

Health & Science

# New Books Preview

## June 2023



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N.B. Please note prices and publication dates may be subject to change without prior notice. Late Addition titles are ones that missed the corresponding New Books Preview Month.

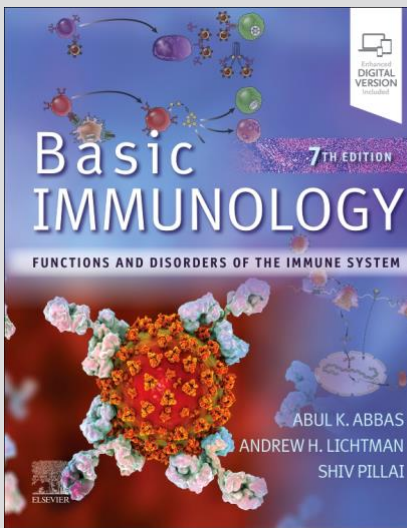
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**eBooks+**



# Basic Immunology, 7e

## Functions and Disorders of the Immune System

**Abul Abbas**, MBBS, Distinguished Professor and Chair, Department of Pathology, University of California San Francisco, San Francisco, California ; **Andrew Lichtman**, MD, PhD, Associate Professor of Pathology, Harvard Medical School and Brigham and Women's Hospital, Boston, MA and **Shiv Pillai**, MBBS, PhD, Massachusetts General Hospital Cancer Center, Boston, MA, USA

ISBN: 9780443105197

PREVIOUS ISBN: 9780323549431

PUB DATE: Jun 26, 2023

LIST PRICE: £56.99 / \$77.99 / €65.99

DISCOUNT:

FORMAT: Paperback

TRIM: 7.5w x 9.25h

PAGES: c. 346

AUDIENCE: Medical and allied health students

BIC CODES:

THEMA CLASSIFICATION:

THEMAMJCM

**International Edition Available!**

ISBN: 9780808923404

LIST PRICE: £21.99 / \$28.95 / €31.99

This edition is not for sale in Only EMEA IE territories

**The essential immunology information you need to know, in a concise, authoritative, and easy to understand text**

### KEY FEATURES

- Emphasizes clinical aspects of immunology, including disease pathogenesis, the development of novel therapies based on basic science, and an appendix of clinical cases for real-world application.
- Contains new and expanded content on pandemics, COVID-19, and herd immunity; resistance and susceptibility to COVID-19; RNA vaccines and hybrid viral vaccines; tumor immunotherapy; innate immune responses to viruses; mechanisms of immunologic tolerance; and immunotherapy for autoimmune, allergic, and other inflammatory diseases, and cancer.
- Provides unrivalled instruction from an expert author team, all of whom are experienced teachers, course directors, and lecturers.
- Features a highly readable writing style and practical organization, now with fully revised content and updated images to cover new information and improve reader understanding of complex concepts.
- Provides additional online features such as answers to in-book chapter review questions and self-assessment questions.
- Presents information in a format and style that maximizes usefulness to students and teachers of medicine, allied health fields, and biology.
- Contains numerous features designed to help students understand key immunologic concepts: high-quality illustrations, practical tables, chapter outlines, bolded key points, and focus questions in every chapter for self-assessment and review.
- An eBook version is included with purchase. The eBook allows you to access all the text and figures, with the ability to search, customize your content, make notes and highlights, and have content read aloud.

### DESCRIPTION

Meticulously reviewed and updated for today's medical students, Basic Immunology, 7th Edition, is a concise text expertly written by the same distinguished author team as the best-selling, comprehensive text, Cellular and Molecular Immunology. This focused, easy-to-understand volume has been fully revised to include recent important advances in our understanding and knowledge of the immune system. A student favorite through six outstanding editions, this new edition uses full-color illustrations and clinical images, useful tables, and practical features such as Summary Point boxes, end-of-chapter review questions, glossary terms, and clinical cases—all designed to help you master this complex topic in the most efficient, effective manner possible.



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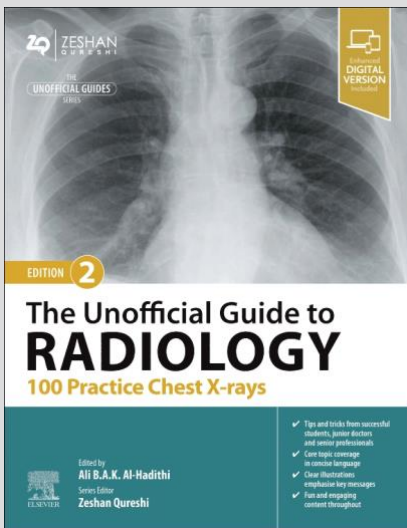
Medical Education Basic Science

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Also includes resources via:







# The Unofficial Guide to Radiology: 100 Practice Chest X-Rays, 2e

Edited by : **Ali B.A.K. Al-Hadithi**, MB BChir, MA(Cantab), MRCP(UK), AFHEA, PGCert (Med Ed), Academic Clinical Fellow (Cardiology and Internal Medicine), University of Cambridge; Cambridge University Hospitals NHS Trust, United Kingdom and **Zeshan Qureshi**, BM, BSc (Hons), MSc, MRCPCH, FAcadMed, MRCPS(Glasg), Paediatric Registrar, London Deanery, United Kingdom

**ISBN:** 9780443109171  
**PREVIOUS ISBN:** 9781910399019  
**PUB DATE:** Aug 28, 2023  
**LIST PRICE:** £24.99 / \$34.99 / €28.99  
**DISCOUNT:**  
**FORMAT:** Paperback  
**TRIM:** 8.5w x 10.875h  
**PAGES:**  
**AUDIENCE:** Medical Students, Junior Doctors,  
**BIC CODES:** MMPH  
**THEMA CLASSIFICATION:**  
THEMAMKSH

## Learn to interpret chest X rays with ease

A Volume in the *Unofficial Guides* Series

### KEY FEATURES

- 100 high-definition images, just like real-life X-rays
- Full-colour annotations demystify chest X-rays for complete beginners
- Systematic examples of how to present reports in an exam and on a hospital ward round
- Follows international radiology reporting guidelines
- Matched to the Royal College of Radiologists national curriculum
- New bonus questions to allow the reader to test their knowledge and cement their learning

### DESCRIPTION

The unique and award-winning *Unofficial Guides* series is a collaboration between senior students, junior doctors and specialty experts. This combination of contributors understands what is essential to excel on your course, in exams and in practice – as well as the importance of presenting information in a clear, fun and engaging way. Packed with hints and tips from those in the know, when you are in a hurry and need a study companion you can trust, reach for an *Unofficial Guide*.

This case-based guide teaches systematic analysis of chest X rays for everyone from complete beginners to professionals. Readers practise X ray interpretation on 100 high quality images based on real-life scenarios. Over each page is a model report accompanied by a fully annotated version of the X ray to explain the reasoning.

*100 Practice Chest X Rays* is ideal for students preparing for examinations and will also provide a handy reference for postgraduates and practising doctors.

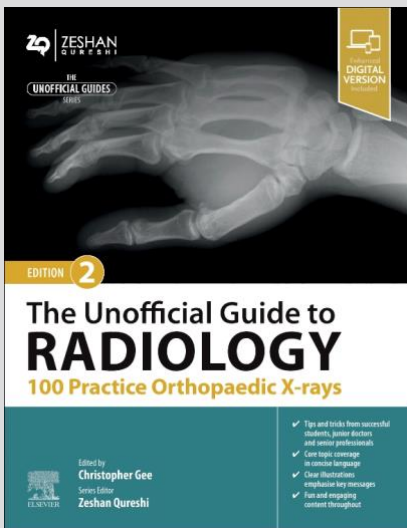


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# The Unofficial Guide to Radiology: 100 Practice Orthopaedic X-Rays, 2e

Edited by : **Christopher Gee**, MBCHB MSC FRCSED(TR&ORTH) , Consultant Trauma and Orthopaedic Surgeon; Honorary Senior Clinical Lecturer, University of Glasgow; Member, Faculty of Surgical Trainers

**ISBN:** 9780443109195  
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**LIST PRICE:** £24.99 / \$34.99 / €28.99  
**DISCOUNT:**  
**FORMAT:** Paperback  
**TRIM:** 8.5w x 10.875h  
**PAGES:**  
**AUDIENCE:** Medical Students, Junior Doctors,  
**BIC CODES:** MMPH  
**THEMA CLASSIFICATION:**  
THEMAMKSH

## Learn to interpret orthopaedic X rays with ease

A Volume in the *Unofficial Guides* Series

### KEY FEATURES

- 100 high-definition images, just like real-life X rays
- Full-colour annotations demystify orthopaedic X rays for complete beginners
- Systematic examples of how to present reports in an exam and on a hospital ward round
- Follows international radiology reporting guidelines
- Matched to the Royal College of Radiologists national curriculum
- New bonus questions to allow the reader to test their knowledge and cement their learning

### DESCRIPTION

The unique and award-winning *Unofficial Guides* series is a collaboration between senior students, junior doctors and specialty experts. This combination of contributors understands what is essential to excel on your course, in exams and in practice – as well as the importance of presenting information in a clear, fun and engaging way. Packed with hints and tips from those in the know, when you are in a hurry and need a study companion you can trust, reach for an *Unofficial Guide*.

This case-based guide teaches systematic analysis of orthopaedic X rays for everyone from complete beginners to professionals. Readers practise X ray interpretation on 100 high quality images based on real-life scenarios. Over each page is a model report accompanied by a fully annotated version of the X ray to explain the reasoning.

*100 Practice Orthopaedic X Rays* is ideal for students preparing for examinations and will also provide a handy reference for postgraduates and practising doctors.

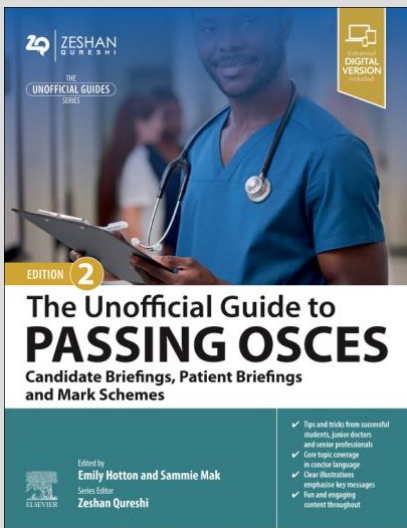


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# The Unofficial Guide to Passing OSCEs: Candidate Briefings, Patient Briefings and Mark Schemes, 2e

**Emily Hotton**, MBChB (Dist), BSc (Hons) PhD, MRCOG, Women's and Children's Research, Southmead Hospital; Translational Health Sciences, University of Bristol, Bristol, United Kingdom and **Sammie Mak**, MBChB, Junior Doctor, NHS England, Manchester, United Kingdom; Edited by **Zeshan Qureshi**, BM, BSc (Hons), MSc, MRCPCH, FAcadMed, MRCPS(Glasg), Paediatric Registrar, London Deanery, United Kingdom

**ISBN:** 9780323931885  
**PREVIOUS ISBN:** 9780957149922  
**PUB DATE:** Jun 30, 2023  
**LIST PRICE:** £27.99 / \$38.99 / €32.99  
**DISCOUNT:**  
**FORMAT:** Paperback  
**TRIM:** 8.5w x 10.875h  
**PAGES:** c. 744  
**AUDIENCE:** Medical Students  
**BIC CODES:** MB  
**THEMA CLASSIFICATION:**  
**THEMAMRG**

## The perfect practice guide for the OSCEs

A Volume in the *Unofficial Guides* Series

### KEY FEATURES

- Companion to *The Unofficial Guide to Passing OSCEs 4e*
- Provides a step-by-step, practical guide to all OSCE exams and revision
- Practice examples of examiner questions, with model answers, to minimise the risk of surprises on the day
- Written and reviewed by doctors and senior medical students – practical guidance from those in the know
- Facilitates practice in groups of 2-3 as if going through the real exam

### DESCRIPTION

Approx. 744 pages

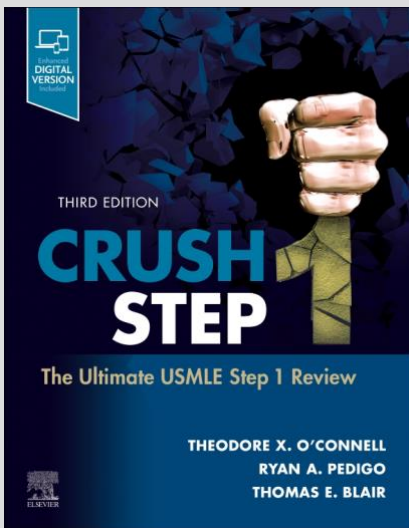


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# Crush Step 1, 3e

## The Ultimate USMLE Step 1 Review

**Theodore X. O'Connell**, MD, Founding Director, Family Medicine, Kaiser Permanente Napa-Solano, Napa; Assistant Clinical Professor, Department of Community and Family Medicine, University of California, San Francisco, School of Medicine, San Francisco, California; **Ryan A. Pedigo**, MD, Director, Undergraduate Medical Education, Department of Emergency Medicine, Harbor-UCLA Medical Center, Assistant Professor of Emergency Medicine, David Geffen School of Medicine at UCLA, Los Angeles, California, USA and **Thomas E. Blair**, MD, Acting Chief of Emergency Medicine, VA Greater Los Angeles Healthcare System, Assistant Clinical Professor of Emergency Medicine, David Geffen School of Medicine at UCLA, Los Angeles, California

ISBN: 9780323878869

PREVIOUS ISBN: 9780323481632

PUB DATE: Apr 05, 2023

LIST PRICE: £37.99 / \$52.99 / €44.99

DISCOUNT:

FORMAT: Paperback

TRIM: 8.5w x 10.875h

PAGES: c. 720

ILLUSTRATIONS: 240 illustrations

AUDIENCE: Medical students preparing for USMLE Step 1

BIC CODES: M, MB

THEMA CLASSIFICATION:

THEMAMR; THEMAMB; THEMAMRG

### Master what you need to know to ace the Step 1 exam

A Volume in the *Crush* Series

#### KEY FEATURES

- Up-to-date, easy-to-read, high-yield coverage of all the material tested on the exam—everything from biostatistics, microbiology, and pharmacology to immunology, oncology, psychiatry, and more.
- Numerous color images (many are new!), helpful lists, and quick-reference tables help you retain and recall information quickly.
- Review questions for each chapter test your mastery of core knowledge and aid retention of high-yield facts.
- Test prep strategies help you identify and understand question stems rather than simply memorizing buzz words.
- A new review board of current students and residents, as well as authors/reviewers who scored in the 99th percentile on the USMLE Step 1, ensures that content is current, relevant, and accurate from cover to cover.
- An eBook version is included with purchase. The eBook allows you to access all of the text, figures and references, with the ability to search, customize your content, make notes and highlights, and have content read aloud.

#### DESCRIPTION

Written and reviewed by students, residents, and experts, and led by bestselling review author Dr. Ted O'Connell, *Crush Step 1, 3rd Edition*, is the perfect review resource you need to pass this high-stakes exam. Now extensively revised and updated to support your coursework and exam preparation, this comprehensive, focused resource is the most effective review tool available for truly understanding the material on which you'll be tested.

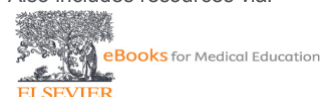


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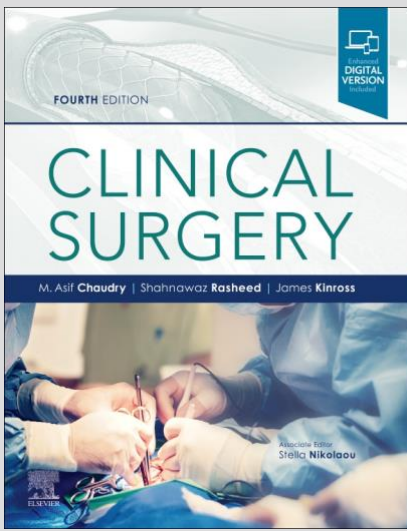


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# Clinical Surgery, 4e

Edited by : M. Asif Chaudry; James Kinross and Shahnawaz Rasheed

**ISBN:** 9780702070501

**PREVIOUS ISBN:** 9780702030703,  
9780702030741

**PUB DATE:** Dec 16, 2022

**LIST PRICE:** £48.99 / \$77.99 / €59.99

**DISCOUNT:**

**FORMAT:** Paperback

**TRIM:**

**PAGES:** c. 884

**ILLUSTRATIONS:** 400 illustrations  
(400 in full color)

**BIC CODES:** MNC

**THEMA CLASSIFICATION:**

THEMAMN

**International Edition Available!**

**ISBN:** 9780702027208

**LIST PRICE:** £24.99 / \$38.99 / €30.99

This edition is not for sale in Only  
EMEA IE territories

**Complete guide to modern surgery for the surgical trainee**

## KEY FEATURES

- Comprehensive and accessible – all you need in the one book
- Information presented logically and clearly in three clear sections
- Aligns with the ISCP – designed for surgical trainees
- Highly illustrated to support understanding
- Detailed practice information and summaries of complex themes to aid with preparation for exams
- Practical steps designed to facilitate procedural based learning and OSCEs

## DESCRIPTION

*Clinical Surgery* provides a complete overview of all surgical specialties, and is suitable for advanced undergraduates through to surgical trainees preparing for the FRCS.

This comprehensive textbook is designed around the Intercollegiate Surgical Curriculum Programme (ISCP) framework, and provides information needed for passing MCQs, OSCEs and Vivas in the one book. Information is divided into three clear sections: basic science and surgical strategy; common surgical conditions and trauma; and leadership, evidence-based practice and global surgery.

This fourth edition has been fully updated and restructured by a new editorial team. Older concepts have been replaced by a new focus on systems biology, omics sciences and multidisciplinary sciences, and the book presents a modern, inclusive view of the surgeon as part of a multidisciplinary team delivering high quality care.



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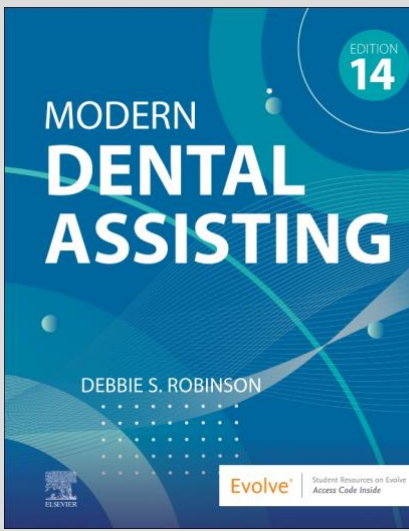


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# Modern Dental Assisting, 14e

**Debbie S. Robinson**, CDA, MS, Former Research Associate, Department of Nutrition Gillings School of Global Public Health University of North Carolina – Chapel Hill Chapel Hill, North Carolina

**ISBN:** 9780323824408

**PREVIOUS ISBN:** 9780323624855

**PUB DATE:** Jun 26, 2023

**LIST PRICE:** £107.99 / \$149.99 / €125.99

**DISCOUNT:**

**FORMAT:** Hardback

**TRIM:** 8.5w x 10.875h

**PAGES:** c. 1060

**ILLUSTRATIONS:** Approx. 1730 illustrations (1730 in full color)

**AUDIENCE:** Dental Assisting students 242 programs accredited by the Commission on Dental Accreditation (CODA) Approximately 5,900 students enrolled, with an additional 20,000+ students being trained in unaccredited private-sector vocational programs Approximately 4,500 graduates per year (accredited programs)

**BIC CODES:** MMD

**International Edition Available!**

**ISBN:** 9780808922704

**LIST PRICE:** £22.99 / \$35.00 / €34.99

**Everything you need to prepare for a career in dental assisting**

## KEY FEATURES

- **Comprehensive, cutting-edge content presented in an approachable writing style** aids comprehension.
- **Step-by-step procedures for general and expanded functions** include helpful color-coding and photos.
- **Chapter features** include recall questions throughout; boxes on infection control and CDC practices; and end-of-chapter elements regarding patient education, law and ethics, future trends, and critical thinking.
- **Key terminology list** offers definitions, visual highlights within chapter discussions, and an alphabetized list in the glossary with cross-references to chapter locations.
- **Learning and performance outcomes** address didactic knowledge and clinical skills mastery.

## DESCRIPTION

Easily master all aspects of dental assisting with the most up-to-date and trusted text available. For more than 45 years, students and practitioners alike have relied on **Modern Dental Assisting** for its cutting-edge content, easy-to-grasp writing style, step-by-step procedures, and top-notch visuals. And the new 14th edition is no exception. With updated content — including the latest technological advancements, clinical photographs, and coverage of cultural diversity and how it relates to patient care — this new edition will guide you from your first day of class all the way to your first job in dental assisting.

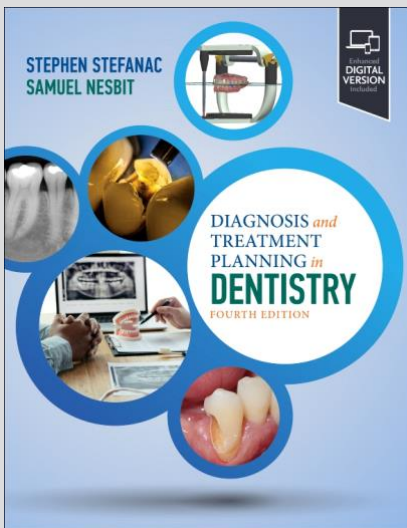


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Health Professions I (HP1) Dental Assisting

<https://virtuale.elsevier.com>, [www.elsevier.com](http://www.elsevier.com)



# Diagnosis and Treatment Planning in Dentistry, 4e

**Stephen J. Stefanac**, DDS, MS, Senior Associate Dean Associate Dean for Patient Services Professor, Periodontics and Oral Medicine University of Michigan School of Dentistry Ann Arbor, MI and **Samuel P. Nesbit**, DDS, MS, Clinical Professor Department of Operative Dentistry University of North Carolina School of Dentistry Chapel Hill, NC

**ISBN:** 9780323809757

**PREVIOUS ISBN:** 9780323287302

**PUB DATE:** Apr 13, 2023

**LIST PRICE:** £84.99 / \$116.99 / €97.99

**DISCOUNT:**

**FORMAT:** Paperback

**TRIM:** 8.5w x 10.875h

**PAGES:** c. 466

**ILLUSTRATIONS:** Approx. 350 illustrations (350 in full color)

**AUDIENCE:** Undergraduate dental students 25,010 undergraduate dental students in 65 accredited programs

**BIC CODES:** MMD

**Enhance your skills in oral diagnosis and dental treatment planning**

## KEY FEATURES

- **Clear, logical organization** builds your understanding with sections on comprehensive patient evaluation, the treatment planning process, the five phases of the treatment plan, and care planning for all patients.
- **What's the Evidence? boxes** cite research articles affecting clinical decision-making and treatment planning strategies.
- **In Clinical Practice boxes** summarize information on specific clinical situations for quick and easy review.
- **Ethics in Dentistry boxes** address clinical situations where ethical decision making may be required.
- **Review questions** summarize and reinforce the important concepts in each chapter.
- **350 full-color illustrations** depict important concepts.

## DESCRIPTION

Enhance your skills in patient assessment, oral diagnosis, and treatment planning! A full-color, all-in-one reference, **Diagnosis and Treatment Planning in Dentistry, 4th Edition** helps you create person-centered dental treatment plans for adolescent and adult patients. Using evidence-based research, this text shows how risk assessment, prognosis, and expected treatment outcomes factor into the planning process. Detailed coverage guides you through each phase of the treatment plan. New to this edition are chapters covering digital tools used in treatment planning and revised content in all chapters. The book renews a core section that describes how to plan and provide optimal oral health care for unique patient populations. Written by noted dentistry educators Stephen Stefanac and Samuel Nesbit, this must-have resource includes a fully searchable eBook version free with each print purchase.

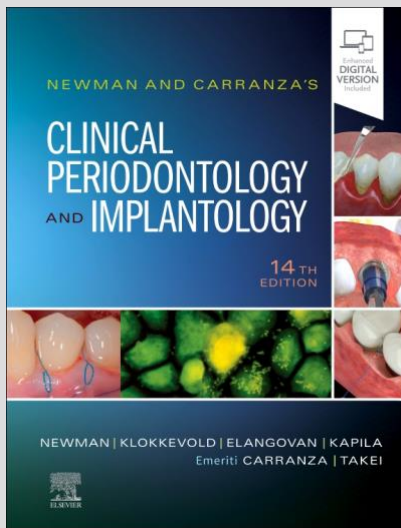


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Health Professions I (HP1) Dental

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# Newman and Carranza's Clinical Periodontology and Implantology, 14e

**Michael G. Newman**, DDS, FACD, Professor Emeritus, Section of Periodontics, School of Dentistry, University of California, Los Angeles, California; **Perry R. Klokkevoid**, DDS, MS, Associate Professor, Section of Periodontics, Program Director, Postgraduate Periodontics Residency School of Dentistry, University of California, Los Angeles; **Satheesh Elangovan**, BDS, DSc, DMSc, Professor, Department of Periodontics The University of Iowa College of Dentistry and Dental Clinics Iowa City, Iowa and **Yvonne Kapila**, DDS, PhD, Professor and Chair, Division of Periodontology, Department of Orofacial Sciences at UCSF. Diplomate, American Board of Periodontology Fellow, International College of Dentists

**ISBN:** 9780323878876  
**PREVIOUS ISBN:** 9780323523004  
**PUB DATE:** Jun 05, 2023  
**LIST PRICE:** £143.99 / \$188.99 / €157.99

**DISCOUNT:**  
**FORMAT:** Hardback  
**TRIM:** 8.5w x 10.875h  
**PAGES:** c. 1088  
**ILLUSTRATIONS:** Approx. 3120 illustrations (3120 in full color)  
**AUDIENCE:** Undergraduate dental students 25,000 undergraduate dental students in 65 accredited programs  
**BIC CODES:** MMD  
**THEMA CLASSIFICATION:** THEMAMKE

### International Edition Available!

**ISBN:** 9780702029356  
**LIST PRICE:** £43.99 / \$69.99 / €50.99  
This edition is not for sale in Only EMEA IE territories



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**The most authoritative, comprehensive, and searchable periodontology and implantology resource for both students and clinicians**

### KEY FEATURES

- **Full-color photos, illustrations, radiographs, animations, simulations, and videos** demonstrate how to perform periodontal and implant procedures.
- **Current information on clinical techniques in periodontology** and the latest advances in basic science.
- **Evidence-based treatment planning** provides knowledge on how to achieve the best possible outcomes of periodontal therapy and implant treatment.
- **Extensive color atlas of periodontal pathology**
- **Internationally known experts** contribute chapters on their areas of specialty.

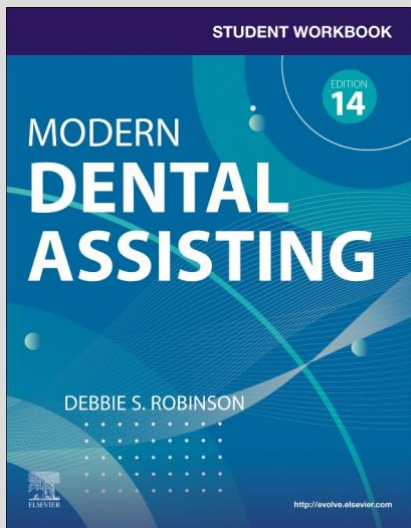
### DESCRIPTION

Learn and master a range of clinical techniques and achieve therapeutic goals with **Newman and Carranza's Clinical Periodontology and Implantology, 14<sup>th</sup> Edition!** Unmatched for its comprehensive approach, this resource provides detailed, up-to-date information on the etiology and pathogenesis of periodontal disease. Basic and advanced evidence-based information on the various treatment modalities employed in periodontics and implantology is presented in an easy-to-read format, with callout boxes throughout the text highlighting the clinical relevance of foundational basic science information. Full-color photos and radiographic images depict periodontal conditions and procedures, and the *Atlas of Periodontal Pathology* is one of the most comprehensive ever compiled in a periodontal textbook. Written by a team of leading experts led by Michael G. Newman, this text not only demonstrates how to perform periodontal procedures but explains the evidence supporting each treatment and provides knowledge on how to achieve the best possible outcomes of periodontal therapy and implant treatment. An eBook version is included with print purchase, providing access to all the text, figures, and references, plus the ability to search, customize content, make notes and highlights, and have content read aloud. The eBook version *included with print purchase* also includes Periopixel 3D color illustrations, a periodontal classification calculator and interactive learning tool, review questions, case studies, videos, 3D animations, and more! This edition features new chapters on *Precision Medicine*, *Pocket Reduction Therapy*, *Periodontal Referral*, and *Digital Implant Workflows*, as well as an updated glossary of terms linked to the eBook. It also features first-of-its-kind content on the effects of COVID-19 on treatment from key opinion leaders in this area. Case studies reflect the new format of the Integrated National Board Dental Exam (INBDE).

Health Professions I (HP1) Dental

<https://virtuale.elsevier.com>, [www.elsevier.com](http://www.elsevier.com)





# Student Workbook for Modern Dental Assisting with Flashcards, 14e

**Debbie S. Robinson**, CDA, MS, Former Research Associate, Department of Nutrition Gillings School of Global Public Health University of North Carolina – Chapel Hill Chapel Hill, North Carolina

**ISBN:** 9780443120312  
**PUB DATE:** Jun 26, 2023  
**LIST PRICE:** £46.99 / \$63.99 / €53.99  
**DISCOUNT:**  
**FORMAT:** Hardback  
**TRIM:** 8.5w x 10.875h  
**PAGES:** c. 632  
**BIC CODES:** MMD

**The essential practice and review you need to succeed as a dental assistant**

## KEY FEATURES

- **Seamless content correlation** uses activities and exercises that reinforce the chapter content students are currently learning in the main text.
- **Practice and review questions** for each chapter include short answer, fill-in-the-blank, multiple-choice, and labeling questions to help reinforce students' understanding of terminology and concepts.
- **Dental Assisting Clinical Externship Guide** provides information and resources to support practicum.
- **Competency skill checklists** provide clear guidelines for performing each dental assisting skill and help students evaluate their strengths and weaknesses, with pages perforated so that they can detach individual skill sheets for use in clinical settings.
- **Flashcards** summarize key information about the sciences, medical emergencies, infection control, radiography, dental materials, dental instruments, and dental procedures, offering convenient, on-the-go review and exam preparation.

## DESCRIPTION

Learn to hone your dental assisting knowledge and skills with this bestselling workbook. Featuring reinforcement exercises and application activities that correspond chapter-by-chapter to the content covered in Robinson's *Modern Dental Assisting, 14th Edition*, this workbook gives you the practice you need to master both dental assisting concepts and practical office skills. The workbook comes with original practice management exercises that correspond to the *Dentrix* software available on Evolve. Also included are ample content review questions, case applications with questions, detached flash cards, and competency skills evaluation sheets for practice with dental assisting procedures.

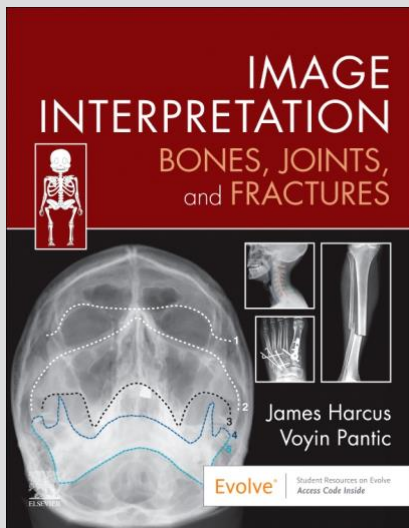


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Health Professions I (HP1) Dental Assisting

<https://virtuale.elsevier.com>, [www.elsevier.com](http://www.elsevier.com)



# Image Interpretation: Bones, Joints, and Fractures

James Marcus, Lecturer in Diagnostic Imaging, University of Leeds, UK and Voyin Pantic

**ISBN:** 9780323870801  
**PUB DATE:** Sep 15, 2023  
**LIST PRICE:** £39.99 / \$55.99 / €46.99  
**DISCOUNT:**  
**FORMAT:** Paperback  
**TRIM:**  
**PAGES:** c. 300  
**AUDIENCE:** Diagnostic Radiographers, Student Radiographers  
**BIC CODES:** MQH, MQ, MQS  
**THEMA CLASSIFICATION:** THEMAMKS

## A concise learning guide to interpreting X-rays

### KEY FEATURES

- User-friendly format: readers will be able to use the text to seamlessly explore the concepts between normal anatomy and abnormal radiographic appearances
- Systematic approach provided for each common radiographic projection
- Online case studies for readers to test and apply their clinical knowledge
- Key important learning points ('Insights')
- Annotated radiographic images and examples to support learning

### DESCRIPTION

Interpreting X-ray images correctly is essential for diagnostic radiographers, as well as a widely used skill for emergency department doctors, nurse practitioners, and many other healthcare professions. This new title provides a systematic, methodical approach to musculoskeletal image interpretation and its role in the evaluation and treatment of injury.

A companion to the eighth edition of *Bones and Joints*, this book covers the basic principles for interpreting images and then follows a simple regional approach to common radiographic projections. It goes on to consider common and important fracture patterns and other injuries related to that region, as well as the differences between normal and abnormal images.

*Image Interpretation* is an ideal learning guide for undergraduates, those transitioning to graduate roles or clinical practice, and other healthcare professionals wanting to supplement their training.

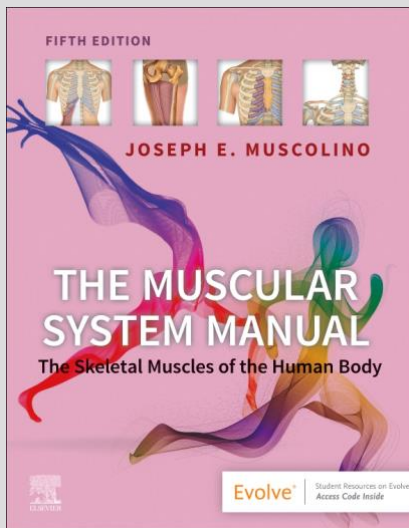


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Health Professions II (HP2) UK  
Rad/Imaging Technology

<https://virtuale.elsevier.com>, [www.elsevier.com](http://www.elsevier.com)



# The Muscular System Manual, 5e

## The Skeletal Muscles of the Human Body

Joseph E. Muscolino, DC, Instructor, Purchase College, State University of New York, Purchase, New York; Owner, The Art and Science of Kinesiology, Redding, Connecticut

**ISBN:** 9780323812757

**PREVIOUS ISBN:** 9780323327701

**PUB DATE:** Jun 15, 2023

**LIST PRICE:** £61.99 / \$85.99 / €72.99

**DISCOUNT:**

**FORMAT:** Paperback

**TRIM:** 8.5w x 10.875h

**PAGES:** c. 786

**ILLUSTRATIONS:** Approx. 710 illustrations (710 in full color)

**AUDIENCE:** Massage therapy students, 16,555 annual enrollment • 13,723 students in public, non-profit institutions • 2,832 students in private, for-profit institutions (IPEDS 2017)

**BIC CODES:** MX

**THEMA CLASSIFICATION:** THEMAMX

### KEY FEATURES

- Overlay art, consisting of over 380 full-color anatomical illustrations of muscles, bones, and ligaments drawn over photographs, helps identify the positions of muscles and bones in the human body.
- UNIQUE! Electronic Muscle and Bone Review Program features a base photograph with a skeleton drawn in and a list of every muscle for each major region of the body so students can choose any combination of muscles and place them onto the illustration - allowing them to see not only the muscle attachments, but also the relationship among the muscles of the region.
- Complete muscle coverage in an easy-to-understand layout makes this text appropriate for novices to anatomy, as well as intermediate and advanced students.
- Content organized by body region and includes information on how muscles in that region function together and large drawings of the muscles of that region so you can go directly to the topic you are studying.
- Covers the methodology for each muscle with information for learning muscle actions to explain the reasoning behind each action - and encourage you to learn and not just memorize.
- The robust online resources found on the companion Evolve site features more than 100 video clips and an interactive muscle program, among other resources.

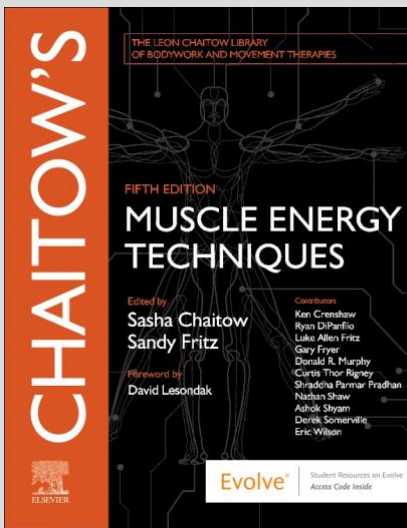


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Health Professions I (HP1) CAM & Massage

<https://virtuale.elsevier.com>, [www.elsevier.com](http://www.elsevier.com)



# Chaitow's Muscle Energy Techniques, 5e

Edited by : **Sasha Chaitow**, PhD and **Sandy Fritz**, MS, NCTMB, Founder, Owner, Director, and Head Instructor, Health Enrichment Center, School of Therapeutic Massage and Bodywork, Lapeer, Michigan

**ISBN:** 9780702082726  
**PREVIOUS ISBN:** 9780702046537  
**PUB DATE:** Jun 10, 2023  
**LIST PRICE:** £51.99 / \$71.99 / €60.99  
**DISCOUNT:**  
**FORMAT:** Paperback  
**TRIM:** 7.5w x 9.25h  
**PAGES:** c. 382  
**BIC CODES:** MQS, MX, MMS, MXH  
**THEMA CLASSIFICATION:**  
THEMAMKS; THEMAMX

A Volume in the *The Leon Chaitow Library of Bodywork and Movement Therapies* Series

## DESCRIPTION

The fifth edition of this well-loved manual for understanding and using Muscle Energy Techniques (METs) presents clear guidelines for their applications, resting on the newest scientific research and embedded in the framework of whole-person health care. It provides a comprehensive, evidence-based how-to guide for applying MET in the treatment of some forms of musculoskeletal dysfunction, to alleviate pain, and support functional movement.

Packed with colour illustrations and complemented by more than 50 instructional videos featuring Leon Chaitow demonstrating the techniques described, *Muscle Energy Techniques 5e* guides the reader through both theory and practice, with an emphasis on evidence-informed clinical reasoning and application. This fifth edition reconvenes the international team of expert contributors originally selected by Leon Chaitow to present the role of METs in a range of clinical settings and scenarios. These include the use of METs for treating a wide range of acute and chronic pain conditions, prevention and management of trauma and injuries in athletes, and their successful incorporation into physiotherapy, chiropractic, osteopathic, massage therapy, and rehabilitation environments.



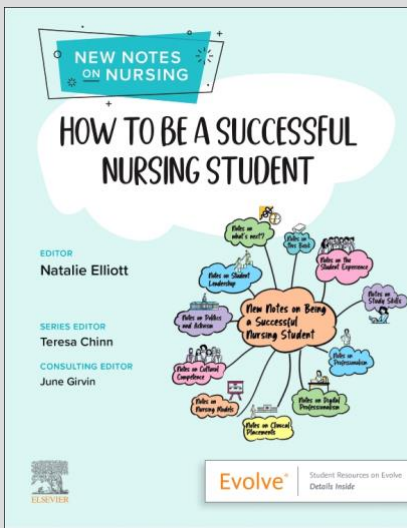
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Health Professions I (HP1) UK  
Manual Therapy

<https://virtuale.elsevier.com>, [www.elsevier.com](http://www.elsevier.com)





# How to be a Successful Nursing Student

New Notes on Nursing

Edited by : Natalie Elliott

**ISBN:** 9780323881791  
**PUB DATE:** Oct 27, 2023  
**LIST PRICE:** £28.99 / \$40.99 / €33.99  
**DISCOUNT:**  
**FORMAT:** Paperback  
**TRIM:** 7.5w x 9.25h  
**PAGES:**  
**AUDIENCE:** Year One nursing students.  
**BIC CODES:** MQC  
**THEMA CLASSIFICATION:**  
 THEMAMQC

A Volume in the *New Notes on Nursing* Series

## KEY FEATURES

- Case studies and storytelling approaches help link theory to practice
- Graphics, icons and mind maps enhance the text and aid visual learners
- Written to show how specific knowledge relates to wider concepts
- Learning is presented in small, self-contained sections for quick location and digestion
- Terms and concepts are explained using simple language
- Content is clearly mapped to latest NMC standards
- Accompanying videos provide additional insights and bring study to life

## DESCRIPTION

Welcome to nursing! *How to be a Successful Nursing Student* is the first volume in a new series created especially for you, the nursing student at the start of your nursing journey. It covers the most important elements required to study successfully, prepare effectively and get the most from your nursing degree, in order to excel in your career. You will also get an invaluable introduction to a range of key topics, covered in more detail in other books in the series.

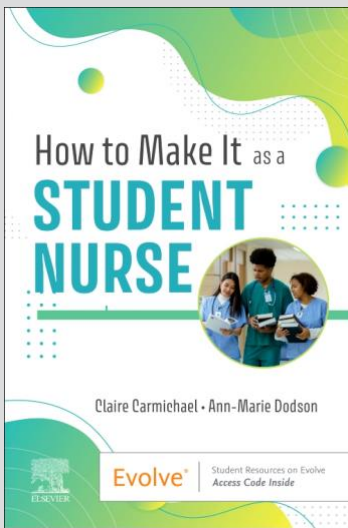
The *New Notes on Nursing* series presents key topics in a highly accessible way, without making assumptions about your existing knowledge. Concise volumes cover critical and emerging areas, including cultural competence, digital professionalism, politics and activism, clinical placements and more. The aim is to make content engaging and easy to absorb, focussing just on what is essential for success on your course. Using a relaxed writing style and an all-new design, these unique books provide personal guidance from experts and students alike. So when you are in a hurry and need a study companion you can trust, reach for *New Notes on Nursing*!



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Nursing UK Pre-Registration Edu  
<https://virtuale.elsevier.com>, [www.elsevier.com](http://www.elsevier.com)



# How to Make It As A Student Nurse

**Claire Carmichael**, General Practice Nurse and **Anne Marie Dodson**, Senior lecturer, Birmingham City University, Faculty of Health, Education and Life Sciences. Westbourne Rd, Birmingham

**ISBN:** 9780323931908  
**PUB DATE:** Jun 22, 2023  
**LIST PRICE:** £24.99 / \$34.99 / €28.99  
**DISCOUNT:**  
**FORMAT:** Paperback  
**TRIM:** 6w x 9h  
**PAGES:**  
**AUDIENCE:** Nursing students  
**BIC CODES:** MQC  
**THEMA CLASSIFICATION:**  
THEMAMQCZ

## Top tips for surviving your nursing degree and beyond

### KEY FEATURES

- Engaging and easy to read – ideal for busy students
- Easy to navigate – takes you through each stage of the student nurse journey
- Covers the whole nursing degree experience
- Video vlogs to summarise key points
- Real life perspectives of nursing students
- Top tips on everything you will come across throughout your nursing education

### DESCRIPTION

This isn't just another book about anatomy or physiology – it's a straightforward, practical guide that answers all the common concerns and questions of every student nurse.

*How to Make It as a Student Nurse* has evolved from the online advice provided to student nurses in the UK by well-known advocate and nurse Claire Carmichael. She has teamed up with experienced nursing lecturer Ann Marie Dodson to provide a complete guide to being a student nurse, from the application stage through to writing assignments, passing exams, undertaking clinical placements and working in a team.

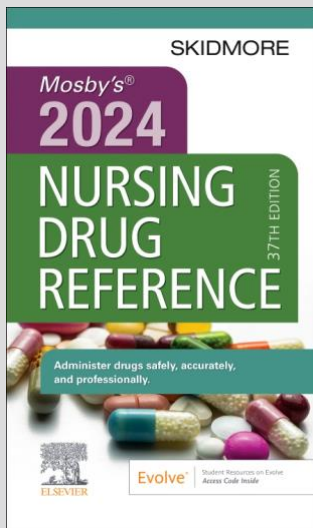
This wonderful new guide is packed full of invaluable advice, including how to handle your finances and juggle your caring responsibilities. The content is supported by real life case studies and vlogs to summarise key points.



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Nursing UK Pre-Registration Edu  
<https://virtuale.elsevier.com>, [www.elsevier.com](http://www.elsevier.com)



# Mosby's 2024 Nursing Drug Reference, 37e

Linda Skidmore-Roth, RN, MSN, NP, Consultant, Littleton, Colorado; Former Nursing Faculty, New Mexico State University, Las Cruces, New Mexico; El Paso Community College, El Paso, Texas

ISBN: 9780443118906  
PREVIOUS ISBN: 9780323930727  
PUB DATE: Jun 12, 2023  
LIST PRICE: £34.99 / \$47.99 / €40.99  
DISCOUNT:  
FORMAT: Paperback  
TRIM: 4.375w x 7.375h  
PAGES: c. 1510  
BIC CODES:

**Mosby's bestselling drug reference for nurses — from the most trusted name in nursing**

A Volume in the *Skidmore Nursing Drug Reference Series*

## KEY FEATURES

- **More than 5,000 generic and trade-name drugs** are profiled, covering almost every drug you will administer in practice or in clinicals.
- **Alphabetical organization by generic name** provides quick and easy access to specific drugs, with both trade and generic names listed in the index.
- **Bolded coverage of IV drug administration** highlights dosage and IV administration instructions, including safety considerations and Y-site, syringe, and additive compatibilities.
- **Nursing Process steps** are used as the framework for organizing all nursing care information.
- **Complete pharmacokinetic information** is summarized in a table and includes the mechanism and absorption of the drug as well as its action, duration, and excretion.
- **Side effects information** is organized by body system and identified as common or life threatening, showing signs to watch for during assessments.
- **High Alert headers** highlight drugs that pose the greatest risk if administered improperly.
- **Black Box Warnings** provide alerts to FDA warnings of dangerous or life-threatening drug reactions.
- **Overview of drug categories** explains the safe administration of common classes of drugs, as well as their common side effects and interactions.
- **Flexible, water-resistant cover** provides durability in the clinical setting.

## DESCRIPTION

Choose the drug handbook trusted by nurses for over 35 years! **Mosby's 2024 Nursing Drug Reference** makes it easy to find the most vital information on the drugs you administer most frequently. More than 5,000 drugs are profiled — including more than 25 new entries for drugs recently approved by the FDA. And no other drug guide places a higher emphasis on patient safety, with *Black Box Warnings* for dangerous adverse reactions, *High Alerts* for drugs with the greatest risk, and a focus on both common and life-threatening side effects. From nursing pharmacology expert Linda Skidmore-Roth, this perennial bestseller proves there is a difference in drug guides.

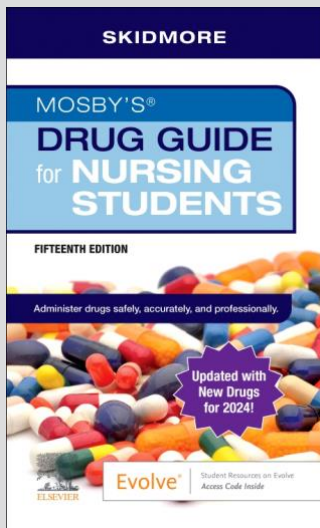


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Nursing Nursing

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# Mosby's Drug Guide for Nursing Students with update, 15e

Linda Skidmore-Roth, RN, MSN, NP, Consultant, Littleton, Colorado; Former Nursing Faculty, New Mexico State University, Las Cruces, New Mexico; El Paso Community College, El Paso, Texas

ISBN: 9780443123887  
PREVIOUS ISBN: 9780323874892,  
9780443105937  
PUB DATE: Jun 12, 2023  
LIST PRICE: £33.99 / \$46.99 / €39.99  
DISCOUNT:  
FORMAT: Paperback  
TRIM:  
PAGES: c. 1238  
BIC CODES:

Rely on the drug handbook designed especially for nursing students

## KEY FEATURES

- **More than 4,000 generic and trade-name drugs** are profiled, covering almost every drug you will administer in practice or in clinicals.
- **Alphabetical organization** by generic name provides quick and easy access to specific drugs, and a full-color design highlights important information.
- **Nursing Process steps** are used as the framework for organizing all nursing care information.
- **Black Box Warnings** provide alerts to FDA warnings of dangerous or life-threatening drug reactions.
- **High Alert headings** indicate drugs that pose the great risk if administered improperly.
- **Additional drug monographs on the Evolve website** provide information on the most recently approved drugs.
- **Individual drug monographs** include generic name, pronunciation, functional and chemical classification, do-not-confuse drug names, action, therapeutic outcome, uses, unlabeled uses, pharmacokinetics/pharmacodynamics, contraindications, precautions, dosages and routes, adverse effects, interactions (including drug/herb, drug/food and lab test), nursing considerations, black box warnings, patient/family education, and treatment of overdose.
- **Drug Categories sections** promote the safe administration of common classes of drugs, explaining the similarities and differences among drugs in the same functional class including their common side effects and interactions.
- **Common and life-threatening side effects** are organized by body system, showing signs to watch for during assessments.

## DESCRIPTION

Find the information you need to administer drugs safely, accurately, and professionally! **Mosby's Drug Guide for Nursing Students, 15th Edition with 2024 Update** provides concise profiles of more than 4,000 generic and trade name drugs, including the drugs most recently approved by the FDA. Each drug monograph includes clear guidelines to dosing, administration, and the nursing process, so you'll always be sure that you're practicing medication safety. What sets this handbook apart is its detailed coverage of rationales and explanations, IV drugs, and the similarities and differences in common classes of drugs. From well-known pharmacology expert Linda Skidmore-Roth, this drug guide has been trusted by nursing students for more than 25 years!



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# Nursing Outcomes Classification (NOC)

Measurement of Health Outcomes



Seventh Edition

Sue Moorhead  
Elizabeth Swanson  
Marion Johnson



# Nursing Outcomes Classification (NOC), 7e

## Measurement of Health Outcomes

**Sue Moorhead**, RN, PhD, FAAN, Professor Emerita, The University of Iowa, College of Nursing, Iowa City, Iowa ; **Elizabeth Swanson**, RN, PhD, Professor Emerita, The University of Iowa, College of Nursing, Iowa City, Iowa and **Marion Johnson**, RN, PhD, Professor Emerita, The University of Iowa, College of Nursing, Iowa City, Iowa

ISBN: 9780323882521

PREVIOUS ISBN: 9780323497640,  
9780323675796, 9780323583435

PUB DATE: Jun 01, 2023

LIST PRICE: £52.99 / \$72.99 / €61.99

DISCOUNT:

FORMAT: Paperback

TRIM: 7.5w x 9.25h

PAGES: c. 868

AUDIENCE: Health Care Institutions;  
Undergraduate and graduate nursing  
students

BIC CODES: MQC

THEMA CLASSIFICATION:  
THEMAMQC

Learn to use standardized nursing terminology to evaluate and improve patient outcomes

### KEY FEATURES

- **612 research-based nursing outcome labels** provide standardized terminology for individual, family, or community outcomes.
- **Overview of the use of NOC within the nursing process** introduces the importance of measuring outcomes of nursing care, and describes linkages with other classifications.
- **Outcomes structured with a label name** include code, definition, set of indicators with codes, five-point Likert measurement scales, publication facts lines, and selected references.
- **Core outcomes** are provided for an expanded list of nursing specialties.
- **Linkages** between NOC knowledge-focused outcomes and NOC behavioral outcomes focused on the concept or condition are examined.

### DESCRIPTION

Enhance your care with the standardized measurement of nursing interventions! **Nursing Outcomes Classification (NOC), 7th Edition** standardizes the terminology and criteria needed to measure and evaluate outcomes in all care settings and with all patient populations. A total of 612 research-based nursing outcome labels — including 82 **that are NEW to this edition** — provide clinically useful language to help you deliver treatment and document outcomes. Specific indicators are included to make it easier to evaluate and rate the patient in relation to outcome achievement. Written by an expert team of authors led by Sue Moorhead, this book is also ideal for healthcare administrators seeking to improve billing, recordkeeping, and cost containment.

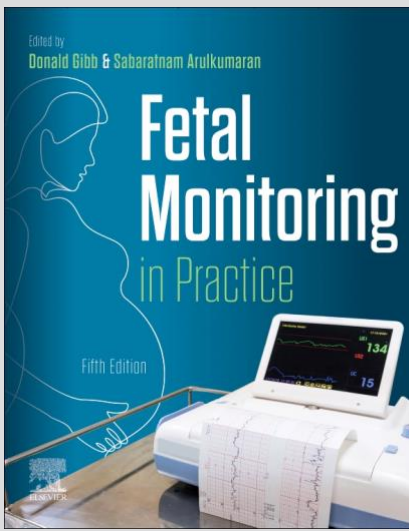


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Nursing Nursing

<https://virtuale.elsevier.com>, [www.elsevier.com](http://www.elsevier.com)



# Fetal Monitoring in Practice, 5e

Edited by : **Donald Gibb**, MD MRCP FRCOG, Independent Obstetrician and Gynaecologist, The Birth Company (part of The Portland Hospital), Harley Street, London, UK and **Sabaratnam Arulkumaran**, Professor Emeritus, Division of Obstetrics and Gynaecology, St George's University of London, London, UK

**ISBN:** 9780323931458

**PREVIOUS ISBN:** 9780702043482

**PUB DATE:** Jun 01, 2023

**LIST PRICE:** £36.99 / \$51.99 / €42.99

**DISCOUNT:**

**FORMAT:** Paperback

**TRIM:** 7.5w x 9.25h

**PAGES:**

**AUDIENCE:** Practising midwives, student midwives

**BIC CODES:** MQD

**THEMA CLASSIFICATION:**

THEMAMQD; THEMAMQCL

**A must-have resource for all health professionals in the delivery suite**

## KEY FEATURES

- Fully updated by internationally renowned editors
- Illustrations and case histories make content applicable to practice
- Clear and friendly writing demystifies a potentially challenging subject area
- Explains the correct use of terminology to help ensure safe and accurate communication
- Covers the basics of interpretation, common pitfalls associated with equipment usage, and clinical trial data in context
- Explains the underlying pathophysiology associated with abnormal changes seen on the CTG
- Clinical scenarios demonstrate common presentations such as breech birth, twin pregnancies, brow presentation, hypertension, and eclampsia
- Real CTG traces demonstrate more complex presentations such as prolonged deceleration, placental abruption, and fetal bleeding

## DESCRIPTION

The latest edition of this popular book is essential reading for all midwives and doctors working in the labour ward.

It has been fully updated but retains the essential features that have contributed to its popularity – an accessible writing style, easy-to-understand explanation of CTGs, and case studies and illustrations to make the content as accessible and practical as possible.

Fetal monitoring is a challenging area that requires skill and experience to practise well. This volume explores the subject matter in a detailed but straightforward manner, thus becoming an invaluable resource for health practitioners as well as midwifery and medical students.

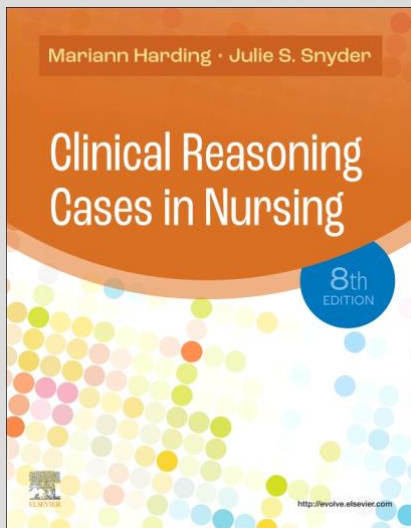


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Nursing UK Mid-Wifery Edu

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# Clinical Reasoning Cases in Nursing, 8e

**Mariann M. Harding**, PhD, RN, CNE, FAADN, Professor of Nursing Technology, Kent State University Tuscarawas, New Philadelphia, Ohio and **Julie S. Snyder**, MSN, RN-BC, Performance Improvement Coordinator, Chesapeake Regional Medical Center, Chesapeake, Virginia; Adjunct Faculty, School of Nursing, Old Dominion University, Norfolk, Virginia.

**ISBN:** 9780323831734  
**PREVIOUS ISBN:** 9780323527361  
**PUB DATE:** Jun 26, 2023  
**LIST PRICE:** £50.99 / \$69.99 / €58.99  
**DISCOUNT:**  
**FORMAT:** Paperback  
**TRIM:** 8.5w x 10.875h  
**PAGES:** c. 700  
**ILLUSTRATIONS:** 40 illustrations (40 in full color)  
**AUDIENCE:** Undergraduate nursing students in ADN and BSN programs (223,846 students in BSN programs per 2018-2019 AACN data)  
**BIC CODES:** MQCL6, MQC, MQCL2

**Develop your ability to make sound clinical nursing judgments with this concept-based, case study approach**

## KEY FEATURES

- **Approximately 150 case studies** draw from actual clinical experiences in medical-surgical, pediatric, OB/maternity, and psychiatric-mental health clinical areas to help you learn to think clinically, prioritize, and deliver proactive nursing care.
- **UNIQUE! Concept-based organization** mirrors the growing popularity of concept-based curricula and conceptual approaches to teaching and learning in nursing education.
- **Clinical judgment approach** helps you learn to identify changes, anticipate possible complications, and initiate therapeutic interventions.
- **Progressive case complexity** builds on previous learning to help you gradually develop clinical judgment skills.
- **Strong QSEN safety emphasis** is highlighted with an icon to communicate "caution" or "safety."
- **Icons** identify questions that resemble new NCLEX-RN® item types.
- **Strong emphasis on sepsis and antibiotic resistance** addresses the growing problem of sepsis (a recent Joint Commission "core measure") and antibiotic resistance, where appropriate.

## DESCRIPTION

Learn to make sound clinical nursing judgments with the concept-based, case study approach in Harding & Snyder's **Clinical Reasoning Cases in Nursing, 8th Edition**. Awarded second place in the 2019 AJN Book of the Year Awards in the Medical-Surgical category, this time-tested case study resource is highly regarded for its clinically relevant and thought-provoking cases. Approximately 150 true-to-life case studies cover all four clinical practice areas — medical-surgical, pediatric, OB/maternity, and psychiatric-mental health nursing — all organized to facilitate a conceptual approach to teaching and learning. Each case covers a common patient problem drawn from actual clinical experiences and written by nurses who are clinical experts and includes a strong focus on interprofessional collaboration competencies. Cases include integrated content on pharmacology, nutrition, and diagnostic/laboratory tests to encourage you to think critically about all aspects of patient care. The 8th edition has been updated throughout to reflect the most current standards of clinical practice, including readiness for practice in the COVID-19 era. Also new to this edition, concepts and terminology related to the Next Generation NCLEX® Exam (NGN) are introduced in the Preface and integrated throughout to help you prepare for the new exam.

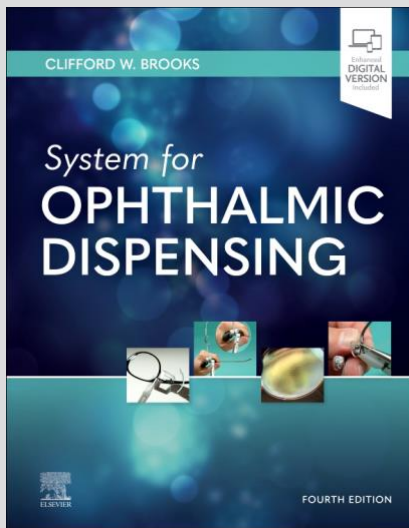


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Nursing Nursing

<https://virtuale.elsevier.com>, [www.elsevier.com](http://www.elsevier.com)



# System for Ophthalmic Dispensing, 4e

Clifford W. Brooks, OD, Associate Professor of Optometry, Indiana University School of Optometry, Bloomington, IN

**ISBN:** 9780128239261  
**PREVIOUS ISBN:** 9780750674805  
**PUB DATE:** Jun 29, 2023  
**LIST PRICE:** £82.99 / \$114.99 / €96.99  
**DISCOUNT:**  
**FORMAT:** Hardback  
**TRIM:** 8.5w x 10.875h  
**PAGES:** c. 650  
**ILLUSTRATIONS:** 400 illustrations (400 in full color)  
**AUDIENCE:** Optometry students; opticianry students  
**BIC CODES:** MQR  
**THEMA CLASSIFICATION:** THEMAMQR

**Your one-stop resource for review and reference on ophthalmic dispensing**

## KEY FEATURES

- Explains the "how" and "why" behind lens selection to help you better understand and meet the vision needs of those you serve.
- Includes in-depth discussions of all types of lenses, including multifocal, progressive, absorptive, safety, recreational, aspheric, high index, and lens coatings.
- Provides updated coverage of the latest dispensing procedures and equipment.
- Discusses the use of spectacle lenses for the control of myopia.
- Contains more than 700 high-quality figures demonstrating how to adjust frames, the optics of lenses, and how light travels through lenses. Photos are all taken from the perspective of the person who is adjusting the frame.
- Features more than 600 interactive review questions along with answers, explanations, and worked problems—all newly revised for this edition.
- An eBook version is included with purchase. The eBook allows you to access all of the text, figures and references, with the ability to search, customize your content, make notes and highlights, and have content read aloud.

## DESCRIPTION

Understand and meet your patients' eyewear needs with the reference that covers every aspect of dispensing — from basic terminology to frame selection to eyewear fitting, adjusting, and repairing. System for Ophthalmic Dispensing, 4th Edition, provides a step-by-step system for properly fitting and adjusting eyewear, including the nuances of lens selection, making it an ideal resource both for students who are just learning about dispensing and practitioners who want to keep their skills up to date. Thorough discussions of every topic and hundreds of newly revised and enhanced review questions make this a one-stop educational and clinical resource for today's eyecare professionals.



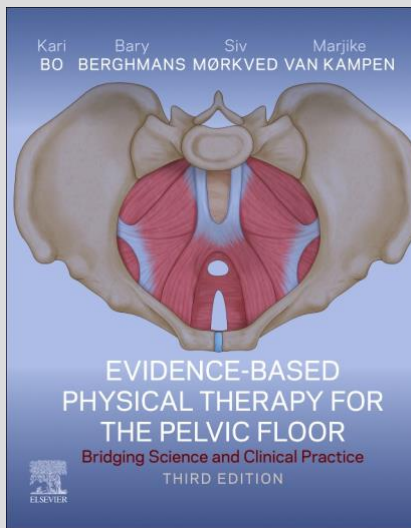
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Health Professions I (HP1)  
Optometry

<https://virtuale.elsevier.com>, [www.elsevier.com](http://www.elsevier.com)





# Evidence-Based Physical Therapy for the Pelvic Floor, 3e

## Bridging Science and Clinical Practice

**Kari Bo**, Professor, PT, PhD, Exercise scientist, Norwegian School of Sports Sciences, Oslo, Norway; **Bary Berghmans**, PhD, MSc, RPt, Epidemiologist and Researcher, Maastricht University Pelvic Care Centre, Maastricht, The Netherlands; **Siv Mørkved**, PT, MSc, PhD, Associate Professor and Senior Researcher, Department of Community Medicine & General Practice, Norwegian University of Science and Technology, Trondheim, Norway and **Marjike Van Kampen**, PhD, Professor in Rehabilitation Science, Katholieke Universiteit Leuven, Faculty of Kinesiology and Rehabilitation Science, University Hospital GHB, Leuven, Belgium

ISBN: 9780702083082

PREVIOUS ISBN: 9780702044434

PUB DATE: Jun 30, 2023

LIST PRICE: £59.99 / \$88.99 / €74.99

DISCOUNT:

FORMAT: Hardback

TRIM: 7.5w x 9.25h

PAGES: c. 470

BIC CODES: MX, MQC, MQS, MQV

THEMA CLASSIFICATION:

THEMAMQS

**A trusted resource for physiotherapists treating disorders of the pelvic floor**

### KEY FEATURES

- New and fully updated contents; new authors and new chapters provide contemporary evidence
- Innovative practice guidelines supported by a sound evidence base
- Colour illustrations of pelvic floor anatomy and related neuroanatomy/neurophysiology
- MRIs and ultrasounds showing normal and dysfunctional pelvic floor
- Key summary boxes for easy navigation
- Full colour throughout

### DESCRIPTION

Written by leading experts in this field, *Evidence-Based Physical Therapy for the Pelvic Floor* provides physiotherapists and other professionals with knowledge and confidence to bring the latest evidence-based approaches and treatment strategies for addressing pelvic floor dysfunction to their practice.

Fully updated and with a wealth of new information, this edition includes sections on devices and apps, gynaecological cancer, sexual dysfunction, fistula, clinical use of EMG, anal incontinence and pain, as well as a discussion of sexualized violence by Nobel Peace Prize winner Denis Mugwege and his team.

