

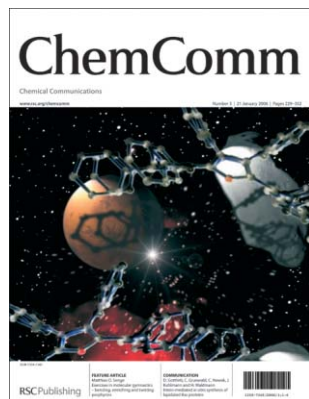
ChemComm

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 (3) 229–352 (2006)



Cover

See Matthias O. Senge page 243. Porphyrins are not planar! Specifically designed highly substituted tetrapyrroles reveal an amazing conformational flexibility of the macrocycle and illustrate their functional versatility in nature. Image reproduced by permission of Matthias O. Senge from *Chem. Commun.*, 2006, 243.

CHEMICAL SCIENCE

C1

Drawing together the research highlights and news from all RSC publications, *Chemical Science* provides a ‘snapshot’ of the latest developments across the chemical sciences showcasing newsworthy articles, as well as the most significant scientific advances.

Chemical Science

January 2006/Volume 3/Issue 1

www.rsc.org/chemicalscience

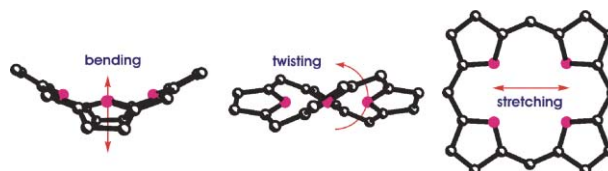
FEATURE ARTICLE

243

Exercises in molecular gymnastics—bending, stretching and twisting porphyrins

Mathias O. Senge

Porphyrins are not flat! Specifically designed highly substituted tetrapyrroles reveal an amazing conformational flexibility of the macrocycle and illustrate the functional versatility of porphyrins in nature.



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 432243; 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.

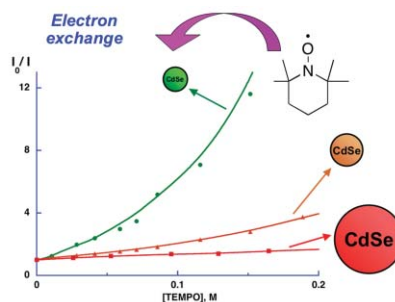
Authors may reproduce/republish portions of their published contribution without seeking permission from the RSC, provided that any such republication is accompanied by an acknowledgement in the form: (Original Citation)–Reproduced by permission of The Royal Society of Chemistry.

257

Non-linear effects in the quenching of fluorescent quantum dots by nitroxyl free radicals

Marie Laferrière, Raquel E. Galian, Vincent Maurel and J. C. Scaiano*

Electron exchange leads to exponential dependence of nitroxide quenching of fluorescent CdSe quantum dots.

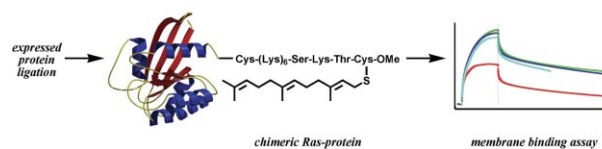


260

Intein-mediated *in vitro* synthesis of lipidated Ras proteins

D. Gottlieb, C. Grunwald, C. Nowak, J. Kuhlmann* and H. Waldmann*

Fully functional lipid-modified Ras proteins suitable for the study of Ras–membrane interactions and embodying exclusively native amide bonds can be synthesized in preparative amounts by means of Expressed Protein Ligation.

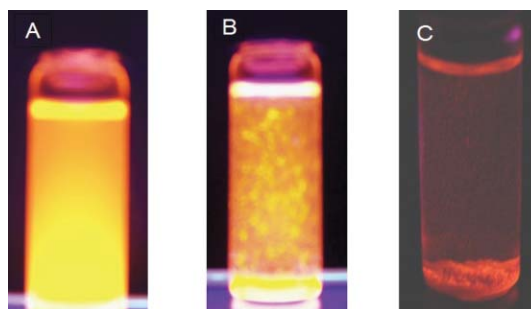


263

Potassium ion recognition by 15-crown-5 functionalized CdSe/ZnS quantum dots in H₂O

Chun-Yen Chen, Chiu-Ting Cheng, Chih-Wei Lai, Pei-Wen Wu, Kun-Chan Wu, Pi-Tai Chou,* Yi-Hsuan Chou and Hsin-Tien Chiu

(A) 55 nM 15-crown-5 capped CdSe/ZnS (5.0/0.8 nm) QDs in H₂O, (B) addition of 5.0 mM KClO₄, (C) similar to (B) except that the picture was taken after 5 min.

