**Cover (far left)**

"Not Always So" is the title of this work of art (by Hamid R. Hoveyda). It symbolizes the endless circle of search for better answers and the unpredictability of Nature and its complex laws, revealed in varying identity of optimal chiral catalysts (pp. 1779–1785).

Inside cover (left)

Half-sandwich arene ruthenium(II)-enzyme complex (pp. 1786–1787), funding acknowledged from COST.



contents

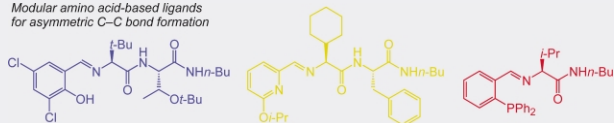
FEATURE ARTICLE

1779

Small peptides as ligands for catalytic asymmetric alkylations of olefins. Rational design of catalysts or of searches that lead to them?

Amir H. Hoveyda,* Alexander W. Hird and Monica A. Kacprzynski

Modular amino acid-based ligands
for asymmetric C–C bond formation



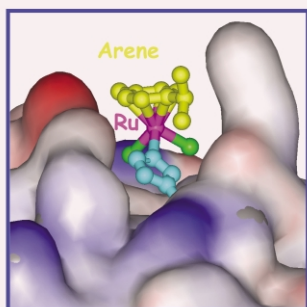
A readily available class of small peptides effectively promote a wide range of enantioselective C–C bond forming reactions. These modular ligands readily lend themselves to screening strategies, which together with mechanistic principles, can be used to design a pathway leading to identification of optimal chiral catalysts.

COMMUNICATIONS

1786

Half-sandwich arene ruthenium(II)-enzyme complex

Iain W. McNae, Katy Fishburne, Abraha Habtemariam, Tina M. Hunter, Michael Melchart, Fuyi Wang, Malcolm D. Walkinshaw and Peter J. Sadler

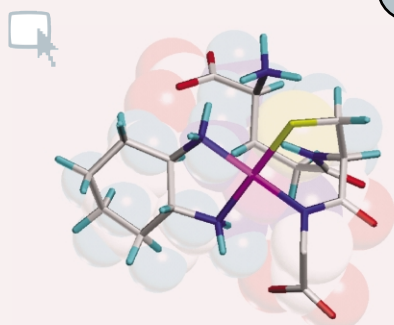


The first X-ray crystal structure of an organometallic ruthenium(II) half-sandwich complex of a protein (the enzyme lysozyme) is reported.

1788

Palladium(II) diamine complex induces reduction of glutathione disulfide

Vivienne P. Munk and Peter J. Sadler*



Surprisingly, oxidised glutathione is readily reduced by [Pd(1*R*,2*R*-diaminocyclohexane)Cl₂] in aqueous solution, giving a Pd^{II} glutathione complex as a product.

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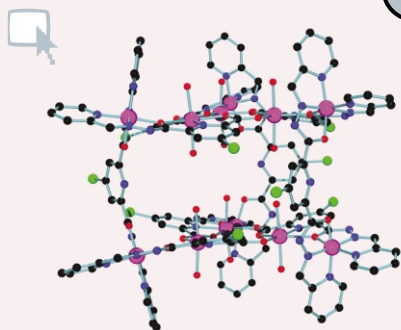
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1790

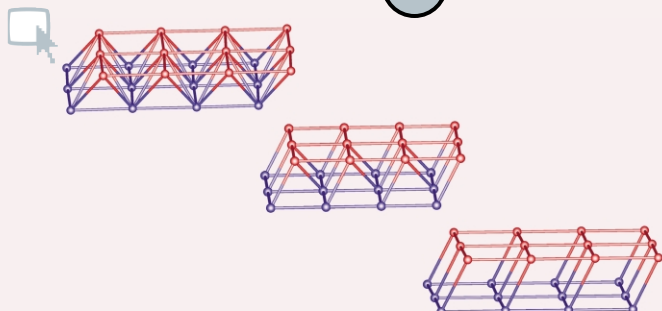


Self-assembly by ligand disassembly?—formation of an unusual dodecanuclear [Co(II)₆Co(III)₆] cluster

Victoria A. Milway, Laurence K. Thompson* and David O. Miller

A 'tritopic' picolyl-dihydrazone ligand partially hydrolyzes in the presence of Co(II) in air to the corresponding mono-carboxylate, which produces a novel dodecanuclear mixed ligand Co(II)–Co(III) cluster by self-assembly.

1792



Unprecedented bilayer topologies in 5- and 6-connected framework polymers

Robert J. Hill, De-Liang Long, Mark S. Turvey, Alexander J. Blake, Neil R. Champness,* Peter Hubberstey,* Claire Wilson and Martin Schröder*

Three bilayer structures with unprecedented 6-connected topology and a single example of a bilayer structure with 5-connected topology have been generated by co-ordination of 4,4'-bipyridine-*N,N'*-dioxide at La(III), Yb(III) or Er(III) nodes.

1794

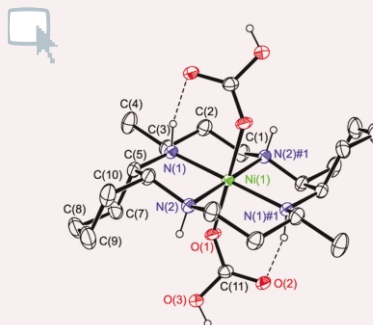


Atomic resolution analyses of the binding of xylobiose-derived deoxynojirimycin and isofagomine to xylanase Xyn10A

Tracey M. Gloster, Spencer J. Williams, Shirley Roberts, Chris A. Tarling, Jacqueline Wicki, Stephen G. Withers and Gideon J. Davies*

The atomic resolution structures of xylobiose-derived isofagomine and xylobiose-derived deoxynojirimycin in complex with the xylanase Xyn10A from *Streptomyces lividans* reveal undistorted ⁴C₁ chair conformed sugars and, in the case of the deoxynojirimycin analogue, suggest unusual p*K*_a changes of the enzyme's catalytic machinery upon binding.