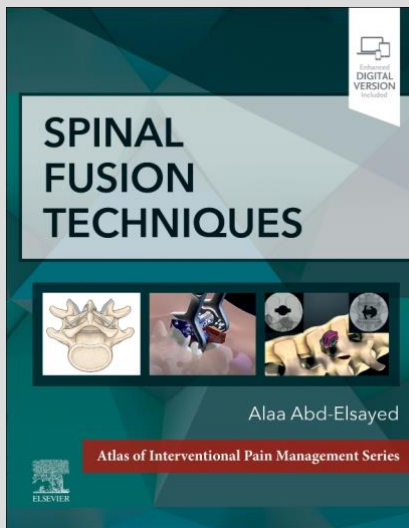


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Health Professions I (HP1) UK  
Physical Therapy

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# Spinal Fusion Techniques

Alaa Abd-Elseyed, MD, MPH, FASA, Medical Director, UW Pain Clinic, Division Chief, Chronic Pain Medicine, University of Wisconsin-Madison, Madison, Wisconsin

**ISBN:** 9780323882231  
**PUB DATE:** Jun 27, 2023  
**LIST PRICE:** £82.99 / \$114.99 / €96.99  
**DISCOUNT:**  
**FORMAT:** Hardback  
**TRIM:** 8.5w x 10.875h  
**PAGES:** c. 280  
**AUDIENCE:** Pain Medicine practitioners and trainees (anesthesiologists, neurologists, physical medicine and rehab, orthopods, rheumatologists)  
**BIC CODES:** MQV

**Practical, hands-on instruction helps you deliver effective relief for chronic pain**

## KEY FEATURES

- Offers a comprehensive overview of the latest techniques used in spinal fusion.
- Features clinically relevant anatomic drawings and radiologic images that provide step-by-step instruction on techniques.
- Provides clear guidance on the risks and benefits, as well as indications and contraindications, for each procedure.
- Covers key topics such as Minimally Invasive Posterior Lumbar Fusion: A Novel Approach to Facet Fusion; Posterior Spinal Fusion; and Interspinous Fusion with Lateral Percutaneous Technique.
- Includes easy-to-follow, templated content on patient selection, preoperative prep, and post-operative care.
- Contains full-color line drawings, photographs, and ultrasound images that provide you with a firm grasp of the anatomy and equipment involved with each procedure.
- Highlights potential pitfalls for each technique and offers clinical pearls on how to avoid them.
- An eBook version is included with purchase. The eBook allows you to access all of the text, figures and references, with the ability to search, customize your content, make notes and highlights, and have content read aloud.

## DESCRIPTION

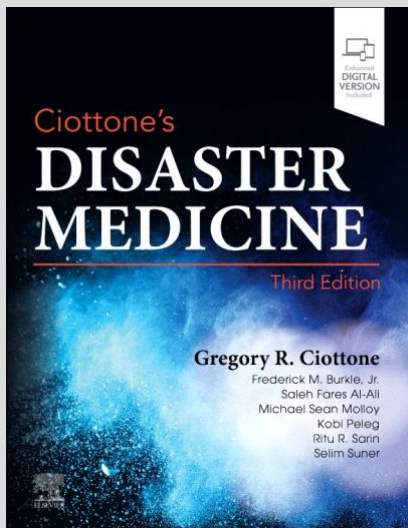
Spinal Fusion Techniques, a volume in the Atlas of Interventional Pain Management series, is a concise, practical guide that provides clinicians with detailed, step-by-step guidance on how to perform the latest interventional techniques for treating patients with chronic pain as a result of spinal stenosis. This comprehensive, easy-to-follow guide offers expert coverage of how to deliver safe, accurate, and cost-effective pain relief to patients using all clinically useful imaging modalities, including ultrasound-guided techniques and fluoroscopy. With high-quality images and clear, authoritative guidance throughout, it shows exactly how to evaluate the causes of pain, identify the most promising stimulation technique, locate the site with precision, and deliver effective relief.



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Speciality Medicine Anesthesiology  
<https://virtuale.elsevier.com>, [www.elsevier.com](http://www.elsevier.com)



# Ciottone's Disaster Medicine, 3e

Edited by : **Gregory R. Ciottone**, MD, FACEP, FFSEM, Director, Division of Disaster Medicine, BIDMC, Director, Disaster Medicine Fellowship Program, BIDMC, Associate Professor of Emergency Medicine, Harvard Medical School, Instructor, Harvard T.H. Chan School of Public Health, President, World Association for Disaster and Emergency Medicine, Harvard Medical School, Boston, Massachusetts

**ISBN:** 9780323809320  
**PREVIOUS ISBN:** 9780323286657  
**PUB DATE:** Jun 19, 2023  
**LIST PRICE:** £128.99 / \$178.99 / €150.99  
**DISCOUNT:**  
**FORMAT:** Hardback  
**TRIM:** 8.5w x 10.875h  
**PAGES:** c. 1046  
**BIC CODES:** MMG, MMK, MQF

**Bring every team member up to speed with expert guidance on today's disaster response.**

## KEY FEATURES

- Part 1 offers an A-to-Z resource for every aspect of disaster medicine and management, while Part 2 features an exhaustive compilation of every conceivable disaster event, organized to facilitate quick reference in a real-time setting.
- Covers basic concepts such as identification of risks, organizational preparedness, equipment planning, disaster education and training, and more advanced concepts such as disaster risk reduction, health in complex emergencies, building local disaster resiliency, psychological impact of disasters on children, and more.
- Contains new decision trees throughout that help guide you through the decision-making process in difficult situations.
- Uses an easy-to-follow, templated approach to historical perspectives, overviews of current practice including pre-incident and post-incident actions, medical treatment of casualties, and potential pitfalls.
- Includes updated sections on man-made disasters, including mass casualties, active shooter situations, integrated response to terrorist attacks, and chemical/biological/radiological/nuclear/high-yield explosives disasters.
- Discusses the latest technologies, such as the use of mobile disaster applications, drone response systems, and virtual reality simulation training.

## DESCRIPTION

While medical specialists in disaster mitigation, preparedness, and response are needed worldwide, the initial phase of disaster response is almost entirely dependent upon local resources—making it essential that all healthcare personnel have a working knowledge of the field and stand ready to integrate into the response system. Ciottone's Disaster Medicine, 3rd Edition, is the most comprehensive reference available to help accomplish these goals in every community. It thoroughly covers isolated domestic events as well as global disasters and humanitarian crises. Dr. Gregory Ciottone and more than 200 worldwide authorities share their knowledge and expertise on the preparation, assessment, and management of both natural and man-made disasters, including lessons learned by the responders to contemporary disasters such as the COVID-19 pandemic, Australian and western U.S. wildfires, European heatwaves, the Beirut explosion, recent hurricanes and typhoons, and the global refugee crisis.



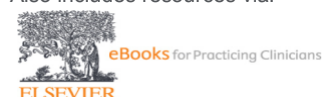
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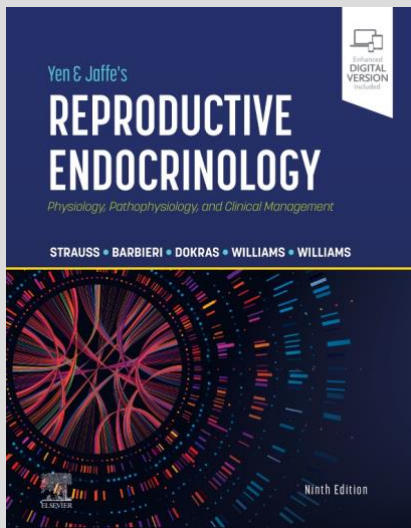


Speciality Medicine    Emergency  
Medicine

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Also includes resources via:





# Yen & Jaffe's Reproductive Endocrinology, 9e

## Physiology, Pathophysiology, and Clinical Management

Edited by : **Jerome F. Strauss, III**, MD, PhD, Executive Vice President for Medical Affairs, VCU Health System; Dean, School of Medicine, Virginia Commonwealth University, Richmond, Virginia ; **Robert L. Barbieri**, MD, Kate Macy Ladd Professor, Department of Obstetrics, Gynecology and Reproductive Biology, Harvard Medical School; Chief, Department of Obstetrics and Gynecology, Brigham and Women's Hospital, Boston, Massachusetts; **Anuja Dokras**, MD, PhD; **Carmen J Williams**, MD, PhD and **S. Zev Williams**, MD, PhD

ISBN: 9780323810074  
PREVIOUS ISBN: 9780323479127  
PUB DATE: Jun 26, 2023  
LIST PRICE: £211.99 / \$293.99 / €246.99  
DISCOUNT:  
FORMAT: Hardback  
TRIM: 8.5w x 10.875h  
PAGES: c. 1024  
ILLUSTRATIONS: 524  
BIC CODES:

**Your one-stop, up-to-date reference for all male and female reproductive endocrine issues**

### KEY FEATURES

- Includes new chapters on Meiosis, Fertilization and Embryo Development; Recurrent Pregnancy Loss; Uterus Transplantation; Mitochondrial Transplantation and Gene Editing; and Germs Cells Developed In Vitro.
- Provides extensively revised information on contemporary practices in assisted reproduction, fertility preservation, and ovulation induction.
- Provides an online video library that highlights surgical procedures, diagnostic imaging, and functional ultrasound imaging.
- Adds three new members to the exceptional editorial team: Drs. Anuja Dokras, Carmen J. Williams, and Zev Williams.
- Features full-color, high-quality illustrations that clearly depict basic anatomic structures, endocrine processes, and cell function and dysfunction.
- Includes bulleted lists under major headings in each chapter for quick, at-a-glance summaries of every section.
- Lists Top References at the end of each chapter that distill the most important references for research underpinnings, to complement the complete online reference list.
- An eBook version is included with purchase. The eBook allows you to access all of the text, figures and references, with the ability to search, customize your content, make notes and highlights, and have content read aloud.

### DESCRIPTION

For over 40 years, Yen & Jaffe's Reproductive Endocrinology has been the gold standard text of both basic science and clinical practice of the full range of female and male reproductive disorders. The fully revised 9th Edition continues this tradition of excellence with complete coverage, including up-to-date information on impaired fertility, infertility, recurrent pregnancy loss, problems of sexual development, menstrual disturbances, fibroids, endometriosis, female and male reproductive aging, fertility preservation, assisted reproduction technologies including ovarian stimulation and ovulation induction, transgender hormonal treatment, contraception, and more. An outstanding editorial board and other global experts in the field share their knowledge and expertise to keep you abreast of current science and practice in endocrinology.



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Speciality Medicine OB/Gyn

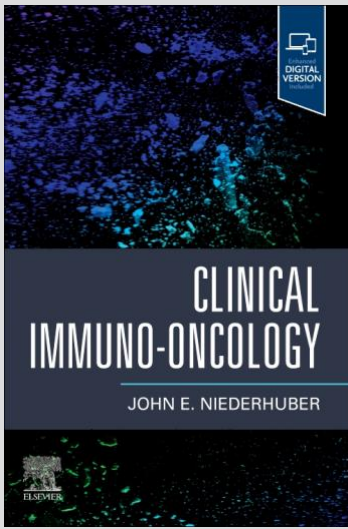
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eBooks for Practicing Clinicians





# Clinical Immuno-Oncology

**John E. Niederhuber, MD**, Adjunct Professor, Departments of Surgery and Oncology; Deputy Director, The Johns Hopkins Clinical Research Network, Johns Hopkins University School of Medicine, Baltimore, Maryland

**ISBN:** 9780323877633  
**PUB DATE:** Jun 16, 2023  
**LIST PRICE:** £113.99 / \$157.99 / €132.99  
**DISCOUNT:**  
**FORMAT:** Hardback  
**TRIM:** 6w x 9h  
**PAGES:** c. 14  
**AUDIENCE:** Medical oncologists, radiation oncologists, oncology surgeons, immunologists – practicing and fellows  
**BIC CODES:**

**Understand and apply recent advances in immunology to oncology therapeutics**

## KEY FEATURES

- Offers balanced and synthesized content on clinical science, clinical and translational research, and evidence-based practice for cutting-edge immunotherapies.
- Discusses clinical applications of immunotherapies in common types of cancer including melanoma, breast cancer, pancreatic cancer, colon and rectum cancer, prostate cancer, leukemias, and hematologic malignancies.
- Includes dedicated chapters on immune responses, innate immunity, active immunization against cancer, and cell-based therapies by leading experts.
- Covers key topics such as cancer immunotherapy in the presence of COVID-19, immunotherapeutics, new findings concerning the role of the microbiome in immunotherapy, advances in engineered cell-based therapies, and active immunization against cancer.
- An eBook version is included with purchase. The eBook allows you to access all of the text, figures and references, with the ability to search, customize your content, make notes and highlights, and have content read aloud.

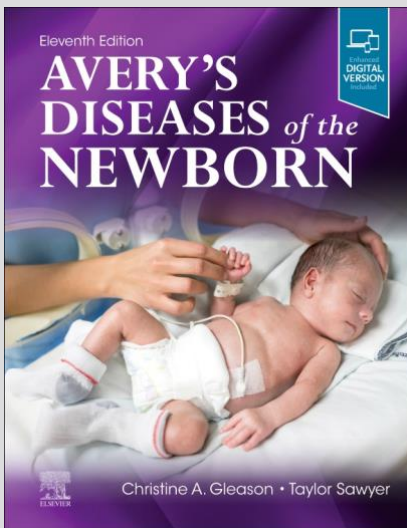


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Speciality Medicine    Oncology

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# Avery's Diseases of the Newborn, 11e

Edited by : **Christine A. Gleason**, MD, Academic Neonatologist and Professor Emeritus of Pediatrics, University of Washington and Seattle Children's Hospital, Seattle, Washington

**ISBN:** 9780323828239

**PREVIOUS ISBN:** 9780323401395

**PUB DATE:** Jun 09, 2023

**LIST PRICE:** £143.99 / \$199.99 / €167.99

**DISCOUNT:**

**FORMAT:** Hardback

**TRIM:** 8.5w x 10.875h

**PAGES:** c. 1462

**AUDIENCE:** Neonatologists, Neonatal Fellows, Pediatric residents

**BIC CODES:** MJW, MJWN

**The most trusted resource among neonatal care providers for more than 60 years**

## KEY FEATURES

- Reflects the latest developments on all aspects of newborn evaluation and management, featuring new content, new chapters, new contributors, and fresh perspectives from a new co-editor.
- Brings you the latest on current topics such as perinatal/neonatal COVID-19, genomics and precision medicine, acute and chronic neonatal respiratory disorders, brain injury and neuroprotection, necrotizing enterocolitis, probiotics, palliative care, prenatal drug exposure, retinopathy of prematurity, and more.
- Provides clinically relevant, practical guidance in concise, focused chapters that include summary boxes, suggested readings, and more than 500 full-color illustrations, micrographs, and photographs.
- Contains the 2020 American Academy of Pediatrics and American Heart Association neonatal resuscitation guidelines and the 2022 American Academy of Pediatrics guidelines on the management of hyperbilirubinemia.
- Serves as a reliable quick reference for clinical questions and an excellent resource for board review.
- An eBook version is included with purchase. The eBook allows you to access all of the text, figures and references, with the ability to search, customize your content, make notes and highlights, and have content read aloud.

## DESCRIPTION

Completely revised and updated, Avery's Diseases of the Newborn, 11th Edition, remains your #1 choice for clinically focused, cutting-edge guidance on the evaluation, diagnosis, and treatment of diseases of the newborn. Drs. Christine A. Gleason, Taylor Sawyer, and a team of expert contributing authors provide comprehensive, up-to-date coverage of every key disease and condition affecting newborns, keeping you current in this fast-changing field. You'll find the specific strategies you need to confidently provide care for this unique patient population, in a full-color, easy-to-use single volume that focuses on key areas of practice.



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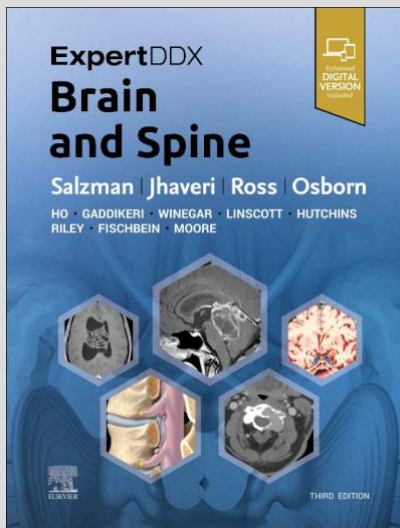


Speciality Medicine Peds

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# ExpertDDx: Brain and Spine, 3e

**Karen L. Salzman, MD**, Professor of Radiology and Imaging Sciences, Neuroradiology Section Chief and Associate Fellowship Director, Leslie W. Davis Endowed Chair in Neuroradiology, University of Utah School of Medicine, Salt Lake City, Utah ; **Miral D. Jhaveri, MD, MBA** , Professor, Division Head, Neuroradiology, Executive Vice-Chair, Department of Diagnostic Radiology & Nuclear Medicine, Rush University Medical Center, Chicago, Illinois and **Jeffrey S. Ross, MD**, Consultant, Neuroradiology Division, Department of Radiology, Mayo Clinic Arizona, Professor of Radiology, Mayo Clinic College of Medicine, Phoenix, Arizona

ISBN: 9780443106941

PREVIOUS ISBN: 9780323443081

PUB DATE: Jun 02, 2023

LIST PRICE: £249.99 / \$346.99 / €291.99

DISCOUNT:

FORMAT: Hardback

TRIM: 8.5w x 10.875h

PAGES: c. 994

ILLUSTRATIONS:

<P><STRONG>More than 7,000 high-quality images</STRONG> in print and online</P>

AUDIENCE: Neuroradiologists

BIC CODES: MMPH

THEMA CLASSIFICATION:

THEMAMJA; THEMAMKSH;

THEMAMKJ

## A highly efficient path to the correct patient diagnosis

A Volume in the *ExpertDDx* Series

### KEY FEATURES

- Presents multiple clear, sharp, succinctly annotated images for each diagnosis; a list of diagnostic possibilities sorted as common, less common, and rare but significant; and brief, bulleted text offering helpful diagnostic clues
- Reflects changes in 2021 WHO CNS tumor grading and nomenclature
- Contains newly identified entities, new differential diagnoses, and updated references
- Shows both typical and variant manifestations of each possible diagnosis
- Includes more than 7,000 high-quality print and online images
- Features updated genetic information now available in Online Mendelian Inheritance in Man (OMIM)
- Separates adult and pediatric DDx lists for even faster reference
- Assists you in building either a definitive diagnosis from an imaging study or a carefully refined list of reasonable differential diagnoses
- Includes an eBook version that enables you to access all text, figures, and references, with the ability to search, customize your content, make notes and highlights, and have content read aloud

### DESCRIPTION

Designed with the busy practitioner in mind, *ExpertDDx: Brain and Spine*, third edition, quickly guides you to the most likely differential diagnoses based on key imaging findings and clinical information. This superbly illustrated resource covers more than 275 of the top differential diagnoses across a broad spectrum of central nervous system diseases, presenting parallel groups of anatomically based differentials, generic imaging patterns, modality-specific findings, and clinically based differentials for each area. Now fully revised and up-to-date, this practical reference clearly guides you through useful, actionable differential diagnoses that lead to definitive findings in every area of the brain and spine.



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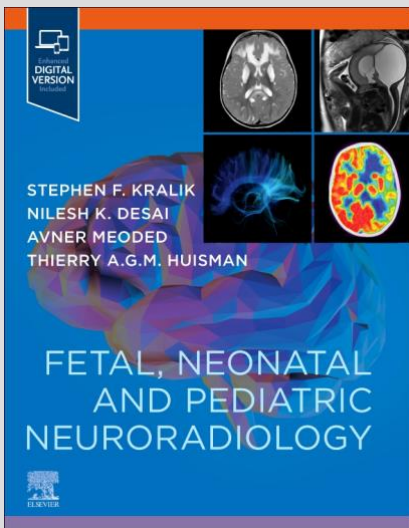


Amirsys General Amirsys 2

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# Fetal, Neonatal and Pediatric Neuroradiology

**Stephen Kralik; Nilesh Desai; Avner Meoded**, MD, Division of Pediatric Radiology, The Johns Hopkins Hospital, Baltimore, Maryland and **Thierry A. G. M. Huisman**, MD, Russell H. Morgan Department of Radiology and Radiological Science, Johns Hopkins Hospital, Baltimore, MD, USA

**ISBN:** 9780323796958  
**PUB DATE:** Jun 14, 2023  
**LIST PRICE:** £90.99 / \$125.99 / €105.99

**DISCOUNT:**

**FORMAT:** Paperback

**TRIM:** 8.5w x 10.875h

**PAGES:** c. 864

**AUDIENCE:** General radiologists trainees, neuroradiologists trainees

**BIC CODES:**

**THEMA CLASSIFICATION:**

THEMAMKS; THEMAMKSH

**Time-saving guidance for radiologists who interpret fetal and pediatric neuroimaging studies**

## KEY FEATURES

- Balances state-of-the-art images and clinical features pertinent to the diagnosis in a bulleted format for quick reference and identification.
- Includes more than 400 diagnoses encountered in pediatric, neonatal, and fetal neuroimaging, including brain, head, neck, spine, and metabolic disorders.
- Features thousands of high-quality MRI, CT, ultrasound, and radiographic images.
- An eBook version is included with purchase. The eBook allows you to access all of the text, figures and references, with the ability to search, customize your content, make notes and highlights, and have content read aloud.

## DESCRIPTION

Ideal for exam preparation and everyday clinical practice, Fetal, Neonatal and Pediatric Neuroradiology brings you fully up to date with recent advances in knowledge and image quality in this fast-changing field. World-renowned pediatric neuroradiologist Dr. Thierry A. G. M. Huisman, along with expert coauthors Drs. Stephen Kralik, Nilesh Desai, and Avner Meoded, utilizes an easy-to-read, quick-reference format of bulleted lists and high-quality images to enhance your understanding and help you quickly grasp and retain critical information.



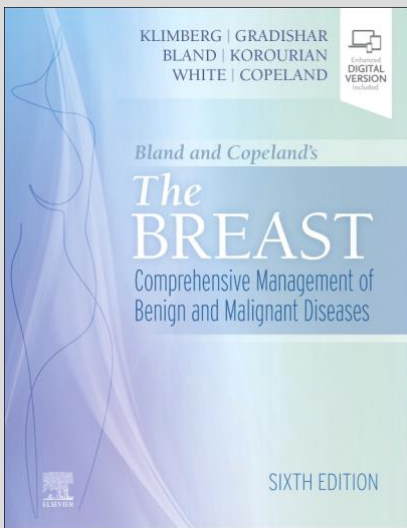
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# Bland and Copeland's The Breast, 6e

## Comprehensive Management of Benign and Malignant Diseases

**Kirby I. Bland**, MD, Professor and Chairman, Department of Surgery; Deputy Director, UAB Comprehensive Cancer Center, University of Alabama at Birmingham, Birmingham, Alabama; **Edward M. Copeland, III**, MD, Emeritus Distinguished Professor, Chairman, Department of Surgery; Director of the Shands Cancer Center, Department of Surgery, University of Florida College of Medicine, Gainesville, Florida; **V. Suzanne Klimberg**, MD, PhD, The Courtney M. Townsend, Jr., M.D. Distinguished Chair in General Surgery, Vice Chair for Administration, Professor of Surgery, University of Texas Medical Branch, Galveston, Texas and **William J Gradishar**, MD, Betsy Bramsen Professor of Breast Oncology, Professor, Department of Medicine-Hematology/Oncology, Northwestern University Feinberg School of Medicine, Chicago, Illinois

**ISBN:** 9780323833653  
**PREVIOUS ISBN:** 9780323359559  
**PUB DATE:** Jun 08, 2023  
**LIST PRICE:** £287.99 / \$398.99 / €335.99  
**DISCOUNT:**  
**FORMAT:** Hardback  
**TRIM:** 8.5w x 10.875h  
**PAGES:** c. 920  
**AUDIENCE:** Surgical oncologists; breast surgeons; general surgeons; medical oncologists  
**BIC CODES:** MNC, MJS, MNK

**The most comprehensive examination of benign and malignant diseases of the breast available**

### KEY FEATURES

- Offers the most comprehensive, up-to-date information on the diagnosis and management of, and rehabilitation following, treatment for benign and malignant diseases of the breast.
- Updates include an extensively updated oncoplastic section and extended medical and radiation oncology sections.
- Delivers step-by-step clinical guidance highlighted by hundreds of superb illustrations that depict relevant anatomy and pathology, as well as medical and surgical procedures.
- Reflects the collaborative nature of diagnosis and treatment among radiologists, pathologists, breast and plastic surgeons, radiation and medical oncologists, geneticists and other health care professionals who contribute to the management of patients with breast disease.
- Includes access to procedural videos that provide expert visual guidance on how to execute key steps and techniques.
- An eBook version is included with purchase. The eBook allows you to access all of the text, figures and references, with the ability to search, customize your content, make notes and highlights, and have content read aloud.

### DESCRIPTION

Multidisciplinary in scope and fully up to date with the latest advances in medical oncology and more, Bland and Copeland's The Breast, 6th Edition, covers every clinically relevant aspect of the field: cancer, congenital abnormalities, hormones, reconstruction, anatomy and physiology, benign breast disease, and more. In a practical, easy-to-use format ideal for today's busy practitioners, this truly comprehensive resource is ideal for surgical oncologists, breast surgeons, general surgeons, medical oncologists, and others who need to stay informed of the latest innovations in this complex and fast-moving area.



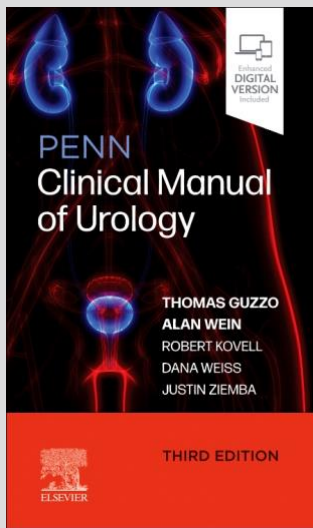
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# Penn Clinical Manual of Urology, 3e

Edited by : **Thomas J. Guzzo**, MD, MPH, Professor of Urology in Surgery, Perelman School of Medicine, Chief, Division of Urology, University of Pennsylvania Health System, Philadelphia, Pennsylvania ; **Robert C. Kovell**, MD, Assistant Professor of Urology in Surgery, Perelman School of Medicine, University of Pennsylvania Health System, Philadelphia, Pennsylvania; **Justin B. Ziemba**, MD, Assistant Professor of Urology in Surgery Perelman School of Medicine University of Pennsylvania Health System Philadelphia, PA ; **Dana A. Weiss**, MD, Assistant Professor of Urology in Surgery, Perelman School of Medicine, University of Pennsylvania Health System, The Children's Hospital of Philadelphia, Philadelphia, Pennsylvania and **Alan J. Wein**, MD, PhD (Hon), FACS, Founders Professor and Emeritus Chief of Urology, Perelman School of Medicine, University of Pennsylvania Health System, Philadelphia, Pennsylvania

**ISBN:** 9780323775755  
**PREVIOUS ISBN:** 9781455753598  
**PUB DATE:** Jun 15, 2023  
**LIST PRICE:** £98.99 / \$136.99 / €115.99  
**DISCOUNT:**  
**FORMAT:** Paperback  
**TRIM:** 4.375w x 7.375h  
**PAGES:** c. 1118  
**ILLUSTRATIONS:** Approx. 120 illustrations (120 in full color)  
**BIC CODES:** MJS

## Quick access to key clinical information on urologic disorders

### KEY FEATURES

- Covers key topics such as recent advances in urologic oncology, including prostate cancer diagnosis and treatment; pelvic surgery; urinary tract function, dysfunction, and reconstruction; and male sexual health.
- Contains self-assessment questions online for every chapter and suggested readings for further study, making it an excellent resource for clinical questions and answers, as well as for exam study.
- Includes new algorithms and suggested core readings, clinical pearls, and updated content on physical examination.
- Highlights new imaging techniques that aid in the identification and treatment of a wide range of urologic issues—from simple to complex.
- Includes an abundance of clinical photos, algorithms, tables, charts, and MRI/CT scans that highlight and clarify the text.
- An eBook version is included with purchase. The eBook allows you to access all of the text, figures and references, with the ability to search, customize your content, make notes and highlights, and have content read aloud.

### DESCRIPTION

Brief, well-illustrated chapters, an easy-to-read format, and a convenient, portable size make Penn Clinical Manual of Urology, 3rd Edition, your go-to resource for fast reference on the effective diagnosis and treatment of urologic disorders. Concise and practical, this manual is indispensable for both residents and practitioners as a daily clinical guide as well as an outstanding review tool for board exam preparation.



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Speciality Medicine Urology

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COVER IMAGE  
FORTHCOMING

# Genetic Engineering and Genome Editing for Zinc Biofortification of Rice

Edited by : **B.P. Mallikarjun Swamy**, Currently Senior Scientist I-Senior Breeder, IRRI, Los Banos, Laguna, Philippines ; **Anca Macovei**, Assistant Professor, Department of Biology and Biotechnology (Plant Biotechnology Laboratory), University of Pavia, Italy and **Kurniawan Rudi Trijatmiko**, Scientist I, Genetic Transformation Laboratory, International Rice Research Institute, Los Banos, Laguna, Philippines

**ISBN:** 9780323854061

**PUB DATE:** Jun 01, 2023

**LIST PRICE:** £115.00 / \$150.00 / €131.00

**DISCOUNT:**

**FORMAT:** Paperback

**TRIM:** 7.5w x 9.25h

**PAGES:** c. 220

**ILLUSTRATIONS:** 45 illustrations (15 in full color)

**AUDIENCE:** University graduate students (PhD), researchers and educators, Libraries and professionals of universities and various kinds of institutes focused on Agriculture, environmental science, plant science (crop improvement, plant breeding and genetics, plant molecular biology, plant protection, quality improvement)

**BIC CODES:** TVK, PSAK, TCB, KNAC, PSB

**THEMA CLASSIFICATION:**

THEMATVK; THEMATCB;

THEMAKNA; THEMAPSB;

THEMAPSAK

**A comprehensive view on Zinc biofortification using transgenic technology**

## KEY FEATURES

- Compiles state-of-the-art information to allow fast-track understanding and application of zinc content improvement
- Discusses multiple strategic and methodology approaches
- Includes discussions on the socioeconomic implications of improved rice nutritional value

## DESCRIPTION

*Genetic Engineering and Genome Editing for Zinc Biofortification of Rice* provides the first single-volume, comprehensive resource on genetic engineering approaches, including novel genome editing techniques, that are carried out in rice, a staple crop for much of the world's population. Dietary zinc deficiency can lead to negative health outcomes, including increased risk of stunting, respiratory diseases, diarrhea, mortality during childhood, and preterm births in pregnancy. By providing a complete view of the need for zinc biofortification in rice, sections in this book discuss state-of-the-art scientific advances, and then go further, placing them in their proper scientific, regulatory and socioeconomic contexts.

While zinc biofortification can be achieved through conventional breeding, genetic engineering and agronomic practices, this is the first reference to bring all the latest insights and understanding to a comprehensive resource that is based on real-world experience and targeted applications.



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FOOD SCIENCE, TECHNOLOGY & NUTRITION  
<https://virtuale.elsevier.com>, [www.elsevier.com](http://www.elsevier.com)

# The Chemical Dialogue Between Plants and Beneficial Microorganisms

Edited by  
Vivek Sharma, Richa Salwan, Ewa Moliszewska,  
David Ruano-Rosa, Malgorzata Jedryczka



# The Chemical Dialogue Between Plants and Beneficial Microorganisms

Edited by : **Vivek Sharma**, PhD, University Centre for Research and Development, Chandigarh University, Gharuan, Mohali (PB.), India; **Richa Salwan**, PhD, College of Horticulture and Forestry (Dr. YS Parmar University of Horticulture and Forestry), Neri, Hamirpur (HP), India; **Ewa Moliszewska**, Institute of Environmental Engineering and Biotechnology, University of Opole, Opole, Poland; **David Ruano-Rosa**, Researcher, Instituto Tecnológico Agrario de Castilla y Leon, ITACyL and **Malgorzata Jedryczka**, Professor Department of Pathogen Genetics and Plant Resistance, Institute of Plant Genetics, Polish Academy of Sciences, Poznan, Poland

**ISBN:** 9780323917346

**PUB DATE:** Jun 01, 2023

**LIST PRICE:** £155.00 / \$200.00 /

€175.00

**DISCOUNT:**

**FORMAT:** Paperback

**TRIM:** 8.5w x 10.875h

**PAGES:** c. 345

**AUDIENCE:** Researchers working on different plant beneficial microorganisms and their molecular arsenal such as mycorrhiza, free living and symbiotically associated nitrogen fixing, plant growth producers and then their similarity/cross talk at molecular level

**BIC CODES:** PSF, PSTL, PST, PSD, PSAK, TVS, PSTD, PSAB, PSB

**THEMA CLASSIFICATION:**

THEMAPST; THEMPSF;

THEMAPSAB; THEMATVS;

THEMAPSAK; THEMPSB;

THEMAPSD

**Provides in-depth details about the mechanisms of different plant beneficial microorganisms, including how they differ and their cross signaling**

## KEY FEATURES

- Includes coverage of oxylipins and sterols in inducing systemic responses
- Explores the role of microbes in transcriptional plasticity of host plants
- Highlights the biology of vegetative cells, N<sub>2</sub>-fixing vesicles, and microbial volatiles in plant growth

## DESCRIPTION

*The Chemical Dialogue Between Plants and Beneficial Microorganisms* provides foundational insights on plant beneficial microorganisms and their impact on the health and productivity of plants. Providing in-depth and recent updates about unexplored aspects of plant microbes interactions, the book includes the biological repertoire of arbuscular mycorrhizal association, molecular architecture of Rhizobium-plant symbiosis, and endophytes in transcriptional plasticity during host colonization by endophytes. The book also includes details about the mechanism of different plant beneficial microorganisms, how these differ, and their cross signaling. This book will be an important reference for researchers working on different plant beneficial microorganisms and their molecular arsenal.



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# Bio-inoculants in Horticultural Crops

## Advances in Bio-inoculant Sciences, Volume 3

Edited by : **Amitava Rakshit**, Faculty Member, Department of Soil Science and Agricultural Chemistry, Institute of Agricultural Sciences, Banaras Hindu University, India; **Vijay Singh Meena**, Project Coordinator, IBorlaug Institute for South Asia (BISA)-CIMMYT, Pusa, Samastipur, Bihar, India; **Leonardo Fernandes Fraceto**, PhD, Associate Professor, Institute of Science and Technology, Sao Paulo State University (UNESP), Sao Paulo, Brazil; **Manoj Parihar**, Scientist, Crop Production Division, ICAR-Vivekananda Parvatiya Krishi Anusandhan Sansthan, Uttarakhand, India; **Adalberto Benavides-Mendoza**, Department de Horticultura, Universidad Autonoma, Calzada Antonio Narro, Saltillo, Mexico and **H.B. Singh**, Professor and Ex Head, Department of Mycology and Plant Pathology, Institute of Agricultural Sciences, Varanasi, India

**ISBN:** 9780323960052  
**PUB DATE:** Jun 01, 2023  
**LIST PRICE:** £155.00 / \$200.00 / €175.00  
**DISCOUNT:**  
**FORMAT:** Paperback  
**TRIM:** 6w x 9h  
**PAGES:** c. 400  
**AUDIENCE:** Researchers, academics and advanced level students in sustainable horticultural and agricultural sciences, and plant microbiology  
**BIC CODES:** PSB, TVS, PSG, TVK  
**THEMA CLASSIFICATION:** THEMPSB; THEMATVK; THEMATVS; THEMAPST; THEMAPSG

**Explores real-world applications of novel microbes through comprehensive information on various biological approaches**

### KEY FEATURES

- Provides microbial tools and techniques for the sustainable production of horticulture crops under various production systems
- Explains the action mechanism and application methodology of microbial inoculants and their interaction with plants
- Identifies future avenues for research and developments
- Includes extensive illustrations

### DESCRIPTION

*Bio-inoculants in Horticultural Crops, Volume Three* in the *Advances in Bio-inoculant Sciences* series, focuses on real-time application of novel microbes that have been proven to enhance and improve plant health and productivity. The book provides comprehensive information on a range of biological approaches and mechanisms for the improvement of horticultural crops being practiced in different production systems. Covering the subject from historical developments to recent advances in microbial interventions, it addresses the potential role and bio-mechanism of bio-inoculants for challenges including stress tolerance, production, commercialization, application methodology, challenges and future roadmap for sustainable production system of horticultural crops.

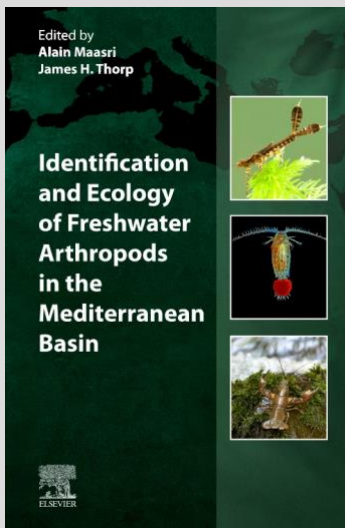
This volume will be useful to scientists, academicians, and students of horticulture, agriculture microbiology, plant protection, and other related subjects.



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# Identification and Ecology of Freshwater Arthropods in the Mediterranean Basin

Edited by : **Alain Maasri**, Freshwater Ecologist, Leibniz-Institute of Freshwater Ecology and Inland Fisheries, Berlin, Germany and Research Associate, The Academy of Natural Sciences of Drexel University, Philadelphia, USA and **James H. Thorp**, Senior Scientist, Kansas Biological Survey, University of Kansas, KS, USA

**ISBN:** 9780128218440  
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**LIST PRICE:** £170.00 / \$220.00 / €195.00  
**DISCOUNT:**  
**FORMAT:** Hardback  
**TRIM:** 8.5w x 10.875h  
**PAGES:** c. 550  
**ILLUSTRATIONS:** 400 illustrations (200 in full color)  
**AUDIENCE:** Ecologists working as researchers or professors or graduate students. Biologists  
**BIC CODES:** RNC  
**THEMA CLASSIFICATION:** THEMPSAF

**Provides taxonomic keys and ecological information on invertebrates found in streams, lakes, wetlands and subterranean habitats of the Mediterranean Ecoregion**

## KEY FEATURES

- Presents taxonomic keys to genera of aquatic insects and to family for other arthropods
- Provides coverage of the entire Mediterranean basin, including case studies and examples
- Covers ecological and taxonomic organisms living in more traditionally-studied lakes and streams as well as in less studied underground and estuarine habitats

## DESCRIPTION

*Identification and Ecology of Freshwater Arthropods in the Mediterranean Basin* covers the entire Mediterranean basin, including parts of Europe, Asia, Africa and the Mediterranean islands, but excluding other biogeographic locations with Mediterranean climates located outside the region. The book provides an extensive description of the taxonomy and ecology of aquatic arthropods encountered in lentic and lotic habitats, as well as in less studied underground and estuarine habitats. It offers expanded taxonomic identification keys to major groups of arthropods with a description of their ecology and distribution. Keys for insects include aquatic larval stages and water-dwelling adults of Coleoptera and Heteroptera.

Additional sections focus on taxa that can be encountered in adjacent brackish and estuary ecosystems as long as the taxon primarily occurs in freshwaters. This is a much-needed, comprehensive resource on the taxonomy and ecology of freshwater arthropods with an introduction to recent molecular tools for identifications. It will be particularly useful for freshwater ecologists, limnologists, environmentalists and students in the ecological sciences.

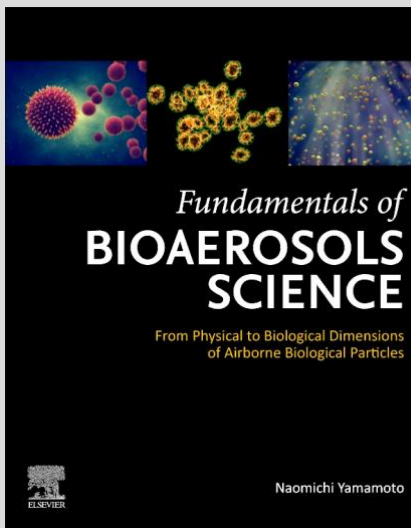


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**EARTH & ENVIRONMENT**

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# Fundamentals of Bioaerosols Science

From Physical to Biological Dimensions of Airborne Biological Particles

Naomichi Yamamoto, Associate Professor, Department of Environmental Health Sciences, Seoul National University (SNU), Gwanak-gu, Seoul, South Korea

ISBN: 9780128244111  
PUB DATE: Jun 01, 2023  
LIST PRICE: £115.00 / \$150.00 /  
€131.00

DISCOUNT:

FORMAT: Paperback

TRIM: 7.5w x 9.25h

PAGES: c. 375

AUDIENCE: The book is primarily intended for professionals working in the field of bioaerosol science, as well as graduate students and researchers with an interest in the field.

BIC CODES: PHVJ

THEMA CLASSIFICATION:  
THEMARBP

**Fills the knowledge gap between biologists and non-biologists in the field of bioaerosols science**

## KEY FEATURES

- Presents an in-depth explanation of the fundamentals of bioaerosols science
- Includes an introduction to the latest knowledge and technologies related to bioaerosol science
- Features interdisciplinary contents that are useful even for those without specialized knowledge

## DESCRIPTION

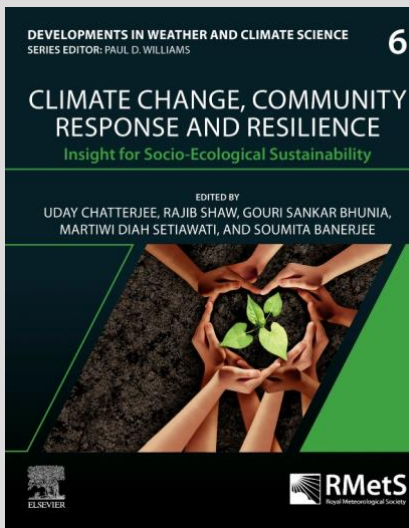
*Fundamentals of Bioaerosols Science: From Physical to Biological Dimensions of Airborne Biological Particles* covers both the physical and biological aspects of bioaerosol science. It is assumed that researchers with a physics background are often unfamiliar with the biological aspects (e.g., molecular biology, PCR, and DNA sequencing), and researchers with a biology background are often unfamiliar with the physical aspects (e.g., aerosol physics, air sampling, and aerodynamic diameter) of bioaerosol science. This book aims to bridge the interdisciplinary gap between the fields of bioaerosol science. Fundamentals of Bioaerosols Science include topics such as bioaerosol physical properties, sampling and monitoring methods, analytical methods, control techniques, and relationship to climate.



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EARTH & ENVIRONMENT Atmospheric Science & Hydrology  
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# Climate Change, Community Response and Resilience, Vol 6

## Insight for Socio-Ecological Sustainability

Edited by : **Uday Chatterjee**, Assistant Professor, Department of Geography, Bhatner College (Affiliated to Vidyasagar University), Dantan, India ; **Rajib Shaw**, Professor, Graduate School of Media and Governance, Keio University, Japan; **Gouri Sankar Bhunia**, Remote Sensing and GIS consultant, TPF Gentisa Euroestudio SL, India; **Martiwi Diah Setiawati**, Research fellow, Research Center for Oceanography National Research and Innovation, Agency of the Republic of Indonesia (BRIN), Indonesia and **Soumita Banerjee**, Senior Research Fellow, Department of Geography, Faculty Council of Science, Jadavpur University, India

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**LIST PRICE:** £115.00 / \$150.00 / €130.00  
**DISCOUNT:**  
**FORMAT:** Paperback  
**TRIM:** 7.5w x 9.25h  
**PAGES:** c. 336  
**AUDIENCE:** Researchers and graduate students in atmospheric and climate science, natural resource management, ecological vulnerability, landscape ecology, social engineering, environmental science and management, and sustainability  
**BIC CODES:** RN, RBP  
**THEMA CLASSIFICATION:** THEMARB; THEMATQ

**Covers a critical theoretical framework for understanding the effects of community resilience and risk assessment on climate change adaptation behavior**

A Volume in the *Developments in Weather and Climate Science Series*

### KEY FEATURES

- Provides insights into the impact of community resilience and risk assessment on climate change adaptation behavior
- Examines several case studies in which local communities have used innovative methods to address climate threats
- Assesses the vulnerability of households and agroecosystems to climate change and environmental degradation

### DESCRIPTION

*Climate Change, Community Response, and Resilience: Insight for Socio-Ecological Sustainability, Volume Six* presents a fundamental theoretical framework for understanding how community resilience and risk assessment affect climate change adaptation behavior. This framework is based on a 26-chapter theoretical and empirical examination that includes pioneer projects from various regions that illustrate the relationship between theory and practice, reflect a paradigm shift in climate change, community response, and resilience, and focus on these important aspects from a sectoral perspective. Climate change, ecological consequences and resilience are then discussed in the final section.

Members of the Royal Meteorological Society are eligible for a 35% discount on all Developments in Weather and Climate Science series titles. See the RMetS member dashboard for the discount code.

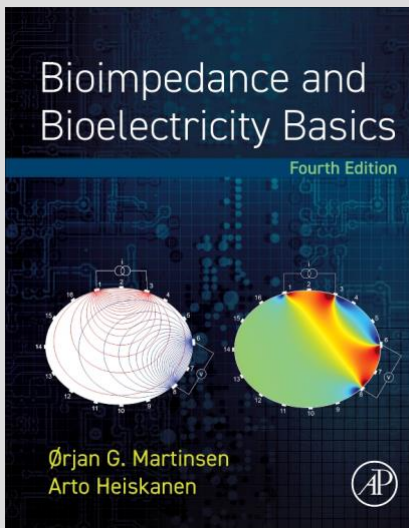


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# Bioimpedance and Bioelectricity Basics, 4e

Ørjan G. Martinsen, Professor, Department of Physics, University of Oslo, Norway and Arto Heiskanen, Technical University of Denmark, Denmark

**ISBN:** 9780128191071  
**PREVIOUS ISBN:** 9780124114708, 9780081013120  
**PUB DATE:** Jun 01, 2023  
**LIST PRICE:** £115.00 / \$150.00 / €131.00  
**DISCOUNT:**  
**FORMAT:** Hardback  
**TRIM:** 7.5w x 9.25h  
**PAGES:** c. 564  
**ILLUSTRATIONS:** Approx. 150 illustrations  
**AUDIENCE:** Graduate and post-graduate students in biomedical engineering and biophysics. Researchers in biotechnology, electrophysiology, pharmacy  
**BIC CODES:** PHVD, PSB, MQW  
**THEMA CLASSIFICATION:** THEMAMQW; THEMAPHVD

**Discusses, in detail, dielectric and electrochemical aspects, as well as electrical engineering concepts of network theory**

## KEY FEATURES

- Contains new pedagogical features that support learning and make this an ideal text for teaching
- Includes more content on electrochemistry, cyclic voltammetry, amperometry, cell properties and machine learning
- Covers tissue immittance building up from the basics in an accurate and easy to understand manner, supported with figures and examples, with Geometry and instrumentation also covered

## DESCRIPTION

*Bioimpedance and Bioelectricity Basics, Fourth Edition* discusses, in detail, dielectric and electrochemical aspects, as well as electrical engineering concepts of network theory. The book takes readers from an introductory (postgraduate) level to a developed understanding of core dielectric and electrochemical aspects of bioelectricity combined with the necessary electrical engineering concepts, such as network theory, to allow readers to work effectively across the interface of biology, physics and engineering. The book has a highly effective organization, and covers important concepts relating to bioelectricity and impedance, including finite element analysis, endogenic sources, control theory, tissue electrical properties, and invasive measurements.

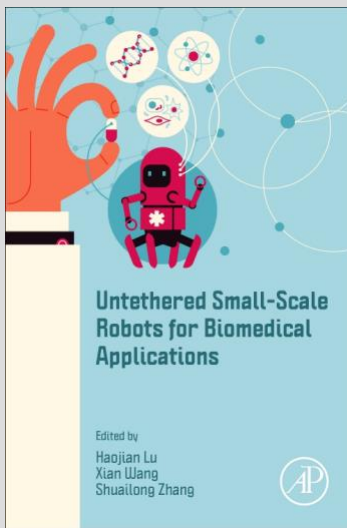
With its concentration on instrumentation and system design, data and analysis, the book is suited to readers with an applied focus on experimentation and device development. It paves an easier and more efficient way for readers seeking basic knowledge about this discipline. This book's focus is on systems with galvanic contact with tissue, and the importance of the geometry of the measuring system cannot be overemphasized.



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ENGINEERING Biomedical  
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# Untethered Small-Scale Robots for Biomedical Applications

Edited by : **Haojian Lu**, Doctoral Candidate, City University of Hong Kong, China; **Xian Wang**, Doctoral Candidate, University of Toronto, Canada and **Shuailong Zhang**, Full professor, School of Mechatronics Engineering, Beijing Institute of Technology, PR China

**ISBN:** 9780128221259  
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**LIST PRICE:** £115.00 / \$150.00 / €131.00  
**DISCOUNT:**  
**FORMAT:** Paperback  
**TRIM:** 6w x 9h  
**PAGES:** c. 156  
**ILLUSTRATIONS:** Approx. 100 illustrations  
**AUDIENCE:** Biomedical Engineering Undergraduate and Post-graduate, Biomechanics, Mechatronics Engineering, Mechanical Engineering, Computer Science Post-graduate, Information systems Post-graduate, Computer Engineering Undergraduate and Post-graduate, Computational Physics, Engineering Mathematics  
**BIC CODES:** TGB, THR, TGBN1, TJFM1  
**THEMA CLASSIFICATION:** THEMATJFM1; THEMATHR; THEMATGB

**Presents the most up-to-date, untethered small-scale robots for biomedical applications**

## KEY FEATURES

- Provides a comprehensive review of the current advances in biomedical untethered mobile milli/microrobots
- Describes the most representative small-scale robots in detail, including design, fabrication, control and function aspects
- Presents the imminent potential impacts of biomedical microrobots
- Discusses the existing challenges and emerging concepts associated with designing such a miniaturized robot for operation inside a biological environment for biomedical applications

## DESCRIPTION

*Untethered Small-Scale Robots for Biomedical Applications* introduces the principle, design, fabrication and application of small-scale robots for biomedical applications. Robots in the scale of nanometer, micrometer and millimeter are described in detail, along with their impact on the field of biomedical engineering. The selected examples of robots across different scales are of the most essential and innovative designs in a small-scale robot with various application settings for biomechanics characterization, drug delivery and surgical procedure. The representative robots represented operate robustly and safely in complex physiological environments where they have a transformative impact in bioengineering and healthcare.

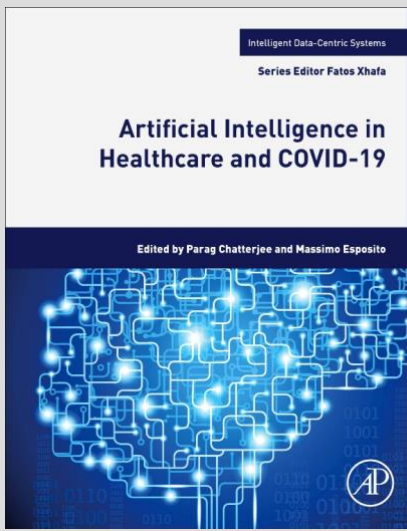
This book will lead the audience to the field of small-scale robots through the description of the physics in the small scale, design and fabrication of small-scale robots, and how these robots may impact the future of biomedical studies and minimally-invasive surgical procedures.



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# Artificial Intelligence in Healthcare and COVID-19

Edited by : **Parag Chatterjee**, Assistant Professor, Department of Biological Engineering, University of the Republic (Universidad de la República), Rincón, Paysandú, Uruguay; Research Professor, National Technological University (Universidad Tecnológica Nacional), Medrano, Buenos Aires, Capital Federal, Argentina and **Massimo Esposito**, Institute for High Performance Computing and Networking (ICAR), Naples, Italy

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**LIST PRICE:** £99.95 / \$130.00 / €113.00

**DISCOUNT:**

**FORMAT:** Paperback

**TRIM:** 7.5w x 9.25h

**PAGES:** c. 300

**ILLUSTRATIONS:** 140 illustrations (40 in full color)

**AUDIENCE:** Researchers, Professors and Postgraduate students working in the field of Artificial Intelligence in healthcare and biomedical engineering, Industry professionals who work in the field of healthcare informatics, especially in the areas of IoT and predictive health

**BIC CODES:** UYQ, TJFM1, MQW

**THEMA CLASSIFICATION:**

THEMATCB; THEMAMQW; THEMATJFM1; THEMAUYQ

**Sheds light on one of the hottest topics of today, using AI to help combat COVID-19**

A Volume in the *Intelligent Data-Centric Systems* Series

## KEY FEATURES

- Discusses the fundamentals and theoretical concepts of applying AI in healthcare pertaining to COVID-19
- Provides a landscape view to the applied aspect of AI in healthcare related COVID-19 through case studies and innovative applications
- Discusses key concerns and challenges in the field of AI in eHealth during the pandemic, along with other allied fields like IoT, creating a broad platform of transdisciplinary discussion

## DESCRIPTION

*Artificial Intelligence in Healthcare and COVID-19* showcases theoretical concepts and implementational and research perspectives surrounding AI. The book addresses both medical and technological visions, making it even more applied. With the advent of COVID-19, it is obvious that leading universities and medical schools must include these topics and case studies in their usual courses of health informatics to keep up with the pace of technological and medical advancements. This book will also serve professors teaching courses and industry practitioners and professionals working in the R&D team of leading medical and informatics companies who want to embrace AI and eHealth to fight COVID-19.

Since AI in healthcare is a comparatively new field, there exists a vacuum of literature in this field, especially when applied to COVID-19. With the area of AI in COVID-19 being quite young, students and researchers usually face a struggle to rely on the few published papers (which are obviously too specific) or whitepapers by tech-giants (which are too wide).

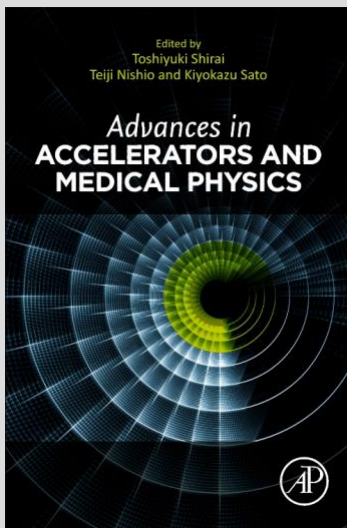


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ENGINEERING Biomedical

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# Advances in Accelerators and Medical Physics

Edited by : **Toshiyuki Shirai**, Director, Department of Accelerator and Medical Physics, Institute for Quantum Medical Science, National Institute for Quantum Science and Technology, Chiba, Japan; **Teiji Nishio**, Professor and Director of the Medical Physics Laboratory, Division of Health Science, Graduate School of Medicine, Osaka University, Osaka, Japan. and **Kiyokazu Sato**, Senior Consultant, Keihin Product Operations, Toshiba Energy Systems & Solutions Co., Kanagawa, Japan

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**LIST PRICE:** £115.00 / \$150.00 / €131.00  
**DISCOUNT:**  
**FORMAT:** Paperback  
**TRIM:** 6w x 9h  
**PAGES:** c. 230  
**AUDIENCE:** Graduate students, researchers, and professionals in medical physics, medical dosimetry, radiation technology, radiotherapy technology, and radiology  
**BIC CODES:** MQW, PHVN  
**THEMA CLASSIFICATION:** THEMAPHVN; THEMATCB; THEMAMQW

**Comprehensive coverage of accelerator and medical physics techniques and technologies used in cancer radiotherapy**

## KEY FEATURES

- Offers a deep dive into the fundamental accelerator and medical physics techniques and technologies used in cancer radiotherapy
- Considers the updated status of hospitals and clinical facilities, safety, education and future research trends
- Covers advanced research and development of X-ray therapy, electron beam therapy and particle therapy

## DESCRIPTION

*Advances in Accelerators and Medical Physics* provides in-depth, comprehensive coverage of basic concepts in X-ray therapy, electron beam therapy, particle therapy, BNCT, RI diagnosis and therapy. Each section of the book presents the current state of the field, details about safety and education, and future trends in advanced research. This book will serve as a key resource for researchers and students to find all information on cancer radiotherapy techniques and methods.

Heavy ion radiotherapy used for cancer treatment involves the acceleration of carbon ions to 70% of the speed of light to deliver radiation to cancer cells and cause cell death. This therapy is also expected to be effective in cancers that are difficult to treat or do not respond to conventional treatments. Furthermore, this therapy is associated with several advantages such as shorter treatment duration and fewer side effects.

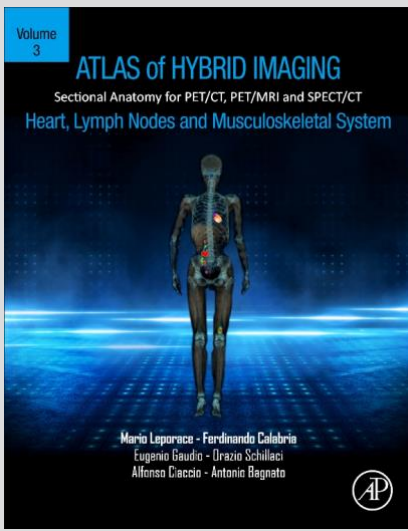


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# Atlas of Hybrid Imaging Sectional Anatomy for PET/CT, PET/MRI and SPECT/CT Vol. 3: Heart, Lymph Node and Musculoskeletal System

Sectional Anatomy for PET/CT, PET/MRI and SPECT/CT

**Mario Leporace**, Clinical Radiologist, Cosenza Hospital, Italy; **Ferdinando Calabria**, Nuclear Physician, Cosenza Hospital, Italy; **Eugenio Gaudio**, MD-PhD, Professor of Human Anatomy, "La Sapienza" University, Rome, Italy; **Orazio Schillaci**, Professor of Nuclear Medicine, "Tor Vergata" University, Rome, Italy; **Alfonso Ciaccio**, Nuclear Physician, Cosenza Hospital, Italy and **Antonio Bagnato**, Nuclear Physician, Cosenza Hospital, Italy

**ISBN:** 9780443188183  
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**LIST PRICE:** £126.00 / \$165.00 / €143.00  
**DISCOUNT:**  
**FORMAT:** Paperback  
**TRIM:** 8.5w x 10.875h  
**PAGES:** c. 278  
**AUDIENCE:** Nuclear Physicians and residents in Nuclear Medicine, Radiologists, Cardiologists, Cardiothoracic surgeons.  
**BIC CODES:** PSA  
**THEMA CLASSIFICATION:** THEMAPS

**A comprehensive, easy-to-read guide to sectional imaging and multiplanar evaluation of hybrid imaging in heart, lymph nodes and musculoskeletal system**

## KEY FEATURES

- Presents a compact, comprehensive, easy-to-read guide on sectional imaging and multiplanar evaluation of hybrid PET and SPECT
- Includes more than 200 fully colored, labeled, high quality original images of axial, coronal and sagittal CT, contrast enhanced CT, PET/CT and/or PET/MRI
- Displays clinical cases that showcase both common and unusual findings that nuclear physicians and radiologists could encounter in their clinical practice
- Provides specific text boxes that explain anatomical variants, radiological advices and physiological findings linked to tracer bio-distribution

## DESCRIPTION

*Atlas of Hybrid Imaging of the Heart, Lymph Nodes and Musculoskeletal System, Volume Three: Sectional Anatomy for PET/CT, PET/MRI and SPECT/CT* provides a guide for interpreting PET and SPECT in relation to co-registered CT and/or MRI. In this atlas, exclusively dedicated to heart, lymph nodes and musculoskeletal system, nuclear physicians and radiologists cover hybrid nuclear medicine based on their own case studies. The practical structure in two-page unit offers readers a navigational tool based on anatomical districts, with labeled and explained low-dose multiplanar CT or MRI views merged with PET fusion imaging on one side and enhanced CT or MRI on the other.

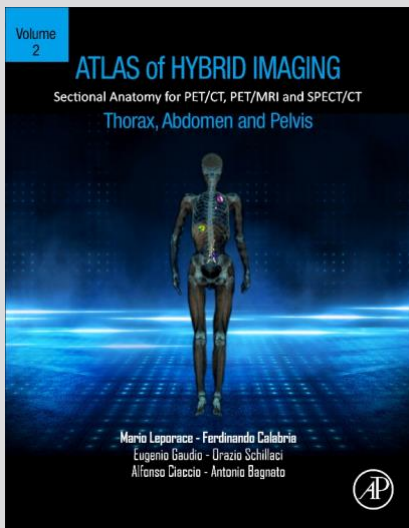
This new format enables the rapid identification of hybrid nuclear medicine findings which are now routine at leading medical centers. Each chapter begins with three-dimensional CT and/or MRI views of the evaluated anatomical region, bringing forward sectional tables. Clinical cases, tricks and pitfalls linked to several PET or SPECT radiopharmaceuticals help introduce the reader to peculiar molecular pathways and improve confidence in cross-sectional imaging that is vital for accurate diagnosis and treatments.



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LIFE SCIENCES Medical  
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# Atlas of Hybrid Imaging Sectional Anatomy for PET/CT, PET/MRI and SPECT/CT Vol. 2: Thorax Abdomen and Pelvis

## Sectional Anatomy for PET/CT, PET/MRI and SPECT/CT

**Mario Leporace**, Clinical Radiologist, Cosenza Hospital, Italy; **Ferdinando Calabria**, Nuclear Physician, Cosenza Hospital, Italy; **Eugenio Gaudio**, MD-PhD, Professor of Human Anatomy, "La Sapienza" University, Rome, Italy; **Orazio Schillaci**, Professor of Nuclear Medicine, "Tor Vergata" University, Rome, Italy; **Alfonso Ciaccio**, Nuclear Physician, Cosenza Hospital, Italy and **Antonio Bagnato**, Nuclear Physician, Cosenza Hospital, Italy

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**FORMAT:** Paperback  
**TRIM:** 8.5w x 10.875h  
**PAGES:** c. 344  
**AUDIENCE:** Nuclear Physicians and residents in Nuclear Medicine, Radiologists  
**BIC CODES:** PSA  
**THEMA CLASSIFICATION:** THEMAPS

**A comprehensive, easy-to-read guide to sectional imaging and multiplanar evaluation of hybrid imaging in the thorax, abdomen and pelvis**

### KEY FEATURES

- Presents a compact, comprehensive, easy-to-read guide on sectional imaging and multiplanar evaluation of hybrid PET and SPECT
- Includes more than 200 fully colored, labeled, high quality original images of axial, coronal and sagittal CT, contrast enhanced CT, PET/CT and/or PET/MRI
- Displays clinical cases that showcase both common and unusual findings that nuclear physicians and radiologists could encounter in their clinical practice
- Provides specific text boxes that explain anatomical variants, radiological advices and physiological findings linked to tracer bio-distribution

### DESCRIPTION

*Atlas of Hybrid Imaging of the Thorax, Abdomen and Pelvis, Volume Two: Sectional Anatomy for PET/CT, PET/MRI and SPECT/CT* provides a guide for interpreting PET and SPECT in relation to co-registered CT and/or MRI. In this atlas, exclusively dedicated to thorax, abdomen and pelvis, nuclear physicians and radiologists cover hybrid nuclear medicine based on their own case studies. The practical structure in two-page unit offers readers a navigational tool based on anatomical districts, with labeled and explained low-dose multiplanar CT or MRI views merged with PET fusion imaging on one side and enhanced CT or MRI on the other.

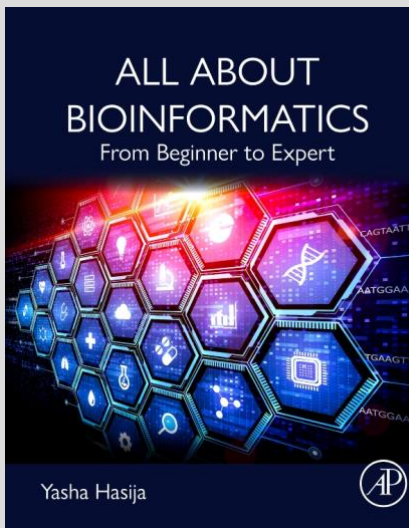
This new format enables the rapid identification of hybrid nuclear medicine findings which are now routine at leading medical centers. Each chapter begins with three-dimensional CT and/or MRI views of the evaluated anatomical region, bringing forward sectional tables. Clinical cases, tricks and pitfalls linked to several PET or SPECT radiopharmaceuticals help introduce the reader to peculiar molecular pathways and improve confidence in cross-sectional imaging that is vital for accurate diagnosis and treatments.



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# All About Bioinformatics

From Beginner to Expert

Yasha Hasija, Professor, Department of Biotechnology, Delhi Technological University, India

**ISBN:** 9780443152504  
**PUB DATE:** Apr 11, 2023  
**LIST PRICE:** £115.00 / \$150.00 /  
€130.00  
**DISCOUNT:**  
**FORMAT:** Paperback  
**TRIM:** 7.5w x 9.25h  
**PAGES:** c. 300  
**AUDIENCE:** Researchers and  
graduate students in bioinformatics,  
Researchers and graduate students in  
life sciences  
**BIC CODES:** MBF  
**THEMA CLASSIFICATION:**  
THEMAPSAX

**Provides fundamental and current knowledge on bioinformatics**

## KEY FEATURES

- Presents a holistic learning experience, beginning with an introduction to bioinformatics to recent advancements in the field
- Discusses bioinformatics as a practice rather than in theory focusing on more application-oriented topics as high-throughput technologies, system and network biology, and workflow management systems
- Encompasses chapters on statistics and machine learning to assist readers in deciphering trends and patterns in biological data

## DESCRIPTION

*All About Bioinformatics: From Beginner to Expert* provides readers with an overview of the fundamentals and advances in the field of bioinformatics, as well as some future directions. Each chapter is didactically organized and includes introduction, applications, tools, and future directions to cover the topics thoroughly.

The book covers both traditional topics such as biological databases, algorithms, genetic variations, static methods, and structural bioinformatics, as well as contemporary advanced topics such as high-throughput technologies, drug informatics, system and network biology, and machine learning. It is a valuable resource for researchers and graduate students who are interested to learn more about bioinformatics to apply in their research work.

