

## Cover

"What could we do with layered structures with just the right layers? What would the properties of materials be if we could really arrange the atoms the way we want them? They would be very interesting to investigate theoretically. I can't see exactly what would happen, but I can hardly doubt that when we have some control of the arrangement of things on a small scale we will get an enormously greater range of possible properties that substances can have, and of different things that we can do."

RICHARD FEYNMAN: *There's Plenty of Room at the Bottom* (1959)

## contents

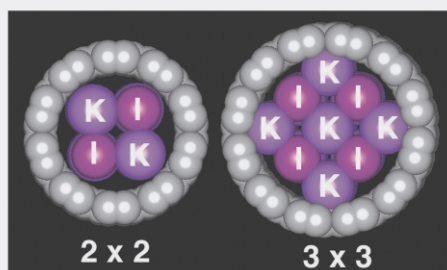
## FEATURE ARTICLE

1319

### Integral atomic layer architectures of 1D crystals inserted into single walled carbon nanotubes

Jeremy Sloan,\* Angus I. Kirkland, John L. Hutchison and Malcolm L. H. Green

Crystal growth within SWNTs is atomically regulated by the size of the encapsulating capillaries and nano-scale crystals with precise integral layer architectures can be formed within.



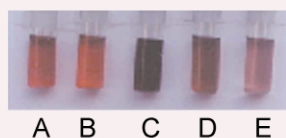
## COMMUNICATIONS

1334

### One-step synthesis of hydrophobized gold nanoparticles of controllable size by the reduction of aqueous chloraurate ions by hexadecylaniline at the liquid-liquid interface

PR. Selvakannan, Saikat Mandal, Renu Pasricha, S. D. Adyanthaya and Murali Sastry\*

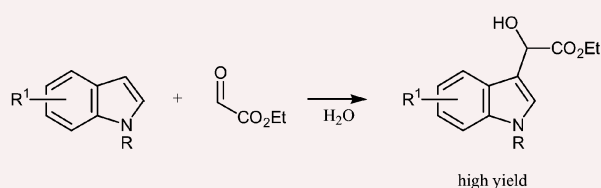
Vigorous stirring of a biphasic mixture containing hexa-decylaniline in chloroform and aqueous chloroauric acid results in the formation of gold nanoparticles of controllable size in the organic phase.



1336

### Friedel-Crafts reactions in water of carbonyl compounds with heteroaromatic compounds

Wei Zhuang and Karl Anker Jørgensen\*

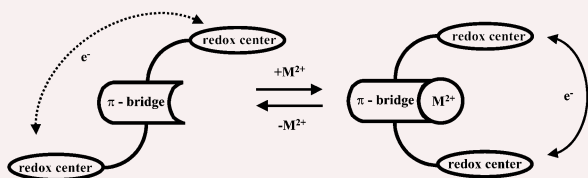


The development of addition of heteroaromatic compounds to glyoxylate to give Friedel-Crafts addition adducts in H<sub>2</sub>O solutions is presented.

1338

### Electronic coupling in 6,6''-donor-substituted terpyridines: tuning of the mixed valence state by proton and metal ion complexation

Michael Büschel, Markus Helldobler and Jörg Daub\*

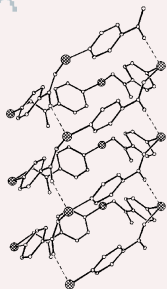


Mechanical (conformational) switching (S-shape/U-shape) of terpyridine–benzodithiophene conjugates is shown to be triggered by protonation or metal-ion complexation and is probed by on–off switching of the mixed valence band in the radical cation state.

1340

### An extremely stable open-framework metal–organic polymer with expandable structure and selective adsorption capability

Jack Y. Lu\* and Amy M. Babb

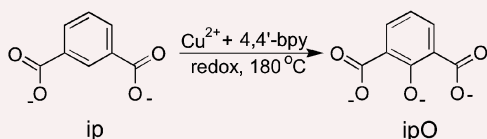


A novel tension spring-like spiral open-framework polymer remains highly stable when linear molecules enter into the channels, which resulted in over 8% volume expansion of the crystal structure.

1342

### A mixed-valence copper coordination polymer generated by hydrothermal metal/ligand redox reactions

Jun Tao, Yong Zhang, Ming-Liang Tong, Xiao-Ming Chen,\* Tan Yuen, C. L. Lin, Xiaoying Huang and Jing Li



A novel coordination polymer of mixed-valence copper(I,II) with 4,4'-bipyridine and *in situ* oxidized isophthalate, [Cu<sub>2</sub>(ipO)(4,4'-bpy)] (ipOH = 2-hydroxyisophthalate), was hydrothermally synthesized and crystallographically characterized to be a laminated structure *via* weak copper(II)–oxygen interactions.

1344

### Indium selenide superlattices from (In<sub>10</sub>Se<sub>18</sub>)<sup>6-</sup> supertetrahedral clusters

Cheng Wang, Xianhui Bu, Nanfeng Zheng and Pingyun Feng\*

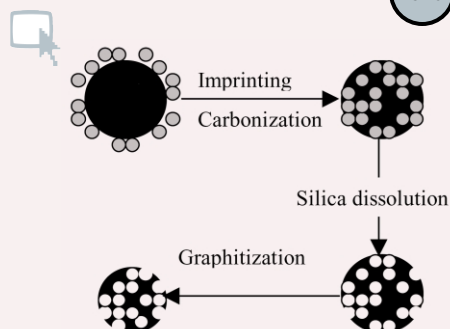


Three-dimensional open framework selenides and tellurides are rare despite the recent progress in the synthesis of indium sulfides with large pore sizes; here we report a family of amine-directed indium selenide superlattices constructed from T3 supertetrahedral (In<sub>10</sub>Se<sub>18</sub>)<sup>6-</sup> clusters.

