

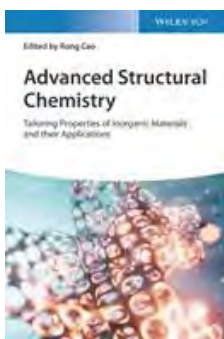


Chemistry & Material Science

May to August 2021

Subject: Chemistry

Wiley-VCH


Advanced Structural Chemistry : Tailoring Properties of Inorganic Materials and their Applications

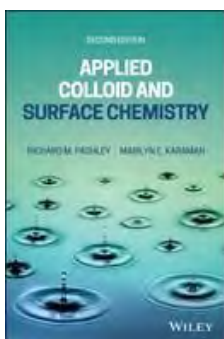
Rong Cao
9783527349005, 3527349006
Pub Date: 4/19/21
\$445.00 USD
1088 pages
Hardcover
Science / Chemistry / Inorganic

Summary: Discover the relationships between inorganic chemical synthesis, structure, and property with these comprehensive and insightful volumes

Advanced Structural Chemistry: Tailoring Properties of Inorganic Materials and their Applications (3 Volume Set) offers readers the opportunity to discover the relationship between the structure and function of matter, develop efficient and precise synthesis methodology, and to understand the theoretical tools for new functional substances.

Advanced Structural Chemistry clarifies the relationships

Wiley

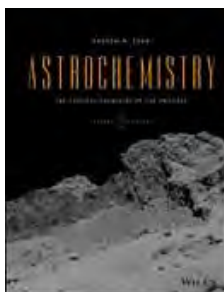

Applied Colloid and Surface Chemistry (2nd Edition)

Richard M. Pashley, Marilyn E. Karaman
9781119739128, 1119739128
Pub Date: 7/19/21
\$65.00 USD
240 pages
Paperback
Science / Chemistry / Physical & Theoretical

Summary: An updated guide to the interaction between solids, liquids, and gases and their application to numerous everyday processes

The revised and updated second edition of *Applied Colloid and Surface Chemistry* offers a comprehensive introduction to this interdisciplinary field that takes a practical approach and includes information on applications drawn from a wide range of industries. The easy-to-follow text contains new content that focuses on applications such as the prevention of propeller cavitation, industrial explosives, PFAS contamination, and bubble column evaporators.

Wiley


Astrochemistry : The Physical Chemistry of the Universe (2nd Edition)

Andrew M. Shaw
9781119114727, 1119114721
Pub Date: 8/2/21
\$90.00 USD
480 pages
Hardcover
Science / Chemistry / Physical & Theoretical

Summary: A fully revised new edition of an introductory text to the dynamic and fascinating subject of astrochemistry

Since the first edition in 2006 of *Astrochemistry*, the Mars rovers have driven 31.18 miles, there has been fly-by of Pluto changing it from a 4-pixel world on the Hubble Space Telescope into a mysterious non-planet. There have been visits to asteroids, revisiting Mercury, discovery of the Higgs Boson, discovery of over 2000 extrasolar planets and landing on the comet 67P/Churyumov-Gerasimenko by Rosetta mission – hence the timely publication of this new edition.

Wiley

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Atomic-Scale Modelling of Electrochemical Systems

Marko Melander, Tomi Laurila, Kari Laasonen
9781119605614, 111960561X
Pub Date: 8/30/21
\$185.00 USD
472 pages
Hardcover
Science / Chemistry / Physical & Theoretical

Summary: A comprehensive overview of atomistic computational electrochemistry, discussing methods, implementation, and state-of-the-art applications in the field

The first book to review state-of-the-art computational and theoretical methods for modelling, understanding, and predicting the properties of electrochemical interfaces. This book presents a detailed description of the current methods, their background, limitations, and use for addressing the electrochemical interface and reactions. It also highlights several applications in electrocatalysis and electrochemistry.

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Automated Sample Preparation : Methods for GC-MS and LC-MS

Hans-Joachim Hubschmann
9783527345076, 3527345078
Pub Date: 6/8/21
\$145.00 USD
275 pages
Hardcover
Science / Chemistry / Analytic

Summary:

An essential guide to the proven automated sample preparation process

While the measurement step in sample preparation is automated, the sample handling step is manual and all too often open to risk and errors. The manual process is of concern for accessing data quality as well as producing limited reproducibility and comparability. *Handbook of Automated Sample Preparation for GC-MS and LC-MS* explores the advantages of implementing automated sample preparation during the handling phase for GC-MS and LC-MS. The author, a noted expert on the topic, includes information on the proven workflows that can be put in place for many

Axially Chiral Compounds : Asymmetric Synthesis and Applications

Bin Tan
9783527347124, 3527347127
Pub Date: 9/20/21
\$169.33 USD
352 pages
Hardcover
Science / Chemistry / Physical & Theoretical

Summary: Explore this comprehensive and current volume summarizing the characteristics, synthesis, and applications of axial chirality

Appearing widely in natural products, biologically active molecules, asymmetric chemistry, and material science, axially chiral motifs constitute the core backbones of the majority of chiral ligands and organocatalysts in asymmetric catalysis. In a new work of particular relevance to synthetic chemists, *Axially Chiral Compounds: Asymmetric Synthesis and Applications* delivers a clearly structured and authoritative volume covering the classification, characteristics, synthesis, and applications of axial chirality.

Blood Traces : Interpretation of Deposition and Distribution

Peter R. De Forest, Peter A. Pizzola, Brooke W. Ka...
9781119764533, 111976453X
Pub Date: 8/2/21
\$135.00 USD
386 pages
Hardcover
Medical / Forensic Medicine

Summary: A guide to the scientific interpretation of blood traces

Blood Traces provides an authoritative resource that reviews many of the aspects of the interpretation of blood traces that have not been treated with the thoroughness they deserve. With strict adherence to the scientific method, the authors — noted experts on the topic — address the complexities encountered when interpreting blood trace configurations. The book provides an understanding of the scientific basis for the use of blood trace deposits, i.e. bloodstain patterns, at crime scenes to better reconstruct a criminal event.

Carbonyl Compounds : Reactants, Catalysts and Products

Feng Shi, Hongli Wang, Xingchao Dai
9783527347360, 3527347364
Pub Date: 6/21/21
\$157.90 USD
368 pages
Hardcover
Science / Chemistry / Organic

Summary: This book comprehensively and systematically treats modern understanding of building, and transformation of carbonyl-containing molecules and its application in catalysis. The contents range from the building of carbonyl with traditional methods and non-traditional methods, the transformation of carbonyl-containing molecules into fine chemicals and the use of these carbonyl-containing molecules as catalyst materials for the synthesis of fine chemicals, which will bring benefits to the professionals as well as newcomers in this field.

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Chemical Reactivity in Confined Systems : Theory, Modelling and Applications

Pratim K. Chattaraj, Debdutta Chakraborty

9781119684022, 1119684021

Pub Date: 7/19/21

\$205.00 USD

576 pages

Hardcover

Science / Chemistry / Physical & Theoretical

Summary: An insightful analysis of confined chemical systems for theoretical and experimental scientists

Chemical Reactivity in Confined Systems: Theory and Applications presents a theoretical basis for the molecular phenomena observed in confined spaces. The book highlights state-of-the-art theoretical and computational approaches, with a focus on obtaining physically relevant clarification of the subject to enable the reader to build an appreciation of underlying chemical principles.

The book includes real-world examples of confined systems that highlight how the reactivity of atoms and molecules

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Chemistry Entrepreneurship

Javier García-Martínez, Kunhao Li

9783527345441, 3527345442

Pub Date: 7/13/21

\$168.73 USD

325 pages

Hardcover

Science / Chemistry

Summary: The book is a step-by-step guide specifically devoted to start and grow a new company in the chemistry sector. It covers the different aspects of the creation of a new chemical enterprise including: the protection of the invention, the business plan, the transfer from the research center or university, the financing, the legal setup, the launching of the company and its growth and exit strategies.

