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# Read PDF A First Course In Electrode Processes Rsc

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**KEY=IN - DOWNS RANDOLPH**

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## A First Course in Electrode Processes

**Royal Society of Chemistry This user friendly introduction highlights the importance of electrochemistry and its applications to the modern world and the future. In contrast to other texts currently available, it emphasises understanding and avoids using many pages of complex equations. It also describes the diverse applications of electrochemistry rather than focusing on analytical chemistry alone. Although the book follows a similar structure to the first edition, the earlier chapters have been extensively up-dated and the later chapters are entirely new. The text is supported by a large number of figures which illustrate key points. The book starts by describing the essential electrochemical techniques before moving on to cover experimental problems and applications. To reflect the present interest in fuel cells and the environment, these have become the focus of the final chapters. A useful appendix contains problems with fully worked answers to test the reader's understanding.**

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## Silver Recovery From Assorted Spent Sources: Toxicology Of Silver Ions

World Scientific Silver holds three world records; it has the lowest contact resistance, highest electrical conductivity and the best thermal conductivity of all metals. The element's physical strength, brilliance and malleability leads to its many uses from electronics to optical applications. A new 'silver rush' has occurred following the recent discovery that silver, when divided to form particles at the nano scale, can take on new properties. Meanwhile, there has been an increase in regulations against environmental pollution of silver ions toxicity, which have caused numerous diseases and disorders in the marine, microbial, invertebrate and vertebrate community (including humans). Both of which have led to a great interest in silver recovery for both environmental toxicity and an economic point of view. Comprised of ten chapters, this book draws attention to the most advance technologies in silver recovery and recycling from various spent sources, which will appeal to research scientists and metallurgists. The state of the art in recovery of silver from different sources by hydrometallurgical and bio-metallurgical processing and varieties of leaching, cementing, reducing agents, adsorbents, and bio-sorbents are highlighted in this book. Contents: Introduction (Syed Sabir) Leaching of Silver Contained in Mining Tailings. A Comparative Study of Several Leaching Reagents (Eleazar Salinas-Rodríguez, Juan Hernández-Ávila, Eduardo Cerecedo-Sáenz, Alberto Arenas-Flores, Ma Isabel Reyes-Valderrama, Edmundo Roldán-Contreras and Ventura Rodríguez-Lugo) Adsorption and Recovery of Silver from Aqueous Solutions (Emanuelle Dantas de Freitas, Thiago Lopes da Silva, Meuris Gurgel Carlos da Silva and Melissa Gurgel Adeodato Vieira) The Biogenic Synthesis of Silver Nanoparticles as a Method for Recovering Silver from Secondary Sources Using Extracts from Indigenous Australian Plants (Derek Fawcett,

Sridevi Brundavanam and G rard Eddy Jai Poinern)Electrochemical Recovery of Silver from Waste Solutions (Victor Reyes-Cruz, Mar a Aurora Veloz Rodr guez, Jos  Angel Cobos Murcia and Gustavo Urbano Reyes)Recovery of Silver from Industrial Wastes: Strategies and Technologies (M Chakankar, U Jadhav and H Hocheng)Silver Recovery Methods from Photographic Wastes (Nuri Nakibo lu)Recovery of Silver from E-wastes Using Acidothiourea (Katsutoshi Inoue, Biplob Kumar Biswas, Manju Gurung, Hidetaka Kawakita, Keisuke Ohto and Shafiq Alam)Silver Extraction and Recovery with Macrocyclic and Tripodal Compounds (Keisuke Ohto, Yuki Ueda, Ramachandra Rao Sathuluri, Hidetaka Kawakita, Shitaro Morisada and Katsutoshi Inoue)Environmental Impacts of Silver from Spent Nanosources (Marija Ljubojevi , Mirta Mili  and Ivana Vinkovi  Vr ek) Readership: Students, researchers, chemists, metallurgists, environmental scientists and electronic waste recovery experts. Keywords: Silver;Silver Recovery;Toxicology;Inorganic Chemistry;Silver IonsReview:0

## REWAS 2016

# Towards Materials Resource Sustainability

Springer Topics covered in this collection include the following: •Enabling & Understanding Sustainability - Ferrous & Non-ferrous Metals Processing •Understanding & Enabling Sustainability - (Rechargeable) Batteries •Enabling & Understanding Sustainability - Rare Earth Element Applications •Enabling & Understanding Sustainability - Building Materials & Slag Valorisation •Designing Materials and Systems for Sustainability •Understanding & Enabling Sustainability - Light Metals Recycling & Waste Valorisation •Understanding & Enabling Sustainability - Education Research Innovation I •Understanding & Enabling Sustainability - Education Research Innovation II + Electronic Equipment

