Agilent Cary 7000 Universal Measurement Spectrophotometer

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The Instrument Manual - J. T. Miller 1975

Nanotechnology in Construction - Konstantin Sobolev 2015-05-07
Nanotechnology has already demonstrated surprising potential for improving the performance of construction materials and many of these recent developments were facilitated by NICOM symposia. The NICOM5 proceedings will cover the emerging opportunities and future use of nanotechnology in construction and will illustrate the broad potential for application of nanotechnology to challenging problems involving materials and infrastructure.
Hazards in the Chemical Laboratory - L. Bretherick 1981

Photoelectrochemical Solar Fuel Production - Sixto Giménez 2016-04-29
This book explores the conversion for solar energy into renewable liquid fuels through electrochemical reactions. The first section of the book is devoted to the theoretical fundamentals of solar fuels production, focusing on the surface properties of semiconductor materials in contact with aqueous solutions and the reaction mechanisms. The second section describes a collection of current, relevant characterization techniques, which provide essential information of the band structure of the semiconductors and carrier dynamics at the interface semiconductor. The third, and last section comprises the most recent developments in materials and engineered structures to optimize the performance of solar-to-fuel conversion devices.
Elemental Speciation - Joseph A. Caruso 2000
Hardbound. This book provides a comprehensive discussion of the major aspects involved in elemental speciation. Sample preparation, separation techniques, instrumentation and quality assurance are all discussed. In addition, individual chapters are devoted to speciation of environmental samples and speciation of biological, clinical, and nutritional samples. Individual chapters are written by leaders in the field, and the book has been organized so that the reader may learn how to collect a sample and prepare it. Ways to separate and detect analytes of interest, and steps to take to ensure the validity of the measurements are also discussed. This book is unique in its comprehensive treatment of this subject.
Modern Technologies and Their Influence in Fermentation Quality - Santiago Benito 2020-05-20
During the last few years, industrial fermentation technologies have advanced in order to improve the quality of the final product. Some examples of those modern technologies are the biotechnology developments of microbial materials, such as Saccharomyces and non-Saccharomyces yeasts or lactic bacteria from different

genera. Other technologies are related to the use of additives and adjuvants, such as nutrients, enzymes, fining agents, or preservatives and their management, which directly influence the quality and reduce the risks in final fermentation products. Other technologies are based on the management of thermal treatments, filtrations, pressure applications, ultrasounds, UV, and so on, which have also led to improvements in fermentation quality in recent years. The aim of the issue is to study new technologies able to improve the quality parameters of fermentation products, such as aroma, color, turbidity, acidity, or any other parameters related to improving sensory perception by the consumers. Food safety parameters are also included.

Black Fungal Extremes - G. S. de Hoog 2008

Nontraditional Careers for Chemists - Lisa M. Balbes 2007

"Contrary to what some people think, an education and background in chemistry prepares you for much more than just a laboratory career. The broad science education, logical and analytical thinking, research methods, and other professional skills are of value to a wide variety of employers, and are essential for a plethora of positions. In addition, those who are interested in chemistry tend to have some similar personality characteristics, which lead to success in certain types of positions. Realizing these two things opens up a world of possibilities for the professional chemist, and allows the selection of a career path that truly is the best fit for your own personal skills, abilities, and interests.""Each chapter in this book provides background information on a nontraditional field and a variety of positions within that field, including typical tasks, education or training requirements, and personal characteristics that contribute to a successful career. Each chapter also contains detailed profiles of several chemists who have achieved success and personal satisfaction in various types of positions in that field. These interesting and varied career histories explain how these chemists got where they are, details what motivates them, and gives advice for others considering the same path, in both the short and long term.""Specific career fields profiled include communication, chemical information, patents, sales and marketing, business development, regulatory affairs, public policy, safety, human resources, and computers, among others. Along the way you will learn how to seek out and evaluate new career options, so even if none of the careers profiled is right for you, you can continue the exploration on your own until you find the one that is."--Back cover.

