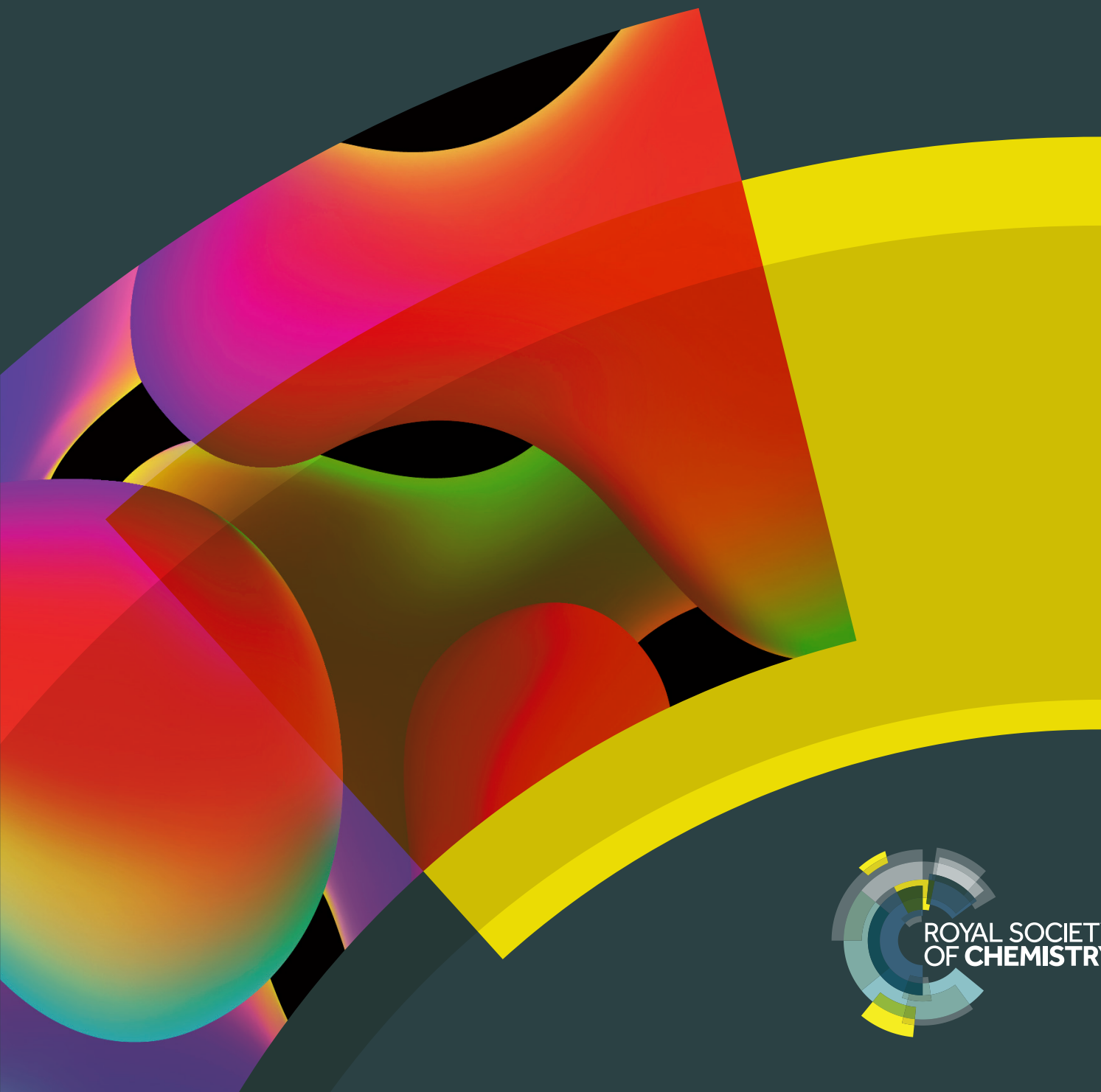


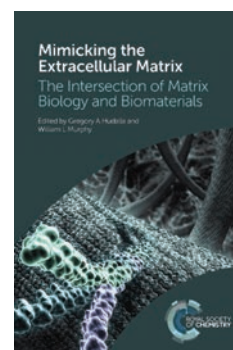
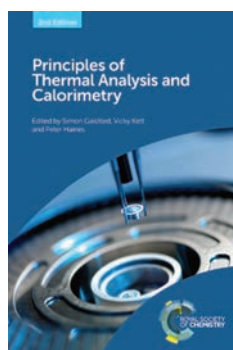
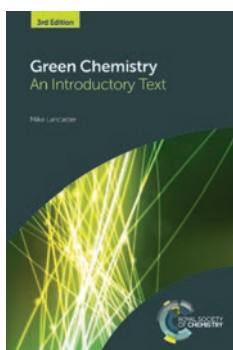
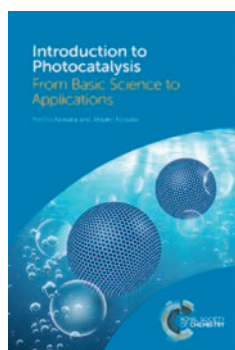
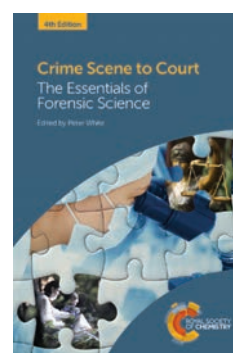
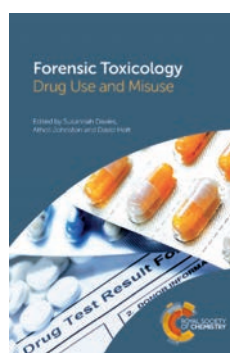
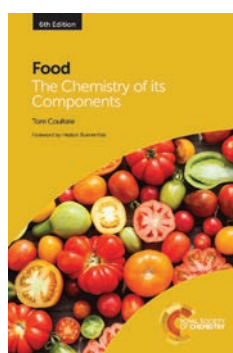
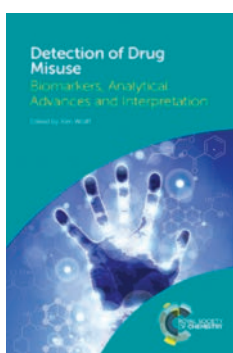
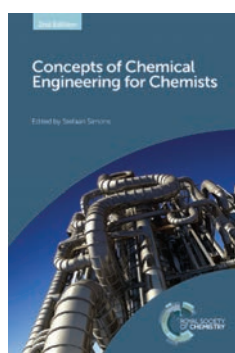
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Introduction

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Our work as a publisher not only allows us to reinvest funds back into the global scientific community. It allows us to support that community with high quality, internationally respected chemical science titles. Currently made up of over 1,500 books, our collection features authors from around the globe and spans 47 years of research.

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Highlights include:

- *Green Chemistry: An Introductory Text 3rd edition* by Mike Lancaster (page 10)
- *Crime Scene to Court: The Essentials of Forensic Science: 4th edition* edited by Peter C White (page 8)
- *Food Microbiology: 4th edition* by Martin Adams, Maurice O Moss, and Peter McClure (page 9)

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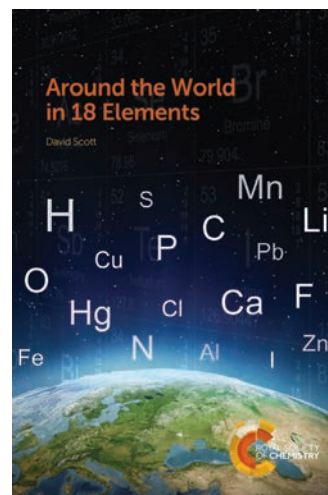
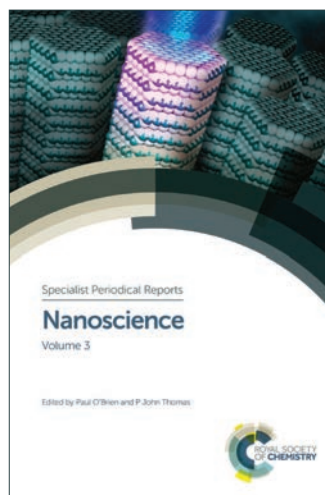
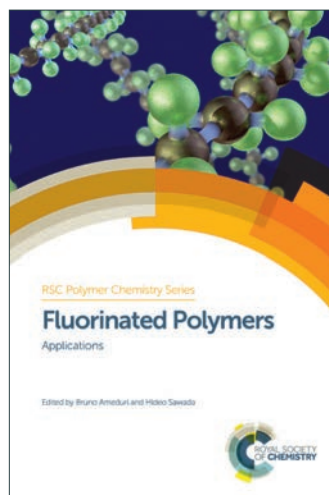
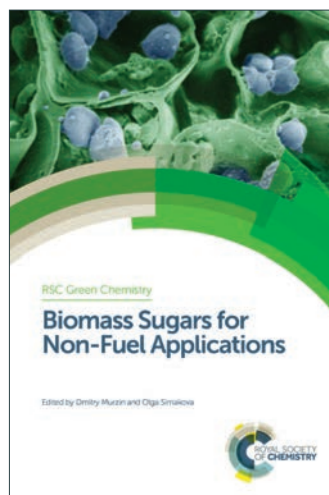
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 available to buy as an eBook from online booksellers

Textbooks

Archaeological Chemistry

A Mark Pollard University of Oxford, UK | Carl Heron The British Museum, UK |

Ruth Armitage Eastern Michigan University, USA

The use of chemistry in archaeology can help archaeologists answer questions about the nature and origin of artefacts. Examining the most widely used analytical techniques in archaeology, the third edition of this comprehensive textbook features a new chapter on proteomics. It is an essential companion to students in archaeological science and chemistry, as well as to archaeologists, and those involved in conserving human artefacts.

Hardback | 500 pages | 9781782624264 | 2016 | £44.99 | \$70.99

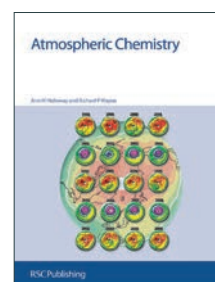


Atmospheric Chemistry

Ann M Holloway | Richard P Wayne University of Oxford, UK

Providing a basic knowledge of the chemistry of Earth's atmosphere, this textbook provides students with an understanding of the role that chemical transformations play in this vital part of our environment. The human race has interfered with the feedbacks that have maintained the atmosphere to support surface life for more than 3.5 billion years. This book enables students to understand the background to the problems that arise from such interference. The book is written at a level accessible to undergraduate chemists.

Hardback | 271 pages | 9781847558077 | 2010 | £25.99 | \$42.00 

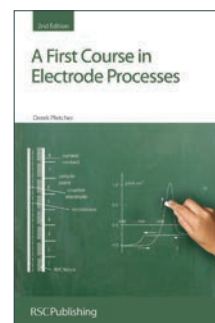


A First Course in Electrode Processes 2nd edition

Derek Pletcher University of Southampton, UK

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. A useful appendix contains problems with fully worked answers to test the reader's understanding.