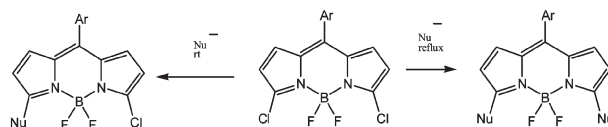


266

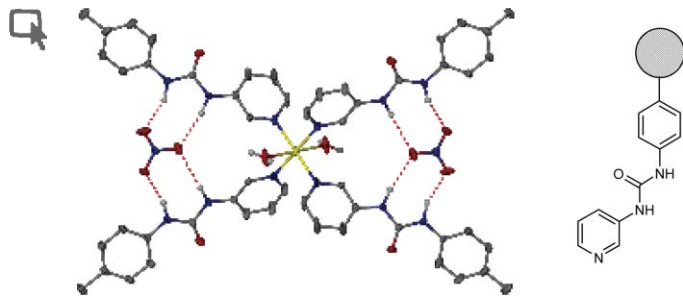
Functionalisation of fluorescent BODIPY dyes by nucleophilic substitution

Taoufik Rohand, Mukulesh Baruah, Wenwu Qin, Noël Boens and Wim Dehaen*

The BODIPY chromophore can be easily modified by nucleophilic mono- or disubstitution of 3,5-dichloroBODIPY with O-, N-, S- and C-nucleophiles. Absorption and fluorescence spectral data of the new BODIPY derivatives are also reported.



269

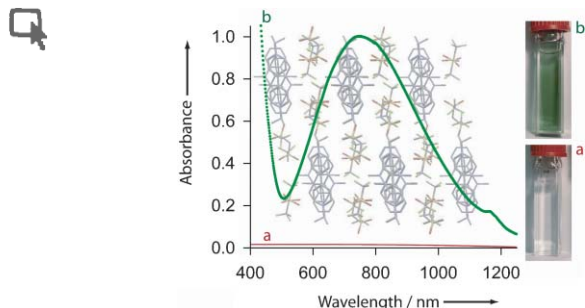


Simultaneous anion and cation binding by a simple polymer-bound ureidopyridyl ligand

Jennifer M. Russell, Andrew D. M. Parker, Ivana Radosavljevic-Evans, Judith A. K. Howard and Jonathan W. Steed*

A polymer bound ureidopyridyl ligand binds copper(II) nitrate. An X-ray crystal structure suggests a double anion chelate binding mode.

272

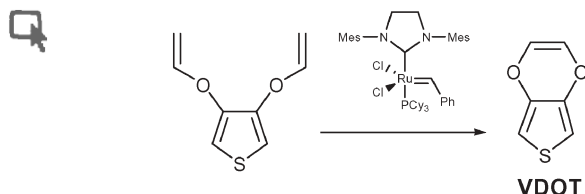


Formation of an unusual charge-transfer network from an ionic liquid

Rico E. Del Sesto, Gary A. Baker, Sheila N. Baker, Brian L. Scott, Timothy S. Keizer, Anthony K. Burrell and T. Mark McCleskey*

An intriguing and novel charge-transfer complex between dimethyldihydrophenazine and diethylviologen has been crystallized from an ionic liquid at room temperature, resulting in an interesting stacking motif of interrupted D \cdots A \cdots D type triads.

275

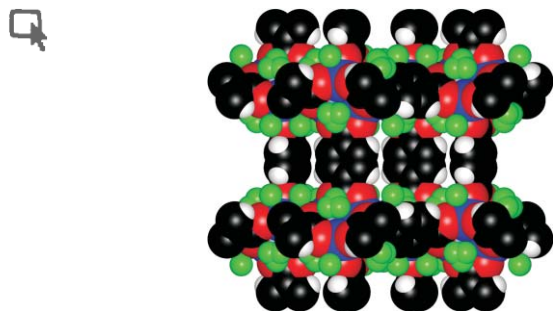


3,4-Vinylendioxythiophene (VDOT): a new building block for thiophene-based π -conjugated systems

Philippe Leriche,* Philippe Blanchard,* Pierre Frère, Eric Levillain, Gilles Mabon and Jean Roncali

The title compound has been synthesized *via* an intramolecular Grubbs metathesis reaction and used as a building block for the preparation of π -conjugated systems.

278



Determination of the hydrogen absorption sites in Zn₄O(1,4-benzenedicarboxylate) by single crystal neutron diffraction

Elinor C. Spencer, Judith A. K. Howard,* Garry J. McIntyre, Jesse L. C. Rowsell and Omar M. Yaghi

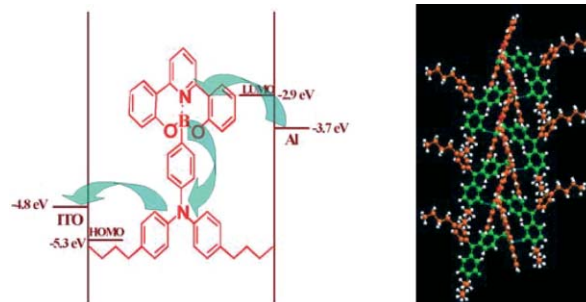
A variable temperature (5–300 K) single crystal Laue neutron diffraction study of hydrogen-loaded Zn₄O(1,4-benzenedicarboxylate) is reported, and this represents the first example of the use of this technique for locating physisorbed gas within a host structure.

