ROYAL SOCIETY OF CHEMISTRY

Thomas Graham House
Science Park, Milton Road
Cambridge CB4 0WF, UK
T +44 (0)1223 420066

Burlington House
Piccadilly, London
W1J 0BA, UK
T +44 (0)20 7437 8656

International offices
Beijing, China
Shanghai, China
Berlin, Germany
Bangalore, India
Tokyo, Japan
Philadelphia, USA
Washington, USA

www.rsc.org

@RoyalSocietyofChemistry
@RoySocChem
@roysocchem
@wwwRSCorg
linkedin.com/company/roysocchem

Registered charity number: 207890

ROYAL SOCIETY OF CHEMISTRY

Energy & Environment

Can a sentence change the world?

Books to refine your knowledge, inspire your curiosity and show you new possibilities

rsc.li/find-a-book

Fundamental questions
Elemental answers

Books to drive discovery

From the Royal Society of Chemistry

The print and eBooks in our portfolio number in the hundreds, and all are full of relevant, expert insight from international authors and editors. The information required to take a vital next step – whether in study, research or teaching technique – could come from any one of them. So for 2021, we wanted to highlight recently published titles, as well as giving you advanced notice of the books coming in the next six months.

Refine your ideas

Specialist Periodical Reports can always be relied upon to provide an expertly reviewed, balanced perspective on specific fields in the chemical sciences. The 50th volume in the trusted Organophosphorus Chemistry collection will be published in 2021. An amazing achievement! You can also look forward to the 50th book in our professional reference series Issues in Environmental Science and Technology. *Environmental Pollutant Exposures and Public Health* will join many other popular titles.

Take on global challenges

The world saw rapid change in 2020, and the role of the chemical sciences in combating health challenges faced around the world has been made all the clearer. *The COVID-19 Pandemic and the Future: Virology, Epidemiology, Translational Toxicology and Therapeutics* chronicles the outbreak and worldwide spread of SARS-Cov-2 (COVID-19) and describes the role that several disciplines have to play in therapeutic and control measures.

Try something new

For those of you exploring fresh lines of enquiry, the first books in our Chemistry in the Environment and Drug Development and Pharmaceutical Science series' are on the way in 2021.

And created in partnership with the students who will use them, the Chemistry Student Guides series focuses on and tackles the most challenging aspects of key topics in the chemical sciences.

If you have any queries, contact **books@rsc.org** to talk to the team.

For a list of books published prior to 2020, visit **rsc.li/backlist**

Happy reading

Serin Dabb Head of Books

Emanuela Trandafir Books Product and Sales Manager

Royal Society of Chemistry | Thomas Graham House
Science Park | Milton Road | Cambridge | CB4 0WF | UK
Tel +44 (0)1223 420066 | Fax +44 (0)1223 426017
www.rsc.org

Ways to buy

Digital options

The complete eBook collection is over 1,750 titles, and can be broken down as follows:

By year
Build on your existing collection by adding the eBooks published in a specific year.

By subject
These smaller sets focus on eight primary topic areas within the chemical sciences.

Pick and Choose
Select only the titles you need from the complete collection. Visit **rsc.li/pickandchoose**

Print options

Series sets
Build up your collection of specially curated book series.

Subject sets
Smaller collections sorted by subject area or by theme.

Individual titles
Purchase any book from the collection on its own.

Placing your order

Librarians and organisations

To place an order for print books please contact your preferred library supplier or find our worldwide representatives and distributors on page **10**

To find out about our eBook options please visit **rsc.li/buy-ebooks** or contact our sales team by emailing **sales@rsc.org**

Individuals

Please complete and send back the form on the next page or visit our online bookshop at **rsc.li/books**

A guide to our book types

Book series
Professional reference collections providing ongoing, in-depth coverage of key fields of research.

Professional reference
Overviews of current and emerging trends in contributing authors' respective fields.

Specialist Periodical Reports (SPRs)
The latest research in a particular field, expertly reviewed and curated for a balanced perspective.

Conference proceedings
Snapshots of the latest developments in a given field from international symposia.

Textbooks
Core and supplementary course material for undergraduate and postgraduate study in the chemical sciences.

Popular science
Lighter books offering entertaining reading for scientists and non-scientists alike.

e Part of our eBook collection

e Available as an eBook from selected online booksellers

Publications order form

Membership number:

Title	ISBN	Quantity	Unit price	Total

Please add the postage and handling charge of £3.50 per item ordered up to a maximum postage charge of £14.00 for UK purchases. For non-UK residents postage is calculated on weight based on destination.	Total	
	Postage	
	Total payable	

Payment details

Method of payment

☐ I enclose a cheque made payable to Royal Society of Chemistry
All cheque payments should be in £ sterling drawn on a UK bank, or $ US drawn on a US bank.

