Chemistry & Material Science

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Table of Contents

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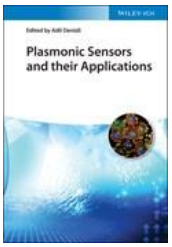
Extraction Techniques for Environmental Analysis

John R. Dean

Extraction Techniques for Environmental Analysis
Explore the analytical approach to extraction techniques

In *Extraction Techniques for Environmental Analysis*, accomplished environmental scientist and researcher John R. Dean delivers a comprehensive discussion of the extraction techniques used for organic compounds relevant to environmental analysis. In the book, extraction techniques for aqueous, air, and solid environmental matrices are explored and case studies that highlight those techniques ar...



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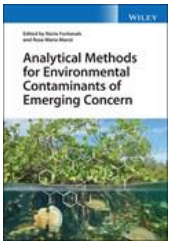
Plasmonic Sensors and their Applications

Adil Denizli

Plasmonic Sensors and their Applications
A practically-focused reference and guide on the use of plasmonic sensing as a faster and cheaper alternative to conventional sensing platforms

Plasmons, the collective oscillations of electrons occurring at the interface between any two materials, are sensitive to changes in dielectric properties near metal surfaces. Plasmonic sensors enable the real-time study of unique surface properties by monitoring the effect of the material interaction at the sensor ...



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Analytical Methods for Environmental Contaminants of Emerging Concern

N Fontanals

Analytical Methods for Environmental Contaminants of Emerging Concern
Provides the analytical methodology required to detect different families of organic compounds of emerging concern (CECs) from environmental samples

Most contaminants of emerging concern (CECs) —such as pharmaceuticals, personal care products, pesticides, sunscreens, perfluorinated compounds, and microplastics—have been present in the environment for years, yet some have only recently been identified, and

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

Hans-Joachim Hubschmann

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 CG-MS and LC-MS explores the advantages of implementing automated sample preparation during the handling phase for CG-MS a

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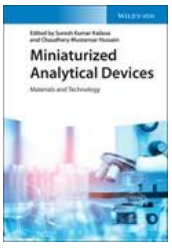
Analytical Testing for the Pharmaceutical GMP Laboratory: An Introduction to the Pharmaceutical GMP Laboratory

Kim Huynh-Ba

Provides practical guidance on pharmaceutical analysis, written by leading experts with extensive industry experience

Analytical Testing for the Pharmaceutical GMP Laboratory presents a thorough overview of the pharmaceutical regulations, working processes, and drug development best practices used to maintain the quality and integrity of medicines. With a focus on smaller molecular weight drug substances and products, the book provides the knowledge necessary for establishing the pharmaceutical



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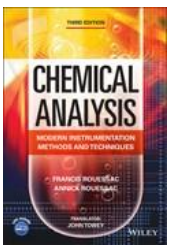
Miniaturized Analytical Devices: Materials and Technology

Suresh Kumar Kailasa, Chaudhery Mustansar Hussain

Miniaturized Analytical Devices
An in-depth overview of integrating functionalized nanomaterials with mass spectrometry, spectroscopy, electrophoresis, and other important analytical techniques

Miniaturized Analytical Devices: Materials and Technology is an up-to-date resource exploring the analytical applications of miniaturized technology in areas such as clinical microbiology, pharmaceuticals, agriculture, and environmental analysis. The book covers the integration of functional nanomaterials i...



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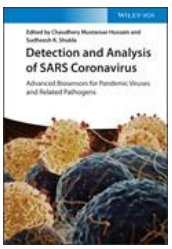
Chemical Analysis: Modern Instrumentation Methods and Techniques *(3rd Edition)*

Francis Rouessac, Annick Rouessac, John Towey

The new edition of the popular introductory analytical chemistry textbook, providing students with a solid foundation in all the major instrumental analysis techniques currently in use

The third edition of *Chemical Analysis: Modern Instrumentation Methods and Techniques* provides an up-to-date overview of the common methods used for qualitative, quantitative, and structural chemical analysis. Assuming no background knowledge in the subject, this student-friendly textbook covers the fundamental p...