281

Efficient single-layer electroluminescent device based on a bipolar emitting boron-containing material

Hongyu Zhang, Cheng Huo, Jingying Zhang, Peng Zhang, Wenjing Tian and Yue Wang*

A novel multifunctional boron containing compound in which the hole-transporting (HT), electron-transporting (ET), and emitting (EM) components are integrated into a single molecule was synthesized and employed as an emitting material to fabricate an efficient single-layer electroluminescent device.

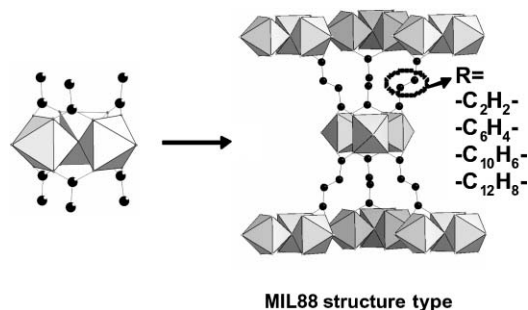


284

A new isoreticular class of metal-organic-frameworks with the MIL-88 topology

Suzy Surblé, Christian Serre,* Caroline Mellot-Draznieks, Franck Millange and Gérard Férey

An isoreticular class of open-framework metalcarboxylates has been characterised using a combined simulation–chemical approach. The prediction method uses energy minimization resulting from the substitution of an organic linker with another, keeping the inorganic subnetwork identical. These solids are built up from trimers of octahedra and adopt the MIL-88 topology, which is a new example of Scale Chemistry.

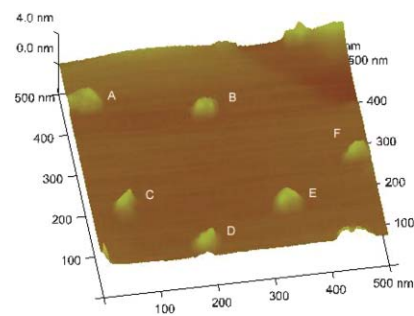


287

One-step synthesis and AFM imaging of hydrophobic LDH monolayers

Gang Hu, Nan Wang, Dermot O'Hare* and Jason Davis

Hydrophobic layered double hydroxide particles with monolayer structure have been successfully synthesised in a reverse microemulsion system and imaged using atomic force microscopy.

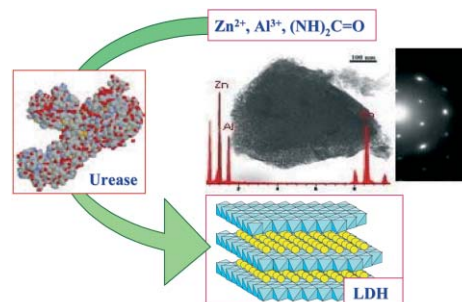


290

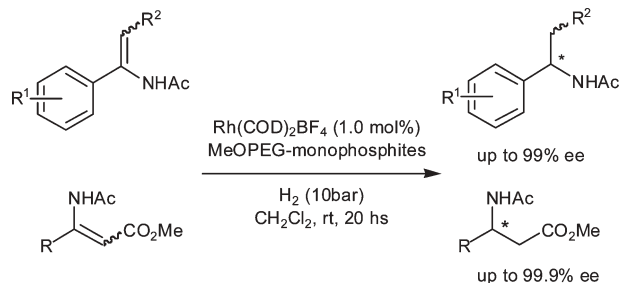
Precipitation of Zn₂Al LDH by urease enzyme

Stephanie Vial, Jaafar Ghanbaja and Claude Forano*

A biomineralization process based on the promotion of precipitating agent by the urea–urease enzymatic system is developed to prepare ZnAl layered double hydroxide materials. The effects of the enzymatic reaction parameters on the structural and textural properties of the materials are investigated on the basis of XRD and EM analysis.



293

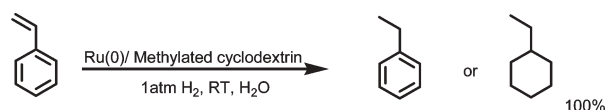


Readily available, recoverable and soluble polymer-monophosphite ligands for highly enantioselective Rh-catalyzed hydrogenation

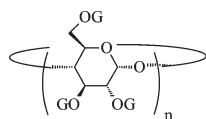
Xiang-Ping Hu, Jia-Di Huang, Qing-Heng Zeng and Zhuo Zheng*

A new family of readily available, recoverable and soluble polymer-monophosphite ligands were prepared and successfully used in the Rh-catalyzed asymmetric hydrogenation of enamides and β -dehydroamino acid esters, in which up to 99 and 99.9% ee were obtained, respectively.

