

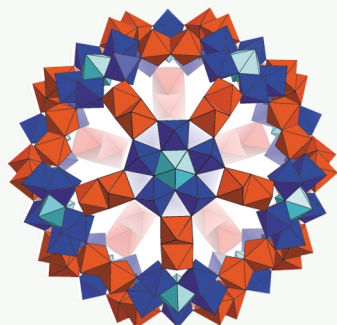
Cover (far left)
Arylene ethynylene macrocycles.

Inside cover (left)
Chemical ligation.

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FOCUS ARTICLE

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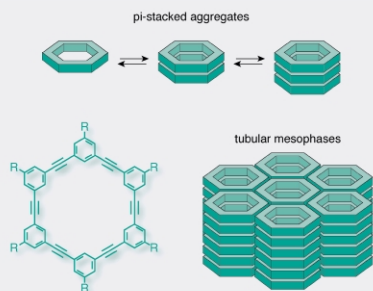
Bringing inorganic chemistry to life

Achim Müller

The author describes his studies of the intricate and versatile chemical behaviour of molybdenum and its oxides, creating self-assembling systems of molybdates in solution that can be regarded as inorganic 'nanomodels' for biological activity at the cellular level.

FEATURE ARTICLE

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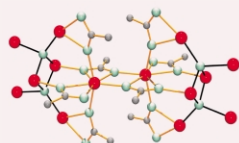
Shape-persistent arylene ethynylene macrocycles: syntheses and supramolecular chemistry

Dahui Zhao and Jeffrey S. Moore*

This article describes recent developments in the synthesis of macrocycles having rigid, monocyclic skeletons composed of arylene and ethynylene units and the studies on their self-assembling behavior.

COMMUNICATIONS

819



Octanuclearity and tetradecanuclearity in manganese chemistry: an octanuclear manganese(II)/(III) complex featuring the novel $[\text{Mn}_8(\mu_4\text{-O})_2(\mu_3\text{-OH})_2]^{14+}$ core and $[\text{Mn}_{10}^{\text{II}}\text{Mn}_4^{\text{III}}\text{O}_4(\text{O}_2\text{CMe})_{20}\{(2\text{-py})_2\text{C}(\text{OH})\text{O}\}_4]$ (2-py = 2-pyridyl)

Constantinos J. Milios, Elena Kefalloniti, Catherine P. Raptopoulou, Aris Terzis, Ramon Vicente, Nikolia Lalioti,* Albert Escuer* and Spyros P. Perlepes*

The first members of the $\text{Mn}_{10}^{\text{II}}\text{Mn}_4^{\text{III}}$ and $\text{Mn}_4^{\text{II}}\text{Mn}_4^{\text{III}}$ sub-families of clusters are reported; tetradecanuclearity is extremely unusual in 3d-metal chemistry.

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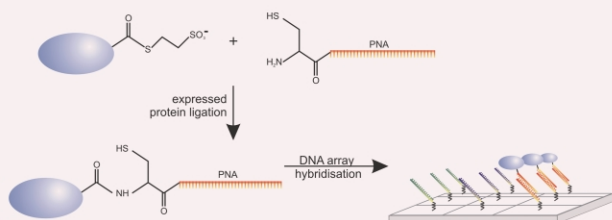
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Synthesis of protein–nucleic acid conjugates by expressed protein ligation

Marina Lovrinovic, Ralf Seidel, Ron Wacker, Hendrik Schroeder, Oliver Seitz, Martin Engelhard, Roger S. Goody and Christof M. Niemeyer*

The rapid and controlled covalent coupling of nucleic acids and bioactive proteins is achieved by expressed protein ligation. The resulting conjugates are versatile molecular tools for biochip technologies and nano sciences.

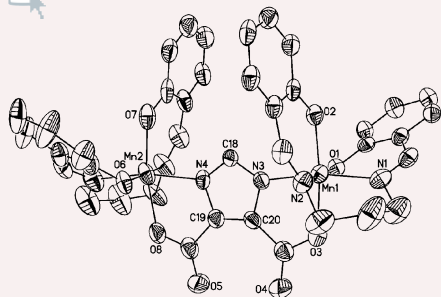


824

Isolation of the first ferromagnetically coupled Mn(III/IV) complex

T. M. Rajendiran, Martin L. Kirk,* Ika A. Setyawati, M. Tyler Caudle, Jeff W. Kampf and Vincent L. Pecoraro*

The imidazolate bridge in the $\text{Mn}_2(\text{III/IV})(\text{dtsalpn})_2\text{DCBI}$ induces a ferromagnetic exchange interaction between manganese ions resulting in an $S_T = 7/2$ ground state.

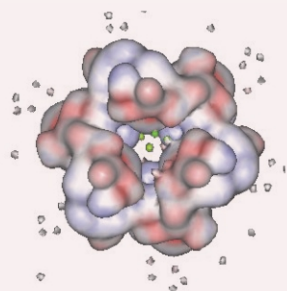


826

The structure of a self-assembled calixarene aqua-channel system

Anthony W. Coleman,* Eric Da Silva, Farid Nouar, Martine Nierlich and Alda Navaza*

The structure of a self-assembled calix-[4]-arene in the presence of propane diamine, water and ethanol into a dimeric structure of hexagonal units, each containing twelve calixarenes, containing an aqueous channel.

