Preventing Chemical Weapons
Arms Control and Disarmament as the Sciences Converge
Michael Crowley University of Bradford, UK
Malcolm Dando University of Bradford, UK
Lijun Shang University of Bradford, UK

In this book, international leaders in various aspects of weapons prevention assess likely future trajectories in the chemical and life sciences alongside the risks of their application in the development of chemical or biological weapons. The current capabilities and limitations of existing international control regimes tasked with the prevention and elimination of chemical and toxin weapons are analysed. This book will be of interest to academic and research communities in the fields of pharmacology, toxicology, social science and those with an interest in the legal and ethical aspects of chemical and biological weapons prevention.

Hardback | 642 pages | ISBN 9781782626497 | £99.00 | $135.00 | 20/08/2018

Pre-combustion Carbon Dioxide Capture Materials
Qiang Wang Beijing Forestry University, China

The book covers the use of inorganic materials for pre-combustion carbon dioxide capture materials including layered double hydroxides derived sorbents; magnesium oxide based sorbents; calcium oxide based sorbents; and alkali ceramics based sorbents. The emphasis is on the design, synthesis, characterization, performance, mechanism, and application of these different inorganic materials.

Hardback | 334 pages | ISBN 9781788011082 | £99.99 | $140.00 | 23/08/2018

Electrospinning
From Basic Research to Commercialization
Erich Kny Austrian Institute of Technology
Kajal Ghosal Dr. B. C. Roy College of Pharmacy and Allied Health Sciences, India
Sabu Thomas Mahatma Gandhi University, India

Electrospinning is a technique used to produce nanofibres from a polymer solution using an electrostatic force. The technology is now being used to create materials for a wide variety of uses. This new book focusses on recent developments and understanding the commercial applications of electrospinning. The book will be suitable for graduate students, academics and industrial entrepreneurs in materials science, polymer science and chemical engineering as well as those interested in the energy and health applications of the materials.

Hardback | 266 pages | ISBN 9781788011006 | £159.00 | $223.00 | 14/08/2018
Just published – August 2018

**Enantioselective Cobalt-catalysed Transformations**
Hélène Pellissier CNRS, France
Cobalt catalysts are a cheaper, more environmentally responsible alternative to many of the more commonly used transition metal catalysts. This book collects the major developments reported in the past thirty years in the field of enantioselective reactions promoted by chiral cobalt catalysts. It is a useful reference resource for chemists, both academic and industrial, working in organic synthesis and interested in greener or more economical catalytic alternatives.

*Hardback | 224 pages | ISBN 9781788014625 | £123.00 | $170.00 | 22/08/2018*

**Supercritical and Other High-pressure Solvent Systems**
For Extraction, Reaction and Material Processing
Andrew J Hunt Khon Kaen University, Thailand Thomas M Attard University of York, UK
Exploring the range and utility of high-pressure solvent systems across a variety of different chemical applications, this book brings together recent advances in supercritical technology and other pressurised-solvent systems. It provides an in-depth overview of the latest advances and developments and discusses the limitations and drawbacks that need to be addressed. Wherever possible, the greenness and economic viability of the different solvent systems is highlighted. This book is ideal for researchers and industrialists working in environmental science, green chemistry and biorefineries.

*Hardback | 678 pages | ISBN 9781782628804 | £169.00 | $237.00 | 28/08/2018*

**Molecular Gels**
Structure and Dynamics
Richard G Weiss Georgetown University, USA
Edited and authored by leading researchers, this book provides a timely update of the molecular gels field. Chapters examine the physical chemistry of molecular gels, including the most recent theories, experimental techniques and computational approaches. Final chapters on applications of molecular gels illustrate, with modern case studies, the principles developed in previous chapters. This will be an indispensable resource for postgraduate students and researchers in supramolecular chemistry, materials science, polymer chemistry, soft matter and chemical engineering.