Fungal Pigments - Laurent Dufossé 2018-03-23

This book is a printed edition of the Special Issue "Fungal Pigments" that was published in JoF

Chemometrics in Spectroscopy - Howard Mark 2021-10-14

Chemometrics in Spectroscopy, Revised Second Edition provides the reader with the methodology crucial to apply chemometrics to real world data. The book allows scientists using spectroscopic instruments to find explanations and solutions to their problems when they are confronted with unexpected and unexplained results. Unlike other books on these topics, it explains the root causes of the phenomena that lead to these results. While books on NIR spectroscopy sometimes cover basic chemometrics, they do not mention many of the advanced topics this book discusses. This revised second edition has been expanded with 50% more content on advances in the field that have occurred in the last 10 years, including calibration transfer, units of measure in spectroscopy, principal components, clinical data reporting, classical least squares, regression models, spectral transfer, and more. Written in the column format of the authors' online magazine Presents topical and important chapters for those involved in analysis work, both research and routine Focuses on practical issues in the implementation of chemometrics for NIR Spectroscopy Includes a companion website with 350 additional color figures that illustrate CLS concepts

Selective Detectors - Robert E. Sievers 1995-04-03

A timely and authoritative review of the current state of selective detector technology This book was written for professionals who need to keep abreast of the latest developments and emerging trends in selective detectors and their applications. It comprises contributions from many of the leading innovators and pioneers in the field, including James Lovelock, inventor of the electron capture detector, whose own contribution is certain to be a rich source of ideas and inspiration for all who read it. Offering a balanced presentation of theory and practice, Selective Detectors: Reviews the theory and underlying principles of a broad range of devices Discusses, in detail, capabilities and current applications, with an emphasis on interdisciplinary applications, including environmental, petrochemical, biomedical, and quality control Explores, in depth, the latest advances and emerging technologies Arms readers with a wealth of practical "how-to" information on selecting, using, modifying, and building selective detectors for a wide range of applications Future historians studying the late twentieth century will almost certainly come to view the advent of selective detectors as among the truly formative technological developments of the period. Anyone who doubts this thesis need only consider the impact of selective detection on environmental quality, the sciences, technology, medicine, business and industry, public policy, quality control, and many other fields. Yet, despite the obvious importance of selective detectors, there continues to be a scarcity of books dedicated to helping professionals keep abreast of the latest developments and emerging trends in this in fluential technology. This timely and authoritative review of the current state of selective detector technology fills that gap. This book focuses on the newest selective detectors for chromatographic analysis. Conceived and shepherded into existence by a major figure in analytical chemistry and environmental analysis, it includes contributions from many of the leading innovators and pioneers in the field. Most prominent among these is Dr. James Lovelock, inventor of the electron capture detector, whose chapter on the history and development of selective detectors will be a rich source of ideas and inspiration for all who read it. Offering a balanced presentation of theory and practice, Selective Detectors reviews the theory and underlying principles of selective detectors; discusses, in detail, their current capabilities and applications; explores the latest advances and emerging technologies; and arms readers with a wealth of practical "how-to" information on selecting, using, modifying, and building selective detectors for a wide range of applications. Selective Detectors is an invaluable resource for analytical chemists and technicians working in a variety of disciplines, including environmental science, petrochemical industries, the food and beverage industries, biotechnology, medicine, and more.

Novel Bioderived Composites from Wastes - Andrea Petrella 2020

The recovery of solid wastes for the preparation of innovative composite materials not only represents an economic advantage, but also offers an ecological opportunity for the utilization of by-products which would otherwise be landfilled. Specifically, the reuse and recycling of waste lead to important savings of raw materials and energy, since these by-products, generally deriv from agricultural or industrial activities, are abundant in nature. Moreover, a reduction of the environmental and related sanitary impacts can be also achieved. For this reason, a recycling operation is fundamental for the improvement of the environmental sustainability, because these secondary raw materials become a resource that can be easily reused without the modification of the peculiar characteristics, in order to obtain new and performing composites, with a low specific weight, high durability, and long life cycle.

