



The following Communications have been judged by at least two referees to be "very important papers" and will be published online at [www.angewandte.org](http://www.angewandte.org) soon:

A. Staubitz, A. Presa, I. Manners\*

**Iridium-Catalyzed Dehydrocoupling of Primary Amine–Borane Adducts: A Route to High Molecular Weight Polyaminoboranes, Boron–Nitrogen Analogues of Polyolefins**

S. Gerlich, M. Gring, H. Ulbricht, K. Hornberger,\* J. Tüxen, M. Mayor,\* M. Arndt\*

**Matter-Wave Metrology as a Complementary Tool for Mass Spectrometry**

V. L. Blair, L. M. Carrella, W. Clegg, B. Conway, R. W. Harrington, L. M. Hogg, J. Klett, R. E. Mulvey,\* E. Rentschler, L. Russo

**Tuning the Basicity of Synergic Bimetallic Reagents: Switching the Regioselectivity of Direct Dimetalation of Toluene from 2,5- to 3,5-Positions**

M. Jung, H. Kim, K. Baek, K. Kim\*

**Synthetic Ion Channel Based on Metal–Organic Polyhedra**

J.-J. Li, T.-S. Mei, J.-Q. Yu\*

**Synthesis of Indolines and Tetrahydroisoquinolines from Arylethylamines by Palladium(II)-Catalyzed C–H Activation Reactions**

S. Srinivasan, V. K. Praveen, R. Philip, A. Ajayaghosh\*

**Bioinspired Superhydrophobic Coatings of Carbon Nanotubes and Linear Systems Based on the "Bottom-up" Self-Assembly Approach**

S. G. Srivatsan, N. J. Greco, Y. Tor\*

**Highly Emissive Fluorescent Nucleoside Signals the Activity of Toxic Ribosome-Inactivating Proteins**

Stereochemistry at Bürgenstock: Chemical Biology and Organic Synthesis in Focus

## Meeting Reviews

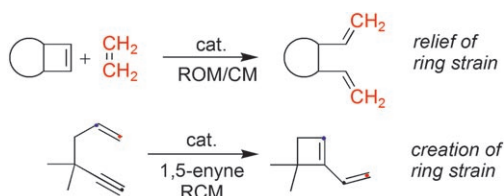
C. P. R. Hackenberger, H. A. Wegner, A. Zumbuehl \_\_\_\_\_ 5496

Catalysis

Gadi Rothenberg

## Books

reviewed by B. Cornils \_\_\_\_\_ 5500



**Lord of the (Small) Rings:** Metathetical opening (ROM/CM) of strained three- and four-membered rings is a well-established transformation that has been used in numerous total syntheses and in the preparation of polymers. Although small cyclic products generally cannot be easily

formed by ring-closing metathesis (RCM), the recent preparation of substituted cyclobutenes by 1,5-enyne RCM is a notable example of the formation of a strained four-membered ring by olefin metathesis.

## Highlights

### Enyne Metathesis

K. Grela\* \_\_\_\_\_ 5504–5507

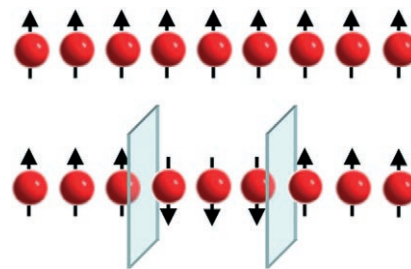
The Joy and Challenge of Small Rings Metathesis

## Giant Coercivity

R. Sessoli\* ————— 5508–5510

Record Hard Magnets: Glauber Dynamics Are Key

A **molecular magnet** comprising cobalt(II) ions and nitronyl-nitroxide radicals has a large coercivity at low temperature that makes it comparable to the hardest commercial alloy-based magnets. The one-dimensional character of the material, with very strong and anisotropic exchange interactions along the chains, seems responsible for the dramatic slowing of the magnetization dynamics.

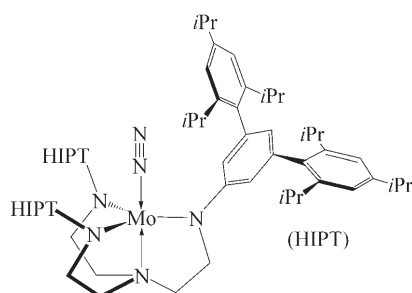


## Minireviews

### Nitrogen Fixation

R. R. Schrock\* ————— 5512–5522

Catalytic Reduction of Dinitrogen to Ammonia by Molybdenum: Theory versus Experiment



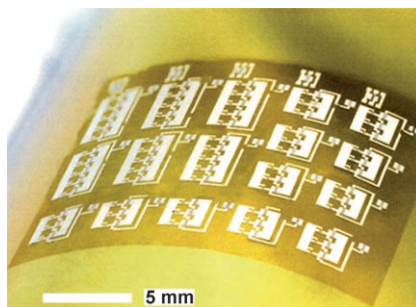
**One small step...** In the laboratory, dinitrogen can be catalytically reduced to  $\text{NH}_3$  with molybdenum complexes. Current findings from theoretical and experimental studies on the molybdenum triamidoamine complex shown give an insight into the complicated but nevertheless important reaction mechanism.