296



With methylated cyclodextrrin :



G: H or CH₃

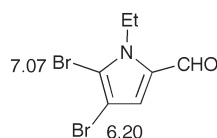
n: 6, 7, 8

Supramolecular shuttle and protective agent: a multiple role of methylated cyclodextrins in the chemoselective hydrogenation of benzene derivatives with ruthenium nanoparticles

Audrey Nowicki, Yong Zhang, Bastien Léger, Jean-Paul Rolland, Hervé Bricout, Eric Monflier and Alain Roucoux*

Efficient chemoselectivities are obtained in the hydrogenation of benzene derivatives under biphasic liquid–liquid conditions using Ru(0) nanoparticles stabilized and controlled by the choice of cavity and methylation degree of cyclodextrins.

299



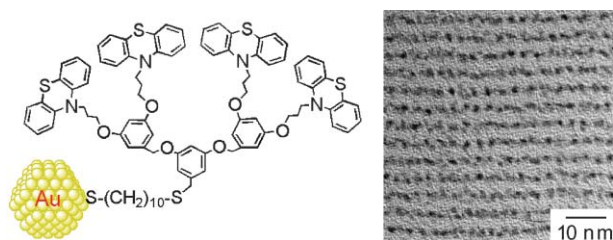
Suzuki coupling occurs first at the C5 bromide as predicted by the ¹H NMR chemical shift values.

A simple guide for predicting regioselectivity in the coupling of polyhaloheteroaromatics

Scott T. Handy and Yanan Zhang

A simple guide for predicting the order and site of coupling (Suzuki, Stille, Negishi, Sonogashira, *etc.*) in polyhaloheteroaromatics based upon the ¹H NMR chemical shift values of the parent non-halogenated heteroaromatics has been developed.

302



Dendritic effects on the ordered assembly and the interfacial one-electron oxidation of redox-active dendron-functionalized gold nanoparticles

Yusuke Komine, Ikuko Ueda, Tomotaka Goto and Hisashi Fujihara*

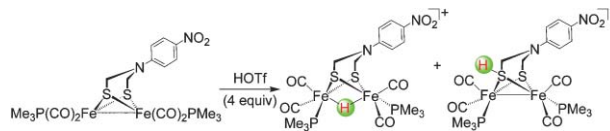
A higher generation dendron with a long-alkyl chain thiol induced the formation of self-assembled one-dimensional arrays of gold nanoparticles. The interfacial reactivity of the gold nanoparticles can be controlled by the dendron.

305

An insight into the protonation property of a diiron azadithiolate complex pertinent to the active site of Fe-only hydrogenases

Weibing Dong, Mei Wang,* Xiaoyang Liu, Kun Jin, Guanghua Li, Fujun Wang and Licheng Sun*

Protonation of $[\{(\mu\text{-SCH}_2)_2\text{N}(\text{C}_6\text{H}_4\text{-}p\text{-NO}_2)\}\{\text{Fe}(\text{CO})_2(\text{PMe}_3)\}_2]$ in the presence of 4 equiv. of HOTf afforded two species, a μ -hydride diiron complex and a μ -S-protonated species, which were both investigated.

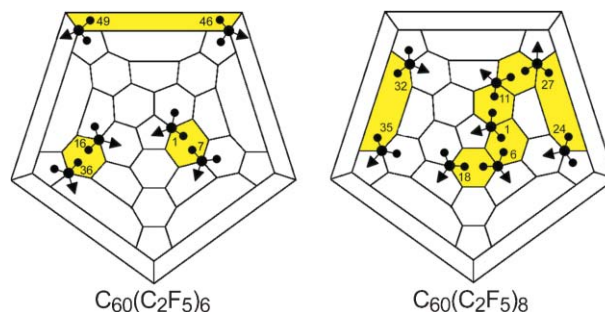


308

Synthesis and structures of poly(perfluoroethyl)-[60]fullerenes: 1,7,16,36,46,49- $\text{C}_{60}(\text{C}_2\text{F}_5)_6$ and 1,6,11,18,24,27,32,35- $\text{C}_{60}(\text{C}_2\text{F}_5)_8$

Ivan E. Kareev, Igor V. Kuvychko, Sergei F. Lebedkin, Susie M. Miller, Oren P. Anderson, Steven H. Strauss* and Olga V. Boltalina*

The poly(perfluoroethyl)fullerenes $\text{C}_{1-1,7,16,36,46,49}\text{-C}_{60}(\text{C}_2\text{F}_5)_6$ and $\text{C}_{1-1,6,11,18,24,27,32,35}\text{-C}_{60}(\text{C}_2\text{F}_5)_8$ were isolated from high-temperature reactions of C_{60} and $\text{C}_2\text{F}_5\text{I}$. The X-ray structures reveal two new addition patterns for C_{60}X_n derivatives.