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

Chaudhery Mustansar Hussain, Sudheesh K. Shukla

Detection and Analysis of SARS Coronavirus
Detecting and analyzing the COVID-19 pandemic with biosensor technology

The highly contagious SARS CoV-2 pathogen has challenged health systems around the world as they struggle to detect and monitor the spread of the pathogen. In *Detection and Analysis of SARS Coronavirus: Advanced Biosensors for Pandemic Viruses and Related Pathogens* expert chemists Chaudhery Mustansar Hussain and Sudheesh K. Shukla deliver a practical analysis of how

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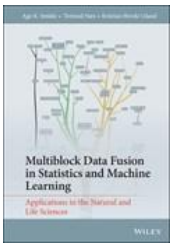

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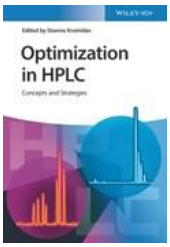
Multiblock Data Fusion in Statistics and Machine Learning: Applications in the Natural and Life Sciences

Age K. Smilde, Tormod Næs, Kristian Hovde Liland

Multiblock Data Fusion in Statistics and Machine Learning
Explore the advantages and shortcomings of various forms of multiblock analysis, and the relationships between them, with this expert guide

Arising out of fusion problems that exist in a variety of fields in the natural and life sciences, the methods available to fuse multiple data sets have expanded dramatically in recent years. Older methods, rooted in psychometrics and chemometrics, also exist.



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Optimization in HPLC: Concepts and Strategies

Stavros Kromidas

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

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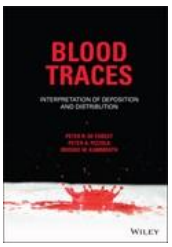

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Blood Traces: Interpretation of Deposition and Distribution

Peter R. De Forest, Peter A. Pizzola, Brooke W. Kammrath

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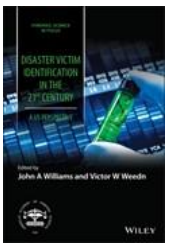

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John A. Williams, Victor W. Weedn, Douglas H. Ubelaker

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Klemen Zupancic, Tea Pavlek, Jana Erjavec

Take your lab into the 21st century with this insightful and exciting new resource

Digital Transformation of the Laboratory: A Practical Guide to the Connected Lab delivers essential and transformative new insights into current and future technologies and strategies for the digitization of laboratories. Thoroughly supported and backed-up with contributions from thought and industry leaders, the book shows scientists in academia and industry how to move from paper to digital in their own labs.

The

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Mass Spectrometry-Based Metabolomics in Clinical and Herbal Medicines: Strategies, Technologies, and Applications

Aihua Zhang, Wanying Wang

Highlights the importance and benefit of mass spectrometry-based metabolomics for identifying biomarkers that accurately screen for potential biomarkers of diseases

Mass spectrometry-based metabolomics offer new opportunities for biomarker discovery in complex diseases and may provide pathological understanding of diseases beyond traditional technologies. It is the systematic analysis of low-molecular-weight metabolites in biological samples and has been applied to discovering and

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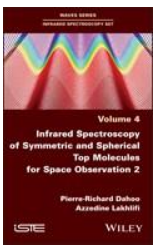

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Infrared Spectroscopy of Symmetric and Spherical Top Molecules for Space Observation, Volume 2

Pierre-Richard Dahoo, Azzedine Lakhlifi

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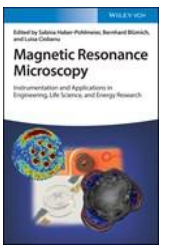
The theoretical models described in Volumes 1, 2 and 3 are used in this volume, applying the cumulant theorem in the mean-field theory framework to interpret the near and



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Magnetic Resonance Microscopy: Instrumentation and Applications in Engineering, Life Science, and Energy Research

Sabina Haber-Pohlmeier, Bernhard Blumich, Luisa Ciobanu

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Explore the interdisciplinary applications of magnetic resonance microscopy in this one-of-a-kind resource

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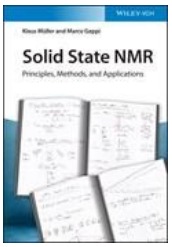

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Klaus Müller, Marco Geppi

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A thorough and comprehensive textbook covering the theoretical background, experimental approaches, and major applications of solid-state NMR spectroscopy

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Herman Tang

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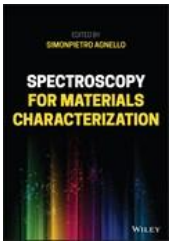