Translocator Protein (TSPO) - Giovanni

Natile 2018-03-05
This book is a printed edition of the Special Issue "Translocator Protein (TSPO)" that was published in IJMS

Challenging Glass 4 & COST Action TU0905 Final Conference - Christian Louter 2014-01-28
This proceedings volume of the Challenging Glass 4 & COST Action TU0905 Final Conference, held 6-7 February 2014 at the EPFL in Lausanne, Switzerland, represents the Final Action Publication of the European research network COST Action TU0905 Structural Glass Novel design methods and next generation products. It contains nearly 100 peer-rev

Photoactive Inorganic Nanoparticles - Julia Pérez Prieto 2019-03-09
Nanoparticles are usually designed for specific applications and selection of the most convenient capping can be a complex task, but is crucial for successful design. In this volume, the authors discuss the selection of functional cappings to coat nanoparticles in a range of different applications. The opening chapter provides an understanding of basic aspects of surface chemistry at the nanoscale. Each following chapter covers a particular kind of capping, beginning with a basic introduction and describing characteristics such as structure, functionality, solubility, (photo)physics, and toxicity. Special emphasis is placed on how important these specific features are in the preparation of smart nanomaterials. In-depth explanations and examples are then presented, highlighting the latest results and cutting-edge research carried out with the selected capping according to the kind of nanoparticle employed (such as rare-earth doped, semiconducting, and metallic). An additional chapter focusses on computational techniques for modelling nanosurfaces. Photoactive Inorganic Nanoparticles: Surface Composition and its Role in Nanosystem Functionality will be a valuable working resource for graduate students, researchers, and industry R&D professionals working in the field of applied nanomaterials. Aids selection of the best functional cappings for particular applications Covers a broad range of application areas, including medical, biological and materials science Provides material on computational techniques for modeling nanosurfaces

Innovative and Integrated Technologies for the Treatment of Industrial Wastewater - Antonio Lopez 2011-12-15
Innovative and Integrated Technologies for the Treatment of Industrial Wastewater deals with advanced technological solutions for the treatment of industrial wastewater such as aerobic granular biomass based systems, advanced oxidation processes integrated with biological treatments, membrane contactors and membrane chemical reactors. Wastewater from pharmaceutical, chemical and food industries as well as landfill leachates are specifically considered as representative of major problems encountered when treating industrial streams. The economic and environmental sustainability of the above solutions are also reported in the book and compared with the alternatives currently available in the market by life cycle assessment (LCA) and life cycle costing (LCC) methodologies. The implementation of the considered solutions at large scale could support and enhance the competitiveness of different industrial sectors, including the water technology sector, in the global market. Innovative and Integrated Technologies for the Treatment of Industrial Wastewater also makes a contribution towards defining: new concepts, processes and technologies in wastewater treatment with potential benefits for the stable quality of effluents, energy and operational costs saving, and the protection of the environment new sets of advanced standards for wastewater treatment new methodologies for the definition of wastewater treatment needs and framework conditions new information supporting development and implementation of water legislation.

Mechanisms of DNA Recombination and Genome Rearrangements: Methods to Study Homologous Recombination - 2018-02-17

Mechanisms of DNA Recombination and Genome Rearrangements: Methods to Study Homologous Recombination, Volume 600, the latest release in the Methods in Enzymology series, continues the legacy of this premier serial with quality chapters authored by leaders in the field. Homologous genetic recombination remains the most enigmatic process in DNA metabolism. The molecular machines of recombination preserve the integrity of the genetic material in all organisms and generate genetic diversity in evolution. The same molecular machines that support genetic integrity by orchestrating accurate repair of the most deleterious DNA lesions, however, also promote survival of cancerous cells and emergence of radiation and chemotherapy resistance. This two-volume set offers a comprehensive set of cutting edge methods to study various aspects of homologous recombination and cellular processes that utilize the enzymatic machinery of recombination The chapters are written by the leading researches and cover a broad range of topics from the basic molecular mechanisms of recombinational proteins and enzymes to emerging cellular techniques and drug discovery efforts. Contributions by the leading experts in the field of DNA repair, recombination, replication and genome stability Documents cutting edge methods

Mergers & Acquisitions - Bruno Cassiman 2006-01-01

"The content of this book is based on the final report of a research project carried out by an international team of researchers for the European Commission's Directorate General for Research"--copyright p.