☐ Please send me a pre-payment invoice

☐ Please charge my Visa/Mastercard/AmEx
Credit cards may be used for orders up to £8,000.

Long number on card ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

Security no. (last three digits on signature strip) ☐☐☐

Expiry date ☐☐/☐☐

Signature _____

Cardholder's/invoice address:

Name (as printed on card) _____

Organisation _____

Address _____

Post/zip code _____

Email _____

Before submitting your Order Form and personal data, please confirm that you consent to The Royal Society of Chemistry collecting, processing and storing this information. ☐

The Royal Society of Chemistry will only collect, process, share and store your personal data in accordance with our Privacy Statement which can be found at **www.rsc.org/help-legal/legal/privacy**. From time to time, The Royal Society of Chemistry may also want to send you information about products and services that we think would be of interest to you, but we will only do this with your permission. Please tick the relevant boxes if you want to give us permission to contact you for this purpose by: ☐ Email ☐ Print mail ☐ Telephone

Delivery Address (if different):

Name _____

Organisation _____

Address _____

Post/zip code _____

Email _____

Date _____

VAT

Prices are subject to VAT which will be charged at the relevant rate as appropriate. Orders within the EU will be zero rated upon provision of a valid EU VAT number.

☐ I am not registered for VAT/my VAT no. is _____

Royal Society of Chemistry members are entitled to a 35% discount on most of our publications. Please contact **booksales@rsc.org** for more information.

Please tear out, complete and send this form to:

Booksales team
Royal Society of Chemistry
Thomas Graham House
Science Park, Milton Road,
Cambridge
CB4 0WF

Tel +44 (0) 1223 432496
Fax +44 (0) 1223 426017
Email booksales@rsc.org

You can also order online at **www.rsc.li/books**

ROYAL SOCIETY OF CHEMISTRY

Chemistry in the Environment

About the series

ISSN 2516-2624

Editor-in-chief

Dionysios D Dionysiou University of Cincinnati, USA

Series editors

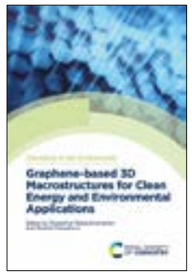
Rajasekhar Balasubramanian National University of Singapore, Singapore | **Triantafyllos Kaloudis** Athens Water Supply and Sewerage Company (EYDAP S.A.), Greece | **Rafael Luque** University of Cordoba, Spain

With environmental issues of increasing global concern to both the public and governments, there is growing interest in scientific research that will allow us to predict, prevent and resolve environmental problems. This series recognises the pivotal role of chemistry in understanding the effects of pollution, climate change and natural processes. The titles deliver up-to-date and critical perspectives on the fate, behaviour and interactions of chemicals and pollutants (both natural and man-made) in the environment. The books in this series provide an accessible reference for academics, industrialists and postgraduates working in environmental chemistry, environmental engineering and remediation technology.

Graphene-based 3D Macrostructures for Clean Energy and Environmental Applications

Rajasekhar Balasubramanian National University of Singapore, Singapore | **Shamik Chowdhury** Indian Institute of Technology, India

Graphene-based 3D Macrostructures for Clean Energy and Environmental Applications provides a critical and comprehensive account of the recent advances in the development and potential applications of high performance 3D GBMs for tackling global energy and environmental issues in a sustainable manner. Particular attention is paid to the fabrication schemes, modulation of physiochemical properties, and their integration into practical devices, and the roles of surface chemistry and pore morphology on the overall performance of 3D GBMs are examined.



Hardback | 400 pages
9781839160011 | 2021
£179.00 | $250.00

ISBN 978-1-83916-001-1

Royal Society of Chemistry | Books | rsc.li/energy-books

Energy and Environment Series

About the series

ISSN 2044-0774

Series editors

Nigel Brandon Imperial College London, UK | **Roberto Rinaldi** Imperial College London, UK | **Vivian Yam** The University of Hong Kong, Hong Kong

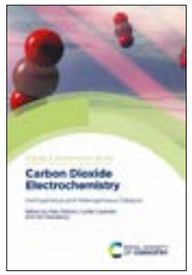
Energy lies at the heart of modern society, and it is critical that we make informed choices of the methods by which we convert and manage energy. This series provides up-to-date and critical perspectives on the various options that are available. The wide range of topics covered reflects the wealth of chemical ideas and concepts that have the potential to make an important impact in the search for sustainable energy. Books in this series form important references for chemists and material scientists, chemical and process engineers, energy researchers, bio-scientists and environmental scientists from across academia, industry and Government.