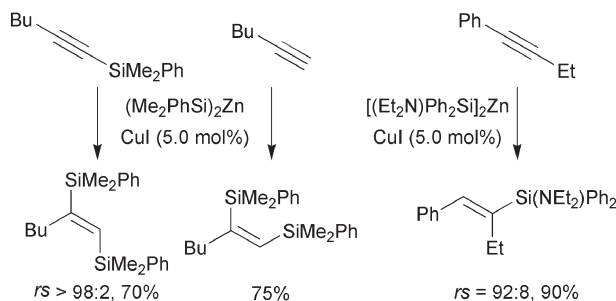


311

Silylzincation of carbon-carbon multiple bonds revisited

Gertrud Auer and Martin Oestreich*

One for all: $(\text{R}_3\text{Si})_2\text{Zn}$ in the presence of catalytic amounts of copper(I) allows not only for the regioselective silylzincation as well as bissilylation of alkynes but also for the silylzincation of 1,3-dienes and styrenes.

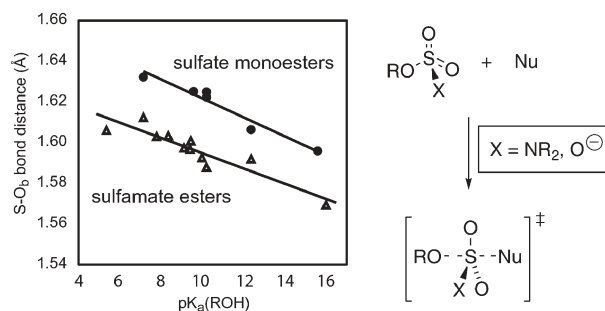


314

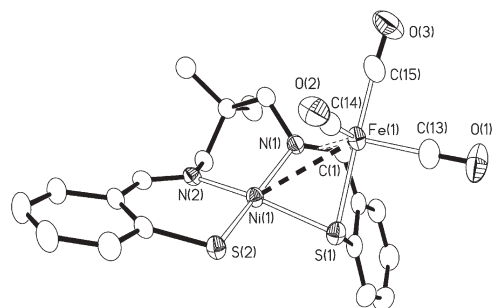
Ground state structures of sulfate monoesters and sulfamates reveal similar reaction coordinates for sulfonyl and sulfamyl transfer

Emma Denehy, Jonathan M. White and Spencer J. Williams*

Structure/reactivity and structure/structure correlations of 5 sulfate monoesters and 11 sulfamate esters determined by low temperature X-ray crystallography reveal similar ground state deformations that suggest similar reaction coordinates for sulfonyl and sulfamyl group transfer.



317

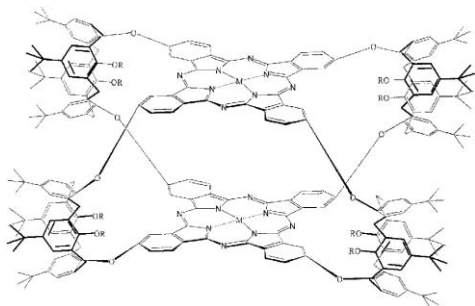


Formation of $[(L)Ni(\mu_2-S)_x\{Fe(CO)_3\}_x]$ adducts ($x = 1$ or 2): analogues of the active site of $[NiFe]$ hydrogenase

Philip A. Stenson, Armando Marin-Becerra, Claire Wilson, Alexander J. Blake, Jonathan McMaster* and Martin Schröder*

Heteronuclear complexes $[Ni(L)Fe(CO)_3]$ (right) and $[Ni(L)\{Fe(CO)_3\}_2]$ are formed upon co-ordination of discrete $Fe(CO)_3$ units to the $[Ni(L)]$ and adopt unusual structural motifs in which $Fe(CO)_3$ units bind to $[Ni(L)]$ via μ_2-S bridging modes, C=N imine π bonds and possible Ni–Fe bonding interactions.

320

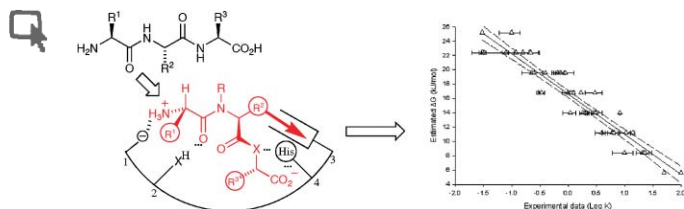


Synthesis, characterization, and electrical, electrochemical and gas sensing properties of a novel ball-type four *t*-butylcalix[4]arene bridged binuclear zinc(II) phthalocyanine

Tanju Ceyhan, Ahmet Altindal, Ali Riza Özkaya, Mehmet K. Erbil, Bekir Salih and Özer Bekaroglu*

A novel ball type four *t*-butylcalix[4]arene bridged binuclear zinc(II) phthalocyanine has been synthesized and electrical, electrochemical and gas sensing properties have been investigated. d.c conductivity measurements show its importance in applications for electrochemical energy based devices.