Paperback | 316 pages | 9781847558930 | 2009 | £39.99 | \$64.00

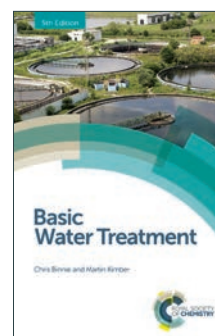


Basic Water Treatment 5th edition

Chris Binnie Independent Consultant, UK | Martin Kimber Atkins Water, UK

Revised to reflect the changes in water treatment over the past few years, the fifth edition of *Basic Water Treatment* remains one of the first choice references on all aspects of water quality and treatment systems. A best-selling text, this book has been written by two of the world's leading experts in the field and is a widely accepted introduction and practical guide. Focused on issues of most interest to practising water treatment engineers, it summarises the key issues and criteria in short and accessible sections with additional theory to explain and support the treatment processes considered. Ideal as a textbook for students, a handbook for mechanical engineers and chemists who need to put their specialised knowledge into a broader context, and a guide to managers and non-technical staff who wish to understand some of the quality and technical issues relating to water treatment.

Paperback | 280 pages | 9781849739740 | 2013 | £40.00 | \$64.00



Biocatalysis in Organic Synthesis

The Retrosynthesis Approach

Nick Turner University of Manchester, UK | Luke Humphreys GlaxoSmithKline, UK

This unique textbook provides new guidelines for "biocatalytic retrosynthesis" in which molecules are disconnected with consideration for applying biocatalysts in the forward synthesis direction. It aims to enable students to make the connection between biocatalysis and synthesis earlier in their studies and to equip students for the modern world of organic synthesis where biocatalysts play an increasingly important role. Tutorials enable the reader to practise disconnecting target molecules to find the 'hidden' biocatalytic reactions which can be applied in the synthetic direction. It also contains a complete description of the current biocatalyst classes that are available. This textbook is an essential resource for lecturers and students studying synthetic chemistry. It also serves as a handy reference for practising chemists wishing to embed biocatalysis into their synthetic toolbox.

Paperback | 200 pages | 9781782625308 | 2017 | £31.99 | \$59.99



Brewing 2nd edition

Ian Hornsey Nethergate Brewery, UK

It is believed that beer has been produced, in some form, for thousands of years - the ancient Egyptians being one civilization with a knowledge of the fermentation process. Beer production has seen many changes over the centuries, and *Brewing's* second edition brings the reader right up to date with the advances in the last decade. Covering the various stages of beer production, reference is also made to microbiology within the brewery and some pointers to research on the topic are given. Written by a recently retired brewer, this book will appeal to all beer lovers, but particularly those within the industry who wish to understand the processes, and will be relevant to students of food or biological sciences.

Paperback | 332 pages | 9781849736022 | 2013 | £27.99 | \$45.00 



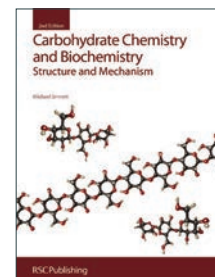
Carbohydrate Chemistry and Biochemistry 2nd edition

Structure and Mechanism

Michael Sinnott

This fully updated and expanded second edition of a highly popular text book focuses on the structure and mechanism in carbohydrate chemistry and biochemistry. Extensively referenced with citations and a detailed index, the book contains everything the reader needs to know to start a carbohydrate research project with one of the real strengths being the treatment and integration of the important physical-chemical principles and methods (though lead references only are given to the finer points of carbohydrate synthesis). Suitable for both researchers who are new to the subject and those more established as well as a readership from diverse backgrounds and interests, including chemists, biochemists, food scientists and technologists involved with the processing of polysaccharides in the paper, textile, cosmetics, biofuels and other industries.

Hardback | 9781849733274 | 2013 | £79.99 | \$128.00 



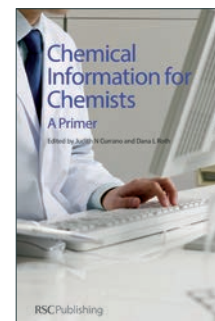
Chemical Information for Chemists

A Primer

Judith Currano University of Pennsylvania, USA | **Dana Roth** California Institute of Technology, USA

While it is not difficult to find data in many cases, what advice can you get on the quality of the data retrieved? This book could help with this problem and more. This is a chemical information book aimed specifically at practicing chemists. Written and edited by experts in the field, it is ideal for chemists who lack a chemical information professional able to teach basic and intermediate techniques in retrieving and evaluating information using the unique entry points of the chemical literature, including structure, formula, substructure, and sequence. Aimed at students on undergraduate and graduate courses, it could also be a useful guide to new information specialists who are facing the challenging diversity of chemical literature.

Paperback | 322 pages | 9781849735513 | 2013 | £24.99 | \$40.00  

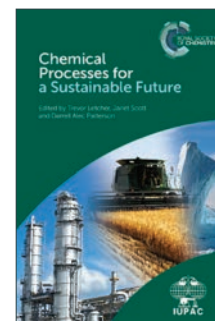


Chemical Processes for a Sustainable Future

Trevor Letcher | **Janet Scott** University of Bath, UK | **Darrell Patterson** University of Bath, UK

This comprehensive book approaches sustainability from two directions, the reduction of pollution and the maintaining of existing resources, both of which are addressed in a thorough examination of the main chemical processes and their impact. Divided into five sections, the book takes the reader through the various types of chemical processes, demonstrating how we must find ways to lower the environmental cost of producing chemicals. Each section consists of a number of chapters, presenting the latest facts and opinion on the methodologies being adopted by the chemical industry to provide a more sustainable future. This book is ideal for industrialists and investors; policy makers; students, teachers, scientists and engineers working in the field; and finally editors and journalists.

Hardback | 800 pages | 9781849739757 | 2015 | £84.99 | \$135.00 



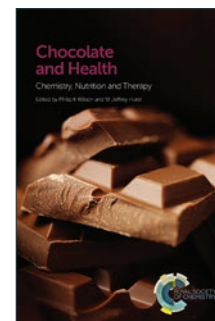
Chocolate and Health

Chemistry, Nutrition and Therapy

Philip K Wilson Formerly East Tennessee State University, USA | **W Jeffrey Hurst** The Hershey Company Technical Centre, USA

Chocolate and Health provides a comprehensive overview of the chemistry, nutrition and bioavailability of cacao and chocolate. The book begins with a brief historical introduction to the topic, outlining the current and historical medical uses of chocolate and chocolate derivatives. The remainder of the text is arranged into three sections that take the reader through various aspects of the nutritional and health aspects of cacao. Each section is written and prepared by experts within the field, providing a global perspective of the current and ongoing research in this area. This text will provide the reader with a complete overview of the field and will be of interest to food and biomedical scientists, as well as nutritionists, medicinal chemists and anyone with an interest in chocolate.

Hardback | 246 pages | 9781849739122 | 2015 | £59.99 | \$96.00 

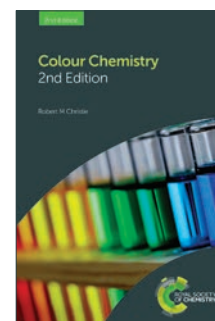


Colour Chemistry 2nd edition

Robert Christie Heriot-Watt University, UK

This revised and updated second edition provides a current insight into how the fundamental principles of the chemistry of colour are applied in dyes and pigments. The text has been expanded and rewritten throughout, while largely maintaining the structure of the first edition. In particular, the chapter on functional dyes has been substantially rewritten, the chapter describing how the colour industry has been responding to environmental issues is expanded to reflect this growing importance and a new chapter is introduced on colour in cosmetics. Broad and balanced in its coverage, this book is ideal for students, graduates and those in industry and academia seeking an introduction to the topic.

Paperback | 360 pages | 9781849733281 | 2015 | £39.99 | \$64.00 

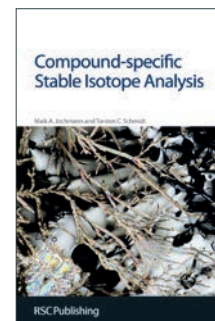


Compound-specific Stable Isotope Analysis

Maik A Jochmann University Duisburg-Essen, Germany | **Torsten C Schmidt** University Duisburg-Essen, Germany

Compound-specific stable isotope analysis (CSIA) is a technique that is increasingly used in many areas of science and technology for source allocation, authentication, and characterisation of transformation reactions. However, there are no textbooks for students with an analytical chemical background or basic introductory books emphasising the instrumentation and the theoretical background. This book is a textbook but is also aimed at more advanced scientists working in this research area. In the first half of the book, general topics and fundamentals such as stable isotopes, isotopic fractionation terminology and notation as well as instrumental equipment for stable isotope analysis and referencing are covered. In the second half, applications of CSIA in different scientific fields are discussed.

Hardback | 376 pages | 9781849731577 | 2012 | £55.99 | \$93.00 

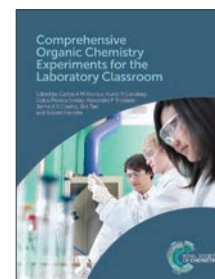


Comprehensive Organic Chemistry Experiments for the Laboratory Classroom

Carlos A M Afonso Universidade de Lisboa, Portugal | **Nuno R Candeias** Tampere University of Technology, Finland | **Dulce Pereira Simão** Universidade de Lisboa, Portugal | **Alexandre F Trindade** University of Lisbon, Portugal | **Jaime A S Coelho** University of Lisbon, Portugal | **Bin Tan** SUSTC University, China | **Robert Franzén** Tampere University of Technology, Finland

Based on a well-received book published in Portuguese, this expanded and practical textbook contains organic chemistry experiments for teaching in the laboratory at the undergraduate level. The editorial team have collected contributions from around the world and standardised them for publication. Targeted at professors and lecturers in chemistry, this useful text will provide up-to-date experiments in modern chemistry scenarios putting the science into context for the students.

Hardback | 840 pages | 9781849739634 | 2016 | £74.99 | \$120.00

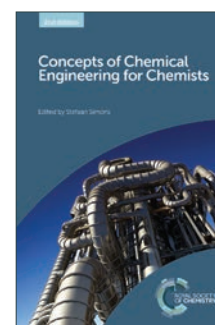


Concepts of Chemical Engineering for Chemists 2nd edition

Stefaan Simons Brunel University London, UK

Based on a former popular course of the same title, *Concepts of Chemical Engineering for Chemists* outlines the basic aspects of chemical engineering for chemistry professionals. It clarifies the terminology used and explains the systems methodology approach to process design and operation for chemists with limited chemical engineering knowledge. The book provides practical insights into all areas of chemical engineering with well explained worked examples and case studies. The new edition contains a revised chapter on process analysis and two new chapters "Process and Personal Safety" and "Systems Integration and Experimental Design", the latter drawing together material covered in the previous chapters so that readers can design and test their own pilot process systems.

Hardback | 402 pages | 9781782623588 | 2016 | £49.95 | \$80.00



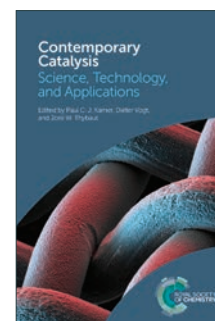
Contemporary Catalysis

Science, Technology, and Applications

Paul C J Kamer University of St Andrews, UK | **Dieter Vogt** University of Edinburgh, UK | **Joris Thybaut** Ghent University, Belgium

Covering the basic principles, this book covers aspects of homogeneous, heterogeneous, organo-, bio- and computational catalysis. It discusses catalyst preparation, catalyst characterization and reactor engineering, and explores recent developments in the understanding of catalytic mechanism, such as operando spectroscopy. Several important case studies using industrial applications are given. It is an integrated approach ideal for graduate students from a range of backgrounds, including catalysis, engineering and organic synthesis.

