

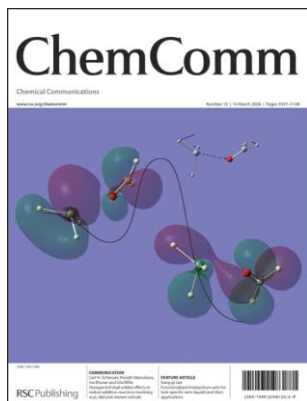
ChemComm

Chemical Communications
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

IN THIS ISSUE

ISSN 1359-7345 CODEN CHCOFS (10) 1037–1148 (2006)

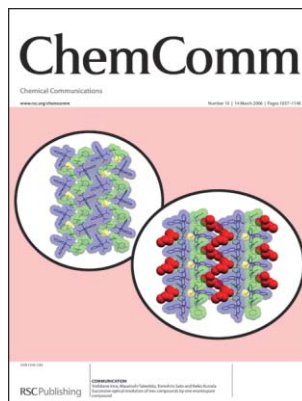


Cover

See Carl H. Schiesser *et al.*, page 1067.

Radicals masquerading as electrophiles. Depicting both radical (SOMO–LUMO) and electrophilic (LUMO–HOMO) transition state interactions when a silyl radical reacts with methanimine.

Image reproduced by permission of Carl H. Schiesser, Hiroshi Matsubara, Ina Ritsner and Uta Wille from *Chem. Commun.*, 2006, 1067.



Inside cover

See Reiko Kuroda *et al.*, page 1070.

Optical resolutions of 1,1'-binaphthyl-2,2'-dicarboxylic acid (ee 98%) and 2-hexanol (ee 62%) achieved by simple successive crystallization using (1*R*,2*R*)-diphenylethylenediamine.

Image reproduced by permission of Yoshitane Imai, Masatoshi Takeshita, Tomohiro Sato and Reiko Kuroda from *Chem. Commun.*, 2006, 1070.

CHEMICAL TECHNOLOGY

T9

Chemical Technology highlights the latest applications and technological aspects of research across the chemical sciences.

Chemical Technology

March 2006/Volume 3/Issue 3

www.rsc.org/chemicaltechnology

FEATURE ARTICLE

1049

Functionalized imidazolium salts for task-specific ionic liquids and their applications

Sang-gi Lee

Task-specifically functionalized imidazolium salts, which can be used for catalysis, organic synthesis and extraction as well as for the construction of nanostructures and other novel materials, have been reviewed.



EDITORIAL STAFF

Editor

Sarah Thomas

Deputy editor

Kathryn Sear

Assistant editors

Sarah Dixon, Nicola Nugent, Alison Stoddart, Katherine Vickers, Jenna Wilson

Publishing assistants

Jackie Cockrill, Jayne Drake, Jayne Gough, Rachel Hegarty

Team leader, serials production

Helen Saxton

Technical editors

Celia Clarke, Laura Howes, Sandra Jones, Caroline Moore, David Parker, Michael Smith, Ken Wilkinson

Administration coordinator

Sonya Spring

Editorial secretaries

Lynne Braybrook, Jill Segev, Julie Thompson

Publisher

Adrian Kybett

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

2006 Annual (print + electronic) subscription price: £1745; US\$3193. 2006 Annual (electronic) subscription price: £1570; US\$2874. 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. 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, 2006. 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

EDITORIAL BOARD

Chairman

Roeland J. M. Nolte, Nijmegen, The Netherlands
nolte@sci.kun.nl

Shankar Balasubramanian, Cambridge, UK
sb10031@cam.ac.uk

Hans-Ulrich Blaser, Solvias AG, Switzerland
hans-ulrich.blaser@SOLVIAS.com

P. Andrew Evans, Bloomington, USA
chemcomm@indiana.edu

Alois Fürstner, Mülheim, Germany
fuerstner@mpi-muelheim.mpg.de

David Haddleton, Warwick, UK
D.M.Haddleton@warwick.ac.uk

Donald Hilvert, Zürich, Switzerland
hilvert@org.chem.ethz.ch

Mir Wais Hosseini, Strasbourg, France
hosseini@chimie.u-strasbg.fr

Barbara Imperiali, Cambridge, USA
chemcomm@mit.edu

Nazario Martín, Madrid, Spain
nazmar@quim.ucm.es

Dermot O'Hare, Oxford, UK
chemcomm@chem.ox.ac.uk

Ryong Ryoo, Taejeon, Korea
rryoo@kaist.ac.kr

Ferdi Schüth, Mülheim, Germany
schueth@mpi-muelheim.mpg.de

Jonathan L. Sessler, Austin, USA
chemcomm@cm.utexas.edu

T. Don Tilley, Berkeley, USA
chemcomm@berkeley.edu

ASSOCIATE EDITORS

All submissions should be sent *via* ReSource:

<http://www.rsc.org/resource>

Manuscripts from North America should be submitted to the appropriate Associate Editor:

Supramolecular

Jonathan L. Sessler

Organic

P. Andrew Evans

Chemical biology

Barbara Imperiali

Inorganic, Organometallic and Materials

T. Don Tilley

Submissions from all other regions should be submitted to the Editor *via* ReSource at <http://www.rsc.org/resource>. For further information see <http://www.rsc.org/authors>

SCIENTIFIC EDITORS

The Scientific Editors welcome enquiries from potential authors regarding the submission and scientific content of papers. For more information please see <http://www.rsc.org/authors>

Dermot O'Hare

Donald Hilvert

Mir Wais Hosseini

Alois Fürstner

EDITORIAL ADVISORY BOARD

Varinder Aggarwal, Bristol, UK

Takuzo Aida, Tokyo, Japan

Frank Allen, CCDC, Cambridge, UK

Jerry L. Atwood, Columbia, USA

Dario Braga, Bologna, Italy

Jillian M. Buriak, Alberta, Canada

Derrick Clive, Alberta, Canada

Marcetta Darensbourg, College Station, USA

Gregory C. Fu, Cambridge, USA

Tohru Fukuyama, Tokyo, Japan

Lutz Gade, Heidelberg, Germany

Philip Gale, Southampton, UK

George W. Gokel, St Louis, USA

Craig Hawker, Santa Barbara, USA

Andrew B. Holmes, Melbourne, Australia

Amir Hoveyda, Boston, USA

Kazuyuki Kuroda, Tokyo, Japan

Jérôme Lacour, Geneva, Switzerland

David MacMillan, Pasadena, USA

E. W. 'Bert' Meijer, Eindhoven, The Netherlands

Jason Micklefield, Manchester, UK

Achim Müller, Bielefeld, Germany

Catherine Murphy, South Carolina, USA

Atsuhiko Osuka, Kyoto, Japan

Ian Paterson, Cambridge, UK

Maurizio Prato, Trieste, Italy

Christopher A. Reed, Riverside, USA

Robin Rogers, Alabama, USA

Michael Sailor, San Diego, USA

Jonathan W. Steed, Durham, UK

Carsten Tschierske, Halle, Germany

Herbert Waldmann, Dortmund, Germany

Henry N. C. Wong, Hong Kong, PR China

Advertisement sales: Tel +44 (0) 1223 432246; Fax +44 (0) 1223 426017; E-mail 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.

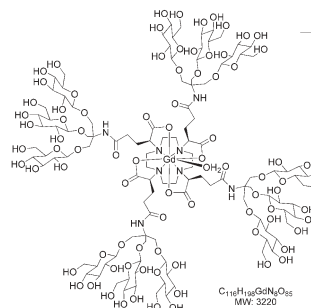
Authors may reproduce/republish portions of their published contribution without seeking permission from the RSC, provided that any such republication is accompanied by an acknowledgement in the form: (Original Citation)–Reproduced by permission of The Royal Society of Chemistry.

1064

Glycoconjugates of gadolinium complexes for MRI applications

David A. Fulton, Elisa M. Elemento, Silvio Aime, Linda Chaabane, Mauro Botta and David Parker*

C-4 symmetric conjugates bearing four dendritic wedges and containing 12 glucose or galactose groups have high relaxivities as a result of effective motional coupling and a large second sphere contribution.

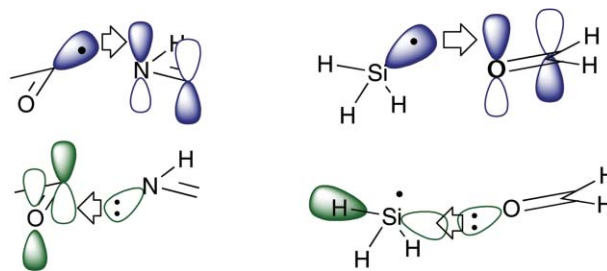


1067

Unexpected dual orbital effects in radical addition reactions involving acyl, silyl and related radicals

Carl H. Schiesser,* Hiroshi Matsubara,* Ina Ritsner and Uta Wille*

Molecular orbital calculations reveal that acyl and silyl radicals add to numerous types of π -systems through simultaneous SOMO–LUMO and LUMO–HOMO interactions.