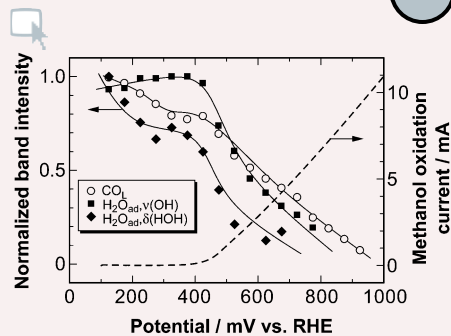


828

Adsorbed water for the electro-oxidation of methanol at Pt–Ru alloy

Takahiro Yajima, Noriaki Wakabayashi, Hiroyuki Uchida and Masahiro Watanabe*

Adsorbed water molecules which promote the methanol oxidation reaction at Pt–Ru alloy electrode are clearly detected for the first time by *in-situ* FTIR spectroscopy, which directly supports the “bi-functional mechanism”.

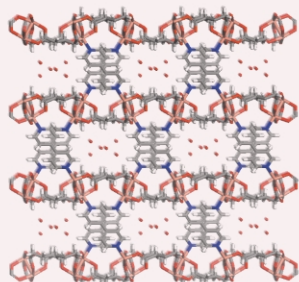


830

A 3D metal-organic network, $[\text{Cu}_2(\text{glutarate})_2(4,4'\text{-bipyridine})]$, that exhibits single-crystal to single-crystal dehydration and rehydration

Beth Rather and Michael J. Zaworotko*

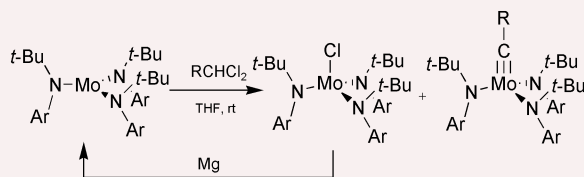
$\text{Cu}(\text{glutarate})_2$ forms 2D sheets that can be cross-linked by 4,4'-bipyridine and 1,2-bis(4-pyridyl)ethane, thereby forming open framework 3D networks **1** and **2**, respectively. Compound **1** (illustrated alongside) exhibits reversible desorption and adsorption of water molecules with retention of single crystallinity.



832

A reductive recycle strategy for the facile synthesis of molybdenum(VI) alkylidyne catalysts for alkyne metathesis

Wei Zhang, Stefan Kraft and Jeffrey S. Moore*

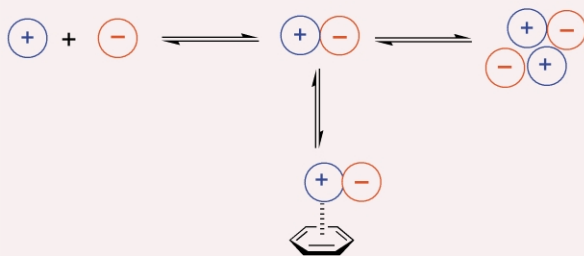


A convenient synthesis of trisamido molybdenum(VI) alkylidyne complexes has been developed, in which the key step is the addition of a geminal dichloride to a trisamido molybdenum(III) complex in the presence of magnesium to continuously recycle unwanted side product monochloride **4**, selectively generating the desired alkylidyne complexes in high yield.

834

The role of the counteranion in the cation- π interaction

Christopher A. Hunter,* Caroline M. R. Low, Carmen Rotger, Jeremy G. Vinter and Cristiano Zonta

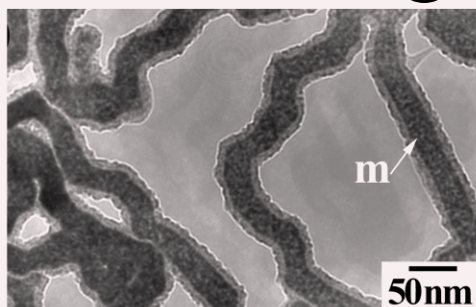


Chemical double mutant cycles have been used to quantify cation- π interactions in chloroform as a function of the nature of the counteranion. The cation- π interaction is $-2.5 \pm 0.4 \text{ kJ mol}^{-1}$ and independent of the anion, even though the overall stability of the complexes varies by an order of magnitude due to competition of the anion for alternative binding sites.

836

ZnS-Zn nanocables and ZnS nanotubes

Ying-Chun Zhu,* Yoshio Bando and Yoichiro Uemura

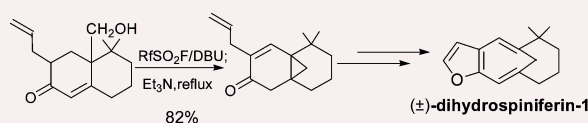


ZnS-Zn nanocables and ZnS nanotubes have been synthesized by a thermochemical process in a simple and safe way. The as-prepared nanocables consist of a single crystal Zn core with a diameter of 20 nm and a polycrystalline ZnS sheath with a thickness of 8 nm. The evaporation of the Zn core leads to the formation of ZnS nanotubes.

838

Total synthesis of (\pm)-dihydrospiniferin-1 via a polyfluoro alkanosulfonyl fluoride induced tandem carbonium ion rearrangement reaction

Ling Chen, Kai Ding and Wei-Sheng Tian*

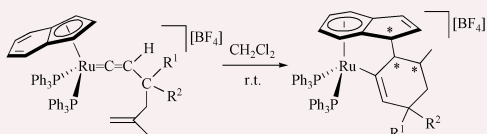


A novel polyfluoroalkanosulfonyl fluoride induced carbonium ion rearrangement reaction of γ -hydroxymethyl cyclohexenone has been used for the total synthesis of (\pm)-dihydrospiniferin-1.