323

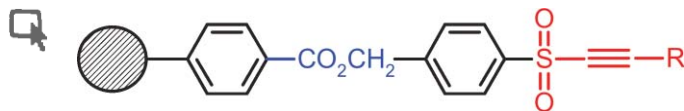


Affinity prediction for substrates of the peptide transporter PepT1

Patrick D. Bailey,* C. A. Richard Boyd, Ian D. Collier, John P. George, George L. Kellett, David Meredith, Keith M. Morgan, Rachel Pettecrew and Richard A. Price

Based on the template model pictured, the affinity of molecules for the peptide transporter PepT1 can be estimated, which should help in the design of orally absorbed drugs.

326



Cyclizations and cycloadditions of acetylenic sulfones on solid supports

Thomas G. Back* and Huimin Zhai

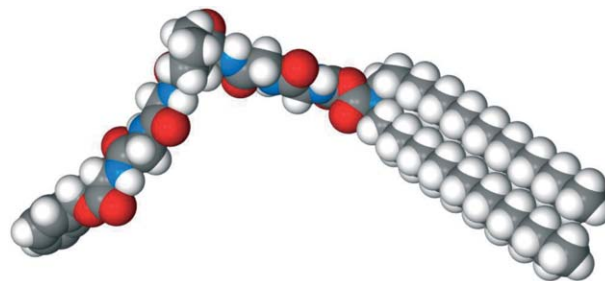
Acetylenic sulfones attached to solid supports underwent cyclizations with chloroamines, as well as Diels–Alder and 1,3-dipolar cycloadditions.

329

A synthetic, chloride-selective channel that alters chloride transport in epithelial cells

Robert Pajewski, Raquel Garcia-Medina, Steven L. Brody, W. Matthew Leevy, Paul H. Schlesinger and George W. Gokel*

An Ussing chamber was used to demonstrate that synthetic amphiphilic anion transporters function as chloride transporters in mammalian airway epithelial cells.

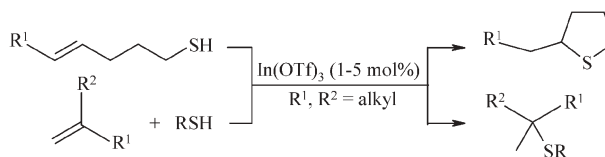


332

Regioselective indium(III) trifluoromethanesulfonate-catalyzed hydrothiolation of non-activated olefins

Michel Weïwer, Lydie Coulombel and Elisabet Duñach*

Indium(III) trifluoromethanesulfonate was found to be an excellent catalyst for the highly regioselective intra- and intermolecular addition of thiols to non-activated olefins.

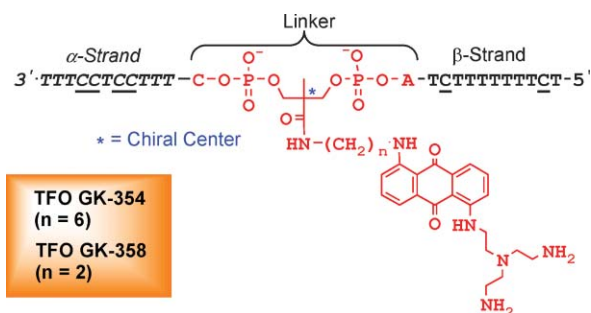


335

Modified α - β chimeric oligoDNA bearing a multi-conjugate of 2,2-bis(hydroxymethyl)propionic acid-anthraquinone-polyamine exhibited improved and stereo-nonspecific triplex-forming ability

A. T. M. Zafrul Azam, Tomohisa Moriguchi and Kazuo Shinozuka*

Novel α - β chimeric oligonucleotides bearing a propionic acid derivative of an anthraquinone-polyamine conjugate in the "linker" region sequence-specifically formed a substantially stable alternate-stranded triplex with dsDNA.

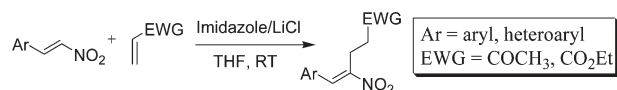


338

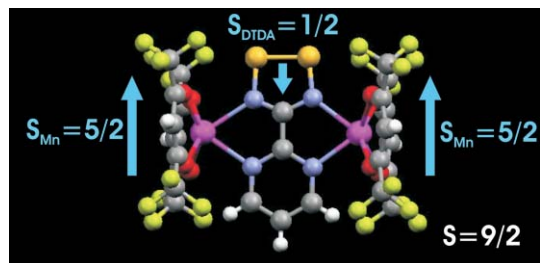
The Morita-Baylis-Hillman adducts of β -aryl nitroethylenes with other activated alkenes: synthesis and anticancer activity studies

Mamta Dadwal, Renu Mohan, Dulal Panda,* Shaikh M. Mobin and Irishi N. N. Namboothiri*

The Morita-Baylis-Hillman (MBH) adducts of β -aryl nitroethylenes with methyl vinyl ketone (MVK) and acrylate, formed in moderate to good yield when mediated by imidazole/LiCl in THF at room temperature, inhibit HeLa cell proliferation by binding to tubulin.