1796

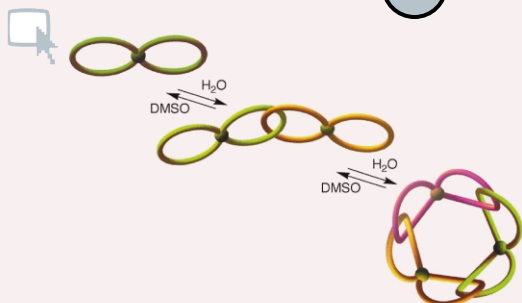


Isolation and characterization of the first stable bicarbonato complex in a nickel(II) system: identification of unusual monodentate coordination

Ju Chang Kim,* Jaeheung Cho, Hyojin Kim and Alan J. Lough

A stable octahedral nickel(II) complex containing monodentate bicarbonate groups was prepared by taking advantage of the tetraaza macrocycle having *cis* fused cyclohexane rings and the directionality of pre-organized N–H groups for the stabilization of bicarbonate ligands.

1798

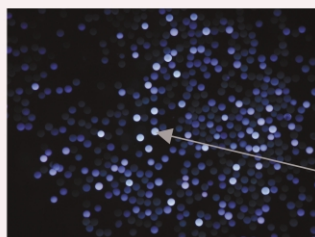


A circular tris[2]catenane from molecular 'figure-of-eight'

Akiko Hori, Ken-ichi Yamashita, Takahiro Kusukawa, Akihiko Akasaka, Kumar Biradha and Makoto Fujita*

A 'figure-of-eight'-shaped molecule with Pd(II) at the node was self-assembled into an unprecedented circular tris[2]catenane *via* reversible double catenation at both loops of the 'figure-of-eight molecule'.

1800



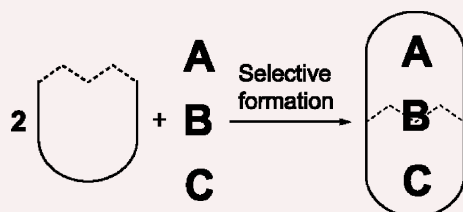
bead with acid rich peptide

Peptide damage under Fenton conditions is sequence-dependent

Matthias Nold and Helma Wennemers*

Peptides with two or more acidic amino acids are damaged to a greater extent than other peptides under Fenton conditions as revealed by treating a 29791 membered one-bead-one-compound peptide library with FeCl_3 , sodium ascorbate and hydrogen peroxide.

1802

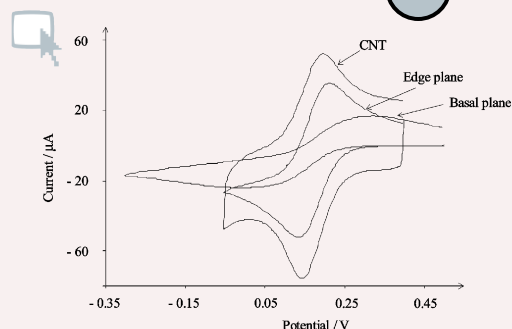


Coencapsulation of three different guests in a cylindrical host

Toru Amaya and Julius Rebek, Jr.*

Combinations of anions and organic solvent molecules were screened to give encapsulation complexes with three different guests inside.

1804



Investigation of modified basal plane pyrolytic graphite electrodes: definitive evidence for the electrocatalytic properties of the ends of carbon nanotubes

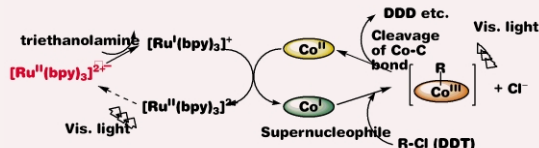
Craig E. Banks, Ryan R. Moore, Trevor J. Davies and Richard G. Compton*

The widely reported 'electrocatalysis' by multi-wall carbon nanotube-modified electrode is shown to reside in electron transfer from the ends of the tubes which structurally resemble edge plane graphite.

1806

Photochemical dechlorination of DDT catalyzed by a hydrophobic vitamin B₁₂ and a photosensitizer under irradiation with visible light

Hisashi Shimakoshi, Mami Tokunaga, Tatsushi Baba and Yoshio Hisaeda*

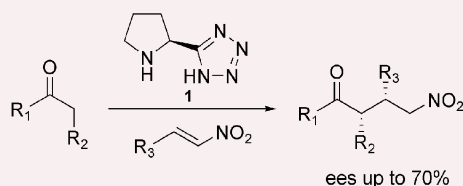


Dechlorination of 1,1-bis(4-chlorophenyl)-2,2,2-trichloroethane (DDT) was catalyzed by a hydrophobic vitamin B₁₂, heptamethyl cobyrinate perchlorate, with a visible light irradiation system containing a $[\text{Ru}(\text{II})(\text{bpy})_3]\text{Cl}_2$ photosensitizer, and the hydrophobic vitamin B₁₂ showed high catalytic efficiency and stability during the reaction.

1808

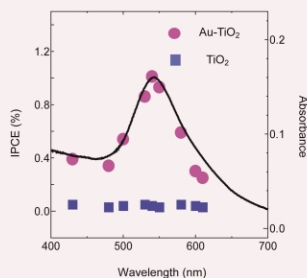
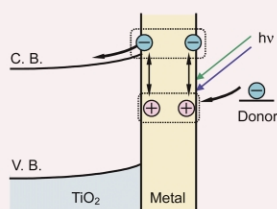
5-Pyrrolidin-2-yltetrazole as an asymmetric organocatalyst for the addition of ketones to nitro-olefins

Alexander J. A. Cobb, Deborah A. Longbottom, David M. Shaw and Steven V. Ley*



Organocatalyst **1** has been applied to the asymmetric Michael addition of a range of ketones to numerous nitro-olefins with marked improvements in enantioselectivity and yield over L-proline itself.