Wine Fermentation - Harald Claus 2019-03-28

Wineries are facing new challenges due to actual market demands for the creation of products exhibiting more particular flavors. In addition, climate change has lead to the requirement for grape varieties with specific features, such as convenient maturation times, enhanced tolerance towards dryness, osmotic stress, and resistance against plant-pathogens. The next generation of yeast starter cultures should produce wines with an appealing sensory profile and less alcohol. This Special Issue comprises actual studies addressing some of the problems and solutions for the environmental, technical, and consumer challenges of wine making today: Development of sophisticated mass spectroscopic methods enable the identification of the major metabolite spectrum of grapes/wine and deliver detailed insights in terroir and yeast-specific traits;Knowledge of the origin and reactions of reductive sulphur compounds facilitates the avoidance of unpleasant wine odors;Innovative physical–chemical treatments support effective and sustainable color extraction from red grape varieties;Enological enzymes from yeasts used directly or in the form of starter cultures are promising tools to increase the juice yields, color intensity, and aroma of wine;Natural and artificial Saccharomyces hybrids as well as collections of adapted wild isolates from various ecological niches will extend winemakers repertoire, allowing individual fermentations;Exact process control of wine fermentations by convenient computer programs will guarantee consistently high product quality.

Heavy Metals Accumulation, Toxicity and Detoxification in Plants - Luigi De Bellis 2020-10-02

In recent years, heavy metals have been widely used in agricultural, chemical, domestic, and technological applications, causing environmental and soil contaminations. Heavy metals enter the plant system through soil or via the atmosphere, and can accumulate, affecting physiological processes, plant growth, yield, and human health if heavy metals are stored in edible tissues. Understanding the regulation mechanisms of plant heavy metals accumulation and partitioning is important to improve the safety of the food chain. In this Special Issue book, a total of 19 articles were included; four reviews covering phytoremediation, manganese phytotoxicity in plants, the effect of cadmium on plant development, the genetic characteristics of Cd accumulation, and the

research status of genes and QTLs in rice, respectively, as well as fifteen original research articles, mainly regarding the impact of cadmium on plants. Cadmium was therefore the predominant topic of this Special Issue, increasing the attention of the research community on the negative impacts determined by cadmium or cadmium associated with other heavy metals. The articles have highlighted a great genetic variability, suggesting different possibilities for accumulation, translocation and the reduction or control of heavy metal toxicity in plants.

Antibody-Drug Conjugates - L. Nathan Tumey 2020

This volume looks at key methodologies that are commonly used across antibody drug conjugates (ADCs) programs. The chapters in this book cover topics such as conjugations to endogenous cysteine residues; click chemistry conjugations; antibody conjugations via glycosyl remodeling; analysis of ADCs by native mass spectrometry; characterization of ADCs by capillary electrophoresis; LC/MS methods for studying lysosomal ADC catabolism; and determination of ADC concentration by ligand-binding assays. Written in the highly successful Methods in Molecular Biology series format, chapters include introductions to their respective topics, lists of the necessary materials and reagents, step-by-step, readily reproducible laboratory protocols, and tips on troubleshooting and avoiding known pitfalls. Cutting-edge and practical, Antibody-Drug Conjugates: Methods and Protocols is a valuable resource that aims to lower the "activation barrier" when undertaking a new discipline, and provides a "toolbox" for the next generation of ADC scientists.

Parallel Robots - J.P. Merlet 2006-07-01

Parallel robots are closed-loop mechanisms presenting very good performances in terms of accuracy, velocity, rigidity and ability to manipulate large loads. They have been used in a large number of applications ranging from astronomy to flight simulators and are becoming increasingly popular in the field of machine-tool industry. This book presents a complete synthesis of the latest results on the possible mechanical architectures, analysis and synthesis of this type of mechanism. It is intended to be used by students (with over 150 exercises and numerous internet addresses), researchers (with over 650 references and anonymous ftp access to the code of some algorithms presented in this book) and engineers (for which practical results, mistakes to avoid, and applications are presented). Since the publication of the first edition (2000) there has been an impressive increase in terms of study and use of this kind of structure that are reported in this book. This second edition has been completely overhauled. The initial chapter on kinematics has been split into Inverse Kinematics and Direct Kinematics. A new chapter on calibration was added. The other chapters have also been rewritten to a large extent. The reference section has been updated to include around 45% new works that appeared after the first edition.