## Reviews

### Flexible Electronic Building Blocks

A. J. Baca, J.-H. Ahn, Y. Sun, M. A. Meitl, E. Menard, H.-S. Kim, W. M. Choi, D.-H. Kim, Y. Huang, J. A. Rogers\* ————— 5524–5542

Semiconductor Wires and Ribbons for High-Performance Flexible Electronics



**Large-area electronics** that offer mechanical flexibility or stretchability are promising for many emerging areas of application. Micro- to nanoscale semiconductor elements, in the form of wires, ribbons, membranes, and related structures, can serve as building blocks for these systems. A silicon-based flexible electrical circuit is shown as an example.

### For the USA and Canada:

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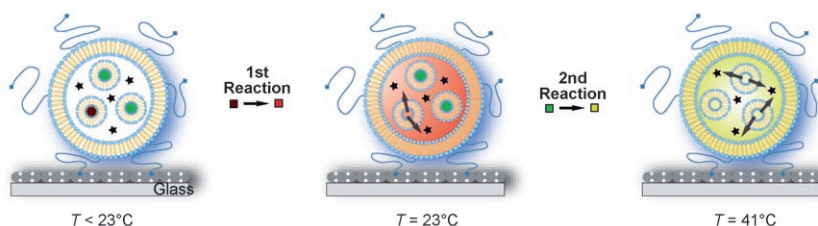
electronic / print or electronic delivery); for individuals who are personal members of a national chemical society prices are available on request. Postage and handling charges included. All prices are subject to local VAT/sales tax.

## Communications

### Nanoreactors

P.-Y. Bolinger, D. Stamou,  
H. Vogel\* 5544–5549

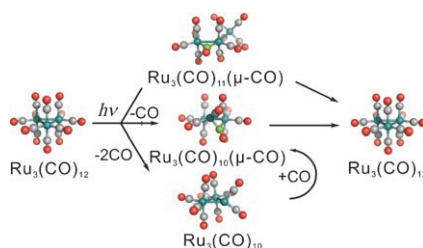
An Integrated Self-Assembled Nanofluidic System for Controlled Biological Chemistry



**Consecutive enzymatic reactions** are executed by mixing attoliter volumes (released from nanometer-sized lipid vesicles) in a closed femtoliter reactor vessel (a larger unilamellar vesicle), thus

controlling the number of reactants with single-molecule precision. The autonomous nanoreactors need no external interfacing such as outlets or inlets, allowing for extreme miniaturization.

**A matter of technique:** Time-resolved X-ray scattering was used to probe the photolysis of  $[\text{Ru}_3(\text{CO})_{12}]$  in cyclohexane, and a new intermediate was identified besides the two  $\mu\text{-CO}$  intermediates known from ultrafast IR spectroscopy (see scheme). The major and hitherto undetected intermediate contains only terminal CO and thus escaped detection by IR spectroscopy based on absorption bands of bridging CO.



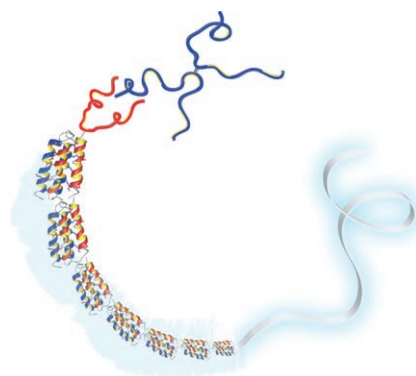
### Ultrafast X-ray Scattering

Q. Kong, J. H. Lee, A. Plech, M. Wulff,  
H. Ihee,\* M. H. J. Koch 5550–5553

Ultrafast X-Ray Solution Scattering Reveals an Unknown Reaction Intermediate in the Photolysis of  $[\text{Ru}_3(\text{CO})_{12}]$



**Joining the fold:** Micrometer-long and nanometer-thin fibers of four-helix bundles are formed by the folding-mediated assembly of disulfide-linked helix-loop-helix polypeptides (see picture). Fibers form both as a result of heteroassociation at neutral pH and homoassociation at acidic pH values. The heteroassociated fibers also assemble into nanorings with a diameter up to 5  $\mu\text{m}$ .



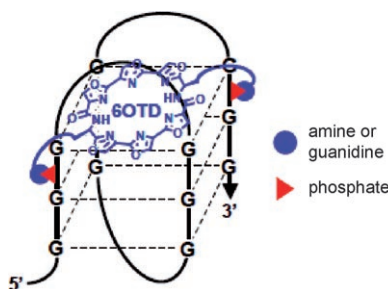
### Self-Assembly

D. Aili, F.-I. Tai, K. Enander, L. Baltzer,  
B. Liedberg\* 5554–5556

Self-Assembly of Fibers and Nanorings from Disulfide-Linked Helix-Loop-Helix Polypeptides



**In a bind:** Macrocyclic hexaoxazole G-quadruplex binders with cationic side chains have been synthesized that are selective for the telo24 DNA sequence, and strongly stabilize telo24 in the anti-parallel form (see picture). These compounds also showed potent telomerase-inhibitory activity in both cell-free and cell-based assay systems.



### DNA Recognition

M. Tera, H. Ishizuka, M. Takagi,  
M. Suganuma, K. Shin-ya,  
K. Nagasawa\* 5557–5560

Macrocyclic Hexaoxazoles as Sequence- and Mode-Selective G-Quadruplex Binders



# Incredibly *inexpensive!*



386407711\_st



Do chemistry journals really cost so much? Perhaps some do, but certainly not *Angewandte Chemie*! In 2006, an entire institution could subscribe through Wiley InterScience for about 4000 Euro and get access to 48 issues with over 1600 articles and all associated online search options, and for just 10% more, the printed issues could be included as well. For full members of the German Chemical Society (GDCh), a personal subscription cost not even 300 Euro, and student GDCh members paid less than 140 Euro, which is just under 3 Euro per issue – a price that even compares with high-circulation newsstand publications!