1810

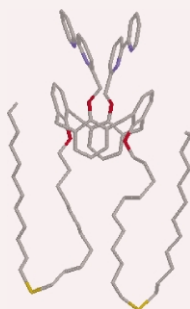


Plasmon-induced photoelectrochemistry at metal nanoparticles supported on nanoporous TiO₂

Yang Tian and Tetsu Tatsuma*

Nanoporous TiO₂ films loaded with commercially available or photocatalytically deposited gold and silver nanoparticles exhibit negative potential changes and anodic currents in response to visible light irradiation.

1812

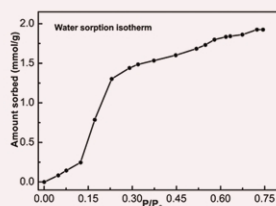
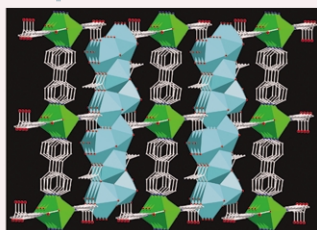


Self-assembling, patterning and SPR imaging of a 1,3 alternate bis(dipyridyl)calix[4]arene derivative-Cu²⁺ complex immobilized on to Au(111) surfaces

Giuseppe Arena,* Annalinda Contino, Elisa Longo, Carmelo Sgarlata, Giuseppe Spoto* and Valeria Zito

The electrochemically switchable Cu²⁺ complex of a 1,3 alternate bis(dipyridyl)calix[4]arene derivative forms self-assembled monolayers on Au(111) surface. The receptor is patterned on the surface by using microcontact printing procedures and the resulting surface is imaged *via* SPR imaging.

1814

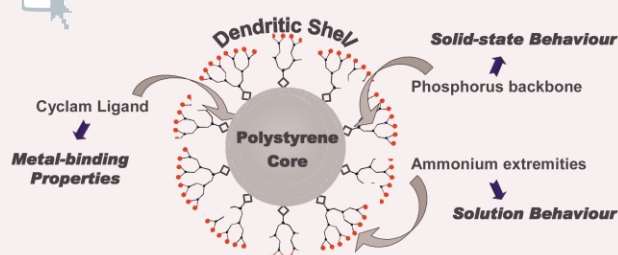


Construction of a microporous inorganic-organic hybrid compound with uranyl units

Zhen-Tao Yu, Zuo-Lei Liao, Yu-Sheng Jiang, Guang-Hua Li, Guo-Dong Li and Jie-Sheng Chen*

A uranium-nickel-organic coordination network with micropores constructed from polyoxouranium ribbons and Ni metal-organic layers has been prepared and characterized.

1816

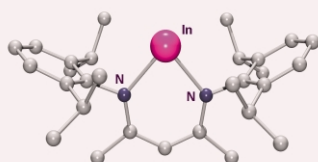


Giant dendrimer-like particles from nanolatexes

Chantal Larpent,* Cécile Geniès, Anne Paula De Sousa Delgado, Anne-Marie Caminade, Jean-Pierre Majoral, Jean-François Sassi and Frédéric Leising

Dendronized nanoparticles are obtained by attaching dendrons to cyclam-functionalized nanolatexes; the polycationic phosphorus-containing dendritic shell improves the solution and solid-state stability while the metal-binding capacity of the polymer core is retained.

1818

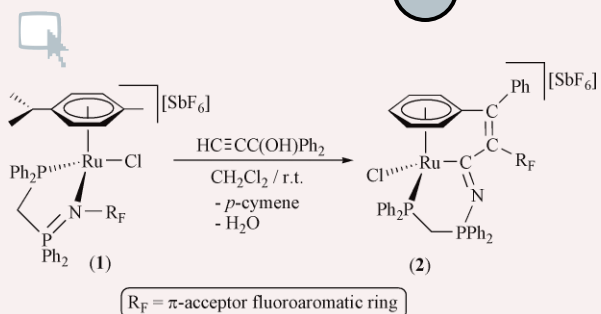


A mononuclear indium(I) carbene analogue

Michael S. Hill* and Peter B. Hitchcock

The 'one pot' reaction between K[N(SiMe₃)₂], InI and the β-diimine ligand precursor [H(NDippCMe)₂CH] (Dipp = C₆H₃Pr^{1-2,6}) produced [In{(NDippCMe)₂CH}] **1**, the first example of a two-coordinate, neutral, In(I) singlet 'carbene analogue'.

1820

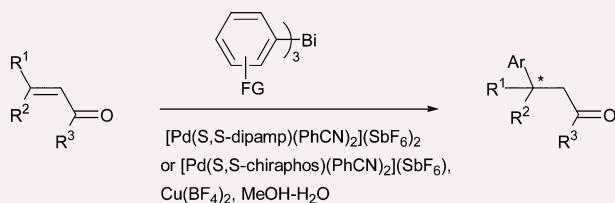


A new class of tethered-arene ruthenium(II) complexes with pendant P and C donor atoms: synthesis of $\eta^6:\eta^1:\eta^1$ phosphonio-azabutadienyl ruthenabicycles *via* allenylidene intermediates

Victorio Cadierno,* Josefina Díez, Joaquín García-Álvarez and José Gimeno*

The unprecedented tethered (η^6 -arene)–ruthenium(II) complexes **2** have been prepared by activation of 1,1-diphenyl-2-propyn-1-ol with compounds **1**, *via* an intramolecular allenylidene–iminophosphorane coupling.