Hardback | 600 pages | 9781849739900 | 2016 | £86.99 | \$143.00



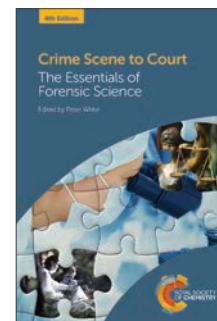
Crime Scene to Court 4th edition

The Essentials of Forensic Science

Peter C White

Written for non-scientists, or those with limited scientific knowledge, this fourth edition features new chapters on identifying an individual, including biometrics, and digital crime. Keeping readers at the forefront of current practices across the forensic disciplines, this is an excellent source of information for anyone studying forensic science or law.

Paperback | 650 pages | 9781782624462 | 2016 | £37.99 | \$60.99



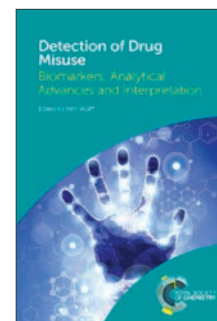
Detection of Drug Misuse

Biomarkers, Analytical Advances and Interpretation

Kim Wolff King's College London, UK

This text describes the current state-of-the-art techniques used for identifying and confirming drug misuse as well as recent advances in biomarkers, instrumentation and analysis methodology. The title discusses both recreational and designer drugs, including non-addictive and addictive drugs. This book is a useful and fascinating resource for healthcare professionals working in the field of drug misuse as well as academics and postgraduates researching within analytical, chromatography, medicinal and pharmaceutical chemistry; drug metabolism; addiction science; and forensic toxicology, science and medicine.

Hardback | 500 pages | 9781782621577 | 2016 | £86.99 | \$143.00




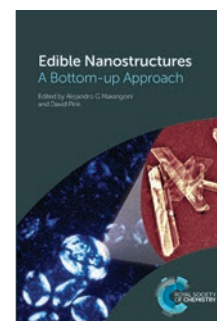
Edible Nanostructures

A Bottom-up Approach

Alejandro G Marangoni University of Guelph, Canada | David Pink St Francis Xavier University, Canada

The book summarises the current developments in the areas of protein aggregation and gelation, starch crystallography, fat crystal network nanostructure and microstructure, and emulsions as they pertain to their functionality in foods. Each chapter offers both the qualitative view and a basic quantitative treatment of the area, including simple models used to describe structure and its relationship to functionality, if they exist. Written by a leading scientist, this is the first book on nanostructures in foods presented for students in chemistry, physics and food science.

Hardback | 328 pages | 9781849738958 | 2014 | £84.99 | \$140.00 



Food 6th edition

The Chemistry of its Components

Tom Coultate

A new edition of the highly successful textbook, which provides a source of detailed information on the chemistry of food. The book investigates food components which are present in large amounts (carbohydrates, fats, proteins, minerals and water) and also those that occur in smaller amounts (colours, flavours, vitamins and preservatives). Food borne toxins, allergens, pesticide residues and other undesirables are also given detailed consideration. Attention is drawn to the nutritional and health significance of food components. The sixth edition also includes addition chapters on enzymes and nucleic acids and nucleotides.

Paperback | 620 pages | 9781849738804 | 2016 | £31.99 | \$51.00 

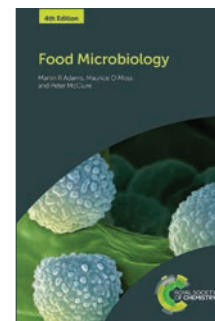


Food Microbiology 4th edition

Martin Adams | Maurice O Moss | Peter McClure Mondelēz International, UK

Now in its fourth edition, this highly successful text covers the full range of topics encompassed in modern food microbiology. The new edition provides updated and revised individual chapters and uses new examples to illustrate incidents with particular attention being paid to images. The textbook is a thorough and accessible account designed for students in the biological sciences, biotechnology and food science. It will also be valuable to researchers, teachers and practising food microbiologists.

Hardback | 562 pages | 9781849739603 | 2016 | £34.99 | \$56.00 



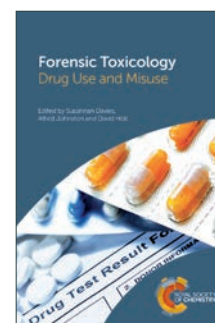
Forensic Toxicology

Drug Use and Misuse

Susannah Davies LTG, UK | Atholl Johnston Queen Mary University of London, UK | David Holt St George's, University of London, UK

New designer drugs, access to databases, and the changing availability of samples for analysis have changed the face of modern forensic toxicology in recent years. From use of pharmaceutical drugs in a clinical setting, through smart and counterfeit drugs, this book documents the wide range in which drugs today are abused. Diverse case examples from industry experts enable readers to understand how drugs impact on each other and how the interpretative outcomes of a case are dependent on many aspects. It is an essential resource for postgraduate students in forensic toxicology, and for researchers in forensic toxicology laboratories who need the latest data and knowledge.

Hardback | 578 pages | 9781782621560 | 2016 | £86.99 | \$143.00



Fundamentals of Smart Materials

Mohsen Shahinpoor University of Maine, USA | Hans-Jorg Schneider Universität des Saarlandes, Germany

A new textbook consisting of a workbook and solutions covering the fundamentals of different functional material systems aimed at undergraduate and postgraduate students. Each chapter will include an introduction to the material, its applications and uses with example problems, fabrication and manufacturing techniques, conclusions, homework problems and a bibliography. Written by leading authors in smart materials, topics include piezoelectric materials, magnetostrictive materials, shape memory alloys, mechanochromic materials, thermochromic materials, chemomechanical polymers and self-healing materials.

Hardback | 480 pages | 9781782626459 | 2017 | £76.99 | \$138.00



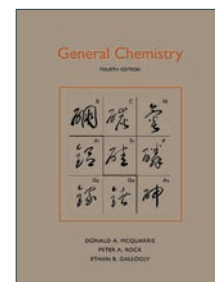
General Chemistry 4th edition

Donald A McQuarrie University of California Davis, USA | Peter A Rock University of California Davis, USA | Ethan B Gallogly Santa Monica College, Davis, USA

This fourth edition of *General Chemistry* takes an atoms-first approach from beginning to end. In the tradition of McQuarrie's many previous works, it promises to be another groundbreaking text. This superb new textbook combines the clear writing and wonderful problems that have made McQuarrie famous among chemistry professors and students worldwide. Presented in an elegant design with all-new illustrations, it is available in a soft-cover edition to offer professors a fresh choice at an outstanding value.

NOT AVAILABLE IN NORTH AMERICA AND CANADA

Paperback | 1116 pages | 9781891389603 | 2011 | £49.95 | \$80.00



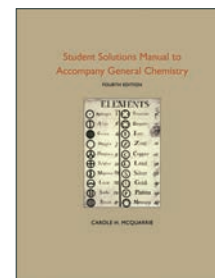
Student Solutions Manual to Accompany General Chemistry 4th edition

Carole H McQuarrie

For years, Donald McQuarrie's chemistry textbooks have been famous among students and professors alike for their wonderful problems. The *Solutions Manual to Accompany General Chemistry, 4th edition* lists even-numbered chapter-ending problems from the textbook and goes on to provide detailed solutions. For students studying independently or in groups, this solutions manual will be tremendously useful to help students perfect their problem-solving skills and to master the covered concepts.

NOT AVAILABLE IN NORTH AMERICA AND CANADA

Paperback | 376 pages | 9781891389733 | 2010 | £24.95 | \$40.00



Green Chemistry 3rd edition

An Introductory Text

Mike Lancaster Chemical Industries Association, UK

Updated throughout, the third edition of this fascinating textbook is suitable for undergraduate and postgraduate courses covering green chemistry. It features expanded sections on legislation, measurement and renewable resources, bringing readers the latest developments in this quickly-growing area. Case studies now include more recent examples of real-world applications from industry to demonstrate how the techniques of green chemistry work in practice.

Hardback | 400 pages | 9781782622949 | 2016 | £35.99 | \$59.99



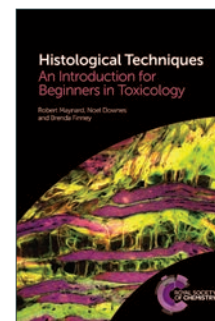
Histological Techniques

An Introduction for Beginners in Toxicology

Robert Maynard University of Birmingham, UK | Noel Downes Sequani Limited, UK | Brenda Finney Sequani Limited, UK

Histological techniques form the basis of many areas of research, yet they can often be poorly understood. Aimed at postgraduate students and those at an early stage of their career, this title provides a detailed and comprehensive introduction to the techniques and how to apply them successfully.

Hardback | 334 pages | 9781849739924 | 2014 | £84.99 | \$140.00 



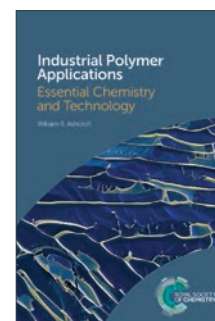
Industrial Polymer Applications

Essential Chemistry and Technology

William R Ashcroft

Industrial Polymer Applications provides a comprehensive overview of the diverse properties and applications of thermoset and thermoplastic polymer technologies used routinely in the protection, repair, restoration and bonding of the main classes of industrial engineering materials such as concrete, masonry, wood, metal, rubber, plastic, glass and advanced ceramics. Written in an accessible way, the book provides a supplementary text for undergraduates, postgraduates and industrialists who have studied or are involved in chemistry, polymer chemistry, industrial chemistry, materials science, chemical engineering, mechanical engineering, civil engineering or corrosion engineering, science and technology.

Hardback | 237 pages | 9781782628149 | 2017 | £30.99 | \$51.99



Intermolecular Interactions in Crystals

Fundamentals of Crystal Engineering

Juan Novoa University of Barcelona, Spain

Crystal engineering concerns the design and synthesis of molecular crystals with desired properties, which requires a deep understanding of intermolecular interactions. This new book brings together all the current information about the most relevant intermolecular interactions providing an introductory text for graduates. The textbook introduces the nature and identification of bonds and the latest knowledge of their physical meaning. Properties of the most relevant intermolecular bonds identified in molecular crystals are described. Cooperative effects from different bond types present in one solid are also explained.

Hardback | 250 pages | 9781782621737 | 2016 | £86.99 | \$140.00

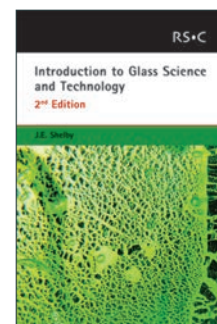


Introduction to Glass Science and Technology 2nd edition

James E Shelby Alfred University, USA

This book provides a concise and inexpensive introduction for an undergraduate course in glass science and technology. The contents cover the fundamental topics of importance in glass science and technology, including glass formation, crystallization, phase separation and structure of glasses. Additional chapters discuss the most important properties of glasses and a final chapter provides an introduction to a number of methods used to form technical glasses. Although intended primarily as a textbook, it is also invaluable to the engineer or scientist who desires more knowledge regarding the formation, properties and production of glass.

Paperback | 308 pages | 9780854046393 | 2005 | £29.95 | \$48.00  



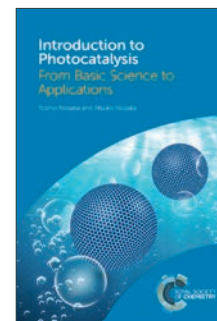
Introduction to Photocatalysis

From Basic Science to Applications

Yoshio Nosaka Nagaoka University of Technology, Japan | Atsuko Nosaka Nagaoka University of Technology, Japan

Presenting the basic science of semiconductor photocatalysis together with the various practical applications, this textbook is ideal for graduate students. It covers fundamental principles and applicable techniques of light, solid state physics, electrochemistry, reaction kinetics, and materials processing. A solid understanding of semiconductor photoelectrochemistry is developed before the textbook moves on to discuss applications and future prospects in photocatalysis. This introductory textbook provides a foundation in photocatalysis to supplement graduate courses in catalysis, environmental science, materials science and chemical engineering.