Wastewater Treatment, Valorization and Reuse - Salah Jellali 2021-09-02

This book deals with the latest developments regarding urban and industrial wastewaters' adapted treatment with various technologies. It focuses, through valuable publications, on the shifting of the wastewater management paradigm from "treatment and disposal" to "the 4Rs principle: Reduce, Recycle, Reuse, and Recover". The adapted wastewater treatment step will allow (i) the disposal of supplementary water amounts that could be safely reused in order to tackle the water-scarcity problem, and (ii) the preservation of the environment against pollution. Finally, this book will contribute to the achievement of the United Nations Sustainable Development Goals and other international related initiatives.

Peptide-Based Materials - Timothy Deming 2012-01-13

Synthesis of Polypeptides by Ring-Opening Polymerization of α-Amino Acid N-Carboxyanhydrides, by Jianjun Cheng and Timothy J. Deming.- Peptide Synthesis and Self-Assembly, by S. Maude, L. R. Tai, R. P.

W. Davies, B. Liu, S. A. Harris, P. J. Kocienski and A. Aggeli.- Elastomeric Polypeptides, by Mark B. van Eldijk, Christopher L. McGann, Kristi L. Kiick andJan C. M. van Hest.- Self-Assembled Polypeptide and Polypeptide Hybrid Vesicles: From Synthesis to Application, by Uh-Joo Choe, Victor Z. Sun, James-Kevin Y. Tan and Daniel T. Kamei.- Peptide-Based and Polypeptide-Based Hydrogels for Drug Delivery and Tissue Engineering, by Aysegul Altunbas and Darrin J. Pochan.-

Photocatalytic Hydrogen Evolution - Misook Kang 2020-06-17

Energy crises and global warming pose serious challenges to researchers in their attempt to develop a sustainable society for the future. Solar energy conversion is a remarkable, clean, and sustainable way to nullify the effects of fossil fuels. The findings of photocatalytic hydrogen production (PCHP) by Fujishima and Honda propose that “water will be the coal for the future”. Hydrogen is a carbon-free clean fuel with a high specific energy of combustion. Titanium oxide (TiO2), graphitic-carbon nitride (g-C3N4) and cadmium sulfide (CdS) are three pillars of water splitting photocatalysts owing to their superior electronic and optical properties. Tremendous research efforts have been made in recent years to fabricate visible or solar-light, active photocatalysts. The significant features of various oxide, sulfide, and carbon based photocatalysts for cost-effective hydrogen production are presented in this Special Issue. The insights of sacrificial agents on the hydrogen production efficiency of catalysts are also presented in this issue.

Plant Stress Tolerance - Ramanjulu Sunkar 2010-05-14

Written by leading researchers, this book provides an easily accessible reference for plant stress tolerance. Comprehensive and up-to-date, it provides a wide range of easy-to-follow protocols catering to the needs of those probing this vital area of study.

Porous Semiconductors: A Symposium Held in Memory of Vitali Parkhutik and Volker Lehmann - P. Schmuki 2008-10

This is a special issue of ECS Transactions published by ECS in memory of Volker Lehmann and Vitali Parkhutik, two key scientists in the field of porous semiconductors who recently passed away. Topics in this issue aim at a more detailed understanding of growth mechanisms and the physical and chemical properties of all types of porous semiconductors. The papers address research in the various sub-fields of porous semiconductors such as semiconductor electrochemistry, deposition into pores, matrix materials, optical spectroscopy and transdisciplinary approaches to the topic as well as work relevant to the formation of advanced materials such as, for example, porous silicon, matrix composites and nanoclusters and their applications such as chemical and biological sensors.

Current Advances in Anaerobic Digestion Technology - Marcell Nikolausz 2021-03-17

Anaerobic digestion (AD) is one of the oldest biotechnological processes and originally referred to biomass degradation under anoxic conditions in both natural and engineered systems. It has been used for decades to treat various waste streams and to produce methane-rich biogas as an important energy carrier, and it has become a major player in electrical power production. AD is a popular, mature technology, and our knowledge about the influencing process parameters as well as about the diverse microbial communities involved in the process has increased dramatically over the last few decades. To avoid competition with food and feed production, the AD feedstock spectrum has constantly been extended to waste products either rich in recalcitrant lignocellulose or containing inhibitory substances such as ammonia, which requires application of various pre-treatments or specific management of the microbial resources. Extending the definition of AD, it can also convert gases rich in hydrogen and carbon dioxide into methane that can substitute natural gas, which opens new opportunities by a direct link to traditional petrochemistry. Furthermore, AD can be coupled with

emerging biotechnological applications, such as microbial electrochemical technologies or the production of medium-chain fatty acids by anaerobic fermentation. Ultimately, because of the wide range of applications, AD is still a very vital field in science. This Special Issue highlights some key topics of this research field.