## Energy Technology 2015

# Carbon Dioxide Management and Other Technologies

Springer This book covers various technological aspects of sustainable energy ecosystems and processes that improve energy efficiency, and reduce and sequester carbon dioxide (CO<sub>2</sub>) and other greenhouse emissions. Papers emphasize the need for sustainable technologies in

extractive metallurgy, materials processing and manufacturing industries with reduced energy consumption and CO<sub>2</sub> emission. Industrial energy efficient technologies include innovative ore beneficiation, smelting technologies, recycling, and waste heat recovery. The book also contains contributions from all areas of non-nuclear and non-traditional energy sources, including renewable energy sources such as solar, wind, and biomass. Papers from the following symposia are presented in the book: Energy Technologies and Carbon Dioxide Management Recycling and Sustainability Update Magnetic Materials for Energy Applications V Sustainable Energy and Layered Double Hydroxides

## Introduction to Electrochemical Science and Engineering

CRC Press The Second Edition of Introduction to Electrochemical Science and Engineering outlines the basic principles and techniques used in the development of electrochemical engineering related technologies, such as fuel cells, electrolyzers, and flow-batteries. Covering topics from electrolyte solutions to electrochemical energy conversion systems and corrosion, this revised and expanded edition provides new educational material to help readers familiarize themselves with some of today's most useful electrochemical concepts. The Second Edition includes a new Appendix C with a detailed description of how the most common electrochemical laboratories can be organized, what data should be collected, and how the data should be treated and presented in a report. Video demonstrations for these laboratories are available on YouTube. In addition, the author has added conceptual and numerical exercises to all of the chapters to help with the understanding of the book material and to extend the important aspects of the electrochemical science and engineering. Finally, electrochemical impedance spectroscopy is now used in most electrochemical laboratories, and so a new section briefly describes this technique in Chapter 7. This new edition Ensures readers have a fundamental knowledge of the core concepts of electrochemical science and engineering, such as electrochemical cells, electrolytic conductivity, electrode potential, and current-potential relations related to a variety of electrochemical systems Develops the initial skills needed to understand an electrochemical experiment and successfully evaluate experimental data without visiting a laboratory Promotes an appreciation of the capabilities and applications of key electrochemical techniques Features eight lab descriptions and instructions that can be used to develop the labs by instructors for a university electrochemical engineering class Integrates eight online videos with lab demonstrations to advise instructors and students on how the labs can be carried out Features a solutions manual for adopting instructors The Second Edition is an ideal and unique text for undergraduate engineering and science



students in these fields.

# Electrochemical Engineering Principles

## Electrochemistry

The renowned Oxford Chemistry Primers series, which provides focused introductions to a range of important topics in chemistry, has been refreshed and updated to suit the needs of today's students, lecturers, and postgraduate researchers. The rigorous, yet accessible, treatment of each subject area is ideal for those wanting a primer in a given topic to prepare them for more advanced study or research. Moreover, cutting-edge examples and applications throughout the texts show the relevance of the chemistry being described to current research and industry. The learning features provided, including questions at the end of every chapter and online multiple-choice questions, encourage active learning and promote understanding. Furthermore, frequent diagrams, margin notes, further reading, and glossary definitions all help to enhance a student's understanding of these essential areas of chemistry. This brand new addition to the series provides the most accessible first introduction to electrochemistry, combining explanation of the fundamental concepts with practical examples of how they are applied in a range of real-world situations.

## Chemically Derived Graphene

### Functionalization, Properties and Applications

Royal Society of Chemistry A comprehensive overview of the recent and state-of-the-art research on chemically derived graphene materials for different applications.

## Applications of Hydrogen Peroxide and Derivatives

Royal Society of Chemistry Simple, but beautifully versatile. Perhaps not a description many would choose for hydrogen peroxide, but an accurate one none the less, and this unique book explains the reasons behind the description. Beginning with an historical overview, and guidelines for the

safe handling of peroxygens, Applications of Hydrogen Peroxide and Derivatives goes on to cover key activation mechanisms, organic functional group oxidations and the use of hydrogen peroxide with heterogeneous catalysts. The clean-up of environmental pollutants; chemical purification; and extraction of metals from their ores are also discussed in detail, using actual examples from industry. The versatility of this reagent may well prove to be a key to integrated pollution control in the future. This book should therefore be read by academics and industrialists at all levels, to encourage wider applications of the use of hydrogen peroxide in laboratories.