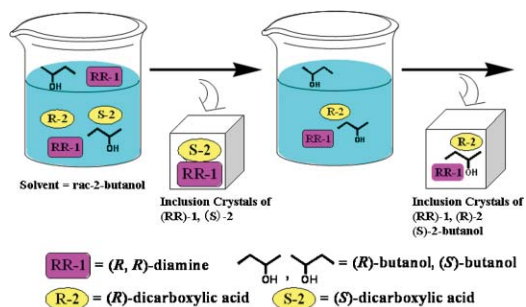


1070

Successive optical resolution of two compounds by one enantiopure compound

Yoshitane Imai, Masatoshi Takeshita, Tomohiro Sato and Reiko Kuroda*

By using (1*R*,2*R*)-1,2-diphenylethylenediamine as a single enantiopure compound, we achieved a novel successive optical resolution of two kinds of racemic compounds known to be difficult to optically resolve, through supramolecular crystallization.

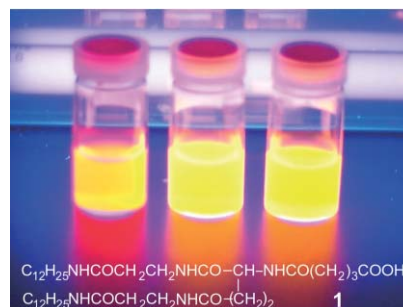


1073

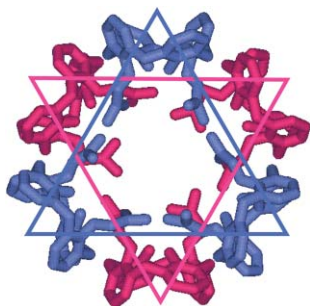
Intense fluorescence-inducing amphiphile in cationic dyes and its applicability

Hiroshi Hachisako* and Ryoichi Murakami

An anionic amphiphile has been found to form extremely hydrophobic sites in water and specifically incorporate stilbazolium-based compact hemicyanine dyes as monomeric species, resulting in induction of intense fluorescence emission.



1076

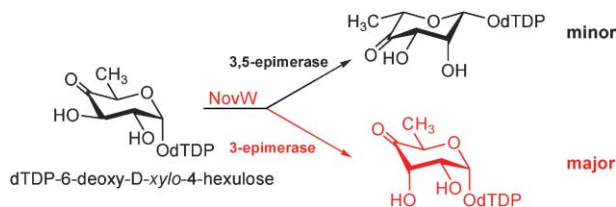


Helical aquatubes of calix[4]arene di-methoxycarboxylic acid

Adina N. Lazar, Nathalie Dupont, Alda Navaza and Anthony W. Coleman*

Dimeric units of calix[4]arene di-methoxycarboxylic acid generate intermeshed triple helical aquatubes that are characterized by a six-pointed star motif.

1079

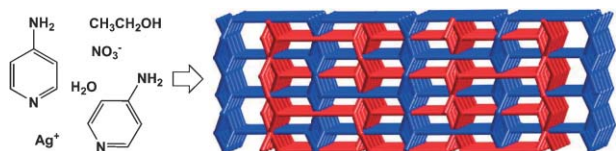


Characterisation of *Streptomyces spheroides* NovW and revision of its functional assignment to a dTDP-6-deoxy-D-xylo-4-hexulose 3-epimerase

Mónica Tello, Piotr Jakimowicz, James C. Errey, Caren L. Freel Meyers, Christopher T. Walsh, Mark J. Buttner, David M. Lawson and Robert A. Field*

Contrary to the literature, *Streptomyces spheroides* NovW is not a kinetically competent dual action dTDP-6-deoxy-D-xylo-4-hexulose 3,5-epimerase, but possesses only significant 3-epimerase activity *in vitro*.

