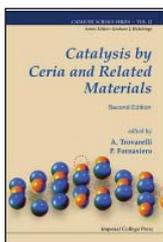


# Publications in Brief

## BOOKS

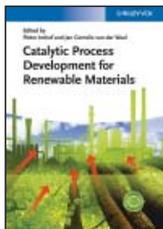
### “Catalysis by Ceria and Related Materials”, 2nd Edition



Edited by A. Trovarelli (Università di Udine, Italy) and P. Fornasiero (Università di Trieste, Italy), Catalytic Science Series, Vol. 12, Imperial College Press, London, UK, 2013, 908 pages, ISBN: 978-1-84816-963-0, £124.00, US\$188.00

This book follows the 2002 edition which was the first book entirely devoted to ceria and its catalytic properties. Since then a great amount of work has been carried out in the field, and ceria has gained a more prominent position in catalysis. Special emphasis is given in this 2nd edition to nano-engineered and nano-shaped systems. The book covers recent advances in emerging and traditional large-scale applications of ceria in catalysis, such as the treatment of emissions from diesel and gasoline engines where ceria is widely used in conjunction with a pgm washcoat.

### “Catalytic Process Development for Renewable Materials”



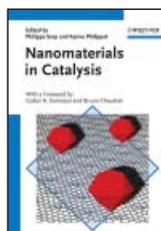
Edited by P. Imhof and J. C. van der Waal (Avantium, The Netherlands), Wiley-VCH Verlag GmbH & Co KGaA, Weinheim, Germany, 2013, 420 pages, ISBN: 978-3-527-33169-7, £115.00, €138.00, US\$190.00

This book is the first to combine the fields of high throughput experimentation and catalytic process development for biobased materials. It describes the entire workflow from idea, approach, research and process development, right up to commercialisation by application of advanced methodologies and technologies. Reactor and process design models are covered in detail. Palladium and ruthenium catalysts are featured. The contributions are from scientists and technologists at leading companies.

### “Nanomaterials in Catalysis”

Edited by P. Serp and K. Philippot (Toulouse University, Laboratoire de Chimie de Coordination, Toulouse, France), Wiley-VCH Verlag GmbH & Co KGaA, Weinheim, Germany, 2013, 516 pages, ISBN: 978-3-527-33124-6, £125.00, €150.00, US\$175.00

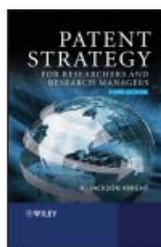
Following an introduction of the concepts in



nanocatalysis, the fabrication of nanocatalysts in various media is discussed in several chapters including nanoparticles in aqueous phase, nanoclusters and colloids as catalysts precursors, nanoparticles in ionic liquid and supercritical fluids, dendrimers that serve as polymeric supports for nanoparticles and

finally nanocatalyst recovery, which addresses the problem of deactivation and regeneration. A section is dedicated to nanoparticle supports like carbon nanotubes and nano oxides. The last chapter reviews modelling of nanocatalysts to show the foundation of theoretical treatment of nanocatalysis and nanomaterials that are used as catalysts. There are examples of all of the pgms as nanocatalysts.

### Patent Strategy for Researchers and Research Managers, 3rd Edition



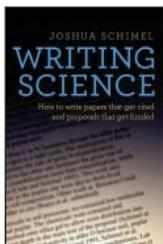
H. J. Knight (E. I. du Pont de Nemours & Co, Inc, Virginia, USA), John Wiley & Sons Ltd, Chichester, UK, 2013, 256 pages, ISBN: 978-0-470-05774-2, £60.00, €72.70, US\$90.00

With minimal use of ‘legal jargon’ this book provides researchers with the assistance and advice they require to understand the legal complexities that they may encounter before and during a patent application. It details the reasons behind patents, their importance and relevance to all researchers and the strategy needed for filing for a patent. The book discusses the responsibilities of the researcher after patent applications have been filed and the role the researcher can play in the maintenance of a global patent estate. The author has over 30 years of experience in areas such as process engineering and operation, research and development, and applications research. He has been working in patent matters for over 20 years and is registered to practice before the United States Patent and Trademark Office.