Introduction to Radiometry and Photometry, Second Edition - William Ross McCluney 2014-11-01

This second edition of an Artech House classic title describes in detail the relationship between radiometry and photometry. It covers information needed to solve problems in radiation transfer and detection, detectors, measuring instruments, and concepts in colorimetry. This revised second edition presents an updated treatment of modern radiometry and photometry, including brand new sections on applications and developments in light sources and scientific instruments for measuring radiation and light. Engineers are also provided with an exciting new chapter on the use of computerized optical ray tracing for “virtual” experiments on optical systems.

Molecular Beacons: Signalling Nucleic Acid Probes, Methods, and Protocols - Andreas Marx 2008-04-03

From probe design to applications in clinical settings, this book provides a diverse set of instructive examples, guided by experts in the field who offer easy-to-follow experimentals. The book first offers an introduction to the basic principles of fluorescence and then describes applications of fluorogenic probes in real-time PCR, which currently is the gold standard for quantitative DNA and RNA analysis. Coverage extends the potential of realtime as well as advocates simplifications of the probe technologies. It also presents a new simplified molecular beacon design, EasyBeacons, and demonstrates the utility in DNA methylation profiling.

Environmentally Friendly (Bio)Technologies for the Removal of Emerging Organic and Inorganic Pollutants from Water - Eldon R. Rene 2019-08-15

This book highlights the impacts of emerging pollutants (both organic and inorganic) in water bodies and the role and performances of different water and wastewater treatment approaches that are presently being employed in the field of environmental engineering. Some of these approaches are focused on ‘end-of-pipe’ treatment, while most of these approaches are focused on the application of novel physic-chemical and biological techniques for wastewater treatment and reuse. The goal of this book is to present the emerging technologies and trends in the field of water and wastewater treatment. The papers in this book provide clear proof that environmentally friendly (bio)technologies are becoming more and more important and playing a critical role in removing a wide variety of organic and inorganic pollutants from water. In Focus – a book series that showcases the latest accomplishments in water research. Each book focuses on a specialist area with papers from top experts in the field. It aims to be a vehicle for in-depth understanding and inspire further conversations in the sector.

Grafting as a Sustainable Means for Securing Yield Stability and Quality in Vegetable Crops - Marios Kyriacou 2021-03-29

Vegetable growers around the world only collect, on average, half of the yield they would obtain under optimal conditions, known as yield potential. It is estimated that 60–70% of the yield gap is attributable to abiotic factors such as salinity, drought, suboptimal temperatures, nutritional deficiencies, flooding, waterlogging, heavy metals contamination, adverse soil pH and organic pollutants, while the remaining 30–40% is due to biotic factors, especially soilborne pathogens, foliar pathogens, arthropods and weeds. Under climate change forecasts, the pressure of biotic/abiotic stressors on yield is expected to rise and challenge further global food security. To meet global demand, several solutions have been proposed, focusing on the breeding of varieties with greater yield

potential, but this one-size-fits-all solution leads to limited benefits. In order to overcome the current situation, grafting of elite scion varieties onto vigorous rootstock varieties has been suggested as one of the most promising drives towards further yield stability. Specifically, the implementation of suitable rootstock × scion × environment combinations in Solanaceous (tomato, eggplant, pepper) and Cucurbitaceous (melon, watermelon, melon) high-value crops represents an untapped opportunity to secure yield stability and reliability under biotic/abiotic stresses. This Special Issue invites Original Research, Technology Reports, Methods, Opinions, Perspectives, Invited Reviews and Mini Reviews dissecting grafting as a sustainable agro technology for enhancing tolerance to abiotic stresses and reducing disease damage. In addition, the following are of interest: potential contributions dealing with genetic resources for rootstock breeding, practices and technologies of rootstock breeding, and rootstock–scion signaling, as well as the physiological and molecular mechanisms underlying graft compatibility. In addition, the effect of grafting on vegetable quality, practical applications and nursery management of grafted seedlings and specialty crops (e.g. artichoke and bean) will be considered within the general scope of the Special Issue. We highly believe that this compilation of high standard scientific papers on the principles and practices of vegetable grafting will foster discussions within this important field.

