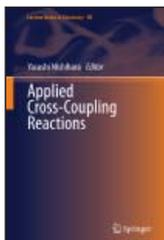


# Publications in Brief

## BOOKS

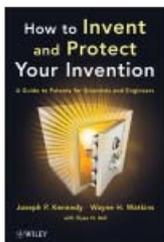
### “Applied Cross-Coupling Reactions”



Edited by Y. Nishihara (Department of Chemistry, Okayama University, Japan), Series: Lecture Notes in Chemistry, Vol. 80, Springer-Verlag, Berlin, Heidelberg, Germany, 2013, 245 pages, ISBN: 978-3-642-32367-6, £90.00, €106.95, US\$129.00

Since the discovery of transition metal-catalysed cross-coupling reactions in 1972, various synthetic uses and industrial applications have been developed. Cross-coupling reactions catalysed by pgms such as palladium can produce natural products, pharmaceuticals, liquid crystals and conjugate polymers for use in electronic devices. The Nobel Prize in Chemistry 2010 was awarded jointly to Richard F Heck, Ei-ichi Negishi and Akira Suzuki “for palladium-catalyzed cross couplings in organic synthesis”. In this book, recent trends in synthesis and catalytic activities of transition metal catalysts, mainly palladium, for cross-coupling reactions are presented.

### “How to Invent and Protect Your Invention: A Guide to Patents for Scientists and Engineers”



J. P. Kennedy (The University of Akron, USA), W. H. Watkins with E. N. Ball (University of Akron Research Foundation, USA), John Wiley & Sons, Inc, Hoboken, New Jersey, USA, 2012, 248 pages, ISBN: 978-1-1183-6937-1 (Paperback), £40.50, €48.60, US\$59.95

This book is based on lecture notes developed over twenty-five years at The University of Akron, USA. It provides a clear, jargon-free and comprehensive overview of the patenting process tailored specifically to the needs of scientists and engineers, including:

- Requirements for a patentable invention;
- How to invent;
- New laws created by President Obama’s 2011 America Invents Act;
- The process of applying for and obtaining a patent in the USA and in other countries;
- Commercialising inventions and the importance of innovation.

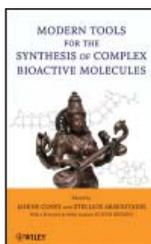
### “Inventing Reactions”



Edited by L. J. Gooßen (TU Kaiserslautern, FB Chemie - Organische Chemie, Germany), Series: Topics in Organometallic Chemistry, Vol. 44, Springer-Verlag, Berlin, Heidelberg, Germany, 2013, 354 pages, ISBN: 978-3-642-34285-1, £206.50, €245.03, US\$309.00

This book analyses the creative process associated with some recent inventions of chemical reactions. Leading academics describe their creative solutions to longstanding problems in organic chemistry. Each chapter provides short overviews of the context and subsequent developments of their respective transformations. The book includes a chapter by Professor Keith Fagnou (posthumously) and David Stuart (University of Ottawa, Canada) on the discovery and development of a Pd(II)-catalysed oxidative cross-coupling of two unactivated arenes.

### “Modern Tools for the Synthesis of Complex Bioactive Molecules”

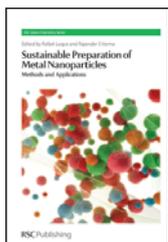


Edited by J. Cossy and S. Arseniyadis (Laboratoire de Chimie Organique, ESPCI ParisTech, Paris, France), John Wiley & Sons, Inc, Hoboken, New Jersey, USA, 2012, 596 pages, ISBN: 978-0-470-61618-5, £100.00, €120.00, US\$149.95

Focusing on organic, organometallic and bio-oriented processes, this book covers the use of the latest synthetic tools for the synthesis of complex biologically active compounds. Innovative methods are described that make it possible to control the exact connectivity of atoms within a molecule in order to set precise three-dimensional arrangements. Many of the transformations rely on palladium, rhodium, ruthenium or other pgm catalysts. Chapters of interest include: ‘C–H Functionalization: A New Strategy for the Synthesis of Biologically Active Natural Products’, ‘Metal-Catalyzed C–Heteroatom Cross-Coupling Reactions’ and ‘Metathesis-Based Synthesis of Complex Bioactives’.