1082

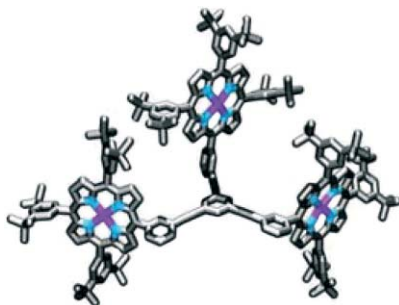


A unique example of a high symmetry three- and four-connected hydrogen bonded 3D-network

Morsy A. M. Abu-Youssef,* Vratislav Langer and Lars Öhrström*

The high symmetry 3D-net presented in this communication has not been observed among the molecular-based nets to date. The usefulness of net-analysis in the understanding of molecular crystal structures is also highlighted.

1085



Large-scale synthesis of alkyne-linked tripodal porphyrins via palladium-mediated coupling conditions

Lok H. Tong, Sofia I. Pascu, Thibaut Jarrosson and Jeremy K. M. Sanders*

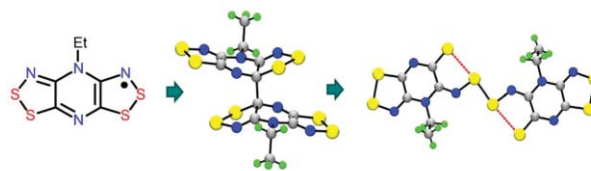
Suzuki and Sonogashira couplings have been used in short and efficient sequences to give access to a new family of porphyrin trimers on a practical scale.

1088

Bimodal association of a *bis*-1,2,3-dithiazolyl radical

Alicea A. Leitch, Courtney E. McKenzie, Richard T. Oakley,* Robert W. Reed, John F. Richardson and Lenora D. Sawyer

The *N*-ethyl pyrazine-bridged *bis*-1,2,3-dithiazolyl radical associates at room temperature as a C–C bonded σ -dimer which, on heating, converts to a laterally S–S σ -bonded structure.

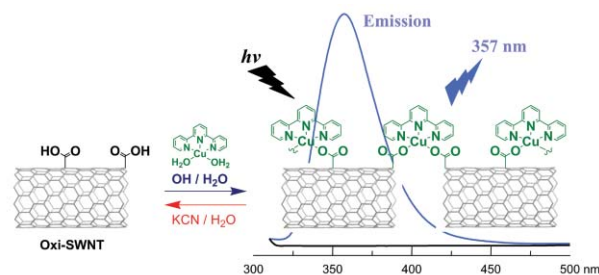


1091

TerpyridineCu^{II}-mediated reversible nanocomposites of single-wall carbon nanotubes: towards metallo-nanoscale architectures

Pingshan Wang, Charles N. Moorefield, Sinan Li, Seok-Ho Hwang, Carol D. Shreiner and George R. Newkome*

Self-assembly of Oxi-SWNTs using terpyridineCu^{II} coordination produced a thermally stable, neutral, and luminescent [(Oxi-SWNT)(tpyCu^{II})_m]_n composite.

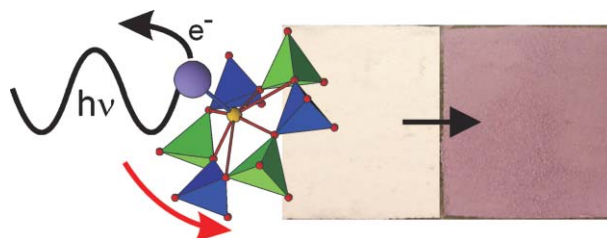


1094

Structural observation of photochromism

Jennifer A. Armstrong and Mark T. Weller

The detailed structural changes that occur in a polycrystalline material following the formation of a coloured, photoexcited state, an F-centre, have been determined using neutron diffraction.

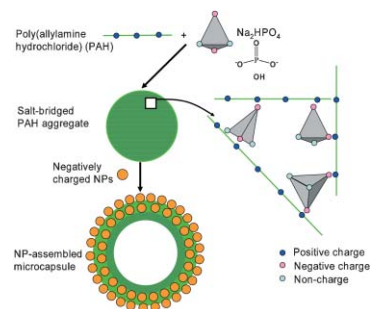


1097

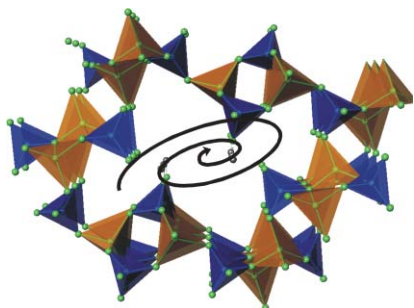
Synthesis of nanoparticle-assembled tin oxide/polymer microcapsules

Jie Yu, Vinit S. Murthy, Rohit K. Rana and Michael S. Wong*

Tin oxide nanoparticles can be assembled into micron-sized hollow capsule structures through a simple mixing procedure based on charge-mediated polymer aggregate templating.



