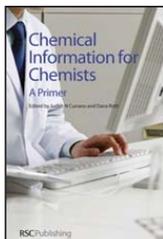


Publications in Brief

BOOKS

“Chemical Information for Chemists: A Primer”

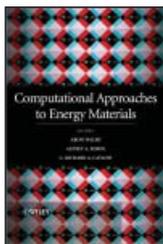


Edited by J. Currano (University of Pennsylvania, USA) and D. Roth (Caltech, USA), Royal Society of Chemistry, Cambridge, UK, 2013, 250 pages, ISBN: 978-1-84973-551-3 (Paperback), £24.99

This book is aimed at practicing chemists. Written and edited by chemical information experts, it covers techniques in retrieving and evaluating chemical information using the unique entry points of the chemical literature, including structure, formula, substructure and sequence. Contents include:

- Introduction to the chemical literature;
- Using the primary literature: journals and impact; patents; conference papers, reports and abstracts;
- Searching by text;
- Physical properties;
- Structure and substructure searching;
- Reaction searching;
- Basic Markush searching for patent information;
- Polymers and information retrieval;
- Commercial availability, safety and hazards information.

“Computational Approaches to Energy Materials”



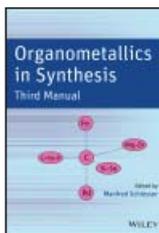
Edited by A. Walsh (Department of Chemistry, University of Bath, UK), A. A. Sokol and C. R. A. Catlow (Department of Chemistry, University College London, UK), John Wiley & Sons, Ltd, Chichester, West Sussex, UK, 2013, 318 pages, ISBN: 978-1-119-95093-6, £100.00, €125.20, US\$185.00

This book is a detailed survey of the current computational techniques for the development and optimisation of energy materials. The review of techniques includes current methodologies based on electronic structure, interatomic potential and hybrid methods. Topics covered include:

- Introduction to computational methods and approaches;
- Modelling materials for energy generation applications: solar energy and nuclear energy;

- Modelling materials for storage applications: batteries and hydrogen;
- Modelling materials for energy conversion applications: fuel cells, heterogeneous catalysis and solid state lighting;
- Nanostructures for energy applications.

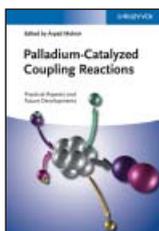
“Organometallics in Synthesis: Third Manual”



Edited by M. Schlosser (Swiss Federal Institute of Technology, Lausanne, Switzerland), John Wiley & Sons, Inc, Hoboken, New Jersey, USA, 2013, 1026 pages, ISBN: 978-0-470-12217-4 (Paperback), £83.50, €100.20, US\$125.00

Each reaction is in the book's acclaimed 'recipe-style format' so that readers can replicate the results in their own laboratories. Each chapter offer hands-on guidance and practical examples. Of special interest is Chapter 5, 'Organopalladium Chemistry', by Stefan Bräse (Institute of Organic Chemistry, Karlsruhe Institute of Technology, Karlsruhe, Germany). This chapter contains the sections: 'π-Allyl or π-Propargyl Intermediates'; 'Carbopalladation of Alkenes and Alkynes'; 'Cross-Couplings for C-C-Carbon Single Bonds'; 'Cross-Coupling Reactions toward C-X Single Bonds'; 'Heteropalladation of Alkenes and Alkynes'; 'Telomerization and Oligomerization Reactions'; 'Cycloaddition Reactions'; 'Rearrangement Reactions'; 'Wacker and Other Oxidation Reactions'; 'Hydrogenation, Reduction, and Isomerization Reactions'; and 'Domino and Multicomponent Reactions'.

“Palladium-Catalyzed Coupling Reactions: Practical Aspects and Future Developments”

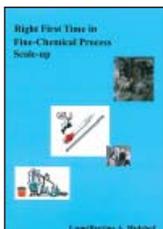


Edited by Á. Molnár (University of Szeged, Department of Organic Chemistry, Hungary), Wiley-VCH Verlag GmbH & Co KGaA, Weinheim, Germany, 2013, 692 pages, ISBN: 978-3-527-33254-0, £125.00, €150.00, US\$190.00

While covering homogeneous and heterogeneous Pd-catalysed coupling reactions, the book focuses on key aspects such as using different reaction media, microwave techniques, catalyst recycling and large-scale applications. It provides comprehensive coverage of coupling reactions and emphasises those topics

that show potential for further development, such as continuous flow systems, water as the reaction medium and catalyst immobilisation.

“Right First Time in Fine-Chemical Process Scale-Up”



B. Hulshof (Eindhoven University of Technology, The Netherlands), Scientific Update LLP, Mayfield, East Sussex, UK, 2013, 483 pages, ISBN 978-0-9533994-1-3, £99.50

Bringing a fine chemical product to plant and market quickly benefits from a “right first time in (fine-chemical) process scale-up”.

This book describes how to bridge the gap between scales avoiding scale-up problems. The author makes available 240 real-life examples and analyses them answering these questions: (a) what was the primary cause of the initial failure in scale-up; (b) what was the solution; and (c) how could the incident have been avoided in the early stages of process development? Includes seven catalyst examples concerning palladium/carbon and one with rhodium.