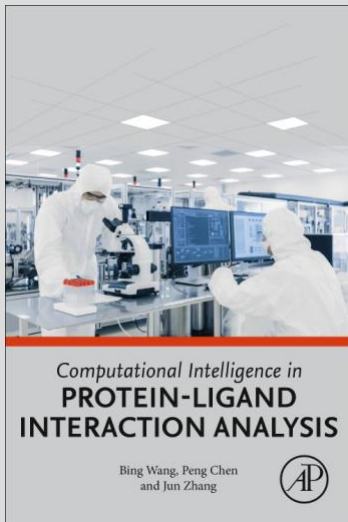


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# Computational Intelligence in Protein-Ligand Interaction Analysis

**Bing Wang**, Dean, School of Electrical and Electronics Information, Anhui University of Technology, China; **Peng Chen**, Professor, Institute of Physical Science and Information Technology, School of the Internet, Anhui University, China and **Jun Zhang**, Professor, Anhui University, China

**ISBN:** 9780128243862  
**PUB DATE:** Jun 01, 2023  
**LIST PRICE:** £157.00 / \$200.00 / €175.00

**DISCOUNT:**

**FORMAT:** Paperback

**TRIM:** 6w x 9h

**PAGES:** c. 300

**ILLUSTRATIONS:** 60 illustrations (30 in full color)

**AUDIENCE:** Researchers working on bioinformatics and computational intelligence algorithms, biophysics, computational biology, molecular modelling, and drug design, Graduate students in bioinformatics, protein bioinformatics, proteomics, protein engineering, structural bioinformatics, and computational biology

**BIC CODES:** PSD

**THEMA CLASSIFICATION:** THEMAPSD

**Presents computational intelligence approaches to protein-ligand interactions**

## KEY FEATURES

- Presents a guide to computational techniques for protein-ligand interaction analysis
- Guides researchers in developing advanced computational intelligence methods for the protein-ligand problem
- Identifies appropriate computational tools for various problems
- Demonstrates the use of advanced techniques such as vector machine, neural networks, and machine learning
- Offers the computational, mathematical and statistical skills researchers need

## DESCRIPTION

*Computational Intelligence in Protein-Ligand Interaction Analysis* presents computational techniques for predicting protein-ligand interactions, recognizing protein interaction sites, and identifying protein drug targets. The book emphasizes novel approaches to protein-ligand interactions, including machine learning and deep learning, presenting a state-of-the-art suite of skills for researchers. The volume represents a resource for scientists, detailing the fundamentals of computational methods, showing how to use computational algorithms to study protein interaction data, and giving scientific explanations for biological data through computational intelligence. Fourteen chapters offer a comprehensive guide to protein interaction data and computational intelligence methods for protein-ligand interactions.



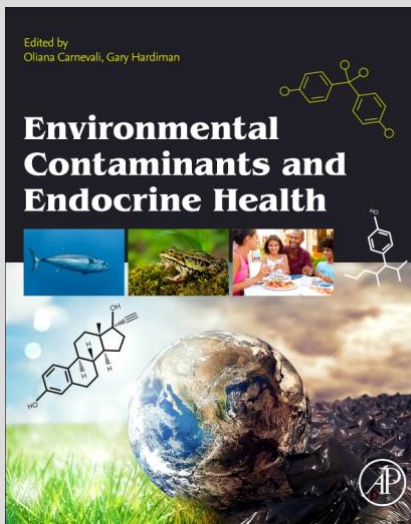
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# Environmental Contaminants and Endocrine Health

Edited by : **Oliana Carnevali**, Professor of Developmental Biology, Polytechnic University of Marche, Italy and **Gary Hardiman**, Professor, Faculty of Medicine, Health and Life Sciences, School of Biological Sciences, Queen's University, Ireland

**ISBN:** 9780128244647  
**PUB DATE:** Jun 01, 2023  
**LIST PRICE:** £126.00 / \$165.00 / €143.00

**DISCOUNT:**

**FORMAT:** Paperback

**TRIM:** 8.5w x 10.875h

**PAGES:** c. 400

**ILLUSTRATIONS:** 100 illustrations (25 in full color)

**AUDIENCE:** Academic/research staff in endocrinology and toxicology, professors, researchers, students (background content for Ecotoxicology courses), Chemical industry managers and researchers

**BIC CODES:** MJG

**THEMA CLASSIFICATION:** THEMAMFGM; THEMAMJG

**An engaging and in-depth review of the endocrine disruptors that have explicit hormonal disrupting activities**

## KEY FEATURES

- Includes important foundational coverage of the endocrine system, definitions of EDC sources and descriptions, model examples and mechanisms of action biological effects
- Provides coverage of EDC effects in humans and animals, from metabolic alterations to epidemiological studies of fertility and metabolism
- Presents insights into the confirmed and suspected human diseases spectrum with origins linked to EDC exposure, including cancers, intellectual disabilities, autism, birth defects of the urethra (hypospadias), decreased sperm count, increased rates of miscarriage, obesity, type 2 diabetes, and more

## DESCRIPTION

*Environmental Contaminants and Endocrine Health* focuses specifically on contaminants with hormonal disrupting activities. The book provides insights into the multiple effects of endocrine-disrupting chemicals (EDCs) and their mechanism of action (MoA) on metabolism, reproduction and the multiple physiological roles of the endocannabinoid system which has recently been indicated as new target. The content systematically covers EDC sources and effects, EDCs as sources of disease and health impairment in laboratory models, EDCs as the cause of disease and health impairment in humans and wild species, and the removal of hazardous pollutants from wastewaters to highlight intervention, mitigation and adaptation for reduced threat.

This content will be a foundational resource for academic and research staff in endocrinology and hormone toxicology as well as for professors, researchers and students in these areas.

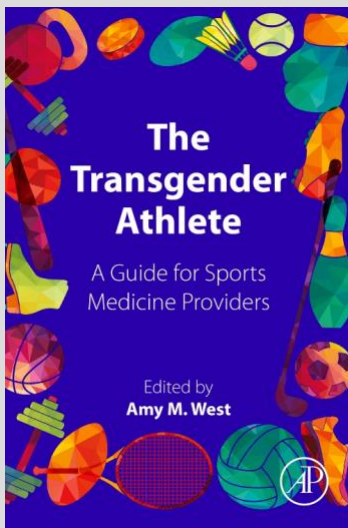


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# The Transgender Athlete

## A Guide for Sports Medicine Providers

Edited by : **Amy M. West**, A specialist in sports medicine and physical medicine and rehabilitation, Amy West, MD, EdM, FAAPMR is a graduate of Harvard Medical School, completed her residency in Physical Medicine and Rehabilitation at Harvard-Spaulding Rehabilitation Hospital and her fellowship in Sports Medicine at Maine Medical Center

**ISBN:** 9780323916196

**PUB DATE:** Jun 01, 2023

**LIST PRICE:** £115.00 / \$150.00 / €131.00

**DISCOUNT:**

**FORMAT:** Paperback

**TRIM:** 6w x 9h

**PAGES:** c. 280

**ILLUSTRATIONS:** 70 illustrations (60 in full color)

**AUDIENCE:** Sports medicine providers including physicians, physical therapists, athletic trainers, and researchers who work with athletes

**BIC CODES:** PSA

**THEMA CLASSIFICATION:** THEMAPS

**A sports medicine reference about transgender athletes for practitioners in the field**

### KEY FEATURES

- Covers the types of treatments, surgeries and affects of musculoskeletal health of transgender athletes
- Intended for sports medicine providers, including physicians, physical therapists, athletic trainers and researchers who work with athletes
- Written by experts in the sports medicine field

### DESCRIPTION

*The Transgender Athlete: A Guide for Sports Medicine Providers* presents sports medicine practitioners insights into the unique issues and concerns of transgender athletes in order to help them understand rules regarding transgender athlete participation and learn how to better provide competent care to transgender athletes. There are over 1.4 million transgender adults in the United States. Transgender individuals undergo gender-affirming treatments including sex hormone therapy and gender-affirming surgery. An increasing number of transgender people are participating in sports and presenting to sports medicine clinics with injuries, yet there is little research about this athlete population.

It is important that sports medicine providers understand the types of hormone treatments and surgeries and how these changes affect the musculoskeletal health of transgender people. Additionally, transgender people may require specific considerations when interacting with medical providers. Furthermore, sports medicine providers are often consulted to formulate transgender athlete inclusion policy. These policies are continuously changing, as new evidence becomes available, which may be difficult to understand without knowledge of the gender transition process.



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COVER IMAGE  
FORTHCOMING

# Insulin

## Deficiency, Excess and Resistance in Human Disease

Edited by : **Andrew J. Krentz**, Visiting Professor, Institute of Cardiovascular and Metabolic Research, University of Reading, UK

**ISBN:** 9780323917070  
**PUB DATE:** Oct 01, 2023  
**LIST PRICE:** £115.00 / \$150.00 / €131.00  
**DISCOUNT:**  
**FORMAT:** Paperback  
**TRIM:** 7.5w x 9.25h  
**PAGES:** c. 290  
**AUDIENCE:** Basic and clinical researchers involved in the management of patients with insulin-related disorders, endocrinologists and diabetologists.  
**BIC CODES:** MJGD, MJG  
**THEMA CLASSIFICATION:** THEMAMJG; THEMAMFGM

**State-of-the-art overview of the etiopathogenesis of insulin deficiency, insulin excess and insulin resistance in a wide spectrum of human diseases**

### KEY FEATURES

- Presents etiology and pathogenesis of insulin deficiency, insulin excess and insulin resistance in a wide spectrum of human diseases, ranging from rare to highly prevalent disorders
- Discusses the latest developments in the diagnosis and management of insulin-related disorders and prospects for future developments
- Explores the increasingly complex pharmacological landscape that comprises a bewildering range of drug-based interventions

### DESCRIPTION

*Insulin: Deficiency, Excess and Resistance in Human Disease* provides an overview of the role of insulin in the pathogenesis of prevalent non-communicable diseases such as obesity, type 2 diabetes, cardiovascular disease, and cancer, along with a comprehensive review of insulin replacement therapies and novel cardioprotective and insulin-sensitizing drugs. Notable advances in precision diagnosis and therapy for single gene subtypes of diabetes in recent years are also discussed.

The discovery of insulin and its lifesaving introduction into clinical practice is one of the most celebrated accomplishments of medical science. However, despite decades of progress and major technical advances, the goal of providing insulin replacement therapy that truly mimics normal physiology remains elusive.

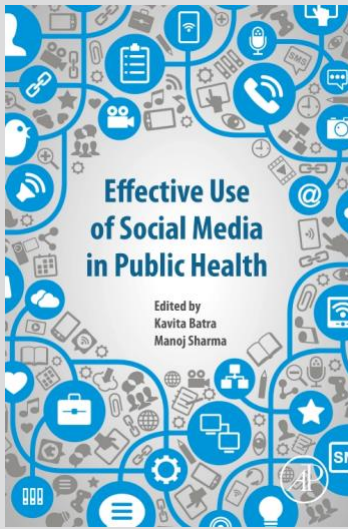


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# Effective Use of Social Media in Public Health

Edited by : **Kavita Batra**, PhD, Assistant Professor and Senior Biostatistician, Kirk Kerkorian School of Medicine at UNLV, Las Vegas, Nevada, USA and **Manoj Sharma**, Full Professor and Chair of the Social and Behavioral Health, University of Nevada Las Vegas, NV, USA

**ISBN:** 9780323956307  
**PUB DATE:** Jun 01, 2023  
**LIST PRICE:** £115.00 / \$150.00 / €131.00  
**DISCOUNT:**  
**FORMAT:** Paperback  
**TRIM:** 6w x 9h  
**PAGES:** c. 230  
**AUDIENCE:** Researchers, Scientists, Practitioners, Undergraduate and Graduate Students in the areas of Public Health  
**BIC CODES:** PSA  
**THEMA CLASSIFICATION:** THEMAPS

**Presents the use and application of social media in public health to those teaching and researching in the space**

## KEY FEATURES

- Provides complete and comprehensive landscape of social media-based applications and their uses among diverse population groups
- Covers current uses and applications of social media, including coverage of issues such as cyberbullying, infodemiology, and program diversity and inclusion
- Includes content from authors from public health and interdisciplinary areas who deliver a holistic view of the subject matter

## DESCRIPTION

*Effective use of Social Media in Public Health* offers a well-organized and comprehensive review of social media and its impact on people's lives and the public health sector. Divided into sections, the book addresses the growing use (and importance) of social media in conducting and disseminating research findings and covers an array of issues from cyberbullying to diversity and inclusion. Written by health educators and practitioners for health educators and practitioners, this book is a timely resource on the topics discussed.

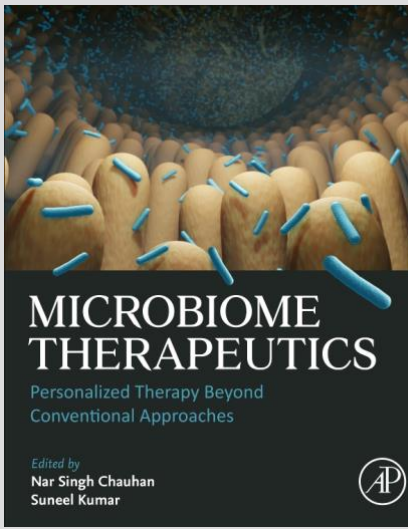


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# Microbiome Therapeutics

## Personalized Therapy Beyond Conventional Approaches

Edited by : **Nar Singh Chauhan**, Department of Biochemistry, Maharshi Dayanand University, Rohtak, India and **Suneel Kumar**, Department of Biomedical Engineering, Rutgers, The State University of New Jersey, NJ, USA

**ISBN:** 9780323993364  
**PUB DATE:** Jun 01, 2023  
**LIST PRICE:** £127.00 / \$165.00 / €144.00  
**DISCOUNT:**  
**FORMAT:** Paperback  
**TRIM:** 7.5w x 9.25h  
**PAGES:** c. 419  
**AUDIENCE:** Researchers, Academics and Medical Practitioners in the area of microbiome research and therapy  
**BIC CODES:** PSA  
**THEMA CLASSIFICATION:** THEMAPS

**Provides a comprehensive overview of the current knowledge and landscape of microbiome therapeutics**

### KEY FEATURES

- Provides chapters focused on illness types to address the potential of microbiome therapeutics in several significant disorders
- Offers human gut microbiome explorations that have enriched the understanding of microbiome colonization, maturation, and dysbiosis in health and disease subsets
- Addresses important concepts like economic potential in the global therapeutics market as well as ethical, technical, and regulatory aspects

### DESCRIPTION

*Microbiome Therapeutics: Personalized Therapy Beyond Conventional Approaches* addresses the current knowledge and landscape of microbiome therapeutics, providing an overview of existing applications in health and disease as well as potential future directions of microbiome modulations and subsequent translation to the global industry and market. This important reference provides the most current status of microbiome therapeutics as well as possible future perspectives through coverage of topics including the application of microbiome therapeutics; various additive, subtractive and modulatory approaches; microbiome composition of health and diseases, insights into live bio-therapeutics and the clinical data supporting their efficacy.

Case studies are provided throughout the book to further define, describe and evaluate microbiome therapeutics success and failure.

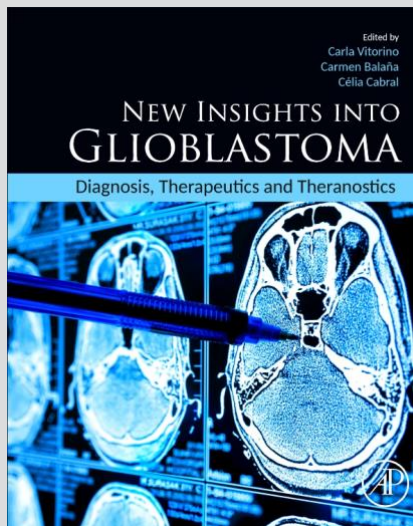


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# New Insights into Glioblastoma

## Diagnosis, Therapeutics and Theranostics

Edited by : **Carla Vitorino**, Assistant Professor, Faculty of Pharmacy, University of Coimbra, Coimbra, Portugal; **Carmen Balana**, MD, PhD, Catalan Institute of Oncology, Badalona/Barcelona, Spain and **Célia Cabral**, PhD, Coimbra Institute for Clinical and Biomedical Research (iCBR), Center for Innovative Biomedicine and Biotechnology (CIBB), Clinic Academic Center of Coimbra (CACC), Faculty of Medicine, University of Coimbra, Portugal

**ISBN:** 9780323998734

**PUB DATE:** Jun 01, 2023

**LIST PRICE:** £138.00 / \$180.00 /

€160.00

**DISCOUNT:**

**FORMAT:** Paperback

**TRIM:** 7.5w x 9.25h

**PAGES:** c. 599

**ILLUSTRATIONS:** 130 illustrations  
(80 in full color)

**AUDIENCE:** Graduate students and researchers on cancer/oncology, Graduate students and researchers on neuroscience and behavioral science

**BIC CODES:** PSA

**THEMA CLASSIFICATION:**

THEMAPS

**Addresses recent advances in glioblastoma diagnosis and treatment, focusing on both potential molecules and/or therapeutic strategies**

### KEY FEATURES

- Provides guidance towards recent advances of new chemical entities and delivery strategies targeted to glioblastoma
- Includes overviews to help readers apply information in their research
- Encompasses summarizing diagrams and real-world examples to facilitate comprehension and enhance the applicability of the content

### DESCRIPTION

*New Insights into Glioblastoma: Diagnosis, Therapeutics and Theranostics* provides a compendium of recent diagnostic and therapeutic advances in GBM, encompassing a pipeline of compounds and (bio) nanotechnology strategies that have stood out with potential increased antitumoral activity and capability to cross the blood-brain barrier. Issues and challenges related to their translation into the clinical practice and their contribution to the increase in survival rates and well-being of patients are addressed. This is a valuable resource for graduate students, oncologists, cancer researchers and members of the biomedical field who need to learn more on recent developments on the management of glioblastoma.

The book is split in three parts: Diagnosis, focusing on biomarkers and techniques such PET/MRI, infrared thermography, and deep neural networks; Therapeutics, discussing new chemical entities, as natural products and repurposed drugs, and new formulation approaches, as nanotechnology-based and microRNA approaches; and Theranostics, explaining the role of omics, system-based approaches, and glioblastoma microenvironment.

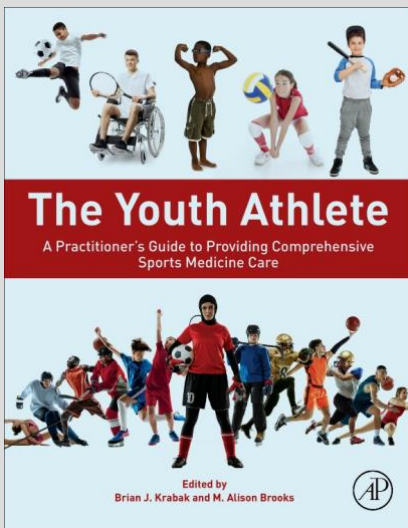


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# The Youth Athlete

## A Practitioner's Guide to Providing Comprehensive Sports Medicine Care

Edited by : **Brian J. Krabak**, Clinical Professor, University of Washington and Seattle Children's Sports Medicine, Seattle, WA, USA and **M. Alison Brooks**, University of Wisconsin – Madison School of Medicine and Public Health, Madison, WI, USA

**ISBN:** 9780323999922  
**PUB DATE:** Jun 01, 2023  
**LIST PRICE:** £127.00 / \$165.00 / €144.00  
**DISCOUNT:**  
**FORMAT:** Paperback  
**TRIM:** 8.5w x 10.875h  
**PAGES:** c. 750  
**ILLUSTRATIONS:** 300 illustrations (100 in full color)  
**AUDIENCE:** Physicians (primary care and specialists), nurse practitioners, physician assistants, athletic trainers, and physical therapists, Students preparing for their Sports Medicine Board Certification, experienced teaching clinicians  
**BIC CODES:** PSA  
**THEMA CLASSIFICATION:** THEMAPS

**A sports medicine reference about the youth athlete for practitioners in the field**

### KEY FEATURES

- Covers diverse topics that reflect our current understanding of youth athletes and issues related to their care
- Incorporates evidence-based approach, highlighting the latest state-of-the-art information and research
- Written by global content experts throughout the sports medicine field

### DESCRIPTION

*The Youth Athlete: A Practitioner's Guide to Providing Comprehensive Sports Medicine Care* includes topics that provide the most comprehensive and holistic understanding of the youth athlete. The foundation of the book focuses on the growth and development of the athlete from child to adolescence, balancing their physical, mental and emotional needs. The middle sections expand on this foundation, concentrating on common injuries and illnesses as well as unique topics (e.g., Female, Athlete Triad, Sports Specialization). Final sections emphasize specific sports (e.g., Soccer, Basketball, eSports), allowing the reader to synthesize the previous information to assist with return to play decision-making.

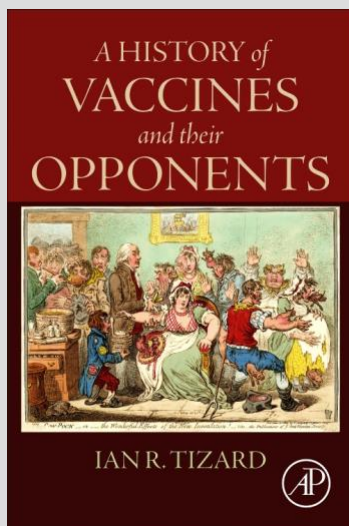
Written from a scientific perspective and incorporating evidence-based medicine into its content, this book is perfect for health care practitioners of varied specialties. The complete and comprehensive structure of the book will clearly distinguish it from all other textbooks on the market.



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# A History of Vaccines and their Opponents

Ian R Tizard, Texas A & M University, College Station, Texas, USA

**ISBN:** 9780443134340  
**PUB DATE:** Apr 28, 2023  
**LIST PRICE:** £115.00 / \$150.00 / €130.00  
**DISCOUNT:**  
**FORMAT:** Paperback  
**TRIM:** 6w x 9h  
**PAGES:** c. 352  
**AUDIENCE:** Medical professionals, Immunologists, Epidemiologists, Biomedical Science students, Premedical and Pre-nursing students Interested laypersons, Medical historians  
**BIC CODES:** PSA  
**THEMA CLASSIFICATION:** THEMAPS

**Provides a history of the opposition to immunization which began when vaccines were first introduced and persists to the present day**

## KEY FEATURES

- Demonstrates vaccine hesitancy is not new and is widespread around the world
- Presents the history of the opposition to immunization
- Provides counterarguments to the opposition today

## DESCRIPTION

The coronavirus pandemic that began in 2019 brought to the fore the presence of a significant minority of individuals who strongly oppose vaccination. This opposition is by no means recent. Ever since the very first attempts to immunize individuals, opposition has been intense in some societies. The reasons for this opposition range from religious to political to medical. Although vaccines have eliminated smallpox and largely eliminated polio and measles, opposition to vaccination persists and, in some countries, has grown stronger.

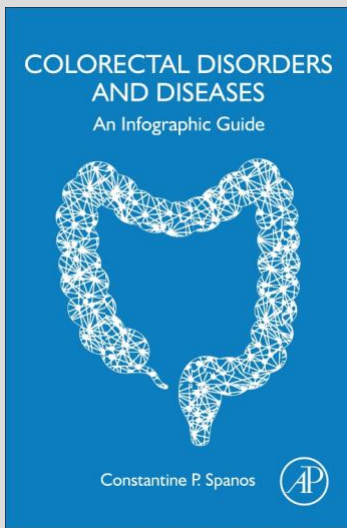
*A History of Vaccines and Their Opponents* seeks to describe the history of this opposition as well as its changing rationale over the years and in different societies. The discussion may ultimately provide some suggestions for reducing hesitancy in the future.



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# Colorectal Disorders and Diseases

## An Infographic Guide

Constantine P. Spanos, MD, PhD, FACS, FASCRS, MBA., Associate Professor, Aristotle University of Thessaloniki, Thessaloniki, Greece

**ISBN:** 9780443156489  
**PUB DATE:** Jun 01, 2023  
**LIST PRICE:** £115.00 / \$150.00 / €131.00  
**DISCOUNT:**  
**FORMAT:** Paperback  
**TRIM:** 7.5w x 9.25h  
**PAGES:** c. 186  
**AUDIENCE:** Scientists that need a quick reference for research of colorectal issues including epidemiology, diagnosis and therapy; Clinicians, surgeons, and medical students rotating in colorectal surgery. Instructors of surgery  
**BIC CODES:** PSA  
**THEMA CLASSIFICATION:** THEMAPS

**Presents comprehensive coverage of the most relevant diagnostic modalities, staging, classification systems and current therapeutic modalities for colorectal disorders and diseases**

### KEY FEATURES

- Provides in-depth coverage of mechanisms, helping users quickly recognize the indications that are connected to specific medical conditions
- Spans the epidemiology, diagnostic modalities, staging, classification systems, and therapy of colorectal diseases and disorders
- Presents Infographics with engaging visuals which allows users to retain a large amount of information without the need to scroll through large text or complex algorithms

### DESCRIPTION

*Colorectal Disorders and Diseases: An Infographic Guide* provides a comprehensive and up-to-date overview of the most relevant diagnostic modalities, staging, classification systems and current therapeutic modalities for colorectal disorders and diseases. With coverage from incontinence, prolapse, anal fissures, and cancer, this reference offers a wide-ranging guide to colorectal disorders and diseases. The use of engaging infographics throughout provides an inviting “at-a-glance” perspective of the subject, allowing users to retain a large amount of information without the need to scroll through large text or complex algorithms.

This is an important reference for clinicians, surgeons and medical students rotating in colorectal surgery as well as scientists that need a quick reference for research of colorectal issues including epidemiology, diagnosis and therapy.



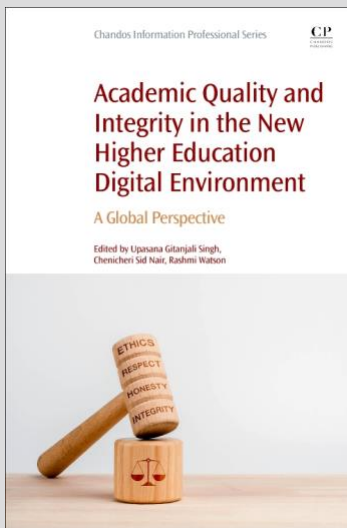
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# Academic Quality and Integrity in the New Higher Education Digital Environment

## A Global Perspective

Edited by : **Upasana Gitanjali Singh**, Senior Lecturer, Discipline of Information Systems and Technology, University of KwaZulu Natal, Westville Campus, Durban South Africa; **Chenicheri Sid Nair**, Executive Dean and Dean Learning, Teaching and Student Experience, Victorian Institute of Technology (VIT), Australia and **Rashmi Watson**, Associate Professor, Assessment in Medical Education, The University of Western Australia, Australia

**ISBN:** 9780323954235  
**PUB DATE:** Jun 01, 2023  
**LIST PRICE:** £85.95 / \$112.00 / €97.95  
**DISCOUNT:**  
**FORMAT:** Paperback  
**TRIM:** 6w x 9h  
**PAGES:** c. 430  
**AUDIENCE:** Academics and management of Higher Education Institutions (HEI)s, teachers and administrators in HEIs globally, graduate certificate programmes on higher education teaching, Regulatory bodies (such as national and regional higher education officials), professional bodies and quality assurance oversight bodies or regulators  
**BIC CODES:** GL  
**THEMA CLASSIFICATION:** THEMAGLC

**Examines the key area of quality assurance and academic integrity in universities**

A Volume in the *Chandos Information Professional Series* Series

### KEY FEATURES

- Provides updates on what university administrators are doing to face challenges on how to maintain the quality of their programs during digital learning
- Addresses concerns on the quality of their programs and academic integrity is maintained at all times
- Proposes new practices and innovative approaches to bring to the attention of stakeholders in a central depository so that there can be informed approaches in institutions and in the set up of regulatory practices

### DESCRIPTION

*Academic Quality and Integrity in the New Higher Education Digital Environment: A Global Perspective* provides discussions on the work of three editors who have significant experience in the quality assurance of teaching and learning and have been developing approaches during the recent COVID-19 pandemic. Discussions on learning and teaching during the pandemic were concentrated on how academic institutions ensure quality of courses, and that academic integrity is maintained in all assessments in a digital environment, thus ensuring what is being delivered meets global standards and professional bodies have confidence in programs delivered by the higher education sector.

The area of quality assurance and academic integrity is thus critical in this new digital environment where significant educational programs will be delivered.

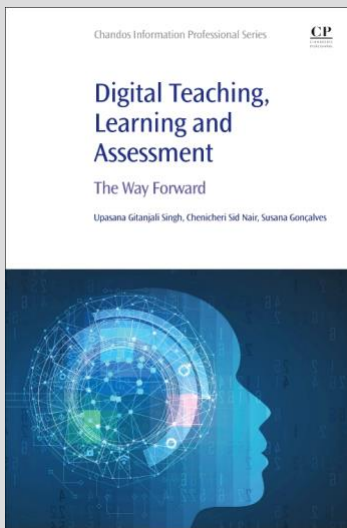


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**LIBRARY & INFORMATION STUDIES**

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# Digital Teaching, Learning and Assessment

## The Way Forward

Edited by : **Upasana Gitanjali Singh**, Senior Lecturer, Discipline of Information Systems and Technology, University of KwaZulu Natal, Westville Campus, Durban South Africa; **Chenicheri Sid Nair**, Executive Dean and Dean Learning, Teaching and Student Experience, Victorian Institute of Technology (VIT), Australia and **Susana Goncalves**, Professor, Polytechnic of Coimbra, Coimbra, Portugal

**ISBN:** 9780323955003  
**PUB DATE:** Jun 01, 2023  
**LIST PRICE:** £85.95 / \$112.00 / €96.95

**DISCOUNT:**

**FORMAT:** Paperback

**TRIM:** 6w x 9h

**PAGES:** c. 430

**AUDIENCE:** Academics and management of Higher Education Institutions (HEIs), The book should reach teachers and administrators in HEIs globally, It could also become an essential reader in graduate certificate programmes on higher education teaching, Regulatory bodies (such as national and regional higher education officials), professional bodies and quality assurance oversight bodies or regulators

**BIC CODES:** GL

**THEMA CLASSIFICATION:**  
THEMAGLC

**Discusses how the digital world will dominate and change the teaching and learning space**

A Volume in the *Chandos Information Professional Series* Series

### KEY FEATURES

- Provides the new post-pandemic audience a futuristic look at the new digital world
- Covers how practitioners perceive this new era
- Enables administrators to have a glance at the possibilities of teaching and learning of the future
- Gives regulatory bodies a glimpse of the future as they try to find how QA would be for such teaching and learning that deviates significantly from didactic approaches

### DESCRIPTION

*Digital Teaching, Learning and Assessment: The Way Forward* is the result of the continuous discussion taking place in the teaching and learning space of what the future holds for academics and their stakeholders, post pandemic students. The editors of this book work in the teaching and learning domain and consider such discussion critical to ensure that students of the future are well serviced by all concerned. The book brings such discussions to one platform where academics, administrators and other stakeholders like researchers and regulatory bodies ponder ideas and practices and how the digital world will dominate and change the teaching/learning space.



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COVER IMAGE  
FORTHCOMING

# 33rd European Symposium on Computer Aided Process Engineering, Vol 52

## ESCAPE-33

Edited by : **Antonios C. Kokossis**, Co-director, National Technology Platform for Sustainable Chemistry, a National Representative of Directorate I (Climate Change and Environment), Affiliate of IEA Bioenergy and EERA Bioenergy, and the Greek Delegate of the Computer Aided Process Engineering (CAPE) group of EFCE, Athens, Greece; **Michael C. Georgiadis**, Honorary Senior Research Fellow, Department of Chemical Engineering, Imperial College London, UK and **Stratos Pistikopoulos**, Director, Texas A&M Energy Institute, Dow Chemical Chair, USA

**ISBN:** 9780443152740  
**PUB DATE:** Jun 10, 2023  
**LIST PRICE:** £465.00 / \$605.00 /  
€530.00

**DISCOUNT:**

**FORMAT:** Hardback

**TRIM:** 7.5w x 9.25h

**PAGES:** c. 1860

**AUDIENCE:** Chemical engineers,  
chemical process engineers,  
researchers in industry and academia,  
students, and consultants for chemical  
industries

**BIC CODES:** UFL, TDCB

**THEMA CLASSIFICATION:**

THEMAUFL; THEMATDC;

THEMAKJT

### Presents findings and discussions from the 33rd European Symposium of Computer Aided Process Engineering (ESCAPE) event

A Volume in the *Computer Aided Chemical Engineering* Series

#### KEY FEATURES

- Presents findings and discussions from the 33rd European Symposium of Computer Aided Process Engineering (ESCAPE) event

#### DESCRIPTION

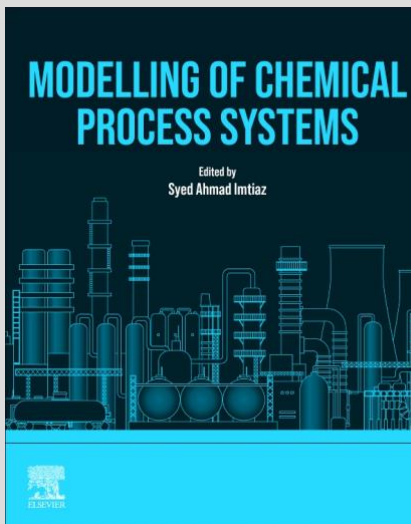
*33rd European Symposium on Computer Aided Process Engineering: ESCAPE-33, Volume 52* contains the papers presented at the 33rd European Symposium of Computer-Aided Process Engineering (ESCAPE) event held in Athens, Greece. It is a valuable resource for chemical engineers, chemical process engineers, researchers in industry and academia, students and consultants in the chemical industries.



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# Modelling of Chemical Process Systems

Edited by : **Syed Ahmad Imtiaz**, Dept Process Engineering, University of Alberta, Canada

**ISBN:** 9780128238691  
**PUB DATE:** Jun 01, 2023  
**LIST PRICE:** £155.00 / \$200.00 / €175.00

**DISCOUNT:**

**FORMAT:** Paperback

**TRIM:** 7.5w x 9.25h

**PAGES:** c. 300

**AUDIENCE:** Graduate students, researchers in academia and industry, engineering consultants working in consulting companies and chemical engineering sectors (e.g. petroleum refining), pharmaceuticals, renewable energy, etc.

**BIC CODES:** UFL, TDCB

**THEMA CLASSIFICATION:**

THEMAKJT; THEMATDC;

THEMAUFL

**Provides step-by-step methodologies for building chemical process systems through theory and several case studies**

## KEY FEATURES

- Includes case studies that explain step-by-step modeling methodologies
- Covers detailed multiscale modeling of chemical processes, providing examples from traditional and novel areas
- Provides modeling at microscopic and macroscale levels, including machine learning techniques

## DESCRIPTION

*Modelling of Chemical Process Systems* gives readers a feel for multiscale modeling. The book starts with the history of modeling and its usefulness, describing modeling steps in detail. Examples have been chosen carefully from both conventional chemical process systems to contemporary systems, including fuel cell and micro reforming processes. Each chapter is accompanied by a case study that explains the step-by-step modeling methodology. The book also introduces the application of machine learning techniques to model chemical process systems.

When combined, the information in the book makes it an indispensable reference for academics and professionals working in modeling and simulation.



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# NANOTECHNOLOGY FOR BIOREFINERY

Edited by  
**Avinash P. Ingle**



## Nanotechnology for Biorefinery

Edited by : **Avinash P. Ingle**, Post-doctoral fellow, Department of Biotechnology, Engineering School of Lorena - University of Sao Paulo, Brazil

**ISBN:** 9780323959650  
**PUB DATE:** Jun 01, 2023  
**LIST PRICE:** £175.00 / \$225.00 /  
€200.00

**DISCOUNT:**

**FORMAT:** Paperback

**TRIM:** 6w x 9h

**PAGES:** c. 380

**AUDIENCE:** Students, graduates and researchers working on biorefineries in chemical engineering, chemistry, materials science and engineering

**BIC CODES:** TC

**THEMA CLASSIFICATION:**  
THEMATDC

**Focuses on the role of biotechnology and nanotechnology in the production of high value biorefining products**

### KEY FEATURES

- Covers the wide range of applications of bio and nanotechnology in biorefinery
- Includes discussions of recent developments as well as step-by-step guidance on key procedures and processes

### DESCRIPTION

*Nanotechnology for Biorefinery* takes an in-depth look at the emerging role of biotechnology and nanotechnology in biorefinery, considered to be one of the most important fields of research in the greener production of high-value products. With chapters covering the different types of nanomaterials, their properties and synthesis methods, the role of nanotechnology in biorefinery, recent advances and challenges, nanobiocatalysts and the applications of nanotechnology in biorefinery, this book will be of interest to students and researchers alike. It will assist users in their quest to develop cost-effective and environmentally-friendly production methods for various biorefining products.

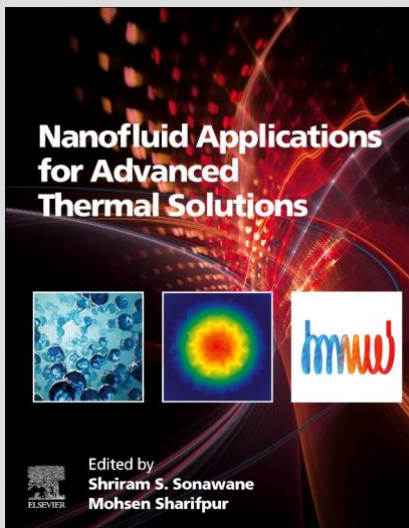


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# Nanofluid Applications for Advanced Thermal Solutions

Edited by : **Shriram S. Sonawane**, Professor, Chemical Engineering, Visvesvaraya National Institute of Technology Nagpur, India and **Mohsen Sharifpur**, Professor, Department of Mechanical and Aeronautical Engineering, University of Pretoria, South Africa

**ISBN:** 9780443152399  
**PUB DATE:** Jun 01, 2023  
**LIST PRICE:** £155.00 / \$200.00 / €175.00  
**DISCOUNT:**  
**FORMAT:** Paperback  
**TRIM:** 7.5w x 9.25h  
**PAGES:** c. 256  
**AUDIENCE:** Upper undergraduate, postgraduate, and doctoral students and researchers in the fields of nanotechnology and nanofluids looking at heat transfer processes in chemical engineering and the petroleum industry  
**BIC CODES:** TGM  
**THEMA CLASSIFICATION:** THEMATGM

**Provides a comprehensive understanding of the heat transfer application of nanofluids in a variety of fields**

## KEY FEATURES

- Provides a comprehensive overview of the heat transfer application of nanofluids in a variety of fields
- Features numerical and experimental investigations of hybrid and mono nanoparticles based nanofluids
- Explores comparative performance investigations of various nanofluids for absorption/regeneration and metal extraction/stripping operations
- Provides case examples of operation and scale-up challenges for nanofluid applications in the industrial process

## DESCRIPTION

*Nanofluid Applications for Advanced Thermal Solutions* covers heat transfer applications of nanofluids in a variety of fields and the main techniques used in nanofluid flow and heat transfer analysis. The book features an introduction to heat transfer, nanofluid conduction, convection and nanofluid boiling and provides a thorough understanding of a variety of applications, including the energy storage component of solar PVT systems. It covers fundamental topics such as the analysis and measurement of thermophysical properties, convection, and heat transfer equipment performance, and provides a rigorous framework to assist readers in developing new nanofluid-based devices.

Finally, the book explores convective instabilities, nanofluids in porous media, and entropy generation in nanofluids. This will be a valuable resource for upper undergraduate, postgraduate, and doctoral students and researchers in the fields of nanotechnology and nanofluids looking at heat transfer processes in chemical engineering and the petroleum industry.



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COVER IMAGE  
FORTHCOMING

# Sustainable Technologies for Remediation of Emerging Pollutants from Aqueous Environment

Edited by : **Mohammad Hadi Dehghani**, Full Professor, Tehran University of Medical Sciences (TUMS), School of Public Health, Department of Environmental Health Engineering, Tehran, Iran; **Rama Rao Karri**, Senior Assistant Professor, Universiti Teknologi Brunei, Brunei Darussalam and **Inderjeet Tyagi**, Scientist, ZSI, Ministry of Environment Forest and Climate Change, Kolkata, India

**ISBN:** 9780443186189

**PUB DATE:** Jun 01, 2023

**LIST PRICE:** £180.00 / \$230.00 /

€200.00

**DISCOUNT:**

**FORMAT:** Paperback

**TRIM:** 7.5w x 9.25h

**PAGES:** c. 240

**AUDIENCE:** MSc and PhD students and researchers working on water and wastewater purification technologies, and water quality and pollution control, Chemists and environmental chemical engineers in green chemistry, Researchers and professionals in industries working on implementation of water and wastewater treatment technologies MSc and PhD students and researchers in environmental sciences and environmental pollution, Water and wastewater engineers and policy makers

**BIC CODES:** PSG, TC, TDCB, TQSW1

**THEMA CLASSIFICATION:**

THEMAPSG; THEMATDC;

THEMATQSW

**Single source reference with the latest information on applications of both conventional and non-conventional approaches to water and wastewater purification**

## KEY FEATURES

- Presents global impacts of pollutants in the water environment, including organic pollutants, inorganic pollutants and biological contamination
- Compares removal mechanisms of emerging pollutants by different purification technologies
- Applies conventional and non-conventional techniques to water and wastewater purification processes

## DESCRIPTION

*Sustainable Technologies for Remediation of Emerging Pollutants from Aqueous Environment* compiles and collates advanced technologies for the purification of water and wastewater. The book covers the biological purification of wastewater, the use of adsorbents for decontamination of water, the role of membrane technology and its composites for removing emerging pollutants, and applications of advanced oxidation processes (AOP) for removal of emerging pollutants. This resource provides a single source solution to academicians and young researchers by assembling the latest information on the application of the conventional and non-conventional in water and wastewater purification.

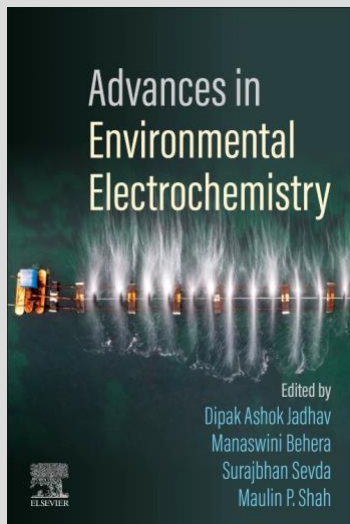


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# Advances in Environmental Electrochemistry

Edited by : **Dipak Ashok Jadhav**, Assistant Professor, Department of Agricultural Engineering, Maharashtra Institute of Technology, Aurangabad, India; **Manaswini Behera**, Assistant Professor, School of Infrastructure (Civil Engineering), Indian Institute of Technology, Bhubaneswar, India; **Surajbhan Sevda**, Assistant Professor, Department of Biotechnology, National Institute of Technology, Warangal, India and **Maulin P. Shah**, Researcher, Environmental Microbiology Lab, Gujarat, India

**ISBN:** 9780443188206  
**PUB DATE:** Nov 01, 2023  
**LIST PRICE:** £175.00 / \$225.00 / €200.00  
**DISCOUNT:**  
**FORMAT:** Paperback  
**TRIM:** 6w x 9h  
**PAGES:** c. 380  
**AUDIENCE:** Chemical Engineers, Environmental Engineers and Biotechnologists  
**BIC CODES:** TDCQ, TDCP  
**THEMA CLASSIFICATION:** THEMATGMP; THEMATGM; THEMATDPF

**Covers the fundamentals of environmental electrochemistry and its applications**

## KEY FEATURES

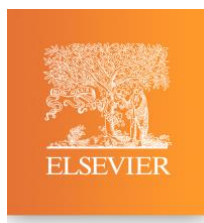
- Covers advances in bio-electrochemical systems for wastewater treatment and resource recovery
- Explains the role of electrochemistry and electrochemical techniques in environmental bioremediation
- Includes lifecycle analysis and a technoeconomic assessment of electrochemical-based reactors for environmental monitoring

## DESCRIPTION

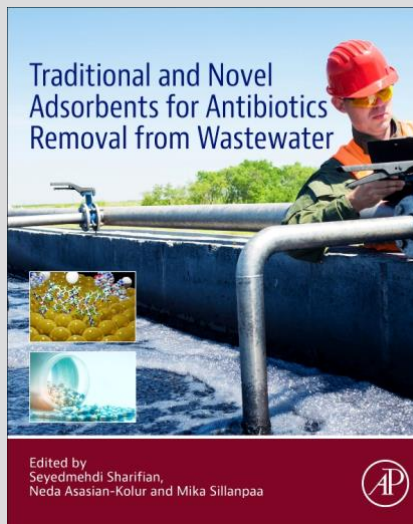
*Advances in Environmental Electrochemistry* provides the basics of environmental electrochemistry, including redox reactions for contaminant removal, bio-electrochemical systems, electrochemical reactor design and the various electrochemistry-based techniques for practical wastewater degradation, environmental remediation and bioenergy recovery from waste. Technologies acting as key indicators for addressing the various aspects of environmental electrochemistry are covered, along with comparisons to conventional methods and potential ways forward. This book will be of interest to chemical engineers, environmental engineers, and all those interested in environmental biotechnology, bio-electrochemical systems, electrochemical sensors, advanced oxidation processes, biological wastewater treatment, and waste to energy recovery.



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# Traditional and Novel Adsorbents for Antibiotics Removal from Wastewater

Edited by : **Seyedmehdi Sharifian**, Davidson School of Chemical Engineering, Purdue University, West Lafayette, IN, United States; **Neda Asasian-Kolur**, Technische Universität Wien, Institute of Chemical, Environmental and Bioscience Engineering, Getreidemarkt 9/166, A1060 Vienna, Austria. •Chemical Engineering Department, Fouman Faculty of Engineering College of Engineering, University of Tehran, Iran. and **Mika Sillanpaa**, Professor, Department of Biological and Chemical Engineering, Aarhus University, Aarhus, Denmark

**ISBN:** 9780443192111  
**PUB DATE:** Jun 01, 2023  
**LIST PRICE:** £185.00 / \$235.00 / €205.00

**DISCOUNT:**

**FORMAT:** Paperback

**TRIM:** 7.5w x 9.25h

**PAGES:** c. 465

**AUDIENCE:** Environmental chemistry experts in academia and industry Professionals using adsorption applications to remove antibiotics from aqueous systems Undergraduate and graduate students of Chemical Engineering, Chemistry, Environmental Science and Engineering, and Pharmacy Industrial managers who have wastewater treatment facilities, especially in the pharmaceutical industry, Municipal managers in charge of wastewater treatment plants, Professionals responsible for wastewater treatment in hospitals, Material production experts who are passionate about microporous and mesoporous structures for both catalytic and

**Comprehensive reference providing efficient/economical ways for antibiotics removal from wastewater**

**KEY FEATURES**

- Provides production and modification methods of conventional and non-conventional adsorbent materials for antibiotics adsorption from aqueous systems
- Considers the effects of antibiotics type and porous and chemical properties of adsorbents to improve the sorption capacity and ease of regeneration
- Features recent advances in the use of biowaste materials and biosorption processes for green removal of antibiotics from wastewater

**DESCRIPTION**

*Traditional and Novel Adsorbents for Antibiotics Removal from Wastewater* describes, in detail, the importance of removing antibiotics from aqueous systems, along with new information on their variation, solubility, toxicology and allowable concentration in groundwater. The book covers adsorption as an applicable method, highlighting its advantages and disadvantages. It investigates various adsorbents ranging from traditional activated carbons, modified forms of clays, metal oxides, polymer resins, and more advanced materials such as graphene-based, MOF, nano-matrices, and composite materials as potential sorbents for the adsorption of antibiotics from aqueous solutions.

In addition, the book covers biological microorganisms that have been used to remove antibiotics from wastewater and presents biopolymers, biowaste and living cells potentially and practically suitable for this purpose. For all adsorbents, the book explains preparation methods, main properties, modification techniques to increase antibiotic removal efficiency, mechanisms in antibiotic removal, advantages and limitations. It also presents adsorption-desorption in batch and continuous mode, optimized operating parameters, kinetic and equilibrium adsorption, and regeneration studies.

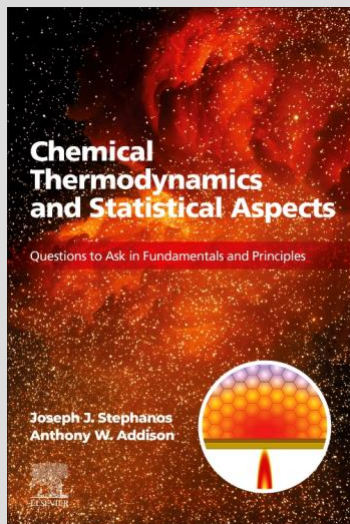


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# Chemical Thermodynamics and Statistical Aspects

## Questions to Ask in Fundamentals and Principles

**Joseph J. Stephanos**, Associate Professor of Inorganic, Bioinorganic, Biophysics Chemistry, Menoufia University, Luran, Alexandria, Egypt and **Anthony W. Addison**, Drexel University, Philadelphia, PA, USA

**ISBN:** 9780443152955  
**PUB DATE:** Jun 03, 2023  
**LIST PRICE:** £155.00 / \$200.00 / €175.00

**DISCOUNT:**

**FORMAT:** Paperback

**TRIM:** 6w x 9h

**PAGES:** c. 300

**AUDIENCE:** Undergraduates, and postgraduates taking courses in chemistry, students in chemical engineering, and materials sciences, research workers who would like an introduction into the essential principles of physical chemistry

**BIC CODES:** PNR

**THEMA CLASSIFICATION:**  
THEMAPNR

**Discusses the derivations of fundamental thermodynamic relations**

### KEY FEATURES

- Includes detailed solutions with the necessary mathematical techniques provided for every problem
- Addresses problems incorporating a variety of types of chemical and physical data to illustrate the interdependence of issues
- Includes a "Questions and Answers" feature which differentiates this book from competing books in the field

### DESCRIPTION

*Chemical Thermodynamics and Statistical Aspects: Questions to Ask in Fundamentals and Principles* covers a full range of topics in macroscopic and statistical thermodynamics. Every step in the book is compiled with sharp and precise attention to detail. Derivations cover fundamental relationships and reinforce and extend the knowledge gained from an earlier exposure to thermodynamics. The book is filled with all kinds of physics processes, a variety of quantum mechanics, and calculus problems involving timely mathematical functions. Special emphases is given to fundamental concepts and their chemical interpretations, which are essential to understanding molecular formation and reaction mechanism.

This book will be a useful reference source for undergraduates and postgraduates taking courses in chemistry, students in chemical engineering, and those in the materials sciences. It will also be of value to research workers who would like an introduction to the essential principles of physical chemistry.

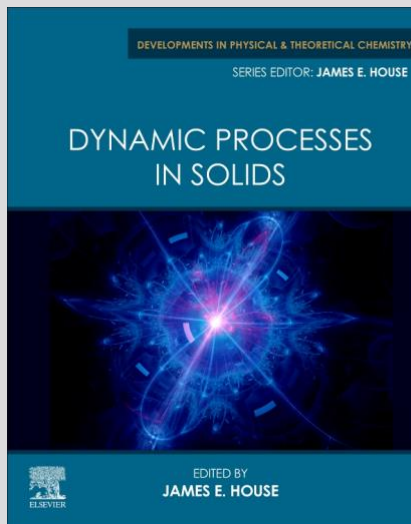


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# Dynamic Processes in Solids

Edited by : **James E. House**, Emeritus Professor of Chemistry, Illinois State University and Scholar in Residence, Illinois Wesleyan University, USA.

**ISBN:** 9780128188767  
**PUB DATE:** Jun 01, 2023  
**LIST PRICE:** £155.00 / \$200.00 / €175.00  
**DISCOUNT:**  
**FORMAT:** Paperback  
**TRIM:** 7.5w x 9.25h  
**PAGES:** c. 340  
**AUDIENCE:** Chemists, Materials Scientists, Physicists, Chemical Engineers, Geologists, Nuclear Scientists, Pharmaceutical Scientists, Food chemists, and students and researchers in related fields across both academia and industry  
**BIC CODES:** PNR  
**THEMA CLASSIFICATION:** THEMAPNR

**Provides a thorough discussion of reactions in solids, modern techniques for studying such reactions, and applications of results from kinetic studies**

A Volume in the *Developments in Physical & Theoretical Chemistry Series*

## KEY FEATURES

- Places the application of kinetic models in the context of reactions across numerous types of materials
- Illustrates the potentials and limitations of experimental techniques for studying reactions in solids
- Shows how experimental conditions can affect kinetic studies and how readers can address such issues

## DESCRIPTION

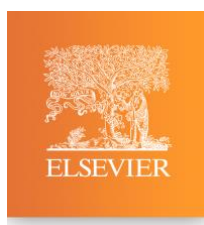
Chemical kinetics in solids are often dependent on numerous factors, and it's important for researchers to understand both the interactions relating to these factors, and how their own procedural choices may influence outcomes. *Kinetics of Processes in the Solid State* provides an authoritative overview of reactions in solids and helps readers quickly and easily identify the kinetic processes at play in their own work.

Beginning with an introduction to the nature of solids and transformations, the book goes on to outline rate laws and experimental techniques, followed by such key areas as nucleation, phase transformations and crystallization. Chapters on the kinetics of dehydration, decomposition and polymers follow, before the book concludes by reviewing kinetics in relation to some important applications.

Drawing on the experience of its expert author, *Dynamic Processes in Solids* is a practical introduction to the field for chemists and researchers whose work is directly related to these interactions, and additionally for all those in related fields whose work would be enhanced by an understanding of these processes.



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# Photochemistry and Photophysics of Coordination Compounds

Fundamentals and Applications



Rakshit Ameta, Avinash Kumar Rai,  
Jayesh P. Bhatt, Shipra Bhardwaj  
and Suresh C. Ameta



# Photochemistry and Photophysics of Coordination Compounds

## Fundamentals and Applications

Edited by : **Rakshit Ameta**, Associate Professor of Chemistry, Faculty of Science, J. R. N. Rajasthan Vidyapeeth, Udaipur, India; **Avinash Kumar Rai**, Researcher, Department of Chemistry, PAHER University, Udaipur, India ; **Jayesh P. Bhatt**, Assistant Professor of Chemistry, Pacific University, Udaipur, India; **Shipra Bhardwaj**, Lecturer, Department of Chemistry, Govt. Meera Girls College, Udaipur, India and **Suresh C. Ameta**, Professor of Chemistry, Pacific University, Udaipur, India

**ISBN:** 9780128244937  
**PUB DATE:** Jun 01, 2023  
**LIST PRICE:** £170.00 / \$220.00 /  
€195.00

**DISCOUNT:**

**FORMAT:** Paperback

**TRIM:** 6w x 9h

**PAGES:** c. 390

**ILLUSTRATIONS:** Approx. 100  
illustrations

**AUDIENCE:** Students and  
researchers interested in  
photochemistry across physical,  
inorganic, materials and green  
chemistry, chemical engineering,  
materials science and chemical  
physics

**BIC CODES:** PNR

**THEMA CLASSIFICATION:**  
THEMAPNR

**A structured guide to the photochemical and photophysical properties of coordination compounds for a range of applications**

### KEY FEATURES

- Introduces the fundamentals of both photochemistry and coordination compounds
- Supports learning through carefully structured content, with chapters uniquely arranged by period table group
- Bridges the knowledge gap between theory and practice by presenting application examples in each chapter

### DESCRIPTION

*Photochemistry and Photophysics of Coordination Compounds: Fundamentals and Applications* provides a systematic overview of the photochemical and photophysical properties of coordination compounds with different metal cores. Beginning with a clear introduction to the fundamentals of both photochemistry and coordination chemistry, the book goes on to outline the photochemical and photophysical properties of a large range of coordination compounds, clustering metal cores together in chapters according to their period table group, ranging across Transition metals, Lanthanides and Actinides. In addition to outlining their properties, each chapter discusses the synthesis, current applications and future potential of coordination compounds in each group.

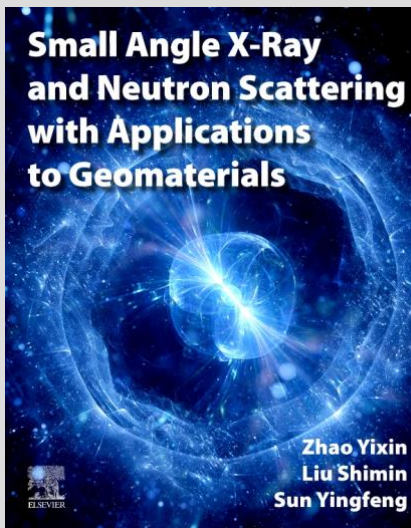
Drawing on the experience of a global team of experts, this book is an authoritative guide for all those interested in understanding and harnessing the photochemical properties and potential applications of coordination complexes for their own work.



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# Small Angle X-Ray and Neutron Scattering with Applications to Geomaterials

**Yixin Zhao**, Professor School of Energy and Mining Engineering China University of Mining and Technology, Beijing, PR China; **Shimin Liu**, Associate Professor College of Earth and Mineral Engineering The Pennsylvania State University University Park, PA, USA and **Yingfeng Sun**, School of Civil and Resource Engineering University of Science and Technology, Beijing, China

**ISBN:** 9780323952972  
**PUB DATE:** Jun 01, 2023  
**LIST PRICE:** £126.00 / \$165.00 / €143.00

**DISCOUNT:**

**FORMAT:** Paperback

**TRIM:** 7.5w x 9.25h

**PAGES:** c. 230

**AUDIENCE:** Graduate students and researchers related to conventional and unconventional oil and gas exploration Secondary readers work in carbon sequestration industries and academic departments

**BIC CODES:** PHVG, KNAT, THFP

**THEMA CLASSIFICATION:**  
THEMATHFP; THEMAKNB;  
THEMAPHVG

**Systematically introduces the application of small angle scattering of X-ray and neutron in geomaterials, which provides new vision for the microstructure of geomaterials**

## KEY FEATURES

- Covers both theory and applications of small angle X-ray and neutron scattering as related to geomaterials
- Provides context for using the techniques described in the book in connection with other well-known techniques
- Includes analysis methods of interactions between pore structures and fluid behaviors in geomaterials

## DESCRIPTION

*Small Angle X-Ray and Neutron Scattering with Applications to Geomaterials* provides techniques for the analysis of geomaterials, which is of great significance for humans because geomaterials are related to earthquake, resource development, underground spaces, carbon dioxide storage, and more. The book introduces the fundamental theory of small angle X-ray and neutron scattering and covers pore accessibility characterization for natural rocks from four aspects, including quantitative evaluation of pore structure heterogeneity and anisotropy, quantification of pore modification in coals due to pulverization, estimation and modeling of coal pore accessibility, and nanoscale coal deformation and alteration of porosity and pore orientation under uniaxial compression.

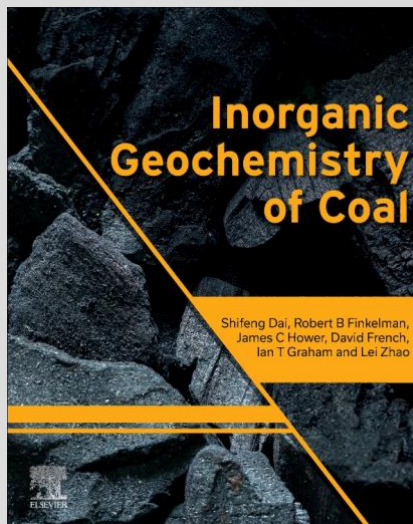
Finally, interactions between pore structures and fluid behaviors in geomaterials are introduced, along with the connections between small-angle scattering and other techniques (NMR cytophotometry, Transmission Electron Microscopy and synchrotron radiation SAXS and nano-CT) described.



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**EARTH & ENVIRONMENT Applied Geoscience**  
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# Inorganic Geochemistry of Coal

**Shifeng Dai**, State Key Laboratory of Coal Resources and Safe Mining, China University of Mining and Technology, Beijing, China ; **Robert B. Finkelman**, Geosciences Department, University of Texas at Dallas Richardson, TX, USA; **James C. Hower**, University of Kentucky Center for Applied Energy Research, Lexington, KY, USA ; **David French**, Earth and Sustainability Sciences Research Centre, School of Biological, earth and Environmental Sciences, UNSW Sydney, Sydney, NSW, Australia ; **Ian T. Graham**, Earth and Sustainability Sciences Research Centre, School of Biological, earth and Environmental Sciences, UNSW Sydney, Sydney, NSW, Australia and **Lei Zhao**, College of Geoscience and Survey Engineering, China University of Mining and Technology, Beijing, China

**ISBN:** 9780323956345  
**PUB DATE:** Jun 01, 2023  
**LIST PRICE:** £127.00 / \$165.00 / €144.00

**DISCOUNT:**

**FORMAT:** Paperback

**TRIM:** 7.5w x 9.25h

**PAGES:** c. 280

**AUDIENCE:** Industries and academic departments related to coal, e.g., coal companies, coal research institutes and universities, Academic departments related to the environment and human health, Industries and academic departments related to critical metals, Academic departments related to geology and geochemistry, Scientific societies related to energy, to environmental, and to health issues

**BIC CODES:** PHH

**THEMA CLASSIFICATION:**  
THEMAPHH

**Comprehensive reference covering the mineral elements in coal, industrial utilization of critical elements, and adverse effects on environments and human health of toxic elements**

## KEY FEATURES

- Features dozens of never-before published illustrations of critical features of the inorganic geochemistry of coal
- Covers both the theory and applications of the topic, including case studies to serve as real-world examples
- Includes a chapter on the health and environmental impacts of the mining, development and use of coal

## DESCRIPTION

*Inorganic Geochemistry of Coal* explains how to determine the concentrations and modes of occurrence of elements in coal, how to diminish adverse effects of toxic elements on the environment and human health, which elements in coal could be industrially utilized, and which elements can be successfully used as indications for deciphering depositional environments and tectonic evolution. As coal use will remain at an all-time high for the next several decades, there is a critical need for understanding the properties of this fuel to ensure efficient use, encourage its economic by-product potential, and to help minimize its negative technological, environmental and health impacts.

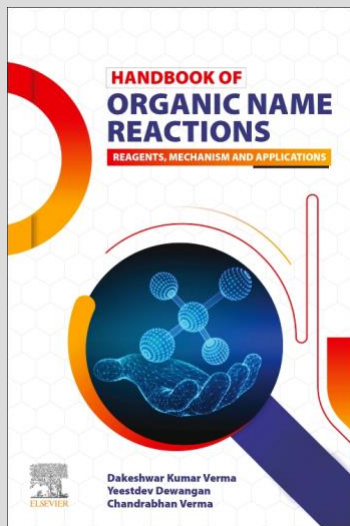


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**EARTH & ENVIRONMENT** Geochemistry  
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# Handbook of Organic Name Reactions

## Reagents, Mechanism and Applications

**Dakeshwar Kumar Verma**, Professor, Department of Chemistry, Digvijay Autonomous Postgraduate College, India; **Yeastdev Dewangan**, Assistant Professor, Department of Chemistry, Govt. Digvijay Autonomous Postgraduate College, Rajnandgaon, Chhattisgarh, India and **Chandrabhan Verma**, Interdisciplinary Research Center for Advanced Materials, King Fahd University of Petroleum and Minerals, Dhahran, Saudi Arabia

**ISBN:** 9780323959483  
**PUB DATE:** Aug 01, 2023  
**LIST PRICE:** £155.00 / \$200.00 / €175.00  
**DISCOUNT:**  
**FORMAT:** Paperback  
**TRIM:** 6w x 9h  
**PAGES:** c. 330  
**AUDIENCE:** Chemists, Biochemists, Biochemical Engineers, Biomedical Engineers and Pharmacists working in both R&D and academia  
**BIC CODES:** PNN  
**THEMA CLASSIFICATION:** THEMAPPNN

**Comprehensive covers the fundamentals, basics, detailed mechanisms and applications of name reactions**

### KEY FEATURES

- Provides chronological advancements of name reactions and industrial applications
- Describes the entire name reaction and their step-by-step mechanism
- Focuses on the most advanced industry-oriented applications including current challenges

### DESCRIPTION

*Handbook of Organic Named Reactions: Reagents, Mechanisms and Applications* discusses the reactions used in organic synthesis, showing the value and scope of these reactions and how they are used in the synthesis of organic molecules. Presenting an accounting of the traditional methods used, as well as the latest details on the advances made in synthetic chemistry research, the named reactions of carbonyl compounds, alcohols, amines, heterocyclic molecules, rearrangements and coupling reactions are all included. Explaining the established research and including detailed mechanism information, step-by-step descriptions, problems and the applications of named reactions in industry, this book also discusses emerging aspects.

Additional sections cover present and future research directions, making it an invaluable resource for all those needing to familiarize themselves with the concepts and applications of designated reactions.