1822

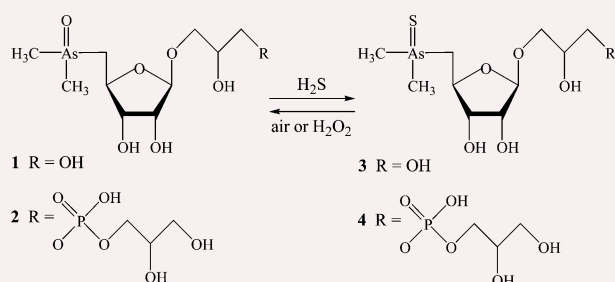


Asymmetric 1,4-addition of triarylbismuths to enones catalyzed by dicationic palladium(II) complexes

Takashi Nishikata, Yasunori Yamamoto and Norio Miyaura*

An asymmetric synthesis of β -arylketones *via* palladium-catalyzed 1,4-addition of triarylbismuths to α,β -unsaturated ketones has been developed. Chiral phosphine–dicationic palladium(II) complexes such as [Pd(P–P)(PhCN)₂](SbF₆)₂ (P–P = *S,S*-dipamp or *R,R*-chiraphos) gave optically active β -arylketones with 90–95% ee for 2-cyclopentenone, 74–94% ee for 2-cyclohexenone, 80–89% ee for acyclic enones.

1824

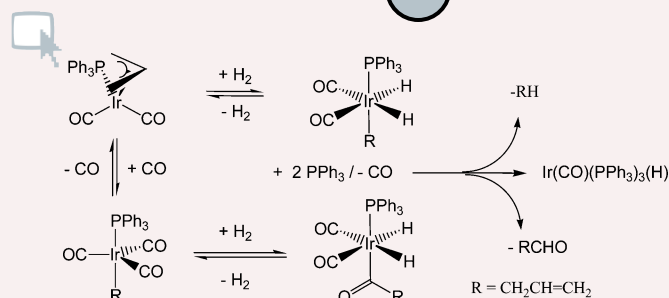


This arsenosugars identified as natural constituents of mussels by liquid chromatography-mass spectrometry

Ernst Schmeisser, Reingard Raml, Kevin A. Francesconi,* Doris Kuehnelt, Anna-Lena Lindberg, Csilla Sörös and Walter Goessler

Two novel thio arsenosugars identified in mussels may be widespread marine arsenicals which have until now escaped detection because of their ready conversion to arsine oxides.

1826

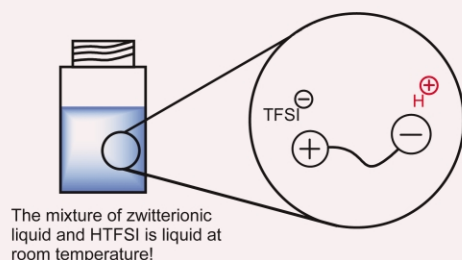


New perspectives in hydroformylation : a *para*-hydrogen study

Cyril Godard, Simon B. Duckett,* Céline Henry, Stacey Polas, Robert Toose and Adrian C. Whitwood

NMR studies on the reaction of Ir(CO)(PPh₃)₂(η^3 -C₃H₅) with *para*-H₂ and CO enable the complete mapping of the hydroformylation mechanism for an iridium monohydride catalyst *via* the detection of species which include iridium acyl and alkyl dihydride intermediates.

1828



Anhydrous proton transport system based on zwitterionic liquid and HTFSI

Masahiro Yoshizawa and Hiroyuki Ohno*

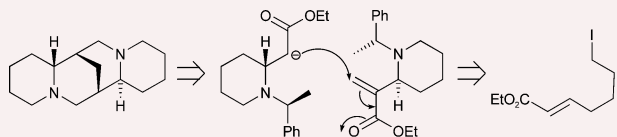
Novel binary ionic liquids based on zwitterionic liquid and HTFSI for anhydrous proton transport were prepared and showed ionic conductivity of about 10^{-2} S cm⁻¹ at 150 °C and a zwitterionic liquid content of 60 mol%.

1830



Concise asymmetric synthesis of (–)-sparteine

Jean-Paul R. Hermet, Matthew J. McGrath, Peter O'Brien,* David W. Porter and John Gilday



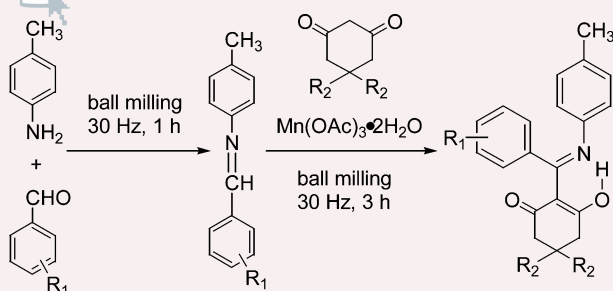
A six-step asymmetric synthesis of natural (–)-sparteine from ethyl 7-iodohept-2-enoate is reported, involving a connective Michael addition of an amino ester-derived enolate to an α,β -unsaturated amino ester.

1832



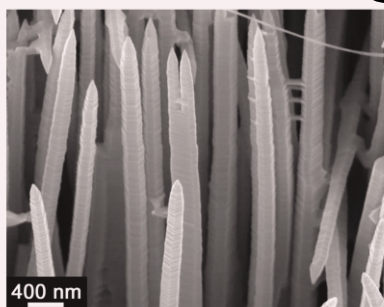
Solid-state radical reactions of 1,3-cyclohexanediones with *in situ* generated imines mediated by manganese(III) acetate under mechanical milling conditions

Ze Zhang, Guan-Wu Wang,* Chun-Bao Miao, Ya-Wei Dong and Ye-Bing Shen



Novel manganese(III) acetate-mediated solid-state radical additions of 1,3-cyclohexanediones to *in situ* generated imines were performed by mechanical milling for the first time. Under these conditions, products with interesting structure were achieved in good to excellent yields.

