



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:

M. Mascal\*, E. B. Nikitin

Direct, High-Yield Conversion of Cellulose into Biofuel

P. García-Álvarez, D. V. Graham, E. Hevia, A. R. Kennedy, J. Klett, R. E. Mulvey\*, C. T. O'Hara, S. Weatherstone

Unmasking Representative Structures of TMP-Active Hauser and Turbo Hauser Bases

T. Robert, J. Velder, H.-G. Schmalz\*

Enantioselective Copper-Catalyzed 1,4-Addition of Grignard Reagents to Cyclohexenone Using Taddol-Derived Phosphine-Phosphite Ligands and 2-Methyl-THF as a Solvent

A. D. Shaller, W. Wang, H. Gan, A. D. Q. Li\*

Tunable Molecular Assembly Codes Direct Reaction Pathways

D. Staack, A. Fridman, A. Gutsol, Y. Gogotsi\*, G. Friedman\*

Nanoscale Corona Discharge in Liquids Enabling Nanosecond Optical Emission Spectroscopy

C. Hawner, K. Li, V. Cirriez, A. Alexakis\*

Copper-Catalyzed Asymmetric Conjugate Addition of Aryl Aluminum Reagents to Trisubstituted Enones: Construction of Aryl-Substituted Quaternary Centers

K. W. Eberhardt, C. L. Degen, A. Hunkeler, B. H. Meier\*

One- and Two-Dimensional NMR Spectroscopy with a Magnetic-Resonance Force Microscope

S. Wan, J. Guo, J. Kim, H. Ihée, D. Jiang\*

A Belt-Shaped, Blue-Luminescent and Semiconducting Covalent Organic Framework

Organic Chemistry:

Nicolaou Honored \_\_\_\_\_ 7162

Organometallic Chemistry:

Prize to Lappert \_\_\_\_\_ 7162

## News

Fullerenes:

Krätschmer Awarded \_\_\_\_\_ 7162

Microporous Framework Solids

Paul A. Wright

## Books

reviewed by D. Volkmer \_\_\_\_\_ 7163



**To be or not to be:** The terms "viable" and "fleeting," rather than the imprecise term "stable," are proposed to describe hypothetical molecules whose existence has been predicted by computational studies. A number of criteria that a molecule described as viable should fulfill are discussed.

## Appeal

### Computational Studies

R. Hoffmann\*, P. v. R. Schleyer\*,

H. F. Schaefer III\* \_\_\_\_\_ 7164–7167

Predicting Molecules—More Realism, Please!

## Referee Report

### Computational Studies

G. Frenking\* \_\_\_\_\_ 7168–7169

No Important Suggestions

W. Koch\* \_\_\_\_\_ 7170

Excellent, Valuable, and Entertaining

M. Reiher\* \_\_\_\_\_ 7171

Important for the Definition of Terminology in Computational Chemistry

F. M. Bickelhaupt\* \_\_\_\_\_ 7172

Attractive and Convincing

## Essays

### Peer Review

L. Bornmann,\*  
H.-D. Daniel\* ————— 7173–7178



The Effectiveness of the Peer Review Process: Inter-Referee Agreement and Predictive Validity of Manuscript Refereeing at *Angewandte Chemie*

**Refereeing the referees:** The peer review process of *Angewandte Chemie* has been examined according to the criteria of reliability (agreement between referees) and predictive validity (correlation between publication decision and citation

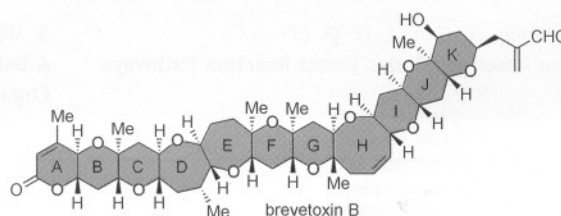
frequency of the reviewed work). Despite the dramatic increase in submitted manuscripts and significant decline in acceptance rate, the results show the unwavering quality of the peer review at *Angewandte Chemie*.

## Reviews

### Natural Products

K. C. Nicolaou,\* M. O. Frederick,  
R. J. Aversa ————— 7182–7225

The Continuing Saga of the Marine Polyether Biotoxins



**Natural products with cyclic ethers:** The discovery of brevetoxin B in 1981 marked the beginning of the marine polyether biotoxins saga that still fascinates chemists and biologists. This Review gives a

chronological overview of the developments in this research field, including studies on the isolation, chemical synthesis, and chemical biology of these toxins.

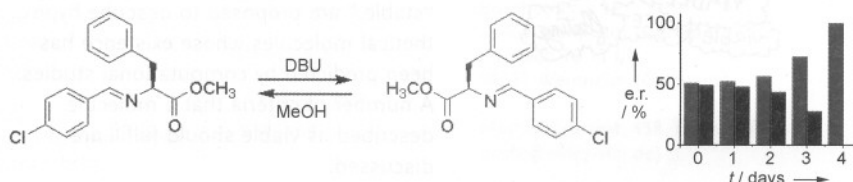
## Communications

### Chiral Resolution

B. Kaptein,\* W. L. Noorduyn, H. Meekes,  
W. J. P. van Enckevort, R. M. Kellogg,\*  
E. Vlieg\* ————— 7226–7229



Attrition-Enhanced Deracemization of an Amino Acid Derivative That Forms an Epitaxial Racemic Conglomerate



**Just bead it!** Despite the complication of enantiomeric epitaxial behavior, a derivative of phenylalanine was completely resolved (see picture). Racemization takes place by abrasively grinding crystals of the compound in a saturated solution.