## Applications of Porphyrinoids as Functional Materials

Royal Society of Chemistry This book gives an overview of the applications and potential applications of porphyrins and related macrocycles as smart or functional materials.

## Electrochemical Methods: Fundamentals and Applications, 2nd Edition

Wiley Global Education A broad and comprehensive survey of the fundamentals for electrochemical methods now in widespread use. This book is meant as a textbook, and can also be used for self-study as well as for courses at the senior undergraduate and beginning graduate levels. Knowledge of physical chemistry is assumed, but the discussions start at an elementary level and develop upward. This revision comes twenty years after publication of the first edition, and provides valuable new and updated coverage.

## Classic Chemistry Demonstrations

Royal Society of Chemistry Classic Chemistry Demonstrations is an essential, much-used resource book for all chemistry teachers. It is a collection of chemistry experiments, many well-known others less so, for demonstration in front of a class of students from school to undergraduate age. Chemical demonstrations fulfil a number of important functions in the teaching process where practical class work is not possible. Demonstrations are often spectacular and therefore stimulating and motivating, they allow the students to see an experiment which they otherwise would not be able to share, and they allow the students to see a

skilled practitioner at work. **Classic Chemistry Demonstrations** has been written by a teacher with several years' experience. It includes many well-known experiments, because these will be useful to new chemistry teachers or to scientists from other disciplines who are teaching some chemistry. They have all been trialled in schools and colleges, and the vast majority of the experiments can be carried out at normal room temperature and with easily accessible equipment. The book will prove its worth again and again as a regular source of reference for planning lessons.

## Electrochemistry Volume 16

Royal Society of Chemistry Providing the reader with an up to date digest of the most important current research carried out in the field, this volume is compiled and written by leading experts from across the globe. It reviews the trends in electrochemical sensing and its applications and touches on research areas from a diverse range including microbial electrosynthesis for bio-based production using renewable electricity and recent advances in inorganic nanostructured materials for electrochemical water splitting. The reviews of established and current interest in the field make this book a key reference for researchers in this exciting and developing area.

## Handbook of Surface Plasmon Resonance

### 2nd Edition

Royal Society of Chemistry Surface plasmon resonance (SPR) plays a dominant role in real-time interaction sensing of biomolecular binding events, this book provides a total system description including optics, fluidics and sensor surfaces for a wide researcher audience.

## Understanding Voltammetry

World Scientific The power of electrochemical measurements in respect of thermodynamics, kinetics and analysis is widely recognised but the subject can be unpredictable to the novice even if they have a strong physical and chemical background, especially if they wish to pursue quantitative measurements. Accordingly, some significant experiments are perhaps wisely never attempted while the literature is sadly replete with flawed attempts at rigorous voltammetry. This textbook considers how to implement designing, explaining and interpreting experiments centered on various forms of voltammetry (cyclic, microelectrode, hydrodynamic, etc.).

The reader is assumed to have knowledge of physical chemistry equivalent to Master's level but no exposure to electrochemistry in general, or voltammetry in particular. While the book is designed to stand alone, references to important research papers are given to provide an introductory entry into the literature. The third edition contains new material relating to electron transfer theory, experimental requirements, scanning electrochemical microscopy, adsorption, electroanalysis and nanoelectrochemistry.

## Redox Polymers for Energy and Nanomedicine

Royal Society of Chemistry Polymers with redox properties are electroactive macromolecules containing localized sites or groups that can be oxidized and reduced. *Redox Polymers for Energy and Nanomedicine* highlights trends in the chemistry, characterization and application of polymers with redox properties. Chapters cover batteries, supercapacitors, solar cells, biofuel cells, thermoelectric cells, drug delivery, biosensors, actuators and smart surfaces. The book will be of interest to graduate students and researchers working in polymer science, electrochemistry, energy research and nanomedicine.