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Simonpietro Agnello

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Learn foundational and advanced spectroscopy techniques from leading researchers in physics, chemistry, surface science, and nanoscience

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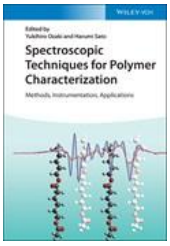

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Spectroscopic Techniques for Polymer Characterization: Methods, Instrumentation, Applications

Yukihiro Ozaki, Harumi Sato

An insightful exploration of cutting-edge spectroscopic techniques in polymer characterization
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Vivek K. Singh, Jun Kawai, Durgesh K. Tripathi

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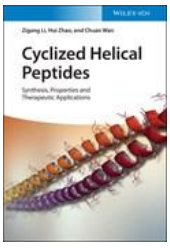

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Cyclized Helical Peptides: Synthesis, Properties and Therapeutic Applications

Zigang Li, Hui Zhao, Chuan Wan

An important and timely guide to the progress being made on constrained helical peptides

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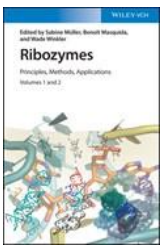

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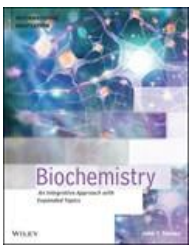
Ribozymes, 2 Volume Set: Principles, Methods, Applications

Sabine Müller, Benoît Masquida, Wade Winkler

Ribozymes
Provides comprehensive coverage of a core field in the molecular biosciences, bringing together decades of knowledge from the world's top professionals in the field

Timely and unique in its breadth of content, this all-encompassing and authoritative reference on ribozymes documents the great diversity of nucleic acid-based catalysis. It integrates the knowledge gained over the past 35 years in the field and features contributions from virtually every leading expert on the



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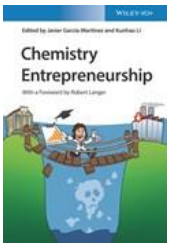

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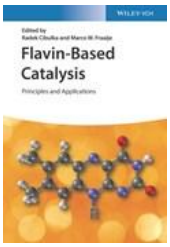
Chemistry Entrepreneurship

Javier García-Martínez, Kunhao Li

A groundbreaking guide to the commercialization of scientific breakthroughs in chemistry, from successful entrepreneurs

Chemistry Entrepreneurship is a step-by-step guide that is specifically devoted to understanding what it takes to start and grow a new company in the chemistry sector. Comprehensive in scope, the book covers the various 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 univ...



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Flavin-Based Catalysis: Principles and Applications

Radek Cibulka, Marco W. Fraaije

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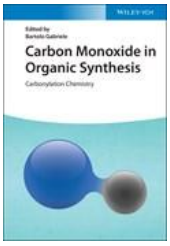

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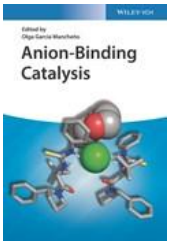
Carbon Monoxide in Organic Synthesis: Carbonylation Chemistry

Bartolo Gabriele

Carbon Monoxide in Organic Synthesis
A thoroughly up-to-date overview of carbonylation reactions in the presence of carbon monoxide

In *Carbon Monoxide in Organic Synthesis: Carbonylation Chemistry,* expert researcher and chemist Bartolo Gabriele delivers a robust summary of the most central advances in the field of carbonylation reactions in the presence of carbon monoxide. Beginning with a brief introduction on the importance of carbon monoxide as a building block in modern organic synthesis, the ...



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Anion-Binding Catalysis

Olga Garcia-Mancheno

Explores the potential of new types of anion-binding catalysts to solve challenging synthetic problems

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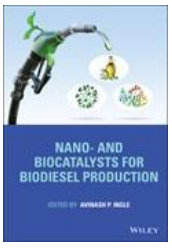

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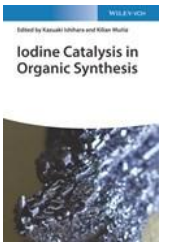
Nano- and Biocatalysts for Biodiesel Production

Avinash P. Ingle

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 envir...