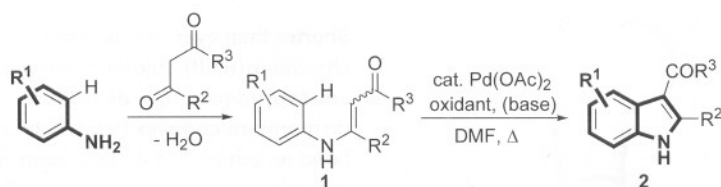
By studying the influence of different crystal sizes, it was found that Ostwald ripening plays an important role in this process. DBU = 1,8-diazabicyclo-[5.4.0]undec-7-ene.

### For the USA and Canada:

ANGEWANDTE CHEMIE International Edition (ISSN 1433-7851) is published weekly by Wiley-VCH, PO Box 191161, 69451 Weinheim, Germany. Air freight and mailing in the USA by Publications Expediting Inc., 200

Meacham Ave., Elmont, NY 11003. Periodicals postage paid at Jamaica, NY 11431. US POSTMASTER: send address changes to *Angewandte Chemie*, Wiley-VCH, 111 River Street, Hoboken, NJ 07030. Annual subscription price for institutions: US\$ 7225/6568 (valid for print and

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.



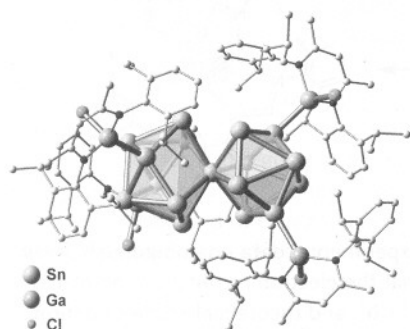
**The special advantage** of the title reaction to form substituted indoles **2** lies within the broad scope of the transformation: A multitude of *N*-aryl enaminones **1** can be prepared readily in one step from commercially available anilines. Furthermore,

anilines can be converted directly in a one-pot process into the indole products.  $R^1 = \text{H, Me, OMe, Cl, F, carbonyl functionality, CN, fused aryl}$ ;  $R^2 = \text{alkyl, aryl}$ ;  $R^3 = \text{alkyl, O-alkyl}$ .

## Heterocycles

S. Würtz, S. Rakshit, J. J. Neumann, T. Dröge, F. Glorius\* — 7230–7233

Palladium-Catalyzed Oxidative Cyclization of *N*-Aryl Enamines: From Anilines to Indoles

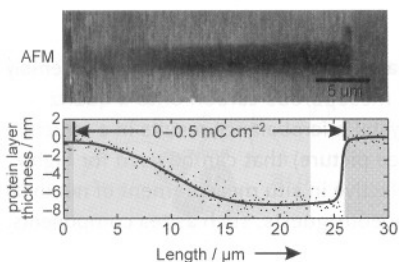


**The reduction of  $\text{SnCl}_2$**  by the low-valent gallium(I)  $\beta$ -diketiminate  $\text{Ga}(\text{ddp})$  gives the title complex, which is best described as a Zintl-type anionic  $[\text{Sn}_{17}]^{4-}$  cluster stabilized by an electrophilic shell of gallium ligands. This reaction could represent a new concept for the synthesis of metalloid main-group clusters.  $\text{ddp} = \text{HC}(\text{CMeNC}_6\text{H}_3-2,6-i\text{Pr}_2)_2$ .

## Cluster Compounds

G. Prabusankar, A. Kempter, C. Gemel, M.-K. Schröter, R. A. Fischer\* — 7234–7237

$[\text{Sn}_{17}\{\text{GaCl}(\text{ddp})\}_4]$ : A High-Nuclearity Metalloid Tin Cluster Trapped by Electrophilic Gallium Ligands

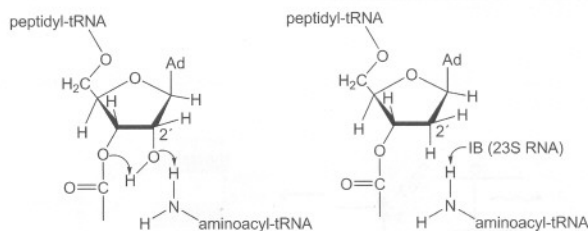


**Sticky slope:** The irradiation-promoted exchange reaction on monolayers using ethylene glycol terminated thiols as ligands provides a useful tool for the adjustment of the bioresistance of surfaces. In conjunction with electron-beam lithography, micrometer-scale gradients of protein adhesivity could be produced (see picture: AFM = atomic force microscopy).

## Surface Chemistry

T. Winkler, N. Ballav, H. Thomas, M. Zharnikov,\* A. Terfort\* — 7238–7241

Micrometer-Scale Protein-Resistance Gradients by Electron-Beam Lithography



**OH?—OH no!** The generally accepted explanation for peptide transfer in ribosomal peptidyltransferase is that the 2'-OH group of the adenosine residue (Ad) in the P site accepts a proton from the incoming  $\alpha$ -amino group and trans-

fers it to the outgoing deacylated tRNA (left). However, it has now been shown that peptide transfer still takes place in the absence of the 2'-hydroxy group (right: proposed alternative mechanism).