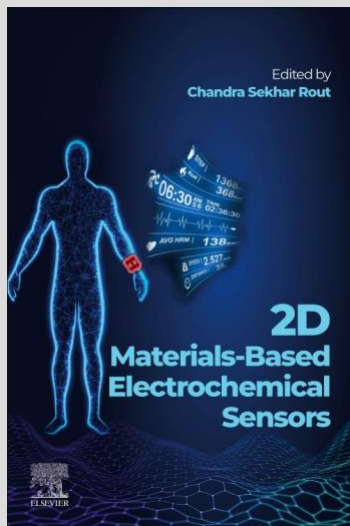


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CHEMISTRY Organic Chemistry  
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# 2D Materials-Based Electrochemical Sensors

Edited by : **Chandra Sekhar Rout**, Member of the Faculty, Indian Institute of Technology Bhubaneswar, India

**ISBN:** 9780443152931  
**PUB DATE:** Jun 01, 2023  
**LIST PRICE:** £155.00 / \$200.00 / €175.00

**DISCOUNT:**

**FORMAT:** Paperback

**TRIM:** 6w x 9h

**PAGES:** c. 414

**AUDIENCE:** Analytical chemists, Electrochemists, particularly those working in field of electrochemistry, electrochemical sensors and analytical chemistry, R&D in electrochemical and bio-sensors, Materials Scientists and Engineers with background of 2D materials research

**BIC CODES:** PNF

**THEMA CLASSIFICATION:**  
THEMAPNF

**Covers electrochemical and biosensor applications of 2D materials including their fundamental properties, sensing mechanisms, fabrication approaches, and more**

## KEY FEATURES

- Provides basic working principles and sensing mechanisms of electrochemical sensors based on 2D materials
- Addresses recent developments and future perspectives on electrochemical sensors and wearable/flexible sensors based on different 2D materials
- Adopts a unique engineering approach of experimental techniques for the fabrication of modern and advanced electrochemical sensors based on 2D material

## DESCRIPTION

*2D Materials-Based Electrochemical Sensors* presents electrochemical and biosensor applications of 2D materials and addresses their fundamental properties, sensing mechanisms and fabrication approaches. The book also includes recent theoretical and experimental investigations. Other sections cover the development of sensors and biosensors from the fabrication of two dimensional layered materials to sensing applications and address recent developments and future perspectives on electrochemical sensors based on a wide variety of 2D materials such as graphene, MXene, boron nitride (h-BN), transition metal dichalcogenides (TMDs) and black phosphorous.

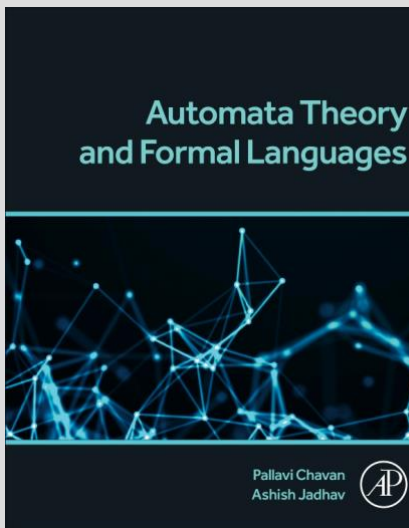
This will be a useful resource for researchers and scientists in the areas of analytical chemistry. This book will serve as a reference book both to the beginners and experienced researchers who are pursuing their research in 2D layered materials and their electrochemical sensing applications.



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CHEMISTRY Analytical Chemistry  
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# Automata Theory and Formal Languages

**Pallavi Vijay Chavan**, Associate Professor, Ramrao Adik Institute of Technology, D Y Patil Deemed to be University, Navi Mumbai, MH, India and **Ashish Jadhav**, Professor and Head, Department of Information Technology, Ramrao Adik Institute of Technology, D Y Patil Deemed to be University, Navi Mumbai, MH, India

**ISBN:** 9780323917841  
**PUB DATE:** May 01, 2023  
**LIST PRICE:** £131.00 / \$170.00 /  
€148.00

**DISCOUNT:**

**FORMAT:** Paperback

**TRIM:** 7.5w x 9.25h

**PAGES:** c. 210

**AUDIENCE:** Researchers, developers, and industry professionals in Information Technology and Computer Science, such as developers of AI and Deep Learning, as well as other research fields, including Biomedical

**BIC CODES:** MQW, PBW

**THEMA CLASSIFICATION:**

THEMAPBW; THEMATCB;

THEMAMQW

**Presents the key concepts of Automata Theory and Theory of Computation using a programming approach and solved real-world examples**

## KEY FEATURES

- Presents the concepts of Automata Theory and Formal Languages in an easy-to-understand approach
- Helps the readers understand key concepts by solving real-world examples.
- Provides the readers with a simple approach to connect the theory with the latest trend like software testing, cybersecurity, artificial intelligence, and machine learning.
- Includes a wide coverage of applications of automata theory and formal languages.

## DESCRIPTION

*Automata Theory and Formal Languages* presents the difficult concepts of automata theory in a straightforward manner, including discussions on diverse concepts and tools that play major roles in developing computing machines, algorithms and code. Automata theory includes numerous concepts such as finite automata, regular grammar, formal languages, context free and context sensitive grammar, push down automata, Turing machine, and decidability, which constitute the backbone of computing machines. This book enables readers to gain sufficient knowledge and experience to construct and solve complex machines.

Each chapter begins with key concepts followed by a number of important examples that demonstrate the solution. The book explains concepts and simultaneously helps readers develop an understanding of their application with real-world examples, including application of Context Free Grammars in programming languages and Artificial Intelligence, and cellular automata in biomedical problems.

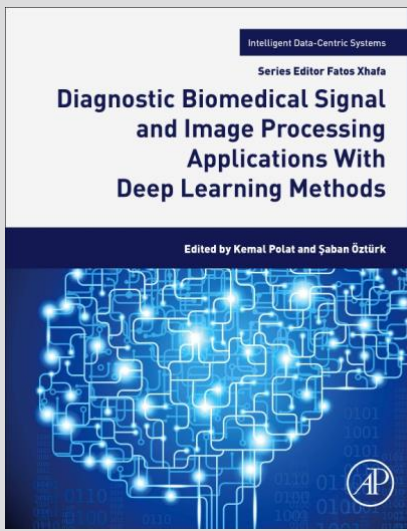


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# Diagnostic Biomedical Signal and Image Processing Applications With Deep Learning Methods

Edited by : **Kemal Polat**, Professor, Electrical and Electronic Engineering Department, Engineering of Faculty, Bolu Abant İzzet Baysal University, Turkey and **Saban Öztürk**, Researcher, Amasya University, Turkey

**ISBN:** 9780323961295  
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**LIST PRICE:** £115.00 / \$150.00 / €130.00  
**DISCOUNT:**  
**FORMAT:** Paperback  
**TRIM:** 7.5w x 9.25h  
**PAGES:** c. 286  
**AUDIENCE:** Graduate students, researchers, and professionals in biomedical engineering, electrical engineering, signal process engineering, biomedical imaging, and computer science  
**BIC CODES:** UYT, UYS, UYQ, UFL, TB  
**THEMA CLASSIFICATION:** THEMAUFL; THEMAUYQ; THEMAUYT; THEMAUYS; THEMAKJT

**Highlights and discusses new advances in biomedical imaging and signal modalities**

A Volume in the *Intelligent Data-Centric Systems* Series

## KEY FEATURES

- Investigates novel concepts of deep learning for acquisition of non-invasive biomedical image and signal modalities for different disorders
- Explores the implementation of novel deep learning and CNN methodologies and their impact studies that have been tested on different medical case studies
- Presents end-to-end CNN architectures for automatic detection of situations where early diagnosis is important
- Includes novel methodologies, datasets, design and simulation examples

## DESCRIPTION

*Diagnostic Biomedical Signal and Image Processing Applications with Deep Learning Methods* presents comprehensive research on both medical imaging and medical signals analysis. The book discusses classification, segmentation, detection, tracking and retrieval applications of non-invasive methods such as EEG, ECG, EMG, MRI, fMRI, CT and X-RAY, amongst others. These image and signal modalities include real challenges that are the main themes that medical imaging and medical signal processing researchers focus on today. The book also emphasizes removing noise and specifying dataset key properties, with each chapter containing details of one of the medical imaging or medical signal modalities.

Focusing on solving real medical problems using new deep learning and CNN approaches, this book will appeal to research scholars, graduate students, faculty members, R&D engineers, and biomedical engineers who want to learn how medical signals and images play an important role in the early diagnosis and treatment of diseases.

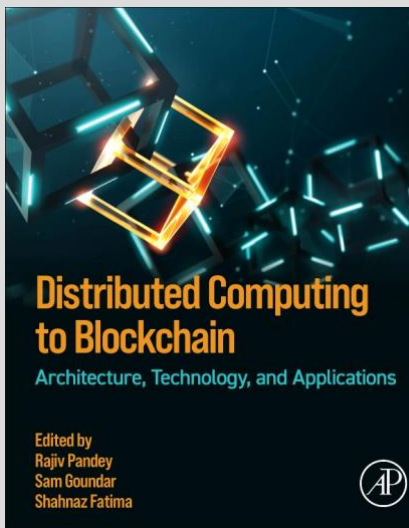


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# Distributed Computing to Blockchain

## Architecture, Technology, and Applications

Edited by : **Rajiv Pandey**, Amity Institute of Information Technology, Amity University Uttar Pradesh, Lucknow Campus, Lucknow, India; **Sam Goundar**, Professor, RMIT University, Hanoi, Vietnam. and **Shahnaz Fatima**, Faculty, Amity University Uttar Pradesh, Lucknow, India

**ISBN:** 9780323961462  
**PUB DATE:** Apr 11, 2023  
**LIST PRICE:** £131.00 / \$170.00 /  
€148.00

**DISCOUNT:**

**FORMAT:** Paperback

**TRIM:** 8.5w x 10.875h

**PAGES:** c. 456

**AUDIENCE:** Scientists, researchers, and MSc. PhD. students from the fields of Computer Science and Engineering, researchers, practitioners, and students in the fields of computer architecture, systems integrators, Distributed Systems, Blockchain, as well as management information systems, Researchers and professionals in fields where Blockchain is becoming a key technology, including biomedicine, healthcare, finance, legal and many others

**BIC CODES:** MQW

**THEMA CLASSIFICATION:**  
THEMATCB; THEMAMQW

**Provides a comprehensive guide to the development and applications of blockchain from distributed systems to real-world case studies in healthcare, finance, and more**

### KEY FEATURES

- Presented as a focused reference handbook describing the evolution of distributed systems, blockchain, and consensus algorithms emphasizing the architectural and functional aspects
- Integrates the various concepts of cryptography in blockchain and further extends to blockchain forensics
- Provides insight and detailed Interpretation of algorithms for consensus in blockchains

### DESCRIPTION

Distributed Computing to Blockchain: Architecture, Technology, and Applications provides researchers, computer scientists, and data scientists with a comprehensive and applied reference covering the evolution of distributed systems computing into blockchain and associated systems. Divided into three major sections, the book explores the basic topics in the blockchain space extending from distributed systems architecture, distributed ledger, decentralized web to introductory aspects of cryptoeconomics (cryptography and economics) of decentralized applications.

The book further explores advanced concepts such as smart contracts; distributed token mining, initial coin offerings; proof of work; public, private, and other blockchains; cryptography; security; and blockchains. The book goes on to review byzantine fault tolerance, distributed ledgers versus blockchains, and blockchain protocols. The final section covers multiple use cases and applications of distributed computing and the future directions for blockchains.



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# Uncertainty in Data Envelopment Analysis

## Fuzzy and Belief Degree-Based Uncertainties

**Farhad Hosseinzadeh Lotfi**, Full Professor of Mathematics, Islamic Azad University, Tehran, Iran; **Masoud Sanei**, Associate Professor, Department of Applied Mathematics, Islamic Azad University, Central Tehran Branch, Iran; **Ali Asghar Hosseinzadeh**, Assistant Professor of Applied Mathematics, Lahijan branch of Islamic Azad University, Iran; **Sadegh Niroomand**, Associate Professor of Industrial Engineering, Firouzabad Institute of Higher Education, Iran and **Ali Mahmoodirad**, Associate Professor of Applied Mathematics, Masjed-Sleiman branch of Islamic Azad University, Iran

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**LIST PRICE:** £115.00 / \$150.00 /  
€131.00

**DISCOUNT:**

**FORMAT:** Paperback

**TRIM:** 6w x 9h

**PAGES:** c. 280

**AUDIENCE:** Graduate students, researchers, and professional engineers who study or perform optimization and evaluation, in the fields of applied mathematics, industrial engineering, computer science, information science, management science, economics, and operations research

**BIC CODES:** UYQ

**THEMA CLASSIFICATION:**  
THEMAUYQ

### An introduction to new methods of dealing with uncertain data in DEA models

A Volume in the *Uncertainty, Computational Techniques, and Decision Intelligence Series*

#### KEY FEATURES

- Introduces methods to deal with uncertain data in DEA models, as a source of information and a reference book for researchers and engineers
- Presents DEA models that can be used for evaluating the outputs of many real-life systems in social and engineering subjects
- Provides fresh DEA models for efficiency evaluation from the perspective of imprecise data
- Applies the fuzzy set and uncertainty theories to DEA to produce a new method of dealing with the empirical data

#### DESCRIPTION

Classical data envelopment analysis (DEA) models use crisp data to measure the inputs and outputs of a given system. In cases such as manufacturing systems, production processes, service systems, etc., the inputs and outputs may be complex and difficult to measure with classical DEA models. Crisp input and output data are fundamentally indispensable in the conventional DEA models. If these models contain complex uncertain data, then they will become more important and practical for decision makers.

*Uncertainty in Data Envelopment Analysis* introduces methods to investigate uncertain data in DEA models, providing a deeper look into two types of uncertain DEA methods, fuzzy DEA and belief degree-based uncertainty DEA, which are based on uncertain measures. These models aim to solve problems encountered by classical data analysis in cases where the inputs and outputs of systems and processes are volatile and complex, making measurement difficult.



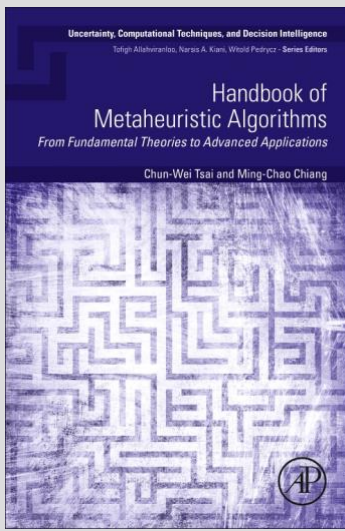
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# Handbook of Metaheuristic Algorithms

## From Fundamental Theories to Advanced Applications

**Chun-Wei Tsai**, Assistant Professor, Department of Computer Science and Engineering, National Sun Yat-sen University, Kaohsiung, Taiwan, R.O.C and **Ming-Chao Chiang**, Professor, Department of Computer Science and Engineering, National Sun Yat-sen University, Kaohsiung, Taiwan, R.O.C

**ISBN:** 9780443191084  
**PUB DATE:** Jun 01, 2023  
**LIST PRICE:** £138.00 / \$180.00 / €160.00  
**DISCOUNT:**  
**FORMAT:** Paperback  
**TRIM:** 6w x 9h  
**PAGES:** c. 480  
**AUDIENCE:** Graduate students and researchers in the fields of computer science and engineering.  
**BIC CODES:** UFL, UYQ, TB, UYQE  
**THEMA CLASSIFICATION:** THEMAUFL; THEMAKJT; THEMAUYQE; THEMAUYQ; THEMAKJ

**Presents a unified framework for metaheuristics to describe well-known metaheuristic algorithms and their variants**

A Volume in the *Uncertainty, Computational Techniques, and Decision Intelligence* Series

### KEY FEATURES

- Presents a unified framework for metaheuristics and describes well-known algorithms and their variants
- Introduces fundamentals and advanced topics for solving engineering optimization problems, e.g., scheduling problems, sensors deployment problems, and clustering problems
- Includes source code based on the unified framework for metaheuristics used as examples to show how TS, SA, GA, ACO, PSO, DE, parallel metaheuristic algorithm, hybrid metaheuristic, local search, and other advanced technologies are realized in programming languages such as C++ and Python

### DESCRIPTION

*Handbook of Metaheuristic Algorithms: From Fundamental Theories to Advanced Applications* provides a brief introduction to metaheuristic algorithms from the ground up, including basic ideas and advanced solutions. Although readers may be able to find source code for some metaheuristic algorithms on the Internet, the coding styles and explanations are generally quite different, and thus requiring expanded knowledge between theory and implementation. This book can also help students and researchers construct an integrated perspective of metaheuristic and unsupervised algorithms for artificial intelligence research in computer science and applied engineering domains.

Metaheuristic algorithms can be considered the epitome of unsupervised learning algorithms for the optimization of engineering and artificial intelligence problems, including simulated annealing (SA), tabu search (TS), genetic algorithm (GA), ant colony optimization (ACO), particle swarm optimization (PSO), differential evolution (DE), and others. Distinct from most supervised learning algorithms that need labeled data to learn and construct determination models, metaheuristic algorithms inherit characteristics of unsupervised learning algorithms used for solving complex engineering optimization problems without labeled data, just like self-learning, to find solutions to complex problems.

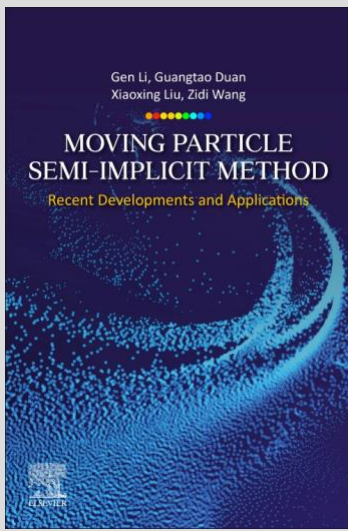


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# Moving Particle Semi-implicit Method

## Recent Developments and Applications

**Gen Li**, Professor, South China University of Technology, China; **Guangtao Duan**, Assistant Professor, The University of Tokyo, Japan; **Xiaoxing Liu**, Associate Professor, Sun Yat-Sen University, China and **Zidi Wang**, Researcher, Japan Atomic Energy Agency, Ibaraki, Japan

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**LIST PRICE:** £146.00 / \$180.00 / €170.00

**DISCOUNT:**

**FORMAT:** Paperback

**TRIM:** 6w x 9h

**PAGES:** c. 284

**AUDIENCE:** Graduates, researchers and engineers interested in nuclear engineering and computational fluid dynamics

**BIC CODES:** TGB, THK, UY

**THEMA CLASSIFICATION:** THEMATJF; THEMAUY; THEMATHK

**A comprehensive guide on the Moving Particle Semi-Implicit Method and its applications in nuclear engineering**

### KEY FEATURES

- Presents detailed information on the advanced numerical models in the Moving Particle Semi-Implicit (MPS) method, including the improved discretization scheme, stabilization method, boundary condition, multiphase flow and fluid-structure interaction
- Provides the latest advances in improving the accuracy, stability and consistency of the MPS method
- Highlights the nuclear and ocean engineering applications of MPS

### DESCRIPTION

*Moving Particle Semi-implicit Method: Recent Developments and Applications* offers detailed step-by-step guidance for advanced numerical models in the MPS method. With a strong focus on overcoming challenges, such as low improving accuracy and numerical stability, the book also examines the applications of MPS, particularly within nuclear engineering. Beginning with an introduction to grid-based and particle-based numerical methods, the book then reviews the original MPS method. Following chapters examine how the original method can be improved, covering topics such as improved discretization models, stabilization methods, multiphase flow and turbulence models, and improving efficiency.

Closing chapters analyze applications in nuclear and ocean engineering, as well as considering future developments and implications. This book is an essential read for graduates, researchers and engineers interested in nuclear engineering and computational fluid dynamics.



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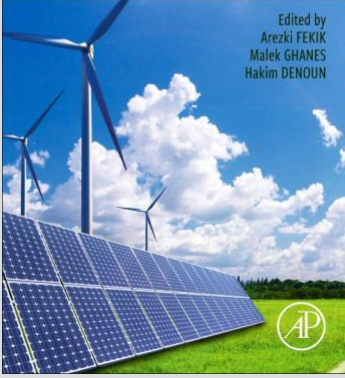


ENGINEERING Energy

<https://virtuale.elsevier.com>, [www.elsevier.com](http://www.elsevier.com)

## Power Electronics Converters and their Control for Renewable Energy Applications

Edited by  
Arezki FEKIK  
Malek GHANES  
Hakim DENOUN



# Power Electronics Converters and their Control for Renewable Energy Applications

Edited by : **Arezki Fekik**, Senior Lecturer, Akli Mohand Oulhadj University-Bouira, Algeria;  
**Malek Ghanes**, Full Professor, CN Centrale Nantes, LS2N, France and **Hakim Denoun**,  
Professor, Mouloud Mammeri University, Algeria

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**LIST PRICE:** £138.00 / \$180.00 /  
€160.00  
**DISCOUNT:**  
**FORMAT:** Paperback  
**TRIM:** 6w x 9h  
**PAGES:** c. 300  
**ILLUSTRATIONS:** 400 illustrations  
(200 in full color)  
**AUDIENCE:** Academics,  
Researchers and engineers in  
electrical, electronic and mechanical  
engineering  
**BIC CODES:** TH, THRM, THX  
**THEMA CLASSIFICATION:**  
THEMATHY; THEMATHV;  
THEMATH; THEMATHR

**A reference that discusses, models and analyses dedicated converters for  
renewable energy applications**

### KEY FEATURES

- Includes important visual illustrations and imagery of concise circuit schematics and renewable energy applications
- Features a templated approach for step-by-step implementation of the new MPPT algorithm based on recent and intelligent techniques
- Provides methods for optimal harnessing of energy from renewable energy sources and converter topology synthesis

### DESCRIPTION

*Power Electronics Converters and their Control for Renewable Energy Applications* provides information that helps to solve common challenges with power electronics converters, including loss by switching, heating of power switches, management of switching time, improvement of the quality of the signals delivered by power converters, and improvement of the quality of energy produced by renewable energy sources.

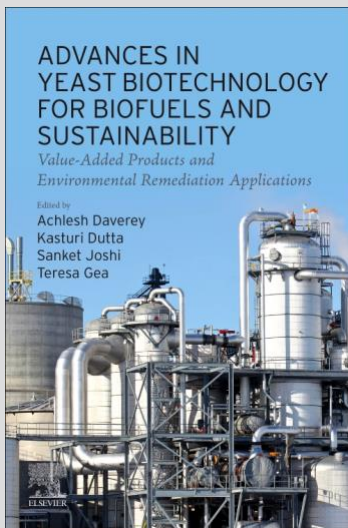
This book is of interest to academics, researchers, and engineers in renewable energy, power systems, electrical engineering, electronics, and mechanical engineering.



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ENGINEERING Energy  
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# Advances in Yeast Biotechnology for Biofuels and Sustainability

## Value-Added Products and Environmental Remediation Applications

Edited by : **Achlesh Daverey**, Assistant Professor, School of Environment and Natural Resources, Doon University, Dehradun, Uttarakhand, India; **Kasturi Dutta**, Assistant Professor, Department of Biotechnology and Medical Engineering, National Institute of Technology Rourkela, India; **Sanket Joshi**, Deputy Director, Oil and Gas Research Center, and Application Specialist, Central Analytical and Applied Research Unit, Sultan Qaboos University, Oman and **Teresa Gea**, Engineering School, Universitat Autònoma de Barcelona, Bellaterra, Barcelona, Spain

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**DISCOUNT:**  
**FORMAT:** Paperback  
**TRIM:** 6w x 9h  
**PAGES:** c. 380  
**AUDIENCE:** Researchers and industry scientists working on biofuels or environmental remediation  
**BIC CODES:** THX, RN, TV  
**THEMA CLASSIFICATION:** THEMATV; THEMATHV; THEMATQ

**Provides case studies in engineered yeast sustainable systems for biofuels, value-added products and environmental remediation applications**

### KEY FEATURES

- Lays out methods, including multiple options for generating biofuels from engineered yeast and several additional value-added products
- Presents a wide variety of real-world sustainable applications for engineered yeast, with a focus on biofuels production
- Provides a selection of case studies in other value-added products and applications, including bioremediation, pollution remediation, and biofertilizers in sustainable agriculture

### DESCRIPTION

*Advances in Yeast Biotechnology for Biofuels and Sustainability: Value-Added Products and Environmental Remediation Applications* showcases the uses for engineered yeast in environmental applications, especially as an innovative source of biofuels. Beginning with a thorough review of recent advances and future potential for yeast biotechnology, the book proceeds to outline several options for biofuels, including lignocellulosic biofuels and alternative feedstock production through hydrolysis and alternative value-added products, including industrial acids and bioplastics and applications in agriculture and environmental remediation. Placing case studies at the center of each chapter, this book presents a future-focused perspective on the potential of yeast biotechnologies to support sustainability.

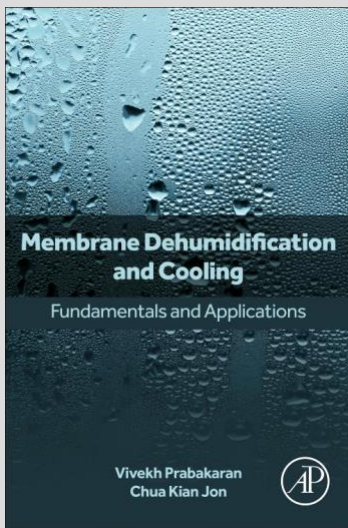


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ENGINEERING Energy  
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# Membrane Dehumidification and Cooling

## Fundamentals and Applications

**Vivekh Prabakaran**, Postdoctoral Research Fellow, Department of Mechanical Engineering, National University of Singapore (NUS), Singapore and **Chua Kian Jon**, Associate Professor, Department of Mechanical Engineering, National University of Singapore, Singapore

**ISBN:** 9780323955294  
**PUB DATE:** May 01, 2023  
**LIST PRICE:** £126.00 / \$165.00 / €143.00  
**DISCOUNT:**  
**FORMAT:** Paperback  
**TRIM:** 6w x 9h  
**PAGES:** c. 200  
**AUDIENCE:** Students, researchers and engineers interested in thermal engineering, heat and mass transfer, alternative cooling, energy materials and dehumidification  
**BIC CODES:** PHH  
**THEMA CLASSIFICATION:** THEMAPHH

**A practical guide to the characterization of membrane dehumidifiers, the latest alternative cooling technologies, and their applications**

### KEY FEATURES

- Presents the fundamental aspects and applications of the latest membrane dehumidification technologies
- Comprehensively emphasizes new energy materials, experimental techniques, numerical methods, and thermal evaluation frameworks
- Focuses on the feasibility of membrane dehumidifiers in the next generation of hybrid cooling systems

### DESCRIPTION

*Membrane Dehumidification and Cooling: Fundamentals and Applications* presents the state-of-the-art on membrane dehumidifiers, highlighting their most recent advancements and providing key insights into global R&D interests. With a strong focus on applications, the book offers characterization techniques to evaluate the potential of hygroscopic materials, as well as experimental methods to study the dehumidifiers' performance. The book begins by highlighting the demerits of conventional cooling systems and then reviews electrically driven alternative cooling solutions. A comparative study between different dehumidification techniques is also given, along with sections on fundamental transport mechanisms and thermodynamic modeling.

Finally, scaling, heat transfer and thermodynamic analysis are presented, along with a review of hybrid membrane-based air-conditioners. This book is a one-stop resource for recent advancements in membrane dehumidification and cooling applications. It is an essential read for students, researchers and engineers interested in thermal engineering, heat and mass transfer, alternative cooling, energy materials and dehumidification.



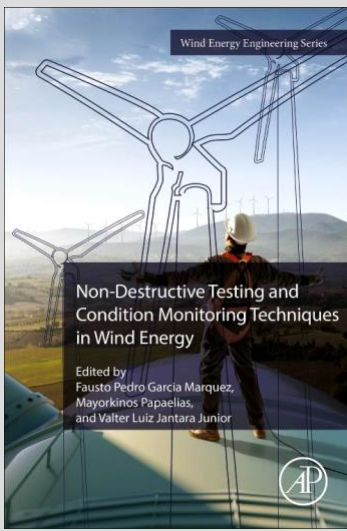
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PHYSICAL SCIENCES

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# Non-Destructive Testing and Condition Monitoring Techniques in Wind Energy

Edited by : **Fausto Pedro Garcia Marquez**, Professor, University of Castilla-La Mancha, Spain; **Mayorkinos Papaefias**, Senior Lecturer, University of Birmingham, UK and **Valter Luiz Jantara Junior**, Postdoctoral Research Fellow, School of Metallurgy and Materials, University of Birmingham, UK

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**FORMAT:** Paperback

**TRIM:** 6w x 9h

**PAGES:** c. 540

**AUDIENCE:** Renewable

Researchers, professionals in the field of engineering, Wind power plants operators, Wind turbine generators vendors, Power systems consultants, Power systems operators. Operators of wind energy systems, where they will find new approaches to apply to their problems to be solved, and similar cases studies to have them as reference

**BIC CODES:** KCN, RN, PHH

**THEMA CLASSIFICATION:**

THEMATQ; THEMAPHH;

THEMAKCVG

**Presents the main concepts and state-of-the-art advances in Non-Destructive Techniques and Condition Monitoring Systems applied to energy industry**

A Volume in the *Wind Energy Engineering Series*

## KEY FEATURES

- Presents advances in Non-Destructive Techniques and Condition Monitoring Systems applied in the energy industry
- Provides case studies in Fault Detection and Diagnosis and Prognosis for critical variability
- Offers technical maintenance actions for the observation and analyses of inspection, monitoring, testing, diagnosis, prognosis and active maintenance actions in wind

## DESCRIPTION

*Non-Destructive Testing and Condition Monitoring Techniques in Wind Energy* looks at the complex and critical components of energy assets and the importance of inspection and maintenance to ensure their high availability and uninterrupted operation. Presenting the main concepts, state-of-the-art advances and case studies, this book approaches the topic by considering it as an integral part of the overall operation of any wind energy project. Linking the essential NDT subject with its sub disciplines, the book uses computational techniques, dynamic analysis, probabilistic methods, and mathematical optimization techniques to support analysis of prognostic problems with defined constraints and requirements.

This book is the first of its kind and will provide useful insights to industrial engineers and scientists, academics and students in the possibilities that NDT and condition monitoring technologies can offer.

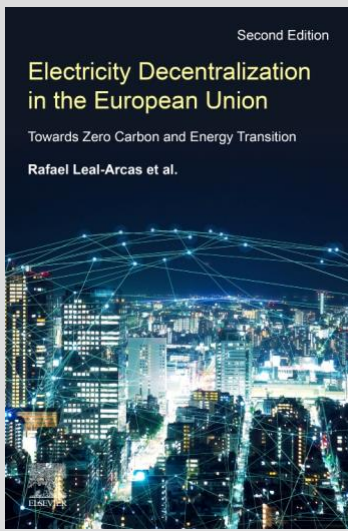


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ENGINEERING Energy

<https://virtuale.elsevier.com>, [www.elsevier.com](http://www.elsevier.com)



# Electricity Decentralization in the European Union, 2e

## Towards Zero Carbon and Energy Transition

**Rafael Leal-Arcas**, Professor of Law, Vice-Dean for Research Grants & Director of Graduate Studies and Research, College of Law & International Relations, Alfaisal University, Kingdom of Saudi Arabia; Formerly, Professor of European and International Economic Law, a Jean Monnet Chair holder (awarded by the European Commission), Program Director of the LLM in International Economic Law; Formerly, Director of Research, Centre for Commercial Law Studies, Queen Mary University of London, UK

**ISBN:** 9780443159206  
**PUB DATE:** Jun 01, 2023  
**LIST PRICE:** £170.00 / \$220.00 / €195.00

**DISCOUNT:**

**FORMAT:** Paperback

**TRIM:** 6w x 9h

**PAGES:** c. 902

**AUDIENCE:** Researchers, scientists, and advanced students working on energy law and policy, energy grids and decentralization, energy economics, energy transition, renewable energy, climate change, and environmental policy, Engineers, R&D, policy makers, and other professionals at non-governmental and international organizations, with an interest in energy policy and regulation, energy grids, energy transition, and renewable energy

**BIC CODES:** THX, KNB, TH, LNCR, RND, KCJ, THRM

**THEMA CLASSIFICATION:**

THEMATH; THEMARN; THEMAKNB; THEMALNDB; THEMATUN; THEMATUN

**A comprehensive guide to electricity decentralization in Europe, highlighting progress and opportunities through case studies from all EU member states**

**KEY FEATURES**

- Analyzes the regulatory environment with regard to decentralization
- Explores new tools and technologies to facilitate decentralization, along with current progress in each
- Addresses barriers and suggests improvements across tools, technologies and regulations

**DESCRIPTION**

*Electricity Decentralization in the European Union: Towards Zero Carbon and Energy Transition, Second Edition* examines progress in decentralization across the European Union, with each chapter focusing on developments and innovations in a specific country. Sections provide an overview of the current role and state of smart grids, the conceptualization of energy transition, and specific cases across all EU states. Across the chapters, regulatory frameworks are assessed to identify to what extent it is conducive to decentralization, with specific outcomes of decentralization covered in detail, including deployment of smart grids and meters, demand response, electric vehicles, and storage.

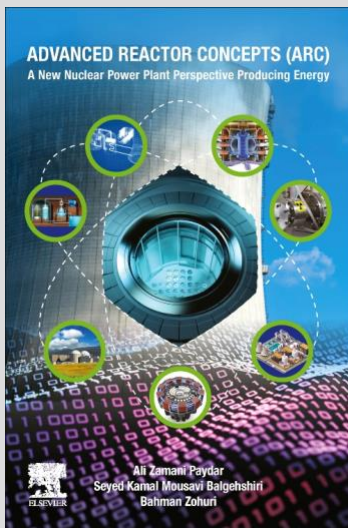
The book highlights how specific EU member states are progressing towards deployment of these tools and technologies, along with the specific needs and regulatory barriers in each and recommendations for how regulation can be more encouraging. In addition, electricity interconnections in the EU are considered as a vital step towards decentralization in order to boost energy security and energy efficiency. Finally, the book includes a detailed examination of data protection concerns that arise from the advent of new technologies that collect personal information, such as smart grids, assessing current regulation on data protection and identifying areas for improvement, as well as innovative finance options for sustainable energy.



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**ENGINEERING Energy**  
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# Advanced Reactor Concepts (ARC)

## A New Nuclear Power Plant Perspective Producing Energy

**Ali Zamani Paydar**, Researcher, Amirkabir University of Technology, Iran; **Seyed Kamal Mousavi Balgehshiri**, Researcher, Amirkabir University of Technology, Iran and **Bahman Zohuri**, Adjunct Professor, Artificial Intelligence Scientist, Golden Gate University, San Francisco, CA; Research Associate Professor, Electrical Engineering and Computer Science, University of New Mexico, Albuquerque, New Mexico, USA

**ISBN:** 9780443189890  
**PUB DATE:** Jun 01, 2023  
**LIST PRICE:** £123.00 / \$160.00 / €140.00

**DISCOUNT:**

**FORMAT:** Paperback

**TRIM:** 7.5w x 9.25h

**PAGES:** c. 422

**AUDIENCE:** Nuclear engineers; nuclear researchers; power plant engineers; energy consultants

**BIC CODES:** THK

**THEMA CLASSIFICATION:**

THEMATHK

**Helps readers understand the latest concepts in next generation nuclear plants**

### KEY FEATURES

- Describes theory and concepts on generation IV technology such as advanced reactor concepts (ARC) and electromagnetic pumps, and compares different types and sizes.
- Sets out the energy transition with critical carbon-free technology that can supplement intermittent power sources such as wind and solar.
- Explains alternative heat storage technology, including Nuclear Air-Brayton Combined Cycles.
- Introduces advanced main instrumentation systems for in-core probes.

### DESCRIPTION

Nuclear engineers advancing the energy transition are understanding more about the next generation of nuclear plants; however, it is still difficult to access all the critical types, concepts, and applications in one location. *Advanced Reactor Concepts (ARC): A New Nuclear Power Plant Perspective Producing Energy* gives engineers and nuclear engineering researchers the comprehensive tools to get up to date on the latest technology supporting generation IV nuclear plant systems. After providing a brief history of this area, alternative technology is discussed such as electromagnetic pumps, heat pipes as control devices, Nuclear Air-Brayton Combined Cycles integration, and instrumentation helping nuclear plants to provide dispatchable electricity to the grid and heat to industry. Packed with examples of all the types, benefits, and challenges involved, *Advanced Reactor Concepts (ARC)* delivers the go-to reference that engineers need to advance safe nuclear energy as a low-carbon option.

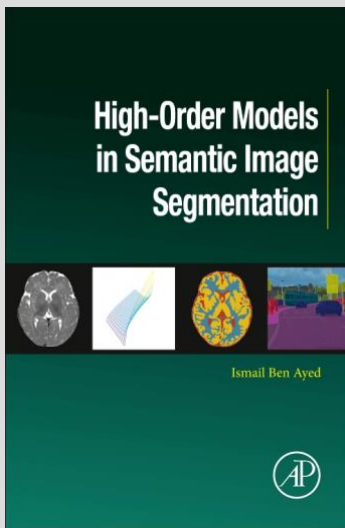


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ENGINEERING Energy

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# High-Order Models in Semantic Image Segmentation

Ismail Ben Ayed, Professor, Departement de Genie de la Production Automatisee, ETS, Montreal, Canada

**ISBN:** 9780128053201  
**PUB DATE:** Jun 01, 2023  
**LIST PRICE:** £84.95 / \$110.00 / €95.95  
**DISCOUNT:**  
**FORMAT:** Hardback  
**TRIM:** 6w x 9h  
**PAGES:** c. 225  
**AUDIENCE:** Computer scientists, electronic and biomedical engineers researching in computer vision, medical imaging, machine learning; graduate students in these fields  
**BIC CODES:** TJK  
**THEMA CLASSIFICATION:** THEMATJK

**Teaches readers how to apply state-of-the-art segmentation techniques**

## KEY FEATURES

- Gives an intuitive and conceptual understanding of this mathematically involved subject by using a large number of graphical illustrations
- Provides the right amount of knowledge to apply sophisticated techniques for a wide range of new applications
- Contains numerous tables that compare different algorithms, facilitating the appropriate choice of algorithm for the intended application
- Presents an array of practical applications in computer vision and medical imaging
- Includes code for many of the algorithms that is available on the book's companion website

## DESCRIPTION

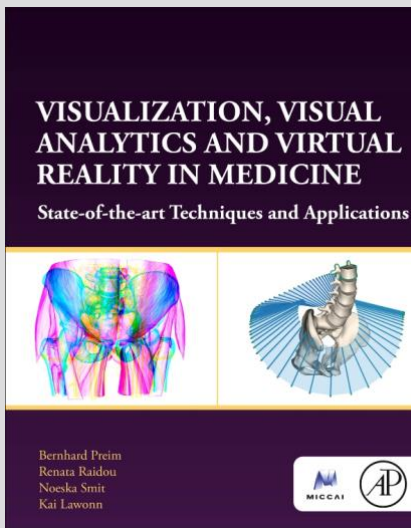
*High-Order Models in Semantic Image Segmentation* reviews recent developments in optimization-based methods for image segmentation, presenting several geometric and mathematical models that underlie a broad class of recent segmentation techniques. Focusing on impactful algorithms in the computer vision community in the last 10 years, the book includes sections on graph-theoretic and continuous relaxation techniques, which can compute globally optimal solutions for many problems. The book provides a practical and accessible introduction to these state-of-the-art segmentation techniques that is ideal for academics, industry researchers, and graduate students in computer vision, machine learning and medical imaging.



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# Visualization, Visual Analytics and Virtual Reality in Medicine

## State-of-the-art Techniques and Applications

**Bernhard Preim**, Professor of Visualization, Computer Science Department, Otto-von-Guericke-University of Magdeburg, Germany; **Renata Raidou**, Assistant Professor in Medical Visualization and Visual Analytics, Research Unit of Computer Graphics of the Institute of Visual Computing & Human-Centered Technology, TU Wien, Austria.; **Noeska Smit**, senior researcher, Mohn Medical Imaging and Visualization (MMIV) center, Department of Radiology of the Haukeland University Hospital, Norway and **Kai Lawonn**, Assistant Professor for visualization, University of Jena, Germany

**ISBN:** 9780128229620  
**PUB DATE:** Jun 01, 2023  
**LIST PRICE:** £115.00 / \$150.00 / €131.00  
**DISCOUNT:**  
**FORMAT:** Paperback  
**TRIM:** 7.5w x 9.25h  
**PAGES:** c. 400  
**ILLUSTRATIONS:** 130 illustrations (100 in full color)  
**AUDIENCE:** Researchers and graduate students in medical imaging and visualization  
**BIC CODES:** UYQV  
**THEMA CLASSIFICATION:** THEMAUYQV; THEMAUYQP

**Presents state-of-the-art techniques in visualization, virtual reality and visualization analytics for medicine and medical healthcare**

A Volume in the *The MICCAI Society book Series* Series

### KEY FEATURES

- Combines visualization, virtual reality and analytics
- Written by leading researchers in the field
- Gives the latest state-of-the-art techniques and applications

### DESCRIPTION

*Visualization, Visual Analytics and Virtual Reality in Medicine: State-of-the-art Techniques and Applications* describes important techniques and applications that show an understanding of actual user needs as well as technological possibilities. The book includes user research, for example, task and requirement analysis, visualization design and algorithmic ideas without going into the details of implementation. This reference will be suitable for researchers and students in visualization and visual analytics in medicine and healthcare, medical image analysis scientists and biomedical engineers in general.

Visualization and visual analytics have become prevalent in public health and clinical medicine, medical flow visualization, multimodal medical visualization and virtual reality in medical education and rehabilitation. Relevant applications now include digital pathology, virtual anatomy and computer-assisted radiation treatment planning.



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**ACOUSTIC EMISSION SIGNAL  
ANALYSIS AND DAMAGE MODE  
IDENTIFICATION OF COMPOSITE  
WIND TURBINE BLADES**

Pengfei Liu



# Acoustic Emission Signal Analysis and Damage Mode Identification of Composite Wind Turbine Blades

Pengfei Liu, Associate Professor, College of Ocean Engineering, Zhejiang University, China

**ISBN:** 9780323886529  
**PUB DATE:** Jun 01, 2023  
**LIST PRICE:** £155.00 / \$200.00 /  
€175.00

**DISCOUNT:**

**FORMAT:** Paperback

**TRIM:** 6w x 9h

**PAGES:** c. 332

**ILLUSTRATIONS:** Approx. 200  
illustrations

**AUDIENCE:** Academic researchers;  
mechanical and oceanic engineers  
Advanced undergraduate and  
graduate students;

**BIC CODES:** TN, PHK, UYS, TGB

**THEMA CLASSIFICATION:**

THEMAUYS; THEMATN;

THEMATGB; THEMAPHK

**Covers the theory and techniques for monitoring composite wind turbine blades via acoustic emission signal analysis**

## KEY FEATURES

- Features fundamental acoustic emission theories and techniques for monitoring the structural integrity of wind turbine blades
- Covers sensor arrangements, noise elimination, defect detection, and dominating damage mode identification using acoustic emission techniques
- Outlines the wavelet method, the time-difference defect detection method, and damage mode identification techniques using machine learning
- Discusses how the techniques covered can be extended and adapted for use in other composite structures under complex loads and in different environments

## DESCRIPTION

*Acoustic Emission Signal Analysis and Damage Mode Identification of Composite Wind Turbine Blades* covers both the underlying theory and various techniques for effective structural monitoring of composite wind turbine blades via acoustic emission signal analysis, helping readers solve critical problems such as noise elimination, defect detection, damage mode identification, and more. Author Pengfei Liu introduces techniques for identifying and analyzing progressive failure under tension, delamination, damage localization, adhesive composite joint failure, and other degradation phenomena, outlining methods such as time-difference, wavelet, machine learning, and more including combined methods.

The disadvantages and advantages of using each method are covered as are techniques for different blade-lengths and various blade substructures. Piezoelectric sensors are discussed as is experimental analysis of damage source localization. The book also takes great lengths to let readers know when techniques and concepts discussed can be applied to composite materials and structures beyond just wind turbine blades.

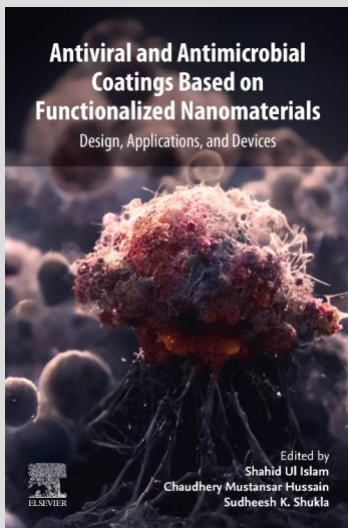


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ENGINEERING Mechanical

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# Antiviral and Antimicrobial Coatings Based on Functionalized Nanomaterials

## Design, Applications, and Devices

Edited by : **Shahid UI Islam**, Fulbright Fellow, University of California, Davis, USA; **Chaudhery Mustansar Hussain**, Department of Chemistry and Environmental Science, New Jersey Institute of Technology, Newark, NJ, USA and **Sudheesh K. Shukla**, Department of Biomedical Engineering, School of Biological Engineering and Life Science, Shobhit Institute of Engineering and Technology (Deemed-to-be University), Modipuram, Meerut, India

**ISBN:** 9780323917834  
**PUB DATE:** Jun 01, 2023  
**LIST PRICE:** £250.00 / \$325.00 / €285.00  
**DISCOUNT:**  
**FORMAT:** Paperback  
**TRIM:** 6w x 9h  
**PAGES:** c. 628  
**AUDIENCE:** Materials scientists, chemists, chemical engineers, biotechnologists, textile engineers and academicians working in the field of medicine, food processing, polymer fabrication and environmental science. Students, scientists, college and university professors, research professionals, technology investors and developers, research enterprises, R&D and defense research laboratories  
**BIC CODES:** TGM  
**THEMA CLASSIFICATION:** THEMATGM

**An in-depth exploration of the various FNPs based antimicrobial and antiviral coatings for devices and their involvement in modern industry**

### KEY FEATURES

- Describes functionalized nanoparticles-based antimicrobial and antiviral coatings utilized in modern industrial platforms
- Evaluates functionalized nanoparticles-based antimicrobial and antiviral coatings as prime options for sustainable and transformational opportunities
- Serves as a reference for scientists and engineers who are searching for modern design techniques for antimicrobial and antiviral coatings systems

### DESCRIPTION

*Antiviral and Antimicrobial Coatings Based on Functionalized Nanomaterials: Design, Applications, and Devices* is the first book on functionalized nanoparticles-based coatings that encompasses the majority of aspects of antimicrobial and antiviral coatings. The use of functionalized nanoparticles has revolutionized all fields of science and engineering, and this book provides the reader with a fundamental, interdisciplinary look at this emerging field. It focuses on the most advanced coating systems being utilized by various industries including a discussion of the current challenges to be considered during manufacturing.

This book provides both academics and those working in industry with a broad-based introduction to the area of modern antimicrobial coatings practices.

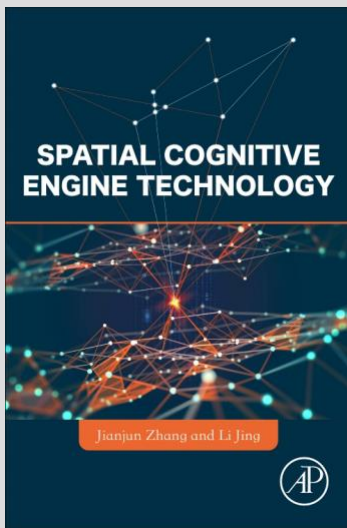


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# Spatial Cognitive Engine Technology

Jianjun Zhang, Ph.D., Professor, China Academy of Space Technology, Beijing, China and Li Jing, Associate Professor, Beijing Institute of Technology, China

**ISBN:** 9780323951074  
**PUB DATE:** Jun 01, 2023  
**LIST PRICE:** £150.00 / \$195.00 / €170.00  
**DISCOUNT:**  
**FORMAT:** Paperback  
**TRIM:** 6w x 9h  
**PAGES:** c. 208  
**AUDIENCE:** Universities, research institutes and other scientific research institutions conduct research on intelligent technology and satellite radio technology, Final year undergraduates and postgraduates in the area  
**BIC CODES:** TTD  
**THEMA CLASSIFICATION:** THEMATTD

**Covers how to better apply artificial intelligence technologies to the spatial cognition engine system**

## KEY FEATURES

- Describes the concept of cognitive engine from the perspective of the spatial cognitive cycle
- Includes coverage of in-depth research on the input module of the spatial cognition engine, the environmental perception module
- Provides in-depth research that has been conducted on the learning reasoning and optimization decision-making modules of the spatial cognition engine
- Covers the cross-layer optimization of the spatial cognition engine to realize an intelligent and complete satellite communication mechanism

## DESCRIPTION

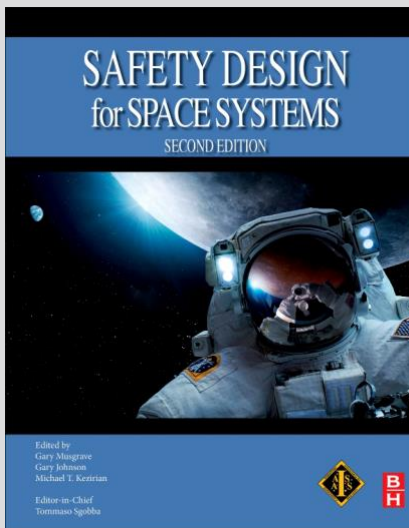
*Spatial Cognitive Engine Technology* discusses the increase in user demand for satellite wireless communication services that has led to the increasing development of spectrum resources and the fixed spectrum allocation mode which makes the utilization rate of spectrum resources lower. As an intelligent spectrum sharing technology, cognitive radio has innovated the traditional spectrum management system and is one of the effective ways to solve the above-mentioned problems. As the core of satellite cognitive radio, the spatial cognitive engine can use artificial intelligence to dynamically configure working parameters according to changes in the communication environment and user needs.



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# Safety Design for Space Systems, 2e

Edited by : **Tommaso Sgobba**, President, International Association for the Advancement of Space Safety (IAASS) and former Head of the Independent Safety Office, European Space Agency (ESA), Noordwijk, The Netherlands; **Gary Musgrave**, NASA-JSC ret., Safety Review Panel Chair, Vaihaku, USA; **Gary Johnson**, NASA-JSC ret., Space Consultant, Houston, TX, USA and **Michael T. Kezirian**, Adjunct Professor, University of Southern California, TX, USA

**ISBN:** 9780323956543  
**PREVIOUS ISBN:** 9780750685801  
**PUB DATE:** Jul 28, 2023  
**LIST PRICE:** £119.00 / \$155.00 / €135.00

**DISCOUNT:**

**FORMAT:** Hardback

**TRIM:** 7.5w x 9.25h

**PAGES:** c. 924

**AUDIENCE:** Aerospace engineers, systems engineering and safety managers working in space agencies, space industry and consulting firms, senior and graduate level courses covering design and operations of space system

**BIC CODES:** KNXC, TBD, TRP

**THEMA CLASSIFICATION:**

THEMATRP; THEMAKNX; THEMATD

**Provides current engineering and management best practices for the safe design and development of space systems**

## KEY FEATURES

- Presents basic multidisciplinary knowledge on space systems safety design
- Addresses how space safety engineering and management can be implemented in practice
- Includes new chapters on crew survivability design and nuclear space systems safety
- Provides a fully revised and updated resource that reflects the latest developments in the field

## DESCRIPTION

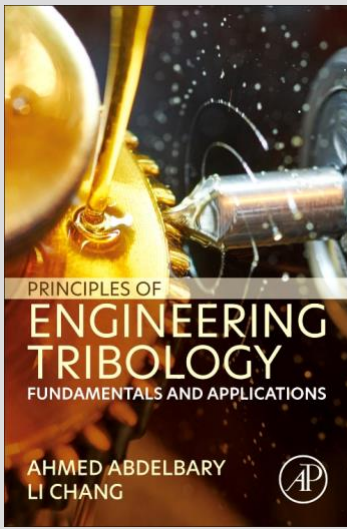
*Safety Design for Space Systems, Second Edition* presents an essential educational resource and reference tool for engineers and managers working on space projects. The book provides substantial updates on chapters from the previous edition, including new content on battery safety, life support systems, robotic systems safety, and fire safety. It also features new chapters on crew survivability design and nuclear space systems safety. Finally, discussions on human rating concepts, safety-by-design principles, and safety management practices are revised and improved. With contributions from leading experts worldwide, this new edition helps educate on space safety engineering and management for safety during design.



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# Principles of Engineering Tribology

## Fundamentals and Applications

**Ahmed Abdelbary**, Chief Engineering and Tribology Consultant, Egyptian Government, Alexandria, Egypt and **Li Chang**, School of Aerospace, Mechanical, and Mechatronic Engineering, The University of Sydney.

**ISBN:** 9780323991155  
**PUB DATE:** Jun 01, 2023  
**LIST PRICE:** £155.00 / \$200.00 / €175.00  
**DISCOUNT:**  
**FORMAT:** Paperback  
**TRIM:** 6w x 9h  
**PAGES:** c. 358  
**AUDIENCE:** Academic researchers, tribologists, materials researchers, mechanical engineering researchers, and professional engineers who encounter tribological issues, Advanced undergrad and graduate students  
**BIC CODES:** TGM  
**THEMA CLASSIFICATION:** THEMATGM

**Introduces the core theories and fundamentals of engineering tribology, including terminology, concepts, experimentation methods, lubrication techniques, applications and case studies**

### KEY FEATURES

- Introduces the basic concepts of tribology, building a comprehensive understanding for readers and then covering more advanced topics
- Discusses tribological properties of various engineering surfaces, roughness measurements, and mechanics of surface contact
- Covers more advanced topics such as fluidic, gaseous, grease, and solid media lubricants, methods for conducting friction and wear laboratory tests, and more
- Includes a wide-range of both traditional and state-of-the-art applications and case studies

### DESCRIPTION

*Principles of Engineering Tribology: Fundamentals and Applications* introduces readers to the core theories and fundamentals of the field, its basic terminology and concepts, as well as advanced topics such as the tribological properties of various engineering surfaces, roughness measurements, and the mechanics of surface contact. The fundamentals of friction and wear of metallic and non-metallic materials such as polymers, ceramics, rubbers, and composites are discussed, as are fluidic, gaseous, grease, and solid media lubrication techniques.

In addition, the properties of lubricants and various types of additives incorporated are discussed, along with a methodology for conducting friction, wear and lubrication laboratory testing and an overview of simulation and modeling methods for various tribosystems. Case studies and applications are featured throughout, with a particular emphasis on analyzing failure modes of tribosystems.

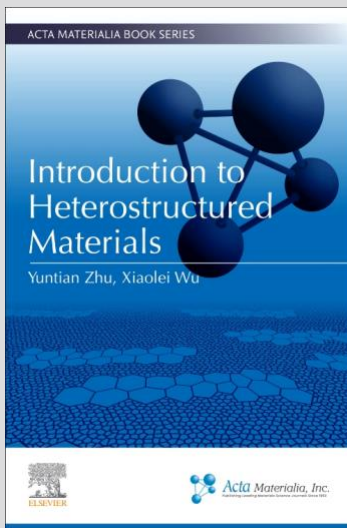


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# Introduction to Heterostructured Materials

Yuntian Zhu, Chair Professor, City University of Hong Kong, Hong Kong and Xiaolei Wu, Professor, State Key Laboratory of Nonlinear Mechanics, Institute of Mechanics, Chinese Academy of Sciences, Beijing, China

**ISBN:** 9780323993265  
**PUB DATE:** Jun 01, 2023  
**LIST PRICE:** £146.00 / \$190.00 / €170.00  
**DISCOUNT:**  
**FORMAT:** Paperback  
**TRIM:** 6w x 9h  
**PAGES:** c. 214  
**ILLUSTRATIONS:** 100 illustrations (30 in full color)  
**AUDIENCE:** Graduate students, postdocs, reseachers in the fields of materials science engineering, mechanics and computer modeling.  
**BIC CODES:** TGM  
**THEMA CLASSIFICATION:** THEMATGM

**Presents developments, state-of-the-art technologies, challenges, and solutions on the production of biofuels and bioenergy from non-food waste and non-waste feedstocks**

A Volume in the *Acta Materialia Book Series* Series

## KEY FEATURES

- Written in a systematic and easy to read style
- Discusses the mechanical behaviors of coarse-grained metals and nanostructured metals
- Focuses on the uniqueness of microstructures, behaviors and their fundamental scientific issues
- Includes the design and potential applications for various heterostructured materials

## DESCRIPTION

*Introduction to Heterostructured Materials* provides updates on the historical perspective of the development of these materials, which is followed by a review of the basic background on mechanical behaviors and properties of metals and alloys. Next, both the definition and the fundamental principles and deformation behavior of heterostructured materials are covered, as well as their processing and properties and various design principles. The book supports graduate students and researchers entering this field, senior scientists who are already working in this field, engineers in the manufacturing industry, and professors who are teaching advanced materials and technologies.

Heterostructured materials not only possess superior mechanical and/or physical properties that are not accessible to their conventional homogeneous counterparts, but they are also conducive to large-scale industrial production at low cost.

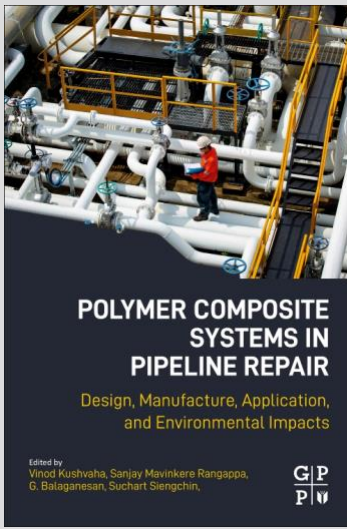


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ENGINEERING Materials

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# Polymer Composite Systems in Pipeline Repair

## Design, Manufacture, Application, and Environmental Impacts

Edited by : **Sanjay Mavinkere Rangappa**, Research Scientist, Natural Composites Research Group Lab, King Mongkut's University of Technology North Bangkok, Thailand; **Suchart Siengchin**, President, Department of Materials and Production Engineering, The Sirindhorn International Thai-German Graduate School of Engineering (TGGS), King Mongkut's University of Technology North Bangkok (KMUTNB), Bangkok, Thailand; **G. Balaganesan**, Indian Institute of Technology, Madras, Chennai, India and **Vinod Kushvaha**, Department of Civil Engineering Materials and Structures, Indian Institute of Technology, Jammu, India

**ISBN:** 9780323993401  
**PUB DATE:** Jun 01, 2023  
**LIST PRICE:** £127.00 / \$165.00 / €144.00  
**DISCOUNT:**  
**FORMAT:** Paperback  
**TRIM:** 6w x 9h  
**PAGES:** c. 310  
**ILLUSTRATIONS:** Approx. 200 illustrations  
**AUDIENCE:** Pipeline engineers, pipeline managers, Mechanical engineers, polymer researchers  
**BIC CODES:** THF, KNAT, TQ  
**THEMA CLASSIFICATION:** THEMATQ; THEMATHF; THEMAKNA

**Provides knowledge on recent advances in pipeline repair using polymer composite systems**

### KEY FEATURES

- Present readers with detailed knowledge on the design, manufacture and application of composite systems used to repair damage in pipelines
- Assesses the environmental impacts on pipeline repairs using nano materials
- Provides the most recent developments in the research of polymers, blends and composites for repair applications
- Bridge theory and practice on the most recent developments in the research of polymers, blends and composites, with applicable case studies and contributions from a diverse group of worldwide contributors

### DESCRIPTION

*Polymer Composite Systems for Pipeline Repair: Design, Manufacture, Application, and Environmental Impacts* delivers the latest developments in nanomaterials, specifically polymers and composites that can support pipeline repair in an effective and more environmentally-sound way. Edited by a diverse worldwide group of contributors, the reference touches on design and manufacturing techniques, patch configurations, hybrid pipes used in harsher environments, and damage detection techniques. High temperature, marine, and cold fluids are also included. Rounding out with economic and environmental impact assessments, this book gives today's oil and gas pipeline engineers an impactful and sustainable tool to safely repair pipelines.

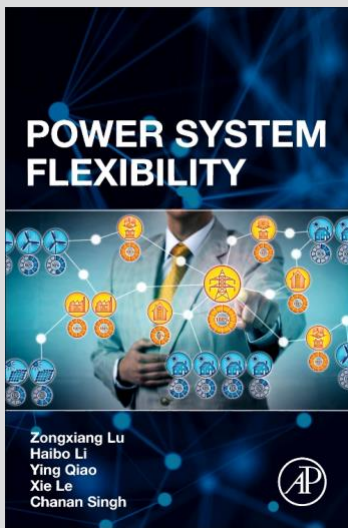


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ENGINEERING Petroleum

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# Power System Flexibility

**Zongxiang Lu**, Associate Professor, Electrical Engineering Department, Tsinghua University, China; **Haibo Li**, Research Assistant, Tsinghua Sichuan Energy Internet Institute, China; **Ying Qiao**, Associate Professor, Electrical Engineering Department, Tsinghua University, China; **Xie Le**, Professor Chancellor EDGE fellow; Assistant Director of Energy Digitization, A&M Energy Institute, Texas, USA and **Chanan Singh**, University Distinguished Professor, Regents Professor and Irma Runyon Chair Professor, Department of Electrical and Computer Engineering, Texas A&M University, USA

**ISBN:** 9780323995177  
**PUB DATE:** Jul 29, 2023  
**LIST PRICE:** £127.00 / \$165.00 / €144.00

**DISCOUNT:**

**FORMAT:** Paperback

**TRIM:** 6w x 9h

**PAGES:** c. 200

**AUDIENCE:** Graduate students and early career researchers (1st year PhD+) working in power engineering, energy systems, control engineering, and renewable energy; Engineers, power plant staff, transmission system operators, network owners, manufacturers, consultants, and relevant workers in power system operations, electrical engineering and relevant fields. Power system economists

**BIC CODES:** THX, THRM

**THEMA CLASSIFICATION:**

THEMATHR; THEMATHY;

THEMATHV

**Provides a comprehensive knowledge framework for researchers and practitioners seeking to design, plan, and operationalize flexibility across various power applications**

## KEY FEATURES

- Integrates underlying scientific foundations with modern methods in the planning and operation of flexible power systems
- Demonstrates how to design, plan, operationalize, and optimize flexible solutions across the full range of power generation, electrical grids, energy demand, and energy storage applications
- Includes an international complement of real-world case studies focusing on delivering flexibility in highly renewable electricity systems

## DESCRIPTION

*Power System Flexibility* provides a consolidated foundation in the design, planning, and operation of intermittent highly renewable power systems—integrating core theory, mathematical analysis, and modern international applications in an unusually multidisciplinary approach. Opening with an expansive theoretical grounding in the definition, analysis, and modeling of power systems, the book demonstrates how to apply flexibility theory to critical problems involving intermittency and variability in power system planning and operation. The guide concludes with an international complement of case studies, demonstrating how flexibility theory has been applied to real-world projects of increasing complexity.

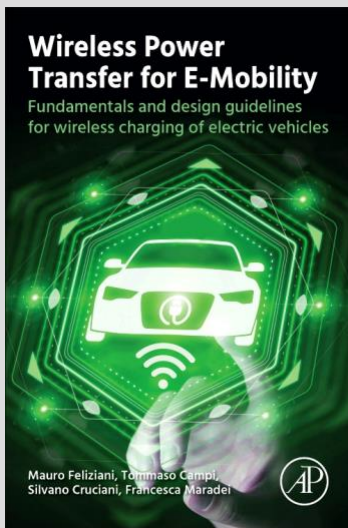


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ENGINEERING Electrical

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# Wireless Power Transfer for E-Mobility

## Fundamentals and Design Guidelines for Wireless Charging of Electric Vehicles

**Mauro Feliziani**, Professor, Electrical Engineering, University of L'Aquila, L'Aquila, Italy; **Tommaso Campi**, Assistant Professor, Electrical Engineering, University of L'Aquila, L'Aquila, Italy.; **Silvano Cruciani**, Assistant Professor, Electrical Engineering, Tor Vergata University, Rome, Italy. and **Francesca Maradei**, Professor of Electrical Engineering, Sapienza University of Rome, Rome, Italy

**ISBN:** 9780323995238  
**PUB DATE:** Jun 01, 2023  
**LIST PRICE:** £127.00 / \$165.00 / €144.00

**DISCOUNT:**

**FORMAT:** Paperback

**TRIM:** 6w x 9h

**PAGES:** c. 224

**AUDIENCE:** Graduate students and early career researchers investigating near-field wireless power transmission, e-mobility and CASE engineering, and in electrical and electronic engineering. Technicians in industry and practicing power engineers

**BIC CODES:** TJ, TRC, THRM, THX

**THEMA CLASSIFICATION:**

THEMATHR; THEMATHY;

THEMATJF; THEMATRC;

THEMATHV

**Provides fundamental principles of wireless power transfer through current best practice in stationary and dynamic automotive inductive power transfer systems**

### KEY FEATURES

- Provides an advanced foundation for research and current industrial applications in automotive WPT systems
- Develops proven methodologies linked to some case studies using examples drawn from global practice
- Explores the role of WPT in near-future mobility scenarios, with featured coverage of electrified transportation
- Includes an extensive usage of equations from MATLAB, Spice and COMSOL

### DESCRIPTION

*Wireless Power Transfer for e-Mobility: Fundamentals and Design Guidelines for Wireless Charging of Electric Vehicles* provides an comprehensive resource for researchers and engineers engaged in the development of automotive WPT systems.

The book opens with an overview of wireless technologies for power transfer and their evolution over time, then focusing on the application of this technology to electric mobility highlighting its importance in terms of impact and perspectives on the development of sustainable transport and autonomous driving. Chapters discuss the fundamentals of electromagnetic field in WPT systems and the circuit modelling. In addition, they examine core current electric vehicle systems and present-day automotive WPT standards. Design techniques of magnetic couplers, including compensation networks are explored in-depth alongside power electronics techniques for automotive WPT systems. Both stationary and dynamic automotive WPT systems are rigorously assessed. Finally, the problems of electromagnetic compatibility and electromagnetic field safety are described with particular attention to shielding techniques for the mitigation of magnetic field emissions.

Addressing essential knowledge from foundational to advanced levels, *Wireless Power Transfer for e-Mobility* provides practical guidance to engineers and researchers developing the future of electric mobility.



