**Cover (far left)**

The cover illustrates the processes occurring in natural photosynthesis and the efforts aimed at mimicking mother Nature using zeolite encapsulated photocatalysts (pp. 1443–1459).

**Inside cover (left)**

Flexible mesoporous nanocrystalline titania (pp. 1460–1461).



Chemical biology articles published in this journal also appear in the *Chemical Biology Virtual Journal*:  
[www.rsc.org/chembiol](http://www.rsc.org/chembiol)

# contents

C49

## Chemical Science

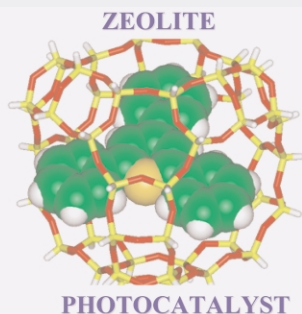
July 2004/Volume 1/Issue 7

[www.rsc.org/chemicalscience](http://www.rsc.org/chemicalscience)

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

### FEATURE ARTICLE

1443



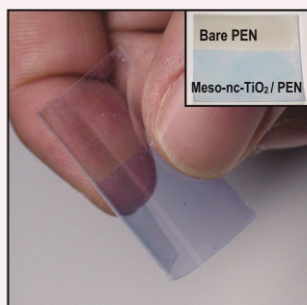
#### Zeolite-based photocatalysts

Avelino Corma\* and Hermenegildo Garcia\*

Encapsulation of a photoactive compound inside the rigid framework of microporous zeolites renders photocatalysts in which the adsorption ability of the zeolite host co-operates increasing the efficiency of the photocatalytic reaction; in addition the zeolite provides a compartmentalised space to assemble multi-component systems in a way reminiscent of enzymes of photosynthetic centers; areas of application of these zeolite-based photocatalysts are discussed.

### COMMUNICATIONS

1460



#### Towards flexible inorganic “mesomaterials”: one-pot low temperature synthesis of mesostructured nanocrystalline titania

Sönke Haseloh, Sung Yeun Choi, Marc Mamak, Neil Coombs, Srebri Petrov, Naveen Chopra and Geoffrey A. Ozin\*

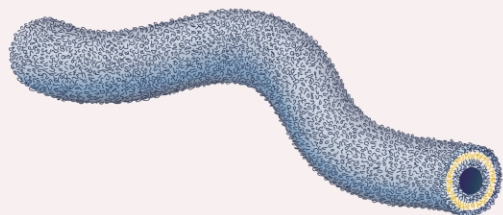
We hereby report a simple route for the low temperature synthesis of mesoporous nanocrystalline titania involving brief hydrothermal treatment of butanolic precursors and non-ionic tri-block-copolymer surfactant at 100 °C, followed by evaporation induced self assembly to make a crack-free flexible film. At no time in the film-forming process is a temperature of more than 120 °C reached, thereby permitting the use of substrates that are not stable to higher temperatures.



1462

**Soft nanotubes from amphiphilic ABA triblock macromonomers**

Julie Grumelard, Andreas Taubert and Wolfgang Meier\*

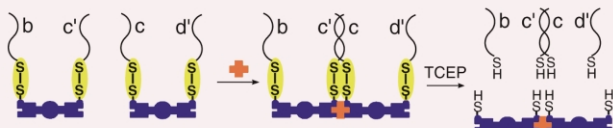


Soft, water-filled polymer nanotubes of several tens of  $\mu\text{m}$  in length have been prepared *via* self-assembly of amphiphilic ABA-triblock macromonomers in aqueous media; the tubes are mechanically and chemically stable and can be loaded with water-soluble substances.

1464

**Self-assembly of aluminium–salen coupled nanostructures from encoded modules with cleavable disulfide DNA-linkers**

Raymond S. Brown, Morten Nielsen and Kurt V. Gothelf\*

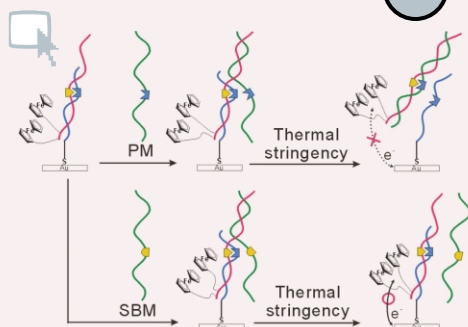


Linear organic modules containing cleavable disulfide linkers are covalently coupled in DNA-directed reactions by formation of aluminium–salen bridges. Disulfide linkers enable subsequent reduction with TCEP and release of DNA.

1466

**Washing-free electrochemical DNA detection using double-stranded probes and competitive hybridization reaction**

Kyuwon Kim,\* Haesik Yang,\* Se Ho Park, Dae-Sik Lee, Sung-Jin Kim, Yong Taik Lim and Youn Tae Kim

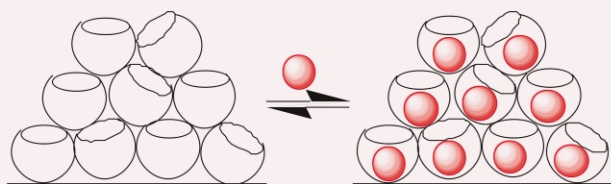


We have demonstrated a new electrochemical DNA detection method using double-stranded probes and competitive hybridization reaction and it offers highly selective discrimination of single base mismatch without post-hybridization washing.

1468

**Encapsulation of gases in the solid state**

Alexander V. Leontiev and Dmitry M. Rudkevich\*

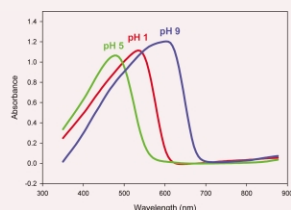


Cavity-containing solids reversibly encapsulate, store and exchange gases.

1470

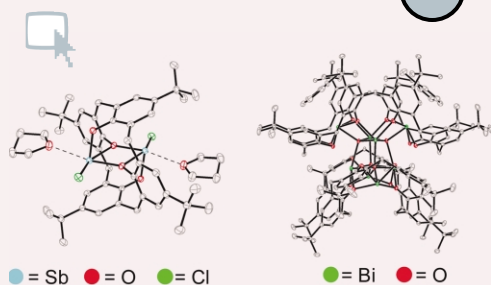
**pH Indicating resins**

Jin Ku Cho, Lu Shin Wong, Tony W. Dean, Osamu Ichihara, Christophe Muller and Mark Bradley\*



pH Indicating resins were prepared by covalently attaching dyes onto resin beads and analysed visually and with a micro UV/Vis spectrometer.