## Peptidyltransferases

M. Koch, Y. Huang, M. Sprinzl\* — 7242–7245

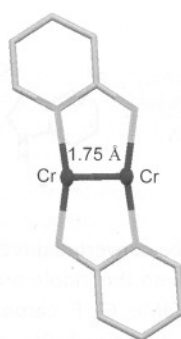
Peptide-Bond Synthesis on the Ribosome: No Free Vicinal Hydroxy Group Required on the Terminal Ribose Residue of Peptidyl-tRNA

## Metal–Metal Bonds

A. Noor, F. R. Wagner,\*  
R. Kempe\* 7246–7249



Metal–Metal Distances at the Limit:  
A Coordination Compound with an  
Ultrashort Chromium–Chromium Bond



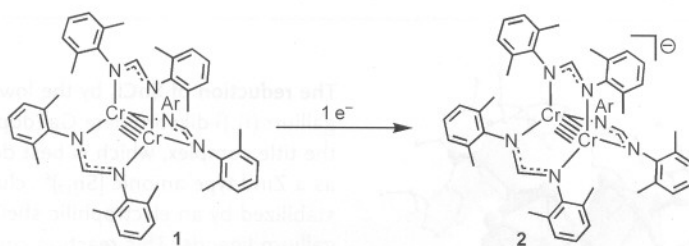
**Shorter than ever:** Reduction of chromium(II/III) chlorides stabilized by amidopyridinato ligands leads to a dichromium complex that has a Cr–Cr bond length of 1.75 Å. This bond is exceptionally short, even for bonding orders higher than four, and is at present the shortest reported metal–metal bond for a stable compound. The experimental results are supported by theoretical calculations.

## Quintuple Bonds

Y.-C. Tsai,\* C.-W. Hsu, J.-S. K. Yu,  
G.-H. Lee, Y. Wang,  
T.-S. Kuo 7250–7253



Remarkably Short Metal–Metal Bonds:  
A Lantern-Type Quintuply Bonded  
Dichromium(I) Complex



**The shortest metal–metal bond** so far is found in complex anion **2** (Cr–Cr 1.7397(9) Å), which is the one-electron reduction product of thermally stable mixed-valent complex **1** (see scheme).

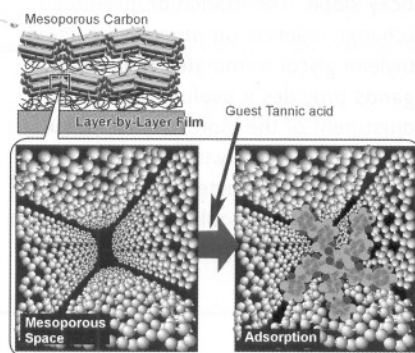
Experimental data unambiguously show that the electronic configuration of **1** is  $\sigma^2\pi^4\delta^3$ , and theoretical studies confirm the presence of a Cr–Cr quintuple bond in **2**. Ar = 2,6- $\text{C}_6\text{H}_3(\text{CH}_3)_2$ .

## Mesoporous Sensors

K. Ariga,\* A. Vinu,\* Q. Ji, O. Ohmori,  
J. P. Hill, S. Acharya, J. Koike,  
S. Shiratori\* 7254–7257



A Layered Mesoporous Carbon Sensor  
Based on Nanopore-Filling Cooperative  
Adsorption in the Liquid Phase



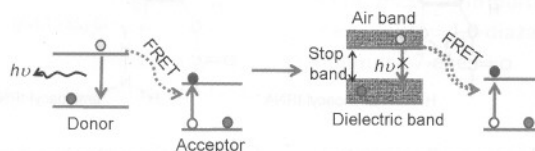
**Tea or coffee?** The layer-by-layer assembly of mesoporous carbon onto a quartz crystal microbalance results in a structure (see picture) that can be used for highly selective in situ measurement of nonionic aqueous guests, such as tea components.

## DNA Detection

M. Li, F. He, Q. Liao, J. Liu, L. Xu, L. Jiang,  
Y. Song,\* S. Wang,\* D. Zhu 7258–7262



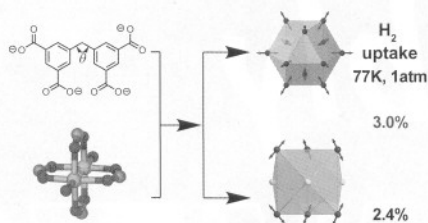
Ultrasensitive DNA Detection Using  
Photonic Crystals



**A strong signal:** A fluorescence resonance energy transfer (FRET)-based DNA hybridization detection method uses a photonic crystal to amplify the optical signal

(see picture). Single-mismatch selectivity and a sensitivity of about 13.5 fm are achieved.

**Open and close:** Inspired by close-packing of spheres, to strengthen the framework–H<sub>2</sub> interaction in MOFs (metal-organic frameworks), a strategy is devised to increase the number of nearest neighboring open metal sites of each H<sub>2</sub>-hosting cage, and to align the open metal sites toward the H<sub>2</sub> molecules. Two MOF polymorphs were made, one exhibiting a record high hydrogen uptake of 3.0 wt % at 1 bar and 77 K.