840

Unexpected coupling between an η^5 -indenyl ligand and alkenyl-vinylidene fragments: synthesis of unprecedented (η^6 -indene)ruthenium(II) metallacycles

Victorio Cadierno, Salvador Conejero, Josefina Díez, M. Pilar Gamasa, José Gimeno* and Santiago García-Granda



Vinylidene complexes $[\text{Ru}\{\text{C}=\text{C}(\text{H})\text{CR}^1\text{R}^2\text{CH}_2\text{C}(\text{Me})=\text{CH}_2\}(\eta^5\text{-C}_9\text{H}_7)(\text{PPh}_3)_2][\text{BF}_4]$ undergo an intramolecular coupling process between the alkenyl-vinylidene fragment and the η^5 -indenyl ligand to afford unprecedented metallacyclic compounds in which the resulting functionalised indene unit is η^6 -coordinated to the metal.

842

Characterization of sulfur exchange reaction between polysulfides and elemental sulfur using a ^{35}S radioisotope tracer method

Shigeru Yamada, Danhong Wang, Songri Li, Megumi Nishikawa, Eika Weihua Qian, Atsushi Ishihara and Toshiaki Kabe*

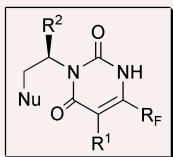


An interesting sulfur exchange reaction between di-*tert*-butylpolysulfides and elemental sulfur was examined using a ^{35}S tracer method and new information on the mechanism of synthesis of polysulfides was obtained.

844

An efficient synthesis of new fluorinated uracil derivatives

Santos Fustero,* Esther Salavert, Juan F. Sanz-Cervera, Julio Piera and Amparo Asensio

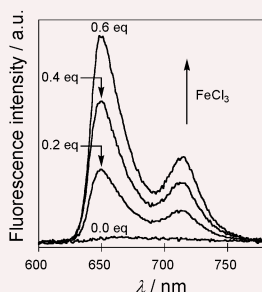
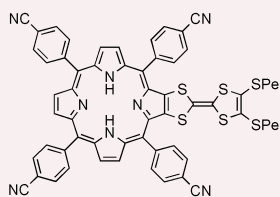


A series of potentially biologically active fluorinated uracil derivatives has been prepared in three steps from oxazolines and fluorinated nitriles with good chemical yields.

846

A mono-TTF-annulated porphyrin as a fluorescence switch

Hongchao Li, Jan O. Jeppesen,* Eric Levillain* and Jan Becher*

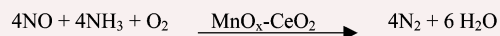


Annulation of one TTF unit directly to the porphyrin chromophore produces an almost nonfluorescent species which can be transformed into a fluorescent species by oxidation of the TTF unit.

848

A superior catalyst for low-temperature NO reduction with NH_3

Gongshin Qi and Ralph T. Yang*

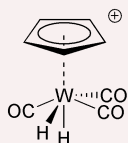


Mn-Ce mixed-oxide catalyst yields nearly 100% NO conversion at 100–150 °C at a high space velocity of 42,000 h⁻¹. SO₂ and H₂O (at high concentrations) have only slight effects on the activity.

850

Why $[\text{CpW}(\text{CO})_3]^+$ reduces H_2 to dihydride

Hervé Lesnard, Isabelle Demachy, Yves Jean* and Agusti Lledos*

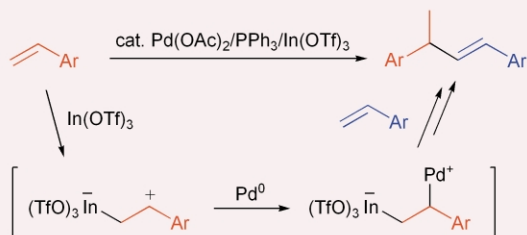


The unexpected reducing ability of $[\text{CpW}(\text{CO})_3]^+$ towards H_2 is rationalized by means of CCSD(T)//B3LYP calculations.

852

Palladium-catalysed dimerization of vinylarenes using indium triflate as an effective co-catalyst

Teruhisa Tsuchimoto, Susumu Kamiyama, Ryoju Negoro, Eiji Shirakawa* and Yusuke Kawakami

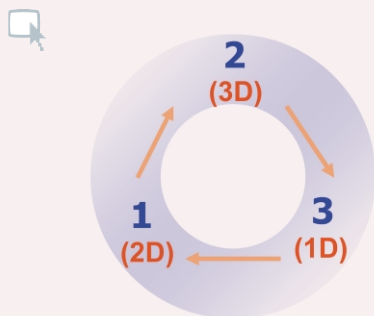


Indium triflate as a co-catalyst drastically enhanced the reaction rate of the palladium-catalysed dimerization of vinylarenes by activating vinylarenes to add oxidatively to palladium(0) complexes.

854

RPM-2: A recyclable porous material with unusual adsorption capability: self assembly via structural transformations

Long Pan, Haiming Liu, Sean P. Kelly, Xiaoying Huang, David H. Olson and Jing Li*

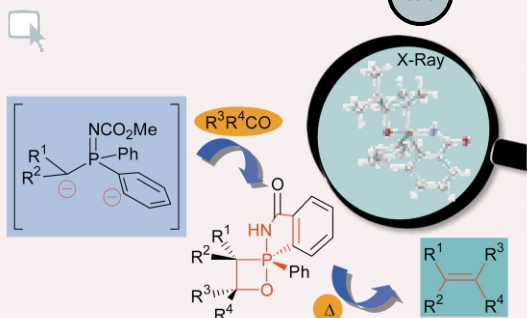


Structural transformation via deliberate and partial topological changes in a grid network structure has led to a three-dimensional, fully recyclable porous material (RPM-2) with a very high sorption capability.