Chemistry of Biologically Potent Natural Products and Synthetic Compounds

Shahid Ul-Islam, Javed Ahmad Banday

9781119640349, 1119640342

Pub Date: 7/7/21

\$225.00 USD

432 pages

Hardcover

Science / Chemistry / Organic

Summary: In view of their promising biological and pharmaceutical activities, natural product inspired and heterocyclic compounds have recently gained a reputation in the field of medicinal chemistry. Over the past decades, intensive research efforts have been ongoing to understand the synthesis, biochemistry and engineering involved in their preparation and action mechanisms.

Several novel natural product derivatives, heterocyclic and other synthetic compounds, have been reported to have shown interesting biological activities including anticancer, antimicrobial, anti-inflammatory, anti-glycemic, anti-allergy and antiviral etc.

Chemometrics and Cheminformatics in Aquatic Toxicology

Kunal Roy

9781119681595, 1119681596

Pub Date: 8/24/21

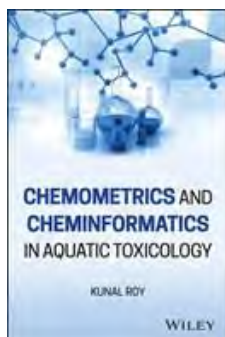
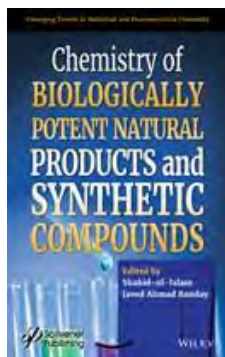
\$195.00 USD

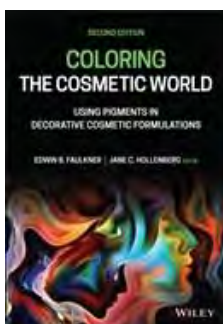
504 pages

Hardcover

Science / Chemistry / Toxicology

Summary: This book introduces readers to the existing and emerging problems of contamination of the aquatic environment due to various metal and organic pollutants (including industrial chemicals, pharmaceuticals, cosmetics, biocides, nanomaterials, pesticides, surfactants, dyes, etc.) and resultant effects on water quality, chemical threat to the aquatic organisms and consequent effects on human health. The book discusses different chemometric (classification and pattern recognition tools, clustering techniques, principal component analysis, multivariate regression analysis, etc.) and cheminformatic (toxicophore, QSAR, data mining, etc.) tools for the non-experts and their application in an...





Coloring the Cosmetic World : Using Pigments in Decorative Cosmetic Formulations (2nd Edition)

Edwin B. Faulkner, Jane C. Hollenberg

9781119558101, 1119558107

Pub Date: 7/13/21

\$135.00 USD

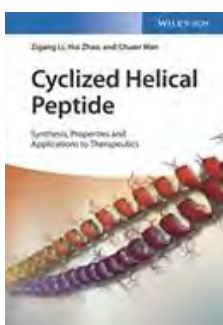
294 pages

Hardcover

Science / Chemistry / Industrial & Technical

Summary: A comprehensive resource on the regulations, applications, properties and processing of pigments used in color cosmetics, now in its second edition.

Coloring the Cosmetic World is a highly practical guide to colorant selection for product formulations in the modern cosmetics and toiletries industry. Providing the essential knowledge required to successfully incorporate pigments into cosmetic formulations, this unique resource covers all essential aspects of color selection—including regulations, economics, color esthetics, and stability—as well as processing, color measurement, pigment testing, natural



Stabilized Helical Peptide Therapeutics

Zigang Li, Hui Zhao, Chuan Wan

9783527343423, 3527343423

Pub Date: 8/16/21

\$185.00 USD

450 pages

Hardcover

Science / Life Sciences / Biochemistry

Summary: This book covers current methodologies of constructing constrained helices, including their features and limitations. The effects of chemical methods constructing helical peptides on helicity, binding affinity, cell penetration and nonspecific toxicity are also substantially summarized and discussed. Furthermore, therapeutic applications of the constraint helices, including comparison with existing small molecule modulators or antibodies are also included. This book will give readers outside the field a comprehensive introduction and readers inside the field a deeper understanding, thus it will help researchers to further advance the field or choose proper achievement of the field

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Deep Learning for Physical Scientists : Accelerating Research with Machine Learning

Edward O. Pyzer-Knapp, Matthew Benatan

9781119408338, 1119408334

Pub Date: 8/30/21

\$95.00 USD

248 pages

Hardcover

Science / Chemistry / Physical & Theoretical

Summary: Discover the power of machine learning in the physical sciences with this one-stop resource from a leading voice in the field

Deep Learning for Physical Scientists: Accelerating Research with Machine Learning delivers an insightful analysis of the transformative techniques being used in deep learning within the physical sciences. The book offers readers the ability to understand, select, and apply the best deep learning techniques for their individual research problem and interpret the outcome.

Designed to teach researchers to think in useful new ways

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Detection and Analysis of SARS Coronavirus : Advanced Biosensors for Pandemic Viruses and Related Pathogens

Chaudhery Mustansar Hussain, Sudheesh K. Shukla

9783527349180, 3527349189

Pub Date: 8/16/21

\$151.24 USD

280 pages

Hardcover

Science / Life Sciences / Biochemistry

Summary: This timely reference shows how a contactless coronavirus detector may be developed using existing biosensor technology, addressing detection principles, biosensor development and fabrication as well as commercialization issues.

While the book focuses on the current global research effort towards a contactless coronavirus detector, the lessons learned can easily be applied to any other current and emerging pathogens.



Digitalization in the Laboratory

Klemen Zupancic, Tea Pavlek
9783527347193, 3527347194

Pub Date: 8/2/21

\$145.00 USD

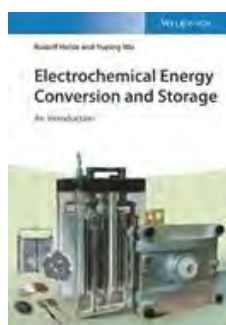
368 pages

Hardcover

Science / Chemistry / Analytic

Summary: This practical book in instrumental analytics conveys an overview of important methods of analysis and enables the reader to realistically learn the (principally technology-independent) working techniques the analytical chemist uses to develop methods and conduct validation. What is to be conveyed to the student is the fact that analysts in their capacity as problem-solvers perform services for certain groups of customers, i.e., the solution to the problem should in any case be processed in such a way as to be "fit for purpose".

The book presents sixteen experiments in analytical chemistry laboratory courses. They consist of the classical curriculum used at universities and universit



Electrochemical Energy Conversion and Storage : An Introduction

Rudolf Holze, Yuping Wu
9783527334315, 3527334319

Pub Date: 6/21/21

\$95.00 USD

398 pages

Paperback

Technology & Engineering / Power Resources / Electrical

This first textbook on the topic provides a clear and well-structured description of the fundamentals, as well as an excellent overview of the practical applications. The well-structured didactic styl...

Summary: This pioneering textbook on the topic provides a clear and well-structured description of the fundamental chemistry involved in these systems, as well as an excellent overview of the real-life practical applications.

Prof. Holze is a well-known researcher and an experienced author who guides the reader with his didactic style, and readers can test their understanding with questions and answers throughout the text



Electrokinetic Remediation for Environmental Security and Sustainability

Alexandra B. Ribeiro, M. N. V. Prasad
9781119670117, 111967011X

Pub Date: 3/22/21

\$250.00 USD

720 pages

Hardcover

Science / Chemistry / Organic

Summary: Explore this comprehensive reference on the remediation of contaminated substrates, filled with cutting-edge research and practical case studies

Electrokinetic Remediation for Environmental Security and Sustainability delivers a thorough review of electrokinetic remediation (EKR) for the treatment of inorganic and organic contaminants in contaminated substrates. The book highlights recent progress and developments in EKR in the areas of resource recovery, the removal of pollutants, and environmental remediation. It also discusses the use of EKR in conjunction with nanotechnology and phytoremediation.