1346

### High surface area graphitized carbon with uniform mesopores synthesised by a colloidal imprinting method

Zuojiang Li, Mietek Jaroniec,\* Young-Jae Lee and Ljubisa R. Radovic

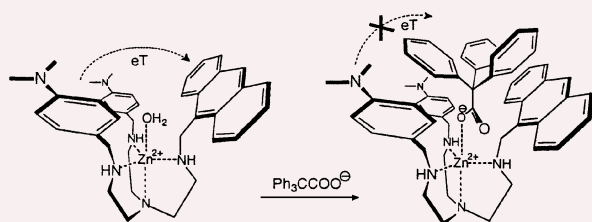


A high surface area graphitized carbon was prepared by high temperature graphitization in argon atmosphere of a mesoporous carbon synthesized by colloidal imprinting of mesophase pitch particles.

1348

**Coordinative control of photoinduced electron transfer: bulky carboxylates as molecular curtains**

Irene Bruseghini, Luigi Fabbrizzi,\* Maurizio Licchelli and Angelo Taglietti

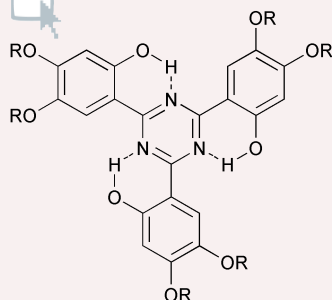


An intramolecular photoinduced electron transfer which takes place in a  $Zn^{II}$  polyamine complex is interrupted through coordination of a bulky carboxylate anion, acting as a curtain.

1350

**Intramolecular hydrogen bond assisted planarization and self-assembly of simple disc-shaped molecules in mesophases**

Wenmiao Shu and Suresh Valiyaveetil\*

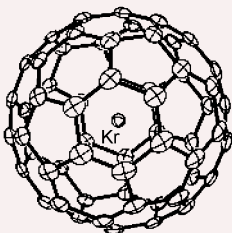


Planarization of a disc-shaped molecule using strong intramolecular hydrogen bonds and the self-assembly of the target molecule in the mesophase is described.

1352

**Crystallographic characterization of  $Kr@C_{60}$  in  $(0.09Kr@C_{60}/0.91C_{60}) \cdot \{Ni^{II}(OEP)\} \cdot 2C_6H_6$** 

Hon Man Lee, Marilyn M. Olmstead, Tomohiro Suetsuna, Hidekazu Shimotani, Nita Dragoe, R. James Cross, Koichi Kitazawa and Alan L. Balch\*

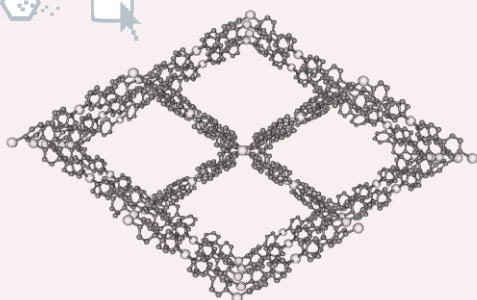


A sample of  $C_{60}$  containing *ca.* 9%  $Kr@C_{60}$  has been used to form crystalline  $(0.09Kr@C_{60}/0.91C_{60}) \cdot \{Ni^{II}(OEP)\} \cdot 2C_6H_6$  whose X-ray crystal structure reveals that the Kr atom is centered within the carbon cage and does not produce a detectable change in the size of the fullerene.

1354

**A three-dimensional nanoporous flexible network of 'square-planar' copper(II) centres with an unusual topology**

Lucia Carlucci, Nicola Cozzi, Gianfranco Ciani,\* Massimo Moret, Davide M. Proserpio and Silvia Rizzato

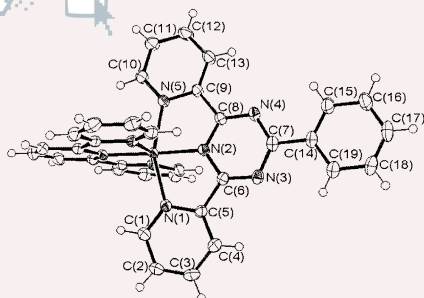


The novel 3D two-fold interpenetrated network  $[Cu(4,4'-bipy)_2(CF_3SO_3)_2]$ , formed by pseudo-square planar nodes and consisting of fused crossing layers of large rhombic meshes ( $22 \times 22 \text{ \AA}$ ), shows an unusual topology and an interesting nanoporous behaviour.

1356

**Facile syntheses of tridentate ligands for room-temperature luminescence in ruthenium complexes**

Matthew I. J. Polson, Nicholas J. Taylor and Garry S. Hanan\*



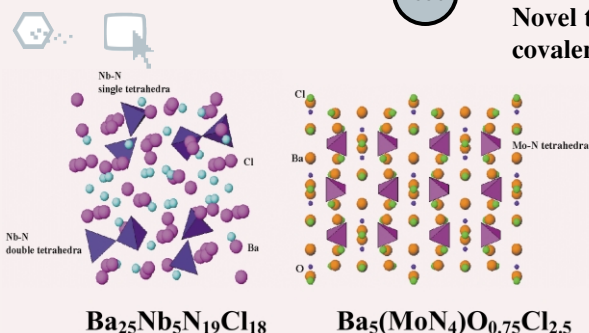
A new family of tridentate terpyridine-like ligands are available in multi-gram quantities and their  $Ru(II)$  complexes exhibit room-temperature luminescence. The new triazine-based ligands are easily synthesised and functionalised, which makes them ideal candidates for incorporation into larger supramolecular systems.