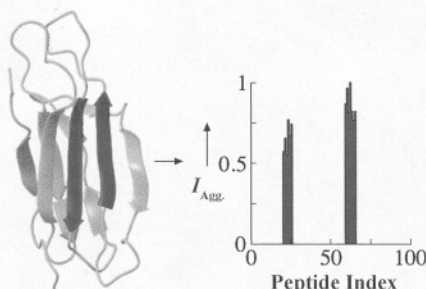


### Hydrogen Storage

X.-S. Wang, S. Ma, P. M. Forster, D. Yuan, J. Eckert, J. J. López, B. J. Murphy, J. B. Parise, H.-C. Zhou\* — **7263–7266**

Enhancing H<sub>2</sub> Uptake by “Close-Packing” Alignment of Open Copper Sites in Metal–Organic Frameworks

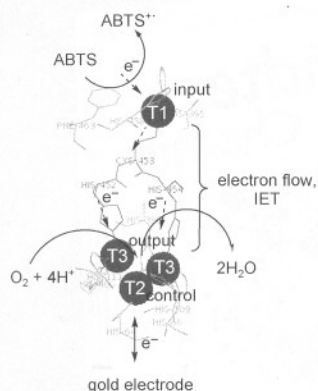
**A number of human pathologies** have been linked to the conversion of soluble proteins into amyloid aggregates. A new computational method based on first principles, peptide interaction matrix analyzer, identifies aggregation-prone peptides, which form in-register antiparallel (see picture) or parallel  $\beta$  sheets, and predicts the likelihood of coaggregation within or between proteins.



### Protein Aggregation

J. M. Bui, A. Cavalli,\* J. Gsponer\* — **7267–7269**

Identification of Aggregation-Prone Elements by Using Interaction-Energy Matrices



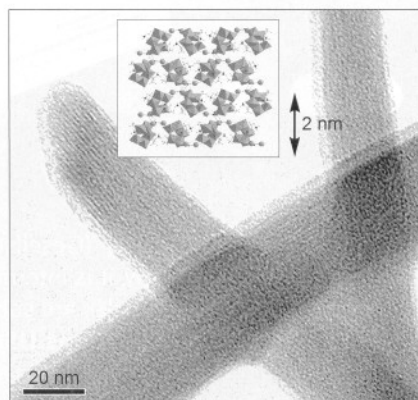
**Potential for change:** The activity of a fungal laccase on a gold electrode can be modulated by an applied potential. The activity–potential dependence resembles “transistor-like” current–potential characteristics. The applied potential affects the chemical and electronic structure of the T2/T3 copper cluster of the enzyme by a mechanism similar to that of the natural regulation of laccase activity (see scheme; IET: intramolecular electron transfer).

### Biotransistors

S. Shleev,\* T. Ruzgas — **7270–7274**

Transistor-Like Behavior of a Fungal Laccase

**Twisted fibers** with a helical structure are formed by self-assembly of chiral polyoxomolybdates (POMs)  $[(R^*PO_3)_2Mo_5O_{15}]^{2-}$  ( $R = CH_3CH(NH_3^+)$ ,  $CH_3CH(CH_3)CH(NH_3^+)$ ) through H-bonding. High-resolution TEM images of single fibers show an ordered substructure with parallel rows about 2 nm in width, in agreement with the packing of the H-bonded POM subunits in the X-ray structure (see inset).



### Chiral Hybrid Gelator

M. Carraro,\* A. Sartorel, G. Scorrano, C. Maccato, M. H. Dickman, U. Kortz,\* M. Bonchio\* — **7275–7279**

Chiral Strandberg-Type Molybdates  $[(RPO_3)_2Mo_5O_{15}]^{2-}$  as Molecular Gelators: Self-Assembled Fibrillar Nanostructures with Enhanced Optical Activity

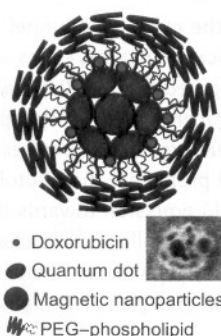


**Ligand to the rescue!** Thyroid hormone receptor (TR) plays a critical role in development and homeostasis. The mutant TR $\beta$ (H435Y) was identified in both cancer and resistance to thyroid hormone. A designed synthetic ligand recovered the cellular reporter-gene activity of TR $\beta$ (H435Y) with a 5850-fold improvement in selectivity for the mutant relative to that of the natural hormone T3 (shown in a modeled structure with TR $\beta$ (H435Y)).

### Ligand Design

A. Q. Hassan, J. T. Koh\* — 7280–7283

Selective Chemical Rescue of a Thyroid-Hormone-Receptor Mutant, TR $\beta$ (H435Y), Identified in Pituitary Carcinoma and Resistance to Thyroid Hormone

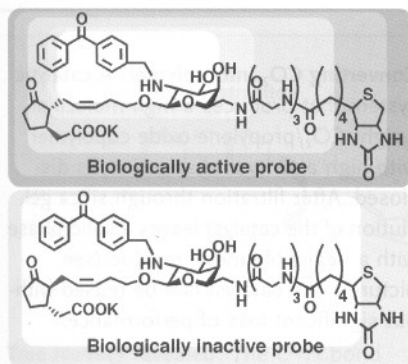


**Multimodal nanoassemblies** that contain magnetic nanoparticles, quantum dots, and the anticancer drug doxorubicin within a single PEG-phospholipid micelle were prepared (see scheme; PEG = poly(ethylene glycol)). When equipped with the targeting peptide F3, these nanostructures enable simultaneous targeted drug delivery and dual-mode imaging of tumor tissues by near-infrared fluorescence and NMR spectroscopy.

### Biological Imaging

J.-H. Park, G. von Maltzahn, E. Ruoslahti, S. N. Bhatia, M. J. Sailor\* — 7284–7288

Micellar Hybrid Nanoparticles for Simultaneous Magnetofluorescent Imaging and Drug Delivery

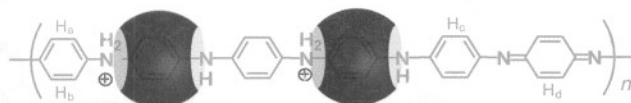


**Pairs of probes** with recognition elements of opposite configuration can be used to detect target proteins of biologically active natural products. The diastereomeric probes shown were designed on the basis of structure-activity relationships determined for an endogenous factor that controls leaf opening and closing in the title plant. They revealed that a 38 kDa membrane protein is key to the stereospecific recognition of the natural product.