1472

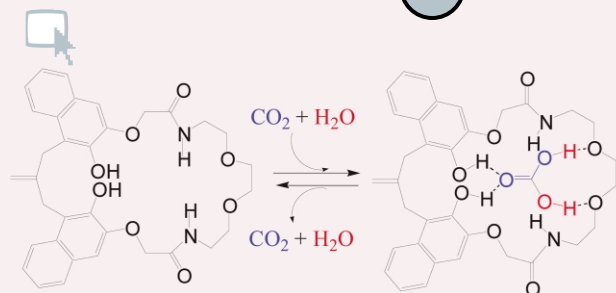


### Synthesis and X-ray crystal structures of the first antimony and bismuth calixarene complexes

Lihua Liu, Lev N. Zakharov, Arnold L. Rheingold\* and Tracy A. Hanna\*

The reaction of the monosodium salt of *p*-*tert*-butylcalix[4]arene (**Bu<sup>t</sup>C4**) with 2 equiv. of SbCl<sub>3</sub> provided **Bu<sup>t</sup>C4**(SbCl)<sub>2</sub>. The first Bi(III) calixarene complex was prepared by treatment of *p*-*tert*-butylcalix[8]arene (**Bu<sup>t</sup>C8**) with Bi[N(SiMe<sub>3</sub>)<sub>2</sub>]<sub>3</sub>.

1474

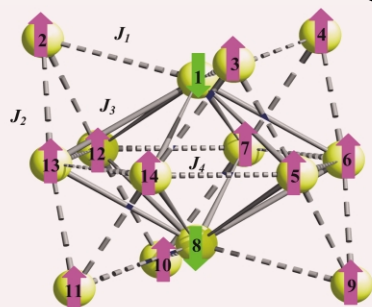


### A novel crownophane trapping CO<sub>2</sub> as carbonic acid at room temperature

Kazuhiisa Hiratani,\* Nobuko Sakamoto, Naohiro Kameta, Michinori Karikomi and Yoshinobu Nagawa

A 25 membered crownophane with two hydroxy and two amide groups has been reported for the first time to make a stable 1 : 1 complex with carbonic acid formed from CO<sub>2</sub> and water at room temperature.

1476

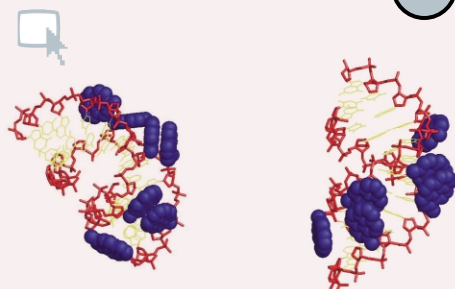


### Density functional calculations of a tetradecametallic iron(III) cluster with a very large spin ground state.

Gopalan Rajaraman, Joan Cano, Euan K. Brechin\* and Eric J. L. McInnes\*

DFT calculations and Monte Carlo simulations are used to calculate the exchange interactions in the Fe(III) cluster [Fe<sub>14</sub>(bta)<sub>6</sub>O<sub>6</sub>(OMe)<sub>18</sub>Cl<sub>6</sub>], impossible to determine by conventional methods – the results support a very high ground state spin arising from competing antiferromagnetic interactions.

1478

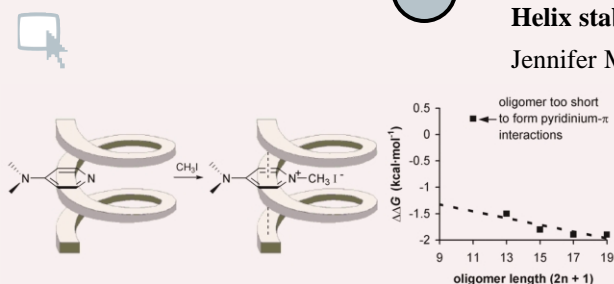


### Interstrand communication between 2'-*N*-(pyren-1-yl)methyl-2'-amino-LNA monomers in nucleic acid duplexes: directional control and signalling of full complementarity

Patrick J. Hrdlicka, B. Ravindra Babu, Mads D. Sørensen and Jesper Wengel\*

Molecular communication systems, based on interstrand pyrene excimer formation, have been obtained as the first demonstration of chemical engineering at the Ångström scale using functionalized 2'-amino-LNA building blocks.

1480



### Helix stabilization through pyridinium- $\pi$ interactions

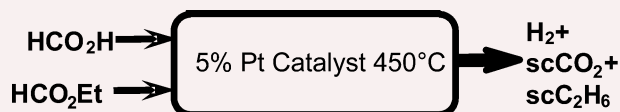
Jennifer M. Heemstra and Jeffrey S. Moore\*

Intramolecular cation- $\pi$  interactions between a methyl pyridinium ion and a phenyl ring stabilize the folded structure of a phenyleneethynylene oligomer.

1482

**Supercritical hydrogenation and acid-catalysed reactions “without gases”**

Jason R. Hyde and Martyn Poliakoff

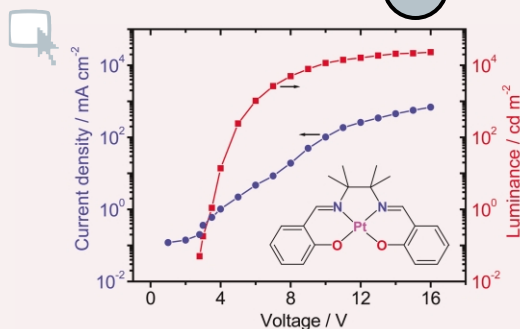


The high temperature catalytic decomposition of  $\text{HCO}_2\text{H}$  and  $\text{HCO}_2\text{Et}$  are used to generate the high pressure  $\text{H}_2$  and the supercritical fluids needed for micro-scale hydrogenation of organic compounds, overcoming the problems and limitations of handling high pressure gases on a small-scale.

1484

**Tetradentate Schiff base platinum(II) complexes as new class of phosphorescent materials for high-efficiency and white-light electroluminescent devices**

Chi-Ming Che,\* Siu-Chung Chan, Hai-Feng Xiang, Michael C. W. Chan, Yu Liu and Yue Wang

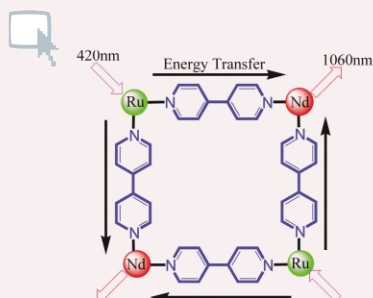


High-performance OLEDs exhibiting superior device efficiencies, plus white EL, have been achieved using phosphorescent  $\text{Pt}(\text{II})$  Schiff base dopants.

1486

**Lanthanide heterometallic molecular squares  $\text{Ru}_2\text{-Ln}_2$  exhibiting sensitized near-infrared emission**

Dong Guo, Chun-ying Duan,\* Feng Lu, Yasuchika Hasegawa, Qing-jin Meng and Shozo Yanagida\*

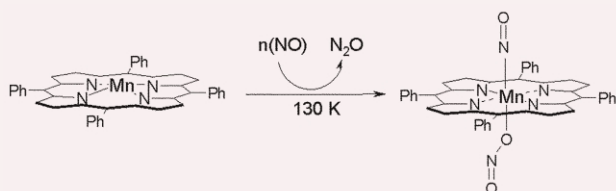


New lanthanide heterometallic molecular squares functionalized with Ru-bpy antenna chromophore  $\text{Ru}_2\text{-Ln}_2$  exhibit sensitized near-infrared emission upon photo-excitation of the Ru-centered antenna at 420 nm.