1358

### Novel ternary N-containing mixed-anion compounds with ionic and covalent features

M. Grazia Francesconi,\* Marten G. Barker and Claire Wilson

Only a few N-containing ternary mixed-anion phases are known. Herein, we report the preparation and structural characterisation of the first niobium nitride-chloride,  $\text{Ba}_{25}\text{Nb}_5\text{N}_{19}\text{Cl}_{18}$ , and the first molybdenum nitride–oxide–chloride  $\text{Ba}_5(\text{MoN}_4)\text{O}_{0.75}\text{Cl}_{2.5}$ .

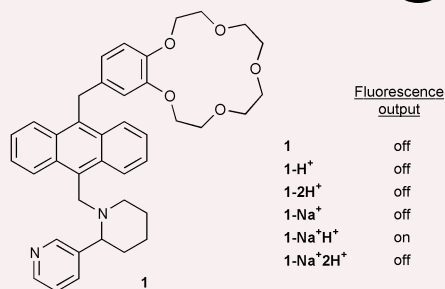


1360

### A fluorescent ‘off-on-off’ proton switch with an overriding ‘enable–disable’ sodium ion switch

Saliya A. de Silva,\* Benjamin Amorelli, David C. Isidor, Kenny C. Loo, Kerry E. Crooker and Yeni E. Pena

System 1 represents the first example of a third generation fluorescent PET sensor with a fluorescence output that responds to three PET processes that are controlled by three cation binding events.

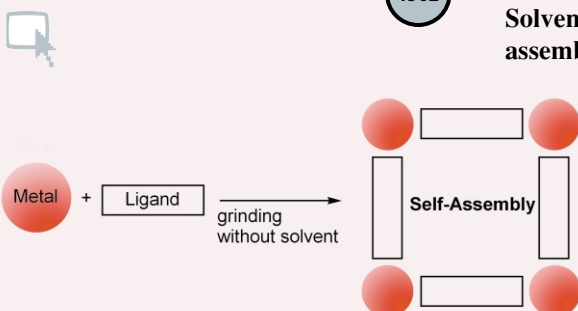


1362

### Solventless reaction dramatically accelerates supramolecular self-assembly

Akihiro Orita, Lasheng Jiang, Takehiko Nakano, Nianchun Ma and Junzo Otera\*

Supramolecular self-assembly is dramatically accelerated under solvent-free conditions leading to higher-order fabrications of two- or three-dimensional topology and even double helicates.

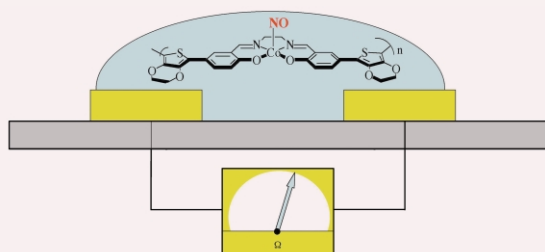


1364

### A reversible resistivity-based nitric oxide sensor

Takeshi Shioya and Timothy M. Swager\*

Cobalt-conducting polymer hybrid structures display reversible resistive responses to nitric oxide; conductivity changes are related to the matching of the cobalt centered redox activity with that of the organic polymer.

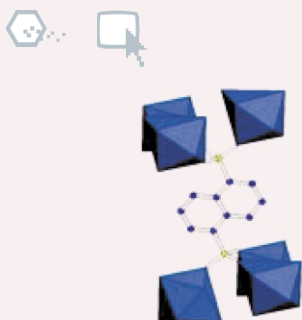


1366

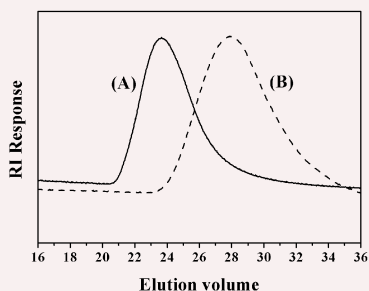
### From rational octahedron design to reticulation serendipity. A thermally stable rare earth polymeric disulfonate family with $\text{CdI}_2$ -like structure, bifunctional catalysis and optical properties

Natalia Snejko, Concepción Cascales, Berta Gomez-Lor, Enrique Gutiérrez-Puebla, Marta Iglesias, Caridad Ruiz-Valero and M. Angeles Monge\*

$\text{Ln}(\text{OH})(\text{NDS})(\text{H}_2\text{O})$ , (Ln = Ln, Pr and Nd and NDS = 1,5-naphthalenedisulfonate) is a thermally stable rare earth polymeric disulfonate family with  $\text{CdI}_2$ -like structure and bifunctional catalysis. This represents the first example of a disulfonate ligand coordinated to six different Ln atoms.



1368

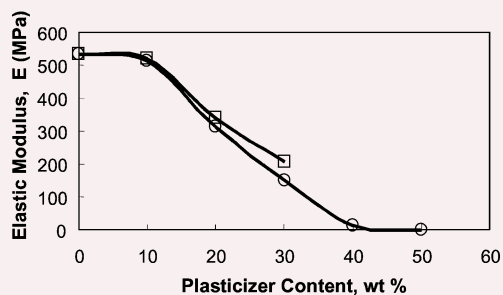


### Conventional free radical polymerization in room temperature ionic liquids: a green approach to commodity polymers with practical advantages

Kunlun Hong, Hongwei Zhang, Jimmy W. Mays,\* Ann E. Visser, Christopher S. Brazel,\* John D. Holbrey, W. Matthew Reichert and Robin D. Rogers\*

Free radical polymerizations in the ionic liquids 1-butyl-3-methylimidazolium and 1-hexyl-3-methylimidazolium hexafluorophosphate using conventional organic initiators are more rapid, and yield polymers with up to 10× greater molecular weights than in conventional VOC solvents under comparable conditions.