### “Writing Science: How to Write Papers That Get Cited and Proposals That Get Funded”

J. Schimel (University of California, Santa Barbara, California, USA), Oxford University Press, New York, USA, 2012, 240 pages, ISBN: 978-0-19-976023-7, £60.00, US\$99.00

This book treats writing technical papers and proposals

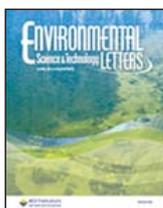


author, reviewer and editor, offering tools that any scientist can use to communicate.

as part of the literary tradition and focuses on structuring the story of the paper rather than focusing on just sentences. The book targets the internal structure of a paper, explaining how to write clear and professional sections, paragraphs and sentences. It draws upon the author's years of experience as an

## JOURNALS

### Environmental Science & Technology Letters

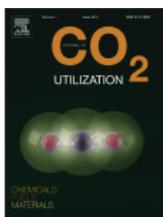


Editor: J. Schnoor (University of Iowa, Iowa City, USA); American Chemical Society; ISSN: 2328-8930

ACS Publications announces *Environmental Science & Technology Letters* (*ES&T Letters*). This new journal will include brief communications on experimental or theoretical results in all aspects of environmental science (pure and applied) and short reviews on emerging environmental science and technology topics. Among the areas the journal will cover are:

- Characterisation of natural and affected environments;
- Energy and the environment;
- Environmental aspects of nanotechnology;
- Environmental measurements methods;
- Environmental processes;
- Novel remediation and control technologies.

### Journal of CO<sub>2</sub> Utilization



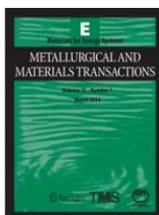
Editor-in-Chief: S.-E. Park (Laboratory of Nano-Green Catalysis and Nano Center for Fine Chemicals Fusion Technology, Department of Chemistry, Inha University, Incheon, South Korea); Elsevier; ISSN: 2212-9820

The *Journal of CO<sub>2</sub> Utilization* is a new journal from Elsevier. It will publish novel research in the field of carbon dioxide re-use. This includes CO<sub>2</sub> as a feedstock in the chemical, energy and materials sectors, and utilisation in general to help minimise environmental impact. The coverage includes:

- Materials for CO<sub>2</sub> activation and adsorption;
- Heterogeneous and homogeneous catalytic reactions involving CO<sub>2</sub>;

- CO<sub>2</sub> conversion to generate synthetic fuels, polymers, organic carbonates and intermediate products;
- Supercritical CO<sub>2</sub> utilisation in natural product extraction, catalysis and separation;
- Use of CO<sub>2</sub> as an oxidant;
- Electrochemical conversion of CO<sub>2</sub>;
- Photoelectrochemical, photocatalytic and photochemical conversion of CO<sub>2</sub>;
- Biological conversion of CO<sub>2</sub>;
- Integrated processes for CO<sub>2</sub> conversion and reduction.

### Metallurgical and Materials Transactions E: Materials for Energy Systems



Principal Editor: D. E. Laughlin (Carnegie Mellon University, Pittsburgh, Pennsylvania, USA); Springer; ISSN: 2196-2936; e-ISSN: 2196-2944

ASM International and TMS (The Minerals, Metals and Materials Society) through *Metallurgical and Materials Transactions* are launching a new joint quarterly journal on energy materials. *Materials for Energy Systems* will publish original research and review articles focused on the science of materials applied to or being investigated to address unique aspects of current and emerging energy technologies, to include: battery, biomass, fuel cell, geothermal, hydrocarbons, hydrogen storage, nuclear, solar cell, supercapacitor, thermal conversion, thermochemistry, thermoelectricity and wind energy systems.

### Sustainable Chemical Processes



Editor-in-Chief: M. Gupta (Indian Institute of Technology Delhi, India); Chemistry Central; e-ISSN: 2043-7129

*Sustainable Chemical Processes* is a new open access journal from Chemistry Central covering both scientific and engineering aspects of sustainable approaches in chemistry. The scope of the journal includes:

- Green routes to isolation, purification and synthesis of organic, inorganic or organometallic compounds and materials;
- All aspects of catalysis and biocatalysis that lead to sustainable processes;
- Biomass conversion and use of renewable resources;

- (d) Biofuels, biorefineries and other alternative sources of energy (such as hydrogen generation and storage, solar cells, fuel cells and photovoltaic cells);
- (e) Process intensification including flow chemistry;
- (f) Green metrics and sustainability assessment of products and processes (including LCA methods);
- (g) Microwave and ultrasonic assisted reactions;
- (h) Nanotechnology that enhances the sustainability aspects of processes;
- (i) Green electronics and sensors;
- (j) Approaches to reduce water consumption in chemical processes;
- (k) CO<sub>2</sub> capture processes.