Advanced Greenhouse Horticulture - Athanasios Koukounaras 2021-03-19
Greenhouse horticulture is one of the most intensive agricultural systems, focusing on the production of high-value products. This book presents current research findings that cover a wide range of new technologies and novel agricultural practices, which are preconditions for successful production in a very competitive global environment.

Thiol-X Chemistries in Polymer and Materials Science - Andrew B. Lowe 2013
A comprehensive resource on thiol-x chemistries for postgraduates, academics and industrial practitioners interested in polymer and materials applications from leading experts in the field.

Glass Stopcocks - United States. Bureau of Standards 1941

Nanotechnology Characterization Tools for Biosensing and Medical Diagnosis - Challa S.S.R. Kumar 2018-05-02
Eighth volume of a 40 volume series on nanoscience and nanotechnology, edited by the renowned scientist Challa S.S.R. Kumar. This handbook gives a comprehensive overview about Nanotechnology Characterization Tools for Biosensing and Medical Diagnosis. Modern applications and state-of-the-art techniques are covered and make this volume an essential reading for research scientists in academia and industry.

Chemistry for a Clean and Healthy Planet - Ponnadurai Ramasami 2019-09-03
These proceedings gather carefully selected, peer-reviewed contributions from the International Conference on Pure and Applied Chemistry (ICPAC 2018). The event, the latest installment in a biennial conference series, was held in July 2018 in Mauritius. The respective chapters in this unique collection reflect a wide range of fundamental and applied research in the chemical sciences and various interdisciplinary subjects. In addition to reviews, they highlight cutting-edge advances.

Luminescence Thermometry - Miroslav Dramićanin 2018-04-21
Luminescence Thermometry: Methods, Materials, and Applications presents the state-of-the art applications of luminescence thermometry, giving a detailed explanation of luminescence spectroscopic schemes for the read-out of temperature, while also describing the diverse materials that are capable of sensing temperature via luminescence. Chapters cover the fundamentals of temperature, traditional thermometers and their figures of merit, a concise description of optical thermometry methods, luminescence and instrumentation, and an explanation of the

ways in which increases in temperature quench luminescence. Additional sections focus on materials utilized for luminescence thermometry and the broad range of applications for luminescence thermometry, including temperature measurement at the nanoscale and the application of multifunctional luminescent materials. Provides an overview of luminescence thermometry applications, including high-temperature, biomedical, nanoscale and multifunctional Delves into luminescence thermometry by materials group, including Rare-earth and transition Metal Ion Doped, Semiconductors, Quantum Dots and Organic materials Gives a concise introduction of the latest methods of temperature measurement, including luminescence spectroscopic schemes and methods of analysis

Optical Characterization of Semiconductors - Sidney Perkowitz 2012-12-02

This is the first book to explain, illustrate, and compare the most widely used methods in optics: photoluminescence, infrared spectroscopy, and Raman scattering. Written with non-experts in mind, the book develops the background needed to understand the why and how of each technique, but does not require special knowledge of semiconductors or optics. Each method is illustrated with numerous case studies. Practical information drawn from the authors experience is given to help establish optical facilities, including commercial sources for equipment, and experimental details. For industrial scientists with specific problems in semiconducting materials; for academic scientists who wish to apply their spectroscopic methods to characterization problems; and for students in solid state physics, materials science and engineering, and semiconductor electronics and photonics, this book provides a unique overview, bringing together these valuable techniques in a coherent wayfor the first time. Discusses and compares infrared, Raman, and photoluminescence methods Enables readers to choose the best method for a given problem Illustrates applications to help non-experts and industrial users, with answers to selected common problems Presents fundamentals with examples from the semiconductor literature without excessive abstract discussion Features equipment lists and discussion of techniques to help establish characterization laboratories

Optical Characterization of Thin Solid Films - Olaf Stenzel 2018-03-09

This book is an up-to-date survey of the major optical characterization techniques for thin solid films. Emphasis is placed on practicability of the various approaches. Relevant fundamentals are briefly reviewed before demonstrating the application of these techniques to practically relevant research and development topics. The book is written by international top experts, all of whom are involved in industrial research and development projects.