1370



### Application of ionic liquids as plasticizers for poly(methyl methacrylate)

Mark P. Scott, Christopher S. Brazel,\* Michael G. Benton, Jimmy W. Mays, John D. Holbrey and Robin D. Rogers\*

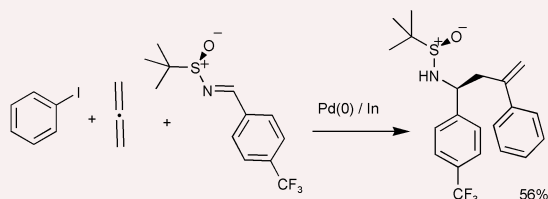
The ionic liquid, 1-butyl-3-methylimidazolium hexafluorophosphate is an effective plasticizer for *in situ* polymerized poly(methyl methacrylate), and displays similar characteristics comparable to the commonly used plasticizer dioctyl phthalate, but has significantly better high temperature stability.

1372



### 3-Component palladium–indium mediated diastereoselective cascade allylation of imines with allenes and aryl iodides

Ian R. Cooper, Ronald Grigg, William S. MacLachlan, Mark Thornton-Pett and Visuvanathar Sridharan

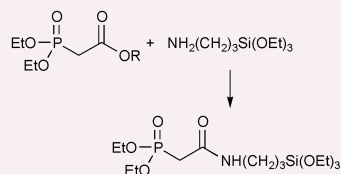


A new palladium–indium diastereoselective cascade allylation of imines using allenes and aryl iodides.

1374

### Synthesis of carbamoylphosphonate silanes for the selective sequestration of actinides

Jerome C. Birnbaum, Brad Busche, Yuehe Lin, Wendy J. Shaw and Glen E. Fryxell\*



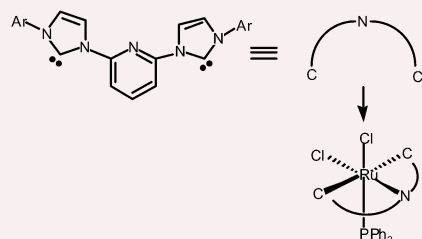
The synthesis of carbamoylphosphonate silanes (CMPO analogs) designed for sequestering actinide cations in self-assembled monolayers on mesoporous supports (SAMMS) is described.

1376



### Stable N-functionalised ‘pincer’ bis carbene ligands and their ruthenium complexes; synthesis and catalytic studies

Andreas A. Danopoulos,\* Scott Winston and William B. Motherwell

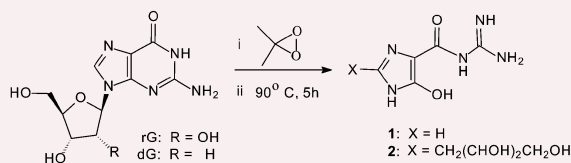


Deprotonation of 2,6-bis(arylimidazolium)pyridine dibromide with  $\text{KN}(\text{SiMe}_3)_2$  gave thermally stable 2,6-bis(arylimidazol-2-ylidene)pyridine, which was further used to prepare ruthenium ‘pincer’ complexes; the latter show catalytic activity in transfer hydrogenation of carbonyl compounds.

1378

### Novel oxidation products from guanine nucleosides reacted with dimethyldioxirane

R. Jeremy H. Davies,\* Clarke Stevenson, Shiv Kumar, Jason Lyle, Lisa Cosby, John F. Malone, Derek R. Boyd, Narain D. Sharma, Ann P. Hunter and Bridget K. Stein



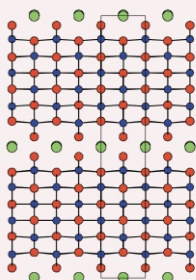
Treatment of guanosine with dimethyldioxirane leads to the formation of 4-amidinocarbamoyl-5-hydroxyimidazole *via* a new oxidative pathway. Remarkably, the corresponding product from 2'-deoxyguanosine incorporates a trihydroxybutyl substituent in the imidazole ring.

1380

### CsPb<sub>3</sub>Bi<sub>3</sub>Te<sub>8</sub> and CsPb<sub>4</sub>Bi<sub>3</sub>Te<sub>9</sub>: low-dimensional compounds and the homologous series CsPb<sub>m</sub>Bi<sub>3</sub>Te<sub>5+m</sub>

Kuei-Fang Hsu, Sangeeta Lal, Tim Hogan and Mercouri G. Kanatzidis\*

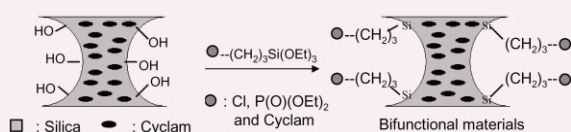
The quaternary compounds CsPb<sub>3</sub>Bi<sub>3</sub>Te<sub>8</sub> and CsPb<sub>4</sub>Bi<sub>3</sub>Te<sub>9</sub> are part of a new homologous series of the type CsPb<sub>m</sub>Bi<sub>3</sub>Te<sub>5+m</sub> with systematically varying structure and composition. The long lattice period and the two-dimensional structure play an important role in suppressing the thermal conductivity in these systems.



