

# ChemComm

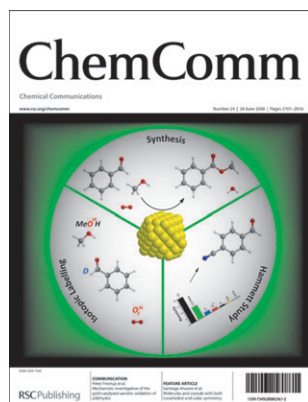
Chemical Communications

[www.rsc.org/chemcomm](http://www.rsc.org/chemcomm)

RSC Publishing is a not-for-profit publisher and a division of the Royal Society of Chemistry. Any surplus made is used to support charitable activities aimed at advancing the chemical sciences. Full details are available from [www.rsc.org](http://www.rsc.org)

## IN THIS ISSUE

ISSN 1359-7345 CODEN CHCOFS (24) 2701-2816 (2008)



### Cover

See Peter Fristrup *et al.*, pp. 2750–2752. A mechanistic study of gold-nanoparticle catalyzed oxidations sheds more light on the fundamental aspects of this important green chemical reaction. Image reproduced by permission of Peter Fristrup, Louise Bahn Johansen and Claus Hviid Christensen from *Chem. Commun.*, 2008, 2750.



### Inside cover

See Jieshan Qiu *et al.*, pp. 2747–2749. Well-defined carbon polyhedrons with hexagonal, heptagonal, octagonal cross-sections and hollow central cavities have been fabricated *via in situ* self-assembly of carbon nanotubes inside microchannels. Image reproduced by permission of Jiangying Qu, Zongbin Zhao, Jieshan Qiu and Yury Gogotsi from *Chem. Commun.*, 2008, 2747.

## FEATURE ARTICLES

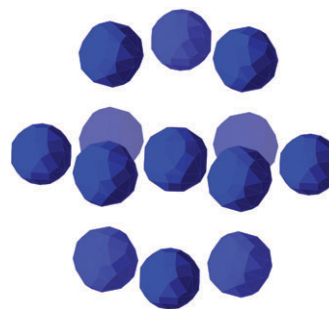


2717

### Molecules and crystals with both icosahedral and cubic symmetry

Jorge Echeverría, David Casanova, Miquel Llunell, Pere Alemany and Santiago Alvarez\*

Shape and symmetry measures of nested polyhedral molecules show that cubic symmetry is latent in icosahedral polyhedra and may be the origin of cubic crystal structures found for such molecules as fullerene, dodecahedrane or the  $(\text{H}_2\text{O})_{100}$  nanodroplets characterized by Müller and co-workers, shown in an fcc packing.

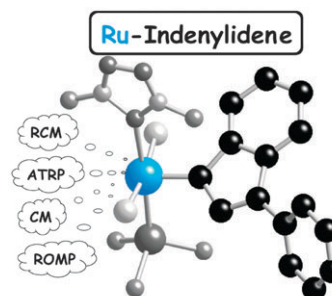


2726

### Ruthenium–indenylidene complexes: powerful tools for metathesis transformations

Fabien Boeda, Hervé Clavier and Steven P. Nolan\*

Ruthenium–indenylidene complexes represent a class of robust and efficient pre-catalysts for olefin metathesis reactions. The authors provide an overview of the various complexes belonging to this family and summarise their use in various applications.



## EDITORIAL STAFF

### Editor

Sarah Thomas

### Deputy editor

Kathryn Sear

### Assistant editors

Michael Brown, Rachel Davies, Emma Shiells,  
Joanne Thomson, Kathleen Too

### Publishing assistants

Jackie Cockrill, Jayne Gough

### Team leader, serials production

Helen Saxton

### Technical editors

Celia Clarke, Nicola Convine, Alan Holder,  
Laura Howes, Sandra Jones, David Parker

### Production administration coordinator

Sonya Spring

### Administration assistants

Clare Davies, Donna Fordham, Kirsty Lunnon,  
Julie Thompson

### Publisher

Janet Miles

Chemical Communications (print: ISSN 1359-7345; electronic: ISSN 1364-548X) is published 48 times a year by the Royal Society of Chemistry, Thomas Graham House, Science Park, Milton Road, Cambridge, UK CB4 0WF. All orders, with cheques made payable to the Royal Society of Chemistry, should be sent to RSC Distribution Services, c/o Portland Customer Services, Commerce Way, Colchester, Essex, UK CO2 8HP. Tel +44 (0)1206 226050; E-mail sales@rscdistribution.org

2008 Annual (print + electronic) subscription price: £1951; US\$3882. 2008 Annual (electronic) subscription price: £1756; US\$3494. Customers in Canada will be subject to a surcharge to cover GST. Customers in the EU subscribing to the electronic version only will be charged VAT. If you take an institutional subscription to any RSC journal you are entitled to free, site-wide web access to that journal. You can arrange access via Internet Protocol (IP) address at [www.rsc.org/ip](http://www.rsc.org/ip). Customers should make payments by cheque in sterling payable on a UK clearing bank or in US dollars payable on a US clearing bank. Periodicals postage paid at Rahway, NJ, USA and at additional mailing offices. Airfreight and mailing in the USA by Mercury Airfreight International Ltd., 365 Blair Road, Avenel, NJ 07001, USA. US Postmaster: send address changes to Chemical Communications, c/o Mercury Airfreight International Ltd., 365 Blair Road, Avenel, NJ 07001. All despatches outside the UK by Consolidated Airfreight. PRINTED IN THE UK

© The Royal Society of Chemistry, 2008. Apart from fair dealing for the purposes of research or private study for non-commercial purposes, or criticism or review, as permitted under the Copyright, Designs and Patents Act 1988 and the Copyright and Related Rights Regulations 2003, this publication may only be reproduced, stored or transmitted, in any form or by any means, with the prior permission in writing of the Publisher or in the case of reprographic reproduction in accordance with the terms of licences issued by the Copyright Licensing Agency in the UK. US copyright law is applicable to users in the USA. The Royal Society of Chemistry takes reasonable care in the preparation of this publication but does not accept liability for the consequences of any errors or omissions. Inclusion of an item in this publication does not imply endorsement by The Royal Society of Chemistry of the content of the original documents to which that item refers.