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Flavin-based Catalysis : Principles and Applications

Radek Cibulka, Marco W. Fraaije
9783527348343, 3527348344

Pub Date: 9/7/21

\$154.01 USD

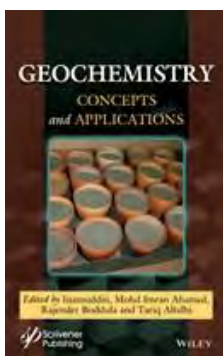
300 pages

Hardcover

Technology & Engineering / Materials Science

Summary: The book gives a unique overview of this rapidly developing research field, presenting structures and properties of flavin derivatives as well as their proven application as bioinspired catalysts in various organocatalytic, biocatalytic, and photocatalytic reactions.

Wiley-Scrivener

**Geochemistry : Concepts and Applications**

Inamuddin, Mohd Imran Ahamed, Rajender Boddula, Ta...

9781119709978, 1119709970

Pub Date: 4/27/21

\$195.00 USD

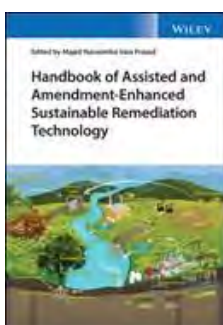
208 pages

Hardcover

Science / Chemistry / Organic

Summary: This book aims to explore basic principles, concepts and applications of geochemistry. Topics include chemical weathering, impacts on living beings and water, geochemical cycles, oxidation and redox reactions in geochemistry, isotopes, analytical techniques, medicinal, inorganic, marine, atmospheric, and environmental applications, as well as case studies. This book helps in understanding the chemical composition of the earth and its applications. It also includes beneficial effects, bottlenecks, solutions, and future directions in geochemistry.

Wiley

**Handbook of Assisted and Amendment-Enhanced Sustainable Remediation Technology**

M. N. V. Prasad

9781119670360, 1119670365

Pub Date: 7/26/21

\$295.00 USD

552 pages

Hardcover

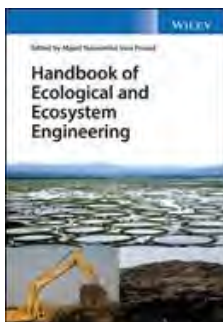
Science / Chemistry / Organic

Summary: Learn more about phytoremediation technology with this state-of-the-art resource from an internationally recognized editor and leader in his field

The Handbook of Assisted and Amendment-Enhanced Sustainable Remediation Technology discusses sustainable approaches to the removal of contaminants from the environment or the reduction of their toxicity. The distinguished editor has included resources from an internationally recognized group of academics who discuss strategies to increase the effectiveness of phytoremediation.

Special attention is paid to the use of organic amendments to

Wiley

**Handbook of Ecological and Ecosystem Engineering**

M. N. V. Prasad

9781119678533, 1119678536

Pub Date: 7/13/21

\$220.00 USD

544 pages

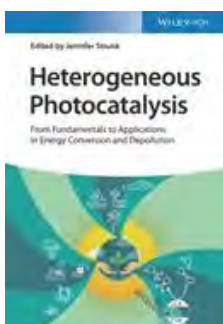
Hardcover

Science / Chemistry / Organic

Summary: Learn from this integrated approach to the management and restoration of ecosystems edited by an international leader in the field

The Handbook of Ecological and Ecosystem Engineering delivers a comprehensive overview of the latest research and practical developments in the rapidly evolving fields of ecological and ecosystem engineering. Beginning with an introduction to the theory and practice of ecological engineering and ecosystem services, the book addresses a wide variety of issues central to the restoration and remediation of ecological environments.

Wiley-VCH

**Heterogeneous Photocatalysis : Fundamental Processes and Applications**

Jennifer Strunk

9783527344642, 3527344640

Pub Date: 6/8/21

\$175.00 USD

432 pages

Hardcover

Science / Chemistry / Industrial & Technical

An excellent overview about modern heterogeneous photocatalysis is given in this reference: Accompanied by chemical and physical fundamentals, it presents the latest research in energy conversion and ...

Summary: An excellent overview about modern heterogeneous photocatalysis is given in this reference: Accompanied by chemical and physical fundamentals, it presents the latest research in energy conversion and environmental depollution reactions.

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How to Commercialize Chemical Technologies for a Sustainable Future

Timothy J. Clark, Andrew Pasternak

9781119604846, 1119604842

Pub Date: 9/7/21

\$135.00 USD

352 pages

Hardcover

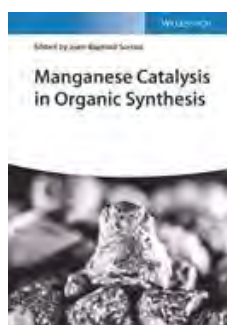
Science / Chemistry / Industrial & Technical

Summary:

The definitive guide for scientific entrepreneurs commercializing sustainable technologies in the chemical sector

Lacking the considerable resources of multinational chemical companies, entrepreneurs face a unique set of risks and challenges. *How to Commercialize Chemical Technologies for a Sustainable Future* is targeted at innovators who are embarking on the entrepreneurial path with their sustainable chemical technology but are unsure of what steps to take. This first-of-its-kind resource features contributions from a diverse team of expert authors including engineers, venture

Wiley-VCH



Manganese Catalysis in Organic Synthesis

Jean-Baptiste Sortais

9783527347308, 3527347305

Pub Date: 8/2/21

\$157.90 USD

350 pages

Hardcover

Technology & Engineering / Materials Science

Summary: This unique book highlights the most important reactions in the presence of homogeneous manganese catalysts, e.g. reduction reactions, C-H functionalization, cross-coupling reactions etc.

Wiley-VCH

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Metabolic Engineering : Concepts and Applications

Sang Yup Lee, Jens Nielsen, Gregory

Stephanopoulos

9783527346622, 3527346627

Pub Date: 8/23/21

\$395.00 USD

960 pages

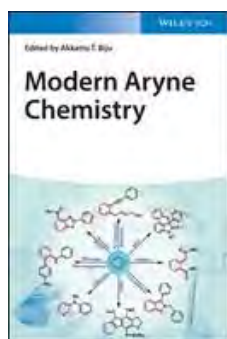
Hardcover

Science / Biotechnology

Summary: Learn more about foundational and advanced topics in metabolic engineering in this comprehensive resource edited by leaders in the field

Metabolic Engineering: Concepts and Applications delivers a one-stop resource for readers seeking a complete description of the concepts, models, and applications of metabolic engineering. This guide offers practical insights into the metabolic engineering of major cell lines, including *E. Coli*, *Bacillus* and *Yarrowia Lipolytica*, and organisms, including human, animal, and plant). The distinguished editors also offer readers resources on microbiome engineering and the use of metabolic engineering in bioremediation.

Wiley-VCH



Modern Aryne Chemistry

Akkattu T. Biju

9783527346462, 3527346465

Pub Date: 6/1/21

\$185.00 USD

500 pages

Hardcover

Science / Chemistry / Organic

Summary: A groundbreaking book to offer a comprehensive account of important reactions involving arynes

Modern Aryne Chemistry is the first book on the market to offer a conceptual framework to the reactions related to arynes. It also provides a systematic introduction to the cycloaddition reactions, insertion reactions and transition-metal-catalyzed transformations of arynes. The author, a noted expert on the topic, highlights a novel strategy for carbon-carbon and carbon-heteroatom bond construction using arynes.