341

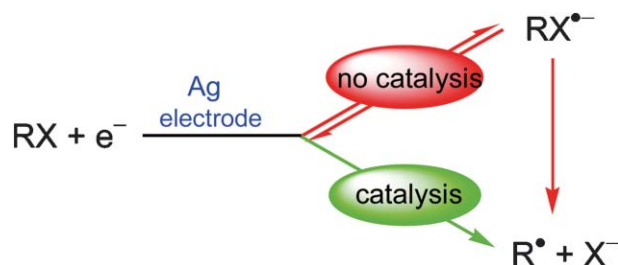


Synthesis and magnetic properties of a 4-(2'-pyrimidyl)-1,2,3,5-dithiadiazolyl dimanganese complex

Michael Jennings, Kathryn E. Preuss* and Jian Wu

A spin-bearing bis-bidentate ligand, designed from a pyrimidyl-substituted R-CN₂S₂ neutral radical, is used to coordinate two Mn(II) metal centres yielding a thermally stable complex with antiferromagnetic coupling between the ligand-centred spin and the metal-centred spins, and thus an overall ferrimagnetic coupling scheme with a ground state $S = 9/2$.

344

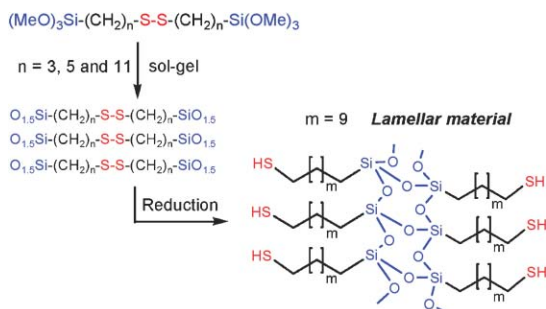


Relevance of electron transfer mechanism in electrocatalysis: the reduction of organic halides at silver electrodes

Abdirisak A. Isse, Luigi Falciola, Patrizia R. Mussini and Armando Gennaro*

The catalytic activity of Ag towards reduction of organic halides (RX) is linked to the mechanism of dissociative electron transfer to RX, the concerted process being always catalysed.

347



An original synthesis of highly ordered organosilica with a high content of thiol groups

Johan Alauzun, Ahmad Mehdi,* Catherine Reyé and Robert J. P. Corriu*

An innovative synthesis of highly mercaptoalkyl functionalised ordered silica was achieved by hydrolysis and polycondensation of α,ω -bis(trimethoxysilyl)alkanes with disulfide core thanks to hydrophobic van der Waals type interactions followed by the reduction of disulfides units in thiols groups. It was shown that, the SH functional groups are fully accessible for adsorption of mercury(II) ions from aqueous solutions.

ADDITIONS AND CORRECTIONS

350

Yasuhiro Shiraishi, Masatsugu Morishita and Takayuki Hirai

Acetonitrile-assisted highly selective photocatalytic epoxidation of olefins on Ti-containing silica with molecular oxygen

Philippe Lesot, Olivier Lafon, Henri B. Kagan and Chun-An Fan

Study of molecular rotational isomerism using deuterium NMR in chiral oriented solvents