1382

### Mesoporous hybrid materials containing functional organic groups inside both the framework and the channel pores

Robert J. P. Corriu,\* Ahmad Mehdi, Catherine Reyé and Chloé Thieuleux



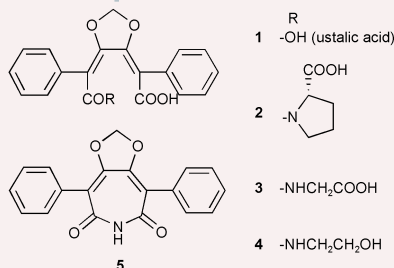
Mesoporous hybrid materials containing cyclam moieties inside the framework are particularly suitable for grafting functional groups inside the channel pores.

1384

### Ustalic acid as a toxin and related compounds from the mushroom *Tricholoma ustale*

Yosuke Sano, Kazutoshi Sayama, Yasushi Arimoto, Takahiro Inakuma, Kimiko Kobayashi, Hiroyuki Koshino and Hirokazu Kawagishi\*

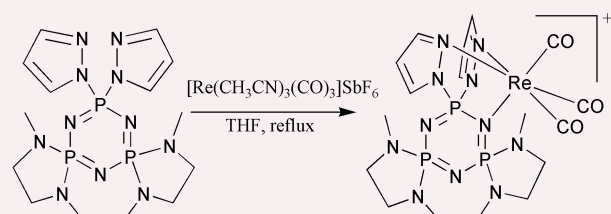
Ustalic acid and related compounds having unique structures were isolated as toxic principles from a poisonous mushroom *Tricholoma ustale*.



1386

### First rhenium complexes based on cyclotriphosphazene scaffolds with exocyclic pyrazolyl substituents

Michael Harmjan, Brian L. Scott and Carol J. Burns\*

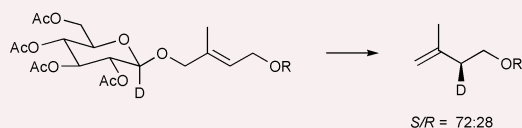


The facile synthesis of pyrazole substituted site-differentiated cyclotriphosphazenes is described and the coordination behavior of these ligands and P<sub>3</sub>N<sub>3</sub>(3,5-Me<sub>2</sub>Pz)<sub>6</sub> towards the formation of Re(I) carbonyl complexes is detailed.

1388

**Enantiomerically enriched [2-<sup>2</sup>H]-isopentenyl alcohol from (*E*)-2-methylbut-2-ene-1,4-diol by an asymmetric retro-ene reaction**

José-Luis Giner\* and Duilio Arigoni\*

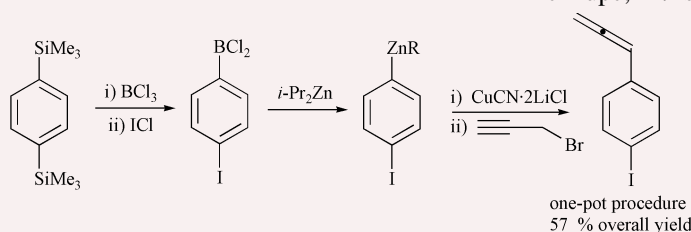


A C-1' deuterated form of the 1-tetra-*O*-acetyl- $\beta$ -D-glucoside of (*E*)-2-methylbut-2-ene-1,4-diol yields upon pyrolysis a sample of [2-<sup>2</sup>H]-isopentenyl alcohol containing 72% of the (*S*)-enantiomer.

1390

**One-pot chemoselective functionalization of arylsilanes *via* cascade metal–metal exchange reactions**

Eike Hupe, M. Isabel Calaza and Paul Knochel\*

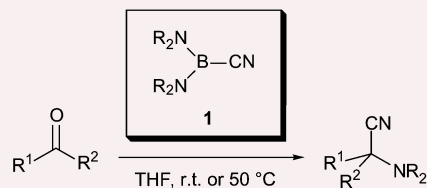


A cascade-transmetallation sequence allows a one-pot conversion of arylsilanes into functionalized arylcoppers.

1392

**Bis(dialkylamino)cyanoboranes: highly efficient reagents for the Strecker-type aminative cyanation of aldehydes and ketones**

Michinori Suginome,\* Akihiko Yamamoto and Yoshihiko Ito

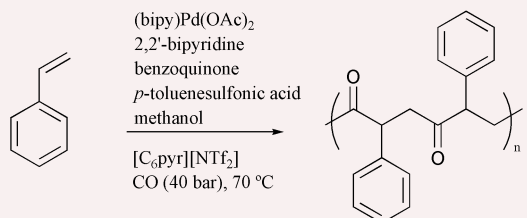


$\alpha$ -Dialkylamino nitriles are formed in excellent yields in the reactions of bis(dialkylamino)cyanoboranes with a wide array of carbonyl compounds.

1394

**Polar, non-coordinating ionic liquids as solvents for the alternating copolymerization of styrene and CO catalyzed by cationic palladium catalysts**

Marc A. Klingshirn, Grant A. Broker, John D. Holbrey, Kevin H. Shaughnessy\* and Robin D. Rogers\*

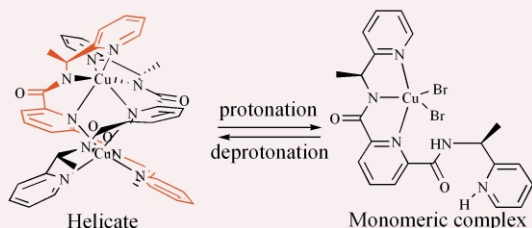


The palladium-catalyzed copolymerization of styrene and CO in an ionic liquid solvent, 1-hexylpyridinium bis(trifluoromethanesulfonyl)imide, gave improved yields and increased molecular weights compared to polymerizations run in methanol.