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Iodine Catalysis in Organic Synthesis

Kazuaki Ishihara, Kilian Muniz

Iodine Catalysis in Organic Synthesis
The first book of its kind to highlight iodine as a sustainable alternative to conventional transition metal catalysis

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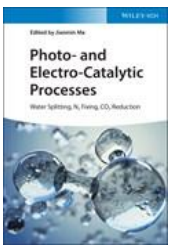

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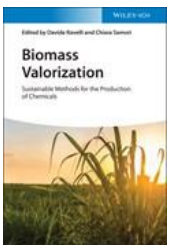
Photo- and Electro-Catalytic Processes: Water Splitting, N2 Fixing, CO2 Reduction

J Ma

Explore green catalytic reactions with this reference from a renowned leader in the field

Green reactions—like photo-, photoelectro-, and electro-catalytic reactions—offer viable technologies to solve difficult problems without significant damage to the environment. In particular, some gas-involved reactions are especially useful in the creation of liquid fuels and cost-effective products.

In *Photo- and Electro-Catalytic Processes: Water Splitting, N_2 Fixing, CO_2 Reduction*, award-winning researche...



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Biomass Valorization: Sustainable Methods for the Production of Chemicals

Davide Ravelli, Chiara Samori

Explore the potential of biomass-based chemicals with this comprehensive new reference from leading voices in the field

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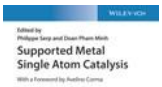

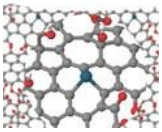

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P Serp

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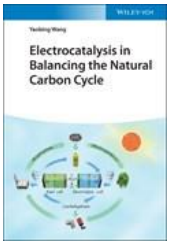

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Yaobing Wang

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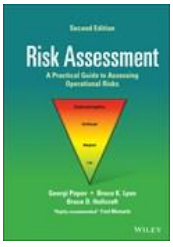

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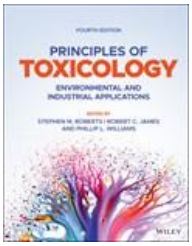

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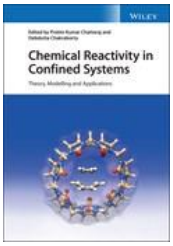

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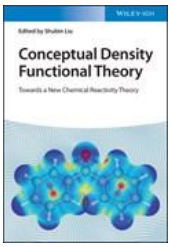

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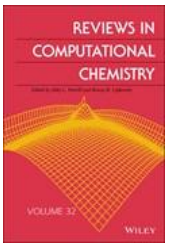

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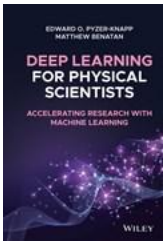

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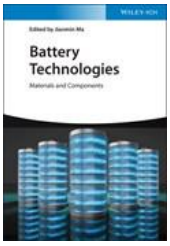

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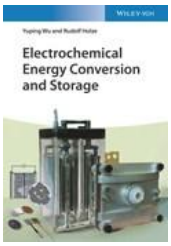

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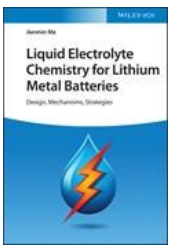

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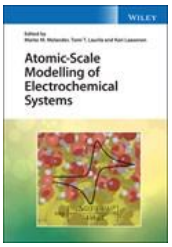

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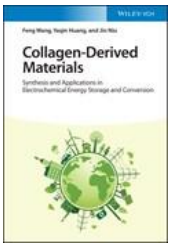

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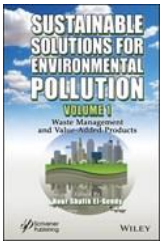

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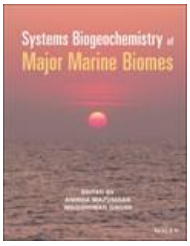

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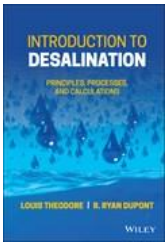

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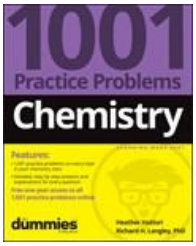

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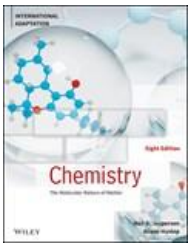

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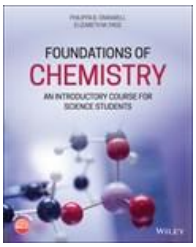

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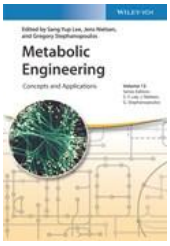