# ChemComm

Chemical Communications

[www.rsc.org/chemcomm](http://www.rsc.org/chemcomm)

## EDITORIAL BOARD

### Chairman

Peter Kündig, Geneva, Switzerland  
[Peter.Kundig@chiorg.unige.ch](mailto:Peter.Kundig@chiorg.unige.ch)

### Associate Editors

Michael Doyle, Maryland, USA  
[chemcomm@umd.edu](mailto:chemcomm@umd.edu)  
Jonathan L. Sessler, Austin, USA  
[chemcomm@cm.utexas.edu](mailto:chemcomm@cm.utexas.edu)  
T. Don Tilley, Berkeley, USA  
[chemcomm@berkeley.edu](mailto:chemcomm@berkeley.edu)

### Members

Penny Brothers, Auckland, New Zealand  
[p.brothers@auckland.ac.nz](mailto:p.brothers@auckland.ac.nz)  
Jillian M. Buriak, Edmonton, Canada  
[jburiak@ualberta.ca](mailto:jburiak@ualberta.ca)  
P. Andrew Evans, Liverpool, UK  
[andrew.evans@liverpool.ac.uk](mailto:andrew.evans@liverpool.ac.uk)

Ben L. Feringa, Groningen, The Netherlands  
[feringa@chem.rug.nl](mailto:feringa@chem.rug.nl)  
David Haddleton, Warwick, UK  
[D.M.Haddleton@warwick.ac.uk](mailto:D.M.Haddleton@warwick.ac.uk)  
Mir Wais Hosseini, Strasbourg, France  
[hosseini@chimie.u-strasbg.fr](mailto:hosseini@chimie.u-strasbg.fr)  
Nazario Martín, Madrid, Spain  
[nazmar@quim.ucm.es](mailto:nazmar@quim.ucm.es)  
Keiji Maruoka, Kyoto, Japan  
[maruoka@kuchem.kyoto-u.ac.jp](mailto:maruoka@kuchem.kyoto-u.ac.jp)  
Ryong Ryoo, Taejeon, Korea  
[rryoo@kaist.ac.kr](mailto:rryoo@kaist.ac.kr)  
Ferdí Schüth, Mülheim, Germany  
[schueth@mpi-muelheim.mpg.de](mailto:schueth@mpi-muelheim.mpg.de)  
Nicholas J. Turner, Manchester, UK  
[nicholas.turner@manchester.ac.uk](mailto:nicholas.turner@manchester.ac.uk)

## ADVISORY BOARD

Varinder Aggarwal, Bristol, UK  
Frank Allen, CCDC, Cambridge, UK  
Jerry L. Atwood, Columbia, USA  
Amit Basak, Kharagpur, India  
Dario Braga, Bologna, Italy  
Xiao-Ming Chen, Guangzhou, China  
Derrick Clive, Alberta, Canada  
Marcella Darensbourg, College Station, USA  
Scott E. Denmark, Urbana, USA  
Kuiling Ding, Shanghai, China  
Shaojun Dong, Changchun, China  
Chris Easton, Canberra, Australia  
Gregory C. Fu, Cambridge, USA  
Tohru Fukuyama, Tokyo, Japan  
Alois Fürstner, Mülheim, Germany  
Lutz Gade, Heidelberg, Germany  
Philip Gale, Southampton, UK  
George W. Gokel, St Louis, USA  
Trevor Hambley, Sydney, Australia  
Craig Hawker, Santa Barbara, USA  
Andrew B. Holmes, Melbourne, Australia  
Amir Hoveyda, Boston, USA  
Steven M. Howdle, Nottingham, UK  
Taeghwan Hyeon, Seoul, Korea  
Biao Jiang, Shanghai, China  
Karl Anker Jørgensen, Aarhus, Denmark  
Kimoon Kim, Pohang, Korea

Susumu Kitagawa, Kyoto, Japan  
Shu Kobayashi, Tokyo, Japan  
Jérôme Lacour, Geneva, Switzerland  
Teck-Peng Loh, Singapore  
Tien-Yau Luh, Shanghai, China  
Doug MacFarlane, Monash, Australia  
David MacMillan, Princeton, USA  
Seth Marder, Atlanta, USA  
Ilan Marek, Haifa, Israel  
E. W. 'Bert' Meijer, Eindhoven, The Netherlands  
Achim Müller, Bielefeld, Germany  
Catherine Murphy, South Carolina, USA  
Atsuhiko Osuka, Kyoto, Japan  
Ian Paterson, Cambridge, UK  
Maurizio Prato, Trieste, Italy  
C. N. R. Rao, Bangalore, India  
Christopher A. Reed, Riverside, USA  
Robin Rogers, Belfast, UK  
Michael Sailor, San Diego, USA  
Jonathan W. Steed, Durham, UK  
Zhong-Qun Tian, Xiamen, China  
Carsten Tschierske, Halle, Germany  
Herbert Waldmann, Dortmund, Germany  
Li-Jun Wan, Beijing, China  
Henry N. C. Wong, Hong Kong, China  
Eiji Yashima, Nagoya, Japan  
Xi Zhang, Beijing, China

**Advertisement sales:** Tel +44 (0) 1223 432246; Fax +44 (0) 1223 426017; E-mail [advertising@rsc.org](mailto:advertising@rsc.org)

© The paper used in this publication meets the requirements of ANSI/NISO Z39.48-1992 (Permanence of Paper).

Royal Society of Chemistry: Registered Charity No. 207890.

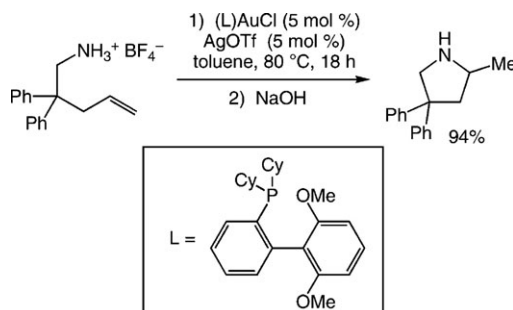
Authors may reproduce/republish portions of their published contribution without seeking permission from the RSC, provided that any such republication is accompanied by an acknowledgement in the form: (Original Citation)–Reproduced by permission of The Royal Society of Chemistry.

2741

**Gold(I)-catalyzed intramolecular hydroamination of unactivated C=C bonds with alkyl ammonium salts**

Christopher F. Bender and Ross A. Widenhoefer\*

Primary and secondary 4-alkenyl ammonium salts and primary 5-hexenyl ammonium salts underwent intramolecular hydroamination in the presence of a catalytic 1 : 1 mixture of (5)AuCl {5 = PCy<sub>2</sub>[2-(2,6-C<sub>6</sub>H<sub>3</sub>(OMe)<sub>2</sub>)C<sub>6</sub>H<sub>4</sub>]} and AgOTf in toluene at 80 °C.