1100

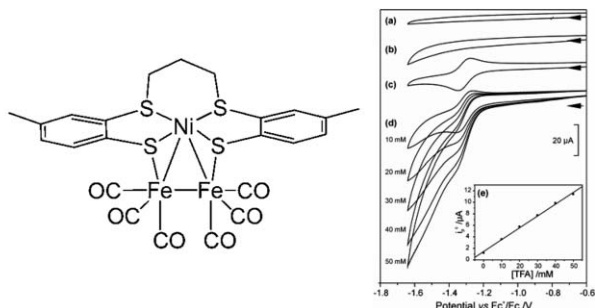


A chiral, 16-ring channel framework and a layered caesium zincarsenate

Seth B. Wiggin and Mark T. Weller*

Two zincarsenate frameworks, one with chiral channels delineated by 16 linked tetrahedra and the other having a pocketed layer structure, have been synthesised.

1103

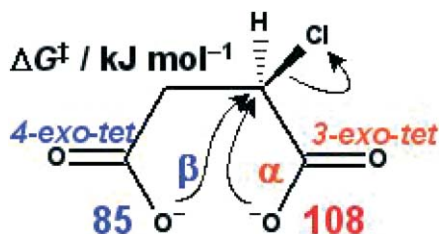


Electrocatalytic production of hydrogen by a synthetic model of [NiFe] hydrogenases

Alessandro Perra, E. Stephen Davies, Jason R. Hyde, Qiang Wang, Jonathan McMaster* and Martin Schröder*

The radical cluster anion $[\text{Ni}(\text{L})\text{Fe}_2(\text{CO})_6]^-$ models the activity of the [NiFe] hydrogenases and catalyses the reduction of protons to produce molecular hydrogen at relatively anodic potentials compared to analogues of the [Fe]-only hydrogenases.

1106

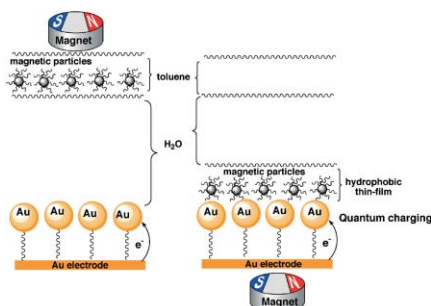


The Walden cycle revisited: a computational study of competitive ring closure to α - and β -lactones

J. Grant Buchanan, Richard A. Diggle, Giuseppe D. Ruggiero and Ian H. Williams*

Ring closure in chlorosuccinate gives β -lactone because $\text{O}_{\text{nuc}}\text{C}\text{Cl}$ angle in transition structure is more favourable than for α -lactone formation in PCM($\epsilon = 78.4$)/B3LYP/6-31+G* calculations.

1109



Magneto-switchable single-electron charging of Au-nanoparticles using hydrophobic magnetic nanoparticles

Eugenii Katz, Oleg Lioubashevski and Itamar Willner*

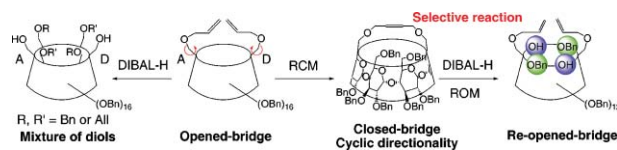
Reversible magneto-switchable quantum charging of a Au nanoparticle array associated with a Au electrode is observed in the presence of hydrophobic magnetic nanoparticles attracted to the functionalized electrode surface.

1112

Sequential ring closing/opening metathesis for the highly selective synthesis of a triply bifunctionalized α -cyclodextrin

Olivia Bistri, Pierre Sinaÿ and Matthieu Sollogoub*

Metathesis versatility has been exploited to reveal the cyclic directionality of cyclodextrins and to selectively synthesise a unique cyclodextrin bearing three pairs of orthogonal protecting groups on its primary rim.