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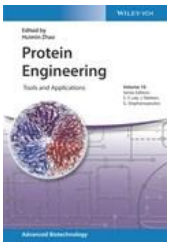

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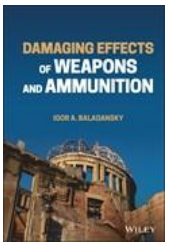

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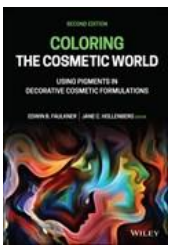

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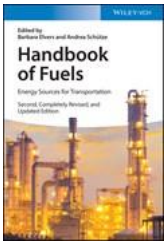

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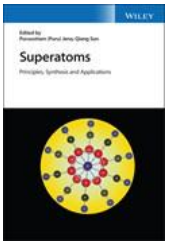

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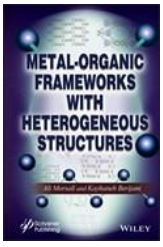

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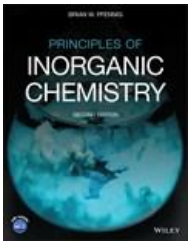

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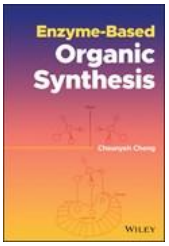

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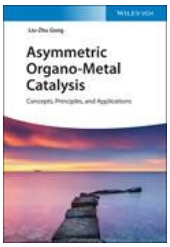

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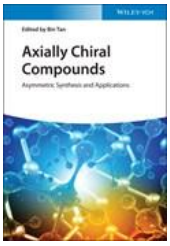

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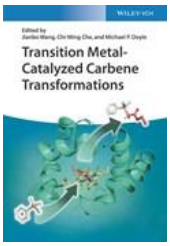

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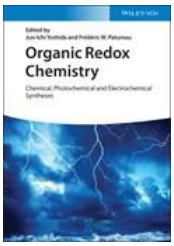

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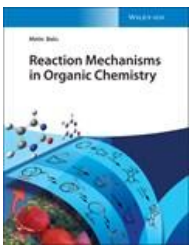

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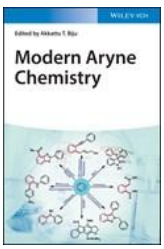

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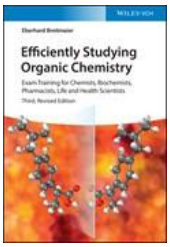

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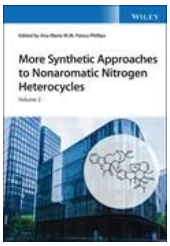

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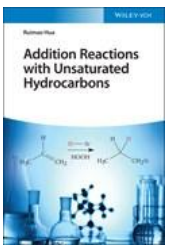

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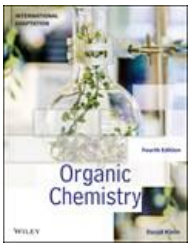

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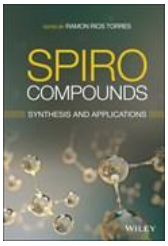

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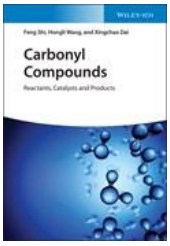

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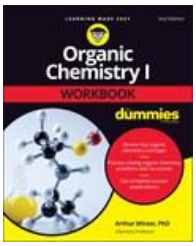

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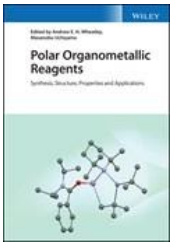

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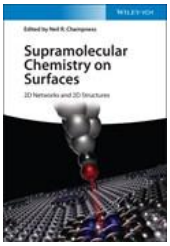

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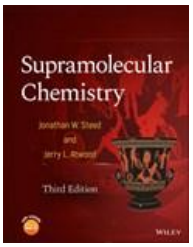

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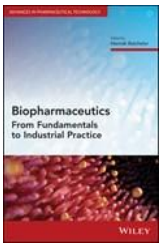

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Hannah Batchelor

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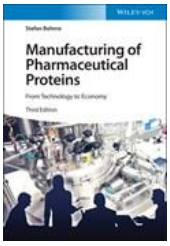