#### Special Issue: Homogeneous Catalysis



*ChemCatChem*, 2013, **5**, (5), 1037–1210

Based on the 18th International Symposium on Homogeneous Catalysis (ISHC-18), held from 9th–13th July 2012 in Toulouse, France, this special issue on homogeneous catalysis is extended to organocatalysis, enzymatic catalysis, bioinspired catalysis, nanocatalysis and heterogenised homogeneous catalysis. Articles of interest include ‘Palladium(II) Complexes with Small *N*-Heterocyclic Carbene Ligands as Highly Active Catalysts for the Suzuki–Miyaura Cross-Coupling Reaction’, ‘Synthesis of Poly(silyl ether)s by Rhodium(I)–NHC Catalyzed Hydrosilylation: Homogeneous *versus* Heterogeneous Catalysis’ and ‘Ruthenium(II)-Catalyzed Hydrogen Generation from Formic Acid Using Cationic, Ammoniomethyl-Substituted Triarylphosphine Ligands’.

#### Special Issue: Metal-Catalyzed C–H Bond Functionalization



*Tetrahedron*, 2013, **69**, (22), 4359–4492

This special issue of *Tetrahedron* has eighteen original research articles authored by some of the pioneers and current major researchers of the field from Canada, China, France, Germany, Italy, Japan, Singapore, Spain, Switzerland, the UK and the USA. There are articles on the control of site-selectivity, the design of more efficient and selective catalysts and additives, the use of first row transition metals, mechanistic studies, the construction of complexity by domino processes, the

development of cross-dehydrogenative couplings, and the application of new methods to the synthesis of complex molecules with interesting biological or luminescent properties. Palladium catalysis features heavily in this special issue.

## ON THE WEB

### Buchwald Technical Forum



Johnson Matthey Catalysis and Chiral Technologies has made its powerful Buchwald phosphine ligand technology available on gram to commercial scale. The intellectual property is available on either “price per kilo” or sublicense options. Additionally the Buchwald Technical Forum gives information about Buchwald Technologies at commercial scale along with the full ligand and palladacycle offering.

Find this at: <http://www.jmct.com/buchwald>

### Changing Market Dynamics for Research Chemicals, Metals and Materials: An Interview with Julie Butterfield



Interview Conducted by Kal Kaur, AZoM™ – The A to Z of Materials, 11th March 2013

Julie Butterfield, General Manager of Alfa Aesar, a Johnson Matthey Company, talks to AZoM in this Insights from Industry interview about the changing market dynamics for research chemicals, metals and materials. This includes a brief introduction to Alfa Aesar, their product range, research application areas and manufacturing processes.

Find this at: <http://www.azom.com/article.aspx?ArticleID=8308>

### Johnson Matthey Prices App



Johnson Matthey has launched a pgm prices application, ‘JM Prices’, which is available to download now on the Apple App Store and Android Market, coming soon to Blackberry App World. This free app provides access to the Johnson Matthey Base Prices for platinum, palladium, rhodium, iridium and ruthenium, which are updated throughout every trading day. As an extension to the prices facility on the Platinum Today website, JM Prices is designed to allow quick access to current

and historical price data, create interactive charts or view daily and monthly prices back to 1992, as well as linking through to News, Weekly Price Bulletins and Monthly Price Bulletins on Platinum Today.

Find this at:

iTunes App Store: <https://itunes.apple.com/gb/app/jm-prices/id608838914?mt=8>

Android Apps on Google Play: <https://play.google.com/store/apps/details?id=com.matthey.prices>

### Water Electrolysis & Renewable Energy Systems



Fuel Cell Today launched its report “Water Electrolysis & Renewable Energy Systems” at All-Energy 2013 in Aberdeen, UK, on 22nd May 2013. The report describes how the electrolysis of water to generate hydrogen can be used in conjunction with renewable energy sources to provide

a number of benefits. It begins with a brief summary of the fundamentals of water electrolysis and the available electrolyser technologies. It then looks at how electrolysis has been applied in the past and its applicability to, and suitability for, energy use.

Find this at: <http://www.fuelcelltoday.com/analysis/surveys/2013/water-electrolysis-renewable-energy-systems>