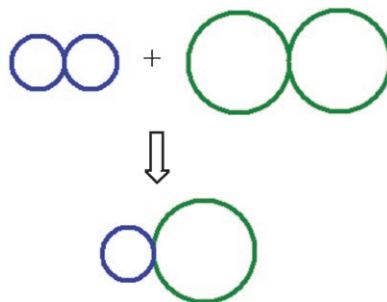
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**Little and large** is preferred to little and little or large and large in the condensation of polyhedral boranes (see picture) due to better orbital compatibility. The stability of the condensed structure increases with increasing difference in the number of vertices of the individual polyhedra of a macropolyhedron. The relative energies of isomers of macropolyhedral structures can be explained by this concept.



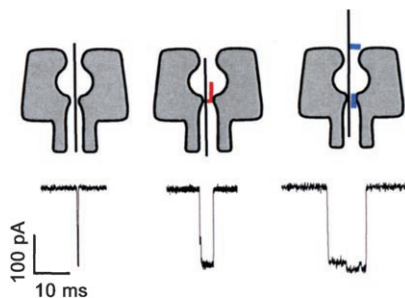
### Polyhedral Boranes

O. Shameema,  
E. D. Jemmis\* — 5561 – 5564

Orbital Compatibility in the Condensation of Polyhedral Boranes



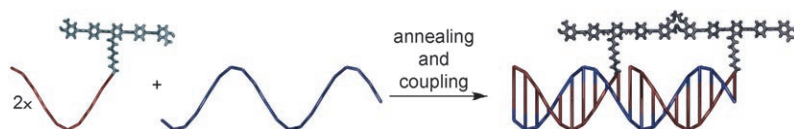
**The base resolution** in the detection of single DNA strands with nanopores can be improved by attaching chemical tags to individual bases. Different chemical tags give rise to characteristic current signatures when a DNA molecule passes through a nanopore (see picture). This sequence-specific sensing with modified DNA is independent of pore engineering and can potentially be applied to analyze nucleic acids with a wide range of solid-state nanopores.



### Single-Molecule Sensing

N. Mitchell, S. Howorka\* — 5565 – 5568

Chemical Tags Facilitate the Sensing of Individual DNA Strands with Nanopores



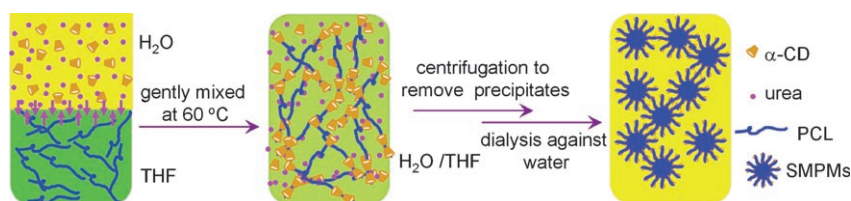
**A molecular bridge:** A molecular rod composed of a substituted oligo(phenylene ethynylene) backbone with salicylaldehyde moieties in the terminal positions was conjugated to short 10-base-pair DNA sequences (shown in red). The

assembly of two such conjugates on a DNA template (blue) aligns the two molecules for reaction in the presence of ethylenediamine and a metal salt to form a metal–salen complex.

### DNA-Templated Coupling

C. S. Andersen, H. Yan,  
K. V. Gothelf\* — 5569 – 5572

Bridging One Helical Turn in Double-Stranded DNA by Templated Dimerization of Molecular Rods



**A matter of control:** A method has been developed for the construction of supramolecular polymer micelles (SMPMs) from  $\alpha$ -cyclodextrin ( $\alpha$ -CD) and poly( $\epsilon$ -caprolactone) (PCL) by controlling the

intermolecular hydrogen bonds between CDs (see scheme). These micelles show great potential for use as drug carriers, templates for the synthesis of inorganic nanoparticles, and nanoreactors.

### Supramolecular Chemistry

H. Dong, Y. Li, S. Cai, R. Zhuo, X. Zhang,\*  
L. Liu\* — 5573 – 5576

A Facile One-Pot Construction of Supramolecular Polymer Micelles from  $\alpha$ -Cyclodextrin and Poly( $\epsilon$ -caprolactone)



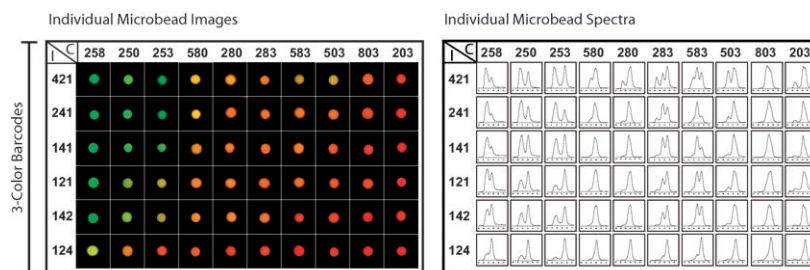


## Quantum Dots

S. Fournier-Bidoz, T. L. Jennings,  
J. M. Klostranec, W. Fung, A. Rhee, D. Li,  
W. C. W. Chan\* — 5577–5581



Facile and Rapid One-Step Mass  
Preparation of Quantum-Dot Barcodes



**Barcoding made easy:** Quantum-dot-based barcodes were synthesized using a new concentration-controlled flow-focus-ing process. This one-step method yields