1396

**Mononuclear–dinuclear helicate interconversion of dibromo{*N,N'*-bis[(*S*)-1-2-(pyridyl)ethyl]pyridine-2,6-dicarboxamidate}copper(II) *via* a deprotonation–protonation process**

Toshihiro Yano, Rika Tanaka, Takanori Nishioka, Isamu Kinoshita,\* Kiyoshi Isobe, L. James Wright and Terrence J. Collins

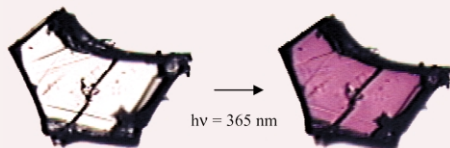


The dinuclear chiral helicate has been formed *via* high level of self recognition process; mononuclear–dinuclear conversion proceeds upon deprotonation–protonation of the amide ligand.

1398

**Observation of photochromic  $\gamma$ -cyclodextrin host-guest inclusion complexes**

Suman Iyengar and Michael C. Biewer\*

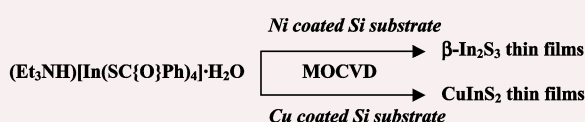


Photochromic spiropyran were included as guests in  $\gamma$ -CD inclusion complexes and the crystalline complexes displayed longer lifetimes for the photogenerated photomerocyanine states.

1400

**Heterogeneous reaction route to  $\text{CuInS}_2$  thin films**

Ming Lin, Kian Ping Loh,\* Theivanayagam C. Deivaraj and Jagadese J. Vittal\*

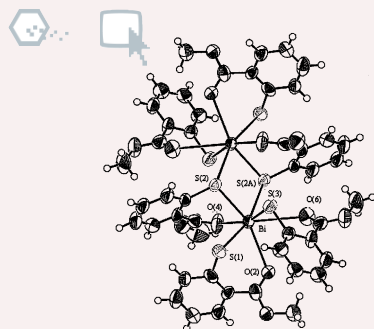


High quality thin films of  $\text{CuInS}_2$  have been deposited on a copper coated silicon substrate using vapors obtained from  $(\text{Et}_3\text{NH})[\text{In}(\text{SC}(\text{O})\text{Ph})_4]$  while  $\beta\text{-In}_2\text{S}_3$  thin films resulted on a nickel coated silicon substrate.

1402

**Comprehensive characterisation of bismuth thiosalicylate complexes: models for bismuth subsalicylate**

Neil Burford,\* Melanie D. Eelman and T. Stanley Cameron

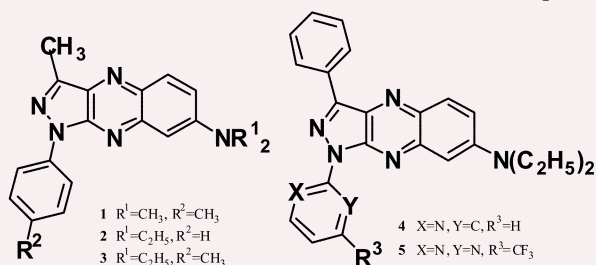


ESI-MS identification of bismuth methylthiosalicylate complexes and isolation of tris(methylthiosalicylato)bismuth(III) demonstrates the importance of thiolates as anchors for hetero-bifunctional ligands and provides models for the medically relevant bismuth subsalicylate.

1404

**New 1*H*-pyrazolo[3,4-*b*]quinoxaline derivatives as sharp green-emitting dopants for highly efficient electroluminescent devices**

Pengfei Wang, Zhiyuan Xie, Oiyang Wong, Chun-Sing Lee, Ningbew Wong, Liangsun Hung and Shuitong Lee\*

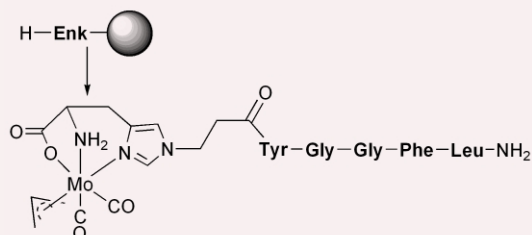


Several new 1*H*-pyrazolo[3,4-*b*]quinoxaline derivatives were used as dopants for EL devices to obtain narrow green emission with an efficiency of 7.5–9.7 cd A<sup>-1</sup> peaking at 530–545 nm.

1406

**Labelling of [ $\text{Leu}^5$ ]-enkephalin with organometallic Mo complexes by solid-phase synthesis**

Dave R. van Staveren and Nils Metzler-Nolte\*



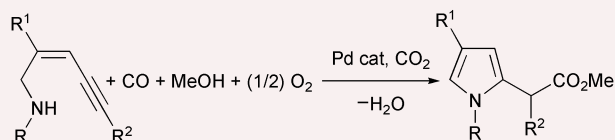
Solid-phase peptide synthesis with organometallic Mo complexes is achieved for the first time, as exemplified by the labelling of the neuropeptide enkephalin *via* two different synthesis schemes.



1408

**Unprecedented carbon dioxide effect on a Pd-catalysed oxidative carbonylation reaction: a new synthesis of pyrrole-2-acetic esters**

Bartolo Gabriele,\* Giuseppe Salerno,\* Alessia Fazio and Fausto Bruno Campana

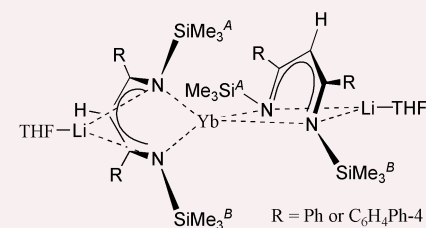


It has been found for the first time that carbon dioxide is able to selectively activate a palladium-catalysed oxidative carbonylation reaction.