1834



Synthesis of blue-light-emitting ZnGa₂O₄ nanowires using chemical vapor deposition

Seung Yong Bae, Hee Won Seo, Chan Woong Na and Jeunghye Park*

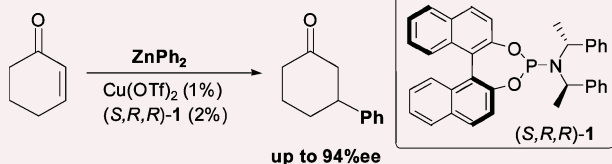
The high-density arrays of vertically aligned ZnGa₂O₄ nanowires are reported; these are synthesized on the Au nanoparticles-deposited Si substrates *via* the sample CVD of a ZnO–Ga mixture at 1000°C.

1836



Highly enantioselective Cu-catalysed asymmetric 1,4-addition of diphenylzinc to cyclohexenone

Diego Peña, Fernando López, Syuzanna R. Harutyunyan, Adriaan J. Minnaard* and Ben L. Feringa*

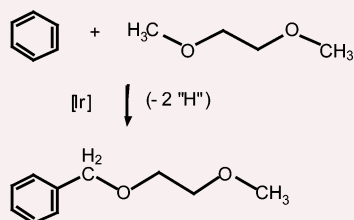


Highly enantioselective Cu-catalysed 1,4-addition of diphenylzinc to cyclohexenone has been achieved for the first time using a monodentate phosphoramidite ligand.

1838

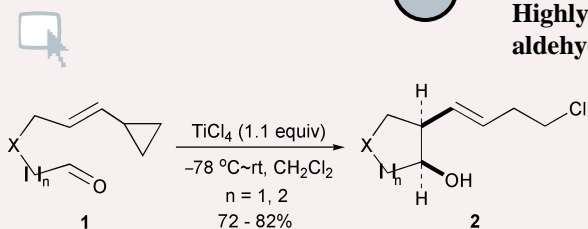
Iridium solutes effect C–H bond activation and C–C bond forming reactions of C₆H₆–MeOCH₂CH₂OMe solvent mixtures

Margarita Paneque,* Manuel L. Poveda, Laura L. Santos, Verónica Salazar and Ernesto Carmona*



The *in situ* generated [Tp^{Me2}Ir(C₆H₅)₂] fragment induces both aromatic and aliphatic C–H bond activation reactions, along with C–C bond formation, when heated with benzene and 1,2-dimethoxyethane.

1840

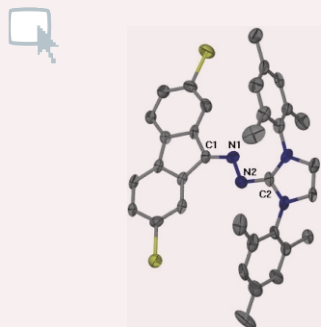


Highly diastereoselective Prins-type cyclisation of cyclopropylvinyl aldehydes mediated by TiCl_4

Chan-Mo Yu,* Seok-Keun Yoon, Young-Taek Hong and Jimin Kim

A novel intramolecular Prins type cyclisation of cyclopropylvinyl aldehydes **1** promoted by TiCl_4 under mild reaction conditions to form *cis*-cyclic products **2** in high yields has been accomplished.

1842

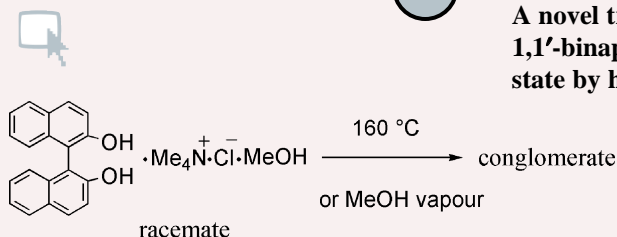


Azines possessing strong push–pull donors/acceptors

Dharinee D. Choytun, Lisa D. Langlois, Thomas P. Johansson, Charles L. B. Macdonald,* Gary W. Leach, Noham Weinberg and Jason A. C. Clyburne*

Azines with strong push–pull substituents show structural trends consistent with delocalisation within the $\text{R}_2\text{C}=\text{N}=\text{N}=\text{CR}_2$ framework.

1844

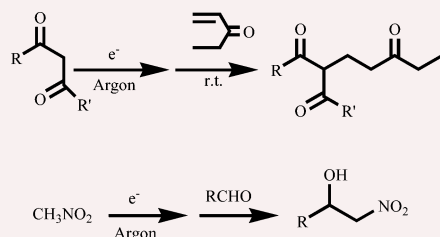


A novel transformation of a 1 : 1 : 1 racemic complex of 2,2'-dihydroxy-1,1'-binaphthyl, $\text{Me}_4\text{N}^+ \text{Cl}^-$ and MeOH into a conglomerate in the solid state by heating or contact with MeOH vapour

Kazuhiro Yoshizawa, Shinji Toyota and Fumio Toda*

The title racemate-to-conglomerate transformation in the solid state occurred on heating or contact with MeOH vapour. Contact of a mixture of powdered racemic 2,2'-dihydroxy-1,1'-binaphthyl and tetramethylammonium chloride with MeOH vapour also gave the conglomerate complex.