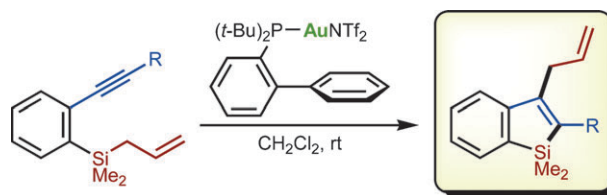


2744

**Gold-catalysed intramolecular *trans*-allylsilylation of alkynes forming 3-allyl-1-silaindenes**

Takanori Matsuda, Sho Kadowaki, Yoshiyuki Yamaguchi and Masahiro Murakami\*

3-Allyl-1-silaindenes are synthesised from alkynes having an allylsilane moiety by a gold-catalysed intramolecular *trans*-allylsilylation reaction.

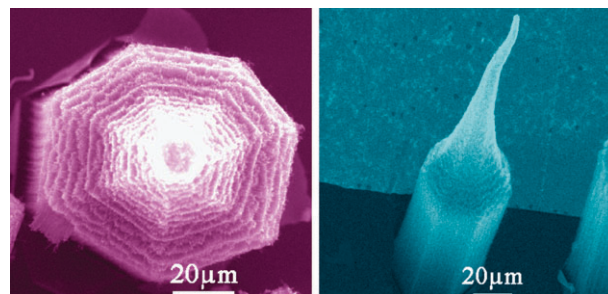


2747

**Self-assembly of carbon nanotube polyhedrons inside microchannels**

Jiangying Qu, Zongbin Zhao, Jieshan Qiu\* and Yury Gogotsi

Carbon polyhedrons with faceted morphologies and hollow internal structures made of self-organized carbon nanotubes have been fabricated by CVD inside microchannels. The confined space of the microchannels is critical for the formation of polyhedra, and these structures show superhydrophobic properties, with the contact angle up to 162°.

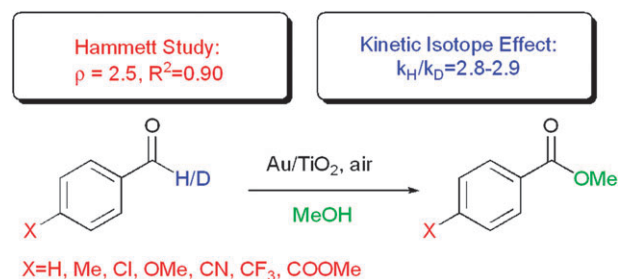


2750

**Mechanistic investigation of the gold-catalyzed aerobic oxidation of aldehydes: added insight from Hammett studies and isotopic labelling experiments**

Peter Fristrup\*, Louise Bahn Johansen and Claus Hviid Christensen\*

The title reaction proceeds through development of a partial negative charge and has a significant kinetic isotope effect ( $k_{\text{H}}/k_{\text{D}} = 2.8\text{--}2.9$ ), which illustrates that activation of the C–H bond takes place in the rate-determining step.





## Faced with questions?

Can I search by structure to find articles?

Are there any related articles on this topic?

What groups and relationships are there for this compound?

Is there any Patent information?

Can I download files of these structures?

What's the definition of that term?

## Looking for answers?

### Use RSC Prospect enhanced HTML journal articles

Linking together related articles by subject ontologies and identified compounds, *RSC Prospect* enhanced HTML articles also provide you with definitions, synonyms, structures and RSS feeds. We've now introduced a structure and sub-structure searching function, widened the compound identifiers to include groups and relationships via the ChEBI (Chemical Entities of Biological Interest) ontology, and included additional features such as an Experimental Data Checker to allow downloading of data for analysis of results. Links to patent information and to compounds in PubChem have also been added.

Hailed as the future of publishing, we add computer readable meaning to our journal articles by applying internationally recognised labels and conventions. We are proud to be leading the way amongst scientific publishers.

*RSC Prospect* - winner of the 2007 ALPSP/Charlesworth Award for Publishing Innovation.



9018020

RSC Publishing

[www.projectprospect.org](http://www.projectprospect.org)

Registered Charity Number 207890

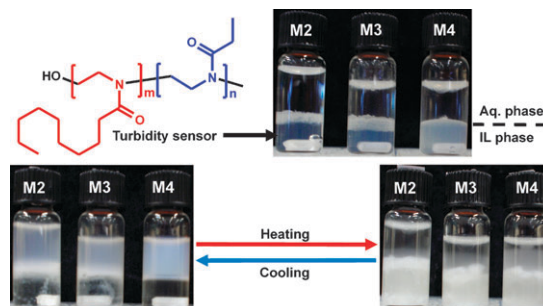


2753

### Controlled thermoreversible transfer of poly(oxazoline) micelles between an ionic liquid and water

Carlos Guerrero-Sanchez, Jean-François Gohy, Cecile D'Haese, Hanneke Thijs, Richard Hoogenboom and Ulrich S. Schubert\*

The thermoreversible and controlled transfer of poly(2-nonyl-2-oxazoline-*block*-2-ethyl-2-oxazoline) micelles between a hydrophobic ionic liquid and water is demonstrated. The approach may allow the development of advanced heterogeneous micellar catalytic systems with novel separation processes.

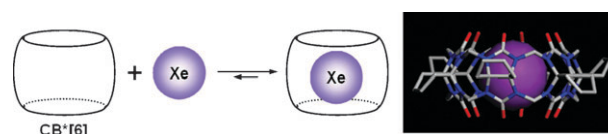


2756

### Water soluble cucurbit[6]uril derivative as a potential Xe carrier for $^{129}\text{Xe}$ NMR-based biosensors

Byoung Soo Kim, Young Ho Ko, Youngkook Kim, Hyeong Ju Lee, N. Selvapalam, Hee Cheon Lee\* and Kimoon Kim\*

The water soluble cucurbit[6]uril derivative CB\*[6] forms a thermodynamically and kinetically stable host-guest complex with xenon in water, which suggests that it may serve as an effective molecular "carrier" for  $^{129}\text{Xe}$  NMR-based biosensors.

