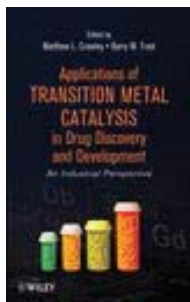


Publications in Brief

BOOKS

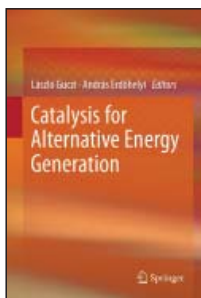
“Applications of Transition Metal Catalysis in Drug Discovery and Development: An Industrial Perspective”



Edited by M. L. Crawley (Main Line Health, USA) and B. M. Trost (Stanford University, USA), John Wiley & Sons, Inc, Hoboken, New Jersey, USA, 2012, 376 pages, ISBN: 978-0-470-63132-4, £66.95, €80.40, US\$99.95

This book focuses on the drug discovery and development applications of transition metal-catalysed processes, which can efficiently synthesise preclinical and clinical drug candidates as well as commercial drugs. The authors give attention to the challenges of developing laboratory reactions into scalable industrial processes. Additionally, the book describes how continued development of transition metal-catalysed processes can deliver new drug candidates. The pgms including palladium, rhodium and ruthenium feature in many of the synthetic procedures discussed.

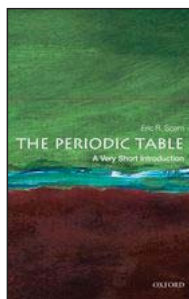
“Catalysis for Alternative Energy Generation”



Edited by L. Guzzi (Department of Surface Chemistry and Catalysis, Institute of Isotopes, Hungarian Academy of Sciences, Hungary) and A. Erdöhelyi (Department of Solid State and Radiochemistry, University of Szeged, Hungary), Springer Science+Business Media, New York, USA, 2012, 536 pages, ISBN: 978-1-4614-0343-2, £117.00, €139.05, US\$179.00

This book summarises the role of catalysis in the production of new energy carriers and in the utilisation of different energy sources. The book discusses the use of biomass or biomass-derived materials as energy sources, hydrogen formation in methanol and ethanol reforming, biodiesel production, and the utilisation of biogases. There are separate sections for fuel cells, photocatalysis and solar cells, which all depend heavily on catalysts, including those of the pgms.

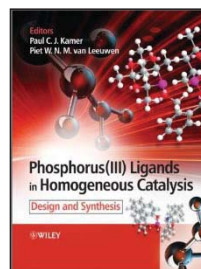
“The Periodic Table: A Very Short Introduction”



By E. Scerri (University of California, Los Angeles, USA), Oxford University Press, Oxford, UK, 2011, 147 pages, ISBN: 978-0-19-958249-5 (paperback), £7.99, US\$11.95

This book considers the implications of the arrangements of the Periodic Table to atomic physics and quantum mechanics. The author looks at the history of the discovery of trends in the properties of the elements that led to the construction of the Periodic Table, and how the deeper meaning of its structure gradually became apparent with the development of atomic theory and quantum mechanics.

“Phosphorus(III) Ligands in Homogeneous Catalysis: Design and Synthesis”



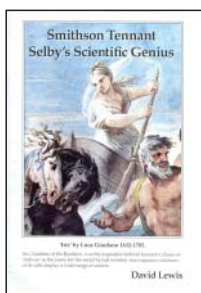
Edited by P. C. J. Kamer (EaStCHEM, School of Chemistry, University of St. Andrews, UK) and P. W. N. M. van Leeuwen (Institute of Chemical Research of Catalonia (ICIQ), Spain), John Wiley & Sons, Ltd, Chichester, West Sussex, UK, 2012, 547 pages, ISBN: 978-0-470-66627-2, £125.00, €147.60, US\$180.00

This book covers the design and synthesis of P(III) donor ligands for use in homogeneous catalysis. The reactivity of transition metal complexes is dependent on the ligand environment of the metal. Consequently, optimising the catalytic centre by varying the ligand properties is a powerful tool in homogeneous catalysis. Both small-scale (asymmetric) catalytic preparation of fine chemicals and industrial production of bulk chemicals are achievable. Ligand families covered include phosphine, diphosphine, phosphite, diphosphite, phosphoramidite, phosphonite, phosphinite, phosphole, phosphinine, phosphinidenene, phosphalkenes, phosphalkynes, P-chiral ligands, and cage ligands.

“Smithson Tennant: Selby’s Scientific Genius”

D. Lewis (Selby, UK), Fulprint, York, UK, 2011, 40 pages, ISBN: 978-0-948330-07-0, £6.00

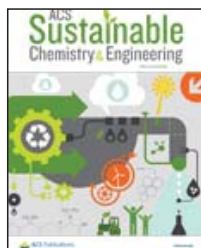
While Smithson Tennant’s achievements, including the discovery of iridium and osmium are relatively



well known, his background in Selby, North Yorkshire, is not. This book illustrates his family connections, his properties in Selby and how he obtained the wealth that enabled his scientific life and extensive touring to be funded. The book also documents his many scientific achievements. It is intended as a general primer to Tennant's life and times. The book is available from the author Mr David Lewis (Email: dglewis49@btinternet.com; 32 Church End, Cawood, Selby YO8 3SN, UK).