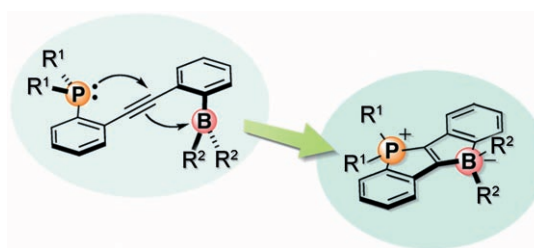
robust barcodes that outperform current technologies and can be used in multi-plexed detection of protein and genetic markers.

## $\pi$ -Conjugated Molecules

A. Fukazawa, H. Yamada,  
S. Yamaguchi\* — 5582–5585



Phosphonium- and Borate-Bridged  
Zwitterionic Ladder Stilbene and Its  
Extended Analogues



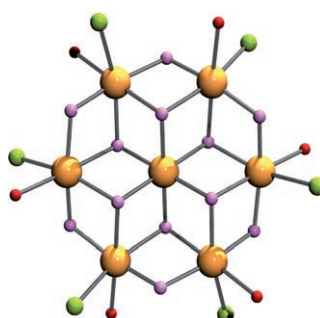
**A rung up:** A polar and rigid stilbene with phosphonium and borate bridging moieties was synthesized by the spontaneous cyclization of a boryl- and phosphanyl-substituted diphenylacetylene (see picture). Various extended ladder  $\pi$ -conju-

gated molecules can be synthesized in this manner. The zwitterionic moiety significantly modulates the electronic structure, thus leading to attractive fluorescence and redox properties.

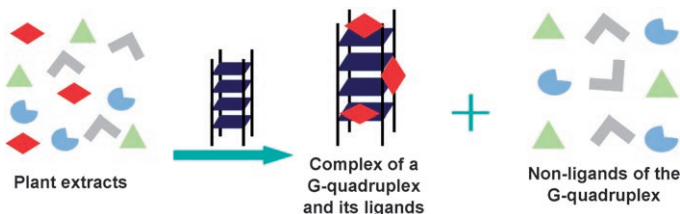
## Actinide Chemistry

J.-C. Berthet,\* P. Thuéry,\*  
M. Ephritikhine\* — 5586–5589

Polyimido Uranium(IV) Clusters:  
Imidometalates with an  $M_7(\mu_3-N)_6(\mu_2-N)_6$   
Core Analogous to the Anderson-Type  
Polyoxometalate Motif



**NU clusters:** Novel imido uranium(IV) clusters involving four or seven metal centers have been obtained from the reaction of  $UCl_4$  and  $[PhNMg(thf)]_6$  in thf or pyridine (see core structure; U yellow, N purple, Cl green, O red). The aggregation is strongly dependent on the nature of the solvent.



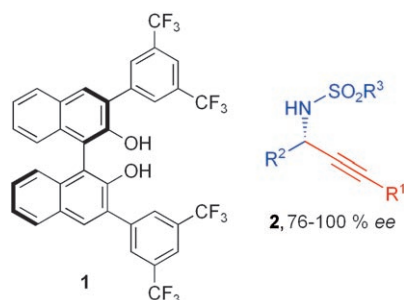
**Weeding out ligands:** Rapid screening of G-quadruplex ligands in plant extracts is achieved by the combination of G-quadruplex recognition (see picture) with  $^1\text{H}$  NMR spectroscopy, diffusion-ordered

spectroscopy (DOSY), and 2D NMR techniques. The method has a low detection limit and allows the structures of the ligands to be identified.

### G-Quadruplex Ligands

Q. J. Zhou, L. Li, J. F. Xiang, Y. L. Tang,\*  
H. Zhang, S. Yang, Q. Li, Q. F. Yang,  
G. Z. Xu \_\_\_\_\_ **5590–5592**

Screening Potential Antitumor Agents  
from Natural Plant Extracts by  
G-Quadruplex Recognition and NMR  
Methods

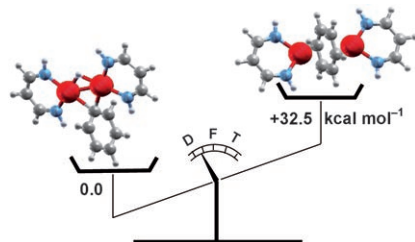


**It all adds up with zinc:** Terminal alkynes react with *N*-tosyl aldimines in the presence of dimethylzinc and binol-type ligands to give to *N*-tosyl-protected propargylic amines with good yields and high enantiomeric excesses (up to more than 99%; see scheme).

### Asymmetric Catalysis

G. Blay, L. Cardona, E. Climent,  
J. R. Pedro\* \_\_\_\_\_ **5593–5596**

Highly Enantioselective Zinc/Binol-  
Catalyzed Alkynylation of *N*-Sulfonyl  
Aldimines



**Weighing in:** DFT calculations suggest that the recently characterized phenyl hydride bridged complex of chromium (see picture, left; Cr red, N blue, C dark gray, H light gray) is more stable than its inverse sandwich isomer (right), thus providing a simple, though unexpected explanation to the high stability of the former compound.