1846

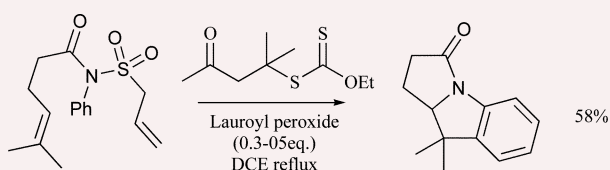


An innovative strategy for electrochemically-promoted addition reactions

Laura Palombi,* Marta Feroci, Monica Orsini and Achille Inesi*

Cathodic electroactivation of suitable C–H acid-containing compounds has been accomplished under galvanostatic conditions, avoiding both the solvent and supporting electrolyte addition to the cell compartments. An inexpensive and selective electro-synthesis of Michael adducts and 2-nitroalcohols has been designed.

1848



A new, practical access to amidyl radicals

Cécile Moutrille* and Samir Z. Zard

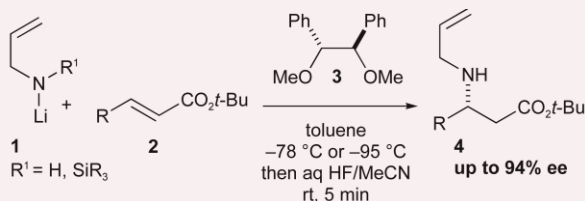
Amidyl radicals are readily generated from *N*-allylsulfonimides by the action of a xanthate and a small amount of a peroxide as initiator. The process involves extrusion of sulfur dioxide from an *N*-amidosulfonyl radical by rupture of the nitrogen–sulfur bond; in some cases, the *N*-amidosulfonyl radical is prematurely captured by the internal olefinic trap.

1850

***N*-Allyl-*N*-*tert*-butyldimethylsilylamine for chiral ligand-controlled asymmetric conjugate addition to *tert*-butyl alkenoates**

Hirohisa Doi, Takeo Sakai, Ken-ichi Yamada and Kiyoshi Tomioka*

A chiral ligand **3** mediated an asymmetric addition of lithium allylamide **1** to alkenoates **2** giving 3-aminoalkanoates **4** with high enantioselectivity up to 94% ee.

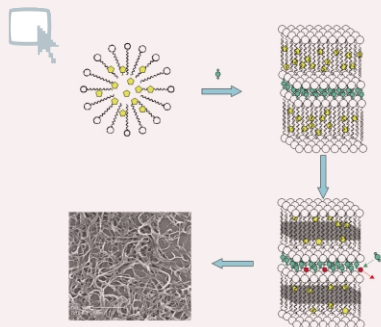


1852

Inorganic/organic mesostructure directed synthesis of wire/ribbon-like polypyrrole nanostructures

Xuetong Zhang, Jin Zhang,* Zhongfan Liu* and Colin Robinson

A simple strategy for the synthesis of wire/ribbon-like polypyrrole nanostructures using lamellar inorganic/organic mesostructures as templates was described. The template was formed during polymerization between surfactant cations and oxidising anions and degraded automatically after polymerization.

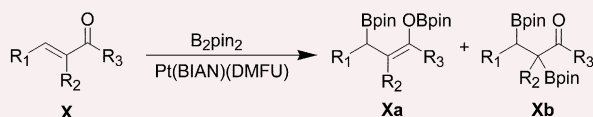


1854

Platinum catalysed 3,4- and 1,4-diboration of α,β -unsaturated carbonyl compounds using *bis*-pinacolatodiboron

Nathan J. Bell, Andrew J. Cox, Neil R. Cameron, John S. O. Evans, Todd B. Marder,* Marcel A. Duin, Cornelis J. Elsevier, Xavier Baucherel, Arran A. D. Tulloch and Robert P. Tooze

Bis-pinacolatodiboron reacts with α,β -unsaturated carbonyl compounds to give 1,4- and unprecedented 3,4-additions in the presence of a second generation Pt(0) catalyst at ambient temperature.

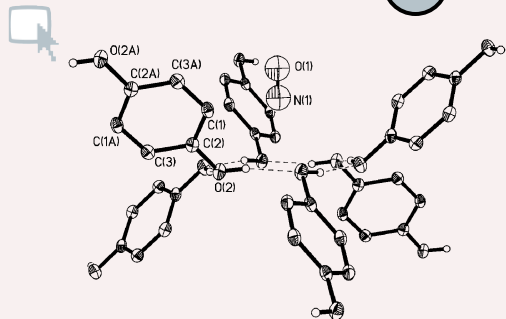


1856

Spatiotemporal defined release of nitric oxide

Navamoney Arulsamy, D. Scott Bohle,* Jeffrey L. Butikofer, Peter W. Stephens and Gordon T. Yee

Biomimetic spatiotemporally resolved NO donation is possible from soluble supramolecular host-guest phases such as the β -quinol NO clathrate.

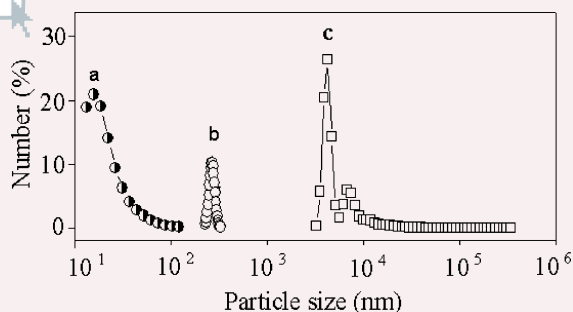


1858

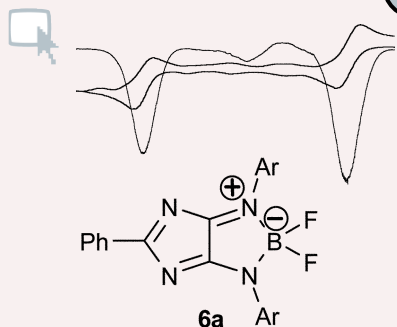
Formation of a novel type of reverse microemulsion system and its application in synthesis of the nanostructured $\text{La}_{0.95}\text{Ba}_{0.05}\text{MnAl}_{11}\text{O}_{19}$ catalyst

Fei Teng, Jinguang Xu, Zhijian Tian,* Junwei Wang, Yunpeng Xu, Zhusheng Xu, Guoxing Xiong* and Liwu Lin

A novel reverse microemulsion system was formed with water, iso-propanol and *n*-butanol, and the nanostructured catalyst with higher surface area and activity was synthesized in the system.