Hardback | 272 pages | 9781782623205 | 2016 | £76.99 | \$138.00

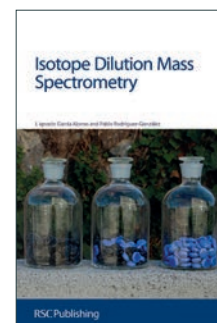


Isotope Dilution Mass Spectrometry

Jose Alonso University of Oviedo, Spain | Pablo Gonzalez University of Oviedo, Spain

Isotope dilution mass spectrometry (IDMS) is increasingly used in research laboratories and has become an essential tool in routine analysis labs (including environmental and clinical applications). This is the first textbook to present a comprehensive and instructive view of the theory and applications of this growing technique. Postgraduate students and laboratory staff will find this textbook to be a highly accessible guide to isotope dilution analysis, providing the reader with a sound basis to working with this technique. Experienced researchers will benefit from designing experiments with IDMS methodologies in mind. The authors enjoy a strong reputation in the field of analytical chemistry and the reader will be familiar with their previous research.

Hardback | 453 pages | 9781849733335 | 2013 | £69.99 | \$112.00

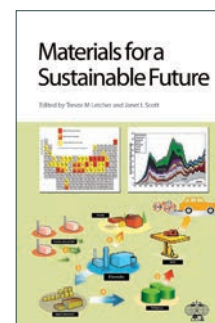


Materials for a Sustainable Future

Trevor M Letcher | Janet L Scott University of Bath, UK

This book is about the materials in our society and how they relate to sustainability. This includes materials that need to be conserved, renewable materials, pollutants that can be used in new processes, and materials designed to optimise the sustainable use of resources. Aimed at students, lecturers, researchers, and policy makers, this work describes current developments in all relevant fields and points the way forward for new developments. Each of the 25 chapters is written by an expert from the discipline concerned and contains a list of recent references. *Materials for a Sustainable Future* enables the reader to appreciate the consequences of exhausting scarce materials and of polluting the planet with greenhouse gases. It also describes how chemistry can be used to maintain the resources we have.

Hardback | 791 pages | 9781849734073 | 2012 | £74.99 | \$126.00

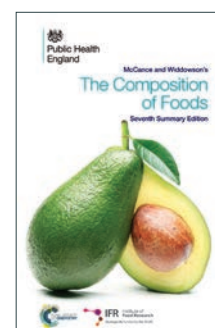


McCance and Widdowson's The Composition of Foods

Seventh Summary Edition

McCance and Widdowson's *The Composition of Foods, Seventh Summary Edition* provides a timely, authoritative and comprehensive update of the nutrient data for the most commonly consumed foods in the UK. Foods that are less commonly consumed but are important in the diets of sub-groups of the population are also included. Aimed at students and professionals in all food and health disciplines, this essential handbook should be on the bookshelf of everyone who needs to know the nutritional value of foods consumed in the UK.

Paperback | 644 pages | 9781849736367 | 2015 | £59.50 | \$95.00 



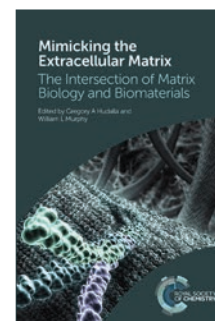
Mimicking the Extracellular Matrix

The Intersection of Matrix Biology and Biomaterials

Gregory A Hudalla University of Florida, USA | William L Murphy University of Wisconsin - Madison, USA

Materials which are able to mimic the properties of the extracellular matrix are of great interest for many therapeutic and biomedical applications. Edited by leading experts in the field, this book brings together the current knowledge of extracellular matrix biology with the state-of-the-art of extracellular matrix-mimicking biomaterials. The book is suitable for both biologists and bioengineers interested in the extracellular matrix, and provides material scientists with a benchmark for future efforts to develop synthetic biomaterials as extracellular matrix mimics.

Hardback | 405 pages | 9781849738330 | 2016 | £84.99 | \$140.00



Molecular Biology and Biotechnology 6th edition

Ralph Rapley University of Hertfordshire, UK | David Whitehouse University of Hertfordshire, UK

This popular textbook has been revised and updated to provide a comprehensive overview and to reflect the latest developments in this rapidly developing area. Continuing with the broad base style of both current molecular and traditional biotechnology, chapters have been updated to reflect current interest and include new areas such as stem cell technology and important areas in drug discovery such as IP and patents. By presenting information in an easily assimilated form, this book makes an ideal undergraduate text for students of biology and chemistry, as well as appealing to postgraduates.

Hardback | 555 pages | 9781849737951 | 2015 | £55.99 | \$89.99 



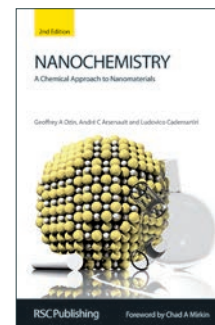
Nanochemistry 2nd edition

A Chemical Approach to Nanomaterials

Geoffrey A Ozin University of Toronto, Canada | **André Arsenault** Opalux Inc, Canada |
Ludovico Cademartiri Iowa State University of Science and Technology, USA

Nanochemistry: A Chemical Approach to Nanomaterials is the first textbook for teaching nanochemistry and adopts an interdisciplinary and comprehensive approach to the subject. It presents a basic chemical strategy for making nanomaterials and describes some of the principles of materials self-assembly over 'all' scales. Suggestions of new ways to tackle research problems and speculations on how to think about assembling the future of nanotechnology are given. Primarily designed for teaching, this book will appeal to graduate and advanced undergraduate students.

Hardback | 876 pages | 9781847558954 | 2008 | £45.00 | \$72.00 




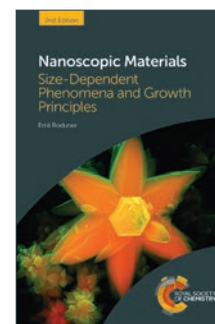
Nanosopic Materials 2nd edition

Size-Dependent Phenomena and Growth Principles

Emil Roduner University of Stuttgart, Germany

Nanosopic Materials provides an accessible overview of the underlying physico-chemical and physical principles of nanoscience including electronic structure, magnetic properties and thermodynamics of size dependence. This new edition has been fully revised and updated to reflect recent advances in nanoscience with particular reference to new materials and their applications including graphene, gold nanoparticles, energy applications and core-shell structures. Additional chapters cover the development of nucleation, crystal shape engineering, self-assembly and biomimetics. With helpful illustrations and summaries of key points in every chapter, this advanced textbook is ideal for graduate students of chemistry and materials science and researchers new to the field of nanoscience and nanotechnology.

Hardback | 439 pages | 9781849739078 | 2014 | £79.99 | \$130.00 



Nanotechnology

The Future is Tiny

Michael Berger Nanowerk LLC, Germany

Following the success of Nano-Society, *Nanotechnology: The Future is Tiny* introduces 160 specific research projects that are currently being investigated in laboratories distributed throughout the world. Through interviews and descriptions of these projects the author provides the reader with a unique commentary on the current state of the art of nanotechnology, through the scientists' own words.

Hardback | 350 pages | 9781782625261 | 2016 | £66.99 | \$118.00 



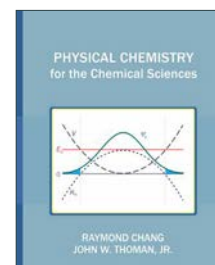
Physical Chemistry for the Chemical Sciences

Raymond Chang Williams College, USA | **John W Thoman, Jr** Williams College, USA

Targeted to a mainstream physical chemistry course, this text features extensively revised chapters on quantum mechanics and spectroscopy, many new chapter-ending problems, and updated references, while biological topics have been largely relegated to the previous two textbooks. Other topics added include the law of corresponding states, the Joule-Thomson effect, the meaning of entropy, multiple equilibria and coupled reactions, and chemiluminescence and bioluminescence. Careful pedagogy and clear writing throughout combine to make this an excellent choice for your physical chemistry course.

NOT AVAILABLE IN NORTH AMERICA AND CANADA

Paperback | 968 pages | 9781782620877 | 2014 | £49.99 | \$80.00



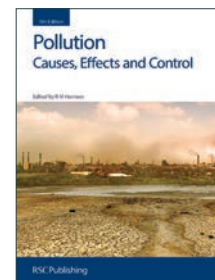
Pollution 5th edition

Causes, Effects and Control

R M Harrison University of Birmingham, UK

Twenty years on from the first edition of *Pollution: Causes, Effects and Control*, the topic remains high in the public awareness. The scope of the book ranges from the sources of pollutants and their environmental behaviour, to their effects on human and non-human receptors, to the technologies and strategies available for control. Whilst originally intended as an introductory reference work for professionals within the field, the book has been widely adopted for teaching purposes at the undergraduate and postgraduate level.

Hardback | 558 pages | 9781849736480 | 2013 | £74.99 | \$135.00 



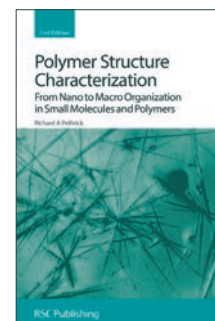
Polymer Structure Characterization 2nd edition

From Nano to Macro Organization in Small Molecules and Polymers

Richard A Pethrick University of Strathclyde, UK

A new, fully revised and updated edition of the successful postgraduate textbook, which covers the way in which molecular interactions influence observed morphologies in both small molecule and polymeric systems. This new edition includes additional chapters on nano molecular systems, self-assembly and molecular organisation. Existing chapters have also been expanded to include recent examples and new content including dynamics and liquid crystal organisation. This textbook is primarily aimed at polymer and material scientists, but would also be of interest to chemists and physicists studying the properties of organic molecules and materials.

Hardback | 492 pages | 9781849734332 | 2013 | £74.99 | \$120.00 



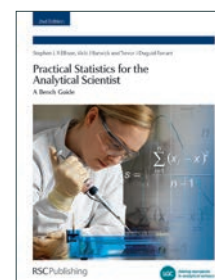
Practical Statistics for the Analytical Scientist 2nd edition

A Bench Guide

Peter Bedson Laboratory of the Government Chemist, UK | Trevor J Duguid Farrant, Reading Scientific Services Ltd, UK

The application of statistics is central to the assessment of data quality and an understanding of statistics is essential for the interpretation of analytical results. The fully revised and updated second edition describes the most common statistical parameters used in an analytical laboratory and contains new sections on method validation, measurement uncertainty, effective experimental design and proficiency testing. The book is aimed at practising analysts and students of analytical science.

Paperback | 282 pages | 9780854041312 | 2009 | £29.95 | \$48.00 

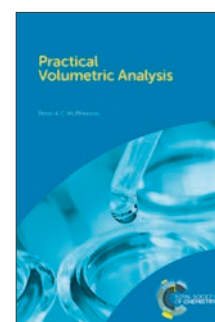


Practical Volumetric Analysis

Peter McPherson Belfast Metropolitan College, UK

Proficiency in volumetric analysis is a key skill for chemists in research and industry. Written by someone who has experienced both teaching and working as a research chemist, this up-to-date textbook on practical volumetric analysis provides the theoretical chemistry associated with volumetric analysis supported by a selection of practicals. It is suitable for students taking modules in introductory chemistry and analytical chemistry on undergraduate degree courses as well as providing guidance to non-specialists teaching chemistry.