## Quantities, Units and Symbols in Physical Chemistry

Royal Society of Chemistry Quantities, Units and Symbols in Physical Chemistry Third Edition The first IUPAC Manual of Symbols and Terminology for Physicochemical Quantities and Units (the "Green Book") of which this is a successor, was published in 1969, with the objective of 'securing clarity and precision, and wider agreement in the use of symbols, by chemists in different countries, among physicists, chemists and engineers, and by editors of scientific journals'. Subsequent revisions have taken account of many developments in the field, culminating in the major extension and revision represented by the 1988 edition under the title *Quantities, Units and Symbols in Physical Chemistry*. This third edition (2007) is a further revision of the material which reflects the experience of the contributors and users with the previous editions. The book has been systematically brought up to date and new sections have been added. It strives to improve the exchange of scientific information between different disciplines in the international pursuit of scientific research. In a rapidly expanding scientific literature where each discipline has a tendency to retreat into its own jargon, this book attempts to provide a compilation of widely used terms and symbols from many sources together with brief

understandable definitions and explanations of best practice. Tables of important fundamental constants and conversion factors are included. Precise scientific language encoded by appropriate definitions of quantities, units and symbols is crucial for the international exchange in science and technology, with important consequences for modern industrial economy. This is the definitive guide for scientists, science publishers and organizations working across a multitude of disciplines requiring internationally approved nomenclature in the area of Physical Chemistry.

## Electrochemical Methods for Hydrogen Production

Royal Society of Chemistry Increased hydrogen supplies using cleaner methods are seen as essential for potential hydrogen based power systems for transportation and renewable energy conversion into fuel. This book provides a comprehensive picture of the various routes to use electricity to produce hydrogen using electrochemical science and technology. Edited by an expert in the field, this title will be of interest to graduate students and researchers in academia and industry working in energy, electrochemistry, physical chemistry and chemical engineering.

## Disposable Electrochemical Sensors for Healthcare Monitoring

## Material Properties and Design

Royal Society of Chemistry Disposable electrodes have been widely used as a sensing platform in electrical and electrochemical sensors owing to the possibility of quantitative detection using clinical biomarkers with high precision, sensitivity and reproducibility, which are necessary for accurate diagnosis of the health condition of an individual. This book focusses on the emerging disposable electrochemical sensors in the health sector and the advancement of analytical devices to monitor diabetic, cancer and cardiovascular patients using different nanomaterials. It discusses the upcoming strategies, advantages and the limitations of the existing devices using disposable electrodes. Uniquely, it covers in-depth knowledge of mechanistic features of various designs of screen-printing electrodes and the material aspects required of sensors developed for the healthcare field. It also looks at the portable devices using a variety of materials and the future directions for research in this area. Appealing to the health care industry, this book is aimed at academic and research institutes at both the graduate and postgraduate level. The contributors

are leading experts in the field and they are providing guidance for the next decade of research in the field of disposable electrochemical biosensors.

## Chemistry for Tomorrow's World

Provides a modern and systematic approach to physical, inorganic and organic chemistry in a methodical style. The book is designed for the Leaving Certificate Chemistry course of the Irish educational system.

## Photocatalysis

## Fundamentals and Perspectives

Royal Society of Chemistry Combining basic concepts with the synthesis of new catalysts, reactor and reaction engineering, this book is a comprehensive resource for researchers.

## Scaling Up of Microbial Electrochemical Systems

## From Reality to Scalability

Elsevier **Scaling Up of Microbial Electrochemical Systems: From Reality to Scalability** is the first book of its kind to focus on scaling up of microbial electrochemical systems (MES) and the unique challenges faced when moving towards practical applications using this technology. This book emphasizes an understanding of the current limitations of MES technology and suggests a way forward towards onsite applications of MES for practical use. It includes the basics of MES as well as success stories and case studies of MES in the direction of practical applications. This book will give a new direction to energy researchers, scientists and policymakers working on field applications of microbial electrochemical systems—microbial fuel cells, microbial electrolysis cells, microbial electrosynthesis cells, and more. Promotes the advancement of microbial electrochemical systems, from lab scale to field applications Illustrates the challenges of scaling up using successive case studies Provides the basics of MES technology to help deepen understanding of the subject Addresses lifecycle analysis of MES technology to allow comparison with other conventional methods

# Electrochemical Impedance Spectroscopy and its Applications

**Springer** This book presents a complete overview of the powerful but often misused technique of Electrochemical Impedance Spectroscopy (EIS). The book presents a systematic and complete overview of EIS. The book carefully describes EIS and its application in studies of electrocatalytic reactions and other electrochemical processes of practical interest. This book is directed towards graduate students and researchers in Electrochemistry. Concepts are illustrated through detailed graphics and numerous examples. The book also includes practice problems. Additional materials and solutions are available online.