1860

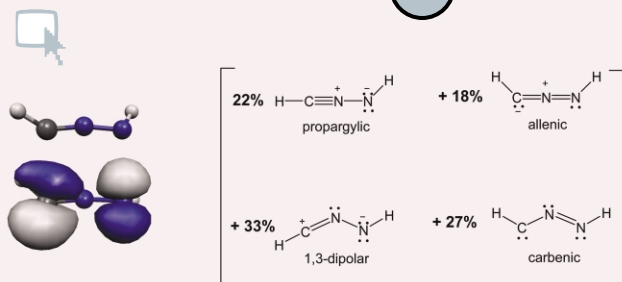


Mesoionic bora-tetraazapentalenes – fully reversible two step redox systems

Tillmann Gebauer, Rainer Beckert,* Dieter Weiß, Katrin Knop, Christian Käpplinger and Helmar Görls

Synthesis and characterization of a new class of 1,3,2-diazaborolidines is described. These compounds can be considered to be a hybrid between the fluorophore of difluoroboradiaza-*s*-indacenes and the redoxactive violine in *N,N'*-2,2'-bipyridylboronium cations.

1862

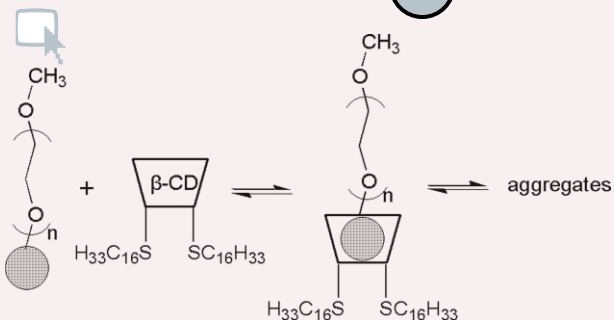


The electronic structure of nitrilimines revisited

Robert C. Mawhinney, Heidi M. Muchall* and Gilles H. Peslherbe*

A combination of density-functional theory and natural resonance theory has been used to show that a complete description of the electronic structure of nitrilimines, R^1CNNR^2 , requires four resonance structures (propargylic, allenic, 1,3-dipolar and carbenic). Appropriate substituents were shown to enhance the carbene character of nitrilimines to the point where they may be considered stable carbenes.

1864

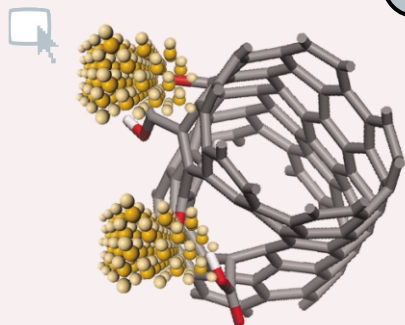


Hierarchical self-assembly of noncovalent amphiphiles

Yan Liu, Jun Xu and Stephen L. Craig*

Amphiphiles defined by noncovalent inclusion complexes between an alkylated β -cyclodextrin and PEG-conjugated guests assemble into higher-ordered structures whose thermodynamic stability reflects that of the defining intermolecular interactions.

1866

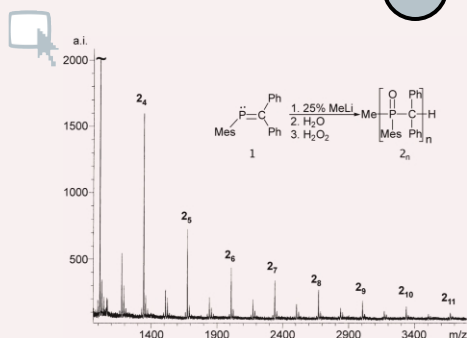


Formation of CdSe nanocrystals onto oxidized, ozonized single-walled carbon nanotube surfaces

Sarbajit Banerjee and Stanislaus S. Wong*

We present the *in situ* formation of crystalline CdSe quantum dots on the surfaces of oxidized, ozonized single-walled carbon nanotubes, which is a rational synthetic route to the synthesis of complex hierarchical assemblies.

1868



Analysis of the products of the anionic oligomerisation of a phosphalkene using MALDI-TOF mass spectrometry

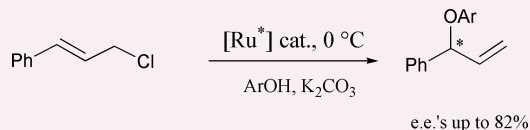
Bronwyn H. Gillon and Derek P. Gates*

Ambient temperature reaction of MeLi with the phosphalkene **1** (4 equiv.) gives short-chain oligomers. Analysis of the oligomers by MALDI-TOF mass spectrometry reveals the presence of **2** ($n = 3-11$) with Me and H end groups, and confirms a linear chain growth mechanism. In addition, other linear and cyclic species were observed which suggest backbiting during oligomerization.