1488

**Low temperature NO disproportionation by Mn porphyrin. Spectroscopic characterization of the unstable nitrosyl nitrito complex  $\text{Mn}^{\text{III}}(\text{TPP})(\text{NO})(\text{ONO})$** 

Garik G. Martirosyan, Arsen S. Azizyan, Tigran S. Kurtikyan\* and Peter C. Ford\*

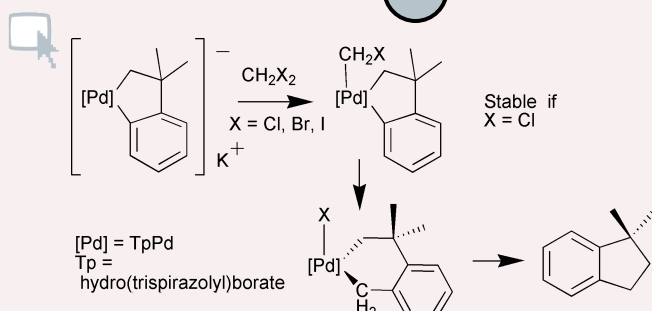


Using FT-IR and UV-VIS spectroscopy, it is shown that thin layers of  $\text{Mn}^{\text{II}}$  tetraphenylporphyrinate disproportionate NO at low temperatures. The previously unknown 6-coordinate  $\text{MnTPP}(\text{NO})(\text{ONO})$  complex is spectrally characterized.

1490

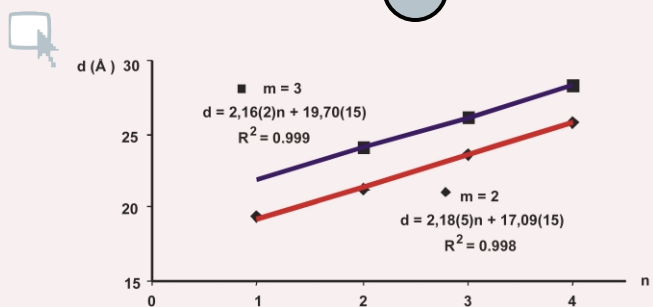
**Reactivity of an anionic Pd(II) metallacycle with  $\text{CH}_2\text{X}_2$  (X = Cl, Br, I): formal insertion of methylene into a Pd-C<sub>aryl</sub> bond**

Juan Cámpora,\* Pilar Palma,\* Diego del Río, Jorge A. López and Pedro Valerga



The reaction of an anionic  $\text{Pd}(\text{II})$  metallacycle with dihalomethanes allowed the isolation and structural characterization of  $\text{Pd}(\text{IV})$  complexes resulting from the formal insertion of a  $\text{CH}_2$  group into a Pd-C(aryl) bond.

1492

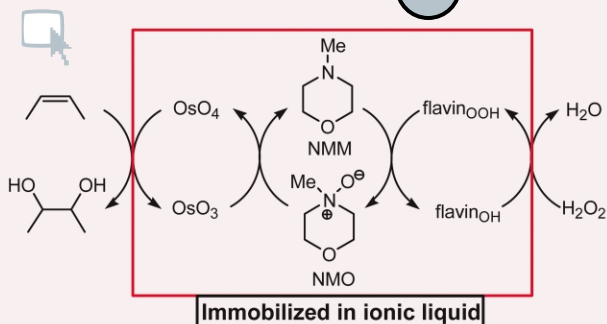


### Metric engineering of perfluorocarbon–hydrocarbon layered solids driven by the halogen bonding

Pierangelo Metrangolo,\* Tullio Pilati, Giuseppe Resnati\* and Andrea Stevenazzi

Halogen bonding has been used for the metric engineering of layered PFC–HC co-crystals. The 1D chain pitch length ( $d$ ) correlates linearly with the number of methylene ( $2m$ ) and difluoromethylene ( $2n$ ) groups in starting modules.

1494

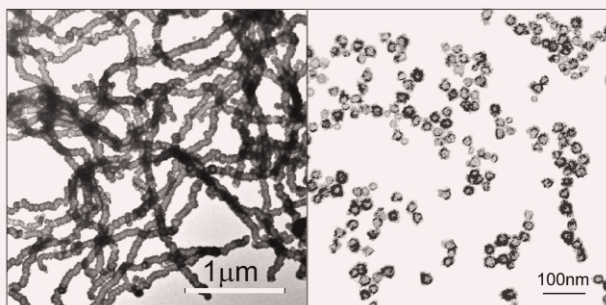


### Ionic liquid-immobilized catalytic system for biomimetic dihydroxylation of olefins

Adam Closson, Mikael Johansson and Jan-E. Bäckvall\*

An immobilized biomimetic catalytic system in an ionic liquid ( $[\text{bmim}]\text{PF}_6$ ) is highly efficient for dihydroxylation of olefins and can be recovered and reused.

1496

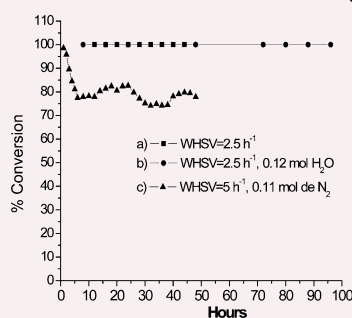


### Controllable AuPt bimetallic hollow nanostructures

Han-Pu Liang, Yu-Guo Guo, Hui-Min Zhang, Jin-Song Hu, Li-Jun Wan\* and Chun-Li Bai\*

One step, large-scale synthesis of AuPt bimetallic hollow 1-D nanostructures and nanospheres is described using Co nanoparticles as sacrificial templates.

1498

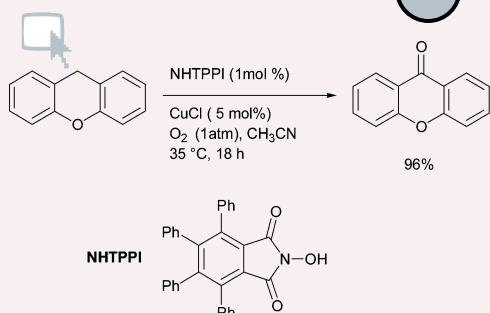


### Room temperature olefins oligomerization over sulfated titania

Angeles Mantilla,\* Francisco Tzompantzi, Gerardo Ferrat, Alfonso López-Ortega, Eduardo Romero, Emma Ortiz-Islas, Ricardo Gómez and Miguel Torres

Catalytic behaviour of the isobutene oligomerization over sulfated titania was evaluated using mild conditions. Total isobutene conversion, long time stability and high selectivity to  $\text{C}_8$ – $\text{C}_{12}$  olefins fractions (87%) were obtained.