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Multi-Scale Biogeochemical Processes in Soil Ecosystems : Critical Reactions and Resilience to Climate Changes

Yu Yang, Marco Keiluweit, Nicola Senesi, Baoshan X...

9781119480341, 1119480345

Pub Date: 8/31/21

\$249.00 USD

512 pages

Hardcover

Science / Chemistry / Organic

Summary: With a systematic and interdisciplinary approach, this volume brings together world-renowned international scientists on the recent progresses in understanding and evaluating soil biogeochemical processes spanning from atomic to global scales. This book is useful for understanding sustainable agricultural development and management of soil ecosystems under climate changes.

The book is composed of 30 chapters in four parts. Part I (9 chapters) focus on the molecular-scale processes and reactions. Part II (10 chapters) covers ecosystem-level observations. Part III (5 chapters) emphasizes large-scale modeling. Part IV (6 chapters) discusses the strategy for

Mutagenic Impurities : Strategies for Identification and Control

Andrew Teasdale

9781119551218, 1119551218

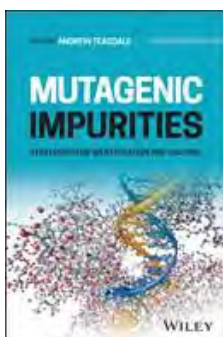
Pub Date: 9/8/21

\$225.00 USD

512 pages

Hardcover

Medical / Pharmacology



Summary: The new edition remains a primary reference point for anyone faced with addressing the issue of mutagenic impurities, providing readers with a definitive narrative of the guidelines and actual practical solutions to allow them to develop effective control measures.

- Combines basic science and practical approaches in a way that can help standardize global handling of mutagenic impurities
- Provides a timely update following the adoption of ICH M7 guideline, revamping previous content with the focus on mutagenic impurities delineated in the ICH M7 guideline
- Includes new chapters on issues gaining traction in the

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Nano- and Biocatalysts for Biodiesel Production

Avinash P. Ingle

9781119730002, 1119730007

Pub Date: 6/21/21

\$215.00 USD

352 pages

Hardcover

Technology & Engineering / Materials Science

Summary: Reviews recent advances in catalytic biodiesel synthesis, highlighting various nanocatalysts and nano(bio)catalysts developed for effective biodiesel production

Nano- and Biocatalysts for Biodiesel Production delivers an essential reference for academic and industrial researchers in biomass valorization and biofuel industries. The book covers both nanocatalysts and biocatalysts, bridging the gap between homogenous and heterogenous catalysis.

Readers will learn about the techno-economical and environmental aspects of biodiesel production using different

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Optimization in HPLC : Concepts and Strategies

Stavros Kromidas

9783527347896, 3527347895

Pub Date: 7/6/21

\$85.00 USD

400 pages

Paperback

Science / Chemistry / Analytic

Summary: Learn to maximize the performance of your HPLC or UHPLC system with this resource from leading voices in the field

Optimization in HPLC: Concepts and Strategies delivers tried-and-tested strategies for optimizing the performance of HPLC and UHPLC systems for a wide variety of analytical tasks. The book explains the different HPLC operation modes and their suitability for a range of analyses, including small molecules, chiral substances, and biomolecules. It also shows readers when and how computational tools may be used to optimize performance.

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Organic Reactions

P. Andrew Evans
9781119771234, 1119771234
Pub Date: 6/2/21
\$350.00 USD
800 pages
Hardcover
Science / Chemistry / Organic

Summary: The 106th volume in this series for organic chemists in academia and industry presents critical discussions of widely used organic reactions or particular phases of a reaction. The material is treated from a preparative viewpoint, with emphasis on limitations, interfering influences, effects of structure and the selection of experimental techniques. The work includes tables that contain all possible examples of the reaction under consideration. Detailed procedures illustrate the significant modifications of each method.

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Organic Redox Chemistry : Chemical, Photochemical and Electrochemical Syntheses

Jun-ichi Yoshida
9783527344871, 352734487X
Pub Date: 8/2/21
\$171.01 USD
272 pages
Hardcover
Science / Chemistry / Organic

Summary: Explore the most recent advancements and synthesis applications in redox chemistry

With a large number of applications in industrial settings, redox chemistry has emerged as a crucial research topic that covers many aspects of different methodologies in synthesis. In *Organic Redox Chemistry: Chemical, Photochemical and Electrochemical Syntheses*, accomplished researchers and editors Dr. Frederic W. Patureau and the late Dr. Jun-Ichi Yoshida deliver an insightful exploration of this rapidly developing topic.

Rather than divide its material into ionic, radical, and metal-

Organic Syntheses

Mohammad Movassaghi
9781119816652, 1119816653
Pub Date: 8/24/21
\$195.00 USD
412 pages
Hardcover
Science / Chemistry / Physical & Theoretical

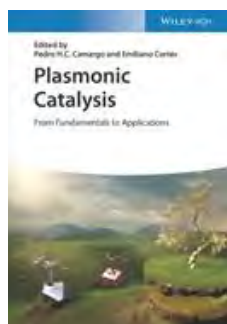
Summary: The current volume continues the tradition of the Organic Syntheses series, providing carefully checked and edited experimental procedures that describe important synthetic methods, transformations, reagents, and synthetic building blocks or intermediates with demonstrated utility in organic synthesis. These significant and interesting procedures should prove worthwhile to many synthetic chemists working in increasingly diverse areas. A trusted guide for professionals in organic and medicinal chemistry in academia, government, and industries, including pharmaceuticals, fine chemicals, agrochemicals, and biotechnological products.

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Phytopharmaceuticals : Potential Therapeutic Applications

Durgesh Nandini Chauhan, Kamal Shah
9781119681915, 111968191X
Pub Date: 8/10/21
\$225.00 USD
470 pages
Hardcover
Science / Chemistry / Organic

Summary: Medicinal plants contain a variety of bioactive compounds, (also referred to as phytochemicals). In the leaves, stems, flowers and fruits. This book covers these bioactive compounds, their available sources, how the bioactive molecules are isolated from the plants, the biochemistry, structural composition and potential biological activities. Also discussed are the pharmacological aspects of medicinal plants, phytochemistry and biological activities of different natural products, ethnobotany and medicinal properties, as well as a novel dietary approach for various disease management and therapeutic potential. The importance of phytopharmaceutical of plants and potential applications



Plasmonic Catalysis : From Fundamentals to Applications

Pedro H.C. Camargo, Emiliano Cortés

9783527347506, 352734750X

Pub Date: 6/8/21

\$175.00 USD

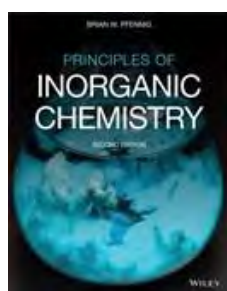
416 pages

Hardcover

Technology & Engineering / Materials Science

Summary: Explore this comprehensive discussion of the foundational and advanced topics in plasmonic catalysis from two leaders in the field

Plasmonic Catalysis: From Fundamentals to Applications delivers a thorough treatment of plasmonic catalysis, from its theoretical foundations to myriad applications in industry and academia. In addition to the fundamentals, the book covers the theory, properties, synthesis, and various reaction types of plasmonic catalysis. It also covers its applications in reactions including oxidation, reduction, nitrogen fixation, CO₂ reduction, and more.