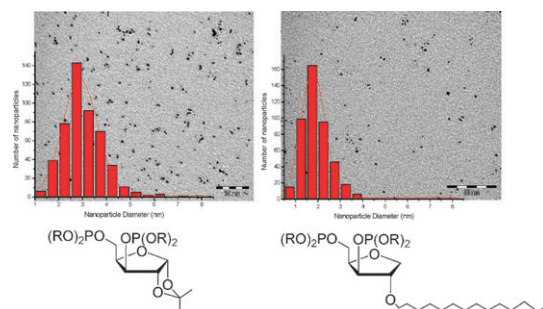


2759

### Diphosphite ligands derived from carbohydrates as stabilizers for ruthenium nanoparticles: promising catalytic systems in arene hydrogenation

Aitor Gual, M. Rosa Axet, Karine Philippot,\* Bruno Chaudret, Audrey Denicourt-Nowicki, Alain Roucoux,\* Sergio Castillon and Carmen Claver\*

Diphosphite ligands, derived from carbohydrates and containing a lipidic chain, stabilize nanoparticles of small size and good dispersity, which provides high activity and selectivity in arene hydrogenation.

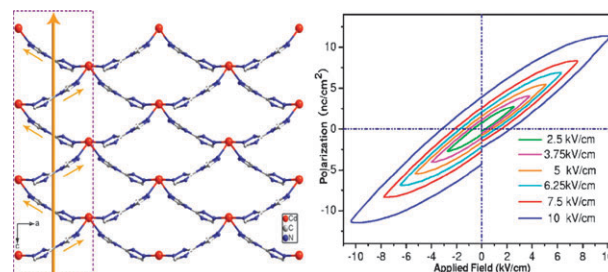


2762

### Nonlinear optical and ferroelectric properties of a 3-D Cd(II) triazololate complex with a novel $(6^3)_2(6^{10} \cdot 8^5)$ topology

Wei-Wei Zhou, Jiu-Tong Chen,\* Gang Xu, Ming-Sheng Wang, Jian-Ping Zou, Xi-Fa Long, Guo-Jian Wang, Guo-Cong Guo\* and Jin-Shun Huang

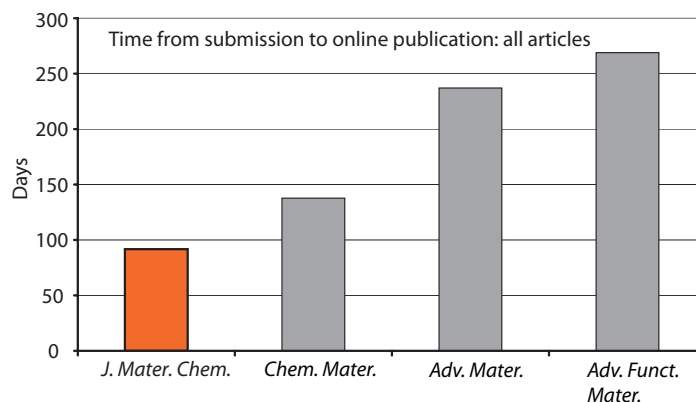
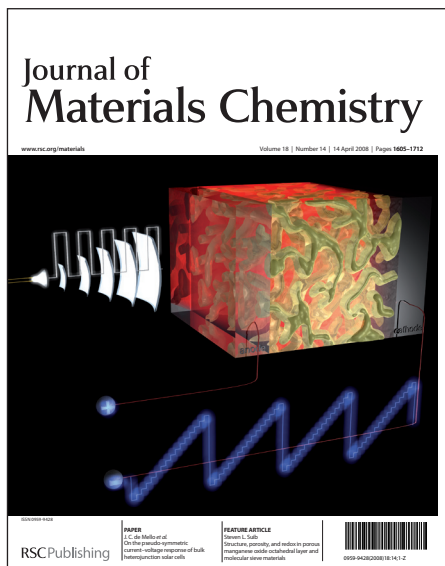
A solvothermally synthesized 3-D Cd(II) complex with an unprecedented  $(6^3)_2(6^{10} \cdot 8^5)$  topology was found to adopt a non-centrosymmetric polar packing arrangement, resulting in strong SHG response and ferroelectric property.



# Sprinting ahead of the competition...



Recent data show that *Journal of Materials Chemistry* is faster than its competitors. Much faster.



At a staggeringly quick 70 days, the average time for a Communication to go from submission to publication online at *Journal of Materials Chemistry* is more than four weeks faster than our nearest competitor. And with all articles being published online on average only 92 days after submission, we are nearly three times faster than the other leading journals in the field.\*

So if you've got important research that needs to reach its audience quickly AND you want to benefit from professional and experienced staff, efficient peer review, expert editing and enhanced HTML publishing, choose *Journal of Materials Chemistry*.

\*Data taken from published issues from September to December (inclusive) 2007.

RSC Publishing

[www.rsc.org/materials](http://www.rsc.org/materials)

Registered Charity Number 207890

2765

### Graphitic carbon nanostructures *via* a facile microwave-induced solid-state process

Kai Chen, Chunlei Wang, Ding Ma,\* Weixin Huang and Xinhe Bao\*

A novel, mild and facile approach to synthesize highly graphitic nanostructured carbons by microwave irradiation is demonstrated. Narrowly distributed metal/graphitic-shell nanocrystals, graphitic hollow carbon nanospheres with well-controlled sizes and CNTs can be obtained within one minute.

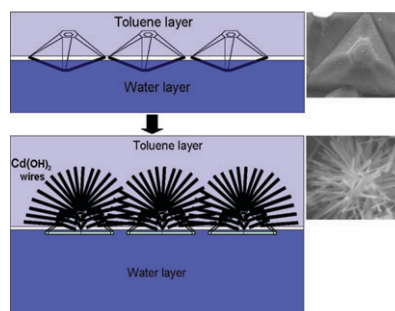


2768

### Deposition of hierarchical Cd(OH)<sub>2</sub> anisotropic nanostructures at the water–toluene interface and their use as sacrificial templates for CdO or CdS nanostructures

Sibusiso N. Mlondo, Ellen M. Andrews, P. John Thomas and Paul O'Brien\*

Hierarchical anisotropic structures ranging from triangular 'platelets' to nanofibres of Cd(OH)<sub>2</sub> are grown at a water–toluene interface, and are further used to produce CdO wires and CdS nanostructures.

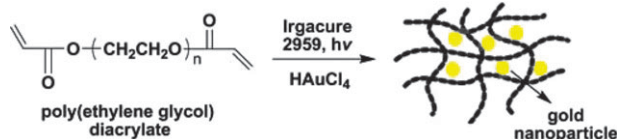


2771

### *In situ* synthesis of gold-cross-linked poly(ethylene glycol) nanocomposites by photoinduced electron transfer and free radical polymerization processes

Yusuf Yagci,\* Marco Sangermano\* and Giancarlo Rizza

Gold-cross-linked poly(ethylene glycol) nanocomposites were prepared by simultaneous photoinduced electron transfer and free radical polymerization processes.