1500

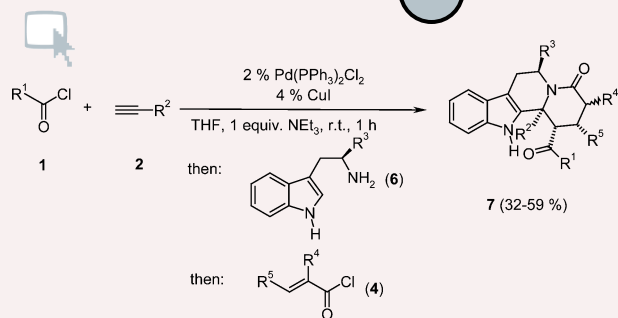


### New aerobic oxidation of benzylic compounds: efficient catalysis by N-hydroxy-3,4,5,6-tetraphenylphthalimide (NHTPPI)/CuCl under mild conditions and low catalyst loading

Malek Nechab, Cathy Einhorn and Jacques Einhorn\*

NHTPPI, in combination with CuCl, has been found to catalyse efficiently the aerobic oxidation of various benzylic compounds at mild temperature and only 1% catalyst loading.

1502

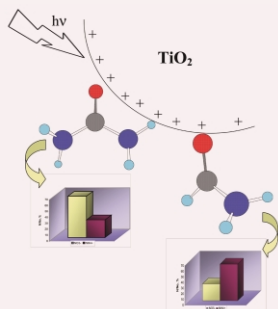


### A novel one-pot four-component access to tetrahydro- $\beta$ -carbolines by a coupling-amination-aza-annulation-Pictet–Spengler sequence (CAAPS)

Alexei S. Karpov, Thomas Oeser and Thomas J. J. Müller\*

The four-component coupling-amination-aza-annulation-Pictet–Spengler (CAAPS) sequence of acid chlorides **1**, terminal alkynes **2**, tryptamine derivatives **6**, and acryloyl chloride derivatives **4** represents a rapid one-pot access to tetrahydro- $\beta$ -carbolines **7**.

1504

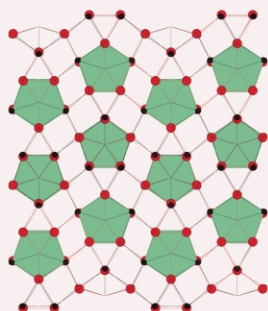


### Different photocatalytic fate of amido nitrogen in formamide and urea

E. Pelizzetti,\* P. Calza, G. Mariella, V. Maurino, C. Minero and H. Hidaka

In formamide and urea photocatalytic degradation the final fate of nitrogen is linked to the carbon (and not nitrogen) oxidation state.

1506

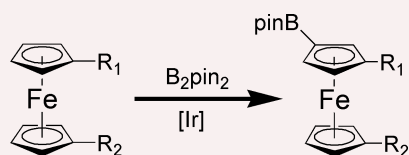


### V<sub>2</sub>Al<sub>5</sub>Ge<sub>5</sub>: first ternary intermetallic in the V–Al–Ge system accessible in liquid aluminium

Xiuni Wu, Daniel Bilc, Subhendra D. Mahanti and Mercouri G. Kanatzidis\*

V<sub>2</sub>Al<sub>5</sub>Ge<sub>5</sub> is stabilized in liquid aluminium and is the first reported example of a compound in this ternary system. It features an anisotropic structure with extensive one-dimensional V–V bonding.

1508

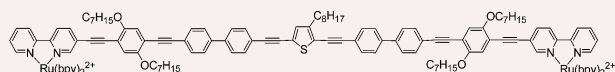


### Ir-catalyzed C–H activation in the synthesis of borylated ferrocenes and half sandwich compounds

Anupama Datta, Axel Köllhofer and Herbert Plenio\*

The 12[Ir(OMe)(cod)]<sub>2</sub>/dtby catalyzed CH-activation is an efficient tool for the functionalization of ferrocenes and related half sandwich compounds which is highly tolerant towards various functional groups.

1510

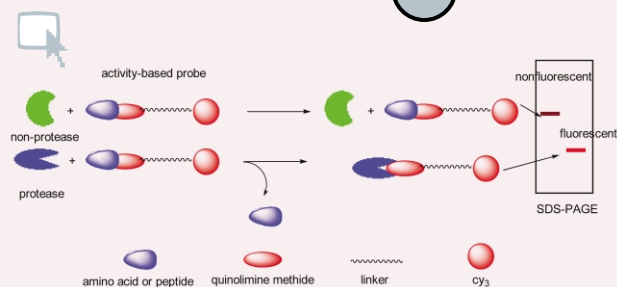


### Solvent tuned excited state configuration mixing in a $\pi$ -conjugated metal–organic oligomer

Shengxia Liu and Kirk S. Schanze\*

The photophysical properties of a  $\pi$ -conjugated metal–organic oligomer vary smoothly with solvent composition. The variation is believed to arise from solvent-tuned configuration mixing of <sup>3</sup> $\pi,\pi^*$  and <sup>3</sup>MLCT levels.

1512

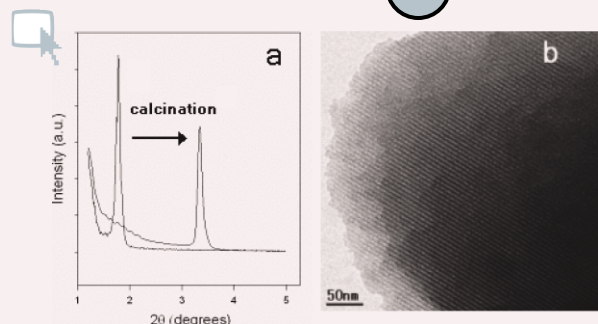


### Developing novel activity-based fluorescent probes that target different classes of proteases

Qing Zhu, Aparna Girish, Souvik Chattopadhyaya and Shao Q. Yao\*

In this article, we report the design and synthesis of a group of novel activity-based probes that target different protease sub-classes based on their substrate specificities, rather than their enzymatic mechanisms. The feasibility of our approach has been demonstrated by using representative members of the different protease sub-classes.

1514

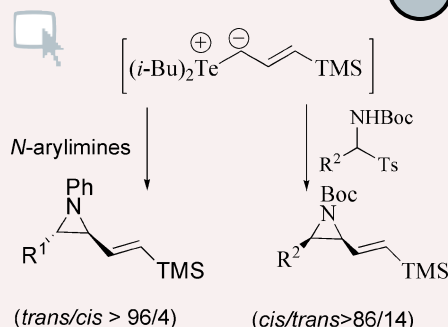


### Using the effects of pH and moisture to synthesize highly organized mesoporous titania thin films

Kwang-Suk Jang, Myung-Geun Song, Sung-Ho Cho and Jong-Duk Kim\*

Highly ordered mesoporous titania thin films were synthesized within a short time period by controlling the pH of sols and moisture exposure of as-prepared films.