Principles of Inorganic Chemistry (2nd Edition)

Brian W. Pfennig

9781119650324, 1119650321

Pub Date: 6/2/21

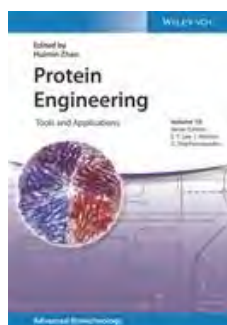
\$150.00 USD

800 pages

Paperback

Science / Chemistry / Inorganic

Summary: This text is designed for undergraduates and introductory-level graduate students taking an inorganic or advanced inorganic chemistry course. It appeals to instructors looking for a more physical inorganic chemistry course. Written in an informal and engaging style, the author includes in-chapter worked problems, explains difficult concepts in simplistic terms, and deposits some mathematical derivations into "in-depth" boxes within the chapter or appendices. The largest change between this edition and the previous is a pedagogical restructuring of the material in a more logical order and the gradual development of underlying concepts as one progresses through the textbook. Several i



Protein Engineering : Tools and Applications

Huimin Zhao, Sang Yup Lee, Jens Nielsen, Gregory S...

9783527344703, 3527344705

Pub Date: 7/13/21

\$175.00 USD

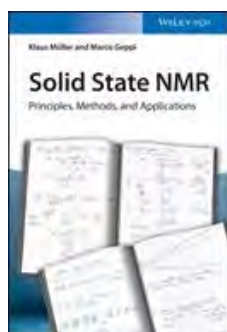
512 pages

Hardcover

Science / Biotechnology

Summary: A one-stop reference that reviews protein design strategies to applications in industrial and medical biotechnology

Protein Engineering: Tools and Applications is a comprehensive resource that offers a systematic and comprehensive review of the most recent advances in the field, and contains detailed information on the methodologies and strategies behind these approaches. The authors—noted experts on the topic—explore the distinctive advantages and disadvantages of the presented methodologies and strategies in a targeted and focused manner that allows for the adaptation and implementation of the strategies for new



Solid State NMR : Principles, Methods and Applications

Klaus Müller, Marco Geppi

9783527318162, 352731816X

Pub Date: 7/6/21

\$115.00 USD

662 pages

Paperback

Science / Chemistry / Analytic

In one didactically uniform volume, this book covers experimental equipment and methodological concepts while providing numerous examples in biomaterials, polymers and inorganic substances. The topics...

Summary: In one didactically uniform volume, this book covers experimental equipment and methodological concepts while providing numerous examples in biomaterials, polymers and inorganic substances. The topics covered range from theoretical background knowledge to practical applications and solutions. The whole is rounded off by a glossary, literature and a summary at the end of the chapters, making this a handy textbook for postgraduate

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Spectroscopy for Materials Characterization

Simonpietro Agnello

9781119697329, 1119697328

Pub Date: 6/16/21

\$140.00 USD

552 pages

Hardcover

Technology & Engineering / Materials Science

Summary: Materials characterization is a process to probe and measure structure and properties of materials. Spectroscopy, which is interaction of materials with electromagnetic radiation, is a prominent way of characterizing materials since each material at electronic, atomic and molecular levels resonates with unique sets of radiation frequencies. Spectroscopic techniques use a range of principles to reveal the chemical composition, composition variation, crystal structure, electronic structure and photoelectric properties of materials. This method thus leads to higher level of understanding of materials, which is needed to find their inherent properties, tune for applications and develop

Supramolecular Chemistry (3rd Edition)

Jonathan W. Steed, Jerry L. Atwood

9781119582519, 1119582512

Pub Date: 8/30/21

\$100.00 USD

1000 pages

Hardcover

Science / Chemistry / Physical & Theoretical

Summary: A one-stop, comprehensive, and thoroughly updated resource for students, professors, and researchers alike

Thoroughly revised and updated, the Third Edition of *Supramolecular Chemistry* delivers a comprehensive and integrated approach to this rapidly evolving and quickly expanding field. Distinguished professors and authors Jonathan Steed and Jerry Atwood provide readers with a broad and exhaustive resource that assumes little in the way of prior knowledge of supramolecular chemistry.

Extensive new content on cutting edge research throughout

The Chemistry of Organoboron Compounds

Mark Gandelman, Ilan Marek, Joel F. Liebman, Zvi R...

9781119518044, 1119518040

Pub Date: 6/8/21

\$1,115.00 USD

1152 pages

Hardcover

Science / Chemistry / Organic

Summary: The ultimate resource in organoboron chemistry

Professor Mark Gandelman and his colleagues delve deeply into the theory, structure, analysis, synthesis, and reactions of organoboron chemistry in *The Chemistry of Organoboron Compounds*. Organoborons are used heavily as highly efficient reagents in many reactions, including cross-coupling and radical reactions. The highly regarded authors have tied together organic-chemical and physico-chemical knowledge usually unavailable from a single source. The book focuses on the use of completely biodegradable "green" reagents, as opposed to environmentally hazardous heavy metal

The Fundamentals of Clinical Research : A Universal Guide for the Clinical Trial Professional

P. Michael Dubinsky, Karen A. Henry

9781118949597, 1118949595

Pub Date: 11/9/21

\$175.00 USD

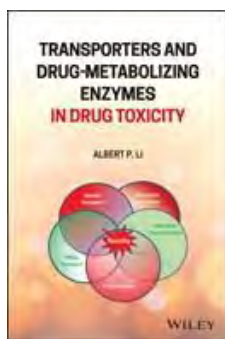
608 pages

Hardcover

Science / Chemistry / Clinical

Summary: This book focuses on the practical application of good clinical practice (GCP) fundamentals and provides insight into roles and responsibilities included in planning, executing, and analyzing clinical trials. The authors describe the design of quality into clinical trial planning and the application of regulatory, scientific, administrative, business, and ethical considerations.

- Describes the design of quality into the clinical trial planning
- Includes end-of-chapter questions and answers to check learning and comprehension
- Has a separate instructor's guide available for



Transporters and Drug-Metabolizing Enzymes in Drug Toxicity

Albert P. Li
9781119170846, 1119170842
Pub Date: 8/10/21
\$150.00 USD
352 pages
Hardcover
Medical / Pharmacology

This book provides a comprehensive and up-to-date coverage of the relationship between drug metabolism enzymes and transporters on drug toxicity.

Summary: This book provides a comprehensive and up-to-date coverage of the relationship between drug metabolism enzymes and transporters on drug toxicity, along with methods to investigate their role on adverse drug reactions.

- Unites both the metabolism and transporter components of drug toxicity – two aspects not normally connected and the latter often neglected

Subject: Food Science & Technology

Wiley-Blackwell



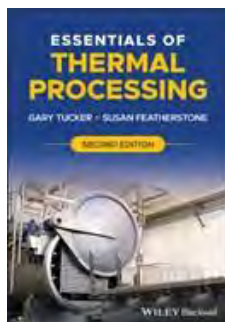
Advanced Fermentation and Cell Technology, 2 Volume Set : 2 Volume Set

Byong H. Lee
9781119042761, 1119042763
Pub Date: 8/9/21
\$345.00 USD
960 pages
Hardcover
Technology & Engineering / Food Science

Summary: A comprehensive and up-to-date reference covering both conventional and novel industrial fermentation technologies and their applications

Fermentation and cell culture technologies encompass more than the conventional microbial and enzyme systems used in the agri-food, biochemical, bioenergy and pharmaceutical industries. New technologies such as genetic engineering, systems biology, protein engineering, and mammalian cell and plant cell systems are expanding rapidly, as is the demand for sustainable production of bioingredients, drugs, bioenergy and biomaterials. As the growing biobased economy drives innovation, industrial practitioners,

Wiley-Blackwell



Essentials of Thermal Processing (2nd Edition)

Gary Tucker, Susan Featherstone
9781119470373, 1119470374
Pub Date: 7/13/21
\$195.00 USD
312 pages
Hardcover
Technology & Engineering / Food Science

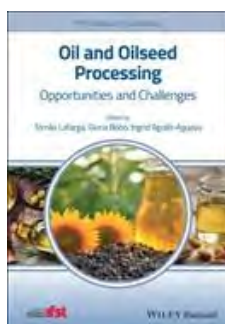
Summary:

The accomplished authors—noted experts in their field—discuss all relevant manufacturing steps, from raw material microbiology through the various processing regimes, validation methods, packaging, incubation testing, and spoilage incidents.