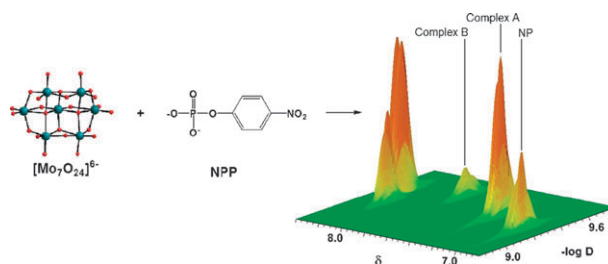


2774

### Phosphoesterase activity of polyoxomolybdates: diffusion ordered NMR spectroscopy as a tool for obtaining insights into the reactivity of polyoxometalate clusters

Luk Van Lokeren, Els Cartuyvels, Gregory Absillis, Rudolph Willem and Tatjana N. Parac-Vogt\*

Diffusion ordered NMR spectroscopy (DOSY NMR) is shown to be an excellent tool for observing reactive transients in the hydrolysis of the phosphatase model substrate (*p*-nitrophenyl)phosphate (NPP) promoted by [Mo<sub>7</sub>O<sub>24</sub>]<sup>6-</sup> cluster.





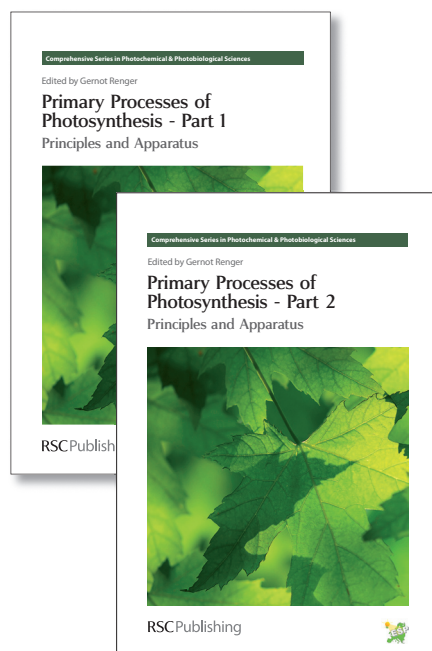
# RSC Comprehensive Series in Photochemical & Photobiological Sciences

Initiated by the European Society for Photobiology, this series provides comprehensive overviews on specific areas of photoscience. It gives in-depth coverage of the very different fields related to light effects and embraces both well-established and emerging areas.

## New Reference Work

# Primary Processes of Photosynthesis

Edited by Gernot Renger



In this comprehensive two part set, the Editor has brought together contributions from numerous leading scientific experts from across the globe to provide a compendium of information.

- The most up-to-date understanding of the primary processes of photosynthesis.
- A summary of current knowledge on the mechanisms of light harvesting, charge separation, electron transport, water cleavage and ATP synthesis.
- High quality structure information at atomic resolution.

Well suited for all those working in the fields of Photochemistry, Bio-organic Chemistry, Bio-inorganic Chemistry, Crystallography, Biological Sciences, Biochemistry and related disciplines.

BB Hardback | 996 pages | ISBN 9780854043644 | 2007 | £339.00

RSC Publishing

[www.rsc.org/books](http://www.rsc.org/books)

Registered Charity Number 207890

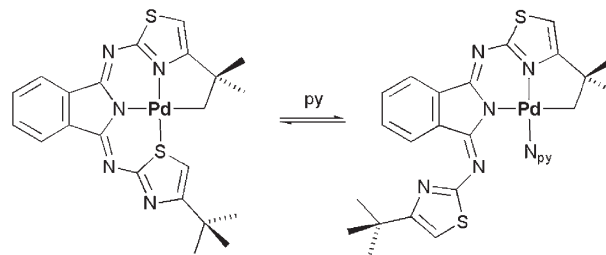


2777

**Facile intramolecular C(sp<sup>3</sup>)-H bond activation with Pd<sup>II</sup>**

Martin Bröring\* and Christian Kleeberg

Non-activated C(sp<sup>3</sup>)-H bonds are cleanly broken by acetatopalladium(II) species at ambient temperature. This is the result of a coordination study of a sterically hindered bis(4-aminothiazolyl)isoindoline ligand to divalent palladium. The product contains a hemilabile S-bonded thiazole *cis* to the Pd-C bond and thus shows potential for mechanistic studies.

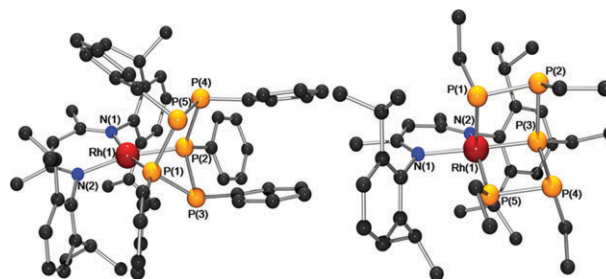


2779

**Activation of P<sub>5</sub>R<sub>5</sub> (R = Ph, Et) by a Rh-β-diketiminato complex**

Stephen J. Geier and Douglas W. Stephan\*

(NacNac)Rh(C<sub>8</sub>H<sub>14</sub>(N)<sub>2</sub>) reacts with P<sub>5</sub>R<sub>5</sub> to give complexes of formula (NacNac)Rh(P<sub>5</sub>R<sub>5</sub>) (R = Ph, Et); in the former species inversion of a P atom of P<sub>5</sub>Ph<sub>5</sub> allows coordination to a Rh(I) centre, whereas in the later species a P-P bond undergoes oxidative addition to give a formally Rh(III) species.

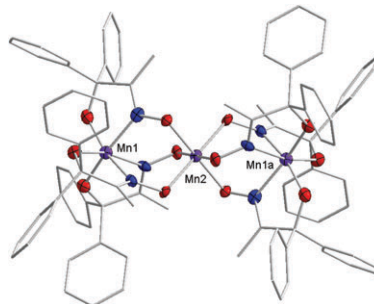


2782

**A rare ligand bridged ferromagnetically coupled Mn<sup>IV</sup><sub>3</sub> complex with a ground spin state of S = 9/2**

Thushan Pathmalingam, Serge I. Gorelsky, Tara J. Burchell, Anne-Catherine Bédard, André M. Beauchemin,\* Rodolphe Clérac and Muralee Murugesu\*

An exclusively chelating ligand bridged high-valent [Mn<sup>IV</sup><sub>3</sub>] complex has been synthesized, in which all Mn<sup>IV</sup> ions are ferromagnetically-coupled to exhibit an S<sub>T</sub> = 9/2 spin ground state.