856

Dilithiated phosphazenes: scaffolds for the synthesis of olefins through a new class of bicyclic 1,2-oxaphosphetanes

Jesús García-López, Emma Peralta-Pérez, Angela Forcén-Acebal, Santiago García-Granda and Fernando López-Ortiz*

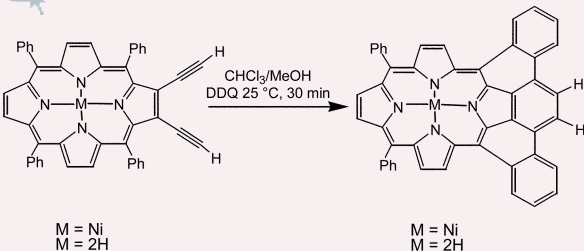


Double lithiation at the C_α and C_{ortho} to the phosphorus of (*N*-methoxycarbonyl)phosphazenes is reported. The dianions add to aldehydes and ketones affording a new type of isolable spirocyclic 1,2-oxaphosphetanes, that give rise to tri- and tetra-substituted olefins upon heating.

858

Accelerated Bergman cyclization of porphyrinic-enediynes

Mahendra Nath, John C. Huffman and Jeffrey M. Zaleski*

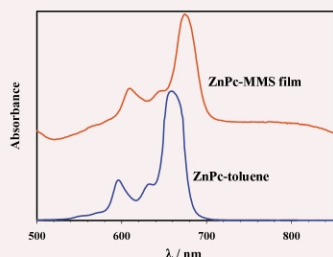


The Bergman cyclization of simple diethynylporphyrinic-enediynes exhibits a double activation barrier to the formation of Bergman cyclized product. Addition of H-atom acceptor accelerates the formation of the picenoporphyrin, indicating that the second barrier is rate limiting.

860

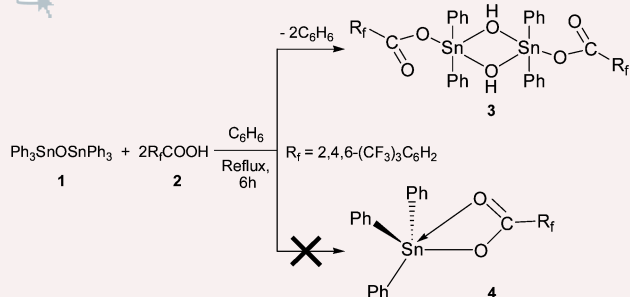
Synthesis of transparent and ordered mesoporous silica monolithic films embedded with monomeric zinc phthalocyanine dye

Selvaraj Subbiah and Robert Mokaya*



Nanocomposite monolithic films of zinc phthalocyanine–mesoporous silica may be prepared in which the embedded phthalocyanine exists predominantly in monomeric form.

862



First example of a Sn–C bond cleaved product in the reaction of $\text{Ph}_3\text{SnOSnPh}_3$ with carboxylic acids. 3D-Supramolecular network formation in the X-ray crystal structure of $[\text{Ph}_2\text{Sn}(\text{OH})\text{OC}(\text{O})(\text{R}_f)]_2$, $\text{R}_f = 2,4,6\text{-(CF}_3)_3\text{C}_6\text{H}_2$
Vadapalli Chandrasekhar,* Selvarajan Nagendran, Kandasamy Gopal, Alexander Steiner and Stefano Zacchini

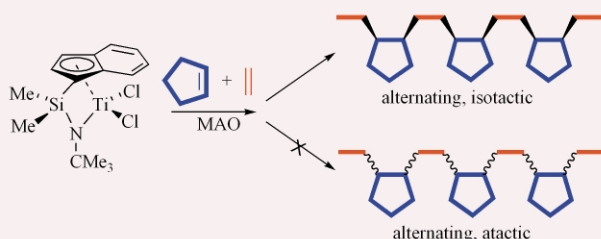
A 1 : 2 reaction of $\text{Ph}_3\text{SnOSnPh}_3$ 1 with R_fCOOH 2 leads to the formation of a Sn–C bond cleaved product $[\text{Ph}_2\text{Sn}(\text{OH})\text{OC}(\text{O})(\text{R}_f)]_2$ 3, instead of the expected product $\text{Ph}_3\text{SnO}_2\text{CR}_f$ 4.

864

Alternating stereospecific copolymerization of cyclopentene and ethylene with constrained geometry catalysts

Adrien R. Lavoie, Michael H. Ho and Robert M. Waymouth*

The stereoselective copolymerization of cyclopentene (cP) and ethylene (E) to generate highly alternating polymers with isotactic *cis* 1,2-cyclopentene enchainment is reported.

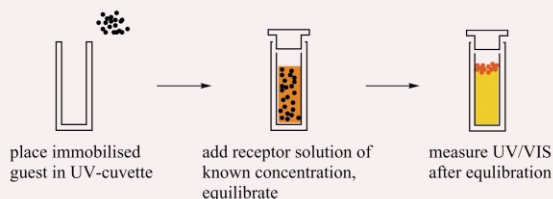


866

Determination of binding affinities on solid supports: influence of the loading and the nature of the solid support

Matteo Conza and Helma Wennemers*

The scope of a solid phase binding assay for the determination of binding affinities between a solid supported substrate and a coloured host has been studied.