### Chromium Complexes

M. Bénard, M.-M. Rohmer,\* X. López,  
K. H. Theopold \_\_\_\_\_ **5597–5599**

A Tale of Two Isomers (Continued): Is the  
Phenyl Hydride Complex of Chromium  
More Stable than Its Benzene-Bridged  
Isomer?



**That's radical!** A radical hydroxysulfenylation reaction of  $\alpha,\beta$ -unsaturated imines to give  $\beta$ -hydroxysulfides with high regioselectivity has been developed (see scheme). The introduction of the imino

group enhances the stability of the intermediate radical and reduces the ability of organoboranes to act as radical trapping reagents. Bn = benzyl.

### Radical Reactions

M. Ueda, H. Miyabe, H. Shimizu,  
H. Sugino, O. Miyata,  
T. Naito\* \_\_\_\_\_ **5600–5604**

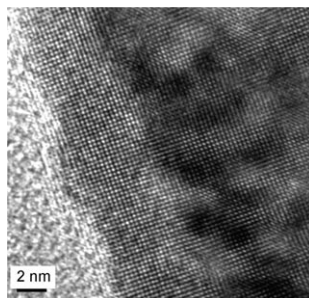
Regioselective Hydroxysulfenylation of  
 $\alpha,\beta$ -Unsaturated Imines: Enhanced  
Stability of an Intermediate Radical



## Nanowire Synthesis

T. Mokari, S. E. Habas, M. Zhang,  
P. Yang\* — 5605 – 5608

Synthesis of Lead Chalcogenide Alloy and  
Core–Shell Nanowires



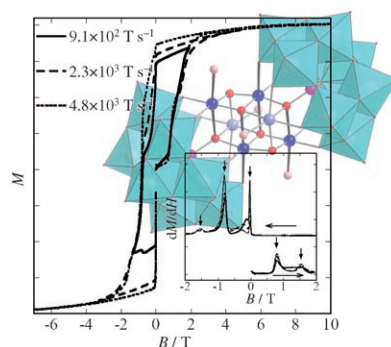
**Getting the grip on wires:** Lead chalcogenide heterostructures, including alloy and core–shell nanowires were achieved by solution phase synthesis (see HRTEM image of a PbSe–PbTe core–shell nanowire). Structural control was gained by changing the growth parameters. The new heterostructures have a potential to provide better thermoelectric materials compared to the pure PbSe nanowires.

## Single-Molecule Magnets

C. Ritchie, A. Ferguson, H. Nojiri,  
H. N. Miras, Y.-F. Song, D.-L. Long,  
E. Burkholder, M. Murrie,\* P. Kögerler,  
E. K. Brechin, L. Cronin\* — 5609 – 5612

Polyoxometalate-Mediated Self-Assembly  
of Single-Molecule Magnets:  
 $\{[XW_9O_{34}]_2[Mn^{III}_4Mn^{II}_2O_4(H_2O)_4]\}^{12-}$

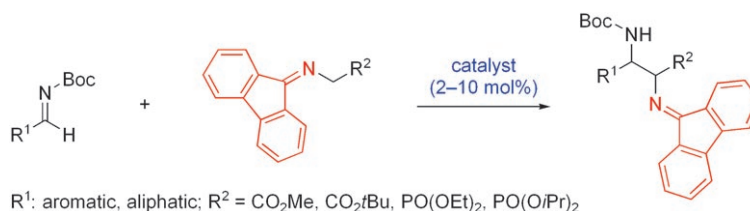
**Last night of the POMs:** The title compound ( $X = Ge^{IV}$ ) exhibits slow relaxation of magnetization and quantum tunneling with a single-molecule magnetic behavior. Significant structural differences in the  $[Mn^{III}_4Mn^{II}_2O_4(H_2O)_4]^{8+}$  cluster core of the  $X = Si^{IV}$  analogue modify the magnetic properties, thereby illustrating how polyoxometalate (POM) ligands can help in the systematic construction of nanoscale magnets.



## Amino Acid Synthesis

S. Kobayashi,\* R. Yazaki, K. Seki,  
Y. Yamashita — 5613 – 5615

The Fluorenone Imines of Glycine Esters  
and Their Phosphonic Acid Analogues



**Much more reactive** than the corresponding benzophenone imines, which have often been used in the synthesis of  $\alpha$ -amino acids, the title compounds undergo Mannich-type reactions with imines in the presence of a catalytic

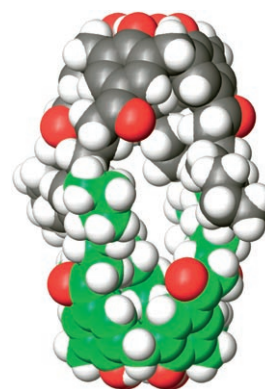
amount of a base to afford  $\alpha,\beta$ -diamino acid and  $\alpha,\beta$ -diaminophosphonic acid derivatives with high *syn* diastereoselectivity (see scheme). An asymmetric version of the reaction is also described. Boc = *tert*-butoxycarbonyl.

## Calixarenes

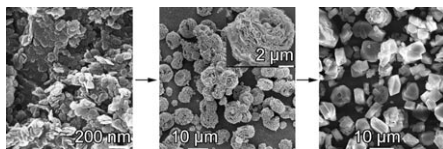
G. S. Ananchenko,\* I. L. Moudrakovski,  
A. W. Coleman,  
J. A. Ripmeester\* — 5616 – 5618

A Channel-Free Soft-Walled Capsular  
Calixarene Solid for Gas Adsorption

**A very good host:** The crystalline capsular structure of *para*-octanoylcalix[4]arene (see picture) is a promising adsorbent for saturated and unsaturated hydrocarbons, polarizable inert gases, and for carbon dioxide. The constant movement of acyl chains creates the effect of “soft cavity walls” in the calixarene capsule and allows gas adsorption even without permanent channels.