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ENGINEERING Electrical

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# Real-Time Simulation Technology for Modern Power Electronics

**Hao Bai**, Associate Professor, Northwestern Polytechnical University, China; **Chen Liu**, Associate Professor in Electrical Engineering, Zhengzhou University, Zhengzhou, China; **Dusan Majstorovic**, Chief Technical Officer at Typhoon HIL and a member of the team that developed both the theoretical foundation and hardware platform for the world's first programmable FPGA solver based Hardware-in-the Loop (HIL) real-time emulator platform for power electronics and **Fei Gao**, Deputy Director, French National CNRS Research Institute FEMTO-ST and Full Professor, University of Technology of Belfort-Montbéliard (UTBM), France

**ISBN:** 9780323995412  
**PUB DATE:** Jun 01, 2023  
**LIST PRICE:** £127.00 / \$165.00 / €144.00

**DISCOUNT:**

**FORMAT:** Paperback

**TRIM:** 6w x 9h

**PAGES:** c. 280

**AUDIENCE:** Researchers, engineers, and applied scientists working in the power electronics, electric drive, and system engineering disciplines in the power, energy and transportation sector, researchers engaged in the modeling, simulation, design, validation, and maintenance of power electronics converters, digital twinning, and cyber-physics applications of power-electronics-penetrated power systems, undergraduates and graduates who major in electrical engineering and computer science, and technicians who are responsible for the construction of the rapid prototyping system, HIL-based testing systems, and condition monitoring systems of power electronics.

**Provides fundamental models, key numerical solutions, implementation technologies, core applications and near and long-term outlooks**

## KEY FEATURES

- Introduces the theoretical building blocks of real-time power electronic simulation through advanced modern implementations
- Includes modern case studies and implementations across diverse applications, including electric vehicle component testing and microgrid controller testing
- Discusses FPGA-based real-time simulation techniques complete with illustrative examples, comparisons with CPU-based simulation, computational performance and co-simulation architectures

## DESCRIPTION

*Real-Time Simulation Technology for Modern Power Electronics* provides an invaluable foundation and state-of-the-art review on the most advanced implementations of real-time simulation as it appears poised to revolutionize the modeling of power electronics. The book opens with a discussion of power electronics device physic modeling, component modeling, and power converter modeling before addressing numerical methods to solve converter model, emphasizing speed and accuracy. It discusses both CPU-based and FPGA-based real-time implementations and provides an extensive review of current applications, including hardware-in-the-loop and its case studies in the micro-grid and electric vehicle applications.

The book closes with a review of the near and long-term outlooks for the evolving technology. Collectively, the work provides a systematic resource for students, researchers, and engineers in the electrical engineering and other closely related fields.



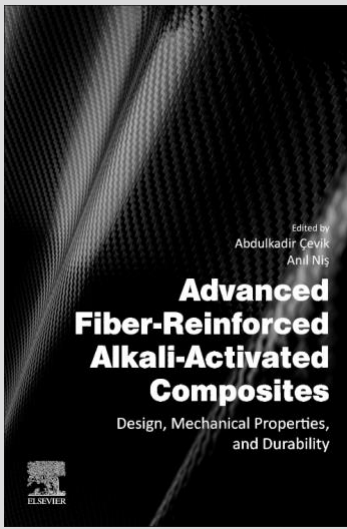
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# Advanced Fiber-Reinforced Alkali-Activated Composites

## Design, Mechanical Properties, and Durability

Edited by : **Abdulkadir Çevik**, Professor, Civil Engineering Department, Gaziantep University, Turkey and **Anil Niş**, Associate Professor, Civil Engineering Department, Istanbul Gelisim University, Turkey

**ISBN:** 9780443153013  
**PUB DATE:** Jun 01, 2023  
**LIST PRICE:** £205.00 / \$250.00 / €240.00  
**DISCOUNT:**  
**FORMAT:** Paperback  
**TRIM:** 6w x 9h  
**PAGES:** c. 461  
**AUDIENCE:** Engineers, material scientists, and researchers, industry professionals working in the production of alkali-activated composites, Undergraduate and graduate students in materials science and engineering related fields of study  
**BIC CODES:** PNK  
**THEMA CLASSIFICATION:** THEMARNK

**Covers various fiber types, their usage as a sustainable material, their influence on mechanical properties and behavior, and more**

### KEY FEATURES

- Discusses different fiber types and their effects on alkali-activated composite materials
- Includes coverage of compressive strength, tensile strength, flexural strength, impact and bond resistance, and more
- Investigates the durability of these materials, studying how they perform in seawater, elevated temperature environments, and under sulphuric acid attacks
- Covers the shrinkage resistance, permeability and corrosion performance of these materials

### DESCRIPTION

*Advanced Fiber-Reinforced Alkali-Activated Composites: Design, Mechanical Properties, and Durability* covers various fiber types and their usage as a sustainable material as well as their influence on mechanical properties and behavior, including compressive strength, tensile strength, flexural strength, and impact and bond resistance. Their durability in different environments (seawater, magnesium sulphate, sulphuric acid, elevated temperature, corrosive) is also discussed. The book also outlines a variety of mix design and curing regimes for alkali-activated composites. The additive manufacturing of these composites is also covered.

Different types of fiber-reinforced alkali-activated composites discussed include steel fiber-reinforced, carbon fiber-reinforced, natural fiber-reinforced, synthetic fiber-reinforced, and others.

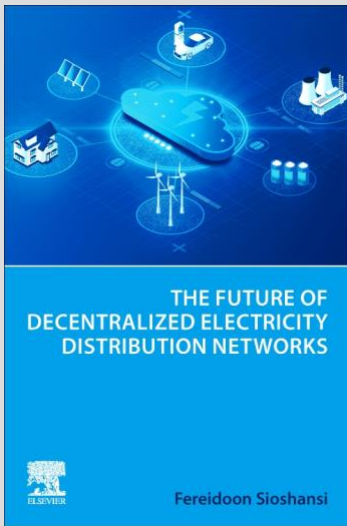


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ENGINEERING Materials

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# The Future of Decentralized Electricity Distribution Networks

Edited by : **Fereidoon Sioshansi**, President, Menlo Energy Economics, San Francisco, CA, USA

**ISBN:** 9780443155918  
**PUB DATE:** Jun 01, 2023  
**LIST PRICE:** £127.00 / \$165.00 / €144.00

**DISCOUNT:**

**FORMAT:** Paperback

**TRIM:** 6w x 9h

**PAGES:** c. 454

**AUDIENCE:** Practitioners in the utility industry investigating how to model and plan for demand-side generation, storage and prosumer behaviors.

Regulators and policy makers making governance decisions on distributed energy systems. Researchers studying energy markets and energy systems. Energy economists.

**BIC CODES:** PHH

**THEMA CLASSIFICATION:**  
THEMAPHH

**Explores the necessary evolution of services delivered by the distribution network as demand proliferates and encompasses new categories**

## KEY FEATURES

- Examines the future of services demanded by electricity customers as some diverge from their traditional total reliance on the network for delivery of all their service needs
- Reviews the emergence of new business models to meet the diverging needs of customers
- Explores the costs imposed by new types of customers on the delivery network and how to collect sufficient revenues from all to maintain it in ways that are efficient, equitable and fair

## DESCRIPTION

*The Future of Decentralized Electricity Distribution Networks* assesses the evolution of the services delivered by the distribution network as demands placed on it proliferates from distributed, self-generating, power storing and power sharing 'consumers' – which Sioshansi terms 'prosumagers'. The work outlines the processes by which passive and homogeneous electricity consumers become prosumers and prosumagers, the nature of their service needs, and dependence on the services delivered by the distribution network diverges. Contributors assess how consumers are discovering and exercising options to migrate away from total reliance on upstream generators to produce electricity and on the delivery network for its transmission.

As they do so, the "utilities" – be they distributors or retailers – must rethink the traditional utility business model. How will they find sufficient revenues to cover their fixed and variable costs as volumetric consumption declines when some consumers become prosumers – or go a step further and become prosumagers? This work argues that new service, business models and new methods for collecting sufficient revenues to maintain the network are mandatory for the survival of modern utilities.

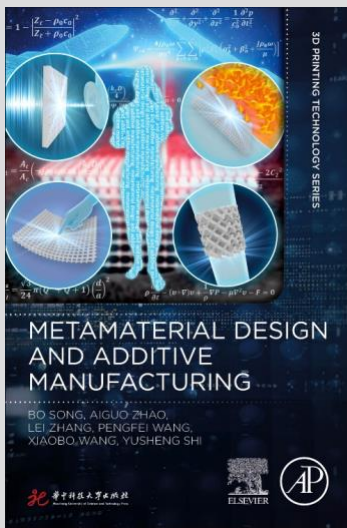


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# Metamaterial Design and Additive Manufacturing

**Bo Song**, Professor, School of Materials Science and Engineering of Huazhong University of Science and Technology, Hubei, China; **Aiguo Zhao**, Professor, College of Civil Engineering, Nanjing Tech University, Nanjing, Jiangsu, China; **Lei Zhang**, Assistant research fellow, School of Materials Science and Engineering, Huazhong University of Science and Technology, Wuhan, China; **Pengfei Wang**, Research fellow, China Aerospace Science and Technology Innovation Research Institute, Beijing, China ; **Xiaobo Wang**, Assistant research fellow School of Materials Science and Engineering, Huazhong University of Science and Technology, Wuhan, Hubei, China and **Yusheng Shi**, Professor, School of Materials Science and Engineering, Huazhong University of Science and Technology, China

**ISBN:** 9780443189005  
**PUB DATE:** May 01, 2023  
**LIST PRICE:** £135.00 / \$175.00 / €155.00  
**DISCOUNT:**  
**FORMAT:** Paperback  
**TRIM:** 6w x 9h  
**PAGES:** c. 334  
**AUDIENCE:** Industry sector: Machinery, Medicine, Marine engineering, Aerospace, Auto, Biology, etc. Job role: Teacher, Researcher, R&D engineer, Student, Industrial worker, etc. Subject specialism: Mechanics, Mechanical Engineering, Materials Science and Technology, Laser, Process Engineering, etc. Academics  
**BIC CODES:** TGB  
**THEMA CLASSIFICATION:** THEMATGB

**Covers the manufacturing, structure and application of pentamode metamaterials**

A Volume in the *3D Printing Technology Series* Series

## KEY FEATURES

- Covers design and optimization methods of pentamode metamaterials
- Describes manufacturing fidelity, microstructure and physical properties of pentamode metamaterials fabricated by AM
- Includes recent applications for pentamode metamaterials, along with research situations and potential problems

## DESCRIPTION

*Metamaterial Design and Additive Manufacturing* covers optimization design, manufacturing, microstructure, mechanical properties, acoustic properties, mass-transport properties and application examples of PMs fabricated by selective laser melting additive manufacturing technology. The book introduces the definition and concept of pentamode metamaterials and then describes their characterization, including manufacturing fidelity, mechanical response, acoustic properties and so on. Final sections analyze research situations, problems and applications of additive manufacturing pentamode metamaterials.



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# Human-Machine Interaction for Automated Vehicles

## Driver Status Monitoring and the Takeover Process

**Yifan Zhao**, Reader in Data Science, School of Aerospace, Transport and Manufacturing, Cranfield University, UK; **Chen Lv**, Assistant Professor, School of Mechanical and Aerospace Engineering, Nanyang Technological University, Singapore and **Lichao Yang**, Research Fellow in Computer Vision and Artificial Intelligence, School of Aerospace, Transport and Manufacturing, Cranfield University, UK

**ISBN:** 9780443189975  
**PUB DATE:** Jun 01, 2023  
**LIST PRICE:** £170.00 / \$220.00 / €195.00  
**DISCOUNT:**  
**FORMAT:** Paperback  
**TRIM:** 6w x 9h  
**PAGES:** c. 270  
**AUDIENCE:** Researchers and engineers interested in human-machine interaction in automated vehicles.  
**BIC CODES:** TRC  
**THEMA CLASSIFICATION:** THEMATRC

**Explains how to design an intelligent human-machine interface by characterizing a range of driver behaviors before and during the take-over process**

### KEY FEATURES

- Covers everything needed to design an effective driver monitoring system, including sensors, areas to monitor, computing devices, and data analysis algorithms
- Explores aspects of driver behavior that should be considered when designing an intelligent HMI
- Examines the L3 take-over process in detail

### DESCRIPTION

*Human-Machine Interaction for Automated Vehicles: Driver Status Monitoring and the Takeover Process* explains how to design an intelligent human-machine interface by characterizing driver behavior before and during the takeover process. Multiple solutions are presented to accommodate different sensing technologies, driving environments and driving styles. Depending on the availability and location of the camera, the recognition of driving and non-driving tasks can be based on eye gaze, head movement, hand gesture or a combination. Technical solutions to recognize drivers various behaviors in adaptive automated driving are described with associated implications to the driving quality.

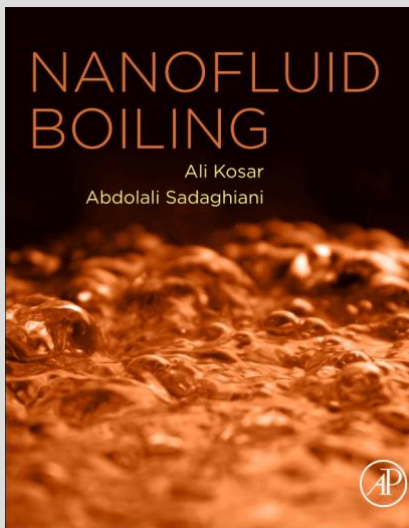
Finally, cutting-edge insights to improve the human-machine-interface design for safety and driving efficiency are also provided, based on the use of this sensing capability to measure drivers' cognition capability.



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ENGINEERING Automotive & Aeronautical  
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# Nanofluid Boiling

**Ali Kosar**, Microthermal and Microfluidic Systems Laboratory, Center of Excellence for Functional Surfaces and Interfaces for Nano Diagnostics, FENS1014 Sabanci University, Orhanli, Tuzla Istanbul, Turkey and **Abdolali Sadaghiani**, Micro-Nano Scale Heat Transfer and Microfluidics Research Group, Nanotechnology Research and Application Center (SUNUM), Orhanli, Tuzla, 34956, Istanbul, Turkey

**ISBN:** 9780128169230  
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**LIST PRICE:** £129.00 / \$165.00 / €145.00

**DISCOUNT:**

**FORMAT:** Paperback

**TRIM:** 7.5w x 9.25h

**PAGES:** c. 288

**AUDIENCE:** Thermal fluid and heat transfer engineers working in industries such as refrigeration, power generation, heat exchangers and power electronics cooling looking for new techniques and technologies for performance enhancement, graduate level students and researchers in thermal engineering working on boiling heat transfer and applications of nanofluids

**BIC CODES:** PHH, RGC

**THEMA CLASSIFICATION:** THEMAPHH; THEMARGC

**Guides thermal fluid and heat transfer engineers in the research, design and development of systems involving nanofluids**

## KEY FEATURES

- Gives insights into nanofluid boiling heat transfer mechanisms
- Offers state-of-the-art techniques for overcoming challenges and difficulties in the applications of nanofluids
- Presents the most updated information about nanofluid boiling heat transfer, mechanisms of heat transfer, and critical heat flux enhancements
- Focuses on parametric effects, such as nanofluid properties (size, concentration, nanoparticle type), preparation methods on heat transfer and critical heat flux mechanisms, bubble dynamics, flow patterns and pressure drop

## DESCRIPTION

*Nanofluid Boiling* presents valuable insights into boiling heat transfer mechanisms, offering state-of-the-art techniques for overcoming obstacles against nanofluid applications. In addition, the book points out emerging industrial applications and guides researchers and engineers in their research and design efforts. In addition, recommendations on future research directions and the design of systems involving nanofluids are presented at the end of each chapter. The book's authors comprehensively cover mechanisms, parametric effects and enhancement techniques in the boiling of nanofluids, providing updated, detailed information about recent developments and findings.



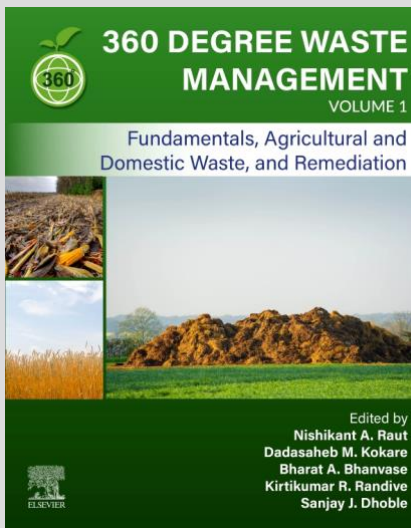
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# 360-Degree Waste Management, Volume 1

## Fundamentals, Agricultural and Domestic Waste, and Remediation

Edited by : **Nishikant A. Raut** , Professor, Department of Pharmaceutical Sciences, Nagpur University, Nagpur, India; **Dadasaheb M. Kokare** , Associate Professor, Department of Pharmaceutical Sciences, R.T.M. Nagpur University, Nagpur, India; **Bharat A. Bhanvase**, Professor and Head, Chemical Engineering Department, Laxminarayan Institute of Technology, RTM Nagpur University, Nagpur, Maharashtra, India; **Kirtikumar R. Randive**, Associate Professor, Department of Geology, R.T.M. Nagpur University, Nagpur, India and **Sanjay J. Dhoble**, Professor, Department of Physics, R.T.M. Nagpur University, Nagpur, India

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**DISCOUNT:**  
**FORMAT:** Paperback  
**TRIM:** 7.5w x 9.25h  
**PAGES:** c. 272  
**AUDIENCE:** Researchers and practitioners in environmental science, waste management, and environmental engineering. Policy makers, Non-Government Organizations, municipal corporations, industries, educational institutes and students  
**BIC CODES:** RN  
**THEMA CLASSIFICATION:** THEMATQ

**Utilizes an interdisciplinary approach to provide a comprehensive view of solid wastes generated from agricultural and domestic activities**

### KEY FEATURES

- Provides a critical assessment of the economic, social and environmental challenges associated with solid wastes, highlighting sustainable management approaches
- Describes various factors to be considered when developing waste management strategies, including techniques to reuse, reduce, recycle or recover solid waste and manage other wastes
- Addresses contemporary issues such as the transformation of waste into value-added products
- Presents an interdisciplinary approach to the management of various types of agricultural and domestic waste

### DESCRIPTION

*360 Degree Waste Management, Volume One: Fundamentals, Agricultural and Domestic Waste, and Remediation* presents an interdisciplinary approach to understanding various types of agricultural and domestic waste, including their origin, management, recycling, disposal, effects on ecosystems, and social and economic impacts. By applying the concepts of sustainable, affordable and integrated approaches for improvement of waste management, the book confronts social, economic and environmental challenges. Thus, researchers, waste managers and environmental engineers will find critical information for identifying long-term answers to problems of waste management that require complex understanding and analysis.

Presenting key concepts in the management of agricultural and domestic or municipal waste, this new volume includes aspects on the microbiology of waste management, advanced treatment processes, environmental impacts, technological developments, the economics of waste management and future implications.



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# 360-Degree Waste Management, Volume 2

## Biomedical, Pharmaceutical, Industrial Waste, and Remediation

Edited by : **Nishikant A. Raut** , Professor, Department of Pharmaceutical Sciences, Nagpur University, Nagpur, India; **Dadasaheb M. Kokare** , Associate Professor, Department of Pharmaceutical Sciences, R.T.M. Nagpur University, Nagpur, India; **Bharat Bhanvase**, Professor and Head in Chemical Engineering Department, Laxminarayan Institute of Technology, RTM Nagpur University, Nagpur, Maharashtra, India; **Kirtikumar R. Randive**, Associate Professor, Department of Geology, R.T.M. Nagpur University, Nagpur, India and **Sanjay J. Dhoble**, Professor, Department of Physics, R.T.M. Nagpur University, Nagpur, India

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**DISCOUNT:**

**FORMAT:** Paperback

**TRIM:** 7.5w x 9.25h

**PAGES:** c. 300

**AUDIENCE:** Researchers and practitioners in environmental science, waste management, and environmental engineering. Policy makers, Non-Government Organizations, municipal corporations, industries, educational institutes and students

**BIC CODES:** TQSR, TQSR3, RN

**THEMA CLASSIFICATION:**

THEMATQSR; THEMARNH;

THEMATQ

**Utilizes an interdisciplinary approach to provide a comprehensive view of solid wastes generated from biomedical, pharmaceutical and industrial activities**

### KEY FEATURES

- Provides a critical assessment of economic, social and environmental challenges due to solid wastes, highlighting sustainable management approach
- Describes various factors to be considered while developing waste management strategies, including techniques for reuse, reduce, recycle or recovery of solid waste and management of other wastes, such as wastes from pharmaceuticals, aluminum industry, heavy metal, and other metallurgical waste
- Addresses contemporary issues such as the transformation of waste into value-added products
- Presents an interdisciplinary approach to the management of various types of biomedical, pharmaceutical and industrial waste

### DESCRIPTION

*360 Degree Waste Management, Volume Two: Biomedical, Pharmaceutical, and Industrial Waste and Remediation* presents an interdisciplinary approach to understanding various types of biomedical, pharmaceutical, and industrial waste, including their origin, management, recycling, disposal, effects on ecosystems, and social and economic impacts. By applying the concepts of sustainable, affordable and integrated approaches for the improvement of waste management, the book confronts social, economic and environmental challenges. Thus, researchers, waste managers and environmental engineers will find critical information to identify long-term answers to problems of waste management that require complex understanding and analysis.

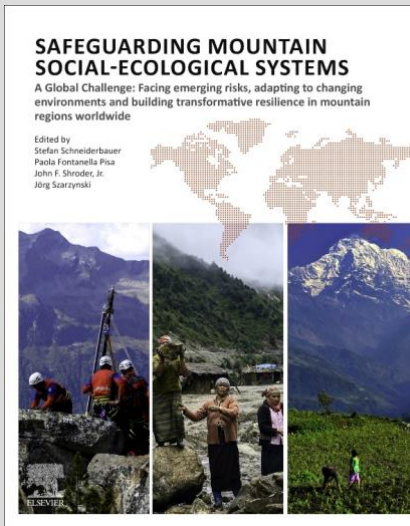
Presenting key concepts in the management of biomedical and industrial waste, Volume Two of this two volume series includes aspects on microbiology of waste management, advanced treatment processes, environmental impacts, technological developments, economics of waste management and future implications.



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# Safeguarding Mountain Social-Ecological Systems

## A Global Challenge: Facing Emerging Risks, Adapting to Changing Environments and Building Transformative Resilience in Mountain Regions Worldwide

Edited by : **Stefan Schneiderbauer**, Head of Global Mountain Safeguard Research Program (GLOMOS), Bolzano, Italy ; **Paola Fontanella Pisa**, United Nations University, Institute for Environment and Human Security, Bonn, Germany at Eurac Research, Centre for Global Mountain Safeguard Research (GLOMOS), Bolzano, Italy ; **John F. Shroder, Jr.**, Department of Geography and Geology, University of Nebraska, Omaha, NE, USA and **Jörg Szarzynski**, Head of GLOMOS, Bonn, Germany

**ISBN:** 9780128220955  
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**DISCOUNT:**  
**FORMAT:** Paperback  
**TRIM:** 7.5w x 9.25h  
**PAGES:** c. 325  
**ILLUSTRATIONS:** Approx. 140 illustrations  
**AUDIENCE:** Application oriented researchers, policy and decision makers, practitioners / public authorities in disaster risk reduction, climate change adaptation, sustainable land management, Climate change adaptation, disaster risk reduction, sustainable development, biodiversity  
**BIC CODES:** RBGD  
**THEMA CLASSIFICATION:** THEMARBG

**Provides state-of-the-art knowledge on mountain social-ecological systems and the corresponding challenges and opportunities for sustainable development**

### KEY FEATURES

- Focuses on existing challenges for mountain regions around the world
- Presents specific case studies of mountain ecosystems from major mountain ranges
- Features contributions from representatives of UN Agencies and research experts from the addressed regions, offering a very interdisciplinary view on challenges and opportunities

### DESCRIPTION

*Safeguarding Mountain Ecosystems: A Global Challenge* provides an overview of the relevant research in mountain regions worldwide, identifying existing challenges and providing an understanding of the diversity of mountain ecosystems in different regions. Mountain ecosystems are increasingly vulnerable to modified climate conditions and other global changes (demographic, migration, urbanization). In this time of change, efforts for sustainable development in mountain ecosystems deserve all the attention, especially in synergy with the United Nations' International Frameworks, including the Sustainable Development Agenda 2030, the Sendai Framework for Disaster Risk Reduction, the Paris Agreement, and the New Urban Agenda.

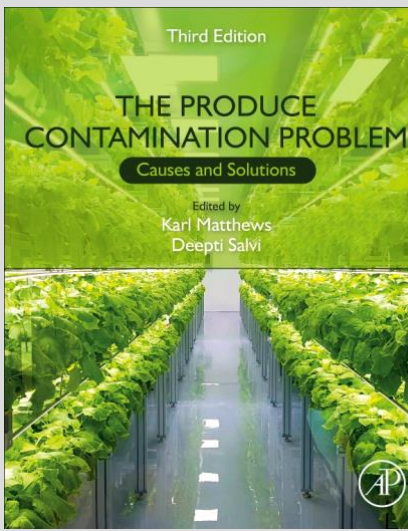
Sections underline the importance of mountain regions for humanity at global, regional and local scales, describe the challenges of safeguarding mountains and possible solutions worldwide, and scrutinize regional specificities of the major mountain ranges, describing the challenges and opportunities of each. Final sections reflect on applications and technologies that address and solve major problems.



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# The Produce Contamination Problem, 3e

## Causes and Solutions

Edited by : **Karl Matthews**, Rutgers-The State University of New Jersey, New Brunswick, USA and **Deepti Salvi**, Department of Food, Bioprocessing and Nutrition Sciences, North Carolina State University, Raleigh, NC, USA

**ISBN:** 9780128195246

**PREVIOUS ISBN:** 9780124046115

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**LIST PRICE:** £205.00 / \$265.00 / €235.00

**DISCOUNT:**

**FORMAT:** Paperback

**TRIM:** 7.5w x 9.25h

**PAGES:** c. 532

**ILLUSTRATIONS:** 100 illustrations

**AUDIENCE:** Growers, packers, and fresh-cut processors, and their trade associations and suppliers, especially those organizations impacted by recent outbreaks of foodborne illness

**BIC CODES:** TDCT, TVB

**THEMA CLASSIFICATION:**

THEMATVB; THEMATDCT

**A valuable source of information on how to avoid contamination and improve the microbiological safety of fresh produce**

A Volume in the *Food Science and Technology Series*

### KEY FEATURES

- Includes new information on sustainable production practices, including aero-farming
- Presents information on preventative controls at all stages of food handling
- Provides information on the use of the latest technologies for the inactivation of pathogens in water, and on commodities

### DESCRIPTION

*The Produce Contamination Problem: Causes and Solutions, Third Edition* is a fully revised resource on preventative controls at all stages of handling, including the use of new technologies for the inactivation of pathogens in both water and commodity. The book begins with an analysis of the contamination problem to identify novel research designed to understand the interaction of human pathogens. Outbreak characteristics vulnerable to contamination are discussed, along with global issues surrounding production. This new edition includes updates on regulatory issues and the newest advances in technologies for the detection of pathogens, whole genome sequencing, and utility in test and hold programs.

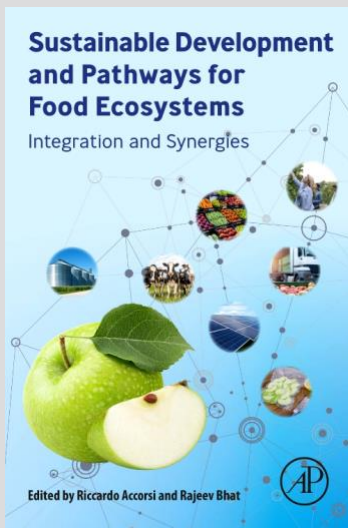


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FOOD SCIENCE, TECHNOLOGY & NUTRITION  
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# Sustainable Development and Pathways for Food Ecosystems

## Integration and Synergies

Edited by : **Riccardo Accorsi**, Assistant Professor, Department of Industrial Engineering, University of Bologna, Italy and **Rajeev Bhat**, Professor and ERA-Chair Holder, Food By-Products Valorization Technologies (VALORTECH), Estonian University of Life Sciences, Tartu, Estonia

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**FORMAT:** Paperback  
**TRIM:** 6w x 9h  
**PAGES:** c. 320  
**AUDIENCE:** Agri-food scientists, biotechnologists, environmental scientist and engineers, bio-entrepreneurs, food industry personnel, policy makers and other closely related professionals, Academics and Students  
**BIC CODES:** MR  
**THEMA CLASSIFICATION:** THEMAMR

**Helps readers understand the relationships and interdependencies between food ecosystems to promote sustainability in the global food chain**

### KEY FEATURES

- Provides information on sustainability challenges, developments and solutions related to food ecosystems
- Discusses the impact of renewables toward sustainable and zero-carbon food ecosystems
- Summarizes the scientific literature on alternative valorization strategies to reduce biomass
- Defines boundaries of analysis of entities, input/output flows, constraints and performance goals to measure data

### DESCRIPTION

*Sustainable Development and Pathways for Food Ecosystems: Integration and Synergies* is a science-based reference which focuses on several illustrated patterns that explore the roles played by the agri-food ecosystems, their functions and needs, and the importance of the interdependencies among them. This book explores the relationships and interdependencies between food ecosystems, highlighting the role each entity has in exploiting, transforming, preserving and conserving the others. It is a great resource of information on the ecosystems that surround the food supply chain and includes all processes from primary production of food through consumption.

Sections cover the agricultural phase, processing and transformation, storage and consolidation, packaging, transportation and the management of waste and losses. This will be a useful reference for academicians, researchers and all the personnel involved with agri-food sector management.

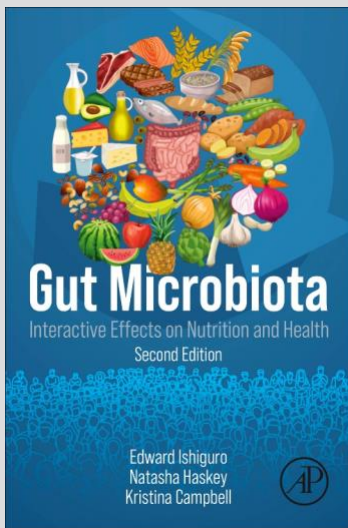


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# Gut Microbiota, 2e

## Interactive Effects on Nutrition and Health

**Edward Ishiguro**, Professor Emeritus, Department of Biochemistry and Microbiology, University of Victoria, Victoria, BC, Canada; **Natasha Haskey**, Registered Dietitian/Consultant, Saskatoon, SK, Canada and **Kristina Campbell**, KC Microbiome Communications Group (science and medical writer), Victoria, Canada

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**DISCOUNT:**  
**FORMAT:** Paperback  
**TRIM:** 6w x 9h  
**PAGES:** c. 275  
**AUDIENCE:** Food and nutrition researchers working in academia and industry, and healthcare professionals giving dietary recommendations to the general public  
**BIC CODES:** TDCT, VFM  
**THEMA CLASSIFICATION:** THEMATDCT; THEMAVFMD; THEMAMBNH3

**Provides succinct, science-based coverage of gut microbiota and health and how to apply this information in practice**

### KEY FEATURES

- Presents diet, the gut microbiota, and health in a way that helps the reader interpret the value of related consumer tests and products
- Includes frequently asked questions that help clinicians provide succinct answers to their patients or clients
- Covers gut microbiota in the context of nutrition research and analyzes gaps in current knowledge to shape the design of future studies in this field

### DESCRIPTION

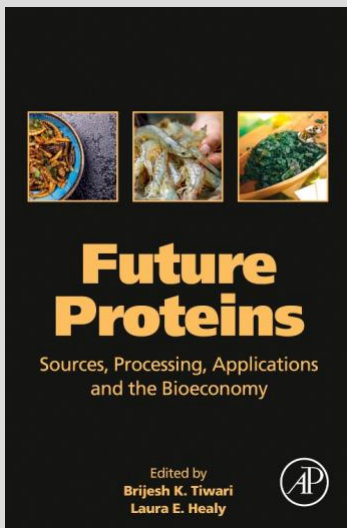
Building off the success of the first edition, *Gut Microbiota: Interactive Effects on Nutrition and Health, Second Edition*, details the complex relationship between diet, the gut microbiota, and health. This second edition expands its coverage of emerging practical applications in nutrition and medicine. Covering topics such as the ecological concepts that apply to the gut microbiota and the effects of aging on the gut microbiome, among others, this book is sure to be a welcome resource to microbiome science trainees, food and nutrition researchers working in academia, and industry and healthcare professionals giving dietary recommendations to the general public.



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# Future Proteins

## Sources, Processing, Applications and the Bioeconomy

Edited by : **Brijesh K Tiwari**, Principal Research Officer, TEAGASC – Agriculture and Food development Authority; Professor, University College Dublin, Dublin, Ireland and **Laura E Healy**, TEAGASC – Agriculture and Food development Authority, Food Chemistry and Technology, Teagasc Food Research Centre, Dublin, Ireland

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**LIST PRICE:** £155.00 / \$200.00 / €175.00  
**DISCOUNT:**  
**FORMAT:** Paperback  
**TRIM:** 7.5w x 9.25h  
**PAGES:** c. 508  
**AUDIENCE:** Food scientists and technologists, food industry personnel, academics, graduate students  
**BIC CODES:** TV  
**THEMA CLASSIFICATION:** THEMATV

**Provides an overview on novel proteins, innovative processing and extraction technologies, applications and market opportunities, and legislative hurdles to overcome**

### KEY FEATURES

- Discusses the various industrial applications of the proposed proteins, from powdered algal for the nutraceuticals market to insect pastas and bacterial-protein flour
- Provides a comprehensive overview of recent advances on the identification of potentially important compounds in these alternative proteins
- Outlines advances in proteins characterization, processing and purification techniques
- Focuses on biologically active proteins and their beneficial impact on humans
- Addresses implications for legislation that forward novel foods

### DESCRIPTION

*Future Proteins: Sources, Processing, Applications and the Bioeconomy* presents sources of alternative proteins and the novel processing technologies associated with these new proteins, including their vast food and non-food applications and their contributions to the circular economy that ties them together. Broken into three sections, chapters focus on alternative proteins including cereals, legumes and pulses, fungi, seafoods, insects, and others before assessing novel production technologies and alternative protein applications. Through the use of content features, specifically definitions, case studies, recent developments, data, and methods, this reference assists readers in understanding how to apply current knowledge and techniques to their research.

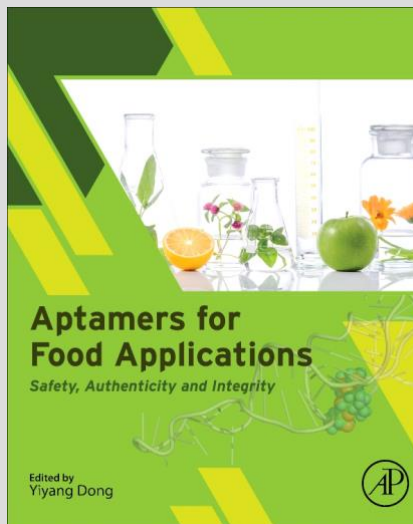
This book is intended for any stakeholders involved in the alternative protein industry as it provides a clear and comprehensive review of the industry. It will be of interest to food scientists, technologists, food industry personnel, academics and graduate students researching this and related topics.



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# Aptamers for Food Applications

## Safety, Authenticity, and Integrity

Edited by : **Yiyang Dong**, Ph.D., Research Professor, Beijing University of Chemical Technology, Beijing, China

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**DISCOUNT:**

**FORMAT:** Paperback

**TRIM:** 7.5w x 9.25h

**PAGES:** c. 280

**ILLUSTRATIONS:** Approx. 120  
illustrations

**AUDIENCE:** Food analytical  
scientists, Food Analytical chemists,  
Food safety/quality inspectors, Bio-  
analytical researchers, Food policy  
regulators, Food quality control  
specialists, Graduate students,  
University teachers

**BIC CODES:** PSA

**THEMA CLASSIFICATION:**  
THEMAPS

### A comprehensive and systematic overview of aptamer research and applications in food science

#### KEY FEATURES

- Presents the versatility of aptamers for food safety, quality and compliance
- Provides utilities of aptamers for the analysis of almost all risk factors in foodstuffs
- Includes food quality control and regulatory measures such as HACCP, MRLs, proficiency test and uncertainty assessment, along with case illustrations

#### DESCRIPTION

*Aptamers for Food Applications: Safety, Authenticity, and Integrity* outlines the main applications of aptamers to ensure food safety, quality and compliance that are crucial for food science, public health and human sustainability. Aptamers or aptamer-based analytical devices are comprehensively summarized to tackle various food contamination or food adulteration problems. Topics covered in this book include aptamers for foodborne microbial pathogens, pesticide or veterinary drug residues, heavy metals, biotoxins, abused food additives, illegal food adulterants, POPs, GMOs, food allergens and food contact material migrants.

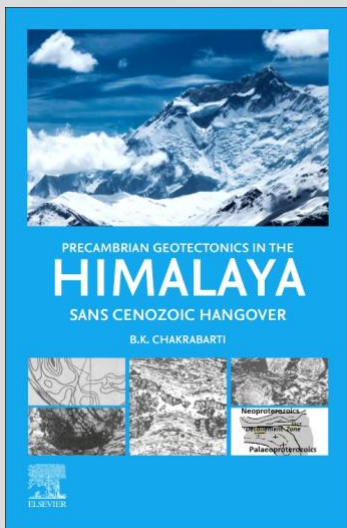
It is therefore of interest for not only analytical investigators and food safety inspectors, but also regulatory practitioners and risk assessors in various food science and research fields.



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# Precambrian Geotectonics in the Himalaya

## Sans Cenozoic Hangover

B.K. Chakrabarti, Formerly Director, Geological Survey of India (GSI), India

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**LIST PRICE:** £131.00 / \$170.00 / €148.00  
**DISCOUNT:**  
**FORMAT:** Paperback  
**TRIM:** 6w x 9h  
**PAGES:** c. 374  
**AUDIENCE:** Earth science researchers in geology, geophysics, geotectonics, and precambrian geology  
**BIC CODES:** RBX, RBGF  
**THEMA CLASSIFICATION:** THEMARBG; THEMARBX

**Provides a clear picture of the Precambrian tectonostratigraphy of the Himalayan terrain**

### KEY FEATURES

- Features comprehensive data gathered from decades of research on the Himalaya
- Includes numerous detailed case studies that allow readers to comprehensively consider the data presented
- Describes the Precambrian tectonostratigraphic history of the Himalayan terrain

### DESCRIPTION

*Precambrian Geotectonics in the Himalaya* provides an overview on general geology and tectonics of all the Precambrian domains of the Himalayan terrain. Authored by an expert with over five decades of laboratory, field and publication experience, the book studies the “Window” zones to provide a scope for understanding Precambrian deformation effects. The book fills a gap in literature, specifically covering the Precambrian geotectonic picture of the terrain. Considering Precambrian regional events are not clearly recognized or visualized in many sectors due to overlapping crystallines, this book details a Precambrian geotectonic framework of the terrain on which the Himalayan event evolved.

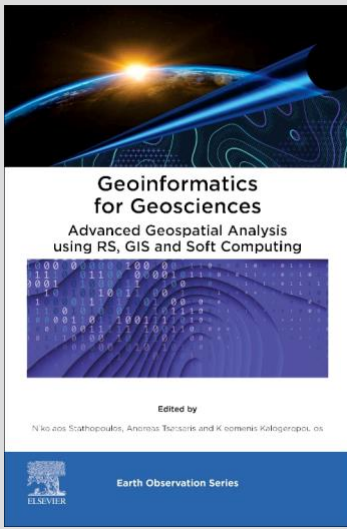
This book is a necessary reference guide for Earth scientists, exploration and hazard management scientists, professors, students and anyone who carries out research that requires a comprehensive picture of the Precambrian Himalaya and the adjacent peninsula.



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# Geoinformatics for Geosciences

## Advanced Geospatial Analysis using RS, GIS and Soft Computing

Edited by : **Nikolaos Stathopoulos**, Scientific Project Manager, Institute for Space Applications and Remote Sensing, National Observatory of Athens, BEYOND Centre of EO Research and Satellite Remote Sensing, Greece; **Andreas Tsatsaris**, Rural and Surveying Engineer and President, Department of Surveying and Geoinformatics Engineering, University of West Attica (UniWA), Greece and **Kleomenis Kalogeropoulos**, Surveying Engineer, Department of Surveying and Geoinformatics Engineering, University of West Attica (UniWA), Greece

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**TRIM:** 6w x 9h  
**PAGES:** c. 380  
**AUDIENCE:** Academics, researchers, and graduate students in geospatial sciences and technologies, including geology, geography, remote sensing and related Earth Sciences  
**BIC CODES:** RB, UFL  
**THEMA CLASSIFICATION:** THEMAUFL; THEMAKJT; THEMARB

**Comprehensively covers advanced applications of Earth observation data, GIS technologies and soft computing techniques in geoinformatics**

A Volume in the *Earth Observation Series*

### KEY FEATURES

- Focuses on a variety of interdisciplinary applications using Earth observation data, GIS, and soft computing techniques to address various challenges in the geosciences
- Presents both innovative techniques and specific features of the practices described, thus allowing readers to choose the most appropriate method to apply to their specific problems
- Comprehensively details the state-of-the-art methodologies and decision-making tools included to ensure they are easily reproducible

### DESCRIPTION

*Geoinformatics for Geosciences: Advanced Geospatial Analysis using RS, GIS and Soft Computing* is a comprehensive guide to the methodologies and techniques that can be used in Earth observation data assessments, geospatial analysis, and soft computing in the geosciences. The book covers a variety of spatiotemporal problems and topics in the areas of the environment, geohazards, urban analysis, health, pollution, climate change, resources and geomorphology, among others. Sections cover environmental and climate issues, analysis of geomorphological data, hazard and disaster impacts, natural and human resources, the influence of environmental conditions, geohazards, climate change, geomorphological changes, etc., and socioeconomic challenges.

Detailing up-to-date techniques in geoinformatics, this book offers in-depth, up-to-date methodologies for researchers and academics to understand how contemporary data can be combined with innovative techniques and tools in order to address challenges in the geosciences.

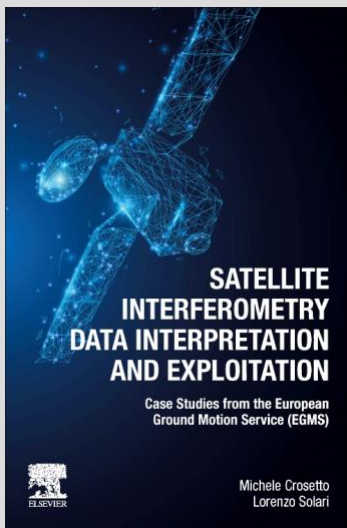


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# Satellite Interferometry Data Interpretation and Exploitation

## Case Studies from the European Ground Motion Service (EGMS)

**Michele Crosetto**, Head, Geomatics Division, Centre Tecnològic de Telecomunicacions de Catalunya, Spain and **Lorenzo Solari**, Expert - Copernicus Land Monitoring Service, European Environment Agency, Copenhagen, Denmark

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**FORMAT:** Paperback  
**TRIM:** 6w x 9h  
**PAGES:** c. 238  
**AUDIENCE:** Scientists and technicians, researchers and academics in the fields of geotechnics, geology, remote sensing, and other geosciences  
**BIC CODES:** RGW  
**THEMA CLASSIFICATION:** THEMARGW

**Thoroughly details InSAR interpretation processes, providing standards, practices and methodologies, along with case studies for easy replication**

### KEY FEATURES

- Provides user-oriented techniques for better understanding of the applications of InSAR and the European Ground Motion Service (EGMS)
- Features case studies based on manipulation of EGMS data, thus showing new applications of InSAR data interpretation
- Details InSAR and EGMS potential and limitations for the exploitation of InSAR data

### DESCRIPTION

*Satellite Interferometry Data Interpretation and Exploitation: Case Studies from the European Ground Motion Service (EGMS)* focuses on the interpretation and exploitation of data obtained from InSAR, thus enabling millimeter-scale deformation measurements from space. The most emblematic InSAR service, the European Ground Motion Service (EGMS), opens a wide range of new applications. However, for effective use of raw data, interpretation techniques and methods are required. This book presents interpretation protocols that can be applied to any InSAR data, as well as the most relevant technical aspects and boundaries of measurement points. Detailed case studies are reviewed to demonstrate points.

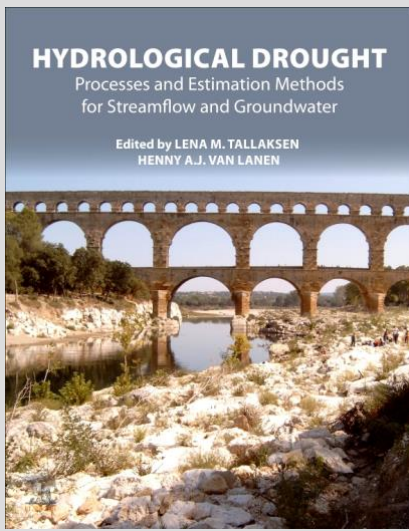
This book will be a valuable resource for remote sensing specialists, as well as non-specialists in geotechnics, geology and other geosciences who are looking to apply InSAR data techniques in their research.



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# Hydrological Drought, 2e

## Processes and Estimation Methods for Streamflow and Groundwater

Edited by : **Lena M. Tallaksen**, Professor in Hydrology, Department of Geosciences, University of Oslo, Oslo, Norway and **Henny A.J. van Lanen**, Associate Professor of Hydrology and Quantitative Water Management, Department of Environmental Sciences, Wageningen University, Wageningen, Gelderland, The Netherlands

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**FORMAT:** Paperback  
**TRIM:** 7.5w x 9.25h  
**PAGES:** c. 658  
**AUDIENCE:** University students,  
practising hydrologists and  
researchers, Water managers,  
stakeholders, drought planners,  
Agriculturalists, Natural hazard  
experts  
**BIC CODES:** RBK  
**THEMA CLASSIFICATION:**  
THEMARBK

**A comprehensive review of drought processes, data requirements, analytical methods (statistical and physically-based) and operational requirements for evaluating the spatial and temporal behaviour of both streamflow and groundwater droughts**

### KEY FEATURES

- Includes a number of innovative tools (self-guided tours, worked examples and software) to support both the understanding and teaching of different methods for evaluating drought severity, human impacts, ecological effects of drought and regional methods that enable estimation
- Offers applications/demonstrations using a comprehensive database of streamflow and thematic data from a large number of national and international agencies, which illustrate how data are used when evaluating drought severity
- Presents the state of the art of hydrological drought, including well established knowledge as well as recent developments in drought research

### DESCRIPTION

*Hydrological Drought: Processes and Estimation Methods for Streamflow and Groundwater, Second Edition* provides a comprehensive review of processes and estimation methods for streamflow and groundwater drought. It includes a qualitative conceptual understanding of drought features and processes, a detailed presentation of estimation methods and tools, practical examples and impacts relevant for operational practice.

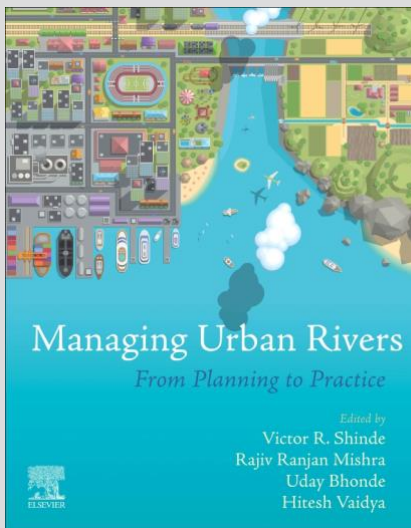
The drought phenomenon and its diversity across the world are illustrated using a global set of daily streamflow series, whereas regional and local aspects of drought are studied using a combination of hydrological time series and catchment information. *Hydrological Drought: Processes and Estimation Methods for Streamflow and Groundwater, Second Edition* concludes with human impacts, including climate change impacts on drought, drought forecasting and early warning and examples of procedures on how to manage water during drought. The majority of the examples are taken from regions where the rivers run most of the year, but not exclusively. The material presented ranges from well-established knowledge and analysing methods to recent developments in drought research. Its nature varies accordingly, from a more traditional textbook and clear overview to that of a research paper, which introduces recent approaches and methodologies for drought analysis.



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# Managing Urban Rivers

## From Planning to Practice

Edited by : **Victor R. Shinde**, Sector Coordinator for Water and Environment, National Institute of Urban Affairs (NIUA), Ministry of Housing and Urban Affairs, India; **Rajiv Ranjan Mishra**, Director General, Organization: National Mission for Clean Ganga (NMCG) under Ministry of JalShakti, India; **Uday Bhonde**, Project Coordinator for Water and Environment, National Institute of Urban Affairs (NIUA), Ministry of Housing and Urban Affairs, India and **Hitesh Vaidya**, Director, National Institute of Urban Affairs (NIUA), Ministry of Housing and Urban Affairs, India

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**PAGES:** c. 330  
**ILLUSTRATIONS:** 100 illustrations (50 in full color)  
**AUDIENCE:** Academicians and scientists from different backgrounds i.e. environmental science, limnology, water engineering management, social scientists  
**BIC CODES:** RNC  
**THEMA CLASSIFICATION:** THEMPSAF

**A fully comprehensive and accessible one-stop hub for practical knowledge on urban river management**

### KEY FEATURES

- Presents practical, global case studies in almost every chapter
- Provides recommendations for best practices based on lessons from different successful case studies, and well as the expert insights of the authors
- Features contributions from global experts for a unique and specialized approach to the topic of urban rivers

### DESCRIPTION

*Managing Urban Rivers: From Planning to Practice* captures the different facets of river management required for integrating rivers within the development landscape of cities in a sustainable manner. Sections cover the entire spectrum of urban river management, from planning to actual on-the-ground implementation, providing a one-stop destination for knowledge on urban river management. Edited by a team of four experts with practical experience in this domain, the different chapters of the book are authored by eminent scholars and practitioners with expertise in specific areas of urban river management.

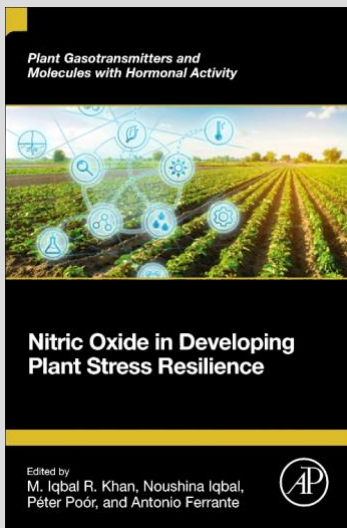
Urban rivers and their management is a hot topic as governments across the world are focusing on this aspect, especially since it has direct implications for SDG target 6.6, which aims to “protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes”.



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# Nitric Oxide in Developing Plant Stress Resilience

Edited by : **M. Iqbal R Khan**, Department of Botany, School of Chemical and Life Sciences, Jamia Hamdard, New Delhi, India.; **Noushina Iqbal**, Post-doctoral Fellow, Jamia Hamdard University, Department of Botany, School of Chemical and Life Sciences, Jamia Hamdard, Hamdard Nagar, New Delhi, India; **Peter Poor**, University of Szeged, Department of Plant Biology, University of Szeged, Szeged, Hungary. and **Antonio Ferrante**, Associate Professor, University of Milan, Italy

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**FORMAT:** Paperback  
**TRIM:** 6w x 9h  
**PAGES:** c. 340  
**ILLUSTRATIONS:** 100 illustrations (50 in full color)  
**AUDIENCE:** Researchers and students interested in plant physiology, plant biochemistry and plant hormones  
**BIC CODES:** PST  
**THEMA CLASSIFICATION:** THEMAPPST

**Provides the latest advances in how nitric oxide can be used to alleviate plant stress**

A Volume in the *PLANT GASOTRANSMITTERS AND MOLECULES WITH HORMONAL ACTIVITY* Series

## KEY FEATURES

- Highlights how Nitric Oxide acts as a signaling molecule and the ways in which this can help plants develop stress tolerance
- Discusses how NO interacts with other signaling molecules, including crosstalk
- Considers the advances and future implications of NO in agriculture

## DESCRIPTION

*Nitric Oxide in Developing Plant Stress Resilience* presents a strong focus on genetics and molecular mechanisms, examining crosstalk with other signaling molecules and the role this plays in the alleviation of oxidative damage. Abiotic stress negatively impacts plants productivity and alters the metabolism at the cellular or whole plant level, disturbing the mineral nutrients status, enzyme activities and osmotic homeostasis. Beginning with the biosynthesis of NO and its mode of action, chapters review various molecular interactions, including phytohormonal crosstalk, ROS metabolism, post-translational modification, and nutrients homeostasis.

In addition, the book also highlights genome editing and proteomic approaches that can be used to manipulate NO responses. This is an essential resource for students and researchers interested in plant physiology, biochemistry and genetics.

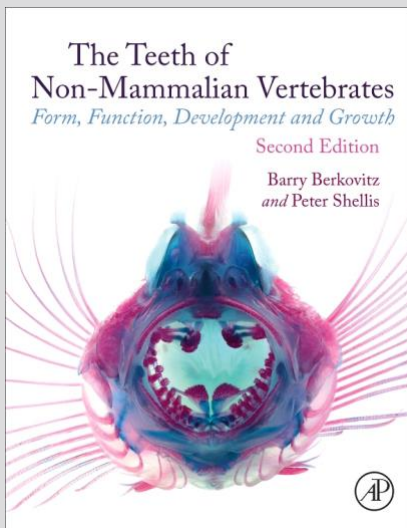


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# The Teeth of Non-mammalian Vertebrates, 2e

## Form, Function, Development and Growth

**Barry Berkovitz**, BDS, MSc, PhD, FDS (ENG), Emeritus Reader in Dental Anatomy, King's College London, UK, Visiting Professor, Oman Dental College, Mina Al Fahal; Oman and Honorary Curator, Odontological Collection, Hunterian Museum, Royal College of Surgeons of England, London, UK and **Peter Shellis**, Department of Preventative, Restorative and Pediatric Dentistry, Universitat Bern, Bern, Switzerland

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**FORMAT:** Hardback

**TRIM:** 8.5w x 10.875h

**PAGES:** c. 390

**AUDIENCE:** Practicing odontologists and researchers in zoology, biology, anthropology, archaeology, and veterinary science, Advanced students and academics in dental schools, museums

**BIC CODES:** PSAJ, PSC

**THEMA CLASSIFICATION:**

THEMAPSC; THEMAPSAJ

**Covers specialized dentition of all living groups of non-mammalian vertebrates**

### KEY FEATURES

- Features more than 650 images, including photographs from internationally recognized researchers and world class collections
- Offers in depth information on tooth structure, development, attachment, and replacement
- Provides detailed descriptions of the dentitions of all living groups of non-mammalian vertebrates
- Discusses the relationship between tooth form and structure to function in the feeding process

### DESCRIPTION

*The Teeth of Non-Mammalian Vertebrates: Form, Function, Development and Growth, Second Edition* is devoted to the teeth and dentitions of living fishes, amphibians, and reptiles. This book presents a comprehensive survey of the wide variety of tooth forms among non-mammalian vertebrates, based on descriptions of approximately 450 species belonging to about 170 families. This latest edition discusses the functional morphology of feeding, the attachment of teeth, and the relationship of tooth form to function, with each chapter accompanied by a comprehensive, up-to-date reference list. Following the descriptions of the teeth and dentitions in each class, four chapters review current topics with considerable research activity: tooth development; tooth replacement; and the structure, formation, and evolution of the dental hard tissues.

*The Teeth of Non-Mammalian Vertebrates: Form, Function, Development and Growth, Second Edition* is authored by internationally recognized teachers and researchers in the field. This new edition reflects the resurgence of interest in the dentitions of non-mammalian vertebrates as experimental systems to help understand genetic changes in evolution of teeth and jaws.



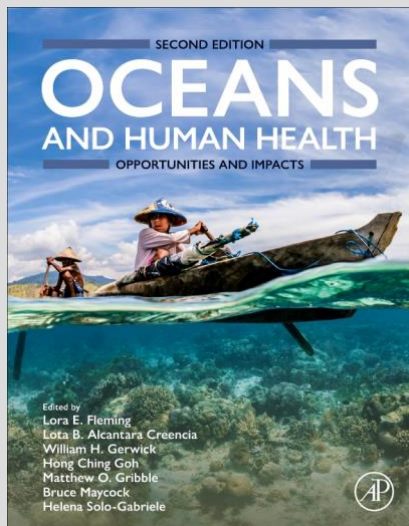
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LIFE SCIENCES Biology

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# Oceans and Human Health, 2e

## Opportunities and Impacts

Edited by : **Lora Fleming**, European Centre for Environment and Human Health, University of Exeter Medical School, Truro, Cornwall, UK; **Lota B. Alcantara Creencia**, College of Fisheries and Aquatic Sciences, Western Philippines University, Puerto Princesa City, Philippines ; **William H. Gerwick**, Skaggs School of Pharmacy and Pharmaceutical Sciences, Scripps Institution of Oceanography, University of California San Diego, La Jolla, California, USA; **Hong Ching Goh**, Department of Urban and Regional Planning, Faculty of Built Environment, Universiti Malaya, Kuala Lumpur, Malaysia ; **Matthew O. Gribble**, University of Alabama at Birmingham School of Public Health, Birmingham, Alabama, USA; **Bruce Maycock** , Asia-Pacific Academic Consortium of Public Health, Fremantle, Australia and **Helena Solo-Gabriele**, Department of Chemical, Environmental and Materials Engineering, University of Miami, Coral Gables, Florida, United States

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€220.00

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**FORMAT:** Hardback

**TRIM:** 8.5w x 10.875h

**PAGES:** c. 680

**AUDIENCE:** Researchers in marine sciences, marine biology, evolution, ecology, public health, medicine, and marine sustainability; advanced undergraduate and graduate students in marine science and public health disciplines, environmental and public health sector administrators; and communities

**BIC CODES:** MBN, PSPM, PSAF

**THEMA CLASSIFICATION:**  
THEMAPSAF; THEMAMBN

**Provides the latest global research to further understanding about how humans interact with the oceans**

### KEY FEATURES

- Addresses benefits, opportunities, risks, and impacts resulting from the relationship between oceans and humans, informed by more than 100 international authors
- Identifies and links necessary tools to relevant disciplines for action, and provides illustrative international case studies
- Covers scientific, socioeconomic, political, and ethical analyses behind the latest ocean and human health research
- Provides study questions and horizon scans at the end of each chapter to encourage individual thought and action, offering a resource for course instructors, students, and communities

### DESCRIPTION

*Oceans and Human Health: Opportunities and Impacts, Second Edition* explores the inextricably interconnected and complex relationship between oceans and humans. Through the lens of the expanding oceans and human health meta-discipline, this work examines the many invaluable ecosystem services offered by oceans as well as the global anthropogenic impacts, and explores the associated risks and benefits to human health. Written and edited by an interdisciplinary team of experts, the book features international perspectives on the resources available to address these benefits and risks, including enhanced research, policy, and community engagement. The book concludes by examining the future of ocean stewardship and how global populations can unite to nurture and promote our life-enhancing relationship with oceans. This is an indispensable resource for students, researchers, communities, and industry specialists in marine sciences, public health, and international policy.

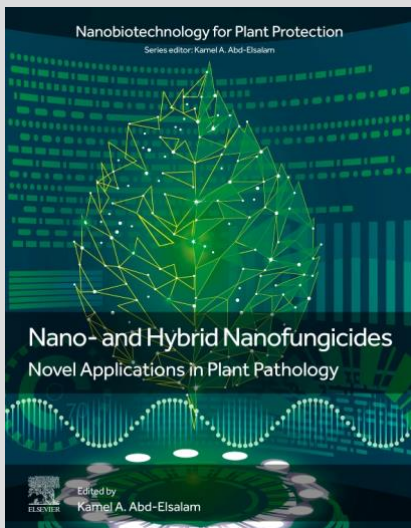


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LIFE SCIENCES Biology

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# Nano- and Nanohybrid Fungicides

## Novel Applications in Plant Pathology

Edited by : **Kamel A. Abd-El Salam**, Research Professor, Plant Pathology Research Institute, Agricultural Research Center, Giza, Egypt

**ISBN:** 9780323953054  
**PUB DATE:** Oct 01, 2023  
**LIST PRICE:** £195.00 / \$250.00 / €220.00  
**DISCOUNT:**  
**FORMAT:** Paperback  
**TRIM:** 7.5w x 9.25h  
**PAGES:** c. 480  
**AUDIENCE:** Plant scientists, agriculture and food scientists, as well as professionals and students working in related fields  
**BIC CODES:** PST  
**THEMA CLASSIFICATION:** THEMAPST

**This book presents nanomaterial-based fungicide applications in the management of plant pathogenic fungi without increasing the health risks associated with synthetic fungicides.**

A Volume in the *Nanobiotechnology for Plant Protection* Series

### KEY FEATURES

- Explains the biosynthesis of NPs and the various types of nanofungicides
- Describes the applications of nanofungicides in plant disease control and crop protection
- Determines the various types of nanohybrid fungicides
- Explores the sensing, degradation, and commercialization of nanofungicides

### DESCRIPTION

*Nano- and Nanohybrid Fungicides: Novel Applications in Plant Pathology* addresses nanofungicides and the opportunities that nano-agrochemicals can provide. Organized into three parts, this book addresses the synthesis and formulation of nanofungicides and nanohybrid fungicides, as well as their sensing, degradation, and commercialization. Furthermore, the book assesses the potential hazards and safety of nanofungicides for agroecosystems, in addition to startup, patents, regulatory concerns, and prospects. Plant scientists, plant pathologist, agriculture and food scientists, and professionals and students working in related fields will all benefit from this timely resource.



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COVER IMAGE  
FORTHCOMING

# Hormonal Cross-Talk, Plant Defense and Development

Plant Biology, Sustainability and Climate Change

Edited by : **Azamal Husen**, Professor and Head, Department of Biology, University of Gondar; Foreign Delegate, Wolaita Sodo University, Wolaita, Ethiopia and **Wenyang Zhang**, Vice-Dean School of Agriculture, Director of Research Center of Crop Stress Resistance, Yangtze University, China

**ISBN:** 9780323953757  
**PUB DATE:** Jun 01, 2023  
**LIST PRICE:** £155.00 / \$200.00 / €175.00

**DISCOUNT:**

**FORMAT:** Paperback

**TRIM:** 7.5w x 9.25h

**PAGES:** c. 410

**AUDIENCE:** Graduate students, Post-Doctoral researchers, researchers in plant sciences, molecular biologists, plant biotechnology, botanists and those in horticultural/forestry/agricultural sciences

**BIC CODES:** PSAK, TVK, PSB, TVS, PSTD, PSTL, PST

**THEMA CLASSIFICATION:**

THEMAPST; THEMPSAK;  
THEMAPSB; THEMATVK;  
THEMATVS

**Identifies the opportunity and future challenges of the molecular/engineering of plants in relation to plant hormones**

A Volume in the *Plant Biology, sustainability and climate change* Series

## KEY FEATURES

- Describes hormonal cross-talk and plant defense with suitable illustrations
- Includes a focus on secondary metabolites and/or bioactive compounds interactions with various plant hormones
- Highlights the use of plant hormones and their interactions in plant growth and developmental processes at physiological, biochemical and molecular levels

## DESCRIPTION

*Hormonal Cross-Talk, Plant Defense and Development: Plant Biology, Sustainability and Climate Change* focuses specifically on plants and their interaction to auxins, gibberellins, cytokinins, ethylene, abscisic acid, jasmonates, brassinosteroids, strigolactones, and the potential those interactions offer for improved plant health and production. Plant hormones (auxins, gibberellins, cytokinins, ethylene, abscisic acid, jasmonates, brassinosteroids, salicylic acid, strigolactones etc.) regulate numerous aspects of plant growth and developmental processes. Each hormone initiates a specific molecular pathway, with each pathway integrated in a complex network of synergistic, antagonistic and additive interactions. This is a valuable reference for those seeking to understand and improve plant health using natural processes.

The cross-talks of auxins - abscisic acid, auxins - brassinosteroids, brassinosteroids - abscisic acid, ethylene - abscisic acid, brassinosteroids - ethylene, cytokinins - abscisic acid, brassinosteroids - jasmonates, brassinosteroids - salicylic acid, and gibberellins - jasmonates - strigolactones have been shown to regulate a number of biological processes in plant system. The cross-talk provides robustness to the plant immune system but also drives specificity of induced defense responses against the plethora of biotic and abiotic interactions.

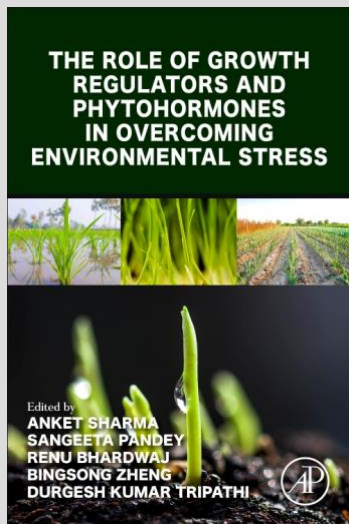


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# The Role of Growth Regulators and Phytohormones in Overcoming Environmental Stress

Edited by : **Anket Sharma**, Visiting Research Scientist, University of Maryland, College Park, USA and Associate Professor (Adjunct), Zhejiang A & F University, Hangzhou, China; **Sangeeta Pandey**, Plant and Microbe Interaction Lab, Amity Institute of Organic Agriculture, Amity University Uttar Pradesh, Noida, India. ; **Renu Bhardwaj**, Professor, Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar, Punjab, India; **Bingsong Zheng**, Professor, Zhejiang A&F University, China. and **Durgesh Kumar Tripathi**, Crop Nano Biology and Molecular Stress Physiology Lab, Amity Institute of Organic Agriculture, Amity University Uttar Pradesh, Noida, India.