AUTHOR INDEX

- Alauzun, Johan, 347
 Altindal, Ahmet, 320
 Anderson, Oren P., 308
 Auer, Gertrud, 311
 Azam, A. T. M. Zafrul, 335
 Back, Thomas G., 326
 Bailey, Patrick D., 323
 Baker, Gary A., 272
 Baker, Sheila N., 272
 Baruah, Mukulesh, 266
 Bekaroğlu, Özer, 320
 Blake, Alexander J., 317
 Blanchard, Philippe, 275
 Boens, Noël, 266
 Boltalina, Olga V., 308
 Boyd, C. A. Richard, 323
 Bricout, Hervé, 296
 Brody, Steven L., 329
 Burrell, Anthony K., 272
 Ceyhan, Tanju, 320
 Chen, Chun-Yen, 263
 Cheng, Chiu-Ting, 263
 Chiu, Hsin-Tien, 263
 Chou, Pi-Tai, 263
 Chou, Yi-Hsuan, 263
 Collier, Ian D., 323
 Corriu, Robert J. P., 347
 Coulombel, Lydie, 322
 Dadwal, Mamta, 338
 Davis, Jason, 287
 Dehaen, Wim, 266
 Denehy, Emma, 314
 Dong, Weibing, 305
 Duñach, Elisabet, 332
 Erbil, Mehmet K., 320
 Falcicola, Luigi, 344
 Férey, Gérard, 284
 Forano, Claude, 290
 Frère, Pierre, 275
 Fujihara, Hisashi, 302
 Galian, Raquel E., 257
 Garcia-Medina, Raquel, 329
 Gennaro, Armando, 344
 George, John P., 323
 Ghanbaja, Jaafar, 290
 Gokel, George W., 329
 Goto, Tomotaka, 302
 Gottlieb, D., 260
 Grunwald, C., 260
 Handy, Scott T., 299
 Howard, Judith A. K., 269, 278
 Hu, Gang, 287
 Hu, Xiang-Ping, 293
 Huang, Jia-Di, 293
 Huo, Cheng, 281
 Isse, Abdirisak A., 344
 Jennings, Michael, 341
 Jin, Kun, 305
 Kareev, Ivan E., 308
 Keizer, Timothy S., 272
 Kellett, George L., 323
 Komine, Yusuke, 302
 Kuhlmann, J., 260
 Kuvychko, Igor V., 308
 Laferrère, Marie, 257
 Lai, Chih-Wei, 263
 Lebedkin, Sergei F., 308
 Leevy, W. Matthew, 329
 Léger, Bastien, 296
 Leriche, Philippe, 275
 Levillain, Eric, 275
 Li, Guanghua, 305
 Liu, Xiaoyang, 305
 Mabon, Gilles, 275
 Marin-Becerra, Armando, 317
 Maurel, Vincent, 257
 McCleskey, T. Mark, 272
 McIntyre, Garry J., 278
 McMaster, Jonathan, 317
 Mehdi, Ahmad, 347
 Mellot-Draznieks, Caroline, 284
 Meredith, David, 323
 Millange, Franck, 284
 Miller, Susie M., 308
 Mobin, Shaikh M., 338
 Mohan, Renu, 338
 Monflier, Eric, 296
 Morgan, Keith M., 323
 Moriguchi, Tomohisa, 335
 Mussini, Patrizia R., 344
 Namboothiri, Irishi N. N., 338
 Nowak, C., 260
 Nowicki, Audrey, 296
 Oestreich, Martin, 311
 O'Hare, Dermot, 287
 Özkaya, Ali Riza, 320
 Pajewski, Robert, 329
 Panda, Dulal, 338
 Parker, Andrew D. M., 269
 Pettecrew, Rachel, 323
 Preuss, Kathryn E., 341
 Price, Richard A., 323
 Qin, Wenwu, 266
 Radosavljevic-Evans, Ivana, 269
 Reyé, Catherine, 347
 Rohand, Taoufik, 266
 Rolland, Jean-Paul, 296
 Roncali, Jean, 275
 Roucoux, Alain, 296
 Rowsell, Jesse L. C., 278
 Russell, Jennifer M., 269
 Salih, Bekir, 320
 Scaiano, J. C., 257
 Schlesinger, Paul H., 329
 Schröder, Martin, 317
 Scott, Brian L., 272
 Senge, Mathias O., 243
 Serre, Christian, 284
 Sesto, Rico E. Del, 272
 Shinozuka, Kazuo, 335
 Spencer, Elinor C., 278
 Steed, Jonathan W., 269
 Stenson, Philip A., 317
 Strauss, Steven H., 308
 Sun, Licheng, 305
 Surblé, Suzy, 284
 Tian, Wenjing, 281
 Ueda, Ikuko, 302
 Vial, Stephanie, 290
 Waldmann, H., 260
 Wang, Fujun, 305
 Wang, Mei, 305
 Wang, Nan, 287
 Wang, Yue, 281
 Weïwer, Michel, 332
 White, Jonathan M., 314
 Williams, Spencer J., 314
 Wilson, Claire, 317
 Wu, Jian, 341
 Wu, Kun-Chan, 263
 Wu, Pei-Wen, 263
 Yaghi, Omar M., 278
 Zeng, Qing-Heng, 293
 Zhai, Huimin, 326
 Zhang, Hongyu, 281
 Zhang, Jingying, 281
 Zhang, Peng, 281
 Zhang, Yanan, 299
 Zhang, Yong, 296
 Zheng, Zhuo, 293

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.

RSS 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).

RSC Nanoscience & Nanotechnology Series

A new series from the Royal Society of Chemistry

Series Editors:

Professor Sir Harry Kroto, *University of Sussex, UK*
Professor Paul O'Brien, *University of Manchester, UK*
Professor Harold Craighead, *Cornell University, USA*

Main Features

- covers the wide ranging areas of nanoscience and nanotechnology
- a comprehensive source of information on research associated with nanostructured materials and miniaturised lab on a chip technologies
- information on characterisation, performance and properties of materials and technologies associated with miniaturised lab on a chip systems
- coverage of the interface of chemistry with subjects such as materials science, engineering, biology, physics and electronics
- focus on potential applications and future developments of the materials and devices
- fully referenced to primary literature

Readership

Market professionals and researchers in academia and industry

Market

Materials Science
Applied and Physical Chemistry
Inorganic Chemistry
Polymers and Materials

Format

Hardcover

First title in the series

Nanotubes and Nanowires

C. N. R. Rao and A. Govindaraj

Provides a comprehensive and up-to-date survey of the research areas of carbon nanotubes, inorganic nanotubes and nanowires including: synthesis; characterisation; properties; applications

Nanotubes and Nanowires includes an extensive list of references and is ideal both for graduates needing an introduction to the field of nanomaterials as well as for professionals and researchers in academia and industry.

0854048324 | 262 pages | 2005 | £89.95