Paperback | 332 pages | 9781849739146 | 2015 | £24.99 | \$39.99

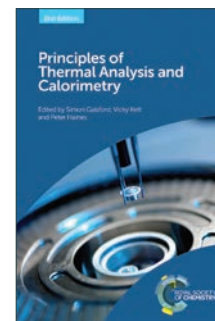


Principles of Thermal Analysis and Calorimetry 2nd edition

Simon Gaisford University College London, UK | Vicky Kett Queen's University Belfast, UK | Peter Haines

Since the original text published in 2001, there have been significant advances in various analytical techniques and their applications. Each chapter of the new book is rewritten by a contemporary expert in the field, who explains the basic principles of the technique and highlights any recent technical advances in instrumentation or methods of analysis. Where appropriate and fully integrated into the chapters, applications are used to highlight particular operating principles or methods of interpretation. All chapters have been reviewed to ensure consistency and accuracy of nomenclature and descriptions thus ensuring the quality of the book. Primarily aimed at undergraduate courses and the chemical industry where this technique is being used, it may also find a use with instrument manufacturers where they are introducing this method.

Hardback | 268 pages | 9781782620518 | 2016 | £35.99 | \$57.00

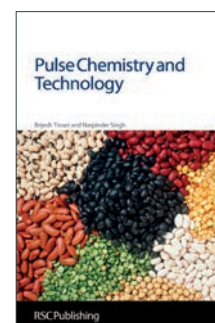


Pulse Chemistry and Technology

Brijesh Tiwari Teagasc Food Research Centre, Ireland | Narpinder Singh Guru Nanak Dev University, India

Like cereal, pulse processing is one of the oldest and most important of all food processing, which encompasses a diverse range of products. Pulses are widely grown throughout the world and their dietary and economic importance is globally appreciated and well recognised. Grain processing including cereal and pulse processing forms a large and important part of the food production chain. Today, the grain processing industry is as diverse as its range of products. Although cereal processing has several dedicated textbooks, however no dedicated text on pulse processing is currently available for food science and technology graduates. This book serves as a comprehensive text book for undergraduate and postgraduate students, educators, industry personnel involved with grain processing and to some extent researchers providing an up-to-date insight into pulse science, processing and technology.

Hardback | 309 pages | 9781849733311 | 2012 | £69.99 | \$112.00 



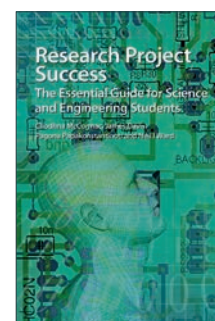
Research Project Success

The Essential Guide for Science and Engineering Students

Clíodhna McCormac University of Ulster, UK | James Davis University of Ulster, UK | Pagona Papakonstantinou University of Ulster, UK | Neil I Ward University of Surrey, UK

This book is a concise, multilevel resource that provides guidance on the core components common to almost every project within the physical, engineering and life sciences (problem assessment and contextualisation, literature review practices, sources and citation, data presentation, reporting styles, data analysis and error etc). It standardises the delivery of the material but, more importantly, links the components together by outlining a coherent procedural road map that can highlight to the student "what to do", "when to do it" and "how to solve it" procedures. The content of the book is presented through case studies so as to enhance the relevance of the processes, presents examples of good practice and, in keeping with the toolbox approach, can be readily adapted and applied by the students.

Paperback | 140 pages | 9781849733823 | 2012 | £18.99 | \$30.00 



Science and Art

The Painted Surface

Antonio Sgamellotti Accademia Nazionale dei Lincei, Italy | **Brunetto Giovanni Brunetti** University of Perugia, Italy | **Costanza Miliani** Italian National Research Council, Italy

The book provides a series of case studies, from ancient to contemporary art belonging to the artistic expressions of world regions from the Far East to America and Europe, showing how the cooperation between science and humanities can lead to the developments in knowledge and conservation of paintings. Written by scientists together with art historians, archaeologists or conservators this is the first book dedicated to this topic presented in an easily readable form for a large audience.

Hardback | 644 pages | 9781849738187 | 2014 | £49.99 | \$80.00 



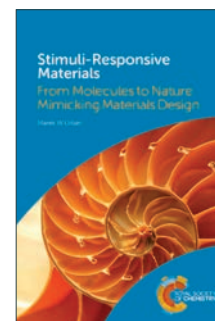
Stimuli-Responsive Materials

From Molecules to Nature Mimicking Materials Design

Marek W Urban Clemson University, USA

The ability for a material to change properties in response to external stimuli is an attractive feature for numerous applications and as such stimuli-responsive materials are gaining attention across many different fields. This book introduces the concepts of stimuli-responsiveness, including the fundamental materials properties required for design. It provides readers with comprehensive scientific principles and developments of stimuli-responsive materials, as well as the recent technological advances. Written by a renowned expert in the field, this book is suitable for anyone interested in stimuli-responsive materials working in polymers, biochemistry, biotechnology and materials science.

Hardback | 427 pages | 9781849736565 | 2016 | £86.99 | \$143.00



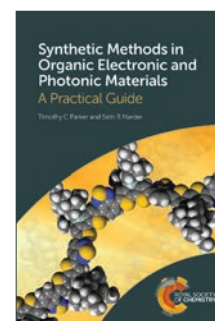
Synthetic Methods in Organic Electronic and Photonic Materials

A Practical Guide

Timothy Parker Georgia Institute of Technology, USA | **Seth Marder** Georgia Institute of Technology, USA

With the development of courses on materials synthesis and the need to carry out specific chemical transformations in the laboratory, good practical advice is needed for those requiring more detail of this area. The purpose of the book is to give researchers and students an introduction and reference that efficiently provides general information for each important synthetic method category and a number of examples from the literature to convey practically important variations. It is useful as an outline for advanced organic and materials science courses as well as a good introduction and desk reference for new and experienced researchers in the field.

Paperback | 296 pages | 9781849739863 | 2015 | £76.99 | \$123.00



Tanning Chemistry

The Science of Leather

Anthony D Covington The University of Northampton, UK

The leather industry generates in the order of 100 billion dollars a year worldwide. Written by the leading expert in the field, this unique book contains the distilled essence of leather science from both a practical and a theoretical point of view. It encompasses the chemistries and mechanisms of tanning, together with the latest thinking on the fundamental principles of collagen stabilisation. Aimed at students as well as experienced practitioners in the art, this is the only current text on tanning science. It includes a subject index, references and glossary.

Paperback | 520 pages | 9781849734349 | 2011 | £45.99 | \$74.00 

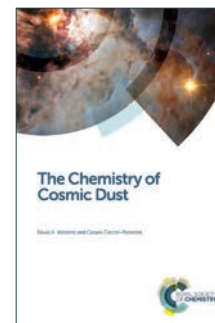


The Chemistry of Cosmic Dust

David A Williams University College London, UK | C Cecchi-Pestellini Università degli Studi di Palermo, Italy

This is the first book devoted to a study of the chemistry of cosmic dust, presenting current thinking on the subject distilled from many publications in surface and solid-state science, and in astronomy. The authors discuss the nature of dust, its formation and evolution, the chemistry it can promote on its surfaces, and the consequences of these functions. The purpose of this book is to review current understanding and to indicate where future work is required. Mainly intended for researchers in the field of astrochemistry, the book could also be used by a researcher as the basis of a course for postgraduate students who have an interest in astrochemistry.

Hardback | 304 pages | 9781782620471 | 2016 | £61.99 | \$99.00 



The Chemistry of Explosives 3rd edition

Jacqueline Akhavan Cranfield University, UK

This concise, easy-to-read book outlines the basic principles needed to understand the chemical mechanisms of explosion. Covering detonation, deflagration, initiation, the latest theories on the production of "hotspots", thermochemistry, thermodynamics and kinetics, the text includes detailed formulations and reactions presented with thermochemical calculations to aid understanding. It is a unique text which introduces difficult subjects in a readable manner. Ideal for A-level students and new graduates with no previous knowledge of explosive materials, it will also be useful to anyone needing succinct information on the subject.

Paperback | 193 pages | 9781849733304 | 2011 | £25.99 | \$42.00 



The Chemistry of Plants

Perfumes, Pigments and Poisons

Margareta Sequin San Francisco State University, USA

This book combines organic chemistry with the living world of plants and is an introduction to organic plant compounds for the non-chemist. It starts with a review of basic concepts of chemistry as they relate to plant life, followed by an introduction to structures of organic compounds, and then chapters on primary metabolites and on plant fragrances, pigments, and plant defensive compounds. The final chapter relates plant compounds to human life, with subchapters on foods from plants, medicines, psychoactives, fibers, and dyes. Historic discoveries of plant compounds and their developments to contemporary uses, like modern pharmaceuticals, and a section on genetically modified plants, connect with topics of recent interest. Plant photos and stories accompany chemistry topics and chemical structures.

Paperback | 226 pages | 9781849733342 | 2012 | £24.99 | \$40.00 

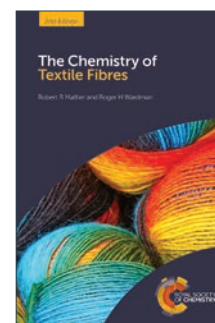


The Chemistry of Textile Fibres 2nd edition

Robert R Mather Power Textiles Limited, UK | Roger H Wardman Formerly, Heriot-Watt University, UK

Textiles are ubiquitous materials that many of us take for granted in our everyday lives. We rely on our clothes to protect us from the environment, for modesty, to enhance our appearance and reflect our personality. The revised and updated second edition of *The Chemistry of Textile Fibres* provides a comprehensive overview of this field aimed at a level appropriate for A-level students and first-year undergraduates following courses in textile science and technology.

Hardback | 439 pages | 9781782620235 | 2015 | £39.99 | \$63.99 



The Handbook of Medicinal Chemistry

Principles and Practice

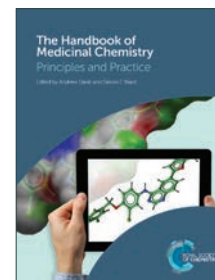
Andrew Davis AstraZeneca, Sweden | Simon E Ward University of Sussex, UK

Drug discovery is a constantly developing and expanding area of research. Developed to provide a comprehensive guide, *The Handbook of Medicinal Chemistry* covers the past, present and future of the entire drug development process. Highlighting the recent successes and failures, the book helps readers to understand the factors governing modern drug discovery from the initial concept through to translational science and intellectual property. Each chapter includes expert advice to not only provide a rigorous understanding of the principles being discussed, but to provide useful hints and tips gained from within the pharmaceutical industry to enable medicinal chemists to fully understand the entire drug discovery process and every area in which medicinal chemists are critically involved. This expert advice, combined with project case studies, highlighting and discussing all areas of successful projects, make this an essential handbook for all those involved in pharmaceutical development.

Hardback | 753 pages | 9781849736251 | 2015 | £84.99 | \$140.00  



A free app has been created in collaboration with the editors of this book that provides a suite of resources to support the day-to-day work of medicinal chemists. Simply search the App Store for Medicinal Chemistry Toolkit.

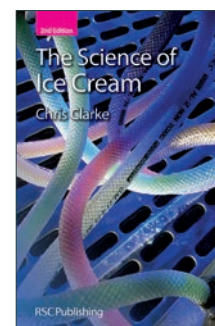


The Science of Ice Cream 2nd edition

Chris Clarke

The second edition of this bestseller shows how much science there is in ice cream and the link between the microscopic and macroscopic properties. It has been fully revised and updated with new material added on nutritional aspects and developments in products and processes for making ice cream. Written by an industrial practitioner, this book is ideal for undergraduate food science students as well as those working in the food industry. It is also accessible to the general reader who has studied science to A-level and provides teachers with ideas for using ice cream to illustrate scientific principles.