1516

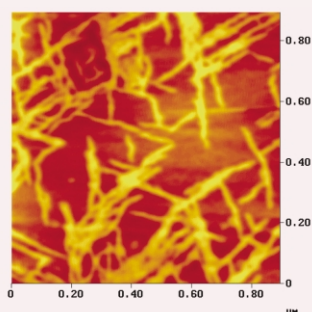


### A facile reaction of imines with telluronium allylide. Highly stereoselective synthesis of vinylaziridines

Wei-Wei Liao, Xian-Ming Deng and Yong Tang\*

The reaction of telluronium allylides with alkylimines, generated *in situ* from  $\alpha$ -amidoalkyl sulfones, affords *cis*-alkylvinylaziridines with good stereoselectivity in good yields. However, the same ylides react with *N*-aryl imines to provide *trans*-vinylaziridines.

1518

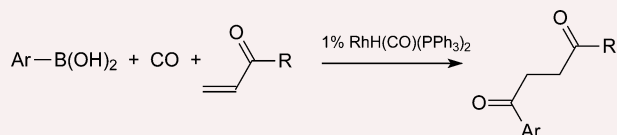


### Growth of carbon nanotubes on a gold (111) surface using two-dimensional iron oxide nano-particle catalysts derived from iron storage protein

Masato Tominaga,\* Akihiro Ohira, Atsushi Kubo, Isao Taniguchi and Masashi Kunitake

Lattice-oriented like growth of carbon nanotubes on a gold(111) surface using the two-dimensional iron oxide nano-particles derived from iron storage protein is reported.

1520



### New synthesis of 1,4-diketones via rhodium-catalysed 1,4 carbonylative addition of arylboronic acids to $\alpha,\beta$ -unsaturated ketones

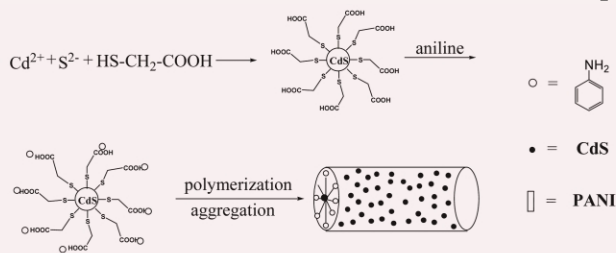
Mathieu Sauthier, Yves Castanet\* and André Mortreux

Under CO pressure, aryl boronic acids add to  $\alpha,\beta$ -unsaturated ketones in the presence of rhodium catalysts to give 1,4-diketones.



1522

### Preparation and characterization of polyaniline microwires containing CdS nanoparticles

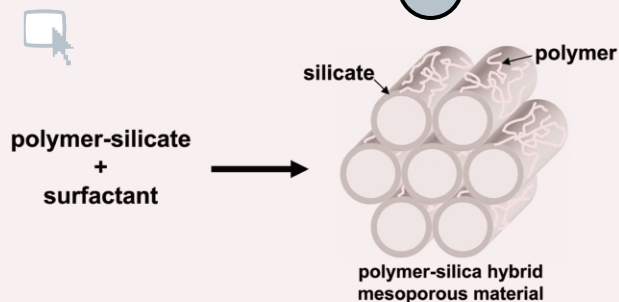


Xiaofeng Lu, Youhai Yu, Liang Chen, Huaping Mao, Wanjin Zhang\* and Yen Wei\*

We describe the synthesis and characterization of PANI microwires containing CdS nanoparticles. We succeed in homogeneous dispersion of CdS nanoparticles for the first time, using hydrogen bonding and/or electrostatic interaction between the carbonyl groups capped CdS nanoparticles and the polyaniline molecules.

1524

### Direct synthesis of ordered mesoporous materials constructed with polymer–silica hybrid frameworks



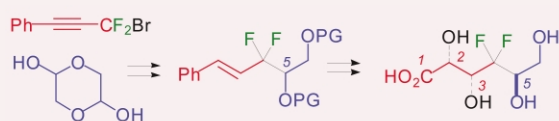
Yoon-Sok Kang, Hyung Ik Lee, Ye Zhang, Yong Jin Han, Jae Eui Yie, Galen D. Stucky\* and Ji Man Kim\*

Highly ordered mesoporous materials constructed with polymer–silica frameworks can be obtained *via* a one-step synthetic strategy using a mixture of polymer and silicate as the framework source.

1526

### A stereodivergent asymmetric approach to difluorinated aldonic acids

Christophe Audouard, Igor Barsukov, John Fawcett, Gerry A. Griffith, Jonathan M. Percy,\* Stéphane Pintat and Clive A. Smith

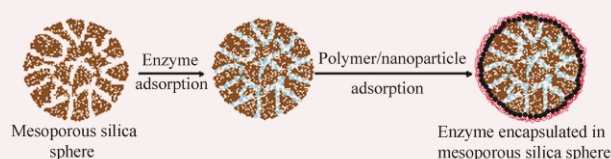


A difluorinated alkyne building block and glycolaldehyde are used to assemble a substrate for asymmetric dihydroxylation and phenyl group oxidation, delivering a novel enantiomerically-enriched difluorinated aldonic acid.

1528

### Enzyme encapsulation in nanoporous silica spheres

Yajun Wang and Frank Caruso\*

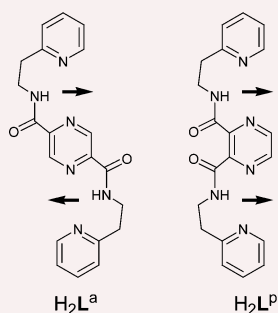


Encapsulating enzymes in mesoporous silica spheres *via* immobilization, followed by deposition of polymer/nanoparticle shells, yields particles that have high enzyme loadings, enzymatic activity and stability.

1530

### Control of molecular architecture by use of the appropriate ligand isomer: a mononuclear “corner-type” versus a tetranuclear [2 × 2] grid-type cobalt(III) complex

Julia Hausmann and Sally Brooker\*

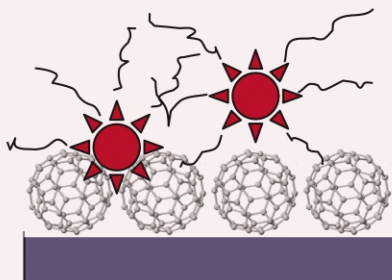


Employing two isomeric pyrazine-based ligands a [2 × 2] grid-type tetranuclear cobalt(III) complex, incorporating doubly deprotonated ( $\text{L}^{\text{a}}\text{)}^{2-}$  ligands, and a “corner-type” mononuclear cobalt(III) complex, incorporating neutral  $\text{H}_2\text{L}^{\text{p}}$  ligands in a zwitterionic form, have been synthesised and structurally characterised.