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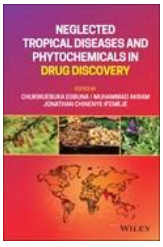

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Chukwuebuka Egbuna, Muhammad Akram, Jonathan Chinenye Ifemeje

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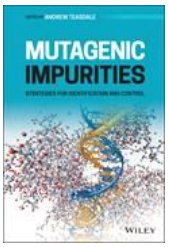

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Andrew Teasdale

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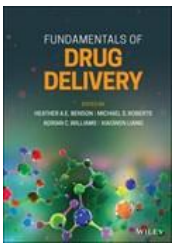

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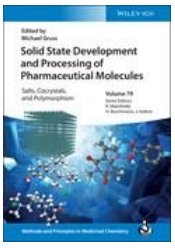

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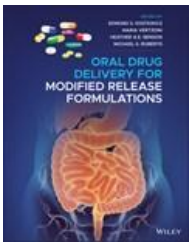

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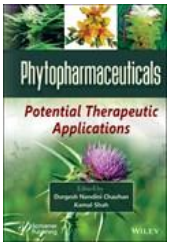

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Durgesh Nandini Chauhan, Kamal Shah

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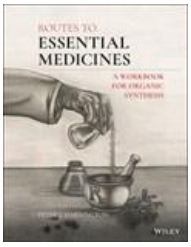

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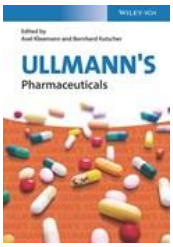

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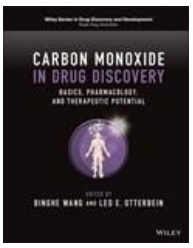

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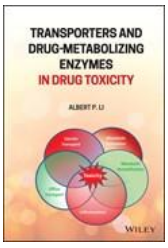

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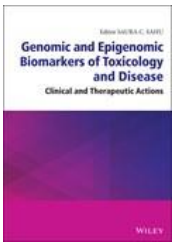

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Saura C. Sahu

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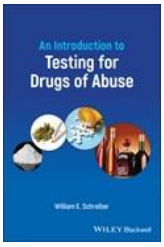

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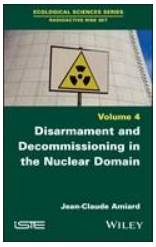

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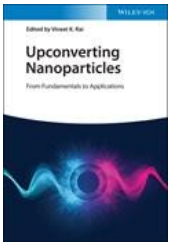

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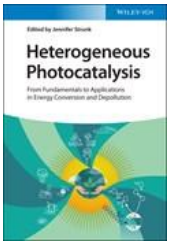

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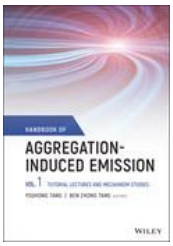

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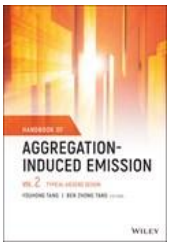

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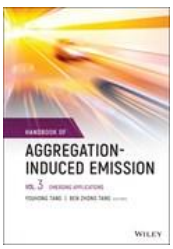

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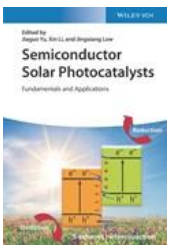

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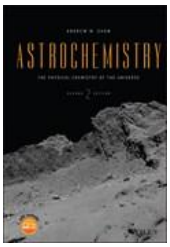

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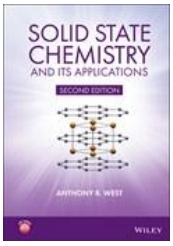

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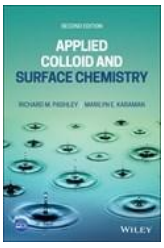

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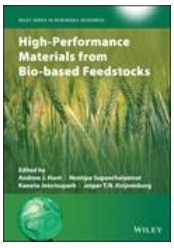

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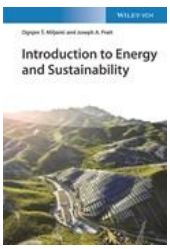

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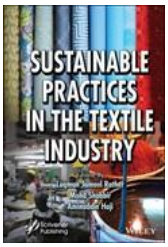

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