### Protein Detection

Y. Nakamura, R. Miyatake, M. Ueda\* — 7289–7292

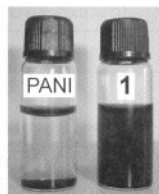
Enantiodifferential Approach for the Detection of the Target Membrane Protein of the Jasmonate Glycoside that Controls the Leaf Movement of *Albizia saman*



1

**Picking up the thread:** A polypseudorotaxane **1** with a regular one-dimensional linear structure has been constructed in satisfactory yield from cucurbit[7]uril and polyaniline (PANI). The complexation with cucurbituril not only enhances the

water solubility of the PANI (see picture; after 10 h), but also effectively stabilizes its radical cation form, that is, the conductive doped form, as shown by EPR spectroscopy.



### Supramolecular Chemistry

Y. Liu,\* J. Shi, Y. Chen, C.-F. Ke — 7293–7296

A Polymeric Pseudorotaxane Constructed from Cucurbituril and Aniline, and Stabilization of Its Radical Cation

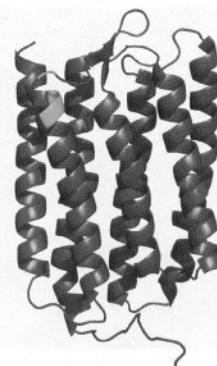
## Membrane Proteins

A. Gautier, J. P. Kirkpatrick,  
D. Nietlispach\* ————— 7297–7300



Solution-State NMR Spectroscopy of a  
Seven-Helix Transmembrane Protein  
Receptor: Backbone Assignment,  
Secondary Structure, and Dynamics

**Protein in motion:** A solution-state NMR study on the seven-helix transmembrane protein pSR11 (see picture) in a detergent solution focused on the sequential backbone assignment, the characterization of the secondary structure, and the backbone dynamics. The structural integrity of the protein was confirmed, and mobility in the loops (ps–ns timescale) and slower motions in the helical core (μs–ms timescale) were identified.

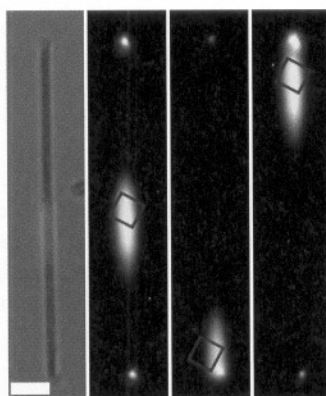


## Nanostructures

Y. S. Zhao, J. Xu, A. Peng, H. Fu, Y. Ma,  
L. Jiang, J. Yao\* ————— 7301–7305



Optical Waveguide Based on Crystalline  
Organic Microtubes and Microrods



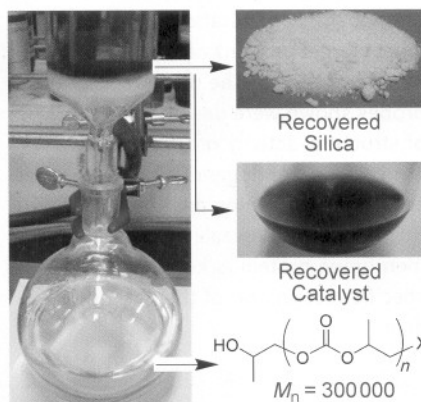
**Light at the end of the tunnel:** Two kinds of 1D microstructures, tubes and rods, were prepared from 9,10-bis(phenylethynyl)anthracene. While both types of 1D microstructures can absorb excitation light and propagate the photoluminescence (PL) emission towards the tips, the air inside the hollow tubes changes the waveguide behavior and helps to reduce the optical loss (see PL images, scale bar: 10 μm).

## Copolymerization

S. S. J. K. Min, J. E. Seong, S. J. Na,  
B. Y. Lee\* ————— 7306–7309



A Highly Active and Recyclable Catalytic  
System for CO<sub>2</sub>/Propylene Oxide  
Copolymerization



**Converting CO<sub>2</sub> into polymer:** A catalytic system that produces a high molecular weight CO<sub>2</sub>/propylene oxide copolymer with high activity and selectivity is disclosed. After filtration through silica gel, elution of the catalyst leaves a solid phase with a negligible metal residue (see picture). The catalyst can be reused without significant loss of performance.

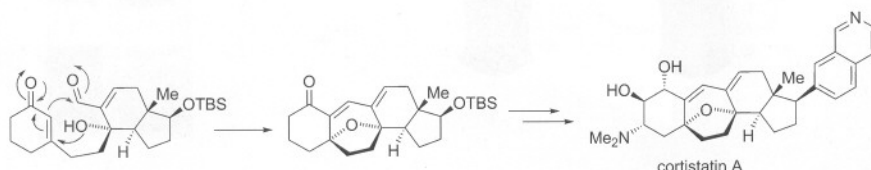


## Natural Products

K. C. Nicolaou,\* Y.-P. Sun, X.-S. Peng,  
D. Polet, D. Y.-K. Chen\* — 7310–7313

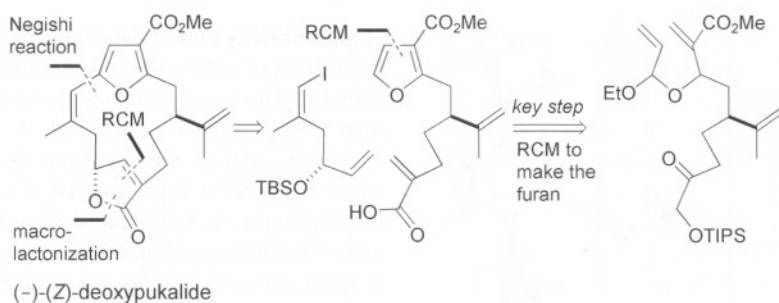


Total Synthesis of (+)-Cortistatin A



**Marine engineering:** A modular strategy featuring an intramolecular 1,4-addition/aldol/dehydration cascade sequence (see scheme; TBS = *tert*-butyldimethylsilyl) has enabled the total synthesis of cortista-

tin A, a potent anti-angiogenic marine natural product. This flexible route offers access to other members of the cortistatin family, both natural and designed.