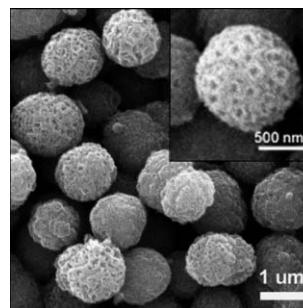


1115

Synthesis of hierarchical nanoporous F-doped TiO₂ spheres with visible light photocatalytic activity

Wingkei Ho, Jimmy C. Yu* and Shuncheng Lee

Hierarchical porous F-doped TiO₂ microspheres exhibiting high visible light photocatalytic activity have been fabricated by a one-step low-temperature hydrothermal approach without using any templates.

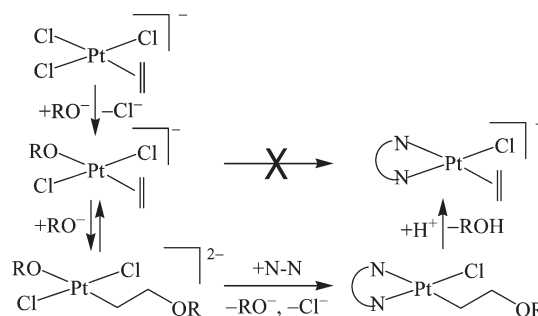


1118

The unexpected reactivity of Zeise's anion in strong basic medium discloses new substitution patterns at the platinum centre

Michele Benedetti, Francesco P. Fanizzi,*
Luciana Maresca* and Giovanni Natile

Zeise's anion in strongly basic hydroxylated solvents undergoes unprecedented nucleophilic addition of OR⁻ (R = H, Me, Et) to the η^2 -ethene giving stable organometallic species the protonolysis of which offers a versatile route to cationic square planar [PtCl(η^2 -C₂H₄)(N-N)]⁺ complexes.

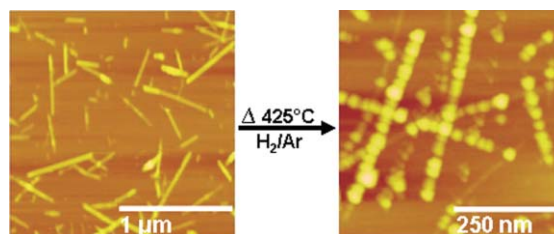


1121

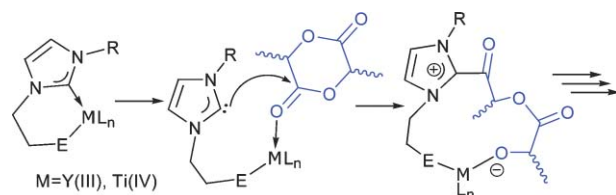
From ribbons to nanodot arrays: nanopattern design through reductive annealing

Palaniappan Arumugam, Samuel S. Shinozaki,
Ruomiao Wang, Guangzhao Mao and
Stephanie L. Brock*

1-D arrays of nickel arsenide nanoparticles can be generated by reduction of nickel arsenate nanoscrolls. This methodology may be suitable for generation of periodic and aperiodic patterns of nanoparticles.



1124

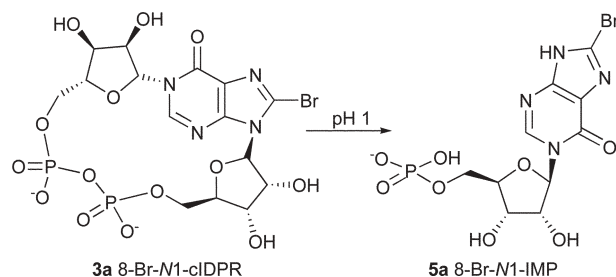


Bifunctional yttrium(III) and titanium(IV) NHC catalysts for lactide polymerisation

Dipti Patel, Stephen T. Liddle, Shaheed A. Mungur, Mark Rodden, Alexander J. Blake and Polly L. Arnold*

Lewis acidic Y(III) and Ti(IV) derivatives of anionic, metal-tethered carbenes apparently act as bifunctional catalysts for the polymerisation of D,L-lactide, using both Lewis acid and base functionalities to initiate ring opening; the alcohol- and amino-functionalised carbene ligands provide models for the first insertion step, and display metal-free polymerisation catalysis to generate polylactic acid.