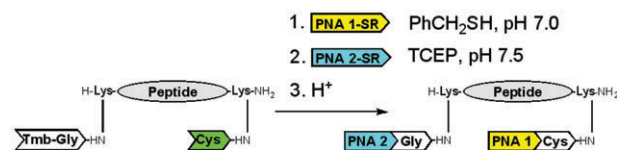


2785

**Orthogonal ligation: a three piece assembly of a PNA-peptide-PNA conjugate**

Fabienne Burlina,\* David D. Dixon, Robert P. Doyle, Gérard Chassaing, Christopher N. Boddy, Philip Dawson and John Offer\*

The authors describe the development of an orthogonal ligation strategy, enabling regiospecific amide bond ligation in aqueous buffer with three components and no requirement for protecting groups.



# Molecular BioSystems

Indexed in  
**MEDLINE!**

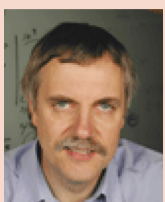
**High quality research at the interface between chemistry, the -omic sciences and systems biology**

**Leading researchers in the field support our journal . . .**



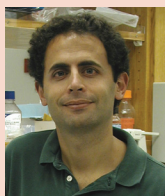
*"Chemists will increasingly turn to '-omics' approaches to understand mechanism of action and specificity of bioactive molecules. Molecular BioSystems provides a home for this rapidly developing interdisciplinary science."*

Thomas Kodadek,  
Chair, Editorial Board



*"This is a very respectable impact factor for a new journal. Authors can be confident that their work is visible to the appropriate audience."*

Ruedi Aebersold,  
Former Editorial Board member



*"Congratulations on the excellent start – I am sure this [impact factor] number will continue to rise over the coming years."*

Benjamin Cravatt,  
Editorial Board member



*"We received three excellent, tractable, and critical reviews with a rapid turn around time after submitting our manuscript. In today's world of potentially long times from submission to publication, this was very refreshing."*

Mike Washburn  
Advisory Board Member



*"We believe Molecular BioSystems has more to offer the chemical biology community than any other journal."*

Michael Smith,  
Commissioning Editor

**Submit your next paper to *Molecular BioSystems* and benefit from:**

- Enhanced HTML articles with RSC Prospect
  - Hyperlinked compound information, including downloadable structures in text.
  - Gene, Sequence and Cell Ontology terms linked to definitions and related articles
  - IUPAC Gold Book terms linked
- Impact factor 2.45\*
- Fast Publication times (average 80 days from receipt)

\*2006 Thompson Scientific (ISI) Journal Citation Reports

010879

RSC Publishing

[www.molecularbiosystems.org](http://www.molecularbiosystems.org)

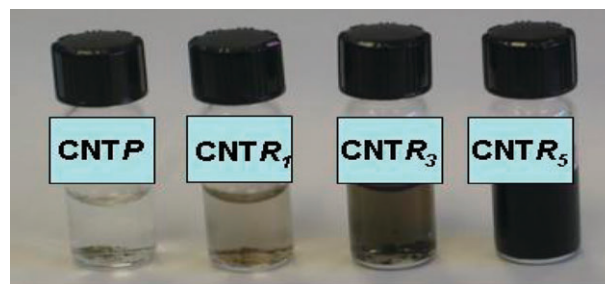
Registered Charity Number 207890

2788

**Ultra-fast and scalable sidewall functionalisation of single-walled carbon nanotubes with carboxylic acid**

Brenda Long, Tan Man Wu and Francesco Stellacci\*

A simple and fast method for the functionalisation of single-walled carbon nanotubes with carboxylic acid terminated molecules, at varying molar fractions, is presented.

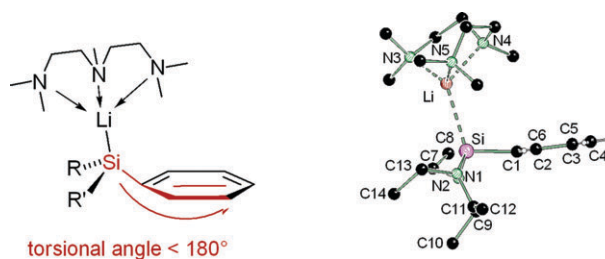


2791

**Bent phenyl groups in lithiosilanes—crystal structures and interpretation of this unanticipated feature**

Carsten Strohmann\* and Christian Däschlein

The bend of aromatic substituents in anionic group fourteen compounds (third row and higher) in their crystal structures is explained by means of quantum chemical calculations.

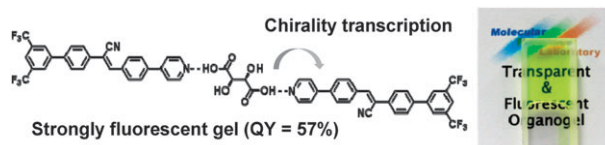


2794

**Highly fluorescent supramolecular gels with chirality transcription through hydrogen bonding**

Jangwon Seo, Jong Won Chung, Eun-Hye Jo and Soo Young Park\*

A highly fluorescent chiral organogel with transparency was prepared *via* the H-bonding mediated supramolecular assembly between non-fluorescent and achiral CN-TFMBPPE and chiral seargent L-tartaric acid.

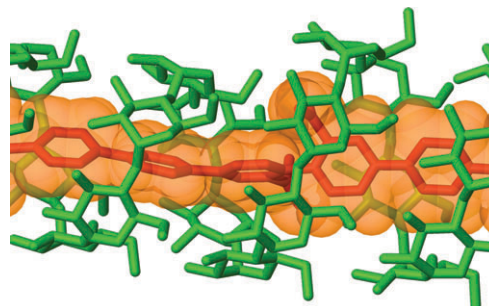


2797

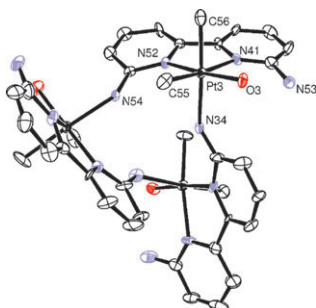
**Amylose-wrapped luminescent conjugated polymers**

Michael J. Frampton, Timothy D. W. Claridge, Gianluca Latini, Sergio Brovelli, Franco Cacialli\* and Harry L. Anderson\*

Highly luminescent inclusion complexes consisting of poly(*para*-phenylene) (PPP) or poly(4,4'-diphenylene-vinylene) (PDV) in the helical cavity of amylose have been synthesised, structurally characterised by nuclear Overhauser spectroscopy and used to fabricate electroluminescent light-emitting diodes.