## Vehicle Propulsion Systems

### Introduction to Modeling and Optimization

**Springer Science & Business Media** The authors of this text have written a comprehensive introduction to the modeling and optimization problems encountered when designing new propulsion systems for passenger cars. It is intended for persons interested in the analysis and optimization of vehicle propulsion systems. Its focus is on the control-oriented mathematical description of the physical processes and on the model-based optimization of the system structure and of the supervisory control algorithms.

## Square-Wave Voltammetry

### Theory and Application

**Springer Science & Business Media** In a real tour-de-force of scientific publishing, three distinguished experts here systematically deliver both the underlying theory and the practical guidance needed to effectively apply square-wave voltammetry techniques. Square-wave voltammetry is a technique used in analytical applications and fundamental studies of electrode mechanisms. In order to take full advantage of this technique, a solid understanding of signal generation, thermodynamics, and kinetics is essential. Not only does this book cover all the necessary background and basics, but it also offers an appendix on mathematical modeling plus a chapter on electrode mechanisms that briefly reviews the numerical

formulae needed to simulate experiments using popular software tools.

## Understanding Voltammetry: Simulation of Electrode Processes Second Edition

World Scientific

## Basic Principles of Colloid Science

**Royal Society of Chemistry** This book provides an introduction to colloid science, based on the application of the principles of physical chemistry. Early chapters assume only an elementary knowledge of physical chemistry and provide the basis for more thorough discussion in later chapters covering specific aspects of colloid science. The widespread occurrence of colloids is stressed and the more important industrial applications of colloid technology are outlined. The final chapter deals with the future of colloid science and indicates the directions in which further developments are likely to take place. The book is ideal for undergraduate courses and, supplemented by further reading, for postgraduates too. It will also be useful to industrial research workers who wish to become familiar with the basic ideas and their many important applications to industry.

## Applied Electrochemistry

**Walter de Gruyter GmbH & Co KG** This book introduces the main aspects of modern applied electrochemistry. Starting with the basics of electrochemical kinetics, the authors address the chemistry and types of corrosion, principles of electro- and biocatalysis, electrodeposition and its applications in industrial processes. The book later discusses the electrochemistry and photoelectrochemistry of semiconductors and their applications in solar energy conversion and photocatalysis.

## Nanofibres in Drug Delivery

**UCL Press** In recent years there has been an explosion of interest in the production of nanoscale fibres for drug delivery and tissue engineering. *Nanofibres in Drug Delivery* aims to outline to new researchers in the field the utility of nanofibres in drug delivery, and to explain to them how to prepare fibres in the laboratory. The book begins with a brief discussion of the main concepts in pharmaceutical science. The authors then introduce the key techniques that can be used for fibre production and explain briefly the theory behind them. They discuss the experimental implementation of fibre production, starting with the simplest possible set-up and then

moving on to consider more complex arrangements. As they do so, they offer advice from their own experience of fibre production, and use examples from current literature to show how each particular type of fibre can be applied to drug delivery. They also consider how fibre production could be moved beyond the research laboratory into industry, discussing regulatory and scale-up aspects.

## Hydrogen and Fuel Cells

Simon and Schuster Hydrogen and fuel cells are vital technologies to ensure a secure and CO<sub>2</sub>-free energy future. Their development will take decades of extensive public and private effort to achieve technology breakthroughs and commercial maturity. Government research programmes are indispensable for catalysing the development process. This report maps the IEA countries current efforts to research, develop and deploy the interlocking elements that constitute a hydrogen economy, including CO<sub>2</sub> capture and storage when hydrogen is produced out of fossil fuels. It provides an overview of what is being done, and by whom, covering an extensive complexity of national government R&D programmes. The survey highlights the potential for exploiting the benefits of the international co-operation. This book draws primarily upon information contributed by IEA governments. In virtually all the IEA countries, important R&D and policy efforts on hydrogen and fuel cells are in place and expanding. Some are fully-integrated, government-funded programs, some are a key element in an overall strategy spread among multiple public and private efforts. The large amount of information provided in this publication reflects the vast array of technologies and logistics required to build the hydrogen economy.