*Hardback | 376 pages | ISBN 9781788011112 | £159.00 | $223.00 | 10/08/2018*
Just published – August 2018

Chromic Phenomena
Technological Applications of Colour Chemistry
Peter Bamfield Michael Hutchings
Chromic or colour related phenomena are produced in response to a chemical or physical stimulus. This new edition will update the information on all those areas where chemicals or materials interact with light to produce colour, a colour change, or luminescence, and where ‘coloured’ compounds are used to transfer energy or manipulate light in some way. In the past eight years since the previous edition, there has been an increase in number of papers and reviews being produced reflecting the growth of interest in this area. This ongoing research interest is matched by a large number of new technological applications of commercial value. This book appeals to industrial chemists, professionals, postgraduates and possibly as high level recommended reading for colour technology courses.

Hardback | 782 pages | ISBN 9781782628156 | £199.00 | $275.00 | 21/08/2018

Biobased Aerogels
Polysaccharide and Protein-based Materials
Sabu Thomas Mahatma Gandhi University, India Laly A Pothan Bishop Moore College, India Rubie Mavelil-Sam Bishop Moore College, India
Bringing together results on the latest research in this field, this book provides a comprehensive review of current developments in polysaccharide and protein based aerogels. It explores their preparation from various sources; characterisation methods; and their properties, such as surface morphology, shape recovery, mechanical properties and absorption capacities. It is an information introduction for researchers and industrialists working in chemical engineering, biomolecular chemistry and materials science.

Hardback | 330 pages | ISBN 9781782627654 | £149.00 | $205.00 | 29/08/2018

Paramagnetism in Experimental Biomolecular NMR
Claudio Luchinat University of Florence, Italy Giacomo Parigi University of Florence, Italy Enrico Ravera University of Florence, Italy
Paramagnetic NMR is a growing technique which represents an increasingly important tool for the investigation of biomolecules. This book presents an update and overview of the paramagnetic NMR effects as well as guidelines for practical implementation of state-of-the-art experiments. All experiments are backed up by a solid theoretical foundation. Compiled by experts in the field, this book has international appeal for researchers as well as students interested in magnetic resonance and structural biology who require experimental support.

Hardback | 316 pages | ISBN 9781788010863 | £159.00 | $223.00 | 07/08/2018

All information is subject to change without notice.

www.rsc.org/books
Registered charity number 207890
Attosecond Molecular Dynamics
Marc J J Vrakking Max Born Institute, Germany
Franck Lépine Université Lyon/CNRS, France

Presenting an overview of theory behind attosecond science, this book explains and predicts manifestations of attosecond timescale dynamics in molecular systems. It is ideal for theoretical chemists wanting to better understand molecular dynamics at the ultrafast scale.

Hardback | 494 pages | ISBN 9781782629955 | £179.00 | $250.00 | 31/08/2018

Photopolymerisation Initiating Systems
Jacques Lallevée Institut de Science des Matériaux de Mulhouse, France
Jean-Pierre Fouassier ENSCMu-UHA, France

Edited by experienced editors and leading names in the field, the book provides an update on the latest developments in the research of photoinitiating systems along with their applications. The book is suitable for postgraduate students and researchers in academia and industry interested in polymer chemistry, organic chemistry, materials science and the applications of the materials.

Hardback | 586 pages | ISBN 9781782629627 | £179.00 | $251.00 | 14/08/2018

Chemical and Biological Synthesis
Enabling Approaches for Understanding Biology
Nick J Westwood University of St Andrews, UK
Adam Nelson University of Leeds, UK

Through a series of recent case studies, this book summarises and showcases the ways in which the preparation of new chemical tools by synthesis has had a major impact in chemical biology. The book provides synthetic chemists with the broader context to which their work contributes and the biological questions that can be addressed through it. It also introduces synthetic techniques and methods to those who wish to incorporate synthesis for the first time into their biology-focussed research programs. It will be a useful guide to postgraduate students and researchers in synthetic organic chemistry and chemical biology.

Hardback | 404 pages | ISBN 9781782629481 | £169.00 | $237.00 | 24/08/2018
Click Polymerization
Anjun Qin South China University of Technology, China Ben Zhong Tang The Hong Kong University of Science and Technology, Hong Kong

A comprehensive summary of the recently emerged technique of click polymerization, edited by world renowned experts. From the basic knowledge through to the recent progress of click polymerizations, the book provides a complete overview for readers. This authoritative guide will provide an excellent resource for graduate students and researchers interested in polymer chemistry and materials science.