ISBN: 9780323983327  
PUB DATE: Jun 01, 2023  
LIST PRICE: £175.00 / \$225.00 /  
€200.00

**DISCOUNT:**

**FORMAT:** Paperback

**TRIM:** 6w x 9h

**PAGES:** c. 474

**ILLUSTRATIONS:** 140 illustrations  
(70 in full color)

**AUDIENCE:** Researchers and  
scientists interested in plant  
physiology, plant biochemistry, and  
agriculture

**BIC CODES:** PST

**THEMA CLASSIFICATION:**  
THEMAPST

**Presents the latest advances of PGR mediated regulation of abiotic stress using advanced molecular techniques**

**KEY FEATURES**

- Provides the latest research on all major Plant Growth Regulators (PGRs)
- Focuses on the mechanistic approaches of the physiological and molecular actions of PGRs
- Highlights crosstalk between PGRs and phytohormones

**DESCRIPTION**

*The Role of Growth Regulators and Phytohormones in Overcoming Environmental Stress* is a comprehensive resource on all major PGRs. These include auxins, cytokinins, jasmonates, polyamines, plant growth promoting rhizobacteria (PGPR), and more. In the last two decades, researchers have explored a lot about the roles of plant growth regulators (PGRs) in boosting the resistance of plants under stress conditions. These PGRs acts as stimulators for various physiological processes by regulating key cell signaling pathways. This title is an essential read for any scientist wanting to understand the latest advances in combatting abiotic stresses using plant growth regulators.

In the present era, plants are facing a lot of challenges during their lifecycle, including growth declines due to abiotic stress. The main abiotic stresses threatening plants are water scarcity, salinity, extreme temperatures, heavy metals and pesticides. These stresses directly or indirectly cause toxicity to plants, causing hindrance to their growth and development, and ultimately reduce plant productivity.

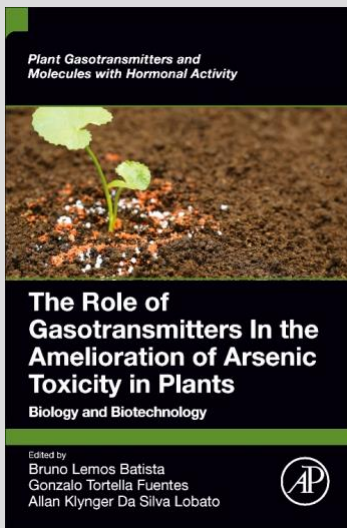


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# The Role of Gasotransmitters In the Amelioration of Arsenic Toxicity in Plants

Biology and Biotechnology

Edited by : **Bruno Lemos Batista**, Professor in Analytical Chemistry, Federal University of ABC, Santo Andre, Brazil; **Gonzalo Tortella Fuentes**, Researcher, Center of Environmental Biotechnology, Scientific and Technological Bioresources Nucleus (BIOREN), Universidad de La Frontera, Temuco, Chile and **Allan Klynger Da Silva Lobato**, Adjunct Professor, Federal Rural University of the Amazon, Coordinator of the Basic and Applied Plant Research Center, and Permanent Professor, Postgraduate Program in Agronomy, UFRA, Brazil

**ISBN:** 9780323988001  
**PUB DATE:** Jun 01, 2023  
**LIST PRICE:** £155.00 / \$200.00 / €175.00  
**DISCOUNT:**  
**FORMAT:** Paperback  
**TRIM:** 6w x 9h  
**PAGES:** c. 380  
**AUDIENCE:** Researchers and students interested in plant physiology, plant biochemistry and plant hormones  
**BIC CODES:** PST  
**THEMA CLASSIFICATION:** THEMAPPST

**A one-stop resource for the molecular mechanisms and pathways associated with arsenic amelioration and gasotransmitters**

A Volume in the *PLANT GASOTRANSMITTERS AND MOLECULES WITH HORMONAL ACTIVITY* Series

## KEY FEATURES

- Explains the physiological, biochemical and molecular aspects of how gasotransmitters can mitigate stress by arsenic in plants
- Presents how arsenic is found in the environment, along with associated problems with arsenic contamination
- Highlights the impact of food processing on minimizing arsenic and other potentially toxic elements in edible plants

## DESCRIPTION

*The Role of Gasotransmitters In the Amelioration of Arsenic Toxicity in Plants: Biology and Biotechnology*, in the *Plant Gasotransmitter* series, provides research on how gasotransmitters can reduce the stress faced by plants through arsenic contamination. With a strong focus on metabolic processes, the book presents the various pathways and mechanisms associated with gasotransmitters as part of arsenic amelioration. Initial chapters discuss the effects of arsenic on the plant genome and metabolome, as well as the mechanisms behind the uptake and translocation of arsenic in plants. The book then takes a deep dive into the role of gasotransmitters, highlighting plant physiological responses.

This is an essential resource for students, researchers and agronomists interested in plant physiology, biochemistry and plant hormones.

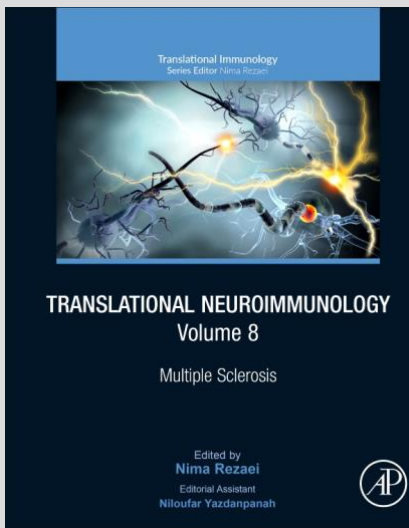


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# Translational Neuroimmunology, Volume 8

## Multiple Sclerosis

Edited by : **Nima Rezaei**, Professor, Department of Immunology, School of Medicine; Head, Research Center for Immunodeficiencies, Children's Medical Center, Tehran University of Medical Sciences; Founding President, Network of Immunity in Infection, Malignancy and Autoimmunity (NIIMA), Universal Scientific Education and Research Network (USERN), Tehran, Iran and **Niloufar Yazdanpanah**, Managing Director, Network of Immunity in Infection, Malignancy and Autoimmunity (NIIMA) Universal Scientific Education and Research Network (USERN); and School of Medicine, Tehran University of Medical Sciences, Tehran, Iran

**ISBN:** 9780443185786  
**PUB DATE:** Jun 23, 2023  
**LIST PRICE:** £135.00 / \$175.00 / €155.00  
**DISCOUNT:**  
**FORMAT:** Paperback  
**TRIM:** 7.5w x 9.25h  
**PAGES:** c. 300  
**AUDIENCE:** Clinical immunologists; neurologists, Rheumatologist; Endocrinologists; Microbiologists; Oncologists; Rheumatologists. Clinicians, research scientists, and industry partners.  
**BIC CODES:** MJCM  
**THEMA CLASSIFICATION:** THEMAMJCM

**Guides clinicians, researchers and students in better understanding translational neuroimmunology with a focus on multiple sclerosis**

A Volume in the *Translational Immunology* Series

### KEY FEATURES

- Provides an introduction on multiple sclerosis as an autoimmune disease, from bench to bedside
- Encourages the development of immunologic approaches to analyze the interaction and specific properties of nervous tissue elements during development and disease
- Focuses on understanding and therapeutically manipulating immunological responses to injury, degeneration and autoimmunity in the central nervous system
- Shows the changes in relevant immune and inflammatory reactions at the cellular and molecular level during the development of nervous system diseases

### DESCRIPTION

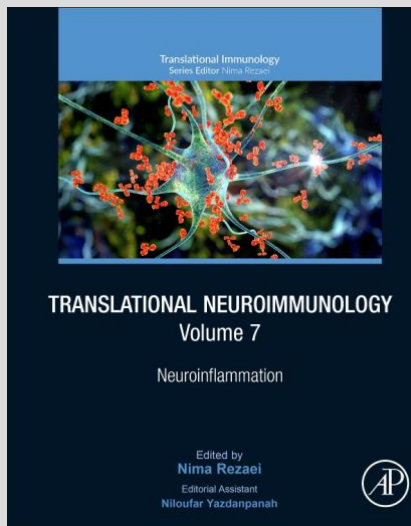
*Translational Neuroimmunology: Multiple Sclerosis* provides an update on bench to bedside studies on Multiple Sclerosis as an autoimmune disease. Divided into twelve chapters, the book begins with an in-depth introduction to the neuroimmunology and immunopathology of multiple sclerosis. Sections also provide content on genetics and epigenetics, the microbiome, diagnosis, and treatment of multiple sclerosis. Finally, various precision treatments are covered. All information is presented in an accessible, practical format, making this volume a valuable resource for immunologists, neurologists and researchers in translational biomedical research.



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# Translational Neuroimmunology, Volume 7

## Neuroinflammation

Edited by : **Nima Rezaei**, Professor, Department of Immunology, School of Medicine; Head, Research Center for Immunodeficiencies, Children's Medical Center, Tehran University of Medical Sciences; Founding President, Network of Immunity in Infection, Malignancy and Autoimmunity (NIIMA), Universal Scientific Education and Research Network (USERN), Tehran, Iran and **Niloufar Yazdanpanah**, Managing Director, Network of Immunity in Infection, Malignancy and Autoimmunity (NIIMA) Universal Scientific Education and Research Network (USERN); and School of Medicine, Tehran University of Medical Sciences, Tehran, Iran

**ISBN:** 9780323858410  
**PUB DATE:** Jun 01, 2023  
**LIST PRICE:** £135.00 / \$175.00 /  
€155.00

**DISCOUNT:**

**FORMAT:** Paperback

**TRIM:** 7.5w x 9.25h

**PAGES:** c. 516

**ILLUSTRATIONS:** 60 illustrations (50  
in full color)

**AUDIENCE:** Clinical immunologists,  
neurologists, Rheumatologist,  
Endocrinologists, Microbiologists,  
Oncologists, Rheumatologists,  
Clinicians, research scientists, and  
industry partners

**BIC CODES:** MJC, MJCM

**THEMA CLASSIFICATION:**

THEMAMJC; THEMAMJCM

**Guides clinicians, researchers and students in better understanding the  
matters of translational neuroimmunology**

A Volume in the *Translational Immunology* Series

### KEY FEATURES

- Gives an introduction on neuroimmunological diseases, from bench to bedside
- Encourages the development of immunologic approaches to analyze the interaction and specific properties of nervous tissue elements during development and disease
- Focuses on understanding and therapeutically manipulating immunological responses to injury, degeneration and autoimmunity in the central nervous system
- Proves changes in relevant immune and inflammatory reactions at the cellular and molecular level during the development of nervous system diseases

### DESCRIPTION

*Translational NeuroImmunology: Neuroinflammation* updates on bench to bedside studies on neurological disorders that have immunological etiologies. The book covers neuroimmunology and the principles of autoimmune and autoinflammatory neurological disorders, with multiple sclerosis as the main focus. The immunopathology, genetics and epigenetics, microbiome, diagnosis and treatment of multiple sclerosis will be explained in ten chapters. A chapter also examines distinct aspects of pericytes, with final discussions on the neurologic manifestations, diagnostic approaches and treatments of the various neuroimmune disorders and lessons learned from translational research on non-human primates and zebrafish.

All sections are presented in an accessible, practical format, making this volume a valuable resource for immunologists, neurologists and researchers in translational biomedical research.

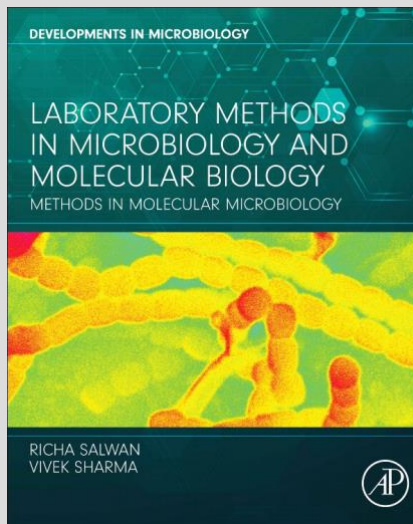


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LIFE SCIENCES Immunology

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# Laboratory Methods in Microbiology and Molecular Biology

## Methods in Molecular Microbiology

Edited by : **Richa Salwan**, PhD, College of Horticulture and Forestry (Dr. YS Parmar University of Horticulture and Forestry), Neri, Hamirpur (HP), India and **Vivek Sharma**, PhD, University Centre for Research and Development, Chandigarh University, Gharuan, Mohali (PB.), India

**ISBN:** 9780323950787  
**PUB DATE:** Jun 15, 2023  
**LIST PRICE:** £135.00 / \$175.00 / €155.00

**DISCOUNT:**

**FORMAT:** Paperback

**TRIM:** 7.5w x 9.25h

**PAGES:** c. 260

**AUDIENCE:** Researchers and post doc students in microbiology and molecular biology, can be used in Universities and Colleges as reference practical book for gaining knowledge and hands on experience, students pursuing their post-graduation and doctoral studies across research institutions and Universities, preparing lectures, assignments and projects

**BIC CODES:** PSG

**THEMA CLASSIFICATION:**

THEMAPSG

**A refreshing update of current practice and future prospects for several important areas in the field of microbial biotechnology**

A Volume in the *Developments in Microbiology Series*

### KEY FEATURES

- Involves various procedures in diverse disciplines, from microbiology to genetics, molecular biology and biochemistry
- Lists the principles and facts underlying practical applications of bacteria and fungi which have prospects in various technologies
- Includes the questions 'how' and 'why' as an explanation for novice students and researchers to modify protocols
- Facilitates students, teachers and researchers to monitor the precision and accuracy of their qualitative and quantitative methods practically

### DESCRIPTION

*Laboratory Methods in Microbiology and Molecular Biology* describes various microbiological, biochemical, and molecular methods employed for the characterization, identification, and analysis of actinomycetes, bacteria and fungi. The book details general guidelines, expectations, and responsibilities for good lab practices and consists of chapters that covers basic microbiological, physiological, biochemical, and molecular aspects as well as in silico analysis using various bioinformatic tools. Other topics in the book include how to make solutions, microscopy and imaging of microorganisms, sero-diagnostics, and basic concepts of phylogeny, physiology, biotechnology, soil, food, and environmental microbiology while working in laboratory. *Laboratory Methods in Microbiology and Molecular Biology* is an informative update to current practices and future perspectives for the field of microbial biotechnology. It aims to facilitate professors, researchers, and graduate students in monitoring the precision and accuracy of the qualitative and quantitative methods in their research.

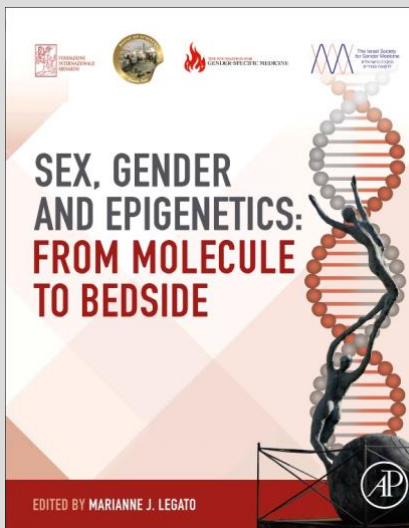


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LIFE SCIENCES Microbiology

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# Sex, Gender, and Epigenetics

## From Molecule to Bedside

Edited by : **Marianne Legato J**, M.D., PhD (hon c), F.A.C.P., Emerita Professor, Clinical Medicine, Columbia University College of Physicians & Surgeons and Adjunct Professor, Medicine at Johns Hopkins Medical School; **Dov Feldberg**, MD, Professor, Department of Obstetrics & Gynecology, Tel Aviv University School of Medicine, Tel Aviv, Israel and **Marek Glezerman**, Professor (emeritus) of Obstetrics and Gynecology, Faculty of Medicine, Tel Aviv University, Israel Current Head of Gender and Sex Conscious Medicine , Chairman of the Ethics Committee, Faculty of Medicine, Tel Aviv University, Tel Aviv, Israel

**ISBN:** 9780128239377  
**PUB DATE:** Jun 01, 2023  
**LIST PRICE:** £135.00 / \$175.00 /  
€155.00

**DISCOUNT:**

**FORMAT:** Paperback

**TRIM:** 7.5w x 9.25h

**PAGES:** c. 298

**ILLUSTRATIONS:** 70 illustrations (30 in full color)

**AUDIENCE:** Human geneticists, human genomicists, translational researchers in genomic medicine, epigenetics, biochemistry, molecular biology, oncology, reproductive biology, gender medicine, pediatrics, and bioinformatics, life science researchers, biotechnologists, developmental biologists, genetic counselors

**BIC CODES:** PSAK, PSAK1

**THEMA CLASSIFICATION:** THEMPSAK

**Fully examines sex and gender-based influences on gene expression via epigenetic mechanisms, emphasizing human biology and disease outcomes**

### KEY FEATURES

- Examines the impact of biological sex and gender on gene expression through epigenetic mechanisms, and its relationship to human biology and disease
- Presents the current state of our understanding of how environmental experience is translated to future generations in a sex specific manner
- Features chapter contributions from international leaders in the field

### DESCRIPTION

*Sex, Gender, and Epigenetics: From Molecule to Bedside* explores our expanding knowledge of the science of epigenetics in which gene expression is modified as a consequence of small chemical additions to various components of the genome. The book provides an overview of the field, describing the epigenetic phenomena that unite biological sex and environmental experience to create the unique phenome of each individual. The book also analyzes the impact of ancestors' environmental experience on subsequent generations through the sex-specific transmission of environmentally induced epigenetic modifications.

Here, international leaders in the field discuss both sex-specific normal physiology and the experience of disease, with chapters dedicated to fetal programming, the microbiome, cancer, bipolar disorder and schizophrenia, embryogenesis, and oocyte aging, among other topics.

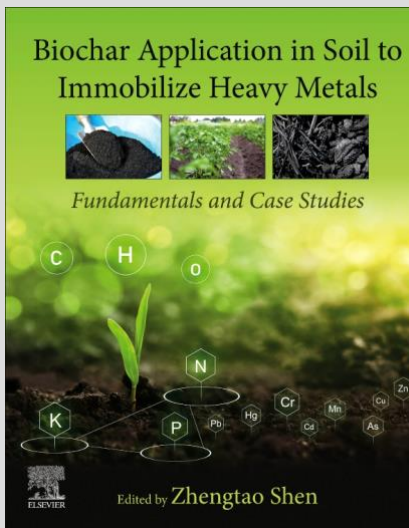


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LIFE SCIENCES Genetics

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# Biochar Application in Soil to Immobilize Heavy Metals

## Fundamentals and Case Studies

Edited by : **Zhengtao Shen**, Killam Postdoctoral Fellow, Department of Earth and Atmospheric Sciences, University of Alberta, Edmonton, Alberta, Canada

**ISBN:** 9780323854597  
**PUB DATE:** Jun 01, 2023  
**LIST PRICE:** £115.00 / \$150.00 / €131.00  
**DISCOUNT:**  
**FORMAT:** Paperback  
**TRIM:** 6w x 9h  
**PAGES:** c. 338  
**AUDIENCE:** Students, Professors, Researchers, and other professionals and stakeholders working in Soil Science and Environmental Science. Environmental Engineers, Agricultural Engineers, Geo-engineers  
**BIC CODES:** RN  
**THEMA CLASSIFICATION:** THEMATQ

**Covers fundamentals to case studies, with a specific focus on the application of biochar to immobilize heavy metals in soils**

### KEY FEATURES

- Covers the fundamentals and influence of pyrolysis temperature and feedstock on the fundamentals, which is very important for applications
- Includes sections that discuss the molecular interaction between biochar and heavy metals in soil
- Contains chapters with subsections that cover mechanisms, applications and case studies, thus allowing readers to quickly grasp content

### DESCRIPTION

*Biochar Application in Soil to Immobilize Heavy Metals: Fundamentals and Case Studies* covers biochar's application to soil heavy metal immobilization. The book covers biochar's effect on soil micro-and macro-properties, assessment of heavy metal stability in biochar-treated soil, and long-term stability of heavy metals in biochar-treated soil. A notable feature of this book includes its extensive use of case studies. Chapters focus on small-scale field trials and medium to large-scale industrial applications of biochar to immobilize soil heavy metals. In addition, the flow of the whole book follows "mechanisms-to-applications-to-case studies," allowing readers to translate the fundamentals to practical applications.

This book provides soil and environmental scientists with the tools they need to build the links between micro-level surface chemistry and macro-level engineering performance.

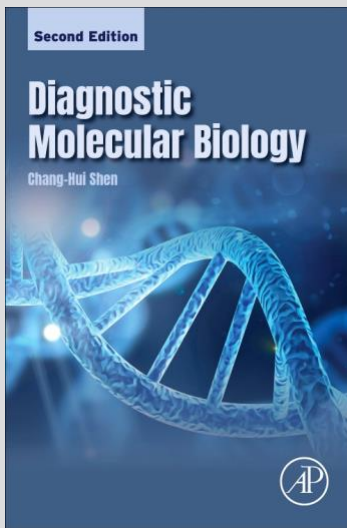


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# Diagnostic Molecular Biology, 2e

**Chang-Hui Shen**, Professor of Biology and Chair of the Biology Department at the College of Staten Island, City University of New York, New York, USA

**ISBN:** 9780323917889

**PREVIOUS ISBN:** 9780128028230

**PUB DATE:** Jun 01, 2023

**LIST PRICE:** £135.00 / \$175.00 / €155.00

**DISCOUNT:**

**FORMAT:** Paperback

**TRIM:** 8.5w x 10.875h

**PAGES:** c. 510

**AUDIENCE:** researchers and technicians in the lab, pathologists, and students in molecular biology, microbiology and virology clinical laboratory scientists and technicians

**BIC CODES:** PSD, PSG

**THEMA CLASSIFICATION:**

THEMAPSD; THEMAPSG

**Describes the fundamentals of molecular biology in a clear, concise manner that includes current applications of clinical laboratory techniques**

## KEY FEATURES

- Provides explanations on how techniques are used to diagnosis at the molecular level
- Explains how to use information technology to communicate and assess results in the lab
- Enhances our understanding of fundamental molecular biology and places techniques in context
- Places protocols into context with practical applications
- Includes extra chapters on respiratory viruses (Corona)

## DESCRIPTION

*Diagnostic Molecular Biology, Second Edition* describes the fundamentals of molecular biology in a clear, concise manner with each technique explained within its conceptual framework and current applications of clinical laboratory techniques comprehensively covered. This targeted approach covers the principles of molecular biology, including basic knowledge of nucleic acids, proteins and chromosomes; the basic techniques and instrumentations commonly used in the field of molecular biology, including detailed procedures and explanations; and the applications of the principles and techniques currently employed in the clinical laboratory. Topics such as whole exome sequencing, whole genome sequencing, RNA-seq, and ChIP-seq round out the discussion.

Fully updated, this new edition adds recent advances in the detection of respiratory virus infections in humans, like influenza, RSV, hAdV, hRV but also corona. This book expands the discussion on NGS application and its role in future precision medicine.



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LIFE SCIENCES    Molecular Biology

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**ADVANCES IN NANO  
AND BIOCHEMISTRY**

Environmental and Biomedical Applications

Edited by  
**Pranay Pradeep Morajkar**  
**Milind Mohan Naik**

# Advances in Nano and Biochemistry

## Environmental and Biomedical Applications

Edited by : **Pranay Pradeep Morajkar**, PhD, Assistant Professor, School of Chemical Sciences, Goa University, Goa, India and **Milind Mohan Naik**, PhD, Assistant Professor, School of Biological Sciences and Biotechnology (SBSB), Goa University, Goa, India

**ISBN:** 9780323952538**PUB DATE:** Jun 01, 2023**LIST PRICE:** £135.00 / \$175.00 /

€155.00

**DISCOUNT:****FORMAT:** Paperback**TRIM:** 7.5w x 9.25h**PAGES:** c. 598**AUDIENCE:** Researchers and Ph.D.

students of Biosciences, Chemistry,

Physics, Medicine, Biophysics,

Pharmacology, Biotechnology, and

Bioengineering,

Graduate/postgraduate students

pursuing research careers in emerging

fields such as sustainable

environmental and biomedical

technologies

**BIC CODES:** PHVN**THEMA CLASSIFICATION:**

THEMAPHVN

**Provides principles of physics and physical chemistry for the investigation of biological systems**

A Volume in the *Progress in Biochemistry and Biotechnology* Series

### KEY FEATURES

- Provides the fundamental concepts of biophysical chemistry and emerging technologies to solve environmental and biomedical problems
- Describes the latest breakthrough research in biophysical chemistry and its applications to better understand biological systems
- Supports development of the latest disease diagnostic and treatment technologies
- Includes advances in physical chemistry and biology for the monitoring and remediation of environmental pollutants

### DESCRIPTION

*Advances in Nano and Biochemistry: Environmental and Biomedical Applications* gives insights into this advanced interdisciplinary science that encompasses the principles of physics and physical chemistry for the investigation of various processes and problems in biological systems. The book is a concise culmination of biophysical chemistry knowledge acquired through core concepts and advanced technologies for addressing emerging challenges in environmental and biomedical applications. Sections cover early diagnostic techniques and accurate treatment strategies using bioinspired, sustainable technologies, including nanomaterials, nanoenzymes, biopolymers, electrochemical biomolecule sensors, biocompatible magnetic nanomaterials, quantum dots and hybrid structures, and DNA nanotechnology.

Other sections discuss advanced technologies for sensing and remedying environmental pollutants, including but not limited to, photocatalytic oxidations, gum polysaccharides based nanostructured materials, bio-inspired and biocompatible nanomaterials, hydrogel nanocomposites, and contemporary enzymes and nanozymes based technologies. Ultimately, the state-of-the-art chapters in this book will empower researchers to combine two complementary elements - chemical analysis use and biomedical applications.



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LIFE SCIENCES Molecular Biology

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## Microbial Inoculants

Recent progress and applications

Edited by  
Vijay Kumar Sharma, Ajay Kumar,  
Michel Rodrigo Zambrano Passarini,  
Shobhika Parmar, and Vipin Kumar Singh



# Microbial Inoculants

## Recent Progress and Applications

Edited by : **Vijay Kumar Sharma**, Kunming University of Science and Technology, Yunnan Province, P.R. China; **Ajay Kumar**, Visiting Scientist, Agriculture Research Organization, Ministry of Agriculture and Rural Development Volcani Center, Rishon, Lezzyon, Israel; **Michel R Zambrano Passarini**; **Shobhika Parmar**, Kunming University of Science and Technology, Yunnan Province, P.R. China and **Vipin Kumar Singh**, CSIR Research Associate, Centre for Advanced Study in Botany, Institute of Science, Banaras Hindu University, Varanasi, India

**ISBN:** 9780323990431

**PUB DATE:** Jun 01, 2023

**LIST PRICE:** £135.00 / \$175.00 /

€155.00

**DISCOUNT:**

**FORMAT:** Paperback

**TRIM:** 6w x 9h

**PAGES:** c. 400

**ILLUSTRATIONS:** 30 illustrations (10 in full color)

**AUDIENCE:** Researchers in microbial biotechnology in both academy and corporate settings, graduate students on related subjects, Microbiologists, plant pathologists, agronomists, molecular biologists, pharmacologist and related researchers, who want to work in the field of sustainable agriculture

**BIC CODES:** PSG

**THEMA CLASSIFICATION:**

THEMAPSG

**Sums up the latest approaches and advancements in the field of microbial inoculants**

A Volume in the *Developments in Applied Microbiology and Biotechnology Series*

### KEY FEATURES

- Proofs the potential development and applications of microbial inoculants as an alternative to chemical fertilizers, herbicides and pesticides
- Shows the impact of microbial inoculants on microbial dynamics, bioavailability and abiotic stress mitigation
- Gives insights on emerging challenges with the commercialization of microbial formulations, technology patenting and legal perspectives

### DESCRIPTION

*Microbial Inoculants: Recent Progress and Applications* fulfills the need to explore and learn about an efficient delivery mechanism, selection of microbial strain as inoculants, and related technological advances for the efficient and productive use of microbial inoculants. Moreover, factors like methods of formulation, interaction between host plant and microbe, impact of inoculation on the metabolomics of plants, the effect of microbial inoculants on soil dynamics, proteomics approach of plant-microbe interaction, as well as the registration and regulation process of bio inoculants for commercial production are described by leading academicians and researchers from different parts of the world in this comprehensive book.

In the recent past, beneficial microorganisms have been sustainably used in agriculture as a safe, economic and effective alternative to chemical fertilizers or pesticides. These beneficial microbes, including bacteria, actinomycetes, and yeast were efficiently applied in soil, seeds, fruits, or plants as inoculants, to achieve the optimum agricultural yield. An efficient delivery method or enhanced shelf life of microbial inoculants in the soil or seed is still a matter of concern.



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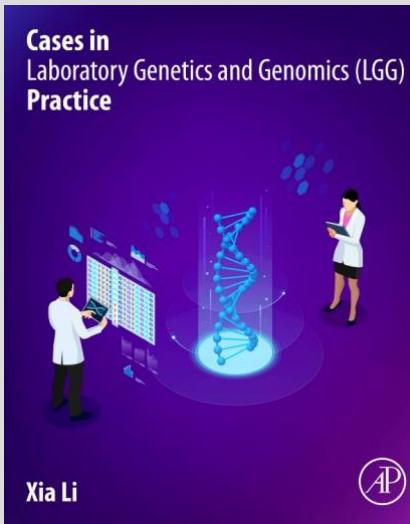
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**Cases in  
Laboratory Genetics and Genomics (LGG)  
Practice**



# Cases in Laboratory Genetics and Genomics (LGG) Practice

Xia Li, Ph.D., FACMG, DABMGG, ASCP(CG) , Scientific Medical Director, Genetics/Genomics Division, Sonora Quest Laboratories; Associate Professor, Pathology, University of Arizona - School of Medicine, Phoenix, Az, USA

**ISBN:** 9780323996228  
**PUB DATE:** Jun 01, 2023  
**LIST PRICE:** £115.00 / \$150.00 / €131.00  
**DISCOUNT:**  
**FORMAT:** Paperback  
**TRIM:** 7.5w x 9.25h  
**PAGES:** c. 364  
**AUDIENCE:** Human geneticists; Pathologists; Medical Geneticists. Students and trainees of human genetics, medical genetics, and pathology; genetic counselors  
**BIC CODES:** PSAK1  
**THEMA CLASSIFICATION:** THEM APSAK

**Offers practical, case-based instruction in lab-based diagnosis of genetic conditions**

## KEY FEATURES

- Presents clinical cases illustrating the complexity of the genetic abnormalities and successful diagnoses
- Discusses the technologies best suited to detect DNA mutations, copy number variations, and chromosome or RNA translocations
- Aids lab professionals in ensuring tests ordered are optimal for clinical indications
- Prepares trainees for the American Board of Medical Genetics and Genomics (ABMGG) LGG course and exam

## DESCRIPTION

*Cases in Laboratory Genetics and Genomics (LGG) Practice* instructs readers in the lab-based diagnosis of genetic conditions, including inborn and acquired disorders using cytogenetics and molecular genetics technologies. This entirely case-based book covers a wide range of genetic cases, from prenatal to postnatal and oncology genetic disorders which lab professionals and geneticists encounter daily in the diagnostic field. Each disorder discussed includes a section on clinical background, clinical indication, tests ordered, laboratory tests performed, test results, results with interpretations, future testing and recommendations, and references.

The book will help lab professionals understand and navigate clinical cases using an integrative approach, and thoroughly understand the methodologies and interpretations involved in high complexity genetic testing.

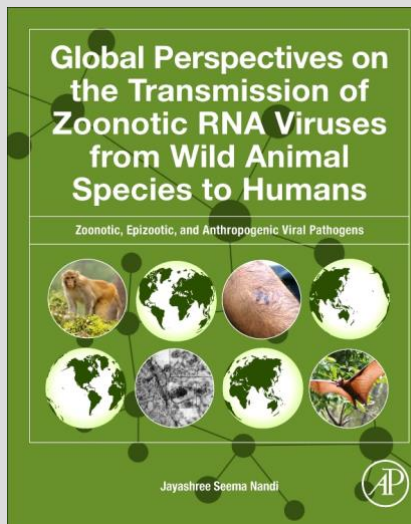


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LIFE SCIENCES Genetics

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# Global Perspectives on the Transmission of Zoonotic RNA Viruses from Wild Animal Species to Humans

## Zoonotic, Epizootic, and Anthropogenic Viral Pathogens

Jayashree Seema Nandi, Volunteer Researcher, Department of Microbiology and Immunology, Albert Einstein College of Medicine, Bronx, NY, USA

**ISBN:** 9780443132674  
**PUB DATE:** Jun 01, 2023  
**LIST PRICE:** £135.00 / \$175.00 / €155.00  
**DISCOUNT:**  
**FORMAT:** Paperback  
**TRIM:** 7.5w x 9.25h  
**PAGES:** c. 279  
**AUDIENCE:** Basic science researchers in virology and clinicians in infectious viral diseases, Public health experts  
**BIC CODES:** PSGL  
**THEMA CLASSIFICATION:** THEMAPSG

**Presents global perspectives on the transmission of zoonotic RNA viruses from different wild animal species to humans**

### KEY FEATURES

- Provides global coverage of the transmission of zoonotic infectious RNA viruses with epidemic and pandemic potentials in natural settings, with a new focus on India which is largely overlooked
- Provides data related to the transmission of different zoonotic RNA viruses, SIVs, SFVs and Influenza viruses in India
- Delivers background information on related RNA viruses like SARS, SRASCoV2, HIV-1, HIV-2, restriction factors, endogenous retroviruses and lentiviruses and other environmental data which is relevant for a comprehensive understanding of zoonotic events across the world

### DESCRIPTION

*Global Perspectives of the Transmission of Zoonotic RNA Viruses from Wild Animal Species to Humans: Zoonotic, Epizootic, and Anthropogenic Transmission Viral Pathogens* elaborates on the current knowledge surrounding the transmission of zoonotic RNA viruses from different wild animal species to humans, including updates on the reverse transmission of pathogens to humans across the globe, with coverage of rodents, pigs, birds and primates. This reference goes beyond the phenomena occurring in African and American regions to provide further study of zoonotic pathogens from the entire world, including various parts of Asia such as India.

The book comprehensively covers new knowledge on many diverse wild primate species for a global perspective on the phenomena of cross-species transmissions of pathogenic RNA viruses. Against the backdrop of the current global Covid-19 pandemic, this reference helps solve the problem of incomplete knowledge on global epidemiology of zoonotic RNA viruses. RNA viruses have pandemic, epidemic and epizootic potentials caused by Influenza viruses, Avian Influenza viruses, and other infectious viruses.

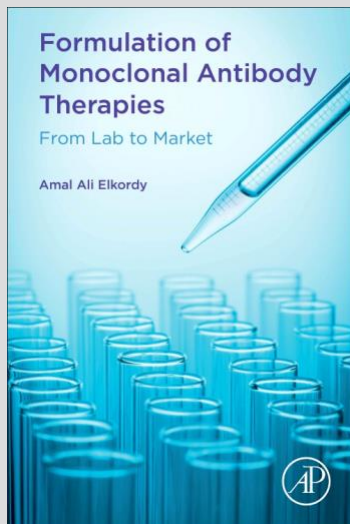


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# Formulation of Monoclonal Antibody Therapies

## From Lab to Market

Amal Ali Elkordy, Professor of Pharmaceutics, Faculty of Health Sciences and Wellbeing, School of Pharmacy and Pharmaceutical Sciences, University of Sunderland, Sunderland, UK

**ISBN:** 9780128233658

**PUB DATE:** Jun 01, 2023

**LIST PRICE:** £137.00 / \$175.00 /

€154.00

**DISCOUNT:**

**FORMAT:** Paperback

**TRIM:** 6w x 9h

**PAGES:** c. 225

**ILLUSTRATIONS:** 25 illustrations (5 in full color)

**AUDIENCE:** Researchers in biotechnology/biopharmaceutical fields, academics and pharmaceutical industrial scientists, and advanced university students in pharmaceutical and biopharmaceutical sciences

**BIC CODES:** MFCC, MMG, TCB, KNDP

**THEMA CLASSIFICATION:**

THEMAMF; THEMATCB;

THEMAKND; THEMAMKG

**Comprehensive and accessible overview of recent advances of using mAbs with focus on the formulation aspects**

### KEY FEATURES

- Covers details of recent advances in using mAbs
- Examines how to overcome the challenges for formulations of therapeutic mAbs
- Includes liposomal forms of mAbs

### DESCRIPTION

*Formulation of Monoclonal Antibody Therapies: From Lab to Market* covers a wide range of topics about therapeutic monoclonal antibodies (mAbs) with a focus on formulation aspects. Therapeutic monoclonal antibodies are used for treatment of chronic diseases. It brings together a comprehensive knowledge in one accessible volume. Starting with foundational information on monoclonal antibodies, the book then discusses the importance of biopharmaceutical products, monoclonal antibodies and biosimilars in treatment of chronic diseases, pharmaceutical aspects of mAbs, and how it can be administered. It also covers the industrial point of view and the clinical application of mAbs including in oncology, general medicine, rheumatology, hematology, dermatology, gastrointestinal tract, metabolic diseases, and dentistry. *Formulation of Monoclonal Antibody Therapies: From Lab to Market* is essential reading for researchers in biotechnology and biopharmaceutical fields, academics and pharmaceutical industrial scientists, and university students in pharmaceutical and biopharmaceutical sciences.

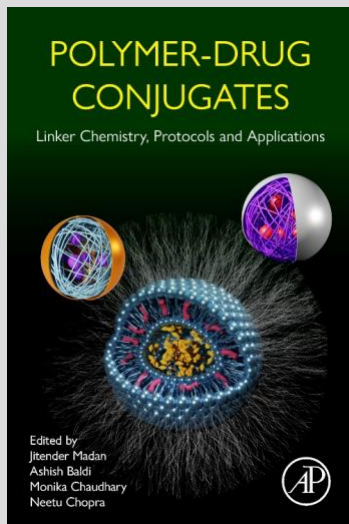


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# Polymer-Drug Conjugates

## Linker Chemistry, Protocols and Applications

Edited by : **Jitender Madan**, PhD, Associate Professor, National Institute of Pharmaceutical Education and Research, Hyderabad, Telangana, India; **Ashish Baldi**, PhD, Professor, Department of Pharmaceutical Sciences and Technology, Maharaja Ranjit Singh Punjab Technical University, Bathinda, Punjab, India ; **Monika Chaudhary**, PhD, Associate Professor, GVM College of Pharmacy, Sonapat, Haryana, India and **Neetu Chopra**, PhD, Safety and Pharmacovigilance Specialist, Syneos Health, Gurgaon, Haryana, India

**ISBN:** 9780323916639  
**PUB DATE:** Jun 01, 2023  
**LIST PRICE:** £135.00 / \$175.00 / €155.00

**DISCOUNT:**

**FORMAT:** Paperback

**TRIM:** 6w x 9h

**PAGES:** c. 391

**AUDIENCE:** Scientists and organizations working in the field of drug discovery, repurposing and pharmacological interpretations, Graduate students learning drug delivery or biomedical applications of polymers

**BIC CODES:** KNDP, MMG

**THEMA CLASSIFICATION:**

THEMAKND; THEMAMKG

**Examines the interaction of the chemical bond with the drug-polymer conjugate and drug delivery at the site of action**

### KEY FEATURES

- Covers mechanism, protocol and therapeutic significance of Polymer-Drug Conjugates
- Outlines updated methods and techniques to enumerate conjugation with related case studies
- Includes comprehensive compilation of marketed and clinical trial drugs conjugated with polymers or linkers

### DESCRIPTION

*Polymer-Drug Conjugates: Linker Chemistry, Protocols and Applications* discusses important concepts, fundamentals and prospective applications of 'Linker Chemistry' in a clear-and-concise manner. The book provides vital information on chemical entities binding with the drug-polymer complex for targeted drug delivery systems. It highlights roles and significance, different classes and synthetic protocols as well as mechanisms of chemical bond formation in drug-polymer conjugation in drug delivery, also offering insights into the mechanism of polymer interaction with linker and drug molecules by biodegradable chemical bonding.

The protocol of binding with drug molecules is clearly explained and justified with case studies, helping researchers and advanced students in the pharmaceutical sciences understand fundamentals involved and related aspects in molecule designing for effective therapeutic benefits.

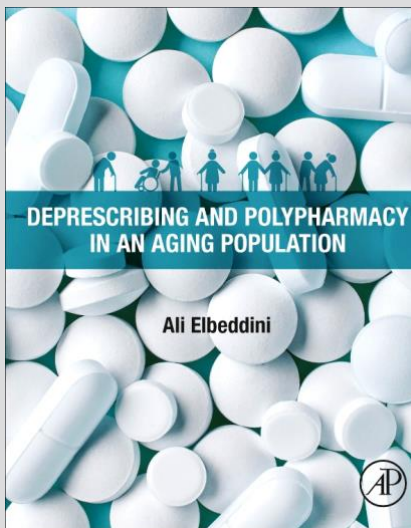


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# Deprescribing and Polypharmacy in an Aging Population

Ali Elbeddini, Assistant Professor, Family Medicine, Faculty of Medicine, University of Ottawa, Canada

**ISBN:** 9780323991384  
**PUB DATE:** Jun 01, 2023  
**LIST PRICE:** £135.00 / \$175.00 / €155.00

**DISCOUNT:**

**FORMAT:** Paperback

**TRIM:** 6w x 9h

**PAGES:** c. 330

**AUDIENCE:** Healthcare professionals involved in the circle of care and Pharmacy and medical school students & residents and professors, Hospital leadership and Policy makers

**BIC CODES:** MMG

**THEMA CLASSIFICATION:**  
THEMAMKG

**Offers solutions to improve medication safety through deprescribing information and knowledge of polypharmacy issues**

## KEY FEATURES

- Emphasizes the importance of involving a multidisciplinary team in deprescribing efforts
- Identifies barriers and enablers for the implementation of deprescribing programs
- Develops strategies to address barriers and optimize enablers for deprescribing implementation

## DESCRIPTION

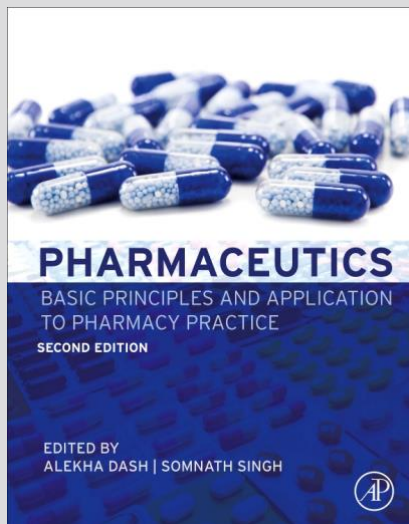
*Deprescribing and Polypharmacy in an Aging Population* supports healthcare professionals across global healthcare institutions in reducing polypharmacy-related drug related problems (DRPs) by working with patients, families, interprofessional healthcare professionals, and educational institutions to develop, implement, test, improve upon, and educate on strategies for deprescribing and optimizing patient safety. Polypharmacy, the use of multiple medications at the same time by one person, is very common in various patient populations, including those who lack primary physicians, patients with mental health conditions, patients with multiple chronic conditions, and in the aging population.



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# Pharmaceutics, 2e

## Basic Principles and Application to Pharmacy Practice

Edited by : **Alekha Dash**, R.Ph, PhD, Professor and Chair, Department of Pharmacy Sciences, School of Pharmacy and Health Professions, Creighton University, Omaha, NE, USA and **Somnath Singh**, PhD, Professor and Director, Department of Pharmacy Sciences, School of Pharmacy and Health Professions, Creighton University, Omaha, NE, USA

**ISBN:** 9780323997966

**PREVIOUS ISBN:** 9780123868909

**PUB DATE:** Jun 01, 2023

**LIST PRICE:** £61.95 / \$79.95 / €69.95

**DISCOUNT:**

**FORMAT:** Hardback

**TRIM:** 8.5w x 10.875h

**PAGES:** c. 440

**ILLUSTRATIONS:** 200 illustrations  
(25 in full color)

**AUDIENCE:** Student of  
pharmaceutics, biopharmaceutics, and  
pharmaceutical sciences

**BIC CODES:** MMG, KNDP, MQP

**THEMA CLASSIFICATION:**

THEMAKND; THEMAMKG;

THEMAMQP

**An updated textbook that covers all aspects of pharmaceutics with an emphasis on basic science and its application to pharmacy practice**

### KEY FEATURES

- Facilitates an integrated and extensive coverage of the study of pharmaceutics due to the clear and engaging language used by the authors
- Includes chapter objectives and summaries to illustrate and reinforce key ideas
- Meets curricular guidelines for pharmaceutics and laboratory skills mandated by the Accreditation Council for Pharmacy Education (ACPE)
- Includes new practice questions, answers, and case studies for experiential learning

### DESCRIPTION

*Pharmaceutics: Basic Principles and Application to Pharmacy Practice, Second Edition* is a valuable textbook covering the role and application of pharmaceutics within pharmacy practice. This updated resource is geared toward meeting and incorporating the current curricular guidelines on pharmaceutics and laboratory skills mandated by the American Council for Pharmacy Education. It includes a number of student-friendly features, including chapter objectives and summaries, practical examples, case studies, numerous images and key-concept text boxes. Two new chapters are included, as well as a new end of chapter section covering "critical reflections and practice applications".

Divided into three sections – Physical Principles and Properties of Pharmaceutics; Practical Aspects of Pharmaceutics; and Biological Applications of Pharmaceutics – this new edition covers all aspects of pharmaceutics and providing a single and compelling source for students.

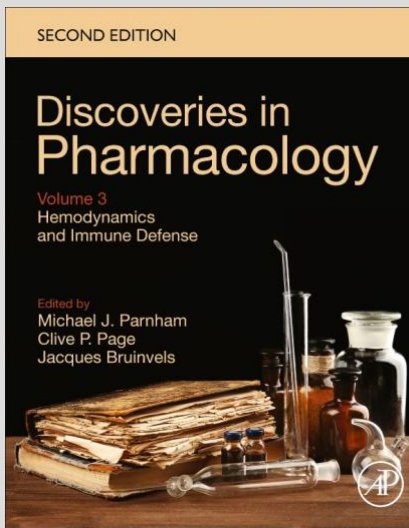


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# Hemodynamics and Immune Defense, 2e

## Discoveries in Pharmacology, Volume 3

Edited by : **Michael J. Parnham**, Professor, Faculty of Biochemistry, Chemistry and Pharmacy, Goethe University Frankfurt, Frankfurt am Main, Germany ; **Clive P. Page**, Professor of Pharmacology and Director, Sackler Institute of Pulmonary Pharmacology, King's College London, UK and **Jacques Bruinvels**, Professor Emeritus of Pharmacology, Department of Pharmacology, Erasmus University Rotterdam, Rotterdam, The Netherlands

**ISBN:** 9780443184420  
**PUB DATE:** Jun 01, 2023  
**LIST PRICE:** £155.00 / \$200.00 / €175.00

**DISCOUNT:**

**FORMAT:** Hardback

**TRIM:** 7.5w x 9.25h

**PAGES:** c. 480

**AUDIENCE:** Academic researchers in pharmacology and medicine, advanced students in the area and teachers needing supplementary course material for undergraduate and graduate pharmacology or medical courses, It may also be of interest to those who study the history of medicine

**BIC CODES:** MJCM, MMG

**THEMA CLASSIFICATION:** THEMAMJCM; THEMAMKG

**Helps readers understand the science and story behind essential pharmacological discoveries from those who made them**

A Volume in the *Advanced Forensic Science Series*

### KEY FEATURES

- Contains important primary-source documents currently unavailable
- Presents the science behind major pharmacological breakthroughs by those who discovered them
- Includes commentary that contextualizes the importance of discoveries and related readings

### DESCRIPTION

*Haemodynamics and Immune Defence: Discoveries in Pharmacology, Second Edition, Volume Three* presents selected articles from the historic *Discoveries in Pharmacology* series that are enhanced with commentary from contemporary scholars who discuss the reception and importance of each chapter along with an updated bibliography on the subject and contributions from those involved in Nobel Prize winning discoveries and pioneering advancements in Pharmacology. This volume brings forth discussions on key discoveries in hemodynamics and immune defense, including chapters on penicillin by Dr. Selwyn and asthma by Dr. Brocklehurst.

Academic and industry researchers in pharmacology and medicine, as well as advanced students in the area, will find this useful teaching tool and launch to new discoveries. Chapters can also be used to supplement course material in pharmacology and medical courses. It will also be of interest to those who are interested in the history of medicine.



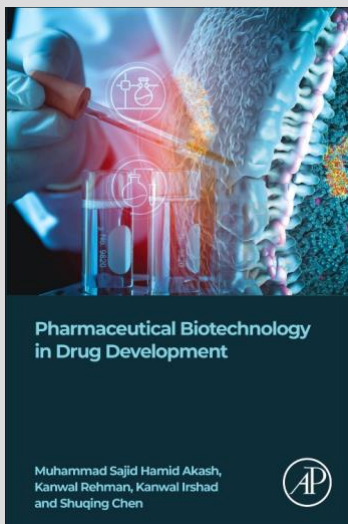
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# Pharmaceutical Biotechnology in Drug Development

**Muhammad Sajid Hamid Akash**, associate professor and chairman at Department of Pharmaceutical Chemistry, Government College University Faisalabad (GCUF), Pakistan.; **Kanwal Rehman**, Associate Professor at Department of Pharmacy in The Women University, Multan, Pakistan. ; **Kanwal Irshad**, PhD scholar at Department of Pharmaceutical Chemistry in Government College University Faisalabad, Pakistan. and **Shuqing Chen**, Professor, Zhejiang University; Head, Precision Medicine and Biopharmaceuticals Laboratory and Director, International Center for Precision Medicine, Zhejiang-California International NanoSystems Institute, China

**ISBN:** 9780443191350  
**PUB DATE:** May 05, 2023  
**LIST PRICE:** £135.00 / \$175.00 / €155.00  
**DISCOUNT:**  
**FORMAT:** Paperback  
**TRIM:** 6w x 9h  
**PAGES:** c. 226  
**AUDIENCE:** Researchers and scientists in Pharmaceutical Sciences, Biochemistry and biotechnology, Drug development corporate researchers  
**BIC CODES:** MMG  
**THEMA CLASSIFICATION:** THEMAMKG

**Provides a well-integrated and objective coverage of biotechnology techniques applied in drug development**

## KEY FEATURES

- Includes key concepts at the foundation of the technology and relevant for protein therapeutics
- Explains how advances in other areas such as genomics, proteomics and high-throughput screening have paved the way for exploring new avenues of drug discovery
- Covers the importance of biotechnology in the development of new biopharmaceuticals, along with their pharmacodynamics and pharmacokinetics

## DESCRIPTION

*Pharmaceutical Biotechnology in Drug Development* summarizes key concepts and the latest developments of biotechnology applied to the development of biopharmaceuticals. Chapters present a comprehensive collection of introductory biotechnology technologies and their modern concepts and cover pharmacokinetic and pharmacodynamic behavior of biopharmaceuticals and modification techniques of amino acids and nucleic acid. Other sections focus on topics such as gene therapy, immunological preparations and nanoparticles which are the major contributions of pharmaceutical biotechnology. Final chapters discuss emerging techniques in the field of pharmaceutical biotechnology to meet current patient and health care demand.

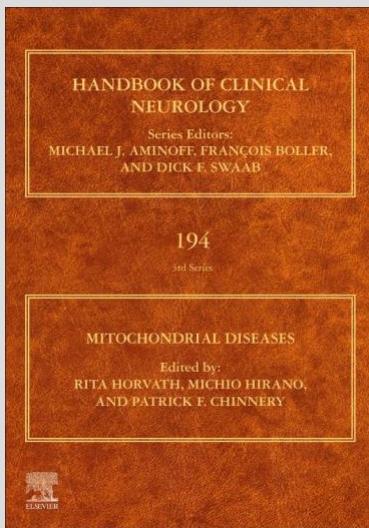
This book is an essential reference useful for pharmaceutical scientists, clinicians and academic researchers who want easy access to up-to-date practices of pharmaceutical biotechnology. Corporate researchers will also benefit from this book's succinct and objective content structure.



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# Mitochondrial Diseases, Vol 194

**Rita Horvath**, Department of Clinical Neurosciences, University of Cambridge, John van Geest Centre for Brain Repair, Cambridge, UK; **Michio Hirano**, Columbia University Irving Medical Center, H. Houston Merritt Neuromuscular Research Center, Division of Neuromuscular Medicine, Department of Neurology, New York, NY, USA and **Patrick F. Chinnery**, MRC Mitochondrial Biology Unit and Department of Clinical Neurosciences, University of Cambridge, Cambridge, UK

**ISBN:** 9780128217511  
**PUB DATE:** Jun 16, 2023  
**LIST PRICE:** £215.00 / \$275.00 / €240.00  
**DISCOUNT:**  
**FORMAT:** Hardback  
**TRIM:**  
**PAGES:** c. 284  
**AUDIENCE:** Clinical neurologists, researchers in neurology  
**BIC CODES:** MJG, MJN, MBGR, PSAN, MMF  
**THEMA CLASSIFICATION:** THEMAMFGM; THEMAMKF; THEMAMBGR; THEMAPSAN; THEMAMKJ; THEMAMJG

**Presents the latest information on the diagnosis and treatment of mitochondrial disorders and diseases**

A Volume in the *Handbook of Clinical Neurology* Series

## KEY FEATURES

- Examines the pathophysiology of mitochondrial diseases and disorders
- Focuses on neurological symptoms of mitochondrial diseases
- Presents myopathies, neuropathies, epilepsy, ataxia, paraplegias, and more
- Covers histology, metabolism, genetic, and neuroimaging diagnostics
- Summarizes both available and emerging therapies
- Includes clinical trials, the use of biomarkers and reproductive options

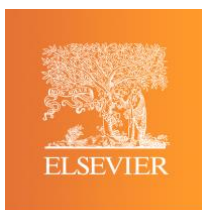
## DESCRIPTION

*Mitochondrial Diseases*, Volume 194 presents the most common clinical manifestations, providing an up-to-date summaries on the clinical presentations, diagnostic processes, genetic counseling and treatment options in mitochondrial diseases. Contents include specialist biochemical analyses and targeted molecular genetic testing, as well as first-line genome-wide sequencing to accelerate speed of diagnosis while avoiding time-consuming, expensive and invasive investigations. Establishing a genetic diagnosis allows patients with mitochondrial diseases to have reproductive options, all of which are covered within.

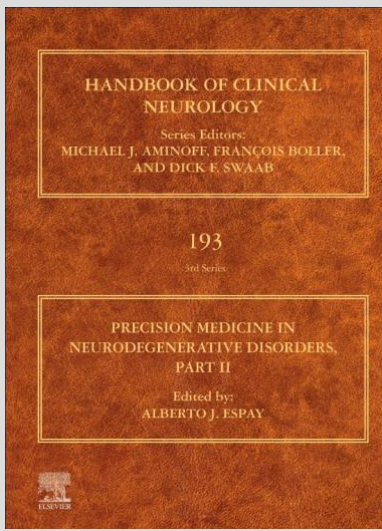
This book is intended for neurologists to help them recognize and manage patients with mitochondrial diseases.



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LIFE SCIENCES Neuroscience  
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# Precision Medicine in Neurodegenerative Disorders, Vol 193

## Part II

**Alberto J. Espay**, Professor of Neurology, Endowed Chair, James J. and Joan A. Gardner Family Center for Parkinson's Disease and Movement Disorders, University of Cincinnati, Cincinnati, OH, United States

**ISBN:** 9780323855556  
**PUB DATE:** Jun 09, 2023  
**LIST PRICE:** £215.00 / \$275.00 / €240.00  
**DISCOUNT:**  
**FORMAT:** Hardback  
**TRIM:**  
**PAGES:** c. 372  
**AUDIENCE:** Clinical neurologists  
**BIC CODES:** MBGR, PSAN, MJG, MJN  
**THEMA CLASSIFICATION:**  
THEMAMKJ; THEMAMBGR;  
THEMAMJG; THEMAPSAN;  
THEMAMFGM

**Reviews recent research on precision medicine for neurodegenerative disorders, including basic science, clinical trials and therapeutic advances**

A Volume in the *Handbook of Clinical Neurology* Series

### KEY FEATURES

- Summarizes theory and research on precision medicine in neurodegenerative disorders
- Covers basic biology, clinical trials and therapeutics
- Includes disease mechanisms, genetic subtypes, and more

### DESCRIPTION

*Precision Medicine in Neurodegenerative Disorders, Part Two, Volume 193* in the *Handbook of Clinical Neurology* deals with the "How" in the reconfiguration of our approach to slow accelerated brain aging. The book rethinks animal models on which therapies are tested, outlines the progress and expected changes in biological subtyping efforts using lysosomal, endosomal, mitochondrial, immune dysregulation, and inflammatory mechanisms of disease pathophysiology, and the growing role of microbiome in shaping disease. The volume separates the potentially disease-modifying neurorescue and neurorestoration, (e.g., gene therapy and cell replacement therapy) from true precision "medicine"—matching biology with the mechanism of intervention of interest.

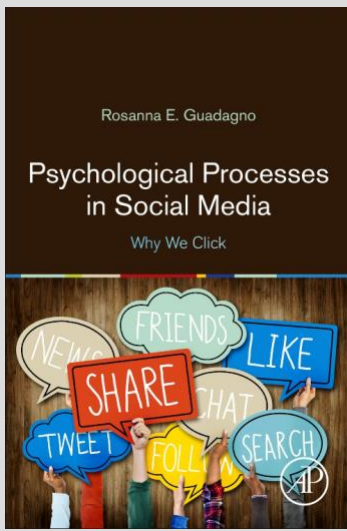
Specific chapters are dedicated to the promise and challenges of extracellular vesicles for both diagnosis and treatment, the growing application of digital measures and other evaluations of clinical response, the nuts and bolts of novel adaptive clinical trial designs, and the regulatory changes needed to facilitate drug development for disease-modification purposes.



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# Psychological Processes in Social Media

## Why We Click

Rosanna E. Guadagno, University of Oulu, OASIS Research Unit, Faculty of Information Technology and Electrical Engineering, Finland

**ISBN:** 9780128113202  
**PUB DATE:** Dec 01, 2023  
**LIST PRICE:** £58.99 / \$74.95 / €65.95  
**DISCOUNT:**  
**FORMAT:** Paperback  
**TRIM:** 6w x 9h  
**PAGES:** c. 280  
**AUDIENCE:** Researchers and students in psychology, media/communication studies researchers and students  
**BIC CODES:** JMH, JMB  
**THEMA CLASSIFICATION:** THEMAJMH; THEMAJMB

**Integrates theory and research from psychology and communication/media studies to explore the psychological implications of social media use**

### KEY FEATURES

- Each chapter starts with a contemporary real-world example illustrating the main point of the chapter
- Integrates research from the psychological sciences, mass communication and media studies
- Explores emotional contagion, memes, misinformation, aggression, social identity, and relationships
- Includes sections on gender differences in social media use
- Highlights the positive and negative psychological impact of social media use
- Cultural differences in social media use featured as a cross-cutting theme in the book

### DESCRIPTION

Incorporating relevant theory and research from psychology (social, cognitive, clinical, developmental, and personality), mass communication, and media studies, *Psychological Processes in Social Media: Why We Click* examines both the positive and negative psychological impact of social media use. The book covers a broad range of topics such as research methods, social influence and the viral spread of information, the use of social media in political movements, prosocial behavior, trolling and cyberbullying, friendship and romantic relationships, and much more. Emphasizing the integration of theory and application throughout, *Psychological Processes in Social Media: Why We Click* offers an illuminating look at the psychological implications and processes around the use of social media.

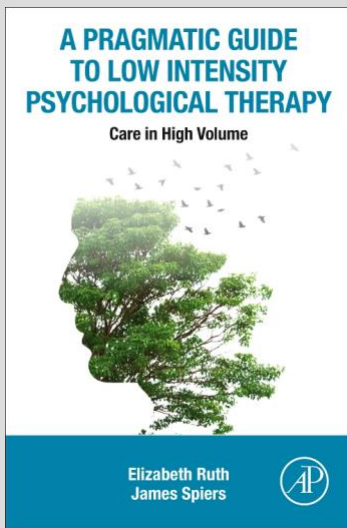


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# A Pragmatic Guide to Low Intensity Psychological Therapy

## Care in High Volume

**Elizabeth Ruth**, Formerly Psychological Wellbeing Practitioner, IAPT and **James Spiers**, Psychological Wellbeing Practitioner, IAPT services, Low Intensity Therapist and Clinical Supervisor

**ISBN:** 9780323884921

**PUB DATE:** Jun 01, 2023

**LIST PRICE:** £115.00 / \$150.00 / €131.00

**DISCOUNT:**

**FORMAT:** Paperback

**TRIM:** 8.5w x 10.875h

**PAGES:** c. 242

**AUDIENCE:** IAPT trainee, Clinical Psychologist, CBT trainees, Supervisors

**BIC CODES:** JMC, JNC, JMR, GTR, JML, JMM, JM

**THEMA CLASSIFICATION:**

THEMAJMR; THEMAMKMT5;

THEMAJML; THEMAJMM;

THEMAJNC; THEMAJMC; THEMAJM

### An insider's guide to Low Intensity Cognitive Behavior Therapy (LI CBT)

"In 1944, Winston Churchill said, "The farther back you can look, the farther forward you are likely to see." The historical context of the Wellbeing Practitioners suggests that the journey has only started. Unquestionably, in England, the IAPT impact has been phenomenal, on multiple levels. What is arguable, is the value and at what cost. The execution of the initiative into clinical delivery needed to be responsive and reactionary. Consistency in dynamic mental health services will rub against the finite resources in health economics. Authoritatively our authors applaud the virtues of IAPT and PWP's role wrapped around statutory services; with brave openness, they provide an experiential critical analysis that might be uncomfortable reading for some. This compelling book will inform a much-needed sensible debate, essential in a dynamic evolving modern health care system. From future trainees, wellbeing practitioners, service managers, clinical leads, and commissioners, to policymakers in England and nations beyond, all will find this book accessible, comprehensive and an essential point of reference to what comes next." -- Lee Grant, Clinical Director, Onebright Efficacy; Board Trustee, British Association for Behavioural & Cognitive Psychotherapies

### KEY FEATURES

- Offers a practitioner perspective on the efficacy research of Low Intensity psychological interventions in adult populations, with a focus on working with diversity
- Aims to support Low Intensity Practitioners in developing competency within the role, with a focus on reflective practice, supervision, and personal wellbeing
- Includes case vignettes and examples to explore the real world implementation of Low Intensity interventions in group and individual settings including the management of long term physical health conditions

### DESCRIPTION

With the rapidly growing demand for mental health care there is a need for efficient and effective psychological treatment options. Low Intensity Psychological Therapy has become well established in the England Improving Access to Psychological Therapies (IAPT) programme as a beneficial and versatile treatment option for mild-moderate symptoms of depression and anxiety. *A Pragmatic Guide to Low Intensity Psychological Therapy: Care in High Volume*, provides a guide to Low Intensity Psychological Therapy from the perspective of the Low Intensity Practitioner. This book describes the Low Intensity role as part of a multi-disciplinary approach to psychological care. The authors use a series of case vignettes, personal experience and current literature to help navigate the context of the role and its potential for ethical and safe expansion.



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## Cannabis Use, Neurobiology, Psychology, and Treatment

Edited by Colin R. Martin, Vinood B. Patel, and Victor R. Preedy



# Cannabis Use, Neurobiology, Psychology, and Treatment

Edited by : **Colin R Martin**, Professor of Clinical Psychobiology and Applied Psychoneuroimmunology and Clinical Director: Institute for Health and Wellbeing University of Suffolk, Ipswich, UK ; **Vinood B. Patel**, Reader, University of Westminster, London, UK and **Victor R Preedy**, BSc, PhD, DSc, FRSB, FRSPH, FRCPath, FRSC, Professor in the Department of Clinical Biochemistry at King's College Hospital, London, UK Emeritus Professor in Faculty of Life Sciences and Medicine at King's College London, UK Visiting Professor at the University of Hull, UK

**ISBN:** 9780323898621

**PUB DATE:** Jun 01, 2023

**LIST PRICE:** £195.00 / \$250.00 / €220.00

**DISCOUNT:**

**FORMAT:** Hardback

**TRIM:** 8.5w x 10.875h

**PAGES:** c. 550

**AUDIENCE:** Researchers in neuroscience and the biomedical sciences, behavioral neuroscientists

**BIC CODES:** PSAN, MFG

**THEMA CLASSIFICATION:**

THEMAMKJ; THEMAPSAN

**A comprehensive overview of cannabis and cannabinoids in relation to neurological systems**

### KEY FEATURES

- Summarizes cannabis and cannabinoid research in relation to neurological function
- Contains chapter abstracts, key facts, a dictionary and a summary
- Covers the neuroactivity of multiple Cannabis compounds beyond tetrahydrocannabinol
- Includes conditions like depression, anxiety, Parkinson's, psychosis, and epilepsy
- Discusses brain structure and brain development, including functional connectivity

### DESCRIPTION

*Cannabis Use, Neurobiology, Psychology, and Treatment* offers readers a comprehensive reference on neurological changes, both transient and long-term, and other factors surrounding the use of these compounds and extracts. With coverage of both natural and synthetic cannabinoids, this broad coverage allows readers to learn about both adverse and non-adverse effects, including reactivity to pain, changes in behavior, and neuroactivity. This volume provides a platform for research on the effects of these compounds in brain function and neurological dysfunction. Extracts from the Cannabis sativa plant contain scores of psychoactive compounds in addition to the principal agent tetrahydrocannabinol, many of which are neuroactive.