1532

**Fullerene-linked Pt nanoparticle assemblies**

C. Roth,\* I. Hussain, M. Bayati, R. J. Nichols and D. J. Schiffrin

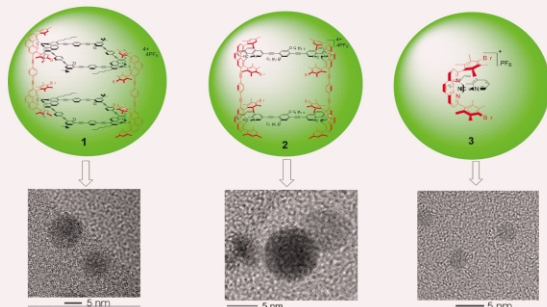


Fullerene–Pt nanoparticle assemblies were prepared by attachment and immobilisation of Pt nanoparticles on a gold electrode using molecular layers of C<sub>60</sub>. These assemblies were active for the methanol oxidation following treatment with CO.

1534

**Simple and supramolecular copper complexes as precursors in the HRTEM induced formation of crystalline copper nanoparticles**

Michael Schmittl,\* Venkateshwarlu Kalsani and Lorenz Kienle\*

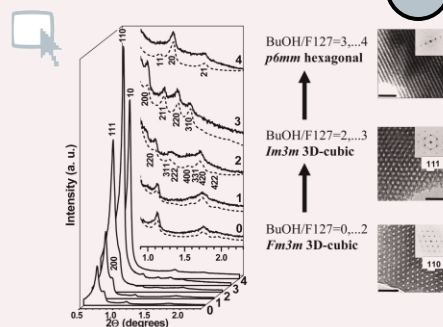


Radiation damage is the reason why in HRTEM investigations of copper(II) bisphenanthroline nanoscaffolds and of simple complexes 3–5 nm sized crystalline copper particles are found that can easily be confused with the original aggregates.

1536

**Transformation of highly ordered large pore silica mesophases (*Fm3m*, *Im3m* and *p6mm*) in a ternary triblock copolymer–butanol–water system**

Freddy Kleitz, Leonid A. Solovyov, Gopinathan M. Anilkumar, Shin Hei Choi and Ryong Ryoo\*

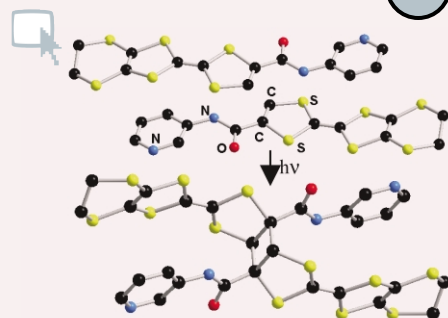


Exceptional control of the phase behavior of highly ordered large pore mesostructured silica (with the choice of *Fm3m*, *Im3m* or *p6mm* symmetry) is achieved using a triblock copolymer (EO<sub>106</sub>PO<sub>70</sub>EO<sub>106</sub>) and butanol at low acid concentrations.

1538

**[2 + 2]Photocyclization in a single-crystal-to-single-crystal transformation of a TTF-amido-pyridine**

Thomas Devic, Patrick Batail\* and Narcis Avarvari\*

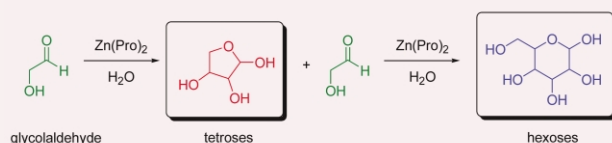


The irradiation of a single crystalline sample of the redox active ligand EDT-TTF-CONH-3-Py afforded the corresponding cyclobutane derivative through a [2 + 2] photodimerization process, as demonstrated by single crystal X-ray analysis.

1540

**Zinc–proline catalyzed pathway for the formation of sugars**

Jacob Kofoed, Miguel Machuqueiro, Jean-Louis Reymond\* and Tamis Darbre\*



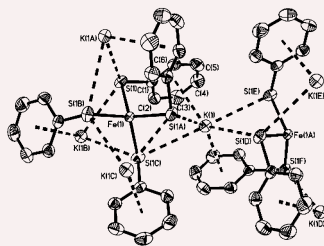
Zn–proline complex catalyzes the aldolisation of glycolaldehyde in water to give tetroses and hexoses; threose (33% of the product mixture) was formed with 10% enantiomeric excess of the D-isomer. The new reaction adds to possible prebiotic synthesis of sugars.

1542

### Phenylthiolate as a $\sigma$ - and $\pi$ -donor ligand: synthesis of a 3-D organometallic coordination polymer $[\text{K}_2\text{Fe}(\text{SPh})_4]_n$

Xiao-Yan Yu, Guo-Xin Jin\* and Lin-Hong Weng

Phenylthiolate acts as a  $\sigma$ - and  $\pi$ -donor ligand to give a 3-D potassium iron coordination polymer  $[\text{K}_2\text{Fe}(\text{SPh})_4]_n$ . It is the first mixed-metal organometallic polymer network containing phenylthiolato ligands.

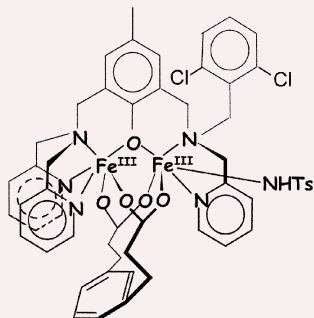


1544

### Catalytic aziridination of olefins and amidation of thioanisole by a non-heme iron complex

Frédéric Avenier and Jean-Marc Latour\*

A non-heme iron complex catalyses the aziridination of various olefins and the amidation of thioanisole in good yields at the expense of an aryl iodinane.

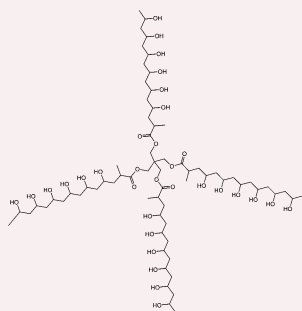


1546

### Poly(vinyl alcohol) star polymers prepared *via* MADIX/RAFT polymerisation

Martina H. Stenzel,\* Thomas P. Davis and Christopher Barner-Kowollik

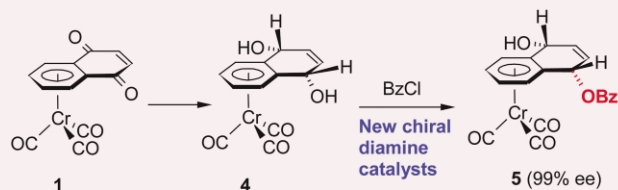
Poly(vinyl alcohol) PVA stars were obtained *via* hydrolysis of well-defined poly(vinyl acetate) PVAc three and four arm stars. RAFT/MADIX polymerisation techniques were employed controlling the molecular weight of PVAc stars leading consequently to well-defined stars of PVA.