1127

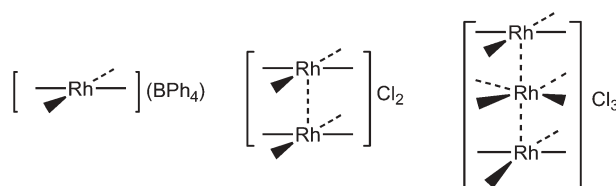


Unusual entry to the novel 8-halo-N1-riboseyl hypoxanthine system by degradation of a cyclic adenosine-5'-diphosphate ribose analogue

Christelle Moreau, Timothy J. Woodman and Barry V. L. Potter*

Cyclic 8-bromo-inosine-5'-diphosphate ribose (8-Br-N1-cIDPR) was cleanly degraded to give 8-bromo-N1-riboseyl hypoxanthine 5'-monophosphate (8-Br-N1-IMP), a novel class of mononucleotide, as the sole product.

1130

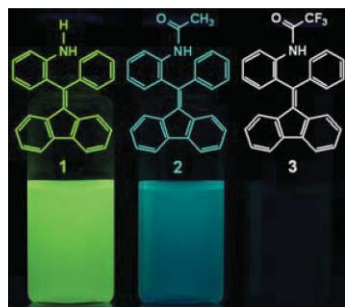


Variation in crystallization conditions allows the isolation of trimeric as well as dimeric and monomeric forms of [(alkyl isocyanide)₄Rh]⁺

Ngon T. Tran, Jay R. Stork, David Pham, Marilyn M. Olmstead, James C. Fettinger and Alan L. Balch*

A trimeric form of [(RCN)₄Rh]⁺ has been isolated for the first time along with crystals containing dimeric and monomeric versions of the cation.

1133



Tunable aggregation-induced emission of diphenyldibenzofulvenes

Hui Tong, Yongqiang Dong, Matthias Häußler, Jacky W. Y. Lam, Herman H.-Y. Sung, Ian D. Williams, Jingzhi Sun and Ben Zhong Tang*

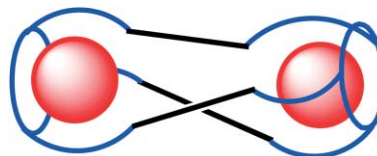
Aggregation-induced emission of fulvene is tunable by molecular engineering and morphological variation: thus **1** and **2** can be induced to emit by aggregation in aqueous media, but **3** cannot; and crystalline aggregates emit stronger, bluer lights than their amorphous counterparts.

1136

Tripodal oxazoline-based homochiral coordination cages with internal binding sites

Jeongryul Kim, Dowook Ryu, Yoshihisa Sei, Kentaro Yamaguchi and Kyo Han Ahn*

Homochiral coordination cages that provide two internal binding sites have been constructed for the first time by Pd(II)-mediated self-assembly of chiral tripodal oxazolines containing pyridine pendant groups.

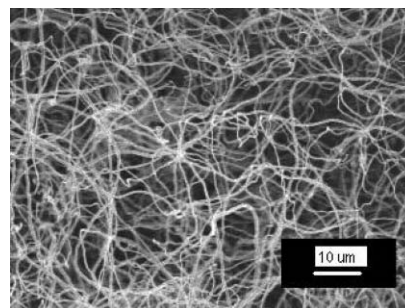


1139

Facile catalytic growth of cyanoacrylate nanofibers

Pratik J. Mankidy, Ramakrishnan Rajagopalan and Henry C. Foley*

Novel, facile and template-less catalytic growth of poly(ethyl 2-cyanoacrylate) nanofibers by vapour phase polymerization.

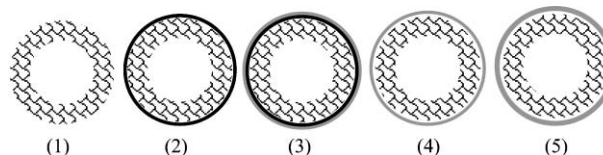


1142

Thin and defect-free Pd-based composite membrane without any interlayer and substrate penetration by a combined organic and inorganic process

Jianhua Tong,* Lingling Su, Kenji Haraya and Hiroyuki Suda

(1) substrate, (2) polymer layer + substrate, (3) Pd layer + polymer layer + substrate, (4) Pd layer + small interstice + substrate, and (5) defect-free Pd layer + small interstice + substrate.