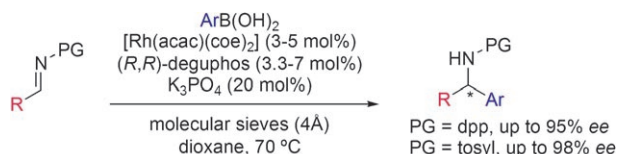
**Don't waste it!** The treatment of  $\text{Mg}(\text{OH})_2$  nanowaste containing  $\text{Cr}^{\text{VI}}$  with  $\text{NaHCO}_3 + \text{Na}_2\text{CO}_3$  as mineralizer converts this nanowaste into a nontoxic bulk material and a concentrated solution

containing the heavy metal in a two-step process involving desorption of the  $\text{Cr}^{\text{VI}}$  and the rapid growth of nanocrystals for complete separation from  $\text{Cr}^{\text{VI}}$  (see picture).

## Waste Treatment

W. Liu, F. Huang, Y. Liao, J. Zhang, G. Ren, Z. Zhuang, J. Zhen, Z. Lin,\*  
C. Wang ————— 5619 – 5622

Treatment of  $\text{Cr}^{\text{VI}}$ -Containing  $\text{Mg}(\text{OH})_2$  Nanowaste



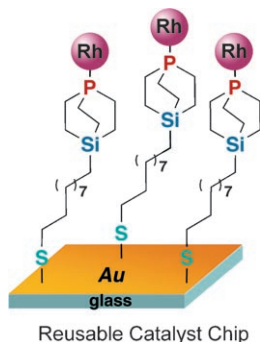
**Aliphatic imines take center stage:** The first enantioselective catalytic addition of arylboronic acids to branched and unbranched *N*-tosyl- and *N*-diphenylphosphinoyl aliphatic imines has been devel-

oped with selectivities of up to 98% *ee* (see scheme; acac = acetylacetonate, coe = cyclooctene, (*R,R*)-deguphos = (*R,R*)-1-benzyl-3,4-bis(diphenylphosphino)pyrrolidine).

## Asymmetric Catalysis

M. Trincado, J. A. Ellman\* — 5623 – 5626

Enantioselective Synthesis of  $\alpha$ -Aryl Alkylamines by Rh-Catalyzed Addition Reactions of Arylboronic Acids to Aliphatic Imines



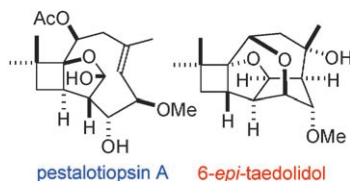
Reusable Catalyst Chip

**Selective surface:** A self-assembled monolayer consisting of a compact trialkylphosphane with an alkanethiolate pendant group was prepared on a gold surface. The rhodium complex of this system (see picture) showed high catalytic activity and reusability for the dehydrogenative silylation of alkanols, as well as unique selectivity for primary over secondary alcohols.

## Heterogeneous Catalysis

K. Hara,\* R. Akiyama, S. Takakusagi, K. Uosaki, T. Yoshino, H. Kagi, M. Sawamura\* ————— 5627 – 5630

Self-Assembled Monolayers of Compact Phosphanes with Alkanethiolate Pendant Groups: Remarkable Reusability and Substrate Selectivity in Rh Catalysis



pestalotiopsin A 6-*epi*-taedolidol

**Family ties:** The pestalotiopsin framework has been constructed by using a  $\text{Sml}_2$ -mediated cyclization and a Nozaki–Hiyama–Kishi coupling to construct the four- and nine-membered rings of the target, respectively. The first synthetic entry into the previously unexplored taedolidol family of natural products has been achieved through a stereoselective, acid-mediated cyclization of the pestalotiopsin skeleton.

## Natural Product Synthesis

T. M. Baker, D. J. Edmonds, D. Hamilton, C. J. O'Brien, D. J. Procter\* — 5631 – 5633

Synthesis and Reactions of the Pestalotiopsin Skeleton



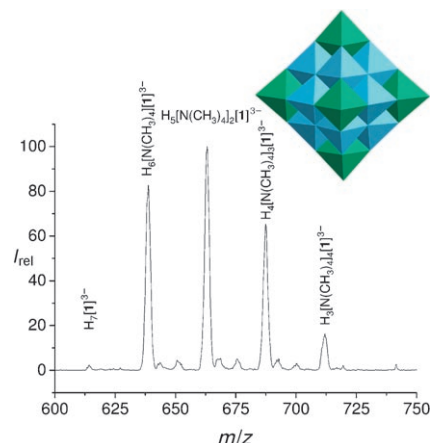
## A Cavity-Containing Polyoxometalate

C. A. Ohlin, E. M. Villa, J. C. Fetting, W. H. Casey\* 5634–5636



The  $[\text{Ti}_{12}\text{Nb}_6\text{O}_{44}]^{10-}$  Ion—A New Type of Polyoxometalate Structure

An extraordinarily useful cluster to detail reaction pathways in water might have been obtained in form of  $[\text{N}(\text{CH}_3)_4]_{10}[\text{Ti}_{12}\text{Nb}_6\text{O}_{44}]$ , a polyoxometalate with a central cavity. This compound is soluble in a range of solvents and has been characterized by ESI mass spectrometry and X-ray crystallography (see picture;  $[\mathbf{1}] = [\text{Ti}_{12}\text{Nb}_6\text{O}_{44}]^{10-}$ ).