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## Medicinal Usage of Cannabis and Cannabinoids

Edited by Victor R. Preedy, Vinood B. Patel, and Colin R. Martin



# Medicinal Usage of Cannabis and Cannabinoids

Edited by : **Victor R Preedy**, BSc, PhD, DSc, FRSB, FRSPH, FRCPath, FRSC, Professor in the Department of Clinical Biochemistry at King's College Hospital, London, UK Emeritus Professor in Faculty of Life Sciences and Medicine at King's College London, UK Visiting Professor at the University of Hull, UK ; **Vinood B. Patel**, Reader, University of Westminster, London, UK and **Colin R Martin**, Professor of Clinical Psychobiology and Applied Psychoneuroimmunology and Clinical Director: Institute for Health and Wellbeing University of Suffolk, Ipswich, UK

**ISBN:** 9780323900362  
**PUB DATE:** Jun 01, 2023  
**LIST PRICE:** £195.00 / \$250.00 / €220.00  
**DISCOUNT:**  
**FORMAT:** Hardback  
**TRIM:** 8.5w x 10.875h  
**PAGES:** c. 710  
**AUDIENCE:** Researchers in neuroscience and the biomedical sciences; behavioral neuroscientists  
**BIC CODES:** MFG, JMM, PSAN  
**THEMA CLASSIFICATION:** THEMAPSAN; THEMAJMM; THEMAMKJ

**A comprehensive overview of the medicinal usage and symptom control of cannabis and cannabinoids**

### KEY FEATURES

- Summarizes the medicinal usage of cannabis and cannabinoids in a variety of conditions
- Contains chapter abstracts, key facts, a dictionary and a summary
- Examines symptom control of conditions such as depression, anxiety and sleep
- Discusses cannabis usage in Alzheimer's, Parkinson's, Multiple Sclerosis and cancer
- Features case reports and chapters on the physiological, psychological and pharmacological effects

### DESCRIPTION

*Medicinal Usage of Cannabis and Cannabinoids* offers readers a comprehensive reference on the medical usage and symptom relief provided by these compounds in a variety of disorders. With coverage of neurological diseases like Alzheimer's and Parkinson's, and a wide range of other afflictions including depression, anxiety, nausea and cancer, this broad coverage allows readers to learn about symptom control, along with the physiological, psychological and pharmacological effects of these compounds. Unique case reports are provided as well. This volume provides a platform for research on the use of these compounds in improving patient care, brain function and neurological dysfunction.



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## Neurobiology and Physiology of the Endocannabinoid System

Edited by Vinood B. Patel, Victor R. Preedy, and Colin R. Martin



# Neurobiology and Physiology of the Endocannabinoid System

Edited by : **Vinood B. Patel**, Reader, University of Westminster, London, UK; **Victor R Preedy**, BSc, PhD, DSc, FRSB, FRSPH, FRCPath, FRSC, Professor in the Department of Clinical Biochemistry at King's College Hospital, London, UK Emeritus Professor in Faculty of Life Sciences and Medicine at King's College London, UK Visiting Professor at the University of Hull, UK and **Colin R Martin**, Professor of Clinical Psychobiology and Applied Psychoneuroimmunology and Clinical Director: Institute for Health and Wellbeing University of Suffolk, Ipswich, UK

**ISBN:** 9780323908771

**PUB DATE:** Jun 01, 2023

**LIST PRICE:** £195.00 / \$250.00 / €220.00

**DISCOUNT:**

**FORMAT:** Hardback

**TRIM:** 8.5w x 10.875h

**PAGES:** c. 710

**AUDIENCE:** Researchers in neuroscience and the biomedical sciences, behavioral neuroscientists

**BIC CODES:** PSAN, JMM, MFG

**THEMA CLASSIFICATION:**

THEMAPSAN; THEMAJMM;

THEMAMKJ

### A comprehensive overview of the endocannabinoid system

#### KEY FEATURES

- Summarizes research on the working neurobiology of the endocannabinoid system
- Contains chapter abstracts, key facts, a dictionary and a summary
- Covers both natural cannabinoids and synthetic or exogenous cannabimimetics
- Includes conditions like headache, anxiety, stress and neuroinflammation
- Discusses system modulation in the context of pain, traumatic brain injury and obesity

#### DESCRIPTION

*Neurobiology and Physiology of the Endocannabinoid System* offers readers a comprehensive reference on the neurobiology of this system and the use of cannabimimetic compounds to induce neurological changes and confer symptom relief. With sections on both natural and synthetic compounds, the book's broad coverage allows readers to learn about their use with multiple conditions, as well as the working biology of the endocannabinoid system, its receptors and its ligands. This volume provides a platform for research on the effects of this system and its modulation in brain function and neurological dysfunction.



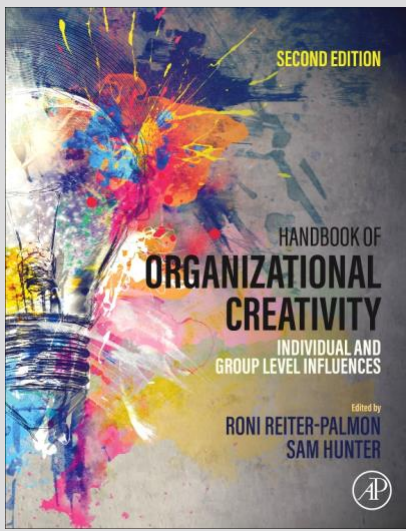
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# Handbook of Organizational Creativity, 2e

## Individual and Group Level Influences

Edited by : **Roni Reiter-Palmon**, Varner Professor of Industrial/Organizational (I/O) Psychology; Director of the I/O Psychology Graduate Program, University of Nebraska at Omaha (UNO), NE, USA and **Sam Hunter**, Associate Professor of Industrial and Organizational Psychology, Penn State University, PA, USA

**ISBN:** 9780323918404  
**PUB DATE:** Jun 01, 2023  
**LIST PRICE:** £115.00 / \$150.00 / €131.00

**DISCOUNT:**

**FORMAT:** Hardback

**TRIM:** 8.5w x 10.875h

**PAGES:** c. 600

**AUDIENCE:** Social psychologists, industrial/organizational psychologists, applied psychologists, business

**BIC CODES:** JMJ, JMS, JP SL

**THEMA CLASSIFICATION:**

THEMAJMJ; THEMAJM; THEMAJMS

**A comprehensive review of what factors influence creativity in organizations and how to harness these factors at the individual, group and organizational level**

### KEY FEATURES

- Focuses on the key need to increase creativity and innovation in organizations
- Identifies the factors influencing organizational creativity
- Includes individual, group and organizational influences
- Specifies how these factors play out in specific subject domains
- Presents interventions to improve organizational creativity

### DESCRIPTION

*Handbook of Organizational Creativity: Individual and Group Level Influences, Second Edition* covers creativity from many perspectives in two unique volumes, including artificial Intelligence work, creativity within specific applied domains (e.g., engineering, science, therapy), and coverage of leadership. The book includes individual, team and organizational level factors and includes organizational interventions to facilitate creativity (such as training). Chapters focus on creative abilities and creative problem-solving processes, along with individual differences such as motivation, affect and personality. New chapters include the neuroscience of creativity, creativity and meaning, morality/ethicality and creativity, and creative self-beliefs.

Sections on group level phenomena examine team cognition, team social processes, team diversity, social networks, and multi-team systems and creativity. Final coverages includes different types and approaches to leadership, such as transformational leadership, ambidextrous leadership leader-follower relations, and more.

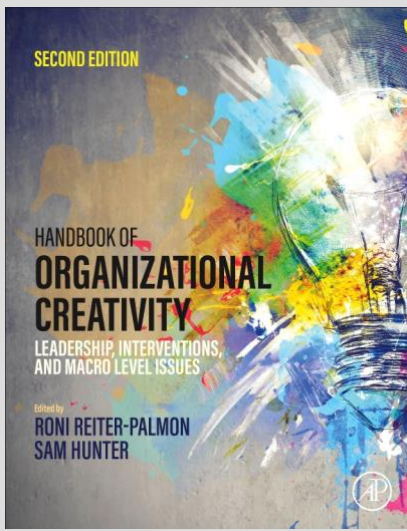


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# Handbook of Organizational Creativity, 2e

## Leadership, Interventions, and Macro Level Issues

Edited by : **Roni Reiter-Palmon**, Varner Professor of Industrial/Organizational (I/O) Psychology; Director of the I/O Psychology Graduate Program, University of Nebraska at Omaha (UNO), NE, USA and **Sam Hunter**, Associate Professor of Industrial and Organizational Psychology, Penn State University, PA, USA

**ISBN:** 9780323918411  
**PUB DATE:** Jun 01, 2023  
**LIST PRICE:** £115.00 / \$150.00 / €131.00

**DISCOUNT:**

**FORMAT:** Hardback

**TRIM:** 8.5w x 10.875h

**PAGES:** c. 600

**AUDIENCE:** Social psychologists, industrial/organizational psychologists, applied psychologists, business

**BIC CODES:** JMS, JMJ, JP SL

**THEMA CLASSIFICATION:**

THEMAJMS; THEMAJMJ; THEMAJM

**A comprehensive review of what factors influence creativity in organizations and how to harness these factors at the individual, group and organizational level**

### KEY FEATURES

- Focuses on the key need to increase creativity and innovation in organizations
- Identifies the factors influencing organizational creativity
- Includes individual, group and organizational influences
- Specifies how these factors play out in specific subject domains
- Presents interventions to improve organizational creativity

### DESCRIPTION

*Handbook of Organizational Creativity: Leadership, Interventions, and Macro Level Issues, Second Edition* covers creativity from many perspectives in two unique volumes, including artificial Intelligence work, creativity within specific applied domains (e.g., engineering, science, therapy), and coverage of leadership. The book includes individual, team and organizational level factors and includes organizational interventions to facilitate creativity (such as training). Chapters focus on creative abilities and creative problem-solving processes, along with individual differences such as motivation, affect and personality. New chapters include the neuroscience of creativity, creativity and meaning, morality/ethicality and creativity, and creative self-beliefs.

Sections on group level phenomena examine team cognition, team social processes, team diversity, social networks, and multi-team systems and creativity. Final coverages includes different types and approaches to leadership, such as transformational leadership, ambidextrous leadership leader-follower relations, and more.



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## CLINICAL NEUROEPIDEMIOLOGY OF ACUTE AND CHRONIC DISORDERS



Jahangir Moini  
Nicholas Avgeropoulos  
Amparo Gutierrez



# Clinical Neuroepidemiology of Acute and Chronic Disorders

**Jahangir Moini**, Retired Professor, Science and Health Department, Eastern Florida State College, FL, USA; **Nicholas Avgeropoulos**, Co-director, Brain and Spine Tumor Program, Orlando Health / UF Health Cancer Center, FL, USA and **Amparo Gutierrez**, Neurologist, The Orlando Health Neuroscience and Rehabilitation Institute Neurology Group, FL, USA

**ISBN:** 9780323959018

**PUB DATE:** Jun 01, 2023

**LIST PRICE:** £155.00 / \$200.00 /

€175.00

**DISCOUNT:**

**FORMAT:** Paperback

**TRIM:** 8.5w x 10.875h

**PAGES:** c. 434

**AUDIENCE:** Neuroscientists, neuroepidemiologists graduate and undergraduate students in biological and biomedical sciences, post-doctoral fellows, researchers, neurologists, parasitologists, clinicians

**BIC CODES:** PSAN, MFG

**THEMA CLASSIFICATION:**

THEMAPSAN; THEMAMKJ

**A comprehensive reference on the neuroepidemiology of acute and chronic disorders of the nervous system**

### KEY FEATURES

- Covers a variety of disorders and their etiology, including risk factors, pathophysiology clinical manifestations diagnosis, incidence of mortality, prevention, treatment and prognosis
- Features real-world case studies with critical thinking questions and answers
- Includes Focus On boxes that highlight key information in each chapter
- Highlights treatments for various disorders, including Alzheimer's disease and migraines
- Discusses the effects of COVID-19 on the nervous system in relation to several diseases

### DESCRIPTION

*Clinical Neuroepidemiology of Acute and Chronic Disorders* explores the epidemiology of disorders that affect the nervous system, providing comprehensive discussions on incidence, prevalence, and more. With thorough coverage of a variety of disorders, chapters detail etiology, risk factors, pathophysiology, clinical manifestations, diagnosis, global incidence and prevalence, age-specific incidence, global mortality, prevention, treatment and prognosis for each disorder. Chapters uniquely discuss the effects of the COVID-19 coronavirus upon the nervous system and in relation to several diseases, including new discoveries and treatments for Alzheimer's disease and migraine headaches. Real-world case studies with critical thinking questions and "Focus On" boxes highlight important information.

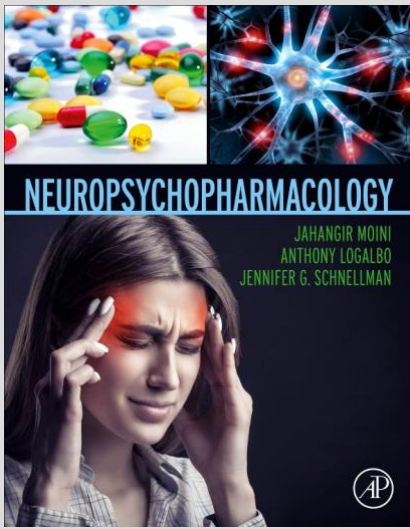


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# Neuropsychopharmacology

**Jahangir Moini**, Retired Professor, Science and Health Department, Eastern Florida State College, FL, USA; **Anthony LoGalbo**, Associate Professor, Florida Institute of Technology, School of Psychology, FL, USA and **Jennifer Schnellmann**, Associate Professor, Department of Pharmacology, College of Pharmacy, University of Arizona, Arizona, USA

**ISBN:** 9780323959742  
**PUB DATE:** Jun 01, 2023  
**LIST PRICE:** £155.00 / \$200.00 /  
€175.00

**DISCOUNT:**

**FORMAT:** Paperback

**TRIM:** 8.5w x 10.875h

**PAGES:** c. 605

**AUDIENCE:** Neurologists, medical students, psychiatrists, psychopharmacologists, psychologists, pharmacologists, and graduate students, Nurses, physician, assistants nurse practitioners

**BIC CODES:** GTR, JMM, MMGW

**THEMA CLASSIFICATION:**

THEMAJMM; THEMAMKGW;

THEMAJMR

**A comprehensive neuropsychopharmacology resource combining content on central and autonomic nervous systems and common psychiatric conditions**

## KEY FEATURES

- Describes pharmacology principles pertaining to the central and autonomic nervous system
- Identifies pharmacological interventions for psychiatric disorders including current evidence-based interventions for depression, schizophrenia and anxiety disorders
- Features chapter outlines, end-of-chapter questions, real-world case studies and examinations for deeper learning or teaching

## DESCRIPTION

*Neuropsychopharmacology* reviews the principles of pharmacology with a focus on the central nervous system and autonomic nervous system. Beyond autonomic and central nervous system pharmacology, this volume uniquely discusses psychiatric disorders and the pharmacological interventions that are available for conditions including depression, schizophrenia and anxiety disorders. With a focus on these specific body systems, readers will see end-of-chapter questions that offer real-world case studies, as well as multiple-choice questions for further learning. Beneficial features and content also include two extensive examination tests, which each contain 100 questions for better learning or to be used in teaching, and a glossary.

Helpful appendices cover high-alert medications and toxicology effects on the nervous system. Each chapter will contain classifications of medications, pharmacokinetics, mechanism of action, clinical indications and toxicities.



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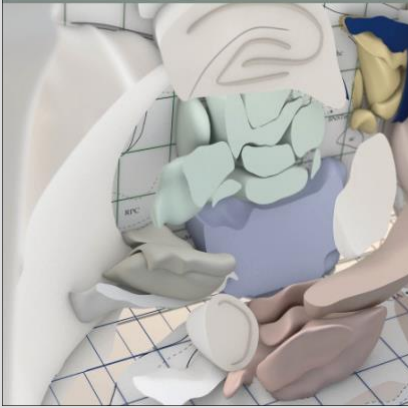


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# ATHYMIC NUDE

Bengt Mattsson, Malin Parmar and Anders Björklund



## Athymic Nude Rat Brain Atlas

**Bengt Mattsson**, Technician in Developmental and Regenerative Neurobiology, Department of Experimental Medical Science at Wallenberg Neuroscience Center, Lund University, Sweden; **Malin Parmar**, Professor of Developmental and Regenerative Neurobiology, Lund University, Sweden and **Anders Björklund**, Senior Professor, Developmental and Regenerative Neurobiology and Head, Neurobiology Unit, Wallenberg Neuroscience Center, Lund University, Sweden

**ISBN:** 9780323997409

**PUB DATE:** Jun 01, 2023

**LIST PRICE:** £115.00 / \$150.00 /

€131.00

**DISCOUNT:**

**FORMAT:** Hardback

**TRIM:** 8.5w x 10.875h

**PAGES:** c. 130

**ILLUSTRATIONS:** 100 illustrations  
(50 in full color)

**AUDIENCE:** Graduate students in biological and biomedical sciences, neuroscientists, clinicians, biomedical scientists, post-doctoral fellows, researchers, CROs conducting safety and efficacy studies

**BIC CODES:** MFG, PSAN, PD

**THEMA CLASSIFICATION:**

THEMAPSAN; THEMAMKJ;

THEMAPDM

**Provides the first atlas of the athymic nude rat brain to identify brain structures**

### KEY FEATURES

- Contains coronal, sagittal, and horizontal maps of young adult athymic nude rat brain, spaced with a distance of 0.2 or 0.25 mm
- Uses "flat skull" Bregma and Lambda as anatomical landmarks for correct placement in the 3D environment
- Anatomical structures and nomenclature follow the standard set by the Paxinos and Watson rat brain atlases
- Includes a map of the dopamine projection system as well as the distribution of the A8-A14 dopamine cell groups
- Allows for easy read-out of coordinates for precise injections using stereotaxic surgery

### DESCRIPTION

*Athymic Nude Rat Brain Atlas* will provide the first stereotaxic brain atlas of the athymic nude rat (CrI:NIH-Foxn1nu), a T-cell deficient rat model commonly used in experimental studies and pre-clinical safety and efficacy studies. This 2D vector-based atlas contains coronal, sagittal, and horizontal brain sections of an athymic rat brain rendered from a single cleared specimen, placed in a computerized 3D environment. The maps enable readers to better calculate co-ordinates to target specific structures for toxin, virus, or cell delivery using stereotaxic surgery. This atlas will be a valuable resource for any neuroscientist who wishes to work with nude rats in experimental and pre-clinical studies.



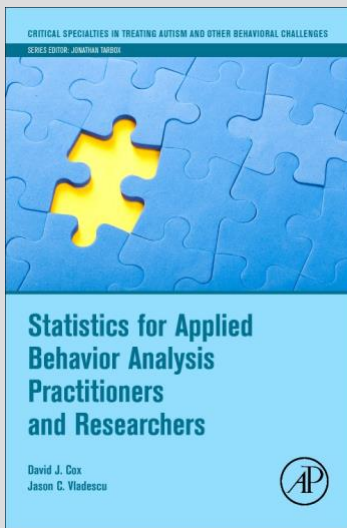
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# Statistics for Applied Behavior Analysis Practitioners and Researchers

David J. Cox, Chief Data Officer, Behavioral Health Center of Excellence and Faculty of Behavior Analysis, Endicott College, Beverly, MA, USA and Jason C. Vladescu, Associate Professor, Department of Applied Behavior Analysis, Caldwell University; Clinical Supervisor, Center for Autism and Applied Behavioral Analysis, Caldwell, NJ, USA

**ISBN:** 9780323998857  
**PUB DATE:** Jul 28, 2023  
**LIST PRICE:** £61.95 / \$79.95 / €69.95  
**DISCOUNT:**  
**FORMAT:** Paperback  
**TRIM:** 6w x 9h  
**PAGES:** c. 250  
**AUDIENCE:** Researchers, practitioner and students in ABA and ASD  
**BIC CODES:** JM, GTR, JMR, JMC, MMJT1, JML, JMM, JNC  
**THEMA CLASSIFICATION:** THEMAJNC; THEMAJML; THEMAJM; THEMAJMAQ; THEMAJMM; THEMAMKMT6; THEMAJMR; THEMAJMC

**The first textbook covering statistical concepts geared specifically to the types of interventions ABA services provide**

A Volume in the *Critical Specialties in Treating Autism and other Behavioral Challenges Series*

## KEY FEATURES

- Examines classical methods of statistics that focus on group design and its applications to ABA research
- Discusses the unique challenges of time-series data and reviews simple solutions
- Covers current standards in writing and presenting statistical effects of interventions
- Focuses on statistical analysis for single case designs

## DESCRIPTION

*Statistics for Applied Behavior Analysis Practitioners and Researchers* provides practical and useful content for individuals who work directly with, or supervise those who work directly with, individuals with ASD. This book introduces core concepts and principles of modern statistical analysis that practitioners will need to deliver ABA services. The organization of the book works through the flow of behavior analytic service provision, aiming to help practitioners read through research, evaluate intervention options, incorporate statistics in their analysis of time-series intervention and assessment data, and effectively communicate assessment and intervention effects using statistics.

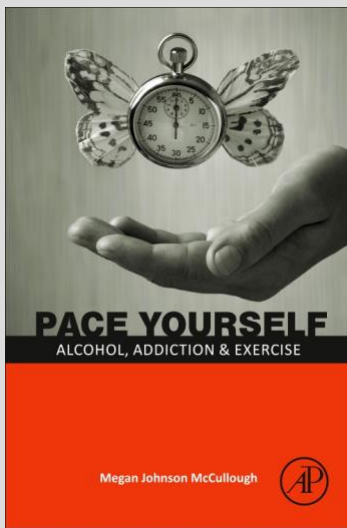
As professionals who provide applied behavior analysis (ABA) services are required to use evidence-based practices and make data-based decisions regarding assessments and interventions, this book will help them take a modern, scientific approach to derive knowledge and make decisions based on statistical literacy.



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# PACE Yourself

## Alcohol, Addiction and Exercise

Megan Johnson McCullough, EdD, Doctor of Health and Human Performance and Owner, Every BODY's Fit in Oceanside, CA, USA

**ISBN:** 9780443133534  
**PUB DATE:** Mar 29, 2023  
**LIST PRICE:** £95.95 / \$125.00 / €109.00

**DISCOUNT:**

**FORMAT:** Paperback

**TRIM:** 6w x 9h

**PAGES:** c. 290

**AUDIENCE:** Professionals in exercise science and/or drug addiction fields (i.e., professors, instructors, counselors, psychologists, etc.)

**BIC CODES:** JMM, PSAN, MMJ

**THEMA CLASSIFICATION:** THEMAMKM; THEMAJMM; THEMAPSAN

**A guide for persons in the addiction and fitness related fields to better understand the nature of alcohol use disorder (AUD) recovery**

### KEY FEATURES

- Provides information about, and for, persons suffering from alcohol use disorder (AUD)
- Introduces exercise as a recovery tool in overcoming alcohol addiction
- Discusses exercise addiction and alcohol addiction together to shed light on a new recovery method from the perspective of real participants suffering from AUD

### DESCRIPTION

*PACE Yourself: Alcohol, Addiction and Exercise* provides qualitative research about the influence of exercise on alcohol use disorder (AUD) recovery. In addition, the author explains how someone can benefit from exercise and explores how the PACE method could help keep new addictions at bay. PACE is an acronym for Proactive Awareness Controlling Excess. The author has developed an app of the same name which is available in the Apple store. Exercise is medicine when it comes to the recovering body and mind of an alcoholic. Physiological and psychological changes as a result of moving the body contribute to prolonged sobriety and deter the cyclical threat the nature of alcohol abuse can pose upon person in recovery.

The struggle to never become powerless to alcohol again can be kept at bay when the benefits of exercise over power the benefits alcohol used to have. However, the addictive mind can find a new habit to replace the old one. The PACE method proposes steps to become aware of replacement type behaviors with the understanding that anyone can become addicted to anything.



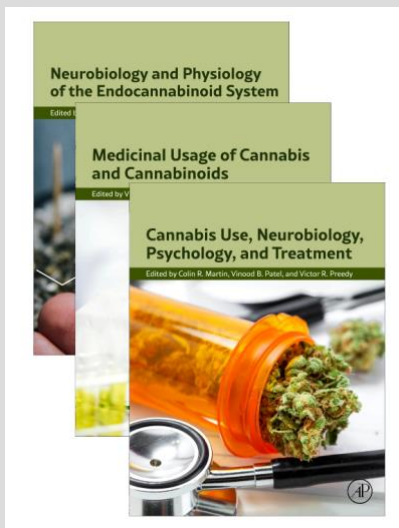
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# Cannabis, Cannabinoids, and Endocannabinoids

Edited by : **Colin R Martin**, Professor of Clinical Psychobiology and Applied Psychoneuroimmunology and Clinical Director: Institute for Health and Wellbeing University of Suffolk, Ipswich, UK ; **Vinood B. Patel**, Reader, University of Westminster, London, UK and **Victor R Preedy**, BSc, PhD, DSc, FRSB, FRSPH, FRCPath, FRSC, Professor in the Department of Clinical Biochemistry at King's College Hospital, London, UK Emeritus Professor in Faculty of Life Sciences and Medicine at King's College London, UK Visiting Professor at the University of Hull, UK

**ISBN:** 9780443187599  
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**DISCOUNT:**

**FORMAT:** Hardback

**TRIM:** 8.5w x 10.875h

**PAGES:** c. 550

**AUDIENCE:** Researchers in neuroscience and the biomedical sciences; behavioral neuroscientists

**BIC CODES:** MFG, PSAN

**THEMA CLASSIFICATION:**

THEMAMKJ; THEMAPSAN

**Provides a comprehensive overview of cannabis and cannabinoids in relation to neurological systems and an overview of the endocannabinoid system**

## KEY FEATURES

- Summarizes cannabis and cannabinoid research in relation to neurological function
- Covers the neuroactivity of multiple cannabis compounds beyond tetrahydrocannabinol
- Includes conditions like depression, anxiety, Parkinson's, psychosis and epilepsy
- Discusses concepts in the context of brain structure and brain development, including functional connectivity
- Summarizes the medicinal usage of cannabis and cannabinoids in a variety of conditions
- Examines symptom control of conditions, including depression, anxiety and sleep
- Discusses cannabis usage in Alzheimer's, Parkinson's, Multiple Sclerosis, and cancer

## DESCRIPTION

*Cannabis, Cannabinoids, and Endocannabinoids* offers a comprehensive reference on natural and synthetic cannabinoids, providing coverage on both adverse and non-adverse effects, including reactivity to pain, changes in behavior and neuroactivity. This volume updates on research on the effects of these compounds in brain function and neurological dysfunction, offering readers a comprehensive reference on medical usage and the symptom relief provided by these compounds. With coverage of neurological diseases like Alzheimer's and Parkinson's, and a wide range of other afflictions, including depression, anxiety, nausea and cancer, this broad coverage expounds on the physiological, psychological and pharmacological effects of these compounds.

Unique case reports are also provided, creating a platform for research on the use of these compounds in improving patient care, brain function and neurological dysfunction. As the endocannabinoid system has been implicated in various neurological conditions, this book is a welcomed resource on the topics presented.

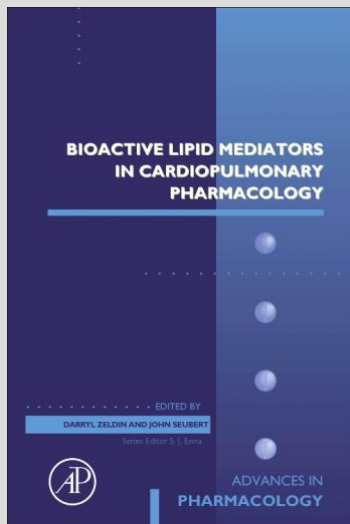


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LIFE SCIENCES Neuroscience

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# Bioactive Lipid Mediators in Cardiopulmonary Pharmacology, Vol 97

Edited by : **Darryl C Zeldin**, National Institutes of Health/National Institute of Environmental Health Services, NC, USA and **John Seubert**, University of Alberta Faculty of Medicine and Dentistry, Edmonton, Canada

**ISBN:** 9780323950572  
**PUB DATE:** Jun 01, 2023  
**LIST PRICE:** £177.00 / \$256.00 /  
€183.00

**DISCOUNT:**

**FORMAT:** Hardback

**TRIM:** 6w x 9h

**PAGES:** c. 300

**AUDIENCE:** Clinical and basic  
researchers involved in drug discovery  
and pathophysiology

**BIC CODES:** MMG

**THEMA CLASSIFICATION:**

THEMAMKG

**Presents the latest information on bioactive lipid mediators and the vast array of signaling pathways that regulate physiological and pathophysiological responses**

A Volume in the *Advances in Pharmacology* Series

## KEY FEATURES

- Provides reviews from world experts in the field of bioactive lipid mediators
- Focuses on current topics, with an emphasis on the development of novel therapeutics
- Covers a diverse range of bioactive lipids derived from COX, LOX or CYP-mediated metabolism of omega-3 and omega-6 PUFAs

## DESCRIPTION

*Bioactive Lipid Mediators in Cardiopulmonary Pharmacology, Volume 97* updates readers on topics surrounding Bioactive lipid mediators. These mediators are involved in a vast array of signaling pathways that regulate both physiological and pathophysiological responses. Chapters in this new release include Cyclooxygenases and Vascular Function, Cyclooxygenases and Platelet Function, Eicosanoids and Cardiomyopathies, Cytochrome P450 Bioactive Lipids in the Heart, Epoxide Hydrolase and Leukotoxin in the Heart and Lung, Role of cytochrome P450-epoxygenase and soluble epoxide hydrolase in the regulation of vascular response, Bioactive Lipids in Hypertension, Cytochrome P450 Metabolites and Angiogenesis, 20-Hydroxyeicosatetraenoic Acid and Vascular Function, and more.

Other critical sections cover Cytochrome P450 Eicosanoids and the Brain, Omega-3 Oxylipids, Resolvins, Lipoxins and Inflammation, Endocannabinoids as Bioactive Metabolites, and Oxylipins and Aspirin Exacerbated Respiratory Disease.



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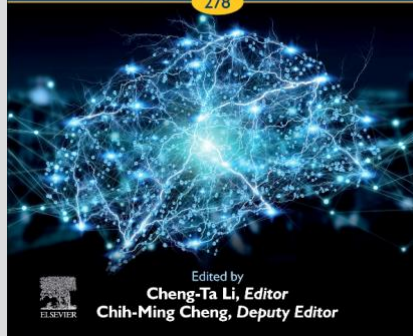


**SERIALS** Pharmacology, Toxicology & Pharmaceutical Science  
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PROGRESS IN BRAIN RESEARCH

Treatment-Resistant  
Depression Part A

278



# Treatment-Resistant Depression, Vol 278

Edited by : **Cheng-Ta Li**, Professor, National Yang Ming Chiao Tung University; Division chief, Taipei Veterans General Hospital, Taiwan and **Chih-Ming Cheng**, Attending Psychiatrist, Division of Community and Rehabilitation Psychiatry, Taipei Veterans General Hospital, Taiwan

ISBN: 9780323957786

PUB DATE: Jun 15, 2023

LIST PRICE: £199.95 / \$288.00 /

€206.00

DISCOUNT:

FORMAT: Hardback

TRIM: 7.5w x 9.25h

PAGES: c. 350

AUDIENCE: Undergraduates, graduates, academics, and researchers in the field of neurology and brain research

BIC CODES: PSAN, JMM

THEMA CLASSIFICATION: THEMAPSAN; THEMAJMM

**Edited by some of the best scientists in the field, this series presents the latest updates in the field of brain research**

A Volume in the *Progress in Brain Research* Series

## KEY FEATURES

- Provides the authority and expertise of leading contributors from an international board of authors
- Presents the latest release in Progress in Brain Research serials
- Updated release includes the latest information on Treatment-Resistant Depression

## DESCRIPTION

*Progress in Brain Research, Volume 278*, the latest release in this ongoing serial, highlights new advances in the field with this new volume presenting interesting chapters on Treatment Resistant Depression overview in Adult, Treatment Resistant Depression in Children and Adolescents, Treatment Resistant Depression in Elderly, Headache and Treatment Resistant Depression, Insomnia and Treatment Resistant Depression, Tinnitus and Treatment Resistant Depression, Genetics of Antidepressant Response and Treatment Resistant Depression, Neuroinflammation via Gut-Microbiota-Brain Axis in Treatment Resistant Depression, Molecular Imaging findings for Treatment Resistant Depression, and more.

Additional sections cover Functional MRI markers for Treatment Resistant Depression: Insights and Current Challenges, Medication Strategies for Treatment Resistant Depression, Brain Stimulation for Treatment Resistant Depression, Electroconvulsive Therapy for Treatment Resistant Depression, Next Generation Antidepressants with Novel Mechanisms for Treatment Resistant Depression, Psychological aspects and Psychotherapy for Treatment Resistant Depression, and Psychiatric Rehabilitation for Treatment Resistant Depression.

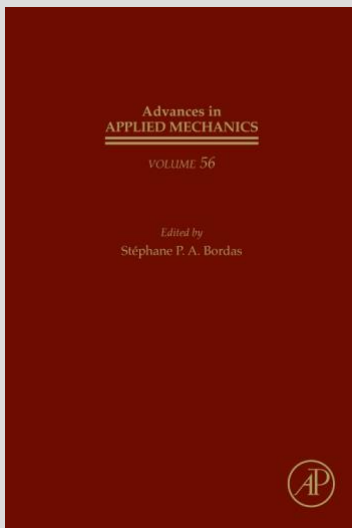


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SERIALS Neuroscience

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# Advances in Applied Mechanics, Vol 56

Stephane P.A. Bordas, Computational Mechanics, University of Luxembourg, Luxembourg

**ISBN:** 9780323992480

**PUB DATE:** Jun 01, 2023

**LIST PRICE:** £150.00 / \$217.00 / €155.00

**DISCOUNT:**

**FORMAT:** Hardback

**TRIM:** 6w x 9h

**PAGES:** c. 290

**AUDIENCE:** PhD students, experienced researchers, post-doctoral researchers, R&D specialists in industry

**BIC CODES:** PH

**THEMA CLASSIFICATION:** THEMAPH

**Edited by some of the best scientists in the field, this series presents the latest updates in the field of applied mechanics**

A Volume in the *Advances in Applied Mechanics* Series

## KEY FEATURES

- Provides the authority and expertise of leading contributors from an international board of authors
- Presents the latest release in the *Advances in Applied Mechanics series*

## DESCRIPTION

*Advances in Applied Mechanics, Volume 56* in this ongoing series, highlights new advances in the field, with this new volume presenting interesting chapters on From Digital Control to Digital Twins in Medicine: A brief review and future perspectives, Predicting Nonlinear Deformation and Yarn Kinematics of Plain Weave Fabrics with Multiscale Recursive Micromechanics, Mechanics Theories for Anisotropic or Composite Materials, Historical purview and recent advances in fracture mechanics of elastomeric matrix composites, Mechanics constitutive models for viscoelastic solid materials: Development and a critical review, and more.



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FORTHCOMING

# Advances in Atomic, Molecular, and Optical Physics, Vol 72

Susanne Yelin, Louis Dimauro, Helene Perrin

**ISBN:** 9780323992527

**PUB DATE:** Jun 01, 2023

**LIST PRICE:** £165.00 / \$239.00 /  
€171.00

**DISCOUNT:**

**FORMAT:** Hardback

**TRIM:** 6w x 9h

**PAGES:** c. 500

**AUDIENCE:** Academic, government  
and industrial sectors

**BIC CODES:** PHM, PHJ

**THEMA CLASSIFICATION:**  
THEMAPHM; THEMAPHJ

**Edited by some of the best scientists in this field, this series presents the latest updates on Advances in Atomic, Molecular, and Optical Physics**

A Volume in the *Advances In Atomic, Molecular, and Optical Physics* Series

## KEY FEATURES

- Provides the authority and expertise of leading contributors from an international board of authors
- Presents the latest release in the *Advances in Atomic, Molecular, and Optical Physics* series
- Includes the latest information in the field

## DESCRIPTION

*Advances in Atomic, Molecular, and Optical Physics, Volume 72* highlights new advances in the field, with this new volume presenting interesting chapters written by an international board of authors.



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SERIALS Physics & Astronomy

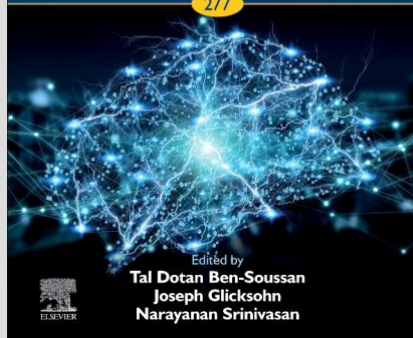
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PROGRESS IN BRAIN RESEARCH

Neurophysiology of Silence  
Part A: Empirical Studies

277



# Neurophysiology of Silence Part A: Empirical Studies, Vol 277

Edited by : **Tal Dotan Ben-Soussan**, Research Institute for Neuroscience, Education and Didactics (RINED), Assisi, Italy; **Joseph Glicksohn**, Multidisciplinary Brain Research Center, Bar-Ilan University, Israel and **Narayanan Srinivasan**, Department of Cognitive Science, Indian Institute of Technology Kanpur, Kanpur, India

ISBN: 9780323995511

PUB DATE: Jun 01, 2023

LIST PRICE: £199.95 / \$288.00 /

€206.00

DISCOUNT:

FORMAT: Hardback

TRIM: 7.5w x 9.25h

PAGES: c. 350

AUDIENCE: Undergraduates, graduates, academics, and researchers in the field of neurology and brain research

BIC CODES: JMM, PSAN

THEMA CLASSIFICATION:  
THEMAPSAN; THEMAJMM

**Edited by some of the best scientists in the field, this series presents the latest updates in the field of brain research**

A Volume in the *Progress in Brain Research* Series

## KEY FEATURES

- Provides the authority and expertise of leading contributors from an international board of authors
- Presents the latest release in Progress in Brain Research serials
- Updated release includes the latest information on the Neurophysiology of Silence

## DESCRIPTION

*Neurophysiology of Silence, Volume 277 in the Progress in Brain Research* series, highlights new advances in the field, including chapters on Mindfulness, mind wandering and creativity, The cloud of unknowing: Cognitive dedifferentiation in whole-body perceptual deprivation, Embodying abstract concepts: the connection between meditation, empathy and interoception, Measures of music-like experience emergent in a sonic ganzfeld: an example of perceptual structuring on the edge of silence, Doing out of silence: The effects of visual art on verbal creativity, Cessation experiences during meditation, The psychophysiology of covert behavior during goal directed behavior, and much more.



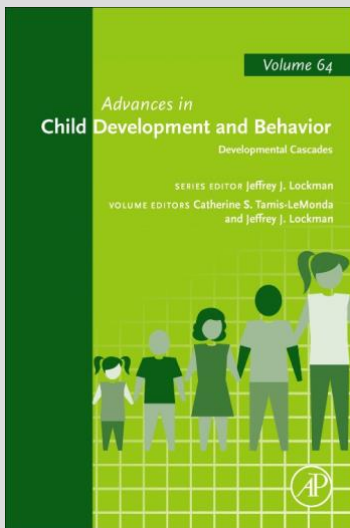
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SERIALS Neuroscience

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# Developmental Cascades, Vol 64

Edited by : **Catherine Tamis-LeMonda**, Professor of Developmental Psychology, New York University, NY, USA and **Jeffrey J. Lockman**, Department of Psychology, Tulane University, New Orleans, LA, USA

**ISBN:** 9780443132391  
**PUB DATE:** Apr 11, 2023  
**LIST PRICE:** £78.99 / \$114.00 / €81.95  
**DISCOUNT:**  
**FORMAT:** Hardback  
**TRIM:** 6w x 9h  
**PAGES:** c. 356  
**AUDIENCE:** Researchers, clinicians, educators, policy makers, and students across disciplines relevant to the science and practice of child and adolescent learning and development  
**BIC CODES:** JMC, JM  
**THEMA CLASSIFICATION:** THEMAJMC; THEMAJM

**World renowned experts provide state-of-the-art coverage across a variety of developmental domains and periods on the core construct of cascades in development**

A Volume in the *Advances in Child Development and Behavior Series*

## KEY FEATURES

- Focus on developmental cascades
- World-renowned across developmental domains and periods
- Coverage of state-of-the-art methods and analytic approaches to investigate developmental cascades

## DESCRIPTION

*Developmental Cascades*, Volume 64 in the *Advances in Child Development and Behavior* series, brings together papers that share a focus on cascading influences across domains and developmental time. The contributors are leading experts in the field of developmental science in areas such as perceptual development, language development, motor development, social development, cognitive development, academic achievement, media use, and children at risk for anxiety and depression.

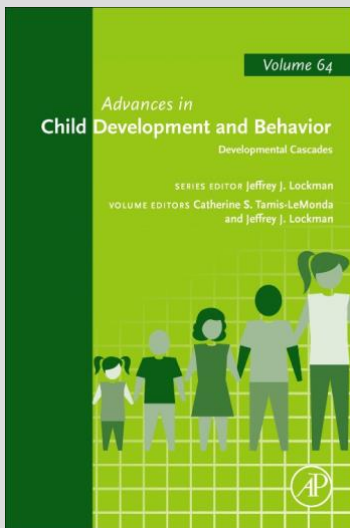
The papers highlight theoretical issues around processes that give rise to cascading effects of experiences in infancy, early childhood, and adolescence using a variety of methods and study designs. Together, the papers showcase the types of methods, designs, and analytic approaches that bring rigor to understanding cascades in development. This volume provides a state-of-the-art collection that will appeal to researchers, clinicians, educators, policy makers, and students across disciplines relevant to the science and practice of child learning and development.



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SERIALS Psychology  
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# Developmental Cascades, Vol 64

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SERIALS Psychology  
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# Environmental Threats to Pollinator Health and Fitness, Vol 64

Edited by : **Jon Harrison**, School of Life Sciences, Arizona State University, Tempe, AZ, USA

**ISBN:** 9780443132490  
**PUB DATE:** Jun 01, 2023  
**LIST PRICE:** £115.00 / \$166.00 / €119.00  
**DISCOUNT:**  
**FORMAT:** Hardback  
**TRIM:** 6w x 9h  
**PAGES:** c. 300  
**AUDIENCE:** Organismal biologists, ecologists, evolutionary biologists, for both researchers and students  
**BIC CODES:** PSVT7, PSVT  
**THEMA CLASSIFICATION:** THEMATGB; THEMATJF; THEMAUYS

**Edited by one of the best scientists in the field, this series presents the latest updates in the field of insect physiology**

A Volume in the *Advances in Insect Physiology* Series

## KEY FEATURES

- Provides the authority and expertise of leading contributors from an international board of authors
- Presents the latest release in the *Advances in Insect Physiology* series
- Updated release includes the latest information on the Environmental Threats to Pollinator Health and Fitness

## DESCRIPTION

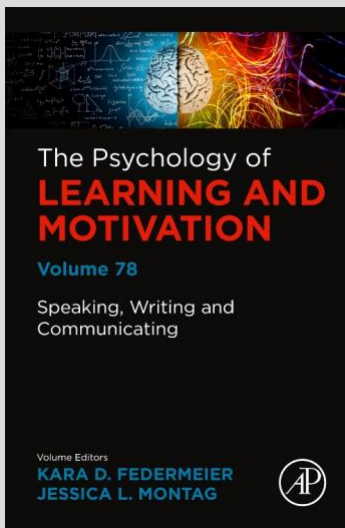
*Environmental Threats to Pollinator Health and Fitness, Volume 64* in the *Advances in Insect Physiology* series, highlights new advances in the field, with this new volume presenting interesting chapters on a variety of topics, including The threat of higher temperatures to pollinating insects, The challenge of balancing fungicide use and pollinator health, Insecticide effects on pollinating insects, Effects of invasive pathogens and parasites on pollinating insects, Heavy metal pollutants: the hidden pervasive threat to honey bees and other pollinators, Honey bee nutritional ecology: from physiology to landscapes, and more.



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SERIALS Agricultural & Biological Sciences  
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# Speaking, Writing and Communicating, Vol 78

Edited by : **Kara D. Federmeier**, Professor, Department of Psychology, University of Illinois Urbana-Champaign, IL, USA and **Jessica L Montag**, Assistant Professor, Department of Psychology, University of Illinois Urbana-Champaign, Champaign, IL, USA

**ISBN:** 9780443134098  
**PUB DATE:** Jun 01, 2023  
**LIST PRICE:** £98.50 / \$142.00 / €102.00  
**DISCOUNT:**  
**FORMAT:** Hardback  
**TRIM:** 6w x 9h  
**PAGES:** c. 300  
**AUDIENCE:** Researchers and students in cognitive psychology  
**BIC CODES:** JMR  
**THEMA CLASSIFICATION:** THEMAJMR

**Essential, authoritative reference on the psychology of learning and motivation for researchers and academics**

A Volume in the *Psychology of Learning and Motivation Series*

## KEY FEATURES

- Presents the latest information in the highly regarded *Psychology of Learning and Motivation* series
- Provides an essential reference for researchers and academics in cognitive science
- Contains information relevant to both applied concerns and basic research

## DESCRIPTION

*Speaking, Writing and Communicating, Volume 78* in *The Psychology of Learning and Motivation* series, provides the latest release in this important resource that features empirical and theoretical contributions in cognitive and experimental psychology.

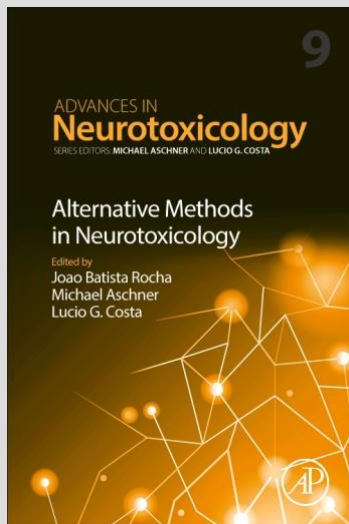


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SERIALS Psychology  
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# Alternative Methods in Neurotoxicology, Vol 9

Edited by : **Joao Batista Rocha**, Full Professor of toxicological biochemistry, Department of Biochemistry and Molecular Biology, Center of Natural and Exact Sciences, Federal University of Rio Grande do Sul, Brazil; **Michael Aschner**, Professor, Department of Molecular Pharmacology, Albert Einstein College of Medicine, NY, USA and **Lucio G. Costa**, Professor of Toxicology, University of Washington, Seattle, WA, USA

**ISBN:** 9780443185823  
**PUB DATE:** Jun 01, 2023  
**LIST PRICE:** £150.00 / \$215.00 / €155.00  
**DISCOUNT:**  
**FORMAT:** Hardback  
**TRIM:** 6w x 9h  
**PAGES:** c. 280  
**AUDIENCE:** neuroscientists, environmental neurotoxicologists, occupational health care professionals, neurodevelopmental scientists and neurobiologists  
**BIC CODES:** PSAN, PSBT  
**THEMA CLASSIFICATION:** THEMAPSAN; THEMAPSB

**Provides recent updates on established and emerging methodologies in basic and applied neurotoxicology**

A Volume in the *Advances in Neurotoxicology* Series

## KEY FEATURES

- Give an up-to-date about the utilization of popular invertebrates (*Drosophila melanogaster* and *Caenorhabditis elegans*) in neurotoxicology
- Brings concise information on emerging invertebrate models in neurotoxicology (from basic to environmental approaches)
- Presents updates on the *in vitro* exploitation of human stem cell in developmental neurotoxicology

## DESCRIPTION

*Alternative Methods in Neurotoxicology, Volume Nine*, the latest release in this series, provides an overview of important *in vitro* and non-vertebrate animal models available to study the neurotoxicity of a range of toxicants of occupational and environmental relevance. Chapters in this new release include Evaluation of mitochondrial function in neurotoxicology using alternative models, Planarians as a model to study neurotoxic agents, Role of *Drosophila melanogaster* in neurotoxicology studies: Responses to different harmful substances, Neurotoxicology of metals and metallic nanoparticles in *Caenorhabditis elegans*, Neurotoxicology of environmental toxicants using *Caenorhabditis elegans* as a model, *Nauphoeta cinerea* as an emerging model in neurotoxicology, and more.

Other chapters cover Human Neural Stem Cells in Developmental Neurotoxicology: Current Scenario and Future Prospects, Use of *Drosophila melanogaster* for advances in developmental neurotoxicology studies, 3D neurospheres and neurotoxicity of organophosphorus and TCE, Genetic factors in methylmercury-induced neurotoxicity: what we have learned from *Caenorhabditis elegans* models, and more.



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COVER IMAGE  
FORTHCOMING

# Polish Quantum Chemistry from Kolos to Now, Vol 87

Edited by : **Monika Musiał**, University of Silesia in Katowice, Poland and **Ireneusz Grabowski**,  
Professor at Nicolaus Copernicus University in Toruń, Poland

**ISBN:** 9780443185946  
**PUB DATE:** Jun 01, 2023  
**LIST PRICE:** £169.00 / \$245.00 /  
€175.00

**DISCOUNT:**

**FORMAT:** Hardback

**TRIM:** 6w x 9h

**PAGES:** c. 300

**AUDIENCE:** World of quantum  
chemistry, quantum physicists, Ph.D.  
students in the theoretical chemistry

**BIC CODES:** PN, PHM, PHVN, PNR

**THEMA CLASSIFICATION:**

THEMAPNR; THEMAPHU

**Helps readers become familiar with attractive fields of quantum chemistry, including nanotubes, quantum computing, high-accuracy relativistic methods, and others**

A Volume in the *Advances in Quantum Chemistry Series*

## KEY FEATURES

- Updates on the latest developments and performance of SAPT
- Presents key theory and applications of high precision calculations for few electron systems
- Includes discussions on the development and applications of the DFT approach

## DESCRIPTION

*Polish Quantum Chemistry from Kolos to Now, Volume 87* provides a survey of contributions coauthored by Polish scientists working in Poland, and in European and American Universities. Sections in this release include Review: From the Kolos-Wolniewicz calculations to the quantum-electrodynamic treatment of the hydrogen molecule: competition between theory and experiment, Review: How to make symmetry-adapted perturbation theory more accurate, Review: Advanced models of coupled cluster theory for the ground, excited and ionized states, Can orbital basis sets compete with explicitly correlated ones for few-electron systems?, Converging high-level equation-of-motion coupled-cluster energetics with the help of Monte Carlo and selected configuration interaction, and more.

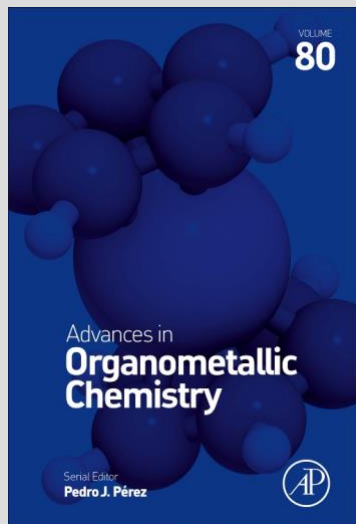
Additional chapters cover Coupled cluster downfolding techniques: a review of existing applications in classical and quantum computing for chemical systems, Exploring the attosecond laser-driven electron dynamics in the hydrogen molecule with different real-time time-dependent configuration interaction approaches, Molecular systems in spatial confinement: variation of linear and nonlinear electrical response of molecules in the bond dissociation processes, and much more.



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**SERIALS** Chemistry & Chemical Engineering  
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# Advances in Organometallic Chemistry, Vol 80

Edited by : **Pedro J. Pérez**, Professor in Inorganic Chemistry, Homogeneous Catalysis Laboratory, Center for Research in Sustainable Chemistry, Universidad de Huelva, Huelva, Spain

**ISBN:** 9780443188909  
**PUB DATE:** Jun 01, 2023  
**LIST PRICE:** £155.00 / \$222.00 / €159.00  
**DISCOUNT:**  
**FORMAT:** Hardback  
**TRIM:** 6w x 9h  
**PAGES:** c. 180  
**AUDIENCE:** Researchers in high performance computer areas, hardware manufacturers, educational programs in physics and scientific computation and in computer science  
**BIC CODES:** PN, PNN, PNK  
**THEMA CLASSIFICATION:** THEMARN; THEMARNK; THEMARN

**Publishes cutting-edge reviews in the field of organometallic chemistry, covering topics in organometallic synthesis, reactions, mechanisms, homogeneous catalysis, and more**

A Volume in the *Advances in Organometallic Chemistry* Series

## KEY FEATURES

- Contains contributions from leading authorities in the field of organometallic chemistry
- Covers topics in organometallic synthesis, reactions, mechanisms, homogeneous catalysis, and more
- Informs and updates readers on the latest developments in the field
- Carefully edited to provide easy-to-read material

## DESCRIPTION

*Advances in Organometallic Chemistry, Volume 80*, the latest release in this longstanding serial, is known for its comprehensive coverage of topics in organometallic synthesis, reactions, mechanisms, homogeneous catalysis, and more. It is ideal for a wide range of researchers involved in organometallic chemistry, with this updated release including chapters on Organometallic-like reactivity of group 10 metal-heteroatom sigma bonds, Organometallic interactions between metal nanoparticles and carbon-based molecules: a surface reactivity rationale, Group VI Allenylidene Complexes, and more.



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COVER IMAGE  
FORTHCOMING

# Mitochondria and Bacterial Pathogens - Part B, Vol 377

Edited by : **Lorenzo Galluzzi**, Assistant Professor of Cell Biology in Radiation Oncology, Department of Radiation Oncology, Weill Cornell Medical College, NY, USA and **Saverio Marchi**, Dept. of Clinical and Molecular Sciences, Marche Polytechnic University, Ancona, Italy

**ISBN:** 9780443191237  
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**LIST PRICE:** £165.00 / \$239.00 / €171.00

**DISCOUNT:**

**FORMAT:** Hardback

**TRIM:** 6w x 9h

**PAGES:** c. 260

**AUDIENCE:** Researchers interested in mitochondrial dynamics and bacterial infections

**BIC CODES:** PSD, PSC, PSF

**THEMA CLASSIFICATION:**

THEMAPSD; THEMPSF;  
THEMAPSC

**Presents the latest information on the control of host mitochondria by bacterial pathogens**

A Volume in the *International Review of Cell and Molecular Biology Series*

## KEY FEATURES

- Provides a collection of articles reporting on the role of mitochondria during bacterial infection
- Covers Mitochondria, the evolutionary successors of an ancient endosymbiotic prokaryote, occupy a central position in the biology of modern eukaryotic cells
- Includes content on numerous pathogenic bacteria and how they have evolved strategies to subvert the mitochondrial functions of host cells in support of proliferation and dissemination

## DESCRIPTION

*Mitochondria and Bacterial Pathogens, Part B, Volume 375* discusses different pathogenic mechanisms that converge on the ability of bacteria to control the mitochondrial compartment of host cells. Chapters in this new release include Interaction between host cell mitochondria and *Coxiella Burnetii*, Control of mitochondrial functions by *Pseudomonas aeruginosa* in cystic fibrosis, Mitochondrial and bacterial ATP synthase: Structural similarities and divergences to exploit in the battle against *M. tuberculosis*, Role of mitochondria in the enteropathogenic *Escherichia coli* disease, Mitochondria dynamics and antibiotic resistance, and more.



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SERIALS Biochemistry, Genetics & Molecular Biology  
<https://virtuale.elsevier.com>, [www.elsevier.com](http://www.elsevier.com)



# Advances in Agronomy, Vol 180

Edited by : **Donald L. Sparks**, Director, Delaware Environmental Institute, University of Delaware, Newark, DE, USA

**ISBN:** 9780443192647  
**PUB DATE:** Jun 01, 2023  
**LIST PRICE:** £135.00 / \$193.00 / €138.00

**DISCOUNT:**

**FORMAT:** Hardback

**TRIM:** 6w x 9h

**PAGES:** c. 284

**AUDIENCE:** Scientists and practitioners in academe, government, and industry and students in an array of fields including crop and soil sciences, agronomy, plant biology, and environmental sciences

**BIC CODES:** TVK

**THEMA CLASSIFICATION:**

THEMATVK

**Highly cited serial review that includes cutting-edge information on the crop and soil sciences and the latest agronomy research**

A Volume in the *Advances in Agronomy* Series

## KEY FEATURES

- Includes numerous, timely, state-of-the-art reviews on the latest advancements in agronomy
- Features distinguished, well recognized authors from around the world
- Builds upon this venerable and iconic review series
- Covers the extensive variety and breadth of subject matter in the crop and soil sciences

## DESCRIPTION

*Advances in Agronomy, Volume 180*, the latest release in this leading reference on agronomy, contains a variety of updates and highlights new advances in the field. Chapters in this new release include The Socio-Economic Impact of Fungicide Resistance in West Australia's Wheatbelt, Microbial Inoculant Carriers: Soil Health Improvement and Moisture Retention in Sustainable Agriculture, Response Network of Plant-Soil-Rhizosphere Environment to Drought Stress and their Regulatory Measures, and Agricultural Residues Management: Life Cycle Assessment Implications for Sustainable Agricultural Practices and Reduction of Greenhouse Gases Emissions, An Analysis of Earth Temperature and Related Series in Air and Soil.



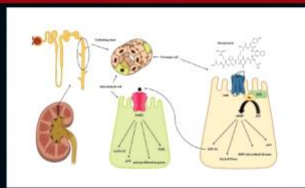
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SERIALS Agricultural & Biological Sciences  
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Advances in  
CLINICAL CHEMISTRY  
VOLUME 114



Edited by  
Gregory S. Makowski



# Advances in Clinical Chemistry, Vol 114

Edited by : **Gregory S. Makowski**, Vice President and Chief Scientific Officer, Clinical Laboratory Partners, Newington, CT, USA

**ISBN:** 9780443192883  
**PUB DATE:** Jun 01, 2023  
**LIST PRICE:** £142.00 / \$205.00 / €147.00

**DISCOUNT:**

**FORMAT:** Hardback

**TRIM:** 6w x 9h

**PAGES:** c. 222

**AUDIENCE:** Clinical Laboratory Professionals, Physicians and Research Scientists

**BIC CODES:** PNN, PSB

**THEMA CLASSIFICATION:**

THEMAPSB; THEMAPPN

**Publishes cutting-edge reviews in the field of clinical chemistry that include the expertise of international contributors**

A Volume in the *Advances in Clinical Chemistry* Series

## KEY FEATURES

- Provides the most up-to-date technologies in clinical chemistry and clinical laboratory science
- Authored by world-renowned clinical laboratory scientists, physicians and research scientists
- Presents the international benchmark for novel analytical approaches in the clinical laboratory

## DESCRIPTION

*Advances in Clinical Chemistry, Volume 114*, the latest installment in this internationally acclaimed series, contains chapters authored by world-renowned clinical laboratory scientists, physicians and research scientists. New sections in the updated release include Growth differentiation factor 15 (GDF-15) in kidney diseases, Alkaptonuria - past, present and future, Alcohol Consumption and Nutritional Biomarkers in Early-Stage Alcohol-Associated Liver Disease, Advances in Liquid Biopsy-Based Markers in NSCLC, D-dimer testing: a narrative review, Evolving Markers in Amyotrophic Lateral Sclerosis, and more.



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**SERIALS** Chemistry & Chemical Engineering  
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Advances in  
Food and Nutrition  
Research

Volume  
104

Volume Editor  
Fidel Toldrá



# Advances in Food and Nutrition Research, Vol 104

Edited by : **Fidel Toldrá**, Research Professor, Instituto de Agroquímica y Tecnología de Alimentos (CSIC), Spanish National Research Council, Paterna (Valencia), Spain

**ISBN:** 9780443193026  
**PUB DATE:** Jun 01, 2023  
**LIST PRICE:** £126.00 / \$182.00 / €130.00

**DISCOUNT:**

**FORMAT:** Hardback

**TRIM:** 6w x 9h

**PAGES:** c. 220

**AUDIENCE:** Scientists involved in R&D related with food science and nutrition but also with food quality and safety

**BIC CODES:** TDCT

**THEMA CLASSIFICATION:**  
THEMATDCT

**Provides the latest advances on emerging bioactive compounds with putative health benefits and on recent developments in 3D printing, viruses in foods, and low energy food processing**

A Volume in the *Advances in Food and Nutrition Research Series*

## KEY FEATURES

- Contains contributions that have been carefully selected based on their vast experience and expertise on the subject
- Includes updated, in-depth and critical discussions of available information, giving the reader a unique opportunity to learn
- Encompasses a broad view of the topics at hand

## DESCRIPTION

*Advances in Food and Nutrition Research, Volume 104* provides the latest advances on emerging bioactive compounds with putative health benefits and their controlled release and application in foods and nutraceuticals, as well as up-to-date information on food technologies, including 3D printing, safety of raw materials, and viruses in foods. Chapters in this new release cover Development and Application of Lipidomics for Food Research, Multi-omics fingerprints for food geographical origin identification and authentication, and Mass Spectrometry-based Techniques for Identification of Compounds in Milk and Meat Matrix, Micro- and Nanoencapsulation of Natural Phytochemicals: Challenges and Recent Perspectives for the Food and Nutraceuticals Industry Applications.

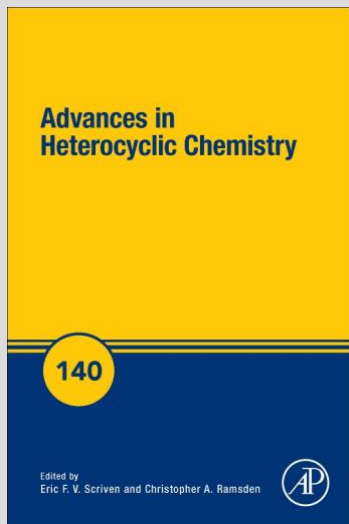
Additional sections delve into the Effect of type and interfacial modification of emulsions on the protection and delivery of nutraceuticals, Nutricosmetics: a new frontier in bioactive peptides' research towards skin aging, In vitro digestion models in the design of safe and nutritious foods, and Informing consumers optimally about their food: issues with and potential solutions for different types of information, their sources and consumers' trust.



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SERIALS Agricultural & Biological Sciences  
<https://virtuale.elsevier.com>, [www.elsevier.com](http://www.elsevier.com)



# Advances in Heterocyclic Chemistry, Vol 140

Edited by : **Eric F.V. Scriven**, Publishing Editor of Arkivoc, Department of Chemistry, University of Florida, Gainesville, USA and **Christopher A. Ramsden**, Professor of Organic Chemistry, Keele University, Staffordshire, UK

**ISBN:** 9780443193163  
**PUB DATE:** Mar 27, 2023  
**LIST PRICE:** £169.00 / \$245.00 / €175.00  
**DISCOUNT:**  
**FORMAT:** Hardback  
**TRIM:** 6w x 9h  
**PAGES:** c. 316  
**AUDIENCE:** Graduate students and research workers in academic and industrial laboratories, organic chemists, polymer chemists and biological scientists  
**BIC CODES:** PNN, PN  
**THEMA CLASSIFICATION:** THEMARN; THEMARN

**Provides the latest comprehensive reviews written by established, world-renowned authorities in heterocyclic chemistry**

A Volume in the *Advances in Heterocyclic Chemistry* Series

## KEY FEATURES

- Considered the definitive serial in the field of heterocyclic chemistry
- Serves as the go-to reference for organic chemists, polymer chemists and many biological scientists
- Provides the latest comprehensive reviews written by established authorities in the field
- Combines descriptive synthetic chemistry and mechanistic insights to enhance understanding on how chemistry drives the preparation and useful properties of heterocyclic compounds

## DESCRIPTION

*Advances in Heterocyclic Chemistry, Volume 140* is the latest release in this definitive series in the field of heterocyclic chemistry, one of great importance to organic chemists, polymer chemists, and many biological scientists. Written by established authorities in the field from around the world, this comprehensive review combines descriptive synthetic chemistry and mechanistic insight to yield an understanding of how chemistry drives the preparation and useful properties of heterocyclic compounds. Chapters in this new release include The chemistry of citrazinic acid (2,6-dihydroxyisonicotinic acid), Aza-Diels-Alder Reaction in the Synthesis of Tetrahydroquinoline Structures, and more.

Additional chapters delve into Recent Developments in the Synthesis of 4-, 5-, 6- and 7-Azaindoles, Fluoroheterocycle formation using fluoroalkynes and their synthetic equivalents, Advances in applications of dihydropyridines in organic chemistry, and Recent Developments in the Chemistry of Triphyrins (2.1.1).



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Advances in  
**MOTIVATION SCIENCE**  
VOLUME 10



# Advances in Motivation Science, Vol 10

Edited by : **Andrew J. Elliot**, Professor of Psychology, University of Rochester, NY, USA

**ISBN:** 9780443193385  
**PUB DATE:** Jun 01, 2023  
**LIST PRICE:** £98.50 / \$142.00 /  
€102.00

**DISCOUNT:**

**FORMAT:** Hardback

**TRIM:** 6w x 9h

**PAGES:** c. 300

**AUDIENCE:** Researchers,  
instructors, and students (graduate  
and advanced undergraduate) in the  
myriad disciplines in which  
motivational issues are relevant

**BIC CODES:** JML, JM, JMH

**THEMA CLASSIFICATION:**

THEMAJML; THEMAJM; THEMAJMH

**Influential work on motivation science and research, bringing together experts  
with cutting-edge theoretical and empirical contributions in psychology**

A Volume in the *Advances in Motivation Science* Series

## KEY FEATURES

- Presents new research in the field of motivation science and research
- Provides a timely overview of important research programs conducted by the most respected scholars in psychology
- Gives special attention to directions for future research

## DESCRIPTION

*Advances in Motivation Science, Volume 10*, the latest release in the Motivation Science series, contains interesting articles that cover topics such as Dissonance Motivation from an Action-Based Perspective: An Updated Review, The Bright, Dark, and Dim Light Colors of Motivation: Advances in Conceptualization and Measurement from a Self-Determination Theory Perspective, Future Self to Current Action: Integrated Review and Identity-Based Motivation Synthesis, Using Free Will Wisely: The Importance of Self-Concordant Goal Pursuit, Workplace Engagement and Motivation, and Mental Calibration: Fine Tuning the Dynamics of Mind and Action.