2800

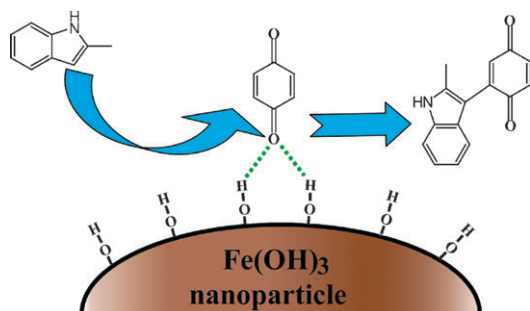


### Hydrogen bonding directs the H<sub>2</sub>O<sub>2</sub> oxidation of platinum(II) to a *cis*-dihydroxo platinum(IV) complex

Russell A. Taylor, David J. Law, Glenn J. Sunley, Andrew J. P. White and George J. P. Britovsek\*

The use of ligands with proximate hydrogen bonding substituents in the oxidation of platinum(II) dimethyl complexes with H<sub>2</sub>O<sub>2</sub> leads to the exclusive formation of an unusual *cis*-dihydroxo platinum(IV) complex, which can dehydrate to form a trinuclear metalla-azacrown complex.

2803

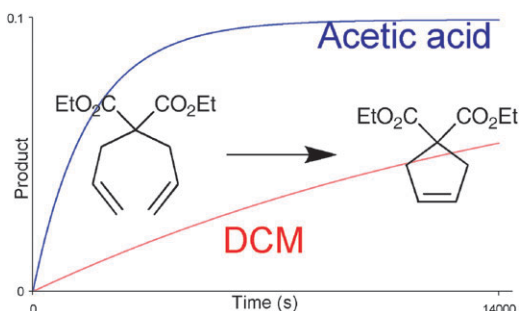


### Promotion of organic reactions by interfacial hydrogen bonds on hydroxyl group rich nano-solids

Fang Niu, Chang-Chang Liu, Zhi-Min Cui, Jin Zhai, Lei Jiang and Wei-Guo Song\*

Surface hydroxyl group rich nano-solids dramatically increase the rate of several organic reactions. Such effect is attributed to the formation of interfacial hydrogen bonds between the surface hydroxyl groups and reactant molecules. This promotion effect is versatile and applicable for a broad range of reaction conditions.

2806

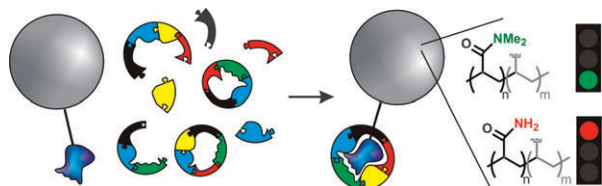


### Solvents for ring-closing metathesis reactions

Claire S. Adjiman,\* Adam J. Clarke, Gregory Cooper and Paul C. Taylor\*

A study of the effects of eight diverse solvents on a Grubbs II-catalysed ring-closing metathesis (RCM) reaction reveals a complex dependence of the different reaction steps on the solvent and suggests acetic acid as a useful solvent for RCM reactions.

2809



### Polymer-supported cationic templates for molecular recognition of anionic hosts in water

Pol Besenius, Peter A. G. Cormack,\* R. Frederick Ludlow, Sijbren Otto\* and David C. Sherrington\*

Translocation of molecular recognition from aqueous to solid phase is reported using a poly(dimethylacrylamide)-immobilised cationic guest and a DCL of anionic hosts, enabling selective amplification and facile isolation of favoured hosts.



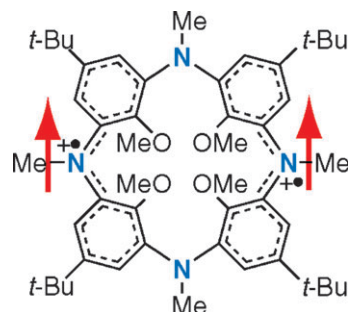


2812

**Azacalix[4]arene cation radicals: spin-delocalised doublet- and triplet-ground states observed in the macrocyclic *m*-phenylene system connected with nitrogen atoms**

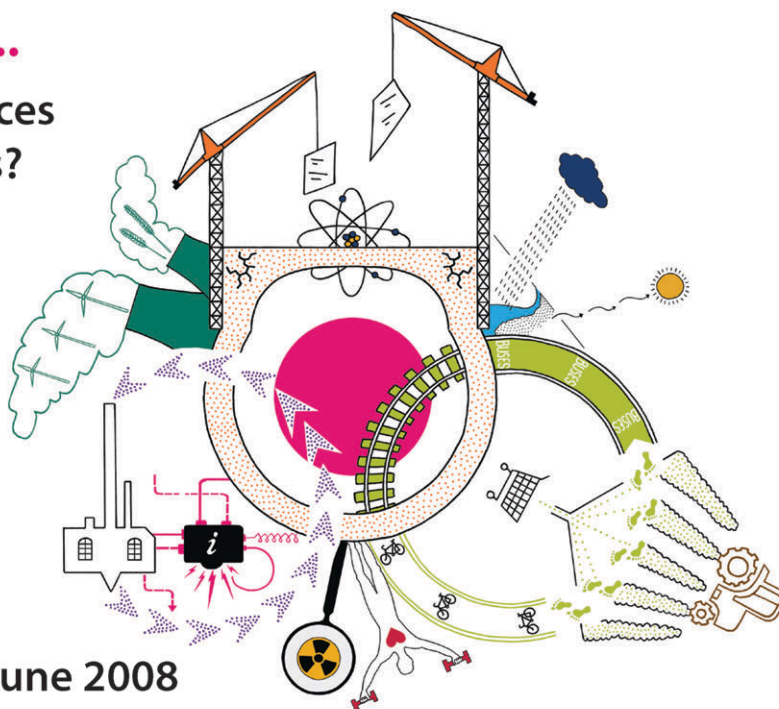
Koichi Ishibashi, Hirohito Tsue,\* Naoko Sakai, Satoshi Tokita, Kazuhiro Matsui, Jun Yamauchi and Rui Tamura

Electron paramagnetic resonance spectroscopy has unmasked for the first time the spin-delocalised doublet- and triplet-ground states of azacalix[4]arene cation radicals.



## Facing the Future ...

How will chemical sciences tackle global challenges?



Register now.