Carbon Dioxide Electrochemistry

Homogeneous and Heterogeneous Catalysis

Marc Robert Université Paris Diderot, France | **Cyrille Costentin** Université Paris Diderot, France | **Kim Daasbjerg** Aarhus University, Denmark

Conversion of light and electricity to chemicals is an important component of a sustainable energy system. Carbon Dioxide Electrochemistry showcases different advances in the field and bridges the two worlds of homogeneous and heterogeneous catalysis that are often perceived as in competition in research. Written and edited by internationally recognised scientists, this title will appeal to students and researchers working in energy, catalysis, chemical engineering and physical chemistry.



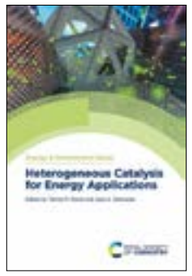
Hardback | 450 pages
9781788015462 | 2021
£179.00 | $250.00

ISBN 978-1-78801-546-2

Heterogeneous Catalysis for Energy Applications

Tomas R Reina University of Surrey, UK | **Jose A Odriozola** Universidad de Sevilla, Spain

Heterogeneous catalysis plays a central role in the global energy paradigm, with practically all energy-related process relying on a catalyst at a certain point. This book provides an overview of the design, limitations and challenges of heterogeneous catalysts for energy applications. With contributions from leaders in the field, Heterogeneous Catalysis for Energy Applications is an essential toolkit for chemists, physicists, chemical engineers and industrials working on energy.



Hardback | 516 pages
9781788017183 | 2020
£179.00 | $250.00

ISBN 978-1-78801-718-3

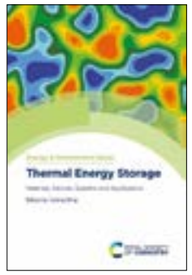
Energy and Environment Series

Thermal Energy Storage

Materials, Devices, Systems and Applications

Yulong Ding University of Birmingham, UK

Thermal energy storage refers to a collection of technologies that store energy in the forms of heat, cold or their combination, which currently accounts for approximately 55% of global non-pumped hydro installations. The potential market for thermal energy storage on future low-carbon energy systems and associated social and economic impacts are enormous, with significant progress having been made in recent years. Edited by an expert in the field, this title is suitable for graduate students and researchers in energy, energy storage, materials engineering, chemical and process engineering, mechanical engineering and manufacture technologies.



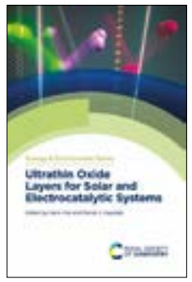
Hardback | 500 pages
9781788017176 | 2021
£179.00 | $250.00

ISBN 978-1-78801-717-6

Ultrathin Oxide Layers for Solar and Electrocatalytic Systems

Heinz Frei Lawrence Berkeley National Laboratory, USA | **Daniel Esposito** Columbia University, USA

Ultrathin metal oxide layers have emerged as a powerful approach for substantially enhancing the performance of photo, electro, or thermal catalytic systems for energy, in some cases even enabling the use of highly attractive materials previously found unsuitable. This book brings together the fundamentals and applications of ultrathin oxide layers while highlighting connections and future opportunities. Edited by leaders in the field, and with contributions from global experts, this title will be of interest to graduate students and researchers across materials science and chemistry who are interested in ultrathin oxide layers and their applications.



Hardback | 350 pages
9781839161797 | 2021
£169.00 | $235.00

ISBN 978-1-83916-179-7

Green Chemistry Series

About the series

ISSN 1757-7039

Editor-in-chief
James H Clark University of York, UK

Series editors
George Kraus Iowa State University, USA | **Andrzej Stankiewicz** Delft University of Technology, The Netherlands | **Peter Seidl** Universidade Federal do Rio de Janeiro, Brazil

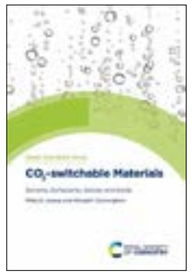
Green chemistry is one of the most rapidly growing fields in modern chemistry, and is widely recognised as being important across the chemical sciences, and throughout industry, education and research. This series provides high-level research books at the cutting-edge of green chemistry. The books are invaluable to industrialists, researchers and academics worldwide and anyone interested in the practical means that are being used to reduce the environmental impact of chemical processes and products.