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SERIALS Psychology

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COVER IMAGE  
FORTHCOMING

# Functional Microbiomes II, Vol 68

Edited by : **David Bohan** , Agricultural Ecologist, UMR 1347 Agroecologie, Dijon, France and  
**Alex Dumbrell**, University of Essex, UK

**ISBN:** 9780443193781

**PUB DATE:** Jun 01, 2023

**LIST PRICE:** £151.00 / \$219.00 /  
€157.00

**DISCOUNT:**

**FORMAT:** Hardback

**TRIM:** 6w x 9h

**PAGES:** c. 300

**AUDIENCE:** Environmentalists,  
ecologists at undergraduate through to  
research level, social scientists and  
economists

**BIC CODES:** RN, RNC

**THEMA CLASSIFICATION:**  
THEMATQ; THEMPSAF

**Edited by some of the best scientists in the field, this series presents the latest updates in the field of ecological research**

A Volume in the *Advances in Ecological Research* Series

## KEY FEATURES

- Provides the authority and expertise of leading contributors from an international board of authors
- Presents the latest release in *Advances in Ecological Research* series
- Includes the latest information on *Managing Conflict in Agricultural, Urban and Tropical Ecosystems*

## DESCRIPTION

*Functional Microbiomes II, Volume 68* in the *Advances in Ecological Research* series, highlights new advances in the field, with this new volume presenting interesting chapters written by an international board of authors. Chapters include Investigating the core microbiome concept: *Daphnia* as a case study and Soil Microbiome

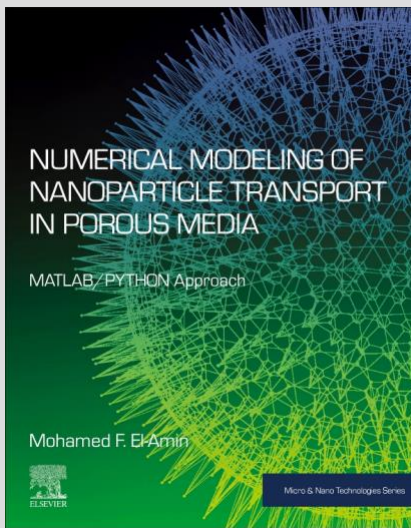


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SERIALS Agricultural & Biological Sciences  
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# Numerical Modeling of Nanoparticle Transport in Porous Media

MATLAB/PYTHON Approach

Mohamed F. El-Amin, Professor of Mathematics, Effat University, Jeddah, Saudi Arabia

**ISBN:** 9780323905114  
**PUB DATE:** Jun 01, 2023  
**LIST PRICE:** £155.00 / \$200.00 / €175.00  
**DISCOUNT:**  
**FORMAT:** Paperback  
**TRIM:** 7.5w x 9.25h  
**PAGES:** c. 296  
**ILLUSTRATIONS:** 35 illustrations (35 in full color)  
**AUDIENCE:** Materials Scientists, Engineers  
**BIC CODES:** TGM  
**THEMA CLASSIFICATION:** THEMATGM

**Focuses on modeling and numerical aspects of nanoparticle transport within single- and two-phase flow in porous media**

A Volume in the *Micro and Nano Technologies Series*

## KEY FEATURES

- Explains the major simulation models and numerical techniques used for predicting nanoscale transport phenomena
- Provides MATLAB codes for most of the numerical simulation and Python codes for machine learning calculations
- Uses examples and results to illustrate each model type to the reader
- Assesses major application areas for each model type

## DESCRIPTION

*Numerical Modeling of Nanoparticle Transport in Porous Media: MATLAB/PYTHON Approach* focuses on modeling and numerical aspects of nanoparticle transport within single- and two-phase flow in porous media. The book discusses modeling development, dimensional analysis, numerical solutions and convergence analysis. Actual types of porous media have been considered, including heterogeneous, fractured, and anisotropic. Moreover, different interactions with nanoparticles are studied, such as magnetic nanoparticles, ferrofluids and polymers. Finally, several machine learning techniques are implemented to predict nanoparticle transport in porous media. This book provides a complete full reference in mathematical modeling and numerical aspects of nanoparticle transport in porous media.

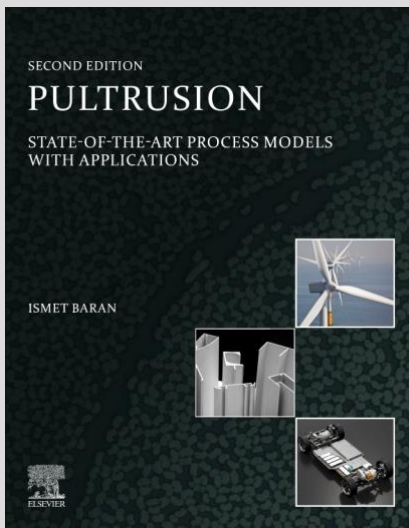
It is an important reference source for engineers, mathematicians, and materials scientists who are looking to increase their understanding of modeling, simulation, and analysis at the nanoscale.



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ENGINEERING Nanotechnology  
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# Pultrusion, 2e

## State-of-the-Art Process Models with Applications

Ismet Baran, Assistant Professor, Section of Production Technology, Faculty of Engineering Technology, University of Twente, The Netherlands

**ISBN:** 9780323916134  
**PUB DATE:** Jun 01, 2023  
**LIST PRICE:** £155.00 / \$200.00 / €175.00

**DISCOUNT:**

**FORMAT:** Paperback

**TRIM:** 7.5w x 9.25h

**PAGES:** c. 230

**ILLUSTRATIONS:** 120 illustrations (20 in full color)

**AUDIENCE:** Engineers, manufacturers, designers, and practitioners working in pultrusion, process optimization, modelling and simulation, fiber-reinforced polymer composites, composite manufacturing, and plastics processing, Researchers, scientists and advanced students in fiber-reinforced polymer composites, polymer engineering, composite manufacturing, materials processing, and mechanical engineering

**BIC CODES:** TBJ, UY, TGM, TDCP, TGB, TB

**THEMA CLASSIFICATION:**

THEMATDCP; THEMAUY;  
THEMATOM; THEMADRMW

**A systematic approach to pultrusion process optimization that is supported by process modeling, simulation and case studies**

### KEY FEATURES

- Provides a detailed summary and description of the practical and scientific challenges in pultrusion processes, and presents methods to overcome the challenges
- Offers a comprehensive analysis of the thermokinetics, residual stresses, resistive forces, and fiber impregnation during pultrusion
- Explains numerical process simulation, opening the door to reliable design and process optimization for pultrusion

### DESCRIPTION

*Pultrusion: State-of-the-Art Process Models with Applications, Second Edition* is a detailed guide to pultrusion, providing methodical coverage of process models and computation simulation, governing principles and science, and key challenges to help readers enable process optimization and scale-up. This new edition has been revised and expanded to include the latest advances, state-of-the-art process models, and governing principles. The main challenges in pultrusion, such as the process induced residual stresses, shape distortions, thermal history, species conversion, phase changes, impregnation of the reinforcements and pulling force are described, with related examples are provided.

Moreover, strategies for having a reliable and optimized process using probabilistic approaches and optimization algorithms are summarized. Another focus of this book is on the thermo-chemical and mechanical analyses of the pultrusion process for industrial profiles.

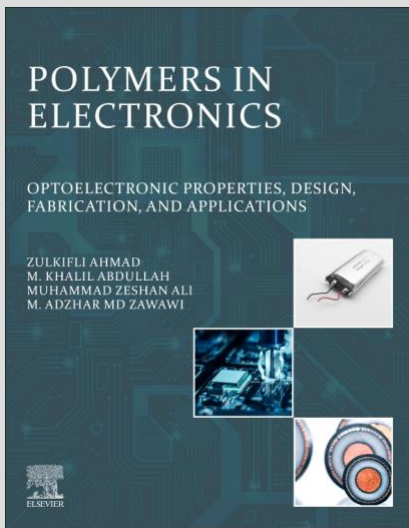


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# Polymers in Electronics

## Optoelectronic Properties, Design, Fabrication, and Applications

**Zulkifli Ahmad**, School of Material and Mineral Resources, Universiti Sains Malaysia, Malaysia; **M. Khalil Abdullah**, School of Material and Mineral Resources, Universiti Sains Malaysia (USM), Malaysia; **Muhammad Zeshan Ali**, School of Material and Mineral Resources, Universiti Sains Malaysia, Malaysia and **Mohamad Adzhar Md Zawawi**, School of Electrical and Electronic Engineering, Universiti Sains Malaysia (USM), Malaysia

**ISBN:** 9780323983822  
**PUB DATE:** Jun 01, 2023  
**LIST PRICE:** £165.00 / \$210.00 /  
€185.00

**DISCOUNT:**

**FORMAT:** Paperback

**TRIM:** 7.5w x 9.25h

**PAGES:** c. 334

**ILLUSTRATIONS:** 150 illustrations  
(25 in full color)

**AUDIENCE:** Advanced students and researchers in opto-electronics or conducting polymers, and across polymer science, chemistry, materials engineering, electronics, Engineers, industrial scientists, and R&D professionals interested in polymeric materials for electronic applications

**BIC CODES:** TJFD, TDCP, PNR, TGM

**THEMA CLASSIFICATION:**

THEMATJF; THEMATDCP;  
THEMATGM; THEMATGMP;  
THEMATDPF

**An essential guide to polymers in electronics, covering principles, design, materials selection, properties, fabrication, and cutting-edge applications**

**KEY FEATURES**

- Offers introductory coverage of polymeric materials for electronics, including principles, design, properties, fabrication and applications
- Focuses on key issues such as materials selection, structure-property relationships and challenges in application
- Explores advanced applications of polymers in photovoltaics, transistors, sensors, light-emitting diodes and stretchable electronics

**DESCRIPTION**

*Polymers in Electronics: Optoelectronic Properties, Design, Fabrication, and Applications* brings together the fundamentals and latest advances in polymeric materials for electronic device applications, supporting researchers, scientists and advanced students, and approaching the topic from a range of disciplines. The book begins by introducing polymeric materials, their dielectric, optical, and thermal properties, and the essential principles and techniques for polymers as applied to electronics. This is followed by detailed coverage of the key steps in the preparation of polymeric materials for opto-electronic devices, including fabrication methods, materials design, rheology, encapsulation, and conductive polymer mechanisms.

The final part of the book focuses on the latest developments in advanced devices, covering the areas of photovoltaics, transistors, light-emitting diodes, and stretchable electronics. In addition, it explains mechanisms, design, fabrication techniques, and end applications. This is a highly valuable resource for researchers, advanced students, engineers and R&D professionals from a range of disciplines.

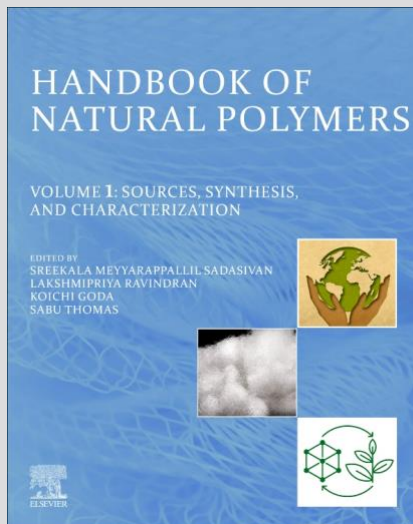


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# Handbook of Natural Polymers, Volume 1

## Sources, Synthesis, and Characterization

Edited by : **M.S. Sreekala**, Associate Professor, School of Chemical Sciences, Mahatma Gandhi University, Kottayam, Kerala, India, and Joint Director, International and Inter-University Centre for Nanoscience and Nanotechnology and School of Nanoscience and Technology, Mahatma Gandhi University, Kottayam, Kerala, India; **Lakshmi Priya Ravindran**, Assistant Professor, School of Energy Materials, Mahatma Gandhi University, Kottayam, Kerala, India; **Koichi Goda**, Full Professor, Department of Mechanical Engineering, Yamaguchi University, Japan and **Sabu Thomas**, School of Chemical Sciences and International and Inter, University Centre for Nanoscience and Nanotechnology, Mahatma Gandhi University, Kottayam, Kerala, India

**ISBN:** 9780323998536  
**PUB DATE:** Jun 01, 2023  
**LIST PRICE:** £210.00 / \$270.00 /  
€235.00

### DISCOUNT:

**FORMAT:** Paperback

**TRIM:** 7.5w x 9.25h

**PAGES:** c. 680

**ILLUSTRATIONS:** 250 illustrations  
(30 in full color)

**AUDIENCE:** Researchers, scientists, and advanced students interested in preparation and application of natural polymers, from a range of disciplines including polymer chemistry, polymer physics, surface science, nanotechnology, composite science, materials science, biomedical engineering, environmental science, chemical engineering, and mechanical engineering. Engineers and R&D with an interest in polymers from natural sources, across a range of industries (biomedical, pharmaceutical, packaging, environmental, consumer products, automotive, etc.)

**DIG CODES:** TFCB, TOM, DUEO

**A complete guide to sources, extraction, synthesis and characterization of natural polymers, highlighting the latest techniques and application potential**

### KEY FEATURES

- Provides systematic coverage of the latest methods for the extraction, synthesis, and characterization of natural polymers.
- Includes an extensive range of natural polymer sources, including established biopolymers and emerging materials.
- Explores preparation of natural polymers and their composites, blends, IPNs, gels, and nanoparticles.

### DESCRIPTION

The *Handbook of Natural Polymers: Sources, Synthesis, and Characterization* is a comprehensive resource covering extraction and processing methods for polymers from natural sources, with an emphasis on the latest advances.

The book begins by introducing the current state-of-the-art, challenges, and opportunities in natural polymers. This is followed by detailed coverage of extraction, synthesis, and characterization methods, organized by polymer type. Along with broad chapters discussing approaches to polysaccharide-based polymers, dedicated chapters offer in-depth information on nanocellulose, chitin and chitosan, gluten, alginate, natural rubber, gelatin, pectin, lignin, keratin, gutta percha, shellac, silk, wood, casein, albumin, collagen, hemicellulose, polyhydroxyalkanoates, zein, soya protein, and gum. The final chapters explore other key themes, including filler interactions and properties in natural polymer-based composites, biocompatibility and cytotoxicity, biodegradability, life cycle, and recycling. Throughout the book, information is supported by data, and guidance is offered regarding potential scale-up and industry factors.

As part of a 3-volume handbook offering comprehensive coverage of natural polymers, this book will be of interest to all those looking to gain a broad knowledge of natural polymers, including academic researchers, scientists, advanced students, engineers, and R&D professionals from a range of disciplines and industries.



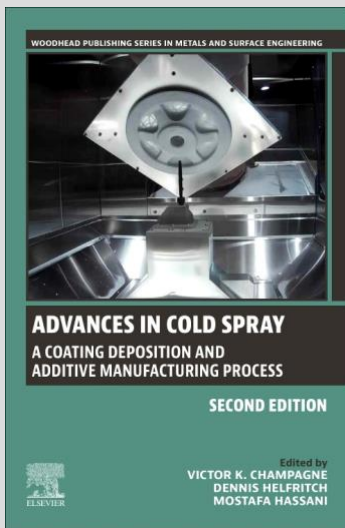
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# Advances in Cold Spray, 2e

## A Coating Deposition and Additive Manufacturing Process

Edited by : **Victor K. Champagne**, US Army Research Laboratory, USA; **Dennis Helfritsch**, Mark E. Schlesinger, P.E., FASM; Professor of Metallurgical Engineering; Department of Materials Science and Engineering; Missouri University of Science and Technology, USA and **Mostafa Hassani**, Assistant Professor, Sibley School of Mechanical and Aerospace Engineering, Department of Materials Science and Engineering, Cornell University, USA

ISBN: 9780081030158

PREVIOUS ISBN: 9781845691813

PUB DATE: Jun 01, 2023

LIST PRICE: £195.00 / \$250.00 / €220.00

DISCOUNT:

FORMAT: Paperback

TRIM: 6w x 9h

PAGES: c. 462

ILLUSTRATIONS: 250 illustrations (50 in full color)

AUDIENCE: KEYWORDS: Cold spray, additive manufacturing, surface coating, corrosion resistance, powder feedstock

BIC CODES: TGM, TDP

THEMA CLASSIFICATION: THEMATD

### A summary of the state-of-the-art of cold spray techniques and uses

A Volume in the *Woodhead Publishing Series in Metals and Surface Engineering Series*

### KEY FEATURES

- Provides information on the fundamentals of cold spray as an additive manufacturing process
- Presents the significant increase in properties of cold spray materials achieved to date
- Discusses recent advancements in cold spray powders, equipment, automation, modeling and simulation and the expansion of applications

### DESCRIPTION

*Advances in Cold Spray: A Coating Deposition and Additive Manufacturing Process, Second Edition* reviews the fundamental processes and recent advances made in the field of cold spray. This fully updated edition now includes a special chapter on Cold Spray Additive Manufacturing, along with advancements in impact modeling and simulation that allow a better understanding of the cold spray bonding mechanisms, powder synthesis and predictive modeling to improve the engineering of cold spray powders. In addition, materials properties data is a backbone of this book because the advanced cold spray materials have proven to be comparable to wrought and enable cold spray to be incorporated into structural applications for near-net shape parts production as well as for repair.

Finally, numerous modern applications of cold spray representative of the Electronics, Medical, Petrochemical, Nuclear, Aerospace, Automotive, and Additive Manufacturing industries are presented.



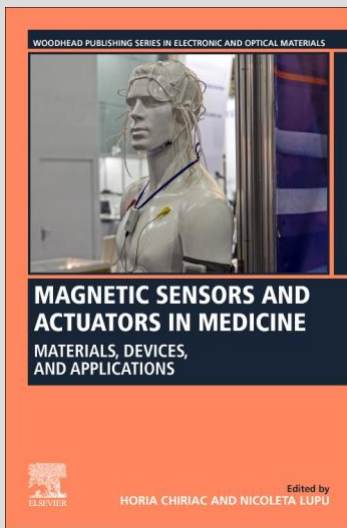
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ENGINEERING Materials

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# Magnetic Sensors and Actuators in Medicine

## Materials, Devices, and Applications

Edited by : **Horia Chiriac**, Senior Scientist and group leader at NIRDTP Iasi. and **Nicoleta Lupu**, Director of the NIRDTP Iasi, Romania.

**ISBN:** 9780128232941  
**PUB DATE:** Jun 01, 2023  
**LIST PRICE:** £195.00 / \$250.00 / €220.00  
**DISCOUNT:**  
**FORMAT:** Paperback  
**TRIM:** 6w x 9h  
**PAGES:** c. 414  
**ILLUSTRATIONS:** 200 illustrations (100 in full color)  
**AUDIENCE:** Materials Scientists and Engineers, Biomedical Engineers, Chemists  
**BIC CODES:** TGM, PHK  
**THEMA CLASSIFICATION:** THEMAPHK; THEMATGM

**Provides a key review of the recent achievements of magnetic materials to enable sensors and actuators for medical applications**

A Volume in the *Woodhead Publishing Series in Electronic and Optical Materials* Series

### KEY FEATURES

- Reviews a wide range of magnetic sensors and actuators employed in medical applications such as diagnosis, surgery and therapy
- Describes magnetic material-based sensors and actuators, including their operation principles, properties and optimization for specific applications
- Includes examples of recent advances, such as emerging magnetic materials, magnetic nanowires, nanorods and/or nanotubes

### DESCRIPTION

*Magnetic Sensors and Actuators in Medicine: Materials, Devices, and Applications* provides an overview of the various sensors and actuators, their characteristics, role in the development of medical applications, the medical problems they solve, and future directions. The book brings together recent advances in the physics, chemistry and engineering of magnetic materials related to sensors and actuators that improve their functions in medical applications. The book describes the main applications of magnetic sensors and actuators, starting from the common and emerging magnetic materials, their principles of operation, the medical problems that they are used to address, and the latest achievements in the field.

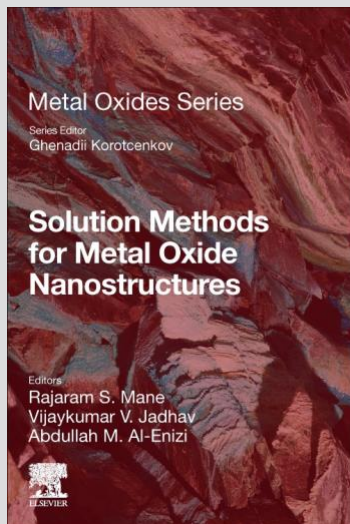


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# Solution Methods for Metal Oxide Nanostructures

Edited by : **Rajaram S. Mane**, Professor, S.R.T.M. University, Nanded, India; Visiting Professor, Pusan National University, Korea; **Vijaykumar Jadhav**, Research Scientist, Guangdong Technion, Israel Institute of Technology, Shantou, China; Assistant Professor, Department of Physics, Shivaji College, Udgir, India and **Abdullah M. Al-Enizi**, Assistant Professor, Department of Chemistry, College of Science, King Saud University, Saudi Arabia

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**DISCOUNT:**  
**FORMAT:** Paperback  
**TRIM:** 6w x 9h  
**PAGES:** c. 500  
**ILLUSTRATIONS:** 160 illustrations (40 in full color)  
**AUDIENCE:** Materials Scientists and Engineers, Chemists  
**BIC CODES:** TDM, TJFD, TGM, TJ  
**THEMA CLASSIFICATION:** THEMATGM; THEMATJF; THEMATDPM

**Introduces relevant wet chemical solution methods for materials synthesis and fabrication of 2D metal oxide materials and metal oxide thin films**

A Volume in the *Metal Oxides* Series

## KEY FEATURES

- Reviews the most relevant wet chemical solution methods for metal oxide nanostructures, including sol-gel, solvothermal, hydrothermal, co-precipitation methods, and more
- Addresses thin film deposition techniques for metal oxide nanostructures, such as spray-pyrolysis, electrodeposition, spin coating and self-assembly
- Discusses the pros and cons of each solution method and its significance and future opportunities

## DESCRIPTION

*Solution Methods for Metal Oxide Nanostructures* reviews solution processes that are used for synthesizing 1D, 2D and 3D metal oxide nanostructures in either thin film or in powder form for various applications. Wet-chemical synthesis methods deal with chemical reactions in the solution phase using precursors at proper experimental conditions. Wet-chemical synthesis routes offer a high degree of controllability and reproducibility for 2D nanomaterial fabrication. Solvothermal synthesis, template synthesis, self-assembly, oriented attachment, hot-injection, and interface-mediated synthesis are the main wet-chemical synthesis routes for 2D nanomaterials. *Solution Methods for Metal Oxide Nanostructures* also addresses the thin film deposition metal oxides nanostructures, which plays a very important role in many areas of chemistry, physics and materials science.

Each chapter includes information on a key solution method and their application in the design of metal oxide nanostructured materials with optimized properties for important applications. The pros and cons of the solution method and their significance and future scope is also discussed in each chapter. Readers are provided with the fundamental understanding of the key concepts of solution synthesis methods for fabricating materials and the information needed to help them select the appropriate method for the desired application.



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# BSIM-Bulk MOSFET Model for IC Design - Digital, Analog, RF and High-Voltage

**Chenming Hu**, Professor Emeritus, University of California, Berkeley, CA, USA; **Harshit Agarwal**, Center Manager and Postdoctoral Researcher, Berkeley Device Modeling Center, Department of Electrical Engineering and Computer Sciences, University of California, Berkeley, USA; **Chetan Gupta**, Principal Engineer, Micron Technologies, India and **Yogesh Singh Chauhan**, Associate Professor, Department of Electrical Engineering, Indian Institute of Technology, Kanpur, India

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**FORMAT:** Paperback  
**TRIM:** 6w x 9h  
**PAGES:** c. 262  
**ILLUSTRATIONS:** Approx. 200 illustrations (200 in full color)  
**AUDIENCE:** Materials Scientists and Engineers; Electrical Engineers  
**BIC CODES:** TJ, TGM, TGX, TJFD  
**THEMA CLASSIFICATION:** THEMATGM; THEMATJF; THEMAKND

**Discusses the standard compact model BSIM-BULK (formerly BSIM6), including mathematical derivations, approximations, numerical techniques and parameter extractions**

A Volume in the *Woodhead Publishing Series in Electronic and Optical Materials Series*

## KEY FEATURES

- Reviews the latest advances in fabrication methods for metal chalcogenide-based biosensors
- Discusses the parameters of biosensor devices to aid in materials selection
- Provides readers with a look at the chemical and physical properties of reactive metals, noble metals, transition metals chalcogenides and their connection to biosensor device performance

## DESCRIPTION

*BSIM-Bulk MOSFET Model for IC Design - Digital, Analog, RF and High-Voltage* provides in-depth knowledge of the internal operation of the model. The authors not only discuss the fundamental core of the model, but also provide details of the recent developments and new real-device effect models. In addition, the book covers the parameter extraction procedures, addressing geometrical scaling, temperatures, and more. There is also a dedicated chapter on extensive quality testing procedures and experimental results. This book discusses every aspect of the model in detail, and hence will be of significant use for the industry and academia.

Those working in the semiconductor industry often run into a variety of problems like model non-convergence or non-physical simulation results. This is largely due to a limited understanding of the internal operations of the model as literature and technical manuals are insufficient. This also creates huge difficulty in developing their own IP models. Similarly, circuit designers and researcher across the globe need to know new features available to them so that the circuits can be more efficiently designed.

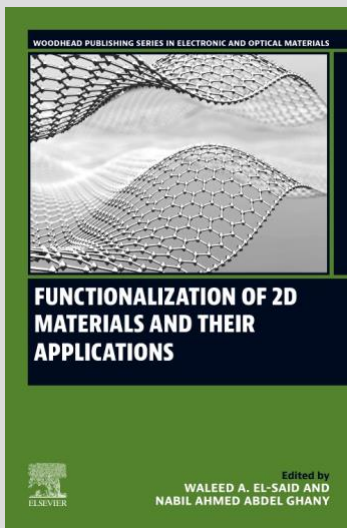


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ENGINEERING Materials

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# Functionalization of 2D Materials and Their Applications

Edited by : **Waleed A. El-Said**, Associate Professor, Chemistry Department, Assiut University, Assiut, Egypt and **Nabil Ahmed Abdel Ghany**, Professor, Physical Chemistry Department, National Research Centre (NRC), Giza, Egypt

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**TRIM:** 6w x 9h  
**PAGES:** c. 400  
**ILLUSTRATIONS:** 140 illustrations (40 in full color)  
**AUDIENCE:** Materials Scientists and Engineers, Physicists, Chemists  
**BIC CODES:** TJ, TGM, TJFD  
**THEMA CLASSIFICATION:** THEMATGM; THEMATJF

**Introduces advances in the synthesis and fabrication of nanopatterned 2D materials and their applications in energy production, conversion and storage, and more**

A Volume in the *Woodhead Publishing Series in Electronic and Optical Materials Series*

## KEY FEATURES

- Reviews the latest advances in the approaches of the fabrication of 2D materials, including nanopatterned, composites and porous 2D materials
- Provides information on the functionalization of 2D materials, with particular attention given to electrical, thermal and optical properties which may make the material useful for a wide range of applications
- Discusses the applications of 2D materials in energy, sensing, environmental remediation and electronics

## DESCRIPTION

*Functionalization of 2D Materials and Their Applications* reviews the synthesis and characterization of nanopatterned 2D materials and how to modify different substrates with these materials. Each chapter emphasizes fabrication, including the fabrication of different morphologies of graphene and transition metal dichalcogenides (TMDCs), the fabrication of different composites and the surface modification of different nanopatterned graphene and TMDCs, and the effects of these nanostructures on the different properties of the modified substrates, such as the electrical, thermal and optical properties, and more.

The applications of graphene and TMDCs in the enhancement of Raman spectroscopy, solar cells, fuel cells, supercapacitors, biosensors, chemical sensors, water treatment, water desalination, perovskite photodetectors, energy storage devices, environmental applications and cell-based chips are also reviewed.

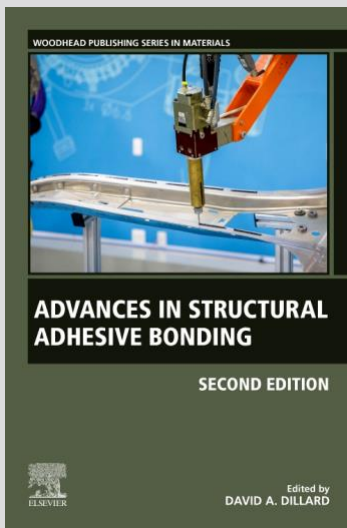


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# Advances in Structural Adhesive Bonding, 2e

Edited by : **David A. Dillard**, Professor, Biomedical Engineering and Mechanics Department, Virginia Polytechnic Institute and State University, Blacksburg, VA, USA

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**PREVIOUS ISBN:** 9781845694357, 9780081014462  
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**FORMAT:** Paperback  
**TRIM:** 6w x 9h  
**PAGES:** c. 880  
**ILLUSTRATIONS:** 250 illustrations (50 in full color)  
**AUDIENCE:** Industry: Adhesive specialists, structural engineers, design engineers, R&D, and scientists working with structural adhesives for advanced industrial applications (e.g. automotive, aerospace, construction, marine, microelectronics). Academia: Researchers, scientists, and advanced students in adhesives, joining technology, materials science, mechanical engineering, and chemical engineering.  
**BIC CODES:** TNC, TGM, PNR, TDCP  
**THEMA CLASSIFICATION:**  
THEMATICO: THEMATICO

**An essential reference for those working on structural adhesive bonding across industry and academia**

A Volume in the *Woodhead Publishing in Materials Series*

## KEY FEATURES

- Provides detailed coverage on the main adhesive groups, including epoxy, acrylic, cyanoacrylate, polyurethane and silicone adhesives
- Includes the latest developments across adherends, pre-treatment methods, joint design and testing, durability and lifecycle related issues
- Addresses environmental challenges, adhesive specification, quality control, and risk mitigation for specific industrial application areas

## DESCRIPTION

*Advances in Structural Adhesive Bonding, Second Edition* reviews developments in adhesive bonding for a range of advanced structural engineering applications. This new edition has been fully revised to include the latest advances in materials, testing and modeling methods, lifecycle considerations, and industrial implementation. Sections review advances in commonly used groups of structural adhesives, covering epoxy, acrylic, anaerobic and cyanoacrylate, polyurethane, and silicone adhesives, along with toughening. Other chapters cover various types of adherends and pre-treatment methods for structural materials, including metals, plastics, composites, wood and joint design and testing, including topics such as fracture mechanics, life prediction techniques, and advanced testing methods.

This is a valuable guide for all those working with structural adhesives, including those in an industrial setting, adhesive specialists, structural engineers, design engineers, R&D professionals, and scientists, as well as academic researchers and advanced students in adhesives, joining technology, materials science and mechanical engineering.



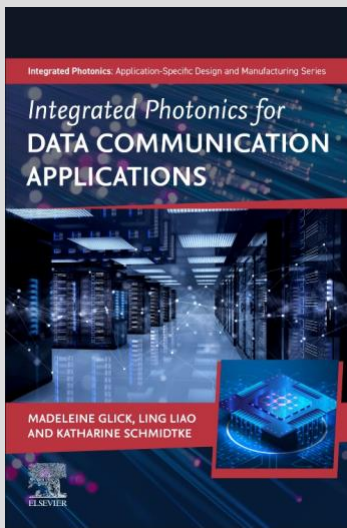
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# Integrated Photonics for Data Communication Applications

Edited by : **Madeleine Glick**, Department of Physics, Ecole Polytechnique Federale de Lausanne (EPFL) Lausanne, Switzerland; **Ling Liao**, Intel Fellow and Chief Architect of Photonic Integration, Intel's Silicon Photonic Product Division, USA and **Katharine Schmidtke**, Director of Sourcing for ASICs and Custom Silicon, Facebook

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**PAGES:** c. 425  
**ILLUSTRATIONS:** 120 illustrations (90 in full color)  
**AUDIENCE:** Materials Scientists and Engineers; Electrical and Optical Engineers  
**BIC CODES:** TTB, TJ, TJK, TGM  
**THEMA CLASSIFICATION:** THEMATGM; THEMATTB; THEMATJK; THEMATJF

## An introduction to the key principles and advances of application-specific design of photonic integrated circuits (PICs)

A Volume in the *Integrated Photonics: Application-Specific Design and Manufacturing Series*

### KEY FEATURES

- Includes contributions from the leading experts and end-users across academia and industry working on the most exciting research directions of integrated photonics for data communications applications
- Provides an overview of data communication specific integrated photonics, starting from fundamental building block devices to photonic integrated circuits and manufacturing tools and processes
- Presents key performance metrics, design principles, performance impact of manufacturing variations and operating conditions, as well as pivotal performance benchmarks

### DESCRIPTION

*Integrated Photonics for Data Communications Applications* reviews the key concepts, design principles, performance metrics and manufacturing processes from advanced photonic devices to integrated photonic circuits. The book presents an overview of the trends and commercial needs of data communication in data centers and high-performance computing, with contributions from end users presenting key performance indicators. In addition, the fundamental building blocks are reviewed, along with the devices (lasers, modulators, photodetectors and passive devices) that are the individual elements that make up the photonic circuits. These chapters include an overview of device structure and design principles and their impact on performance.

Following sections focus on putting these devices together to design and fabricate application-specific photonic integrated circuits to meet performance requirements, along with key areas and challenges critical to the commercial manufacturing of photonic integrated circuits and the supply chains being developed to support innovation and market integration are discussed. This series is led by Dr. Lionel Kimerling Executive at AIM Photonics Academy and Thomas Lord Professor of Materials Science and Engineering at MIT and Dr. Sajan Saini Education Director at AIM Photonics Academy at MIT. Each edited volume features thought-leaders from academia and industry in the four application area fronts (data communications, high-speed wireless, smart sensing, and imaging) and addresses the latest advances.



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# Magnetic Nanoferrites and their Composites

## Environmental and Biomedical Applications

Edited by : **Susheel Kalia**, Associate Professor and Head, Department of Chemistry, Army Cadet College Wing of Indian Military Academy Dehradun, India; **Rohit Jasrotia**, Assistant Professor, School of Physics and Materials Science, Shoolini University of Biotechnology and Management Sciences, Himachal Pradesh, India and **Virender Pratap Singh**, Researcher and Emerging Physicist Materials Research Lab, Department of Physics, Sidharath Govt. Degree College Nadaun, supported by the Department of Higher Education, Government of Himachal Pradesh, India

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**DISCOUNT:**  
**FORMAT:** Paperback  
**TRIM:** 6w x 9h  
**PAGES:** c. 430  
**AUDIENCE:** Academic and industrial researchers, material scientists and engineers working in the development and application of magnetic storage-related materials, Postgraduate students in condensed matter physics and material science and engineering programs  
**BIC CODES:** TDCP, TDCQ  
**THEMA CLASSIFICATION:** THEMATGMP; THEMATDPF; THEMATGM

**Provides a comprehensive review on recent progress in magnetic nanoferrites and their related composite materials**

A Volume in the *Woodhead Publishing Series in Composites Science and Engineering Series*

### KEY FEATURES

- Provides a systematic, comprehensive review on recent progress in magnetic nanoferrites and their related composites
- Presents the latest synthesis techniques required for fabricating magnetic nanoferrites and their composites
- Addresses the latest research towards enhancing the magnetic and photocatalytic degradation characteristics of magnetic nanoferrites and their composites

### DESCRIPTION

*Magnetic Nanoferrites and their Composites: Environmental and Biomedical Applications* addresses recent developments in this important research field. The book covers the latest synthesis and fabrication techniques, properties, characterization and multifunctional biomedical and environmental applications. Chapters provide cutting-edge research while addressing the latest scenarios, recent developments, future aspects, and challenges and opportunities attributed to their excellent properties, including large surface-to-volume ratio, high chemical stability, low eddy losses, moderate values of saturation magnetization and coercivity, large adsorption, non-toxicity, bio-degradable and biocompatibility. This book will be a valuable reference resource for researchers, engineers and technologists working in this important research field.

Magnetic nanoferrites and their composites are now utilized in a broad range of different application fields such as catalysis, biomedicine, magnetic resonance imaging (MRI), tissue targeting, drug delivery, sensors, environmental remediation, data storage, transformers, switching devices, high frequency and microwave devices.



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ENGINEERING Materials

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# Bioenergy Engineering

Fundamentals, Methods, Modelling, and Applications



Edited by  
Krishna Prasad Shadangi, Prakash Kumar Sarangi,  
Kaustubha Mohanty, Irem Deniz and Anjani Ravi Kiran Gollakota



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**ILLUSTRATIONS:** 140 illustrations  
(20 in full color)

**AUDIENCE:** Graduate and PhD students, and researchers working in the field of bioenergy and renewable energy; Industry practitioners working in the field of bioenergy and renewable energy. PhD students and researchers working in the fields of Chemical Engineering, Biotechnology, Microbiology, fuel technologies, bioprocess engineering, environmental engineering, waste valorization, and energy recovery

**BIC CODES:** THX

**THEMA CLASSIFICATION:**  
THEMATHV



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# Bioenergy Engineering

Fundamentals, Methods, Modelling, and Applications

Edited by : **Krishna Prasad Shadangi**, Assistant Professor, Department of Chemical Engineering, Veer Surendra Sai University of Technology, Burla, Odisha, India; **Prakash Kumar Sarangi**, Scientist with specialization in Microbiology, Central Agricultural University, Imphal, India; **Kaustubha Mohanty**, Professor of Chemical Engineering, Indian Institute of Technology Guwahati, Guwahati, Assam, India; **Irem Deniz**, Department of Bioengineering, Manisa Celal Bayar University, Turkey and **Anjani Ravi Kiran Gollakota**, Assistant Professor, Department of Safety, Health and Environmental Engineering, National Yunlin University of Science and Technology, Taiwan

**Presents principles, challenges, solutions and future perspectives on the production of biofuels and bioenergy from non-food waste and non-waste feedstocks**

## KEY FEATURES

- Analyzes emerging technologies for the sustainable conversion of various waste and non-waste materials into bioenergy and biofuels
- Examines a wide range of feedstocks and conversion pathways for liquid and gaseous biofuels
- Offers practical guidance and data on how to conduct lifecycle assessment, techno-economic analysis, and utilize GIS modeling for a range production pathways

## DESCRIPTION

*Bioenergy Engineering: Fundamentals, Methods, Modelling, and Applications* presents the fundamental principles, recent developments, innovative state-of-the-art technologies, challenges, solutions and future perspectives on the production of biofuels and bioenergy. Balancing the scientific and engineering aspects of biofuels production, the book guides readers through the chemical kinetics, modeling, thermodynamics, unit operations and technological advancements in fuel processing from conventional and alternative resources. Each chapter of the book starts with the fundamentals and goes on to assess the latest technologies for the production of renewable fuels on topics.

Sections cover biomass utilization, biomass-to-liquid conversion technologies (pyrolysis, liquefaction, solid-state fermentation and submerged fermentation), biomass-to-gas conversion technologies (thermochemical gasification, subcritical and supercritical water gasification, and methanation), gas-to-liquid conversion technologies (Fischer-Tropsch synthesis), carbonization, transesterification, organic transformation, carbon-carbon and carbon-heteroatom coupling reactions, oxidation, reforming, hydrotreating technologies (hydrogenation, hydrodesulfurization, hydrodenitrogenation, hydro dearomatization and hydro demetalization), nanocatalysis and biocatalysis (enzymatic hydrolysis), and much more.

ENGINEERING Energy

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ELSEVIER

# Textile Geometrical Reinforcements for Structural Composites

**Hafsa Jamshaid**, Director Graduate studies, National Textile University, Faisalabad, Pakistan and **Rajesh Mishra**, Professor, Department of Material Science and Manufacturing Technology, Czech University of Life Sciences Prague, Czech Republic

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**TRIM:** 6w x 9h  
**PAGES:** c. 314  
**ILLUSTRATIONS:** 100 illustrations (50 in full color)  
**AUDIENCE:** Researchers, Engineers interested in textile composites  
**BIC CODES:** TDH, TGM  
**THEMA CLASSIFICATION:** THEMATGMP; THEMATDPF; THEMATGM

**A systematic introduction to textile structural composites, including discussions on reinforcement, manufacture and the characterization of performance and application**

A Volume in the *The Textile Institute Book Series* Series

## KEY FEATURES

- Explains the multi-scale structures of textile architectures in detail
- Addresses a wide range of applications, including biomedical engineering, construction and aerospace
- Provides descriptions of the different manufacturing methods needed

## DESCRIPTION

*Textile Geometrical Reinforcements for Structural Composites* details all types of structures for load bearing structural composite applications, including characterization and manufacturing methods.

Unlike conventional composite materials, geometrically oriented textile structures (e.g. woven, knitted and braided constructions) can be designed and developed for load bearing in a particular direction. Their properties can be enhanced by modifying the geometry and material composition. This comprehensive cutting-edge book explains how to achieve these materials with superior mechanical properties in a cost-effective way. Addressing 2D, 3D, and multiaxial woven, knitted, and braided structures, the full range of materials are covered in the context of their load bearing structural composite applications. Methods of characterizing woven, knitted and braided fabric reinforced composites are compared, and impregnation methods using thermoplastic and thermoset resins are described. Potential future directions for research in this field are also explored.

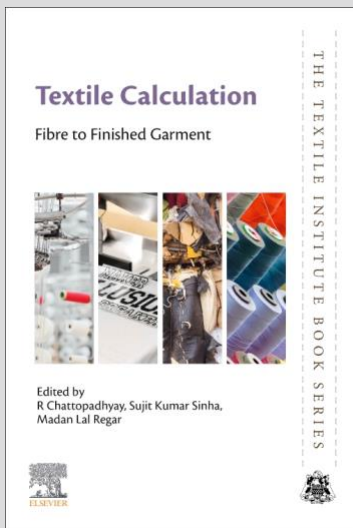


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TEXTILE TECHNOLOGY

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# Textile Calculation

## Fibre to Finished Garment

Edited by : **R. Chattopadhyay**, Professor and Head, Department of Textile Technology, IIT Delhi, India; **Sujit Kumar Sinha**, Professor, Department of Textile Technology, National Institute of Technology Jalandhar, India and **Madan Lal Regar**, Assistant Professor, Uttar Pradesh Textile Technology Institute, India

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**FORMAT:** Paperback  
**TRIM:** 6w x 9h  
**PAGES:** c. 288  
**ILLUSTRATIONS:** 70 illustrations (40 in full color)  
**AUDIENCE:** Textile manufacturing, production and design engineers in industry, Researchers and students of textile engineering  
**BIC CODES:** TGM  
**THEMA CLASSIFICATION:** THEMATGM

**Explains the numerical calculations used at different stages of garment production, including spinning, weaving, processing, garmenting and testing**

A Volume in the *The Textile Institute Book Series* Series

### KEY FEATURES

- Provides a complete overview of the manufacturing process of yarns and garments, as well as introductory material on the building elements of garments
- Includes detailed descriptions of industry testing methods for yarns, fibers and garments
- Explains calculation methodologies from across the textile production process

### DESCRIPTION

*Textile Calculation: Fibre to Finished Garment* provides detailed explanations of standard numerical calculations used at different stages of garment production, including spinning, weaving, processing, garmenting and testing. At every stage, from fiber production to garment manufacturing, textile production involves the selection of fibers or filaments, yarns, machines and process parameters. The calculations involved in this work relate to requirements of machines in the process line, estimations of process parameters, process characteristics, and machine efficiency, all of which must be objective and backed by sound theory.

Drawing on extensive industry experience, this book gathers these numerical problems from across the supply chain to provide best practice and appropriate solutions. With its comprehensive coverage of all parts of the textile production cycle, this book is essential reading for those preparing to enter the textile industry, as well as an invaluable reference for professionals and researchers.



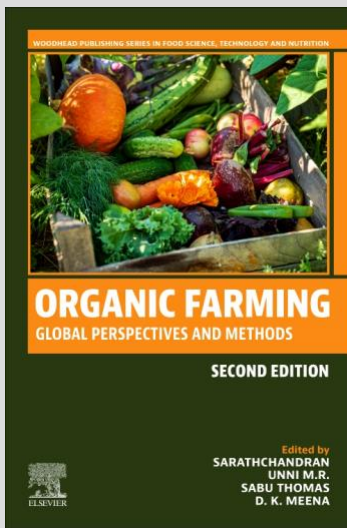
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TEXTILE TECHNOLOGY

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# Organic Farming, 2e

## Global Perspectives and Methods

Edited by : **Sarath Chandran**, School of Chemical Sciences, Mahatma Gandhi University, Kottayam, Kerala, India, School of Sciences, Royal Melbourne Institute of Technology, Melbourne, Victoria and International and Inter University Centre for Nanoscience and Nanotechnology, Mahatma Gandhi University, Kottayam, Kerala, India; **Unni M.R.**, Inter University Center for Organic Farming and Sustainable Agriculture, Mahatma Gandhi University, Registrar, Mahatma Gandhi University, Kerala, India; **Sabu Thomas**, Vice Chancellor, Mahatma Gandhi University, Kerala, India. and **D K Meena**, Senior Scientist ICAR-Central Inland Fisheries Research Institute (CIFRI)

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FORMAT: Paperback

TRIM: 6w x 9h

PAGES: c. 581

AUDIENCE: Researchers, post-doctoral fellows, academicians and industry related to agriculture, farming

BIC CODES: PST, PSG, RBGB

THEMA CLASSIFICATION:

THEMARBGB; THEMAPPST;

THEMATVB

**Helps readers understand insights on the latest opportunities and challenges of organic production**

A Volume in the *Woodhead Publishing Series in Food Science, Technology and Nutrition Series*

### KEY FEATURES

- Presents the latest insights, from basic principles to emerging practices and future prospects
- Includes new chapters on emerging organic farming practices and opportunities to address animal agriculture and vertical and indoor farming
- Includes coverage of standards, certification and accreditation, and presents insights on economics and marketing

### DESCRIPTION

*Organic Farming: Global Perspectives and Methods, Second Edition* provides the core definition and concepts of organic farming, also addressing current challenges and goals. The book provides a comprehensive resource, from sustainability to influences on the ecosystem, including the significance of seed, soil, water and weed management, and other important aspects. In addition, it presents advancements in the field and insights on the future. This fully revised and updated edition expands coverage to include important economic considerations, understanding the influence of nanotechnology on organic farming, vertical farming, organic farming and livestock management, as well as the future of organic farming.

Written by a team of global experts to provide current concepts of organic farming, this resource is valuable for researchers, graduate students, and post-doctoral fellows from academia and research institutions.

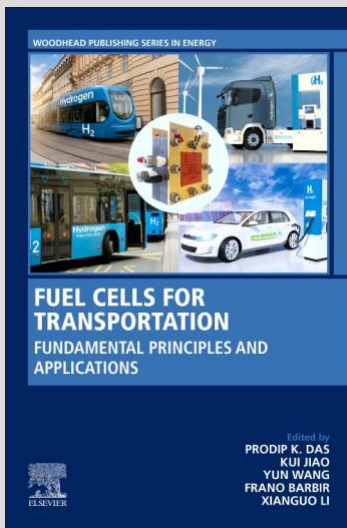


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FOOD SCIENCE, TECHNOLOGY & NUTRITION

<https://virtuale.elsevier.com>, [www.elsevier.com](http://www.elsevier.com)



# Fuel Cells for Transportation

## Fundamental Principles and Applications

Edited by : **Prodip K. Das**, Associate Professor in Hydrogen Energy Systems at The University of Edinburgh, UK; **Kui Jiao**, Professor, State Key Laboratory of Engines, Tianjin University, Tianjin, China; **Yun Wang**, Department of Mechanical and Aerospace Engineering, The University of California, Irvine, USA; **Frano Barbir**, Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture, University of Split, Croatia and **Xianguo Li**, Professor of Mechanical and Mechatronics Engineering; University Research Chair, University of Waterloo, Canada

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**TRIM:** 6w x 9h

**PAGES:** c. 460

**AUDIENCE:** Graduate students and researchers involved in the application of fuel cells in Chemical, Mechanical, and Electrical Engineering, Material Science, and Chemistry, Industry engineers involved in the application of fuel cells and clean energy and working in the transportation industry in the automobile, marine, and aviation sectors, Policymakers and non-government organizations interested in decarbonization of the transport sector

**BIC CODES:** TGM, THRH

**THEMA CLASSIFICATION:** THEMATH; THEMATGM

**A comprehensive and systematic reference on every aspect of hydrogen fuel cells and their application in transportation**

### KEY FEATURES

- Presents a comprehensive examination of the technologies, integration and application of fuel cells for transportation, from the fundamentals to the latest advances
- Examines the latest challenges, market outlooks and targets for fuel cells in light-duty and heavy-duty vehicles
- Offers solutions to fuel-cell system integration problems, optimization of operating conditions, and improvements for fuel-cell materials based on the latest developments
- Addresses key barriers to the commercial success of fuel cells for transportation, including durability, performance, materials and how to balance these factors

### DESCRIPTION

*Fuel Cells for Transportation: Fundamental Principles and Applications* is the first comprehensive reference on the application of fuel cells for light- and heavy-duty transportation. Addressing the subject from both a materials and engineering perspective, the book examines integration, modeling, and optimization of fuel cells from fundamentals to the latest advances. Chapters address every aspect of fuel cell systems for transport applications, including performance optimization, stack characterization, low-cost materials and catalysts, design of bipolar plates and flow fields, water and thermal management, durability under automotive driving cycles, cold start, state of the art characterization, optimization of various components, and more.

Each chapter reviews the fundamental principles of the topic before going on to examine the latest developments alongside current applications and real-world case studies. This is an essential reference for graduate students and researchers working on fuel cells for transport applications, as well as professional engineers involved in the application of fuel cells and clean energy and working in any sector of the transportation industry.

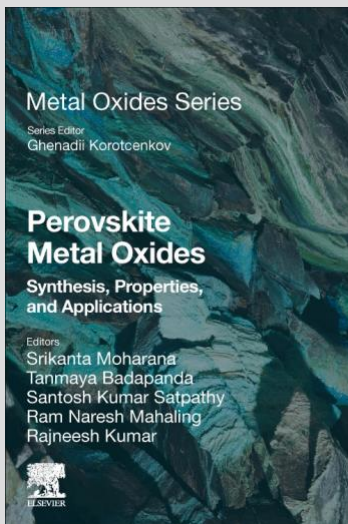


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# Perovskite Metal Oxides

## Synthesis, Properties, and Applications

Edited by : **Srikanta Moharana**, Assistant Professor, Department of Chemistry, School of Applied Sciences, Centurion University of Technology and Management, Odisha, India; **Tanmaya Badapanda**, Associate Professor, Department of Physics, C.V. Raman College of Engineering, Bhubaneswar, Odisha, India; **Santosh Kumar Satpathy**, Assistant Professor, Department of Physics, School of Applied Sciences, Centurion University of Technology and Management, Odisha, India ; **Ram Naresh Mahaling**, Associate Professor, School of Chemistry, Sambalpur University, Odisha, India and **Rajneesh Kumar**, Associate Professor, Department of Physics, Banaras Hindu University, Varanasi, U.P., India

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**BIC CODES:** TGM  
**THEMA CLASSIFICATION:** THEMATGM

**Important reference on low-cost and efficient methods to synthesize, fabricate and characterize perovskite metal oxides for a wide range of applications**

A Volume in the *Metal Oxides* Series

### KEY FEATURES

- Provides an overview of perovskite metal oxides, with an emphasis on synthesis, fabrication and characterization methods
- Discusses strategies to improve the functionality of perovskite metal oxide materials, including chemical methods and controlling the size, shape and structure of the materials
- Reviews applications of perovskite metal oxides in energy conversion and storage, sensing and electronics

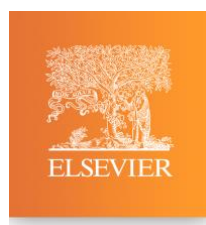
### DESCRIPTION

*Perovskite Metal Oxides: Synthesis, Properties and Applications* provides an overview on the topic, including the synthesis of various types of perovskites, their properties, characterization and application. The book reviews the applications of this category of materials for photovoltaics, electronics, biomedical, fuel cell, photocatalyst, sensor, energy storage and catalysis, along with processing techniques of perovskite metal oxides with a focus on low-cost and high-efficiency methods, including various properties and probable applications in academia and industry. Other sections discuss strategies to improve the functionality of perovskite metal oxide materials, including chemical methods and controlling the size, shape and structure of the materials.

Finally, applications of perovskite metal oxides in energy conversion and storage, sensing and electronics are covered.

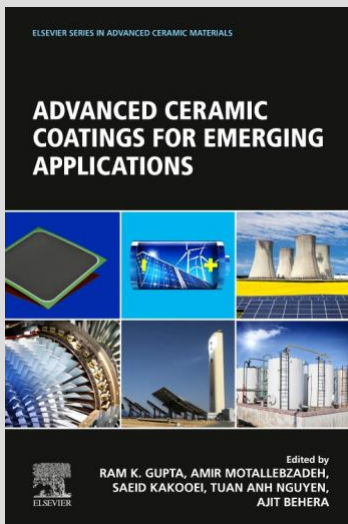


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# Advanced Ceramic Coatings for Emerging Applications

Edited by : **Ram K. Gupta**, Associate Professor, Department of Chemistry, Pittsburg State University, Pittsburg, KS, USA; **Amir Motallebzadeh**, Senior Researcher, Surface Science and Technology Center (KUYTAM), Koc University, Turkey; **Saeid Kakooei**, Senior Research Engineer (Research Scholar), School of Materials Engineering, Purdue University, West Lafayette, Indiana, USA ; **Tuan Anh Nguyen**, Principal Research Scientist, Institute for Tropical Technology, Vietnam Academy of Science and Technology, Hanoi, Vietnam and **Ajit Behera**, Assistant Professor, Metallurgical and Materials Engineering Department, National Institute of Technology, Rourkela, Odisha, India

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**AUDIENCE:** Academic and industrial researchers working on coatings, especially advanced ceramic coatings, material scientists, chemists, physicists and engineers, industrial R&D in energy and medical sectors, Regulatory bodies, early career scientists, and postgraduate students in materials and engineering sciences  
**BIC CODES:** TDCQ, TDCP  
**THEMA CLASSIFICATION:** THEMATGMP; THEMATGM; THEMATDPF

**Provides comprehensive coverage of emerging applications and advanced ceramic coatings**

A Volume in the *Elsevier Series on Advanced Ceramic Materials Series*

## KEY FEATURES

- Provides comprehensive coverage of emerging applications in advanced ceramic coatings
- Features the latest progress and recent technological developments
- Includes comparisons to other coatings types (e.g., polymers, metals and enamel) to demonstrate potential, limitations and differences
- Contains extensive case studies and worked examples

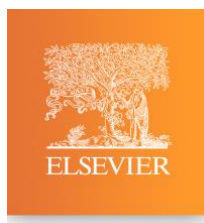
## DESCRIPTION

*Advanced Ceramic Coatings for Emerging Applications* covers new developments in automotive, construction, electronic, space and defense industries. The book is one of four volumes that together provide a comprehensive resource in the field of Advanced Ceramic Coatings, also including titles covering fundamentals, manufacturing and classification, energy and biomedical applications. These books will be extremely useful for academic and industrial researchers and practicing engineers who need to find reliable and up-to-date information about recent progresses and new developments in the field of advanced ceramic coatings. These books will also be of value to early career scientists providing background knowledge to the field.

Smart ceramic coatings containing multifunctional components are now finding application in transportation and automotive industries, in electronics, and energy, sectors, in aerospace and defense, and in industrial goods and healthcare. Their wide application and stability in harsh environments are only possible due to the stability of the inorganic components that are used in ceramic coatings.



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# Advanced Ceramic Coatings for Biomedical Applications

Edited by : **Ram K. Gupta**, Associate Professor, Department of Chemistry, Pittsburg State University, Pittsburg, KS, USA; **Amir Motallebzadeh**, Senior Researcher, Surface Science and Technology Center (KUYTAM), Koc University, Turkey; **Saeid Kakooei**, Senior Research Engineer (Research Scholar), School of Materials Engineering, Purdue University, West Lafayette, Indiana, USA ; **Tuan Anh Nguyen**, Principal Research Scientist, Institute for Tropical Technology, Vietnam Academy of Science and Technology, Hanoi, Vietnam and **Ajit Behera**, Assistant Professor, Metallurgical and Materials Engineering Department, National Institute of Technology, Rourkela, Odisha, India

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**AUDIENCE:** Academic and industrial researchers working on coatings, especially advanced ceramic coatings, material scientists, chemists, physicists and engineers, industrial R&D in energy and medical sectors, Regulatory bodies, early career scientists, and postgraduate students in materials and engineering sciences  
**BIC CODES:** TDCQ, TDCP  
**THEMA CLASSIFICATION:** THEMATDPF; THEMATGM; THEMATGMP

## Comprehensive coverage of biomedical applications of advanced ceramic coatings

A Volume in the *Elsevier Series on Advanced Ceramic Materials Series*

### KEY FEATURES

- Provides comprehensive coverage of biomedical applications of advanced ceramic coatings
- Covers basic principles of surface chemistry and the fundamentals of ceramic materials and engineering
- Features the latest progress and recent technological developments
- Includes comparisons to other coating types (e.g., polymers, metals, and enamel) to demonstrate the potential, limitations, and differences
- Contains extensive case studies and worked examples

### DESCRIPTION

*Advanced Ceramic Coatings for Biomedical Applications* covers tissue engineering, scaffolds, implant and dental application, wound healing and adhesives. The book is one of four volumes that together provide a comprehensive resource in the field of Advanced Ceramic Coatings, also including titles covering: fundamentals, manufacturing, and classification; energy applications; and emerging applications. This books will be extremely useful for academic and industrial researchers and practicing engineers who need to find reliable and up-to-date information about recent progresses and new developments in the field of advanced ceramic coatings. It will also be of value to early career scientists providing background knowledge to the field.

Smart ceramic coatings containing multifunctional components are now finding application in transportation and automotive industries, in electronics, and energy sectors, in aerospace and defense, and in industrial goods and healthcare. Their wide application and stability in harsh environments are only possible due to the stability of the inorganic components used. Ceramic coatings are typically silicon nitride, chromia, hafnia, alumina, alumina-magnesia, silica, silicon carbide, titania, and zirconia-based compositions. The increased demand for these materials and their application in energy, transportation, and the automotive industry, are considered, to be the main drivers.



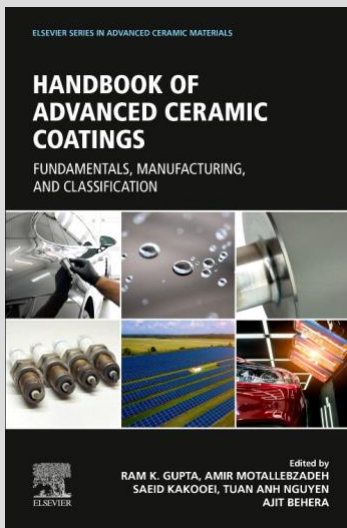
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# Advanced Ceramic Coatings

## Fundamentals, Manufacturing, and Classification

Edited by : **Ram K. Gupta**, Associate Professor, Department of Chemistry, Pittsburg State University, Pittsburg, KS, USA; **Amir Motallebzadeh**, Senior Researcher, Surface Science and Technology Center (KUYTAM), Koc University, Turkey; **Saeid Kakooei**, Senior Lecturer, Mechanical Engineering Department, Universiti Teknologi Petronas, Malaysia; **Tuan Anh Nguyen**, Principal Research Scientist, Institute for Tropical Technology, Vietnam Academy of Science and Technology, Hanoi, Vietnam and **Ajit Behera**, Assistant Professor, Metallurgical and Materials Engineering Department, National Institute of Technology, Rourkela, Odisha, India

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**AUDIENCE:** Academic and industrial researchers working on coatings, especially advanced ceramic coatings, material scientists, chemists, physicists and engineers, industrial R&D in energy and medical sectors, Regulatory bodies, early career scientists, and postgraduate students in materials and engineering sciences  
**BIC CODES:** TDCP, TDCQ  
**THEMA CLASSIFICATION:** THEMATGMP; THEMATDPF; THEMATGM

**Comprehensive coverage of the production, properties and characterization of advanced ceramic coatings**

A Volume in the *Elsevier Series on Advanced Ceramic Materials Series*

### KEY FEATURES

- Comprehensively covers the production, characterization and properties of advanced ceramic coatings
- Features the latest manufacturing processes
- Covers basic principles of surface chemistry, along with the fundamentals of ceramic materials and engineering
- Features the latest progress and recent technological developments
- Discusses basic science relevant to both the materials and preparation methods

### DESCRIPTION

*Handbook of Advanced Ceramic Coatings: Fundamentals, Manufacturing and Classification* introduces ceramic coating materials, methods of fabrication, characterizations, the interaction between fillers, reinforcers, and environmental impact, and the functional classification of ceramic coatings. The book is one of four volumes that together provide a comprehensive resource in the field of Advanced Ceramic Coatings, also including titles covering energy, biomedical and emerging applications. These books will be extremely useful for academic and industrial researchers and practicing engineers who need to find reliable and up-to-date information about recent progresses and new developments in the field of advanced ceramic coatings.

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# Global Progress on Molten Salt Reactors, 2e

A Companion to Dolan's Molten Salt Reactors and Thorium Energy

Edited by : **Thomas James Dolan**, Adjunct Professor, Nuclear, Plasma, and Radiological Engineering Department, University of Illinois, USA and **John Kutsch**, President of Whole World LLC, Design Engineers, USA

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**AUDIENCE:** Scientists and engineers involved in MSR research, university faculty and students, analysts and policy makers, nuclear energy professionals, nuclear physicists, Government staff  
**BIC CODES:** THK  
**THEMA CLASSIFICATION:** THEMATHK

**A collection of global case studies presenting the latest research and advances on MSRs from 23 countries**

A Volume in the *Woodhead Publishing Series in Energy Series*

## KEY FEATURES

- Provides a collection of case studies from 23 countries, presenting their latest research and activities on Molten Salt Reactors
- Based on chapter 26 of the first edition of *Dolan's Molten Salt Reactors and Thorium Energy*, this companion title presents expanded and more complete coverage of global activities and research
- Includes advanced technologies, reactor designs and safety and management strategies

## DESCRIPTION

*Global Progress on Molten Salt Reactors: A Companion to Dolan's Molten Salt Reactors and Thorium Energy, Second Edition* presents global perspectives on the latest research and technological advances. Each case study utilizes a comprehensive template that guides the reader through country specific research. Useful data which can be applied to work and research is included, along with a list of references for further research. Researchers, professional engineers and policymakers will gain a broad picture of worldwide MSR activity and a deep understanding of how theory and practical guidance is applied in a variety of settings, including budgets, approaches and constraints.



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# Molten Salt Reactors and Thorium Energy, 2e

Edited by : **Thomas James Dolan**, Adjunct Professor, Nuclear, Plasma, and Radiological Engineering Department, University of Illinois, USA; **Imre Pazsit**, Chalmers University of Technology, Department of Nuclear Engineering, Göteborg, Sweden; **Andrei Rykhlevskii**, Postdoctoral Appointee, Research and Test Reactors Department, Argonne National Laboratory, Lemont, IL, United States of America and **Ritsuo Yoshioka**, Ritsuo Yoshioka Owner, Japan Functional Safety Laboratory, Yokohama, Japan

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**AUDIENCE:** Scientists and engineers involved in MSR research, university faculty and students, analysts and policy makers, A2 nuclear energy professionals, nuclear physicists, Government staff

**BIC CODES:** KNXC, THK

**THEMA CLASSIFICATION:**

THEMATHK; THEMAKNX

**A comprehensive and highly visual reference on MSR development and thorium fuel use**

A Volume in the *Woodhead Publishing Series in Energy Series*

## KEY FEATURES

- A fully updated comprehensive handbook on Molten Salt Reactors and Thorium Energy, written by a team of global experts
- Covers MSR applications, technical issues, reactor types and reactor designs
- Includes 3 brand new chapters which reflect the latest advances in research and technology since the first edition published
- Presents case studies on molten salt reactors which aid in the transition to net zero by providing abundant clean, safe energy to complement wind and solar power

## DESCRIPTION

*Molten Salt Reactors and Thorium Energy, Second Edition* is a fully updated comprehensive reference on the latest advances in MSR research and technology. Building on the successful first edition, Tom Dolan and the team of experts have fully updated the content to reflect the impressive advances from the last 5 years, ensuring this book continues to be the go-to reference on the topic. This new edition covers progress made in MSR design, details innovative experiments, and includes molten salt data, corrosion studies and deployment plans. The successful case studies section of the first edition have been removed, expanded, and fully updated, and are now published in a companion title called *Global Case Studies on Molten Salt Reactors*.

Readers will gain a deep understanding of the advantages and challenges of MSR development and thorium fuel use, as well as step-by-step guidance on the latest in MSR reactor design. Each chapter provides a clear introduction, covers technical issues and includes examples and conclusions, while promoting the sustainability benefits throughout.



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