## Compendium of Polymer Terminology and Nomenclature IUPAC Recommendations 2008

Royal Society of Chemistry The IUPAC system of polymer nomenclature has aided the generation of unambiguous names that reflect the historical development of chemistry. However, the explosion in the circulation of information and the globalization of human activities mean that it is now necessary to have a common language for use in legal situations, patents, export-import regulations, and environmental health and safety information. Rather than recommending a 'unique name' for each structure, rules have been developed for assigning 'preferred IUPAC names', while continuing to allow alternatives in order to preserve the diversity and adaptability of nomenclature. Compendium of Polymer

**Terminology and Nomenclature** is the only publication to collect the most important work on this subject into a single volume. It serves as a handy compendium for scientists and removes the need for time consuming literature searches. One of a series issued by the International Union of Pure and Applied Chemistry (IUPAC), it covers the terminology used in many and varied aspects of polymer science as well as the nomenclature of several different types of polymer including regular and irregular single-strand organic polymers, copolymers and regular double-strand (ladder and spiro) organic polymers.

## Polymeric Materials

## Surfaces, Interfaces and Bioapplications

**MDPI** This book collects the articles published in the Special Issue “Polymeric Materials: Surfaces, Interfaces and Bioapplications”. It shows the advances in polymeric materials, which have tremendous applications in agricultural films, food packaging, dental restoration, antimicrobial systems, and tissue engineering. These polymeric materials are presented as films, coatings, particles, fibers, hydrogels, or networks. The potential to modify and modulate their surfaces or their content by different techniques, such as click chemistry, ozonation, breath figures, wrinkle formation, or electrospray, are also explained, taking into account the relationship between the structure and properties in the final application. Moreover, new trends in the development of such materials are presented, using more environmental friendly and safe methods, which, at the same time, have a high impact on our society.

## Ultrasound in Chemistry

## Analytical Applications

**John Wiley & Sons** This comprehensive reference and handbook covers all aspects of ultrasound for analytical applications. Besides classical extraction techniques, it also provides an overview of ultrasound applications and devotes two chapters to proteomics and polymer technology. From the contents: \* Common ultrasonic devices \* Elemental speciation \* On-line applications \* Accelerated extraction of semivolatile and volatile organics \* The ultrasonic bath vs. the ultrasonic probe \* Liquid-liquid, liquid-solid and solid-liquid extraction \* Solid-phase (micro)extraction \* Stir bar sorptive extraction \* Sonochemistry for organic and inorganic synthesis \* Electrochemical applications \* Applications to

polymer science \* Power ultrasound meets proteomics Of great interest to researchers in academia and industry, as well as analytical and natural products chemists, and those working in trace analysis.

## Nanopatterned and Nanoparticle-Modified Electrodes

John Wiley & Sons Volume XVII in the "Advances in Electrochemical Science and Engineering" series, this monograph covers progress in this rapidly developing field with a particular emphasis on important applications, including spectroscopy, medicinal chemistry and analytical chemistry. As such it covers nanopatterned and nanoparticle-modified electrodes for analytical detection, surface spectroscopy, electrocatalysis and a fundamental understanding of the relation between the electrode structure and its function. Written by a group of international experts, this is a valuable resource for researchers working in such fields as electrochemistry, materials science, spectroscopy, analytical and medicinal chemistry.

## Selected Water Resources Abstracts

## Polymer Colloids

Royal Society of Chemistry Academic and industrial research around polymer-based colloids is huge, driven both by the development of mature technologies, e.g. latexes for coatings, as well as the advancement of new materials and applications, such as building blocks for 2D/3D structures and medicine. Edited by two world-renowned leaders in polymer science and engineering, this is a fundamental text for the field. Based on a specialised course by the editors, this book provides the reader with an invaluable single source of reference. The first section describes formation, explaining basic properties of emulsions and dispersion polymerization, microfluidic approaches to produce polymer-based colloids and formation via directed self-assembly. The next section details characterisation methodologies from microscopy and small angle scattering, to surface science and simulations. The final chapters close with applications, including Pickering emulsions and molecular engineering for materials development. A comprehensive guide to polymer colloids, with contributions by leaders in their respective areas, this book is a must-have for researchers and practitioners working across polymers, soft matter and chemical and molecular engineering.

# Colour Chemistry

**Royal Society of Chemistry** This book provides an up-to-date insight into the chemistry behind the colour of the dyes and pigments that make our world so colourful. The impressive breadth of coverage starts with a dip into the history of colour science. Colour Chemistry then goes on to look at the structure and synthesis of the various dyes and pigments, along with their applications in the traditional areas of textiles, coatings and plastics, and also the ever-expanding range of "high-tech" applications. Also discussed are some of the environmental issues associated with the manufacture and use of colour. The broad and balanced coverage presented in this book makes it ideal for students and graduates. In addition, many specialists in industry or academia will also benefit from the overview of the subject that is provided.