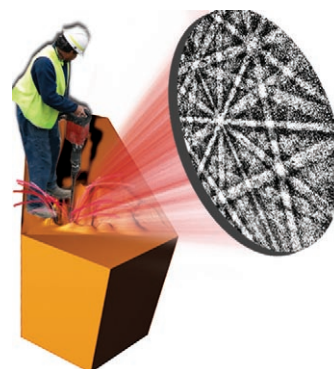
## Zeolites

E. Stavitski, M. R. Drury,\* D. A. M. de Winter, M. H. F. Kox, B. M. Weckhuysen\* 5637–5640



Intergrowth Structure of Zeolite Crystals and Pore Orientation of Individual Subunits Revealed by Electron Backscatter Diffraction/Focused Ion Beam Experiments

The two-component model of coffin-shaped intergrown crystals of zeolite ZSM-5 has been verified by a combination of electron backscattering diffraction and focused ion beam milling (see picture), which respectively revealed the orientation of the channel system in the individual subunits of the crystal and allowed these building blocks to be visualized.

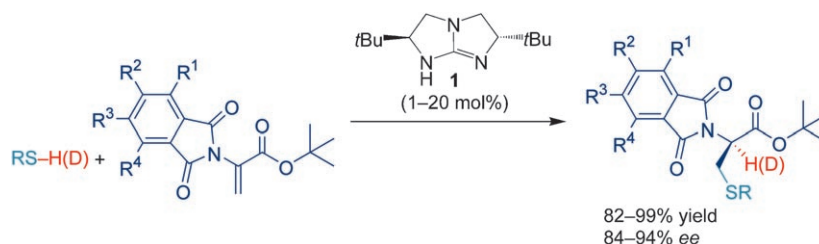


## Asymmetric Catalysis

D. Leow, S. Lin, S. K. Chittimalla, X. Fu, C.-H. Tan\* 5641–5645



Enantioselective Protonation Catalyzed by a Chiral Bicyclic Guanidine Derivative



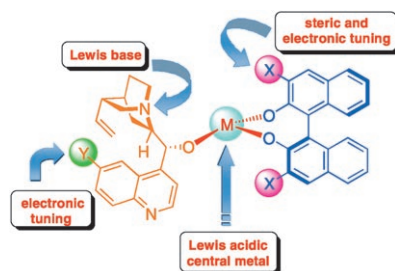
**Simple is beautiful:** The guanidine derivative **1** catalyzes a tandem conjugate addition–enantioselective protonation reaction of phthalimidoacrylates with thiols (see scheme) and itaconimides with phosphine oxides. Optically pure analogues of cysteine and cystine were obtained in this way. In highly enantioselective deuteration reactions, a small but significant kinetic isotope effect was observed.  $\text{R} = \text{aryl}$ , benzhydryl;  $\text{R}^1\text{--R}^4 = \text{H}$ , Me, Cl, F.

## Asymmetric Catalysis

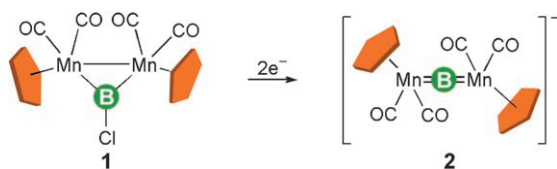
F. Yang, D. Zhao, J. Lan, P. Xi, L. Yang, S. Xiang, J. You\* 5646–5649



Self-Assembled Bifunctional Catalysis Induced by Metal Coordination Interactions: An Exceptionally Efficient Approach to Enantioselective Hydrophosphonylation



**Cost effective:** Bifunctional catalysts derived from commercially available chiral substituted binols and cinchona alkaloids with  $\text{Ti}(\text{O}i\text{Pr})_4$  by spontaneous metal–organic coordination (see picture) promote the asymmetric hydrophosphonylation of aldehydes in up to 99 % yield and greater than 99 % ee. The experimental conditions are capable of tolerating a relatively wide scope of substrates even in the presence of only 2.5 mol % of catalyst.



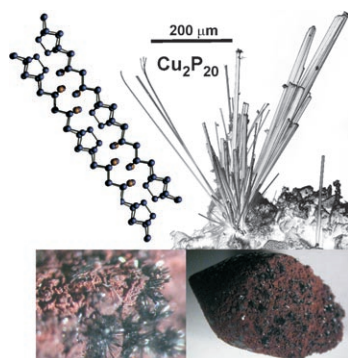
**A boryl anion with a Mn-imum of fuss:**  
The reduction of **1** with lithium sand yielded the first anionic dimetalloborylene complex **2**, which is totally separated from its counter cation  $[\text{Li}(\text{dme})_3]^+$  (dme = 1,2-

dimethoxyethane). The anion reacts with MeI to give the corresponding methylborylene complex  $[(\eta^5\text{-C}_5\text{H}_4\text{Me})\text{-(OC)}_2\text{Mn}]_2(\mu\text{-BMe})$ .