JOURNALS

ACS Sustainable Chemistry & Engineering



Editor-in-Chief: D. T. Allen (University of Texas at Austin, USA); American Chemical Society: e-ISSN: 2168-0485

American Chemical Society (ACS) Publications has announced a new peer-reviewed journal *ACS Sustainable Chemistry & Engineering*, with

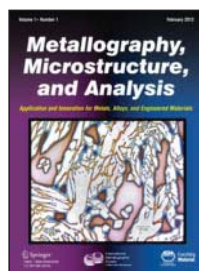
a focus on advancing research that aims to minimise environmental harm and achieve sustainable processes. Its first issue will be published online only in January 2013. Experts in the field are invited to contribute original research letters and articles. Authors will be encouraged to establish correlations between their research and the principles of green chemistry/engineering. The journal scope will emphasise five focal areas of research:

- Life-cycle assessment;
- Green chemistry;
- Waste as resources;
- Alternative energy;
- Green innovative manufacturing.

Metallography, Microstructure, and Analysis: Application and Innovation for Metals, Alloys, and Engineered Materials

Editor: R. M. Deacon (Johns Hopkins University, Applied Physics Laboratory, USA); Advisory Editor: C. Bagnall (MCS Associates, Inc, USA): International Metallographic Society/Springer; e-ISSN: 2192-9270; Springer journal no. 13632

Metallography, Microstructure, and Analysis (MMA) is a new journal from the International Metallographic Society (IMS), an Affiliate Society of ASM International.



MMA focuses on the art and science of preparing, interpreting and analysing microstructures for the purpose of understanding material behaviour and performance. *MMA* is available online to IMS members as part of their annual subscription.

Special Issue: Catalytic Control of Lean-Burn Engine Exhaust Emissions



Catal. Today, 2012, **184**, (1), 1–300

This issue of *Catalysis Today* includes original research articles based on select presentations from the 22nd North American Meeting of the North American Catalysis Society (NACS) held in Detroit, USA, in June 2011, with a particular focus on catalysed

diesel emissions control. The symposium on mobile emissions control was dedicated to the memory of Dr Haren Gandhi, who throughout his entire career at the Ford Motor Company was deeply engaged in the technical aspects of emissions control.

Special Issue: Phase Stability, Phase Transformation and Reactive Phase Formation in Electronic Materials

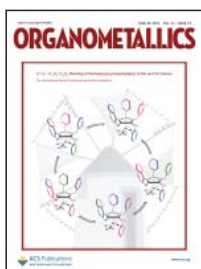


J. Electron. Mater., 2012, **41**, (1), 1–175

The “Phase Stability, Phase Transformation and Reactive Phase Formation in Electronic Materials” symposium at the TMS Annual Meeting addresses the stability, transformation, and formation of phases during the fabrication, processing, and

utilisation of (opto)electronic materials and devices. This special issue has papers from the symposium held from 27th February to 3rd March, 2011, in San Diego, California, USA. The collected papers discuss phase-related and reliability issues in lead-free solders, thermoelectrics and interconnect materials. Items of interest include: ‘Cross-Interaction Study of Cu/Sn/Pd and Ni/Sn/Pd Sandwich Solder Joint Structures’, ‘Kinetics of Solid-State Reactive Diffusion in the (Pd-Ni)/Sn System’ and ‘Low-Resistivity Ru-Ta-C Barriers for Cu Interconnects’.

Organometallics Roundtable 2011



J. A. Gladysz, Z. T. Ball, G. Bertrand, S. A. Blum, V. M. Dong, R. Dorta, F. E. Hahn, M. G. Humphrey, W. D. Jones, J. Klosin, I. Manners, T. J. Marks, J. M. Mayer, B. Rieger, J. C. Ritter, A. P. Sattelberger, J. M. Schomaker and V. Wing-Wah Yam, *Organometallics*, 2012, **31**, (1), 1–18

Organometallics assembled a panel of seventeen experts who shared their thoughts on a

variety of matters of importance to the field. The panel was chosen to represent a number of countries and career stages, including industry. This item constitutes an edited transcript of the panel discussion held on 29th August 2011, which was structured around ten questions on the past, present and future of organometallic chemistry.

ON THE WEB

Cover Story: Ever-Cleaner Auto Exhaust



M. Jacoby, *Chem. Eng. News*, 2012, **90**, (21), 10–16

Mitch Jacoby, Senior Editor of *Chemical & Engineering News*, has written a detailed

item on the progress of catalytic chemistry methods to further reduce emissions levels – especially diesel emissions, which until recently were not regulated – to comply with ever-tightening engine emissions laws. Ford Technical Leader Robert W. McCabe points out that unlike carefully controlled and finely optimised stationary catalytic reactors, catalytic converters experience wild and frequent temperature excursions, rapid and large fluctuations in feed stream composition and pressure, and constant jostling from road vibrations. And unlike chemical plants that are operated by teams of highly trained engineers, automobile catalytic converters can be turned on and turned off by anyone who can drive a car.

Find this at: <http://cen.acs.org/articles/90/i21/Ever-Cleaner-Auto-Exhaust.html>

A History of Platinum and its Allied Metals: Digital Formats

The book “A History of Platinum and its Allied Metals”, by Donald McDonald and Leslie B. Hunt, is now available in digital formats as a free download. Documents are supplied as high-resolution PDF files or as an ebook for use with e-reader devices. The book, originally

Platinum Metals Review

published in 1982 by Johnson Matthey, describes

the history of platinum and its associated metals, covering important discoveries and scientific work on the pgms up to the early twentieth century. With twenty-four chapters, 450 pages, over 600 references and 235 illustrations (20 in colour) including 100 portraits, it is the definitive description of how science was able to progress by means of the unique properties of these metals.

Find this at: <http://www.platinummetalsreview.com/resources/history-of-platinum-2/>