CO_2-switchable Materials

Solvents, Surfactants, Solutes and Solids

Philip G Jessop Queen's University, Canada | **Michael F Cunningham** Queen's University, Canada

Summarizing recent progress in the preparation, self-assembly, and functional applications of CO_2-responsive materials, this book explores the physical chemistry of CO_2-switching, including constraints on structural design and process conditions, together with applications. The book discusses the environmental, health, and safety advantages and disadvantages compared to conventional materials. It is ideal for researchers and industrialists working in green chemistry, chemical engineering, polymer chemistry and material science.



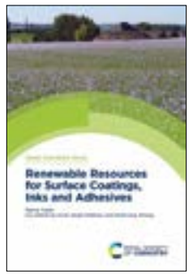
Hardback | 240 pages
9781782628767 | 2021
£149.00 | $205.00

ISBN 978-1-78262-876-7

Renewable Resources for Surface Coatings, Inks and Adhesives

Rainer Höfer Editorial Ecosiris, Germany

Providing a detailed survey of renewable raw materials for paints, inks and glues, this book examines the raw materials that are used, their sourcing and processing. It explores biorefineries and white biotechnology manufacturing technologies and the use of renewable raw materials in the latest developments in industrial surface coatings and adhesives. The book is ideal for researchers and industrialists working in green chemistry, industrial coatings, adhesives and inks and printing technologies.



Hardback | 300 pages
9781782629931 | 2021
£159.00 | $220.00

ISBN 978-1-78262-993-1

Issues in Environmental Science and Technology

About the series

ISSN 1350-7583

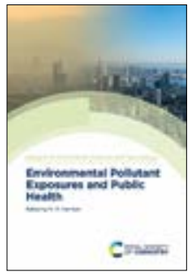
Series editors
R M Harrison University of Birmingham, UK

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.

Environmental Pollutant Exposures and Public Health

R M Harrison University of Birmingham, UK

On a day-to-day basis, we are constantly exposed to a variety of different pollutants. From the air we breathe to the food we eat, undesirable substances can be found everywhere and they can have significant health effects. Covering topics from dietary exposure to chemicals through to the health effects of climate change, this book brings together contributors from around the world to highlight the latest science on how environmental pollutant exposure impacts upon public health.



Hardback | 371 pages
9781788018951 | 2021
£70.00 | $95.00

ISBN 978-1-78801-895-1

Royal Society of Chemistry | Books | rsc.li/energy-books

Professional Reference

Life Cycle Assessment

A Metric for The Circular Economy

Aiduan Borrion University College London, UK | **Mairi J Black** University of Surrey, UK | **Onesmus Mwabonje** Imperial College London, UK

Life Cycle Assessment (LCA) is an established methodology used to quantify the environmental impacts of products, processes and services. Circular Economy (CE) thinking is a conceptual way of thinking of the impacts of consumption. Providing a robust systematic approach to the circular economy concept, using the established methodology of LCA, this book will be a practical guide for those who wish to use LCA as a research tool or to inform policy, process, and product improvement.

Hardback | 320 pages
9781788014458 | 2021
£70.00 | $95.00

ISBN 978-1-78801-445-8

Nitroxides

Synthesis, Properties and Applications

Olivier Ouari Aix-Marseille University, France | **Didier Gigmes** Aix-Marseille University, France

Nitroxides are versatile small organic molecules possessing a stabilised free radical. With their unpaired electron spin, they display a unique reactivity towards various environmental factors, enabling a diverse range of applications. This book covers the synthesis, physicochemical studies and applications of nitroxides, showcasing the developments which have occurred in recent years. Edited and written by experts working in the field, this title will be of interest to graduate students and researchers working across chemistry, physics, biology and materials science.

Hardback | 400 pages
9781788017527 | 2021
£179.00 | $250.00

ISBN 978-1-78801-752-7

Agents and representatives

China, Taiwan & Hong Kong

Wayne Tian | Royal Society of Chemistry
5th Floor, South Block, Tower C,
Raycom InfoTech Park,
2 Kexueyuan South Road,
Haidian District,
Beijing 100190, China
Tel 00 86 1391 091 3625
Email tianw@rsc.org

Eastern Europe

Radek Janousek | Publishers' Representative
Vratenska 384/18 | Praha 9 – 19600 | Czech Republic
Mobile +420 602 294 014 | Fax +48 22 6714819
Email radek@radekjanousek.com
Website www.radekjanousek.com