### “Sustainable Preparation of Metal Nanoparticles: Methods and Applications”

Edited by R. Luque (Departamento de Química Orgánica, Universidad de Córdoba, Spain) and R. S. Varma (National Risk Management Research Laboratory, US Environmental Protection Agency, USA), RSC Green Chemistry No. 19, The



Royal Society of Chemistry, Cambridge, UK, 2013, 230 pages, ISBN: 978-1-84973-428-8, £109.99

This book provides the state-of-the-art as well as current challenges and advances in the sustainable preparation of metal nanoparticles for a variety of applications. For example, wet chemistry methods are frequently used for biomedical applications, while gas phase deposition on solid supports is commonly employed in the preparation of catalysts and electrocatalysts. Platinum, palladium, iridium and ruthenium are featured. Researchers interested in the green and environmentally safe production of nanoparticles will find this book useful.

## JOURNALS

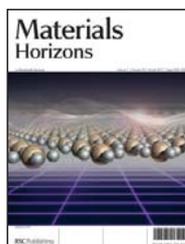
### Journal of Environmental Chemical Engineering



Editors: D. Fatta-Kassinos (University of Cyprus, Nicosia, Cyprus), Y. Lee (Gwangju Institute of Science & Technology (GIST), Gwangju, Republic of Korea), T.-T. Lim (Nanyang Technological University, Singapore) and E. C. Lima (Federal University of Rio Grande do Sul, Porto Alegre, RS, Brazil); Elsevier; e-ISSN: 2213-3437

The new online-only journal *Journal of Environmental Chemical Engineering (JECE)* from Elsevier focuses on environmental sustainability in engineering and chemistry. Published four times per year, *JECE* will provide a forum for the publication of original research on the development of alternative sustainable technologies for water and wastewater treatment and reuse; treatment, reuse and disposal of waste; pollution prevention; sustainability and environmental safety; green chemistry; and remediation of environmental accidents.

### Materials Horizons

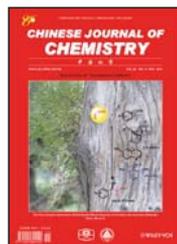


Editor: L. Dunn; Royal Society of Chemistry; ISSN: 2051-6347; e-ISSN: 2051-6355

*Materials Horizons* from the Royal Society of Chemistry is a new peer-reviewed journal publishing primary research on materials science. Seth Marder (Georgia Institute of Technology, USA), chair of the Editorial Board, said "while published by a chemical society, the journal will seek to serve the

broader materials community by welcoming papers that cover the gamut of materials research". It will include content specifically aimed at educating and engaging younger researchers. Due to launch late in 2013, access will be free until December 2015.

### Special Issue: Asymmetric Gold Synthesis



*Chin. J. Chem.*, 2012, **30**, (11), 2601–2725

Asymmetric synthesis, particularly utilising catalysts, is very important for providing chiral compounds in an enantiopure form. Contributions dealing with recent progress in homogeneous asymmetric catalysis are collected here. This special issue contains 19 selected papers including: 'Enantioselective and  $\alpha$ -Regioselective Allylic Amination of Morita-Baylis-Hillman Acetates with Simple Aromatic Amines Catalyzed by Planarly Chiral Ligand/Palladium Catalyst', 'Iridium-Catalyzed Allylic Alkylations of Sodium Phenyl Selenide' and 'Stereoselective Synthesis of Optically Active Hydrobenzoin *via* Asymmetric Hydrogenation of Benzils with Ru(OTf)(TsDPEN)( $\eta^6$ -cymene) as the Pre-catalyst'.