Hardback | 213 pages | 9781849731270 | 2012 | £25.99 | \$42.00 




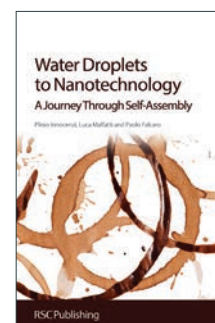
Water Droplets to Nanotechnology

A Journey Through Self-Assembly

Plinio Innocenzi University of Sassari, Italy | Luca Malfatti Università di Sassari, Italy | Paolo Falcaro CSIRO, Australia

Self-assembly is a key concept for nanotechnology, but it can be quite a difficult subject to approach. Using everyday examples, this book gives a simple and general overview of the different self-assembly processes which are at the basis of recent developments in nanotechnology. Internationally renowned scientists show how simple and common phenomena such as the coffee stain and tears of wine can become a tool for making nanomaterials. By taking the reader on a journey from everyday life to the secrets of nanotechnology, the book is suitable for a non-specialist audience interested in the wider perspectives and the latest developments of nanoscience.

Hardback | 184 pages | 9781849736640 | 2013 | £59.99 | \$95.99 



Worldwide Trends in Green Chemistry Education

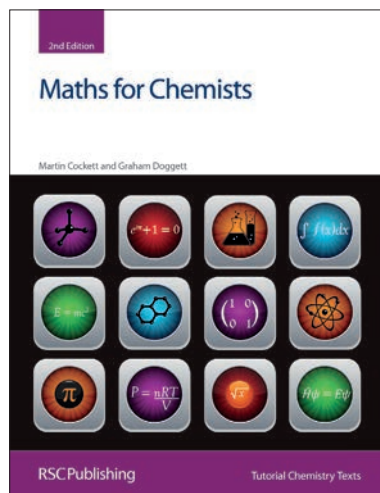
Vânia Zuin Federal University of São Carlos, Brazil | Liliana Mammìno University of Venda, South Africa

Enabling green issues to be taught from the underlying principles of all chemistry courses, rather than in isolation, this book is a valuable resource for chemical educators worldwide who wish to integrate green chemistry into chemical education in a systematic and holistic way. Chapters contributed by experts from across the globe, with experience in teaching at different academic levels, provide a coherent overview of possible approaches to incorporate green chemistry into existing curriculums. Useful laboratory experiments and in-class activities to aid teaching are included.

Hardback | 329 pages | 9781849739498 | 2015 | £39.99 | \$59.99 



Tutorial Chemistry Texts



d- and f-Block Chemistry

Chris J Jones University of Birmingham (retired), UK

Paperback | 184 pages | 9780854046379 | 2001 | £15.95 | \$26.00 

Aromatic Chemistry

John D Hepworth | Mike J Waring | David R Waring

Paperback | 176 pages | 9780854046621 | 2013 | £15.95 | \$26.00 

Atomic Structure and Periodicity

Jack Barrett

Paperback | 184 pages | 9780854046577 | 2002 | £15.95 | \$26.00 


Basic Atomic and Molecular Spectroscopy

J Michael Hollas

Paperback | 192 pages | 9780854046676 | 2002 | £15.95 | \$26.00 

Biophysical Chemistry 2nd edition

Alan Cooper University of Glasgow, UK

Paperback | 244 pages | 9781849730815 | 2011 | £21.99 | \$35.00 

Functional Group Chemistry

James R Hanson

Paperback | 171 pages | 9780854046270 | 2001 | £15.95 | \$26.00 

Heterocyclic Chemistry

Malcolm Sainsbury

Paperback | 148 pages | 9780854046522 | 2001 | £15.95 | \$26.00 

Inorganic Chemistry in Aqueous Solution

Jack Barrett

Paperback | 192 pages | 9780854044719 | 2003 | £15.95 | \$26.00 

Main Group Chemistry

W Henderson The University of Waikato, New Zealand

Paperback | 204 pages | 9780854046171 | 2000 | £15.95 | \$26.00 

Maths for Chemists 2nd edition

Graham Doggett | Martin Cockett University of York, UK

Paperback | 404 pages | 9781849733595 | 2012 | £24.95 | \$40.00 

Mechanisms in Organic Reactions

Richard A Jackson

Paperback | 206 pages | 9780854046423 | 2004 | £15.95 | \$26.00 

Natural Products

The Secondary Metabolites

James R Hanson

Paperback | 154 pages | 9780854044900 | 2003 | £15.95 | \$26.00 

Nucleic Acids

Shawn Doonan

Paperback | 192 pages | 9780854044818 | 2004 | £15.95 | \$26.00 

Organic Spectroscopic Analysis

Rosaleen J Anderson University of Sunderland, UK | David J Bendell University of Sunderland, UK |

Paul W Groundwater University of Sydney, Australia

Paperback | 182 pages | 9780854044764 | 2004 | £15.95 | \$26.00 

Organic Synthetic Methods

James R Hanson

Paperback | 184 pages | 9780854046829 | 2002 | £15.95 | \$26.00 

Organotransition Metal Chemistry

A Hill Australian National University, Australia

Paperback | 192 pages | 9780854046225 | 2002 | £15.95 | \$26.00 

Peptides and Proteins

Shawn Doonan

Paperback | 192 pages | 9780854046928 | 2002 | £15.95 | \$26.00 

Quantum Mechanics for Chemists

David O Hayward

Paperback | 192 pages | 9780854046072 | 2002 | £15.95 | \$26.00 

Reactions and Characterization of Solids

Sandra E Dann Loughborough University, UK

Paperback | 208 pages | 9780854046126 | 2000 | £15.95 | \$26.00 

Stereochemistry

David G Morris

Paperback | 178 pages | 9780854046027 | 2001 | £15.95 | \$26.00 

Structure and Bonding

Jack Barrett

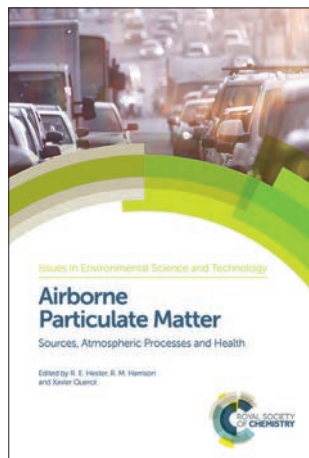
Paperback | 188 pages | 9780854046478 | 2001 | £15.95 | \$26.00 

Thermodynamics and Statistical Mechanics

J M Seddon Imperial College London, UK | J D Gale IVEC, Australia

Paperback | 170 pages | 9780854046324 | 2002 | £15.95 | \$26.00 

Issues in Environmental Science and Technology series



About the series

ISSN: 1350-7583

Series editors

R M Harrison University of Birmingham, UK | **R E Hester** University of York, UK

Written by world experts in their specialised fields, this series tackles important environmental topics. It also focuses on broader issues, notably economic, legal and political considerations. Authors are drawn from industry, the public service and academic organisations. The books are invaluable for scientists and engineers in industry and public service, consultancy and academic institutions. They are also essential reading for students taking specialised courses in environmental chemistry, and provide supplementary reference material for general science courses.

Agricultural Chemicals and the Environment

Issues and Potential Solutions

R E Hester University of York, UK | **R M Harrison** University of Birmingham, UK

Providing an overview of the changes occurring in the agricultural industry, this book highlights opportunities to address impacts and indicates potential barriers to adoption of the technology. This new edition has been updated to include the very latest in agricultural developments, including organic farming and genetically modified crops. It is of interest to students and academics, as well as farmers and landowners and those working in legislation.

Hardback | 250 pages | 9781782626909 | 2016 | £67.50 | \$108.00 

Airborne Particulate Matter

Sources, Atmospheric Processes and Health

R M Harrison University of Birmingham, UK | **R E Hester** University of York, UK | **Xavier Querol** Consejo Superior de Investigaciones Científicas, Spain.

The estimated health impacts and associated economic costs resulting from airborne particulate matter are substantial. This book reviews the sources and atmospheric processes affecting airborne particulate matter and consequent impacts upon human health. Examining the latest information on the sources of particles in the atmosphere, the book features case studies from recent assessments in Europe, the USA, China and India. This comprehensive book is an important reference for policymakers and researchers working in pollution and human health.

Hardback | 400 pages | 9781782624912 | 2016 | £67.50 | \$108.00 

Coal in the 21st Century

Energy Needs, Chemicals and Environmental Controls

R E Hester University of York, UK | R M Harrison University of Birmingham, UK

Coal has been the fastest growing energy resource in recent years, especially in developing nations where demand for electricity is growing rapidly. This book examines the impacts that the ongoing mining and burning of coal is having on our environment. It is an important reference for students studying energy and the environment; researchers and industrialists working in energy; and policy-makers involved in the regulations surrounding energy and the environment.

Hardback | 200 pages | 9781782628606 | 2018 | £70.00 | \$115.00 

Environmental Impacts of Road Vehicles

Past, Present and Future

R M Harrison University of Birmingham, UK | R E Hester University of York, UK

Exploring the impacts road vehicles have on the environment and on human health, this book takes in a broad range of topics. Chapters cover air pollution, pollution of soil and water, and noise pollution. The book also looks at car batteries, and the life cycle of a car, from production to disposal. The book gives a complete picture of the impacts of road vehicles, and is a must-read for anyone interested in pollution and the environment.

Hardback | 250 pages | 9781782628927 | 2017 | £70.00 | \$115.00 

Pharmaceuticals in the Environment

R E Hester University of York, UK | R M Harrison University of Birmingham, UK

Residues from pharmaceuticals can be released into the environment through a number of routes during their manufacture, use and disposal. This book explores where these residues can be found in the environment, how they break down, and how this all impacts on wildlife and human health. It is an important reference for researchers working in the pharmaceutical industry, as well as for environmentalists and policy makers wanting to better understand the impacts of pharmaceuticals on the environment.


Hardback | 294 pages | 9781782621898 | 2016 | £67.50 | \$108.00 

Still Only One Earth

Progress in the 40 Years Since the First UN Conference on the Environment

R M Harrison University of Birmingham, UK | R E Hester University of York, UK

Forty years since the first UN Conference on the Human Environment was held in Stockholm, how has the situation changed? We still have only one Earth but are we caring for and maintaining it? This book, written by leaders in the field, discusses the key environmental issues affecting the Earth today. Aimed at policy makers, students, environmental scientists and thinkers, it will be an important review bringing the reader right up to date with current opinions.

Hardback | 285 pages | 9781782620761 | 2015 | £67.50 | \$108.00 

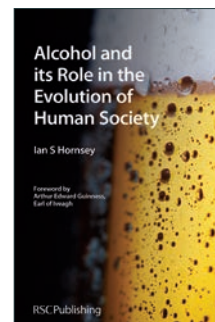
Popular science

Alcohol and its Role in the Evolution of Human Society

Ian S Hornsey Nethergate Brewery, UK

Archaeologists and anthropologists (especially ethnologists) have for many years realised that man's ingestion of alcoholic beverages may well have played a significant part in his transition from hunter-gatherer to agriculturalist. This unique book provides a scientific text on the subject of 'ethanol' that also aims to include material designed to show 'non-scientists' what fermentation is all about. Conversely, scientists may well be surprised to find the extent to which ethanol has played a part in evolution and civilisation of our species.