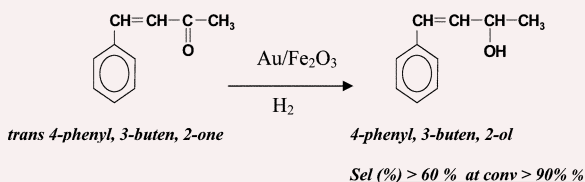


868

First example of selective hydrogenation of unconstrained α,β -unsaturated ketone to α,β -unsaturated alcohol by molecular hydrogen

C. Milone, R. Ingoglia, M. L. Tropeano, G. Neri and S. Galvagno*

Unprecedented hydrogenation of unhindered α,β -unsaturated ketones to unsaturated alcohols by molecular H_2 on gold supported on Fe_2O_3 catalysts.

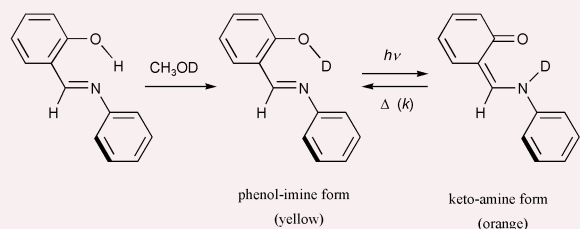


870

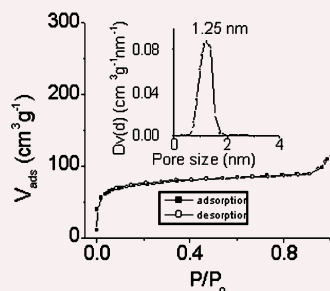
Deuterium isotope effect on the solid-state thermal isomerization of photo-coloured *cis*-keto species of *N*-salicylideneaniline

Kiichi Amimoto, Hajime Kanatomi, Atsuyoshi Nagakari, Hisatane Fukuda, Hiroyuki Koyama and Toshio Kawato*

From kinetic measurements for thermal fading reaction of the photoproducts derived from *N*-salicylideneaniline, its deuteriohydroxyl derivative and *N*-(6-methylsalicylidene)aniline analogue, the existence of a *cis*-keto form in the photo-coloured Schiff base crystals was suggested.



872

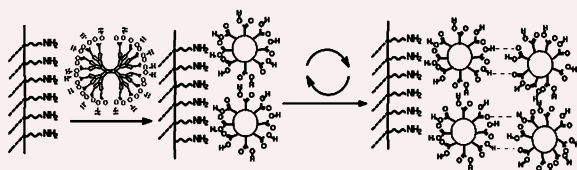


Microporous niobium phosphates and catalytic properties prepared by a supramolecular templating mechanism

Nawal Kishor Mal, Asim Bhaumik, Prashant Kumar and Masahiro Fujiwara*

Microporous distorted hexagonal niobium phosphate synthesized by a supramolecular templating mechanism (S^{0T^0}) possesses strong hydrophilic character, which leads to high selectivity for catechol formation (95.3%) in the presence of protic solvent (MeOH) in the hydroxylation of phenol.

874

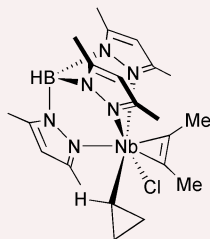


Hydrogen-bonding based multilayer assemblies by self-deposition of dendrimer

Fengwei Huo, Huaping Xu, Li Zhang, Yu Fu, Zhiqiang Wang and Xi Zhang*

We reported on hydrogen-bonding directed Layer-by-Layer assemblies by self-deposition of a kind of dendrimer bearing carboxyl groups on its periphery that act as hydrogen bonding donor as well as hydrogen bonding acceptor.

876

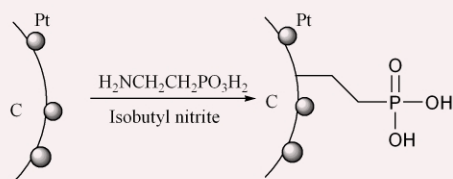


An unprecedented α -C-C agostic interaction in a cyclopropyl tris(pyrazolyl)boratoniobium complex

Joëlle Jaffart, Michel Etienne,* Meike Reinhold, John E. McGrady* and Felieu Maseras*

A rare C-C agostic interaction is preferred over both α - or β -C-H agostic alternatives in the cyclopropyl complex $Tp^{Me_2}NbCl(c-C_3H_5)(MeCCMe)$. Calculations performed with the hybrid DFT/molecular mechanics methodology reveals that the origin of this preference is electronic rather than steric.

878

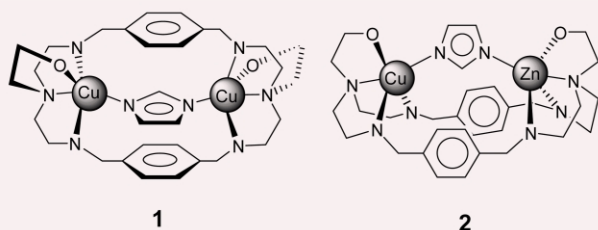


High performance carbon-supported catalysts for fuel cells via phosphonation

Zhiqiang Xu, Zhigang Qi* and Arthur Kaufman

Phosphonic acid groups have been successfully linked onto carbon-supported catalysts to effectively enhance the latter's performance in proton-exchange membrane fuel cells.