1548

### Desymmetrization of a *meso*-diol complex derived from $[\text{Cr}(\text{CO})_3(\eta^6\text{-5,8-naphthoquinone})]$ : use of new diamine acylation catalysts

E. Peter Kündig,\* Thierry Lomberget, Ryan Bragg, Cyril Poulard and Gérald Bernardinelli



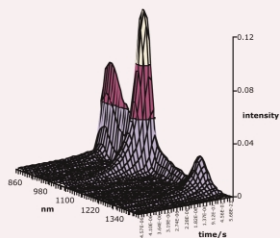
$[\text{Cr}(\text{CO})_3(\text{naphthoquinone})]$ (1) was reduced to the corresponding *meso*-diol complex 4. Asymmetric acylation catalyzed by new, easily accessed quinuclidine amines afforded both enantiomers of the the mono-acyl complex 5.

1550

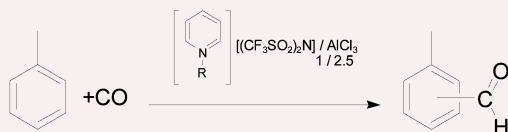
### $\text{Re}(\text{I})$ sensitised near-infrared lanthanide luminescence from a hetero-trinuclear $\text{Re}_2\text{Ln}$ array

Simon J. A. Pope, Benjamin J. Coe\* and Stephen Faulkner\*

The trinuclear complexes  $\text{Re}_2\text{Ln}$  ( $\text{Ln} = \text{Nd}, \text{Yb}$  or  $\text{Er}$ ) contain two  $\text{Re}^{\text{I}}$  tricarbonyl units linked to a DTPA binding site *via* 2,2'-bipyridyl ligands;  $\text{Ln}^{\text{III}}$ -centred emission is sensitised by the  $\text{Re}^{\text{I}}$  MLCT excited states.



1552

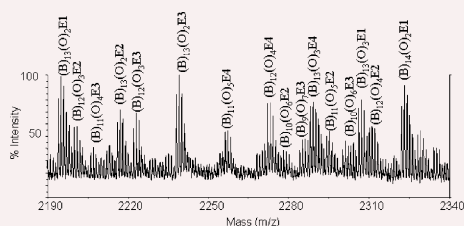


### New, highly acidic ionic liquid systems and their application in the carbonylation of toluene

Nicole Brausch, Andreas Metlen and Peter Wasserscheid\*

A new class of highly acidic ionic systems of the type [cation][(CF<sub>3</sub>SO<sub>2</sub>)<sub>2</sub>N]–AlCl<sub>3</sub> has been developed and successfully applied in the carbonylation of toluene.

1554

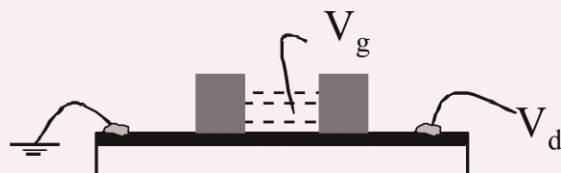


### Olefin copolymerization *via* reversible addition–fragmentation chain transfer

Rajan Venkatesh, Bastiaan B P Staal and Bert Klumperman\*

$\alpha$ -Olefins and (meth)acrylates are copolymerized *via* reversible addition–fragmentation chain transfer mediated radical polymerization. The incorporation of the  $\alpha$ -olefin in the polymer chain is proven by various techniques including MALDI-TOF MS.

1556



### A simple poly(3,4-ethylene dioxythiophene)/poly(styrene sulfonic acid) transistor for glucose sensing at neutral pH

Zheng-Tao Zhu, Jeffrey T. Mabeck, Changcheng Zhu, Nathaniel C. Cady, Carl A. Batt and George G. Malliaras\*

A simple transistor, which is based on the conducting polymer PEDOT : PSS, and is capable of sensing glucose in a neutral pH buffer solution, is demonstrated.

## ADDITIONS AND CORRECTIONS

1558

Omowunmi A. Sadik and Fei Yan

### Novel fluorescent biosensor for pathogenic toxins using cyclic polypeptide conjugates

1558

Jin Ku Cho, Lu Shin Wong,  
Tony W. Dean, Osamu Ichihara,  
Christophe Muller and  
Mark Bradley

### pH Indicating resins

## CONFERENCE DIARY

xvii

Dates, venues and contact details of forthcoming events.

## COPIES OF CITED ARTICLES

The Library and Information Centre (LIC) of the RSC offers a first class Document Delivery Service for items in Chemistry and related subjects. Contact the LIC, The Royal Society of Chemistry, Burlington House, Piccadilly, London W1V 0BN, UK.

This service is only available from the LIC in London and not the RSC in Cambridge.

Tel: +44 (0) 20 7437 8656; Fax: +44 (0) 20 7287 9798; E-mail: [library@rsc.org](mailto:library@rsc.org)

## FREE E-MAIL ALERTING SERVICE

Contents lists in advance of publication are available on the web via [www.rsc.org/chemcomm](http://www.rsc.org/chemcomm) – or take advantage of our free e-mail alerting service ([www.rsc.org/ej\\_alert](http://www.rsc.org/ej_alert)) to receive notification each time a new list becomes available.

## ADVANCE ARTICLES AND ELECTRONIC JOURNAL

Free site-wide access to Advance Articles and the electronic form of this journal is provided with a full-rate institutional subscription. See [www.rsc.org/ejs](http://www.rsc.org/ejs) for more information.

\* Indicates the author for correspondence: see article for contact details.



Electronic supplementary information is available *via* the online article (see <http://www.rsc.org/esi> for general information).