Paperback | 9781849731614 | 2012 | £29.99 | \$48.00 

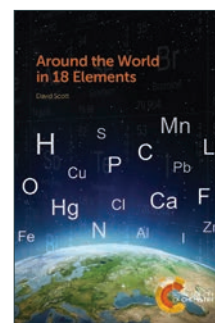


Around the World in 18 Elements

David Scott The King's School, UK

Written with both students and educators in mind, this book presents a tour of the elements found in the British A-level syllabus. Each chapter presents a key concept of chemistry in the context of the element, instilling a wider background in chemistry to the reader, which can then be tested by questions in the text. Students of chemistry will enjoy this informative approach to revision, while educators will gain inspiration for planning lessons and discussing concepts. International baccalaureate and foundation-year students will also benefit from the topics presented in this accessible textbook.

Paperback | 235 pages | 9781849738040 | 2014 | £19.99 | \$48.00 



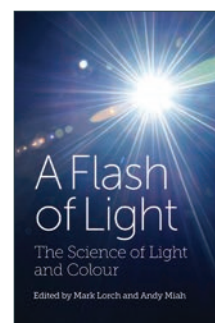
A Flash of Light

The Science of Light and Colour

Mark Lorch University of Hull, UK | Andy Miah University of Salford, UK

A Flash of Light is an intriguing book that starts at the beginning of time itself and then winds its way through a host of fascinating light related topics including the hues of alien sunsets, the psychology of colour, and the chemistry of LCD screens. Drawing on the experience of some of the UK's best science communicators, this book will appeal to anyone with an interest in science. Its pacey, witty and engaging tone provides an illuminating insight into how and why we see the universe the way we do.

Paperback | 124 pages | 9781782627319 | 2016 | £12.00 | \$19.00 

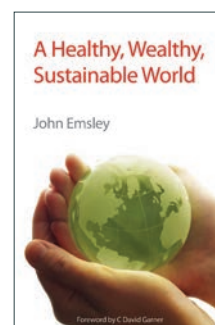


A Healthy, Wealthy, Sustainable World

John Emsley

The world stands at a crossroads. What route to the future should we take? The road to a sustainable future beckons, but what effect will this have on chemistry, which appears so dependent on fossil resources? This book shows how vital chemistry is for producing abundant food, clean water, healing drugs, alternative fuels, and plastics, and how most of the things which a modern society requires now depend on it - and that includes city living and even sport. Written in an appealing style, this lay person's guide explains the roles of chemistry in areas of life ranging from the entirely personal to the global, as well as deconstructing several urban myths about chemicals.

Hardback | 222 pages | 9781847558626 | 2010 | £18.99 | \$30.00 



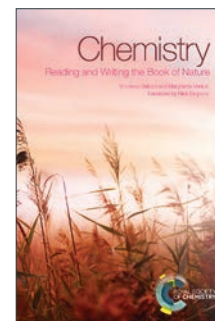
Chemistry

Reading and Writing the Book of Nature

Vincenzo Balzani Università di Bologna, Italy | Margherita Venturi Università di Bologna, Italy

Many people are convinced that, among other courses taught in schools, chemistry is a difficult and complex subject. This book sets out to introduce chemistry concepts and demystify chemistry showing how it is a major part of our everyday lives. It introduces the readers into the wonderful world of atoms and molecules and chemical reactions whilst showing that chemistry is centrally important but also an emerging science and defines what the practising chemist does. The book also examines curiosity, creativity, fascination, poetry, beauty, and ethics in science. Originally published in Italian, *Chimica – leggere e scrivere il libro della Natura* was among the finalists for the 2013 Italian Award for popularisation of science. The English translation has been sensitively achieved to enable the book to reach young students and teachers of chemistry in a positive way.

Paperback | 132 pages | 9781782620020 | 2014 | £15.00 | \$24.00



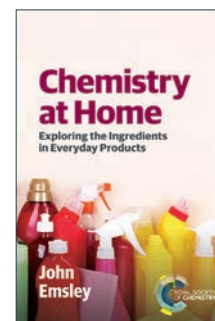
Chemistry at Home

Exploring the Ingredients in Everyday Products

John Emsley

Ever wondered what was in the toothpaste you were cleaning your teeth with or the low-fat spread you were eating? How glue sticks or what's in insect repellent? This accessible book aims to de-mystify the part chemicals play in the products we have in our home and what benefits they bring. Written in an appealing style, the reader is taken on a journey of discovery around the house gaining information on and explanation for the chemistry we have in our everyday existence.

Paperback | 395 pages | 9781849739405 | 2015 | £21.99 | \$35.00 

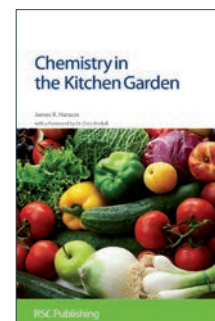


Chemistry in the Kitchen Garden

James Hanson

The book is aimed at readers with a chemical background who wish to know a little more about the natural products that they are eating, their beneficial effects, and the roles that these compounds have in nature. Developments in the understanding of the ecological and beneficial chemistry of fruit and vegetables have made the exploration of their chemical diversity a fascinating and expanding area of natural product chemistry and readers will obtain some 'taste' for this chemistry from the book.

Hardback | 300 pages | 9781849733236 | 2011 | £24.99 | \$40.00 



Chemistry in Your Kitchen

Matthew Hartings American University, USA

Whether you know it or not, you become a chemist any time you step into a kitchen. Through its unique meal-by-meal organisation, the book playfully explores the chemistry that turns our food into meals. The book features many experiments that you can try in your own kitchen, such as exploring the melting properties of cheese, retaining flavour when cooking and pairing wines with foods. This is a fascinating read for anyone interested in the science behind cooking.

Paperback | 250 pages | 9781782623137 | 2017 | £19.99 | \$39.99 



Chocolate as Medicine

A Quest over the Centuries

Philip K Wilson Formerly East Tennessee State University, USA | **W Jeffrey Hurst** The Hershey Company Technical Centre, USA

The Mesoamerican population had over 150 documented applications of cocoa as medicine ranging from cardiac uses to snake bites and today a scientific literature search shows over 300 references to the use of cocoa in cardiac medicine. This book, for the first time, describes the topic of chocolate as medicine from a historical perspective but also explores the benefits of cocoa, its positive health effects and also why chocolate was thought to be bad for you. The book is written by a unique combination of a historian of science and a practising scientist with expertise in cocoa and chocolate. It includes a historical perspective on the development of medicinal uses of cocoa, an introduction to the chemistry and physiology involved and ends with its suggestions for chocolate's future uses in medicine. It will appeal to food scientists, cocoa researchers, ethnobotanists, historians and medical scientists as well as lay people with an interest in this science.

Paperback | 213 pages | 9781849734110 | 2012 | £29.99 | \$48.00 

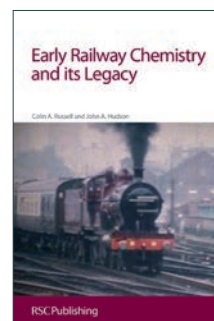


Early Railway Chemistry and its Legacy

Colin A Russell | **John Hudson**

One of the most important parts of British heavy industry today is our railway system. Its constant appearances in news bulletins, its enormous appeal to fans or "enthusiasts", its permanent role in the lives of most of us, and its economic significance today, all underline its importance. What has never been clear till now has been the crucial role that chemistry has played in its development. This unique book is aimed at chemists, some of whom may already have an additional interest in railways, and will be delighted to learn of any close connection between their two interests. The book is also a serious and scholarly revelation of an aspect of the history of railways in Britain that has only recently come to light: the critical part played by chemistry in their growth and development.

Paperback | 208 pages | 9781849733267 | 2012 | £29.99 | \$48.00

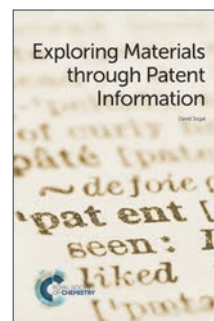


Exploring Materials through Patent Information

David Segal

The book describes how different technologies have evolved through the development of their patents, providing students with a guide on how to use patents as a source of information in their research and studies. The first chapter provides practical advice on searching for patents and using patents, followed by individual chapters covering different material systems including light-emitting diodes; quantum dots; organic light-emitting diodes (OLEDs); liquid crystals and liquid crystal displays; 3D printing; block copolymers; aerogels; hydrogels; ionic liquids; flame retardants, graphene and superhydrophobic materials. The book is suitable for students in chemistry, materials science and engineering.

Paperback | 266 pages | 9781782621126 | 2015 | £24.99 | \$40.00



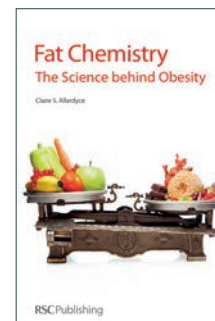
Fat Chemistry

The Science behind Obesity

Claire S Allardyce EPFL ISIC, Switzerland

Currently the health of over half the adult population in the UK suffers because of fat. The UK is not alone: obesity is a global problem, but the populations of some countries are heavier than others. Based on an extensive review of scientific literature, this topical book is a presentation of the biochemical origins of obesity written in a way that is accessible to the non-specialist. Suitable for the general public, the principal focus of the book is to advance the public understanding and awareness of science through the high interest subject of obesity. However, many universities recommend public understanding of science texts to students as a means of broadening general knowledge and as a means to emphasise to students the importance of communicating their research to the public. This book is key to developing this knowledge.

Paperback | 384 pages | 9781849733250 | 2012 | £24.99 | \$40.00 



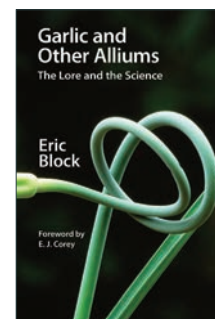
Garlic and Other Alliums

The Lore and The Science

Eric Block University of Albany, USA

This unique book, with a foreword by 1990 Nobel Laureate E J Corey, outlines the extensive history and the fascinating past and present uses of these plants. Readers will be entertained and educated as they learn about early cultivation of garlic and other alliums while being introduced to their remarkable chemistry and biochemistry, much of which prominently features the element sulfur. Fascinating reading for anyone with a general interest in science.

Paperback | 480 pages | 9781849731805 | 2010 | £24.99 | \$40.00 




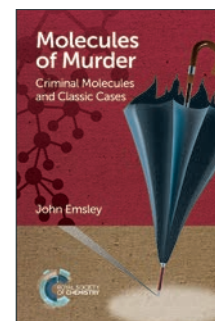
Molecules of Murder

Criminal Molecules and Classic Cases

John Emsley

This fascinating book takes the reader on a journey of discovery into the world of dangerous organic poisons. *Molecules of Murder* describes ten highly toxic molecules which are of particular interest due to their use in notorious murder cases. Each chapter explores the discovery of the molecules, their chemistry and effects in humans, followed by a re-examination of their deliberate misuse in high profile murder cases. *Molecules of Murder* makes enthralling reading for both scientists and non-scientists alike.

Paperback | 252 pages | 9781782624745 | 2016 | £16.99 | \$27.00 



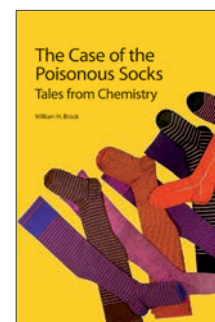
The Case of the Poisonous Socks

Tales from Chemistry

William H Brock University of Leicester, UK

Written by a respected science historian and established author, this collection of essays touches on all aspects of chemistry. It contains 42 tales about chemists and their discoveries from the nineteenth and twentieth centuries. The title is taken from the lead chapter which describes how respected chemist, William Crookes, solved a mystery from the 1860s of how brilliantly coloured socks were causing the feet of unfortunate wearers to swell. Other topics covered include: the quirky beliefs of American philanthropist, George Hodgkins; the development of the chemical laboratory since the 1830s, and the career of C P Snow before he became a novelist. Light in style, and presented as a series of unconnected vignettes, the book will interest chemists, teachers, historians and lay people with an interest in science.