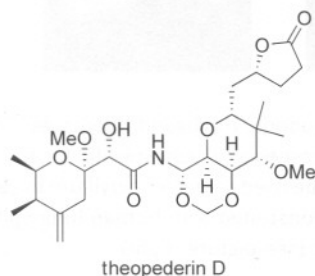
**Closing the deal:** A ring-closing metathesis (RCM)/aromatization protocol, followed by a regioselective Negishi cross-coupling reaction and macrolactonization, with subsequent RCM mediate the

synthesis of (-)-(Z)-deoxypukalide in 12 linear steps and 15% overall yield (see retrosynthesis; TBS = *tert*-butyldimethylsilyl, TIPS = triisopropylsilyl).

### Natural Product Synthesis

T. J. Donohoe,\* A. Ironmonger,  
N. M. Kershaw 7314–7316

Synthesis of (-)-(Z)-Deoxypukalide



**The transformation is complete!** The total synthesis of theopederin D (see structure), a potent cytotoxin, has been achieved through oxidative cleavage of a carbon–carbon bond. Other key transformations include an acid-mediated functionalization of a tetrahydrofuranol, a syn-selective glycol epoxide ring-opening, and an asymmetric aldehyde/acid chloride condensation.

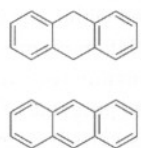
### Natural Product Synthesis

M. E. Green, J. C. Rech,  
P. E. Floreancig\* 7317–7320

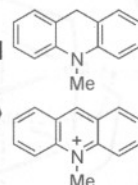
Total Synthesis of Theopederin D



### H-Atom Abstraction



### Hydride Transfer



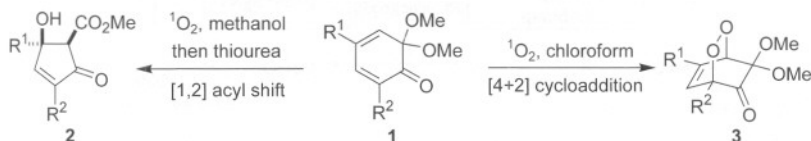
**True identity revealed:** The C–H bond activation of alkyl aromatics by synthetic iron(IV)–oxo porphyrin species and the hydride transfer of NADH analogues to them occur through H-atom abstraction

and proton-coupled electron-transfer mechanisms, respectively. Mechanistic studies revealed that iron(IV)–oxo porphyrins, not iron(IV)–oxo porphyrin  $\pi$ -radical cations, are the true oxidant.

### Enzyme Models

Y. J. Jeong, Y. Kang, A.-R. Han, Y.-M. Lee,  
H. Kotani, S. Fukuzumi,\*  
W. Nam\* 7321–7324

Hydrogen Atom Abstraction and Hydride Transfer Reactions by Iron(IV)–Oxo Porphyrins



**MOB tactics:** A novel oxidation of masked *o*-benzoquinones (MOBs) **1** occurs by singlet-oxygen-triggered ring contraction to form cyclopentenone derivatives **2** and

by [4+2] cycloaddition to give endoperoxides **3**. The competing pathways are directed by solvents and allow access to a variety of functionalized cyclopentenones.

### Oxidation

T.-C. Kao, G. J. Chuang,  
C.-C. Liao\* 7325–7327

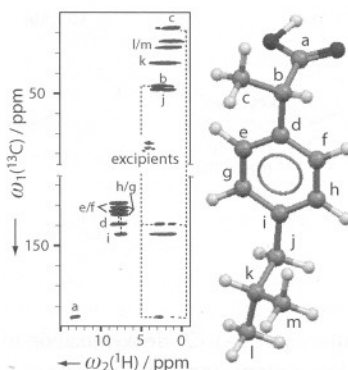
Photooxygenation of Masked *o*-Benzoquinones: An Efficient Entry into Highly Functionalized Cyclopentenones from 2-Methoxyphenols



## Solid-State NMR Spectroscopy

D. H. Zhou, C. M. Rienstra\* 7328–7331

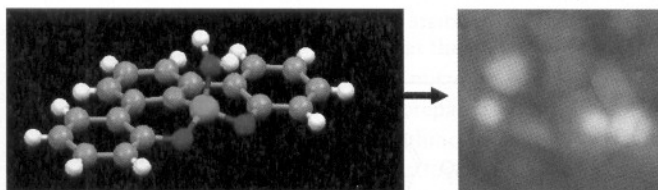
Rapid Analysis of Organic Compounds by Proton-Detected Heteronuclear Correlation NMR Spectroscopy with 40 kHz Magic-Angle Spinning



**High-sensitivity proton detection** enabled acquisition of well-resolved two-dimensional spectra in only 30 minutes for less than 5 mg of organic compounds at natural abundance. Besides faster resonance assignment, rapid analysis of crystal polymorphism, molecular dynamics, and H-bonding is possible. This method is applicable to both pure and dosage forms of solid pharmaceuticals, such as ibuprofen (see picture).