Two new chapters on temperature and heat distribution, as well as heat penetration of foods, are included. More worked and practical examples are found throughout the book as well. Readers will also benefit from the inclusion of:

- A thorough introduction to the microbiology of heat processed foods, food preservation techniques, low acid canned foods, and high acid foods
- An exploration of acidified products, heat extended shelf-life chilled

Wiley-Blackwell



Oil and Oilseed Processing : Opportunities and Challenges

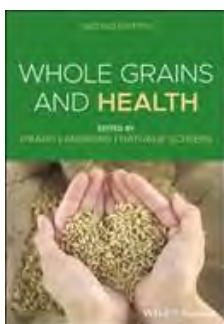
Tomás Lafarga, Gloria Bobo, Ingrid Aguilera
9781119575276, 1119575273
Pub Date: 6/28/21
\$199.99 USD
304 pages
Hardcover
Technology & Engineering / Food Science

Summary: The latest information available on oil and oilseed processing

Oil and Oilseed Processing offers a comprehensive text that explores both the conventional and novel “green” extraction methods used to extract oils from seeds. The authors—noted experts on the topic—examine the positive aspects of operations in processing oil and oilseeds and present new processing concepts, principles, effects on quality, as well as the stability characteristics, limitations, and challenges.

Due to the economic implications associated with the overproduction of seed oils, the book includes pertinent

Wiley-Blackwell

**Whole Grains and Health (2nd Edition)**

Rikard Landberg, Nathalie Scheers

9781118939437, 1118939433

Pub Date: 6/28/21

\$165.00 USD

512 pages

Hardcover

Technology & Engineering / Food Science

Summary: The updated guide to whole grains and their integral role in nutritional health

In an increasingly health-conscious society, the potential benefits of whole grain products are of paramount importance to manufacturers, dieticians, and consumers alike. *Whole Grains and Health* covers all aspects of this crucial topic, presenting a data-driven study of whole grains' functional components, associated biomarkers and overall impact upon human health. Now in its second edition, the text has been revised and expanded to include six new chapters and groundbreaking new data. This essential guide features:

Subject: Material Science

Wiley-VCH

**Biological Soft Matter : Fundamentals, Properties, and Applications**

Corinne Nardin, Helmut Schlaad

9783527343485, 3527343482

Pub Date: 4/26/21

\$160.00 USD

288 pages

Hardcover

Technology & Engineering / Chemical & Biochemical

Summary: Explore a comprehensive, one-stop reference on biological soft matter written and edited by leading voices in the field

Biological Soft Matter: Fundamentals, Properties and Applications delivers a unique and indispensable compilation of up-to-date knowledge and material on biological soft matter. The book presents a thorough overview about biological soft matter, beginning with different substance classes, including proteins, nucleic acids, lipids, and polysaccharides. It goes on to describe a variety of superstructures and aggregated and how they are formed by self-assembly processes like protein folding or crystallization.

Wiley-American Ceramic Society

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Available**81st Conference on Glass Problems**

ACerS (American Ceramics Society, The)

9781119822998, 1119822998

Pub Date: 8/24/21

\$250.00 USD

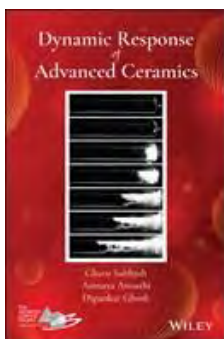
252 pages

Hardcover

Technology & Engineering / Materials Science

Summary: The 81st Conference on Glass Problems (GPC) was organized by the Kazuo Inamori School of Engineering, The New York State College of Ceramics, Alfred University, Alfred, NY 14802 and The Glass Manufacturing Industry Council (GMIC), Westerville, OH 43082. The Program Director was S. K. Sundaram, Inamori Professor of Materials Science and Engineering, Kazuo Inamori School of Engineering, The New York State College of Ceramics, Alfred University, Alfred, NY 14802. The Conference Director was Bob Lipetz, Executive Director, Glass Manufacturing Industry Council (GMIC), Westerville, OH 43082. The GPC Advisory Board (AB) included the Program Director, the Conference Director, and several in

Wiley-American Ceramic Society

**Dynamic Response of Advanced Ceramics**

Ghatu Subhash, Amnaya Awasthi, Dipankar Ghosh

9781119599777, 1119599776

Pub Date: 6/2/21

\$205.00 USD

448 pages

Hardcover

Technology & Engineering / Materials Science

Summary: In the last few decades, significant progress has been made in developing in-depth understanding of high strain-rate behavior of ceramic materials. The widespread use of ceramics for a variety of civilian and military applications, for example, in blast protection for armored vehicles, lightweight protective armor for soldiers etc., has invigorated new research directions in this field. The scientific discussions presented here are also applicable to a range of civilian applications including high-speed machining, cutting, and grinding of brittle materials.

The book is organized into eight chapters as detailed in the following: Chapter 1 provides a brief history of ceramic

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Electronic Packaging Science and Technology

Chih Chen, King-Ning Tu, Hung-Ming Chen
9781119418313, 1119418313

Pub Date: 7/27/21

\$195.00 USD

500 pages

Hardcover

Science / Chemistry / Analytic

Summary: This is a must-have book on the topic of electronic packaging technology -- covering the basics of the technology, electric circuit design for packaging, and the processes related to electronic packaging.

Flexible Supercapacitor Nanoarchitectonics

Inamuddin, Mohd Imran Ahamed, Rajender Boddula, Ta...

9781119711452, 1119711452

Pub Date: 5/25/21

\$249.00 USD

664 pages

Hardcover

Technology & Engineering / Nanotechnology & Mems

Summary: The 21 chapters in this book presents a comprehensive overview of flexible supercapacitors using engineering nanoarchitectures mediated by functional nanomaterials and polymers as electrodes, electrolytes, and separators, etc. for advanced energy applications. The various aspects of flexible supercapacitors, including capacitor electrochemistry, evaluating parameters, operating conditions, characterization techniques, different types of electrodes, electrolytes, and flexible substrates are covered. This is probably the first book of its type which systematically describes the recent developments and progress in flexible supercapacitor technology, and will be very helpful for generat

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Graphdiyne : Fundamentals, and Applications in Renewable Energy and Electronics

Yuliang Li

9783527347872, 3527347879

Pub Date: 8/16/21

\$164.34 USD

400 pages

Hardcover

Technology & Engineering / Materials Science

Summary: This book systematically summaries the recent research results in the field of graphdiyne. It not only eluminate the properties of graphdiyne by both theoretical simulations and experimental characterizations, but also combines the development of graphdiyne with appropriate preparation technology. This book has important impetus and academic reference value for the development of new graphdiyne based materials, which also provides the opportunity to understand the intrinsic properties of this kind of fantastic materials and thus accelerates the development of materials science and technology.

High Temperature Mechanical Behavior of Ceramic-Matrix Composites

Longbiao Li

9783527349036, 3527349030

Pub Date: 7/26/21

\$162.45 USD

450 pages

Hardcover

Technology & Engineering / Materials Science

Summary: This book presents state-of-the-art investigation on the properties of ceramic-matrix composites subjected to tensile and fatigue loading at different testing conditions. It helps designer to better design components for civil aircrafts or aero engines.