India

Ravindra Saxena | Sara Books Pvt Ltd
302 A , Vardaan House,
7/28, Ansari Road, Daryaganj,
New Delhi - 110002.
India
Email ravindrasaxena@sarabooksindia.com

Middle East, North Africa & South East Europe

Bill Kennedy | Claire de Gruchy | Publishers' Representatives
Avicenna Partnership Ltd
PO Box 501 | Witney | Oxfordshire | OX28 9JL | United Kingdom

Bill Kennedy: Egypt, Lebanon, UAE, Bahrain, Oman, Qatar, Iraq, Libya, Saudi Arabia, Sudan, Yemen & Kuwait
Tel +44 (0) 7802 244457
Email AvicennaBK@gmail.com

Claire de Gruchy: Greece, Cyprus, Malta, Turkey, Morocco, Tunisia, Algeria, Jordan, Palestine & Israel
Tel +44 (0) 7771 887843
Email claire_degruchy@yahoo.co.uk

Pakistan

Tahir Lodhi | Publishers' Representative
14-G Canalberg H.S. | Multan Road
Lahore 53700 | Pakistan
Tel +042 35292168
Mobile +0300 8419436
Fax +042 35882651
Email tahirlodhi@gmail.com

Singapore, Indonesia, Philippines, Thailand, Vietnam, Cambodia, Laos, Malaysia & Brunei

Ian Pringle | Publishers' Representative
APD Singapore Pte Ltd
52 Genting Lane #06-05 | Ruby Land Complex Block 1
Singapore 349560
Tel +65 6749 3551
Fax +65 6749 3552
Email ian@apdsing.com
Email stacy@apdsing.com

South Korea

Ms Sunny Cheong
Wise Book Solutions
#1607 Daewoo Freshia
143 Dongil-Ro (Sungsoo-Dong2Ga)
Sungdong-Ku | Seoul | 04799 | Korea
Tel +82 2 499 4301 | Fax +82 2 499 4301
Email sunnycheong88@naver.com

US & Canada

Bob Meehan | Princeton Selling Group, Inc.
175 Strafford Avenue
Wayne, PA, 19087
Tel (610) 975-4595 | Fax (610) 975-4593
Email psg@firstclassweb.com
Website www.princetonsellinggroup.com

Anywhere else in the world

Books Sales Support
Tel +44(0)1223 432485
Email booksales@rsc.org

Royal Society of Chemistry | Books | rsc.li/books

Royal Society of Chemistry contacts

Books sales enquiries

For sales enquiries please contact your regional sales representative.

For translation requests and inspection copy information, please contact
Book Sales Support
Tel +44(0) 1223 432485
Email booksales@rsc.org

Ordering information

Postage

Postage charges are applicable - there is a postage and handling charge of £3.50 per item ordered up to a maximum postage charge of £14.00 for UK purchases. For non-UK residents postage is calculated on weight based on destination.

All trade partners should provide details of a UK based freight forwarder.

Credit cards

Customers may purchase Royal Society of Chemistry publications using credit card facilities for purchases up to £8,000.

Royal Society of Chemistry members

Non-member prices quoted. Royal Society of Chemistry members are entitled to 35% discount on most of our publications. Details are available from our website or for more information please contact

Royal Society of Chemistry | Thomas Graham House
Science Park | Milton Road | Cambridge
CB4 0WF | UK

Tel +44 (0)1223 420066
Fax +44 (0)1223 420247
Email books@rsc.org
Website www.rsc.org

Ordering enquiries

Customers in USA and Canada should order from our distributor:

Ingram Publisher Services
Customer Service, Box 631 | 14 Ingram Blvd
La Vergne, TN 37086 | USA

ipage.ingramcontent.com
Tel +1 (866) 400 5351
Fax +1 (800) 838 1149
Email ips@ingramcontent.com

The customer service hours of operation are Monday - Friday, 8.00 am. - 5.00 pm. CST

ACCESS (automated stock check and ordering line)
+1 (800) 961 8031

Royal Society of Chemistry assigned Toll Free number
+1 (888) 790 0428

All other customers should send their orders to:

Marston Book Services Ltd
160 Eastern Avenue | Milton Park | Abingdon
Oxfordshire | OX14 4SB | UK

Trade
Tel +44 (0) 1235 465576
Fax +44 (0) 1235 465555
Email for UK traders:
trade.orders@marston.co.uk

Email for Export traders:
export.orders@marston.co.uk

Email for Trade Customers with no account:
direct.orders@marston.co.uk