## Cell Imaging

H. V. K. Diyabalanage, K. Ganguly, D. S. Ehler, G. E. Collis, B. L. Scott, A. Chaudhary, A. K. Burrell, T. M. McCleskey\* 7332–7334



Three-Coordinate Ligand for Physiological Beryllium Imaging by Fluorescence

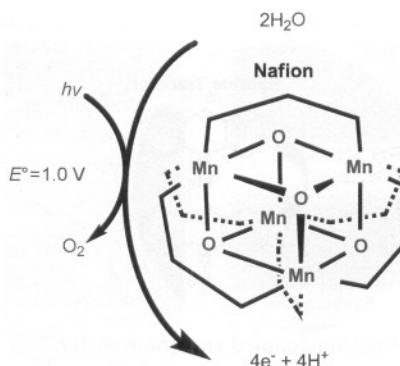
**To Be or not to Be:** Be binds strongly to the three-dentate ligand 2,6-bis(2-hydroxyphenyl)pyridine in a 1:1 ratio with no bridging phenolates (see structure; Be green, C gray, H white, O red, N blue). As Be binds and displaces the strong hydro-

gen bonds, the ligand fluoresces. The fluorescence is very specific for Be and can be used to detect beryllium in cells, as demonstrated with human lung epithelial cells (see picture, right).

## Water Oxidation

R. Brimblecombe, G. F. Swiegers,\* G. C. Dismukes,\* L. Spiccia\* 7335–7338

Sustained Water Oxidation Photocatalysis by a Bioinspired Manganese Cluster

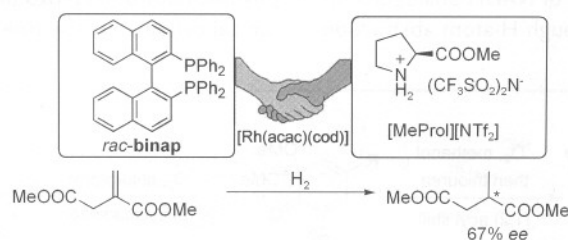


**The generation game:** A manganese–oxo complex with a cubic  $\{Mn_4O_4\}^{7+}$  core catalyzes the electrooxidation of water when suspended within the aqueous channels of a Nafion membrane (see picture). Illumination with visible light under an applied potential of 1.0 V (vs Ag/AgCl) generates current over one thousand turnovers. The catalytically active species arises from photolysis and subsequent dissociation of the manganese complex.

## Asymmetric Catalysis

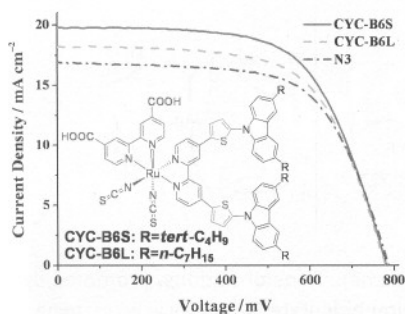
D. Chen, M. Schmitkamp, G. Franciò, J. Klankermayer,\* W. Leitner\* 7339–7341

Enantioselective Hydrogenation with Racemic and Enantiopure Binap in the Presence of a Chiral Ionic Liquid



**Racemic but enantioselective:** *rac*-Binap and a chiral ionic liquid (cIL) used for the asymmetric hydrogenation of dimethyl itaconate led to identical *ee* values as enantiopure binap. The enantiodifferentiation results primarily from a diastereo-

meric interaction of the binap–Rh unit and the proline ester moiety. For other substrates, enhanced enantioselectivity with inverted absolute configuration was obtained with the enantiopure ligand in the cIL relative to organic solvents.

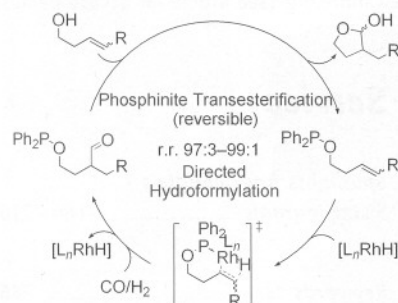


**The sensitive type:** Two new ruthenium-based supersensitizers (CYC-B6S and CYC-B6L) in which a hole-transport moiety and a conjugated segment are connected sequentially to the bipyridine of the ancillary ligand show efficiency in dye-sensitized solar cells (DSCs) of up to 9.72%. Increasing the conversion efficiency of liquid-state DSCs by connecting a carbazole moiety to the ancillary ligand of the ruthenium-based sensitizer is demonstrated.

### Dye-Sensitized Solar Cells

C.-Y. Chen, J.-G. Chen, S.-J. Wu, J.-Y. Li, C.-G. Wu,\* K.-C. Ho\* — 7342–7345

Multifunctionalized Ruthenium-Based Supersensitizers for Highly Efficient Dye-Sensitized Solar Cells

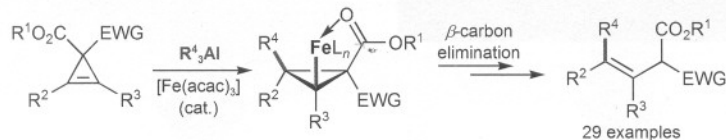


**Phosphinites do the trick** and work as reversibly bound catalyst-directing groups in catalytic amounts to allow for the highly regioselective hydroformylation of homoallylic alcohols with terminal and internal alkene functions in favor of the branched product.