880



A novel imidazolate-bridged heterodinuclear Cu(II)/Zn(II) complex derived from a unique macrocyclic ligand with two hydroxyethyl pendants

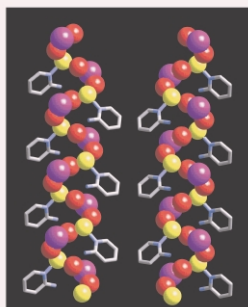
Shu-an Li, Dong-feng Li,* De-xi Yang, Yi-zhi Li, Jin Huang, Kai-bei Yu and (the late) Wen-xia Tang*

A new imidazolate-bridged homodinuclear copper(II) complex **1** and a novel imidazolate-bridged heterodinuclear Cu(II)-Zn(II) complex **2**, derived from a single macrocyclic ligand with two flexible hydroxyethyl pendants, have been synthesized and characterized.

882

Synthesis and structure of a new layered zinc phosphite ($C_5H_6N_2$)Zn(HPO₃) containing helical chains

Jing Liang, Yu Wang, Jihong Yu,* Yi Li and Ruren Xu*

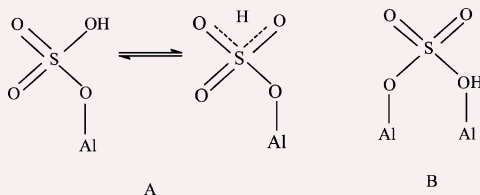


A new compound ($C_5H_6N_2$)Zn(HPO₃) has been prepared hydrothermally; it consists of left-handed and right-handed helical chains that are connected through oxygen atoms to form an undulated sheet structure with 4.8-net.

884

Solid state NMR study of acid sites formed by adsorption of SO₃ onto γ -Al₂O₃

Jun Yang, Mingjin Zhang, Feng Deng,* Qing Luo, Delian Yi and Chaohui Ye

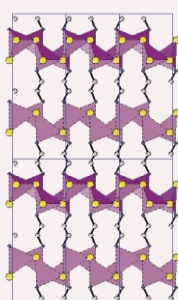


Detailed structure of Brønsted acid sites on the surface of SO₃/Al₂O₃ catalyst has been proposed based on ¹H/²⁷Al TRAPDOR NMR results and the acidity of the catalyst has also been characterized by NMR probe molecules.

886

Ab initio structure study from in-house powder diffraction of a novel ZnS(EN)_{0.5} structure with layered wurtzite ZnS fragment

Xiang Ouyang, Tsung-Yen Tsai, Dong-Hwang Chen, Qi-Jie Huang, Wu-Hsun Cheng and Abraham Clearfield

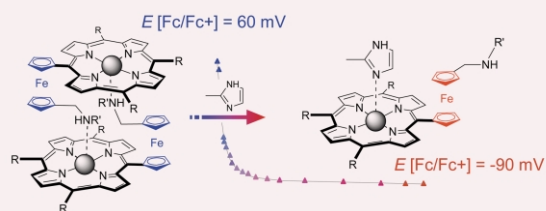


The solvothermal reaction of elemental zinc with sulfur in ethylenediamine (en) as solvent yields [ZnS·0.5(NH₂CH₂CH₂NH₂)], **1**, an unprecedented ethylenediamine pillared ZnS layered compound, containing two dimensional (2-D) boat-type 6-membered rings, which was characterized by *ab initio* structure solution from powder diffraction data (SDPD).

888

Self-assembly of a ferrocene-substituted porphyrin capable of electrochemically sensing neutral molecules via a “tail on–tail off” process

Christophe Bucher,* Charles H. Devillers, Jean-Claude Moutet,* Guy Royal and Eric Saint-Aman

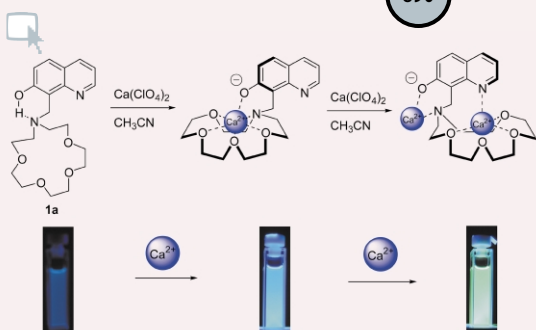


Self-assembly of a novel functionalized ferrocene–porphyrin conjugate, with efficient electronic communication throughout the molecular receptor, allows unprecedented ferrocene-based electrochemical sensing of neutral species via a metalloporphyrin-centred “tail on–tail off” binding process.

890

8-(1,4,7,10-Tetraoxa-13-azacyclopentadec-13-ylmethyl)quinolin-7-ol: synthesis and application as a highly sensitive metal cation probe

Kun-Chan Wu, Moawia O. Ahmed, Chun-Yan Chen, Guo-Wei Huang, Yung-Son Hon* and Pi-Tai Chou*

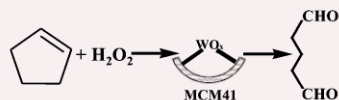


1a was proven to recognize metal cations incorporating excited-state proton transfer reaction. The remarkable differentiation in absorption and fluorescence makes **1a** a highly sensitive probe.

892

Novel economic and green approach to the synthesis of highly active W-MCM41 catalyst in oxidative cleavage of cyclopentene

Wei-Lin Dai,* Hao Chen, Yong Cao, Hexing Li, Songhai Xie and Kangnian Fan

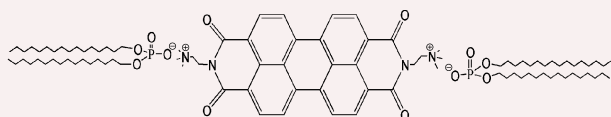


A highly active and perfectly structured W-MCM41 catalyst for the oxidative cleavage of cyclopentene to glutaraldehyde was synthesized through a novel economic and green synthetic method by using Na_2SiO_3 as the Si source and $\text{CH}_3\text{COOC}_2\text{H}_5$ as the hydrolyzer.