### Special Issue: Electrocatalysis



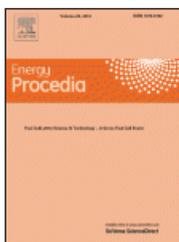
*Catal. Today*, 2013, **202**, 1–210

A number of European universities (Alicante, Birmingham, Gothenburg, Leiden, Liverpool and Ulm), one research institute (Heyrovsky Institute, Prague) and two companies (Johnson Matthey, UK, and Permascand, Sweden) were involved in the EU-funded 'ELCAT' network. The aim was to train young researchers in theoretical and experimental research methods and to provide theoretical and synthetic tools to design new electrocatalysts. The collection of papers in this special issue, many from groups outside the ELCAT network, reflects these aims and strategies. ELCAT: <http://www.elcat.org.gu.se/>

### Special Issue: Fuel Cells 2012 Science & Technology – A Grove Fuel Cell Event

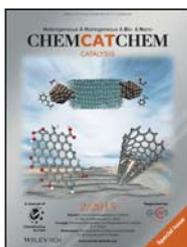
*Energy Procedia*, 2012, **28**, 1–198

The Fuel Cells 2012 Science and Technology conference took place in Berlin, Germany, from 11th–12th April 2012. It included the award of the 2012 Grove Medal to Professor Dr Hubert Gasteiger, Chair



of Technical Electrochemistry at the Technical University of Munich, Germany. Both as industrial and university scientist, Professor Gasteiger has made remarkable contributions to the understanding of fuel cell related electrochemistry and to the vitally important task of translating application requirements into fundamental parameters. His interests include electrocatalysts for low-temperature fuel cells and electrolyzers as well as materials degradation mechanisms. Twenty articles from this conference are included in this special issue. Fuel Cells 2012 Science & Technology: <http://www.fuelcelladvances.com/>

### Special Issue: The World of Catalysis – A Perspective from The Netherlands



*ChemCatChem*, 2013, 5, (2), 357–618

This *ChemCatChem* special issue is an anthology of the topics addressed over the last five years of The Netherlands Catalysis and Chemistry Conference (NCCC). It reflects the development of new or renewed catalysis research from heterogeneous catalysis, homogeneous catalysis and biocatalysis. Items of interest include: 'Pt/Al<sub>2</sub>O<sub>3</sub> Catalyzed 1,3-Propanediol Formation from Glycerol Using Tungsten Additives', 'Stable and Efficient Pt–Re/TiO<sub>2</sub> Catalysts for Water-Gas-Shift: On the Effect of Rhenium', 'NanoSelect Pd Catalysts: What Causes the High Selectivity of These Supported Colloidal Catalysts in Alkyne Semi-Hydrogenation?' and 'Effects of Support, Particle Size, and Process Parameters on Co<sub>3</sub>O<sub>4</sub> Catalyzed H<sub>2</sub>O Oxidation Mediated by the [Ru(bpy)<sub>3</sub>]<sup>2+</sup> Persulfate System'.

## ON THE WEB

### 2012 Fuel Cell Patent Review



The “2012 Fuel Cell Patent Review” is the second Fuel Cell Today report on annual fuel cell patent activity. It

analyses both granted patents and patent applications published in 2011, by comparison with publications in 2010. The number of granted fuel cell patents increased by 51% between 2010 and 2011. Fuel cell patent applications also continue to grow, with a 58% increase in 2011 *versus* 2010. The emergence of Asia as a dominant patenting force has also been identified, with the World Intellectual Property Organization observing double-digit growth in applications from Japan and China. Fuel Cell Today has tracked the emergence of China as a named country in the fuel cell patent literature and this is discussed in the 2012 Patent Review.

Find this at: <http://www.fuelcelltoday.com/analysis/patents/2012/2012-fuel-cell-patent-review>

### Global Emissions Management



Latest issue: Volume 3, Issue 05 (January 2013)

The latest update of *Global Emissions Management (GEM)* from Johnson Matthey Emission Control Technologies includes:

- (a) Advanced Emission Control Concepts for Gasoline Engines;
- (b) Renault Awards for Johnson Matthey;
- (c) Johnson Matthey Acquires the Axon Group.

Find this at: <http://www.jm-gem.com/>

### Platinum Today



Platinum Today has been redesigned. Its new simplified homepage presents easy access to all of its most frequently visited areas such as prices, news and publications. An upgraded price charting system allows comparison pricing between all the platinum group metals. The navigation structure has been improved but still contains all the same elements as the old site, including the extensive news and publications archives.

Find this at: <http://www.platinum.matthey.com/>