- Anilkumar, Gopinathan M., 1536  
 Audouard, Christophe, 1526  
 Avarvari, Narcis, 1538  
 Avenier, Frédéric, 1544  
 Azizyan, Arsen S., 1488  
 Babu, B. Ravindra, 1478  
 Bäckvall, Jan-E., 1494  
 Bai, Chun-Li, 1496  
 Barner-Kowollik, Christopher, 1546  
 Barsukov, Igor, 1526  
 Batail, Patrick, 1538  
 Batt, Carl A., 1556  
 Bayati, M., 1532  
 Bernardinelli, Gérald, 1548  
 Bilc, Daniel, 1506  
 Bradley, Mark, 1470, 1558  
 Bragg, Ryan, 1548  
 Brausch, Nicole, 1552  
 Brechin, Euan K., 1476  
 Brooker, Sally, 1530  
 Brown, Raymond S., 1464  
 Cadz, Nathaniel C., 1556  
 Calza, P., 1504  
 Cámpora, Juan, 1490  
 Cano, Joan, 1476  
 Caruso, Frank, 1528  
 Castanet, Yves, 1520  
 Chan, Michael C. W., 1484  
 Chan, Siu-Chung, 1484  
 Chattopadhyaya, Souvik, 1512  
 Che, Chi-Ming, 1484  
 Chen, Liang, 1522  
 Cho, Jin Ku, 1470, 1558  
 Cho, Sung-Ho, 1514  
 Choi, Shin Hei, 1536  
 Choi, Sung Yeun, 1460  
 Chopra, Naveen, 1460  
 Closson, Adam, 1494  
 Coe, Benjamin J., 1550  
 Coombs, Neil, 1460  
 Corma, Avelino, 1443  
 Darbre, Tamis, 1540  
 Datta, Anupama, 1508  
 Davis, Thomas P., 1546  
 Dean, Tony W., 1470, 1558  
 del Río, Diego, 1490  
 Deng, Xian-Ming, 1516  
 Devic, Thomas, 1538  
 Duan, Chun-ying, 1486  
 Einhorn, Cathy, 1500  
 Einhorn, Jacques, 1500  
 Faulkner, Stephen, 1550  
 Fawcett, John, 1526  
 Ferrat, Gerardo, 1498  
 Ford, Peter C., 1488  
 Garcia, Hermenegildo, 1443  
 Girish, Aparna, 1512  
 Gómez, Ricardo, 1498  
 Gothelf, Kurt V., 1464  
 Griffith, Gerry A., 1526  
 Grumelard, Julie, 1462  
 Guo, Dong, 1486  
 Guo, Yu-Guo, 1496  
 Han, Yong Jin, 1524  
 Hanna, Tracy A., 1472  
 Hasegawa, Yasuchika, 1486  
 Haseloh, Sönke, 1460  
 Hausmann, Julia, 1530  
 Heemstra, Jennifer M., 1480  
 Hidaka, H., 1504  
 Hiratani, Kazuhisa, 1474  
 Hrdlicka, Patrick J., 1478  
 Hu, Jin-Song, 1496  
 Hussain, I., 1532  
 Hyde, Jason R., 1482  
 Ichihara, Osamu, 1470, 1558  
 Jang, Kwang-Suk, 1514  
 Jin, Guo-Xin, 1542  
 Johansson, Mikael, 1494  
 Kalsani, Venkateshwarlu, 1534  
 Kameta, Naohiro, 1474  
 Kanatzidis, Mercouri G., 1506  
 Kang, Yoon-Sok, 1524  
 Karikomi, Michinori, 1474  
 Karpov, Alexei S., 1502  
 Kienle, Lorenz, 1534  
 Kim, Ji Man, 1524  
 Kim, Jong-Duk, 1514  
 Kim, Kyuwon, 1466  
 Kim, Sung-Jin, 1466  
 Kim, Youn Tae, 1466  
 Kleitz, Freddy, 1536  
 Klumperman, Bert, 1554  
 Kofoed, Jacob, 1540  
 Köllhofer, Axel, 1508  
 Kubo, Atsushi, 1518  
 Kündig, E. Peter, 1548  
 Kunitake, Masashi, 1518  
 Kurtikyan, Tigran S., 1488  
 Latour, Jean-Marc, 1544  
 Lee, Dae-Sik, 1466  
 Lee, Hyung Ik, 1524  
 Leontiev, Alexander V., 1468  
 Liang, Han-Pu, 1496  
 Liao, Wei-Wei, 1516  
 Lim, Yong Taik, 1466  
 Liu, Lihua, 1472  
 Liu, Shengxia, 1510  
 Liu, Yu, 1484  
 Lomberget, Thierry, 1548  
 López, Jorge A., 1490  
 López-Ortega, Alfonso, 1498  
 Lu, Feng, 1486  
 Lu, Xiaofeng, 1522  
 Mabeck, Jeffrey T., 1556  
 Machuqueiro, Miguel, 1540  
 McInnes, Eric J. L., 1476  
 Mahanti, Subhendra D., 1506  
 Malliaras, George G., 1556  
 Mamak, Marc, 1460  
 Mantilla, Angeles, 1498  
 Mao, Huaping, 1522  
 Mariella, G., 1504  
 Martirosyan, Garik G., 1488  
 Maurino, V., 1504  
 Meier, Wolfgang, 1462  
 Meng, Qing-jin, 1486  
 Metlen, Andreas, 1552  
 Metrangolo, Pierangelo, 1492  
 Minero, C., 1504  
 Moore, Jeffrey S., 1480  
 Mortreux, André, 1520  
 Muller, Christophe, 1470, 1558  
 Müller, Thomas J. J., 1502  
 Nagawa, Yoshinobu, 1474  
 Nechab, Malek, 1500  
 Nichols, R. J., 1532  
 Nielsen, Morten, 1464  
 Oeser, Thomas, 1502  
 Ohira, Akihiro, 1518  
 Ortiz-Islas, Emma, 1498  
 Ozin, Geoffrey A., 1460  
 Palma, Pilar, 1490  
 Park, Se Ho, 1466  
 Pelizzetti, E., 1504  
 Percy, Jonathan M., 1526  
 Petrov, Srebri, 1460  
 Pilati, Tullio, 1492  
 Pintat, Stéphane, 1526  
 Plenio, Herbert, 1508  
 Poliakoff, Martyn, 1482  
 Pope, Simon J. A., 1550  
 Poulard, Cyril, 1548  
 Rajaraman, Gopalan, 1476  
 Resnati, Giuseppe, 1492  
 Reymond, Jean-Louis, 1540  
 Rheingold, Arnold L., 1472  
 Romero, Eduardo, 1498  
 Roth, C., 1532  
 Rudkevich, Dmitry M., 1468  
 Ryoo, Ryong, 1536  
 Sadik, Omowunmi A., 1558  
 Sakamoto, Nobuko, 1474  
 Sauthier, Mathieu, 1520  
 Schanze, Kirk S., 1510  
 Schiffrin, D. J., 1532  
 Schmittel, Michael, 1534  
 Smith, Clive A., 1526  
 Solovyov, Leonid A., 1536  
 Song, Myung-Geun, 1514  
 Sørensen, Mads D., 1478  
 Staal, Bastiaan B P, 1554  
 Stenzel, Martina H., 1546  
 Stevenazzi, Andrea, 1492  
 Stucky, Galen D., 1524  
 Tang, Yong, 1516  
 Taniguchi, Isao, 1518  
 Taubert, Andreas, 1462  
 Tominaga, Masato, 1518  
 Torres, Miguel, 1498  
 Tzompantzi, Francisco, 1498  
 Valerga, Pedro, 1490  
 Venkatesh, Rajan, 1554  
 Wan, Li-Jun, 1496  
 Wang, Yajun, 1528  
 Wang, Yue, 1484  
 Wasserscheid, Peter, 1552  
 Wei, Yen, 1522  
 Weng, Lin-Hong, 1542  
 Wengel, Jesper, 1478  
 Wong, Lu Shin, 1470, 1558  
 Wu, Xiuni, 1506  
 Xiang, Hai-Feng, 1484  
 Yan, Fei, 1558  
 Yanagida, Shozo, 1486  
 Yang, Haesik, 1466  
 Yao, Shao Q., 1512  
 Yie, Jae Eui, 1524  
 Yu, Xiao-Yan, 1542  
 Yu, Youhai, 1522  
 Zakharov, Lev N., 1472  
 Zhang, Hui-Min, 1496  
 Zhang, Wanjin, 1522  
 Zhang, Ye, 1524  
 Zhu, Changcheng, 1556  
 Zhu, Qing, 1512  
 Zhu, Zheng-Tao, 1556

NOTE: An asterisk in the heading of each paper indicates the author who is to receive any correspondence.