Wiley-American Ceramic Society

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**Materials for Biomedical Engineering
: Fundamentals and Applications**

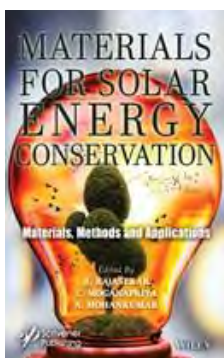
Mohamed N. Rahaman, Roger F. Brown
9781119551089, 1119551080
Pub Date: 10/26/21
\$175.00 USD
544 pages
Hardcover
Science / Biotechnology

Summary: This book provides an up-to-date textbook suitable for a one-semester (or two-quarter) course in biomaterials at the junior/senior undergraduate and introductory graduate levels. While intended primarily for students in biomedical engineering degree programs, the book will also provide an indispensable resource for an interdisciplinary audience composed of medical and dental students, researchers in the biomedical industry, and students with science and engineering backgrounds who have an interest in biomaterials. The focus of the book centers on the fundamentals to aid students to understand the materials science of biomaterials and their interaction with cells and tissues. However

John Wiley & Sons

**Materials for Solar Energy Conservation
: Materials, Methods and Applications**

R. Rajasekar, C. Moganapriya, A. Mohankumar
9781119750604, 1119750601
Pub Date: 6/22/21
\$225.00 USD
400 pages
Hardcover
Technology & Engineering / Materials Science

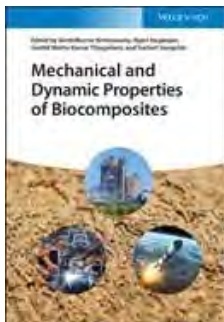


Summary: The demand for energy is increasing day by day and development of sustainable power generation is a critical issue. To overcome this constraint, renewable energy sources such as solar energy are developed by researchers. Effectual collection and storage of renewable energies like solar radiation requires the development of advanced functional materials. This book mainly focuses on the progress of recently developed functional materials for solar energy conservation. It also discusses the wide variety of organic and inorganic materials. Use of modern computer simulation techniques, conversion and storage processes are effectively covered. The research topics such as nano-structured s...

Wiley-VCH

**Mechanical and Dynamic Properties of
Biocomposites**

Senthilkumar Krishnasamy, Rajini Nagarajan, Senthil...
9783527346264, 3527346260
Pub Date: 6/21/21
\$174.00 USD
368 pages
Hardcover
Technology & Engineering / Materials Science



**Summary: A comprehensive review of the properties
of biocomposites and their applications**

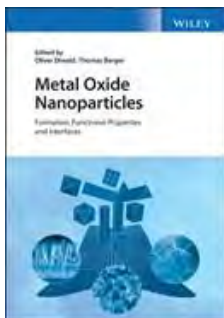
Mechanical and Dynamic Properties of Biocomposites offers a comprehensive overview of the mechanical and dynamic properties of biocomposites and natural fiber-reinforced polymer composites. This essential resource helps with materials selection in the development of products in fields like automotive and aerospace engineering as well as the construction of structures in civil engineering.

With contributions from a panel of experts in the field, the book reviews the mechanical and vibration damping

Wiley

**Metal Oxide Nanoparticles : Formation,
Functional Properties and Interfaces**

Oliver Diwald, Thomas Berger
9781119436744, 1119436745
Pub Date: 8/30/21
\$250.00 USD
632 pages
Hardcover
Technology & Engineering / Materials Science



**Summary: A complete nanoparticle resource for
chemists and industry professionals**

Metal oxide nanoparticles are integral to a wide range of natural and technological processes—from mineral transformation to electronics. Additionally, the fields of engineering, electronics, energy technology, and electronics all utilize metal oxide nanoparticle powders. *Metal Oxide Nanoparticles: Formation, Functional Properties and Interfaces* presents readers with the most relevant synthesis and formulation approaches for using metal oxide nanoparticles as functional materials. It covers common processing routes and the assessment of physical and

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Microbial Interactions at Nanobiotechnology Interfaces : Molecular Mechanisms and Applications

R. Navanietha Krishnaraj, Rajesh K. Sani
9781119617198, 1119617197

Pub Date: 8/17/21

\$195.00 USD

400 pages

Hardcover

Technology & Engineering / Nanotechnology & Mems

Summary: This book provides a strong foundation for researchers who want to develop functionalized nanomaterials for any biological applications in their research. Topics covered include the synthesis of nanomaterials with specific size, shape, and properties, structure-function relationships, tailoring the surface of nanomaterials for improving the properties, and the interaction of nanomaterials with proteins/microorganism /eukaryotic cells.

Readers will especially benefit from learning practical concepts and techniques such as modelling nanomaterials and simulating the molecular interactions with biomolecules,

Wiley-VCH

Nanogap Electrodes

Tao Li

9783527332717, 3527332715

Pub Date: 7/19/21

\$150.00 USD

400 pages

Hardcover

Technology & Engineering / Nanotechnology & Mems

Unique in combining various synthesis strategies with applications for nanogap electrodes, this book introduces the topic before devoting whole sections to synthesis, characterization, and application...

Summary: Unique in its scope, this book comprehensively combines various synthesis strategies with applications for nanogap electrodes. Clearly divided into four parts, the monograph begins with an introduction to molecular electronics and electron transport in molecular junctions, before moving on to a whole section devoted to synthesis and characterization. The third part looks at applications with single molecules or self-assembled monolayers and the

Wiley-VCH

Electrochemical Energy Storage Devices : New Design, Architectures and Configurations

Feng Li, Lei Wen, Huiming Cheng

9783527345793, 3527345795

Pub Date: 5/24/21

\$165.00 USD

328 pages

Hardcover

Technology & Engineering / Materials Science

Summary: Explore the latest developments in electrochemical energy storage device technology

In *Novel Electrochemical Energy Storage Devices*, an accomplished team of authors delivers a thorough examination of the latest developments in the electrode and cell configurations of lithium-ion batteries and electrochemical capacitors. Several kinds of newly developed devices are introduced, with information about their theoretical bases, materials, fabrication technologies, design considerations, and implementation presented.

You'll learn about the current challenges facing the industry,

Wiley-VCH

Organic Electronics for Electrochromic Materials and Devices

Hong Meng

9783527348718, 3527348719

Pub Date: 4/26/21

\$185.00 USD

528 pages

Hardcover

Technology & Engineering / Optics

Summary: Explore this comprehensive overview of organic electrochromic materials and devices from a leading voice in the industry

Organic Electronics for Electrochromic Materials and Devices delivers a complete discussion of the major and key topics related to the phenomenon of electrochromism. The text covers the history of organic electrochromism, its fundamental principles, different types of electrochromic materials, the development of device structures and multi-function devices, characterizations of device performance, modern applications of electrochromic devices, and prospects for future electrochromic devices.



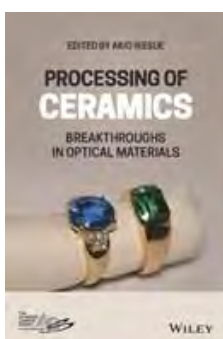
Organic Semiconductors for Optoelectronics

Hiro Yoshi Naito
9781119146100, 1119146100
Pub Date: 6/21/21
\$195.00 USD
400 pages
Hardcover
Science / Physics / Condensed Matter

Summary: Comprehensive coverage of organic electronics, including fundamental theory, basic properties, characterization methods, device physics, and future trends

Organic semiconductor materials have vast commercial potential for a wide range of applications, from self-emitting OLED displays and solid-state lighting to plastic electronics and organic solar cells. As research in organic optoelectronic devices continues to expand at an unprecedented rate, organic semiconductors are being applied to flexible displays, biosensors, and other cost-effective green devices in ways not possible with conventional inorganic semiconductors.

Wiley-American Ceramic Society



Processing of Ceramic Optical Materials

Akio Ikesue
9781119538707, 111953870X
Pub Date: 6/29/21
\$205.00 USD
432 pages
Hardcover
Technology & Engineering / Materials Science

Summary: Focusing on optical applications mainly in lasers, scintillators, Faraday rotators, lighting, and passive materials, this book progresses from an introduction to the topic through principle of function creation, material preparation, properties (characteristics), and future trends in optical ceramics. The book covers practical applications of transparent ceramics such as lighting, passive applications (windows, domes, and armor), and future technologies such as bonding technologies.