### Anionic Borylene Complexes

H. Braunschweig,\* M. Burzler,  
R. D. Dewhurst, K. Radacki **5650–5653**

A Linear, Anionic Dimetalloborylene Complex

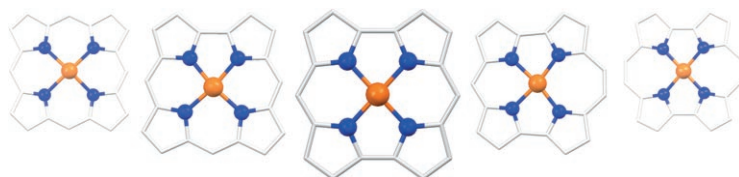


**Mineralization chemistry:**  $\text{Cu}_2\text{P}_{20}$  and  $\text{Cu}_5\text{InP}_{16}$  were synthesized by a mineralization reaction from the elements and binary starting materials.  $\text{Cu}_2\text{P}_{20}$  is the first representative retaining the structural features of violet or fibrous phosphorus in a binary compound (see picture).  $\text{Cu}_5\text{InP}_{16}$  displays a previously unseen layered polyphosphide substructure built up of six-membered rings connected via four phosphorus bridges.

### Phosphorus Chemistry

S. Lange, M. Bawohl, R. Wehrich,  
T. Nilges\* **5654–5657**

Mineralization Routes to Polyphosphides:  $\text{Cu}_2\text{P}_{20}$  and  $\text{Cu}_5\text{InP}_{16}$



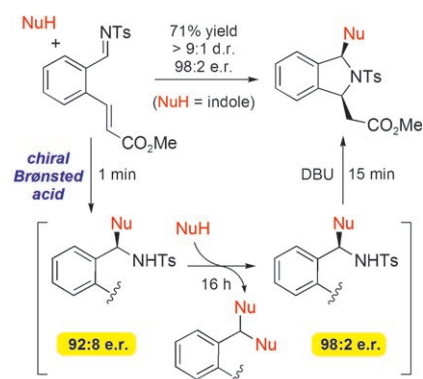
**A newborn member of the porphyrin family,** the porphyrin(1.0.1.0) called norcorrole (shown in the center of the picture), was detected as an unexpected product of a spontaneous oxidative mac-

rocyclization reaction of the iodoiron(III) complex of 2,2'-bidipyrrin. It fills a gap in the family of contracted porphyrinoid variants and shows reactivity consistent with earlier DFT calculations.

### Contracted Porphyrinoids

M. Bröring,\* S. Köhler,  
C. Kleeberg **5658–5660**

Norcorrole: Observation of the Smallest Porphyrin Variant with a  $\text{N}_4$  Core



**Improving with time:** The first catalytic asymmetric synthesis of chiral 1,3-disubstituted isoindolines is based on a Brønsted acid catalyzed one-pot reaction consisting of a Friedel–Crafts reaction and a base-catalyzed aza-Michael addition (see scheme). The enantiomeric ratio of the product significantly increases with reaction time as a result of a Brønsted acid catalyzed stereoablative kinetic resolution, which occurs in tandem to the first step.

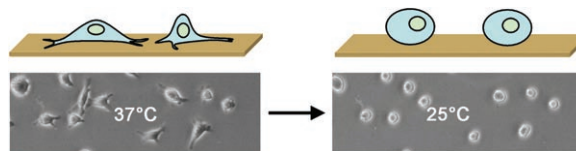
### Asymmetric Synthesis

D. Enders,\* A. A. Narine, F. Toulgoat,  
T. Bisschops **5661–5665**

Asymmetric Brønsted Acid Catalyzed Isoindoline Synthesis: Enhancement of Enantiomeric Ratio by Stereoablative Kinetic Resolution

## Smart Materials

E. Wischerhoff, K. Uhlig, A. Lankenau,  
H. G. Börner, A. Laschewsky,\* C. Duschl,\*  
J.-F. Lutz\* \_\_\_\_\_ **5666–5668**



Controlled Cell Adhesion on PEG-Based  
Switchable Surfaces

**A wash and brush up:** Thermoresponsive and biocompatible oligo(ethylene glycol)-based copolymers enable the control of cell adhesion on planar gold substrates. While at physiological temperature, the polymer brushes are collapsed and enable

fibroblast adhesion and cultivation, at room temperature, the now hydrated oligo(ethylene glycol) segments become cell-repellent, thus allowing cell harvesting under mild conditions (see scheme).



Supporting information is available on [www.angewandte.org](http://www.angewandte.org) (see article for access details).



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## Corrigendum

Catalytic Three-Component Ugi Reaction

S. C. Pan, B. List\* \_\_\_\_\_ **3622–3625**

*Angew. Chem. Int. Ed.* **2008**, 47

DOI 10.1002/anie.200800494

In this Communication, two additional publications on non-catalytic three-component Ugi reactions from Weber et al. should be cited.<sup>[8g,h]</sup> The authors thank Professor M. Bradley and Professor H. Waldmann for bringing this to their attention.

[8] Non-catalytic three-component Ugi reactions using amidine-modified primary amines have been investigated on an analytical scale: g) L. Weber, S. Wallbaum, C. Broger, K. Gubernator, *Angew. Chem.* **1995**, 107, 2452–2454; *Angew. Chem. Int. Ed. Engl.* **1995**, 34, 2280–2282; h) K. Illgen, T. Enderle, C. Broger, L. Weber, *Chem. Biol.* **2000**, 7, 433–441.