1410

**Unusual crystalline heterobimetallic trinuclear  $\beta$ -diketiminates [Yb{L( $\mu$ -Li(thf))<sub>2</sub>}<sub>2</sub>] and [Yb{L'( $\mu$ -Li(thf))<sub>2</sub>}<sub>2</sub>].thf [L, L' = {N(SiMe<sub>3</sub>)C(R)}<sub>2</sub>CH, R = Ph, C<sub>6</sub>H<sub>4</sub>Ph-4]**

Anthony G. Avent, Alexei V. Khvostov, Peter B. Hitchcock and Michael F. Lappert\*

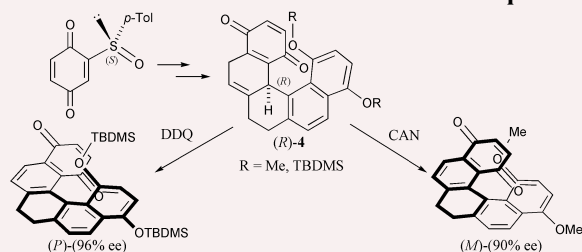


Treatment of YbCl<sub>3</sub> with successively 2KL or 2LiL' and then >2Li in thf is shown to yield crystalline [Yb{L( $\mu$ -Li(thf))<sub>2</sub>}<sub>2</sub>] or [Yb{L'( $\mu$ -Li(thf))<sub>2</sub>}<sub>2</sub>].thf, characterised by single crystal X-ray, multinuclear NMR spectral and VT magnetic susceptibility data; L or L', is believed to be dianionic in the complexes.

1412

**Divergent enantioselective synthesis of (*P*)- and (*M*)-dihydro[5]helicenequinones from a common tetrahydroaromatic precursor**

M. Carmen Carreño,\* Susana García-Cerrada and Antonio Urbano

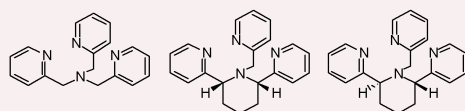


Compounds (*R*)-**4** having central chirality lead, in a divergent way, to helically chiral (*P*) or (*M*) enantiomers of dihydro[5]helicenequinones simply by selecting the common oxidant reagent which makes the final aromatization.

1414

**Stereochemical control of Zn(II)/Cu(II) selectivity in piperidine tripod ligands**

Zhaohua Dai, Xiaodong Xu and James W. Canary\*

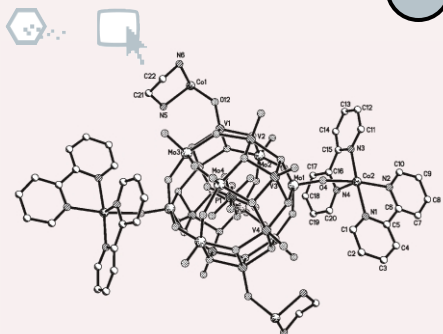
Zn(II)/Cu(II)  
selectivity10<sup>-5</sup>10<sup>-4</sup>10<sup>-1</sup>

Stereochemistry controls selectivity toward Zn(II) over Cu(II) of some tripod ligands with a central piperidine scaffold, one of which acts as a fluorescent zinc sensor with nanomolar sensitivity.

1416

**A novel two-dimensional mixed molybdenum–vanadium polyoxometalate with two types of cobalt(II) complex fragments as bridges**

Cai-Ming Liu, De-Qing Zhang,\* Ming Xiong and Dao-Ben Zhu\*



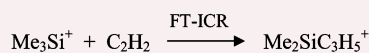
[Co(en)<sub>2</sub>][Co(bpy)<sub>2</sub>]<sub>2</sub>[PMo<sup>V</sup><sub>5</sub>Mo<sup>V</sup><sub>3</sub>V<sup>IV</sup><sub>8</sub>O<sub>44</sub>].4.5H<sub>2</sub>O (en = ethylenediamine, bpy = 2,2'-bipyridine) is the first example of a two-dimensional framework in which polyoxometalate anions are linked by two types of complex fragments.

1418

**The trimethylsilylation of acetylene**

B. Chiavarino, M. E. Crestoni\* and S. Fornarini

Unexpectedly, an adduct ion is formed from the reaction of gaseous  $\text{Me}_3\text{Si}^+$  ions with acetylene in the low-pressure regime of FT-ICR mass spectrometry. Collision induced dissociation and bimolecular reactivity of the  $\text{C}_5\text{H}_{11}\text{Si}^+$  adduct were compared with those of model ions pointing to a skeletal rearrangement to an  $\text{Me}_2\text{SiC}_3\text{H}_5^+$  isomer.

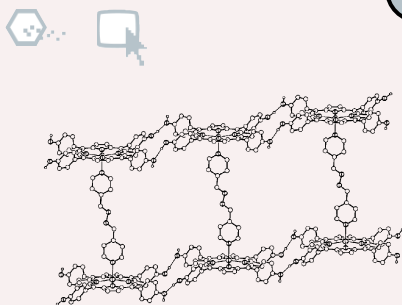


1420

**Crystal engineering of metalloporphyrin assemblies. New supramolecular architectures mediated by bipyridyl ligands**

Yael Diskin-Posner, Goutam Kumar Patra and Israel Goldberg\*

New spectacular porphyrin-based supramolecular architectures in crystals were designed by a concerted mechanism of molecular recognition, using [tetrakis(4-hydroxyphenyl)porphyrinato]zinc and bipyridyl ligands as building blocks.