894

Perylenediimide-surfactant complexes: thermotropic liquid-crystalline materials via ionic self-assembly

Ying Guan, Yuriy Zakrevskyy, Joachim Stumpe, Markus Antonietti and Charl F. J. Faul*

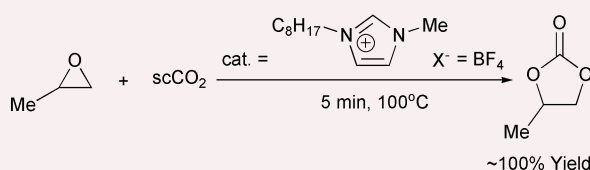


Thermotropic liquid-crystalline materials were prepared by simple and convenient ionic self-assembly of cationic perylenediimide tectonic units and anionic surfactants.

896

A rapid and effective synthesis of propylene carbonate using a supercritical CO_2 -ionic liquid system

Hajime Kawanami,* Akiyoshi Sasaki, Keitaro Matsui and Yutaka Ikushima*

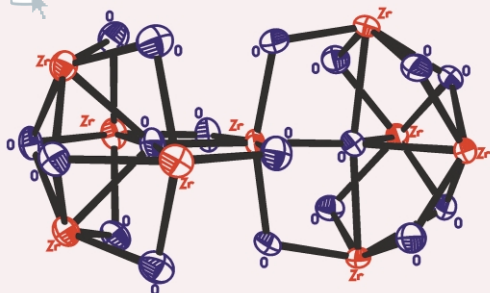


The propylene carbonate synthesis by CO_2 fixation under supercritical conditions in the presence of ionic liquid was achieved in nearly 100% yield and 100% selectivity within 5 minutes.

898

New synthetic route for organic polyoxometallic clusters: synthetic and structural investigations on the first dumb-bell shaped polyoxozirconium hydroxide with the $[\text{Zr}_9(\mu_5\text{-O})_2(\mu_3\text{-O})_4(\mu\text{-O})_4(\mu\text{-OH})_8]$ core structure

Guangcai Bai, Qingjun Ma, Herbert W. Roesky,* Denis Vidovic and Regine Herbst-Irmer

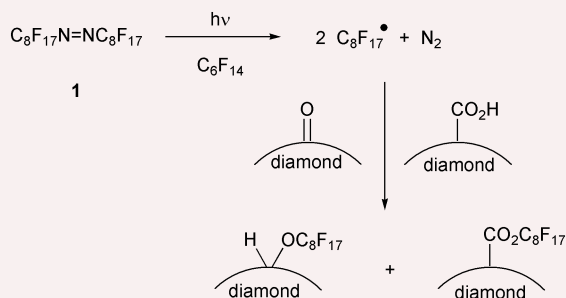


The first dumb-bell-like organic polyoxozirconium hydroxide $\{[(\text{Cp}^*\text{Zr})_4(\mu_5\text{-O})(\mu_3\text{-O})_2(\mu\text{-OH})_4]_2\text{Zr}(\mu\text{-O})_4\} \cdot 2\text{C}_7\text{H}_8$ (**2**; $\text{Cp}^* = \text{C}_5\text{Me}_5$) was obtained by the treatment of the Brønsted acidic organozirconium hydroxide $[(\text{Cp}^*\text{Zr})_6(\mu_4\text{-O})(\mu\text{-O})_4(\mu\text{-OH})_8] \cdot 2\text{C}_7\text{H}_8$ (**1**) with organozirconium compounds.

900

Chemical modification of diamond powder using photolysis of perfluoroazooctane

Takako Nakamura,* Masatou Ishihara, Tsuguyori Ohana and Yoshinori Koga



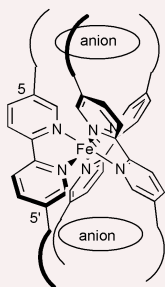
Photolysis of perfluoroazooctane with diamond powders led to chemical modification of the surface by the introduction of perfluorooctyl ester and ether functional groups, the presence of which was confirmed by means of FT-IR, XPS and ^{19}F NMR measurements.

902

Large size anion binding with iron(II) complexes of a 5,5'-disubstituted-2,2'-bipyridine ligand

Biao Wu, Xiao-Juan Yang, Christoph Janiak* and Paul Gerhard Lassahn

Three 5,5'-substituted 2,2'-bipyridyl ligands around a metal atom form two clefts which can encapsulate sulfate, perchlorate, or nitrate anions.

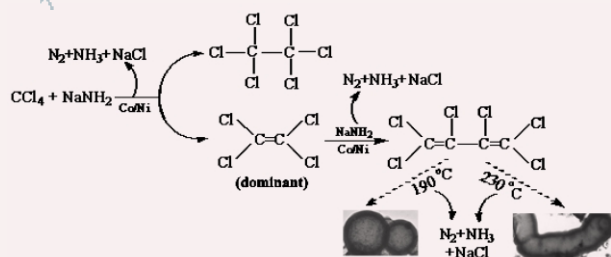


904

A novel approach to carbon hollow spheres and vessels from CCl₄ at low temperatures

Yujie Xiong, Yi Xie,* Zhengquan Li, Changzheng Wu and Rong Zhang

Carbon hollow spheres (400–600 nm) and vessels (400 nm × 3000 nm) have been synthesized from sp³-CCl₄ at 190 and 230 °C, respectively.