AUTHOR INDEX

- Abu-Youssef, Morsy A. M., 1082
Ahn, Kyo Han, 1136
Aime, Silvio, 1064
Armstrong, Jennifer A., 1094
Arnold, Polly L., 1124
Arumugam, Palaniappan, 1121
Balch, Alan L., 1130
Benedetti, Michele, 1118
Bistri, Olivia, 1112
Blake, Alexander J., 1124
Botta, Mauro, 1064
Brock, Stephanie L., 1121
Buchanan, J. Grant, 1106
Buttner, Mark J., 1079
Chaabane, Linda, 1064
Coleman, Anthony W., 1076
Davies, E. Stephen, 1103
Diggie, Richard A., 1106
Dong, Yongqiang, 1133
Dupont, Nathalie, 1076
Elemento, Elisa M., 1064
Errey, James C., 1079
Fanizzi, Francesco P., 1118
Fettinger, James C., 1130
Field, Robert A., 1079
Foley, Henry C., 1139
Freel Meyers, Caren L., 1079
Fulton, David A., 1064
Hachisako, Hiroshi, 1073
Haraya, Kenji, 1142
Häußler, Matthias, 1133
Ho, Wingkei, 1115
Hwang, Seok-Ho, 1091
Hyde, Jason R., 1103
Imai, Yoshitane, 1070
Jakimowicz, Piotr, 1079
Jarrosson, Thibaut, 1085
Katz, Eugenii, 1109
Kim, Jeongryul, 1136
Kuroda, Reiko, 1070
Lam, Jacky W. Y., 1133
Langer, Vratislav, 1082
Lawson, David M., 1079
Lazar, Adina N., 1076
Lee, Sang-gi, 1049
Lee, Shuncheng, 1115
Leitch, Alicea A., 1088
Li, Sinan, 1091
Liddle, Stephen T., 1124
Lioubashevski, Oleg, 1109
Mankidy, Pratik J., 1139
Mao, Guangzhao, 1121
Maresca, Luciana, 1118
Matsubara, Hiroshi, 1067
McKenzie, Courtney E., 1088
McMaster, Jonathan, 1103
Moorefield, Charles N., 1091
Moreau, Christelle, 1127
Mungur, Shaheed A., 1124
Murakami, Ryoichi, 1073
Murthy, Vinit S., 1097
Natile, Giovanni, 1118
Navaza, Alda, 1076
Newkome, George R., 1091
Oakley, Richard T., 1088
Öhrström, Lars, 1082
Olmstead, Marilyn M., 1130
Parker, David, 1064
Pascu, Sofia I., 1085
Patel, Dipti, 1124
Perra, Alessandro, 1103
Pham, David, 1130
Potter, Barry V. L., 1127
Rajagopalan, Ramakrishnan, 1139
Rana, Rohit K., 1097
Reed, Robert W., 1088
Richardson, John F., 1088
Ritsner, Ina, 1067
Rodden, Mark, 1124
Ruggiero, Giuseppe D., 1106
Ryu, Dowook, 1136
Sanders, Jeremy K. M., 1085
Sato, Tomohiro, 1070
Sawyer, Lenora D., 1088
Schiesser, Carl H., 1067
Schröder, Martin, 1103
Sei, Yoshihisa, 1136
Shinozaki, Samuel S., 1121
Shreiner, Carol D., 1091
Sinay, Pierre, 1112
Sollogoub, Matthieu, 1112
Stork, Jay R., 1130
Su, Lingling, 1142
Suda, Hiroyuki, 1142
Sun, Jingzhi, 1133
Sung, Herman H.-Y., 1133
Takeshita, Masatoshi, 1070
Tang, Ben Zhong, 1133
Tello, Mónica, 1079
Tong, Hui, 1133
Tong, Jianhua, 1142
Tong, Lok H., 1085
Tran, Ngon T., 1130
Walsh, Christopher T., 1079
Wang, Pingshan, 1091
Wang, Qiang, 1103
Wang, Ruomiao, 1121
Weller, Mark T., 1094, 1100
Wiggin, Seth B., 1100
Wille, Uta, 1067
Williams, Ian D., 1133
Williams, Ian H., 1106
Willner, Itamar, 1109
Wong, Michael S., 1097
Woodman, Timothy J., 1127
Yamaguchi, Kentaro, 1136
Yu, Jie, 1097
Yu, Jimmy C., 1115

FREE E-MAIL ALERTS AND RSS FEEDS


Contents lists in advance of publication are available on the web *via* www.rsc.org/chemcomm – or take advantage of our free e-mail alerting service (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 for details.

ADVANCE ARTICLES AND ELECTRONIC JOURNAL

Free site-wide access to Advance Articles and electronic form of this journal is provided with a full-rate institutional subscription. See 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).