1870

First enantioselective allylic etherification with phenols catalyzed by chiral ruthenium bisoxazoline complexes

Mbaye D. Mbaye, Jean-Luc Renaud,* Bernard Demerseman and Christian Bruneau*

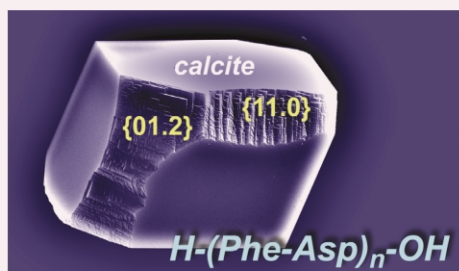


Regio- and enantioselective substitution of cinnamyl chloride by phenols has been achieved with high selectivities, using a ruthenium catalyst prepared from $[\text{Cp}^*(\text{CH}_3\text{CN})_3\text{Ru}][\text{PF}_6]$ and a chiral bisoxazoline ligand.

1872

Acidic peptides acting as growth modifiers of calcite crystals

Dirk Volkmer,* Marc Fricke, Thomas Huber and Norbert Sewald

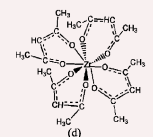
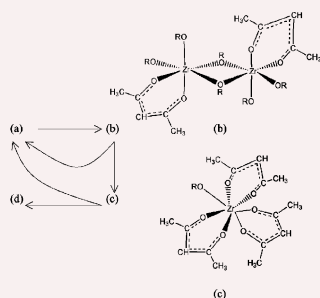
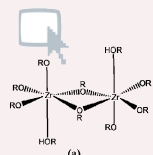


Small acidic peptides comprising a repeating Phe–Asp sequence motif exert control, *in vitro*, on the morphology of calcite crystals similar to natural proteins from calcified tissues.

1874

Stabilization and destabilization of zirconium propoxide precursors by acetylacetonone

Gerald I. Spijksma, Henny J. M. Bouwmeester, Dave H. A. Blank and Vadim G. Kessler*

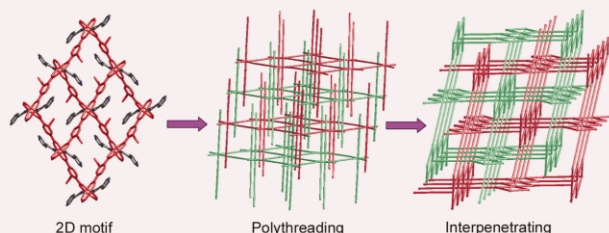


The stabilizing and destabilizing mechanism in the action of acetylacetonone on zirconium propoxide precursors in the synthesis of porous zirconia is revealed; the nature of heteroleptic intermediates provides an explanation.

1876

From arm-shaped layers to a new type of polythreaded array: a two fold interpenetrated three-dimensional network with a rutile topology

Chao Qin, Xinlong Wang, Lucia Carlucci, Mingliang Tong, Enbo Wang,* Changwen Hu and Lin Xu

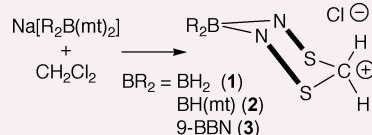


A new type of polythreaded network (2D → 3D) has been constructed from 2D motifs; more interestingly, when considering the strong hydrogen bonds between layers, the overall resulting network exhibits a fascinating 2-fold interpenetrated architecture with a rutile topology.

1878

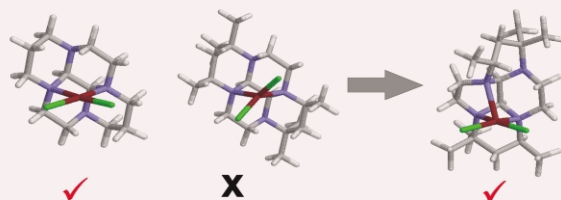
Caveats for poly(methimazolyl)borate chemistry: the novel inorganic heterocycles $[\text{H}_2\text{C}(\text{mt})_2\text{BR}_2]\text{Cl}$ (mt = methimazolyl; $\text{BR}_2 = \text{BH}_2$, $\text{BH}(\text{mt})$, 9-BBN)

Ian R. Crossley, Anthony F. Hill,* Elizabeth R. Humphrey, Matthew K. Smith, Never Tshabang and Anthony C. Willis



The reactions of poly(methimazolyl)borate salts with dichloromethane give rise to a new class of 8-membered inorganic heterocycle, three examples of which have been structurally characterised.

1880

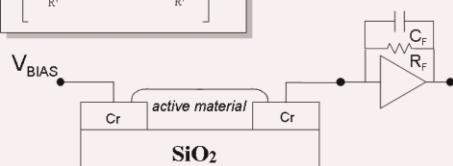
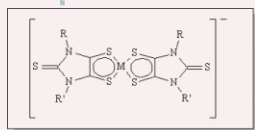


Rigidity extremes in coordination chemistry: a fine energetic balance in the isolation of a trapped ligand inversion intermediate

Caleb M. May, Stephen J. Archibald, Adam J. Bridgeman, Christopher J. Empson and Timothy J. Hubin*

An unusual copper(II) complex of a highly rigid and bulky ligand has been synthesized and investigated *via* DFT calculations and structural characterisation.

1882



Monoreduced $[M(R,R'timdt)_2]^-$ dithiolenes ($M = Ni, Pd, Pt$; $R,R'timdt =$ disubstituted imidazolidine-2,4,5-trithione): solid state photoconducting properties in the third optical fiber window

M. Carla Aragoni, Massimiliano Arca,* Mario Caironi, Carla Denotti, Francesco A. Devillanova, Emanuela Grigiotti, Francesco Isaia, Franco Laschi, Vito Lippolis, Dario Natali, Luca Pala, Marco Sampietro and Piero Zanello

Electrochemically generated monoreduced dithiolenes $[M(R,R'timdt)_2]^-$, showing an intense NIR electronic absorption, were exploited in a photodetector operating at a frequency of 85 kbit s^{-1} .

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