### Homogeneous Catalysis

C. U. Grünanger, B. Breit\* — 7346–7349

Branched-Regioselective Hydroformylation with Catalytic Amounts of a Reversibly Bound Directing Group



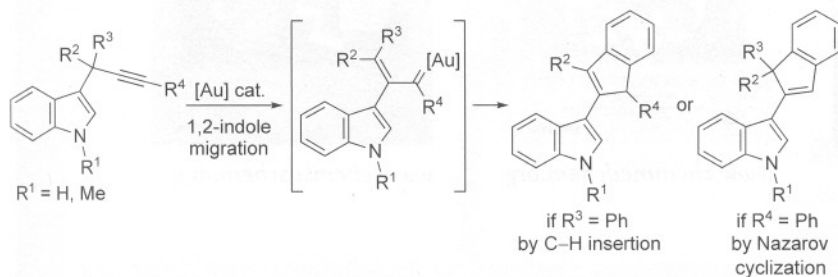
**Open sesame:** An iron-catalyzed cyclopropene carbometalation ring-opening sequence using trialkylaluminum reagents is described. The reactions proceed with high levels of regio- and stereo-

control to provide a range of multisubstituted alkenes, including trisubstituted vinylsilanes, trisubstituted vinylstananones, and all-carbon tetrasubstituted alkenes.

### Alkene Synthesis

Y. Wang, E. A. F. Fordyce, F. Y. Chen, H. W. Lam\* — 7350–7353

Stereoselective Synthesis of Tri- and Tetrasubstituted Alkenes by Iron-Catalyzed Carbometalation Ring-Opening Reactions of Cyclopropenes



**Take your pick!** Indene-containing indole scaffolds have been catalytically prepared from C3-propargylated indoles by tandem reactions involving an initial 1,2-indole migration. This unprecedented process

generates a gold carbene complex and proceeds through either a formal C-H insertion or a Nazarov cyclization (see scheme).

### Gold Catalysis

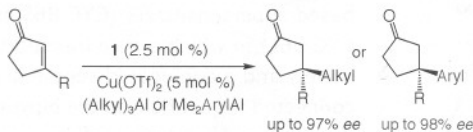
R. Sanz,\* D. Miguel, F. Rodríguez — 7354–7357

Gold(I)-Catalyzed Tandem Reactions Initiated by 1,2-Indole Migrations

## Asymmetric Conjugate Additions

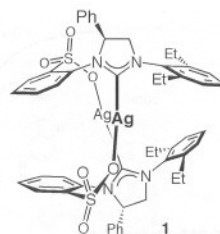
T. L. May, M. K. Brown,  
A. H. Hoveyda\* \_\_\_\_\_ 7358–7362

 Enantioselective Synthesis of All-Carbon Quaternary Stereogenic Centers by Catalytic Asymmetric Conjugate Additions of Alkyl and Aryl Aluminum Reagents to Five-, Six-, and Seven-Membered-Ring  $\beta$ -Substituted Cyclic Enones



**Solution to pesky problems:** Effective methods for catalytic asymmetric conjugate additions of alkyl and aryl aluminum reagents with unactivated  $\beta$ -substituted cyclopentenones are now available (see

scheme). Transformations, promoted by chiral bidentate N-heterocyclic carbene (NHC) copper complexes derived from **1**, give rise to all-carbon quaternary stereogenic centers.



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

 A video clip is available as Supporting Information on [www.angewandte.org](http://www.angewandte.org) (see article for access details).

## Sources

### Product and Company Directory

You can start the entry for your company in "Sources" in any issue of *Angewandte Chemie*.

If you would like more information, please do not hesitate to contact us.

Wiley-VCH Verlag – Advertising Department

Tel.: 0 62 01 - 60 65 65

Fax: 0 62 01 - 60 65 50

E-Mail: [MSchulz@wiley-vch.de](mailto:MSchulz@wiley-vch.de)

## Service

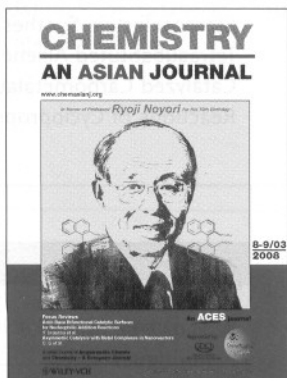
Spotlights Angewandte's  
Sister Journals \_\_\_\_\_ 7160–7161

Keywords \_\_\_\_\_ 7364

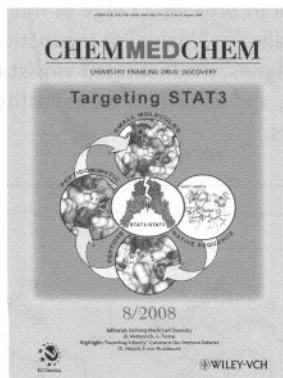
Authors \_\_\_\_\_ 7365

Preview \_\_\_\_\_ 7367

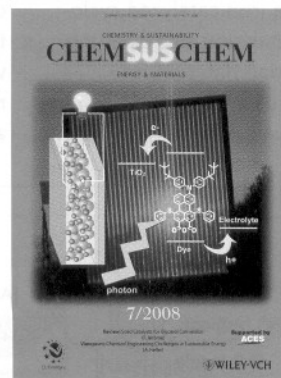
## Check out these journals:



[www.chemasianj.org](http://www.chemasianj.org)



[www.chemmedchem.org](http://www.chemmedchem.org)



[www.chemsuschem.org](http://www.chemsuschem.org)