Wiley-Scrivener

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Rubber to Rubber Adhesion

Dinesh Kumar Kotne, Anil K. Bhowmick
9781119768890, 1119768896
Pub Date: 6/2/21
\$195.00 USD
275 pages
Hardcover
Technology & Engineering / Materials Science / Metals & Alloys

Summary: This book covers various aspects of rubber to rubber adhesion. Rubber is a polymer whose glass transition temperature is well below the room temperature and hence the chains are very mobile at room and higher temperatures. This property makes this material very versatile. Rubber is used in a large number of applications ranging from underground mining to tire to space shuttle. In all these cases, compounded rubbers are used in laminates and joined. Higher the adhesion, higher will be the joint strength. The principles taught in adhesion science and technology are extensively used to prepare better joints and hence useful products. The subject of this book is important theoretically...

Wiley

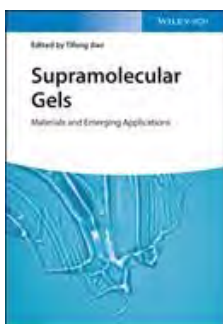
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Simulation and Wargaming

Charles Turnitsa, Curtis Blais, Andreas Tolk
9781119604785, 1119604788
Pub Date: 8/3/21
\$135.00 USD
432 pages
Hardcover
Technology & Engineering / Materials Science

Summary: The use of simulation applied to combat situations has a long history, going back to the beginning of the 20th century, and it is usually applied to areas of analysis and training outside of wargaming. Wargaming, on the other hand, has its modern roots going back to the first half of the 19th century, and has proven to be extremely effective at giving military planners and analysts insights into possible future conflicts, as well as an invaluable method at evaluating current and past operations. By combining these two areas, the data driven speed and details of computer simulation can be combined with insight and analysis provided by wargaming, however the two communities do not see

Wiley-VCH



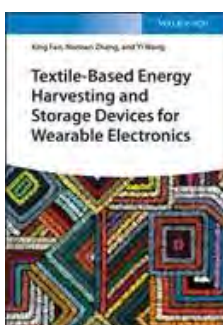
Supramolecular Gels : Materials and Emerging Applications

Tifeng Jiao
9783527345113, 3527345116
Pub Date: 9/27/21
\$163.75 USD
350 pages
Hardcover
Technology & Engineering / Materials Science

Summary: Discover a current and authoritative overview of the cutting-edge in supramolecular gels from a leading voice in the field

A promising new class of materials shows potential and is receiving increasing attention as an intelligent material for multifunctional systems. In a work that is sure to be of great interest to a wide variety of researchers, chemists, and engineers, *Supramolecular Gels: Materials and Emerging Applications* delivers an application-oriented and focused book exploring the most recent applications of supramolecular gels.

Wiley-VCH



Textile-Based Energy Harvesting and Storage Devices for Wearable Electronics

Xing Fan, Nannan Zhang, Yi Wang
9783527345243, 3527345248
Pub Date: 9/20/21
\$163.75 USD
350 pages
Hardcover
Technology & Engineering / Materials Science

Summary: The book covers textile-based energy harvesting and storage systems. It presents the principles of the smart fibers and fabrics, as well as the fabrication methods. Then it introduces in detail various fiber- or fabric-based energy harvesting and storage devices, including photovoltaics, piezoelectrics, triboelectrics, supercapacitors, batteries as well as sensing and self-powered electric fabrics. Expanded functions of the smart fabrics are also discussed, such as stretchability, hydrophobicity, air permeability and color-changeability.

Wiley-VCH

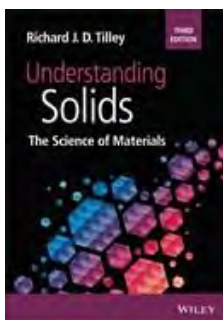
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Two-Dimensional Materials for Electromagnetic Shielding

Chong Min Koo, Pradeep Sambyal, Aamir Iqbal
9783527348428, 3527348425
Pub Date: 8/2/21
\$155.00 USD
256 pages
Hardcover
Technology & Engineering / Materials Science /
Electronic Materials

Summary: This book covers knowledge on shielding mechanisms and hence the demanding physical, chemical and mechanical properties of the novel 2D materials against betrayed electromagnetic waves.

Wiley

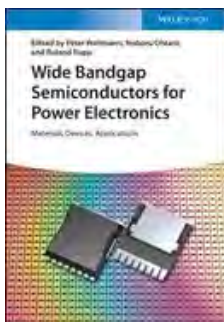


Understanding Solids : The Science of Materials (3rd Edition)

Richard J. D. Tilley
9781119716501, 1119716500
Pub Date: 9/14/21
\$85.00 USD
550 pages
Paperback
Technology & Engineering / Materials Science

Summary: Explore a comprehensive and illuminating introductory text to the science of solid materials from a leading voice in the field

The newly revised Third Edition of *Understanding Solids: The Science of Materials* delivers a complete yet concise treatment of the basic properties and chemical and physical behaviors of solid materials. Following a completely revised opening set of chapters in which the basic properties of solids—including atomic structure, chemical bonding, crystallography, and phase relationships—are discussed, the book goes on to describe new developments in the areas of batteries and fuel cells, perovskite solar cells, lighting and



Wide Bandgap Semiconductors for Power Electronics : Materials, Devices, Applications

Peter Wellmann, Noboru Ohtani, Roland Rupp

9783527346714, 3527346716

Pub Date: 6/8/21

\$335.00 USD

715 pages

Hardcover

Technology & Engineering / Materials Science

Summary: A guide to the field of wide bandgap semiconductor technology

Wide Bandgap Semiconductors for Power Electronics is a comprehensive and authoritative guide to wide bandgap materials silicon carbide, gallium nitride, diamond and gallium(III) oxide. With contributions from an international panel of experts, the book offers detailed coverage to the growth of these materials, their characterization, and how they are used in a variety of power electronics devices such as transistors and diodes and in the areas of quantum information and hybrid electric vehicles.

Subject: Polymer Science & Technology

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Applications of Polymer Nanofibers

Anthony L. Andradý, Saad A. Khan

9781119267683, 1119267684

Pub Date: 9/8/21

\$195.00 USD

400 pages

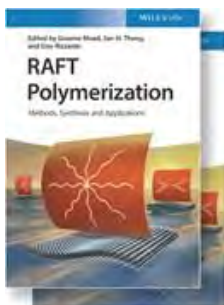
Hardcover

Technology & Engineering / Chemical & Biochemical

Summary: Explore a comprehensive review of the practical experimental and technological details of polymer nanofibers with a leading new resource

Applications of Polymer Nanofibers delivers a complete introduction to the basic science of polymer nanofibers as well as a review of their diverse applications. The book assesses their potential for commercialization and presents contributions from leading experts emphasizing their practical and technological details. New and up to date research findings are presented throughout the book in areas including filters, fabric, energy, fuel cells, batteries, sensors, biomedicine, drug delivery, tissue engineering, and wound

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RAFT Polymerization, 2 Volume Set : Methods, Synthesis, and Applications

Graeme Moad, Ezio Rizzardo

9783527344956, 3527344950

Pub Date: 6/14/21

\$540.00 USD

1108 pages

Hardcover

Science / Chemistry / Organic

Summary: Explore this one-stop resource for reversible addition-fragmentation chain transfer polymerization from a leading voice in chemistry

RAFT Polymerization: Methods, Synthesis and Applications delivers a comprehensive and insightful analysis of reversible addition-fragmentation chain transfer polymerization (RAFT) and its applications to fields as diverse as material science, industrial chemistry, and medicine. This one-stop resource offers readers a detailed synopsis of the current state of RAFT polymerization.

This text will inspire further research and continue the drive