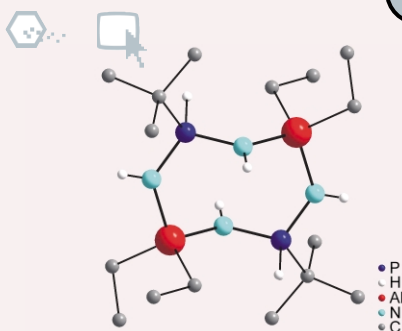


1422

**Synthesis and single crystal X-ray structure of the first imido analog of an eight-membered aluminophosphate heterocycle**

Tillmann Bauer, Stephan Schulz,\* Martin Nieger and Ingo Krossing\*

The equimolar reaction of *t*-BuP(NH)<sub>2</sub> and Et<sub>2</sub>AlH yields [*t*-Bu(H)P(NH)<sub>2</sub>AlEt<sub>2</sub>]<sub>2</sub>, the first structurally characterized aluminonitridodiphosphate containing an eight-membered AlNP-heterocycle. Computational calculation gives further information on the most likely reaction mechanism.

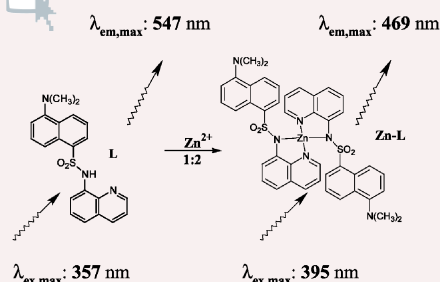


1424

**Novel zinc fluorescent probe bearing dansyl and aminoquinoline groups**

Pengju Jiang, Lizhen Chen, Jun Lin, Qin Liu, Jun Ding, Xiang Gao and Zijian Guo\*

The newly designed fluorescent probe is highly sensitive and selective towards Zn(II) ions and demonstrated a combined properties of both PET and PCT fluoroionophore.

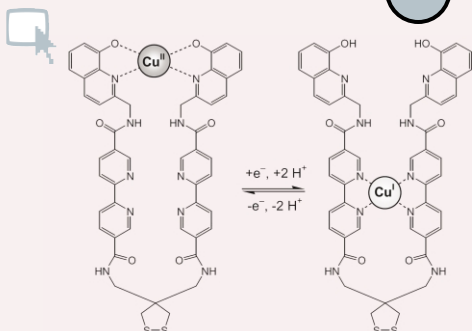


1426

**A new molecular switch: redox-driven translocation mechanism of the copper cation**

Daniel Kalny, Mourad Elhabiri, Tamar Moav, Alexander Vaskevich, Israel Rubinstein, Abraham Shanzer\* and Anne-Marie Albrecht-Gary\*

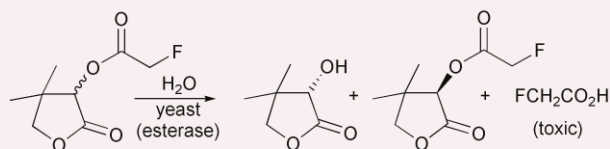
The synthesis of a novel molecular switch based on a heteroditopic ligand, which operates through the  $\text{Cu}^{\text{II}}/\text{Cu}^{\text{I}}$  couple, is reported. Reversible motion of the copper cation between the two binding sites is driven by auxiliary oxidation and reduction reaction. The rate-limiting steps of this translocation process were determined as well as the corresponding kinetic parameters.



1428

**A screening system for enantioselective enzymes based on differential cell growth**

Manfred T. Reetz\* and Carsten J. Rüggeberg

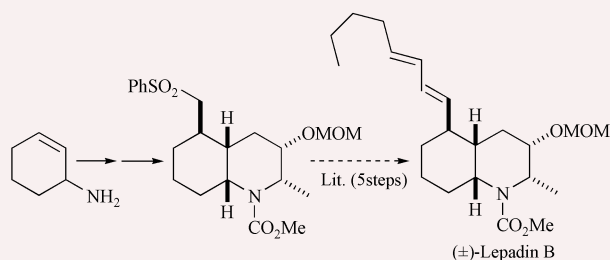


The esterase-catalyzed enantioselective hydrolysis of the fluoroacetate of pantolactone leads to fluoroacetic acid, a toxic compound which inhibits the growth of esterase-producing yeast; this forms the basis of an *ee*-assay.

1430

**A short formal route to (±)-lepudin B using a xanthate-mediated free radical cyclisation/vinylation sequence**

Chakib Kalai, Edward Tate and Samir Z. Zard\*

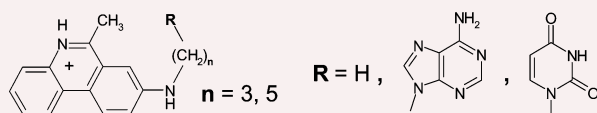


A short route towards (±)-lepudin B has been developed starting from cyclohexenylamine, featuring a diastereoselective xanthate-mediated free radical cyclisation/vinylation sequence.

1432

**Interactions of phenanthridinium–nucleobase conjugates with polynucleotides in aqueous media. Recognition of poly U**

Iva Juranović, Zlatko Meić, Ivo Piantanida,\* Lidija-Marija Tumir and Mladen Žinić\*



Phenanthridinium–adenine conjugates exhibit significantly higher affinity toward poly U than non-complementary uracil analogues and reference compound (R = H).

## CONFERENCE DIARY

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