Paperback | 362 pages | 9781849733243 | 2011 | £19.99 | \$32.00 



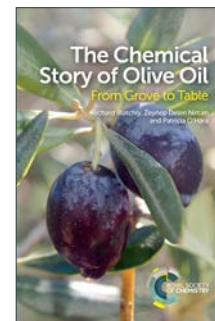
The Chemical Story of Olive Oil

From Grove to Table

Richard Blatchly Keene State College, USA | Zeynep Delen Boğaziçi University, Turkey | Patricia O'Hara Amherst College, USA

Providing the chemist's view of the production, use and impact of olive oil, readers get a deeper understanding of what makes an extra virgin olive oil (EVOO) authentic, and how scientists are fighting the battle against fraud. Olive oil is a very valuable commodity worldwide and introducing the chemicals allows the authors to provide a richer explanation of the techniques of growing and processing, as well as of the impact on humans such as taste and health effects. Food scientists and those who work in processing as well as the interested lay reader will find this a fascinating book.

Paperback | 220 pages | 9781782628569 | 2017 | £29.99 | \$48.00



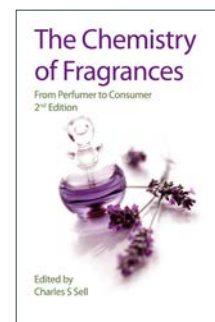
The Chemistry of Fragrances 2nd edition

From Perfumer to Consumer

Charles S Sell

Ever wondered how perfumes are developed? Or why different scents appeal to different people? *The Chemistry of Fragrances 2nd edition* offers answers to these questions, providing a fascinating insight into the perfume industry, from the conception of an idea to the finished product. It discusses the technical, artistic and commercial challenges of the perfume industry in an informative and engaging style, with contributions from leading experts in the field.

Hardback | 348 pages | 9780854048243 | 2006 | £29.95 | \$48.00 

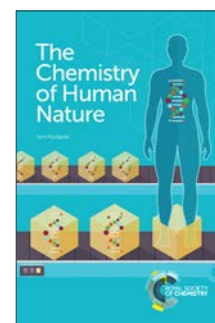


The Chemistry of Human Nature

Tom Husband

The possibility of exploring Mars for life has become easier as our technology has developed. This exploration may shed some light on the mystery of life on planet Earth. Starting with this concept enables the reader to familiarise themselves with the concepts of chemistry including atoms, molecules, elements and so on. Having laid down some foundation work, this popular science title attempts to explain the processes that originate and sustain our lives, exploring Man's fascination with the world around us. The book considers the chemistry of life from four viewpoints: food and health; love and romance; work, rest and play; and finally, health and longevity and concludes with a review of the impact on readers.

Paperback | 280 pages | 9781782621348 | 2016 | £21.99 | \$35.00



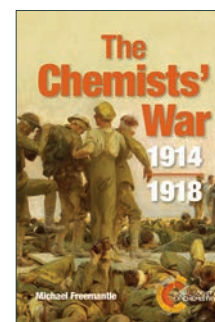
The Chemists' War

1914-1918

Michael Freemantle

The 1914-18 war has been referred to as the 'chemists' war' and to commemorate the centenary, this collection of essays examines various facets of the role of chemistry in the First World War. The industrial-scale slaughter of the war was underpinned by the industrial-scale production of a vast variety of chemicals, particularly chemical warfare agents, propellants and high explosives, and metals for the manufacture of shells and guns. However, chemicals not only killed, they also played a key role in the protection of troops and the care of the sick and wounded. Alloy steels for armour, dyes for camouflaging military and naval uniforms, disinfectants, antiseptics, pharmaceutical preparations, anaesthetics, and painkillers are all examples. Written by an experienced science writer and aimed at the general reader, this book will inform scientists and historians with an interest in this technologically challenging time.

Paperback | 358 pages | 9781849739894 | 2015 | £19.99 | \$32.00 



The Cosmic-Chemical Bond

Chemistry from the Big Bang to Planet Formation

D A Williams University College London, UK | T W Hartquist University of Leeds, UK

Aimed at a wide audience, this book describes how molecules formed in chemical reactions occur in a range of environments in interstellar and circumstellar space, from shortly after the Big Bang up to the present epoch. Stressing that chemistry in these environments needs to be driven, it helps identify these drivers and the various chemical networks that operate giving rise to signature molecules that enable the physics of the region to be better understood. The book emphasises, in a non-mathematical way, the chemistry of the Milky Way Galaxy and its planet-forming regions, describes how other galaxies may have rather different chemistries and shows how chemistry was important even in the Early Universe when most of the elements had yet to be formed.

Paperback | 228 pages | 9781849736091 | 2013 | £24.99 | \$40.00 



The Microbes Fight Back

Antibiotic Resistance

Laura Bowater University of East Anglia, UK

Although scientists continue to play a crucial role in the continuing battle against antibiotic resistance, a return to a pre-antibiotic era is a distinct possibility. This book draws much-needed attention to current levels of antibiotic resistance and the lack of new antibiotic drugs coming to market. The fascinating history of antibiotic discovery, how antibiotics are made now, and how bacteria manage to mutate and develop resistance to our medicines are explained in terms non-specialists can follow. The book also describes the alarming ease with which antibiotic resistance spreads within bacterial communities. How have human activities contributed to antibiotic resistance? What will a future where resistance continues to increase look like and how will we cope with the 'superbugs'? Laura Bowater engages readers with these questions, raising awareness of an important global challenge for humanity.

Paperback | 250 pages | 9781782621676 | 2016 | £24.99 | \$40.00



The Science and Commerce of Whisky

Ian Buxton | Paul S Hughes

Worldwide - whisky has never been in better shape. New distillation capacity is being added at a record pace and new consumers in emerging markets are entering the arena. Distillers are experimenting with finishes, packaging and marketing techniques, and amongst consumers there is a hunger for knowledge and informed commentary. This book, written by two acknowledged authorities, provides a uniquely authoritative overview of this dynamic and fast-moving sector. The book reflects current practice and combines a historical perspective with production expertise and best practice, with insightful, expert market and marketing commentary. The style is readable and accessible, whilst independent and authoritative.

Paperback | 285 pages | 9781849731508 | 2014 | £27.99 | \$45.00 



Other products

Chemistry Crosswords

Are you good at solving puzzles? Do you have an active interest in science? Then why not try Chemistry Crosswords? With 70 crosswords all with chemistry related clues and answers, and designed with chemists in mind, this collection is set to challenge you. So distil your thoughts, find the solutions and good luck!

Paperback | 112 pages | 9781782628903 | 2017 | £8.99 | \$12.99

Molymod MMS-003

Organic Teacher 111 atom set

These popular molecular modelling sets can be used to make many different molecules. Designed for teachers, this set contains 111 colour-coded atoms and 140 links. The medium links can be used for single bonds, while the longer, flexible links can be used for double or triple bonds. Short links can be used to create compact models.

Using molecular models can help students to visualise concepts such as isomerism through hands-on learning. The models can also be used to learn about balancing equations and molecular geometry.

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NOT AVAILABLE IN NORTH AMERICA AND CANADA

Non Book / Merchandise | 9781782624301 | 2015 | £33.95 | \$56.95

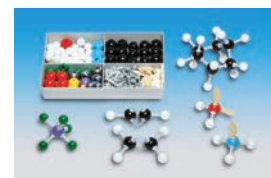


Molymod MMS-072

Molecular Set for Inorganic & Organic Chemistry, 72 atoms

These popular molecular modelling sets can be used to make many different molecules. This makes them ideal for student use and also for educators and researchers. The set contains 72 colour-coded atoms, 105 links and five lone pair electron clouds. The shorter links can be used for single bonds, while the longer, flexible links can be used for double or triple bonds. Using molecular models can help students to visualise concepts such as isomerism through hands-on learning. The models can also be used to learn about balancing equations and molecular geometry.

Non Book / Merchandise | 9781782624318 | 2015 | £19.95 | \$32.95



RSC Periodic Table

Wallchart, A0 - 2A0

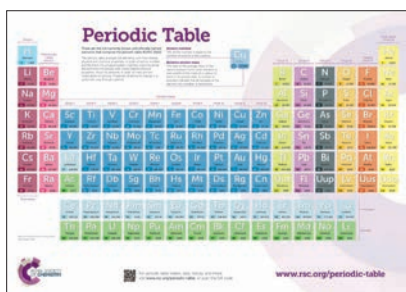
Murray Robertson Visual Elements, UK

A bold and clear new representation of the periodic table from the Royal Society of Chemistry. The poster is two-sided: on one side, a Visual Elements version, with fascinating element artwork by Murray Robertson based on scientific data provided by the chemist and science writer John Emsley; on the other, a bold colour-coded version, emphasising readability and clarity. Printed in full colour, there are two sizes of the wallchart available: A0 (1189 x 841 mm) and 2A0 (1682 x 1189 mm). Information for each element includes the name, chemical symbol, atomic number, and relative atomic mass. The groups are readily identifiable by colour, and the wallchart has been updated to include elements 110, 111, 112, 114, and 116. We've designed the wallchart to be readable, visually engaging, and an excellent addition to any classroom, laboratory, or office. Price shown does not include VAT in the EU.

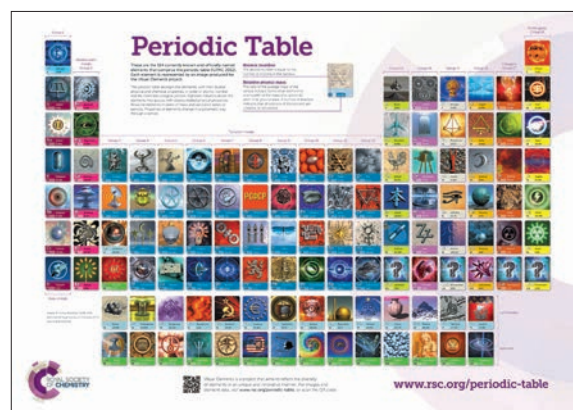
A0 Poster | 2 pages | 9781849736787 | 2014 | £9.95 | \$16.00

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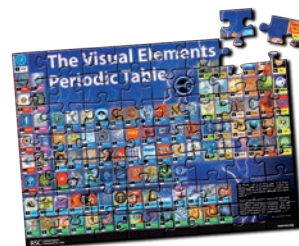


Visual Elements Jigsaw

Murray Robertson Visual Elements, UK

With 550 pieces and a stunning full-colour design, this jigsaw puzzle beautifully illustrates the periodic table in all its glory. The jigsaw would be an attractive gift for any puzzle-loving friends or relatives, and might even spark an interest in chemistry. Price shown does not include VAT in the EU.

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Elements Top Trumps is an entertaining, fast-paced chemistry card game. With eye-catching imagery and fascinating facts about the elements, it's a great way to have fun and learn about the elements. Recommended for children aged 7-14, the game can be played by two or more players. Each of the 30 cards represents an element. Players compare numerical properties of the elements (melting point, density, price, discovery date and the size of the atom) and choose the category they think will win. Elements Top Trumps is created by the Royal Society of Chemistry in partnership with Winning Moves Ltd, the makers of Top Trumps™.

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