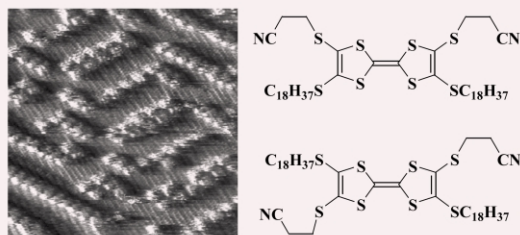


906

Synthesis, separation, and isomer-dependent packing in two dimensions—detected by scanning tunnelling microscopy—of a TTF derivative

Elba Gomar-Nadal, Mohamed M. S. Abdel-Mottaleb, Steven De Feyter, Jaume Veciana, Concepció Rovira, David B. Amabilino* and Frans C. De Schryver*

The synthesis, isolation and STM imaging on graphite of the *cis* and *trans* isomers of a TTF reveal isomer-dependent packing, and constitutes a way to study the non-covalent interactions at play in these systems.

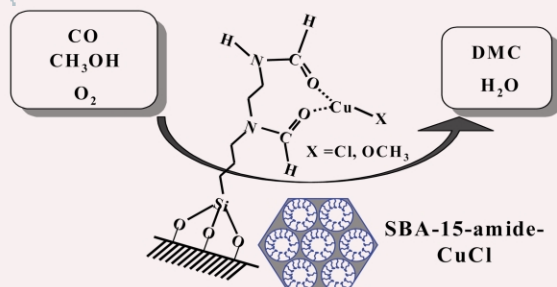


908

CuCl catalyst heterogenized on diamide immobilized SBA-15 for efficient oxidative carbonylation of methanol to dimethylcarbonate

Yong Cao,* Jun-Cheng Hu, Ping Yang, Wei-Lin Dai and Kang-Nian Fan*

CuCl has been successfully immobilized on a novel diamide modified SBA-15, and proven to be an efficient heterogenized catalyst for the oxidative carbonylation of methanol to dimethylcarbonate.

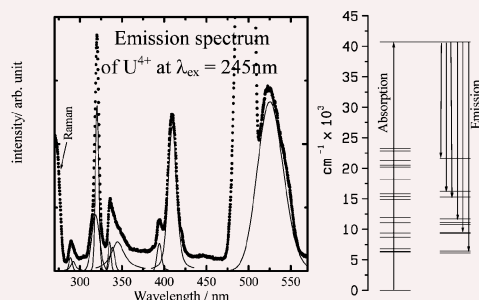


910

Luminescence study of tetravalent uranium in aqueous solution

Akira Kirishima,* Takaumi Kimura, Osamu Tochiyama and Zenko Yoshida

The luminescence spectrum of U⁴⁺ in aqueous solution is observed in the UV-Vis region at room temperature. All the luminescence peaks are assigned to individual electronic transitions.

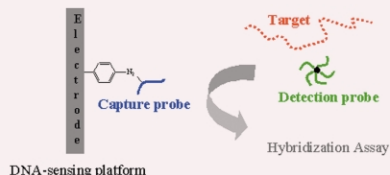


912

Covalent immobilization of oligonucleotides on *p*-aminophenyl-modified carbon screen-printed electrodes for viral DNA sensing

Audrey Ruffien, Murielle Dequaire* and Pierre Brossier

A novel route for oligonucleotide probes immobilization on modified carbon screen-printed electrodes : Towards the development of new disposable electrochemical DNA biosensors.

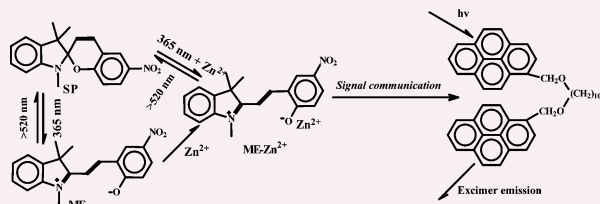


914

Reversible regulation of pyrene excimer emission by light and metal ions in the presence of photochromic spiropyran: toward creation of a new molecular logic circuit

Xuefeng Guo, Deqing Zhang,* Tongxin Wang and Daoben Zhu*

A new fluorophore-photochrome system with the excimer fluorescence as the output signal; reversible regulation of pyrene excimer fluorescence by light and metal ions in the presence of spiropyran.

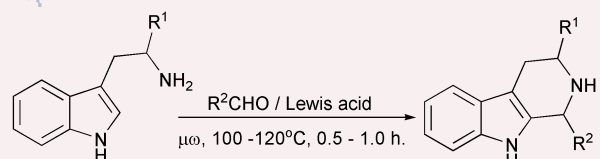


916

Highly efficient Lewis acid-catalysed Pictet–Spengler reactions discovered by parallel screening

Natarajan Srinivasan and A. Ganesan*

High yielding Lewis acid catalysed one-pot Pictet–Spengler reactions of tryptophan methyl ester and tryptamine with aliphatic and aromatic aldehydes were achieved in short reaction times with the aid of microwave irradiation.

R¹ = H or CO₂MeR² = Phenyl, *p*-NO₂-Phenyl, *p*-OMe-Phenyl, 3,4,5-(OMe)₃-phenyl and *c*-C₆H₁₁

ADDITIONS AND CORRECTIONS

918

Valérie Atlan, Hugues Bienaymé,
Laurent El Kaim and Adinath Majee**The use of hydrazones for efficient Mannich type coupling with aldehydes and secondary amines**

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Kazuo Shinozuka, Noritake
Matsumoto, Hideo Suzuki,
Tomohisa Moriguchi and Hiroaki
Sawai**Alternate stranded triplex formation of chimeric DNA composed of tandem α - and β -anomeric strands**

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