Consultation opens 16 June 2008

**RSC** Advancing the  
Chemical Sciences

[www.rsc.org/roadmap](http://www.rsc.org/roadmap)


Registered Charity Number 207890

## AUTHOR INDEX

- Absillis, Gregory, 2774  
 Adjiman, Claire S., 2806  
 Alemany, Pere, 2717  
 Alvarez, Santiago, 2717  
 Anderson, Harry L., 2797  
 Andrews, Ellen M., 2768  
 Axet, M. Rosa, 2759  
 Bao, Xinhe, 2765  
 Beauchemin, André M., 2782  
 Bédard, Anne-Catherine, 2782  
 Bender, Christopher F., 2741  
 Besenius, Pol, 2809  
 Boddy, Christopher N., 2785  
 Boeda, Fabien, 2726  
 Britovsek, George J. P., 2800  
 Bröring, Martin, 2777  
 Brovelli, Sergio, 2797  
 Burchell, Tara J., 2782  
 Burlina, Fabienne, 2785  
 Cacialli, Franco, 2797  
 Cartuyvels, Els, 2774  
 Casanova, David, 2717  
 Castillon, Sergio, 2759  
 Chassaing, Gérard, 2785  
 Chaudret, Bruno, 2759  
 Chen, Jiu-Tong, 2762  
 Chen, Kai, 2765  
 Christensen, Claus Hviid, 2750  
 Chung, Jong Won, 2794  
 Claridge, Timothy D. W., 2797  
 Clarke, Adam J., 2806  
 Claver, Carmen, 2759  
 Clavier, Hervé, 2726  
 Clérac, Rodolphe, 2782  
 Cooper, Gregory, 2806  
 Cormack, Peter A. G., 2809  
 Cui, Zhi-Min, 2803  
 D'Haese, Cecile, 2753  
 Däschlein, Christian, 2791  
 Dawson, Philip, 2785  
 Denicourt-Nowicki, Audrey, 2759  
 Dixon, David D., 2785  
 Doyle, Robert P., 2785  
 Echeverría, Jorge, 2717  
 Frampton, Michael J., 2797  
 Fristrup, Peter, 2750  
 Geier, Stephen J., 2779  
 Gogotsi, Yury, 2747  
 Gohy, Jean-François, 2753  
 Gorelsky, Serge I., 2782  
 Gual, Aitor, 2759  
 Guerrero-Sanchez, Carlos, 2753  
 Guo, Guo-Cong, 2762  
 Hoogenboom, Richard, 2753  
 Huang, Jin-Shun, 2762  
 Huang, Weixin, 2765  
 Ishibashi, Koichi, 2812  
 Jiang, Lei, 2803  
 Jo, Eun-Hye, 2794  
 Johansen, Louise Bahn, 2750  
 Kadowaki, Sho, 2744  
 Kim, Byoung Soo, 2756  
 Kim, Kimoon, 2756  
 Kim, Youngkook, 2756  
 Kleeberg, Christian, 2777  
 Ko, Young Ho, 2756  
 Latini, Gianluca, 2797  
 Law, David J., 2800  
 Lee, Hee Cheon, 2756  
 Lee, Hyeong Ju, 2756  
 Liu, Chang-Chang, 2803  
 Llunell, Miquel, 2717  
 Lokeren, Luk Van, 2774  
 Long, Brenda, 2788  
 Long, Xi-Fa, 2762  
 Ludlow, R. Frederick, 2809  
 Ma, Ding, 2765  
 Matsuda, Takanori, 2744  
 Matsui, Kazuhiro, 2812  
 Mlondo, Sibusiso N., 2768  
 Murakami, Masahiro, 2744  
 Murugesu, Muralee, 2782  
 Niu, Fang, 2803  
 Nolan, Steven P., 2726  
 O'Brien, Paul, 2768  
 Offer, John, 2785  
 Otto, Sijbren, 2809  
 Parac-Vogt, Tatjana N., 2774  
 Park, Soo Young, 2794  
 Pathmalingam, Thushan, 2782  
 Philippot, Karine, 2759  
 Qiu, Jiesshan, 2747  
 Qu, Jiangying, 2747  
 Rizza, Giancarlo, 2771  
 Roucoux, Alain, 2759  
 Sakai, Naoko, 2812  
 Sangermano, Marco, 2771  
 Schubert, Ulrich S., 2753  
 Selvapalam, N., 2756  
 Seo, Jangwon, 2794  
 Sherrington, David C., 2809  
 Song, Wei-Guo, 2803  
 Stellacci, Francesco, 2788  
 Stephan, Douglas W., 2779  
 Strohmann, Carsten, 2791  
 Sunley, Glenn J., 2800  
 Tamura, Rui, 2812  
 Taylor, Paul C., 2806  
 Taylor, Russell A., 2800  
 Thijs, Hanneke, 2753  
 Thomas, P. John, 2768  
 Tokita, Satoshi, 2812  
 Tsue, Hirohito, 2812  
 Wang, Chunlei, 2765  
 Wang, Guo-Jian, 2762  
 Wang, Ming-Sheng, 2762  
 White, Andrew J. P., 2800  
 Widenhoefer, Ross A., 2741  
 Willem, Rudolph, 2774  
 Wu, Tan Man, 2788  
 Xu, Gang, 2762  
 Yagci, Yusuf, 2771  
 Yamaguchi, Yoshiyuki, 2744  
 Yamauchi, Jun, 2812  
 Zhai, Jin, 2803  
 Zhao, Zongbin, 2747  
 Zhou, Wei-Wei, 2762  
 Zou, Jian-Ping, 2762

## FREE E-MAIL ALERTS AND RSS FEEDS


Contents lists in advance of publication are available on the web via [www.rsc.org/chemcomm](http://www.rsc.org/chemcomm) – or take advantage of our free e-mail alerting service ([www.rsc.org/ej\\_alert](http://www.rsc.org/ej_alert)) to receive notification each time a new list becomes available.

 Try our RSS feeds for up-to-the-minute news of the latest research. By setting up RSS feeds, preferably using feed reader software, you can be alerted to the latest Advance Articles published on the RSC web site. Visit [www.rsc.org/publishing/technology/rss.asp](http://www.rsc.org/publishing/technology/rss.asp) for details.

## ADVANCE ARTICLES AND ELECTRONIC JOURNAL

Free site-wide access to Advance Articles and the electronic form of this journal is provided with a full-rate institutional subscription. See [www.rsc.org/ejs](http://www.rsc.org/ejs) for more information.

\* Indicates the author for correspondence: see article for details.

 Electronic supplementary information (ESI) is available via the online article (see <http://www.rsc.org/esi> for general information about ESI).