JOURNALS

ACS Photonics



Editor: H. A. Atwater (Caltech, USA); ACS Publications

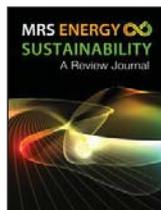
The new journal *ACS Photonics* will publish its first issue in January 2014. The aim is to meet the growing need for an interdisciplinary journal dedicated to high-impact research in the field of photonics. Published

as soon as accepted and summarised in monthly issues, *ACS Photonics* will publish research articles, letters, perspectives and reviews, to encompass the full scope of published research in this field. Among the areas the journal will cover are LEDs and solid state lighting and photonics for energy materials.

MRS Energy & Sustainability—A Review Journal

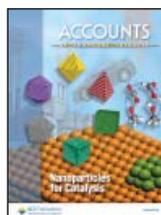
Editors-in-Chief: D. S. Ginley (National Renewable Energy Laboratory, USA), D. Cahen, (Weizmann Institute of Science, Israel) and S. M. Benson (Stanford University, USA); Materials Research Society/Cambridge University Press; ISSN: 2329-2229; e-ISSN: 2329-2237

Published jointly by the Materials Research Society and Cambridge University Press, *MRS Energy & Sustainability—A Review Journal* will have reviews



on key topics in materials science and development as they relate to energy and sustainability. Topics to be covered include research and development of both established and new areas; interdisciplinary systems integration; and objective application of economic, sociological and governmental models, enabling research and technological developments.

Nanoparticles for Catalysis



Acc. Chem. Res., 2013, **46**, (8), 1671–1910

This special issue is a series of accounts by leading experts giving an overview of recent major developments in nanoparticles for catalysis. The most powerful synthetic methods and state-of-the-art characterisation techniques that have been utilised to control and analyse these nanoparticle-based catalysts are described. The guest editors hope that the reader can see the relationship between the structural details of the nanoparticles and their catalyst performance, while at the same time develop a fundamental understanding of the basic principles that dictate these relationships. Examples involving platinum and palladium nanoparticle-based catalysts are included.

Virtual Issue: Catalysis at the Shanghai Institute of Organic Chemistry



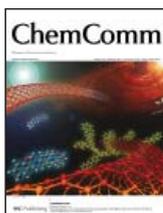
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ACS Catal., 2013, **3**, (7), 1633

The Shanghai Institute of Organic Chemistry (SIOC), China, was founded in May 1950 as one of the first fifteen institutions established by the Chinese Academy of Sciences (CAS). This virtual issue of *ACS Catalysis* highlights the world-class catalysis research being

carried out at SIOC. The topics of catalysis research at SIOC are organometallic catalysis, organocatalysis, asymmetric catalysis and biocatalysis. Items of interest include: 'Recent Advances in Asymmetric Catalysis in Flow', 'Palladium-Catalyzed C-C Triple Bond Cleavage: Efficient Synthesis of 4*H*-Benzo[*d*][1,3]oxazin-4-ones' and 'Enantioselective Intramolecular Carbene C-H Insertion Catalyzed by a Chiral Iridium(III) Complex of *D*₄-Symmetric Porphyrin Ligand'.

Web Themed Issue: Medicinal Inorganic Chemistry



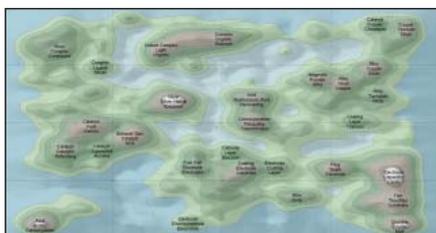
Chem. Commun., 2013

This web themed issue of *Chem. Commun.* celebrates current achievements and future perspectives in the field of medicinal inorganic chemistry, including, but not limited to: metal-based diagnostics, metal-based therapeutics, mechanistic studies of metallotherapeutics, the role of metal ions and metal ion homeostasis in disease, chelation therapy, inhibitors of medically-relevant metalloproteins and metal ion sensing. The guest editors are Amy Barrios (University of Utah, Salt Lake City, USA), Seth Cohen (University of California, San Diego, USA) and Mi Hee Lim (University of Michigan, Ann Arbor, USA).

The feature article by Nicolas Barry and Peter Sadler (University of Warwick, UK) entitled 'Exploration of the Medical Periodic Table: Towards New Targets' provides an excellent overview. Drugs and therapies based on Pt, Pd, Rh, Ir and Ru are covered and the collection will be added to as more articles are published.

ON THE WEB

How Can I Find Out What Research is Being Done on Uses of Iridium?



Questions & Answers | Platinum Metals Review

This item has a movie that shows the progress in patent applications involving iridium over time from 1993 to the present day (August 2013).

Find this at: <http://www.platinummetalsreview.com/resources/view-questions-answers/how-can-i-find-out-what-research-is-being-done-on-uses-of-iridium/>

Johnson Matthey Noble Metals Wins Award at Sante Fe Symposium



Johnson Matthey Noble Metals, 01/07/2013

For its part in the manufacture of parts for a specially commissioned palladium claret jug crafted by master goldsmith and silversmith Martyn Pugh, Johnson Matthey was awarded a Collaborative Research Award at the 2012 Santa

Fe Symposium "in recognition of published research, done in collaboration between a manufacturing jeweller and a supplier, that uses good scientific principles to result in useful information that can be applied for the greater good of the industry". The work is summarised in 'Final Analysis: Challenges and Opportunities in Palladium: The Claret Jug Experience at the Santa Fe Symposium', C. Corti, *Platinum Metals Rev.*, 2012, 56, (4), 284.

Find this at: <http://www.noble.matthey.com/news2.asp?id=79>