VIP 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 soon:

*H. Miyamura, R. Matsubara, Y. Miyazaki, S. Kobayashi**
Aerobic Oxidation of Alcohols at Room Temperature under Atmospheric Conditions Catalyzed by Reusable Gold Nanoclusters Stabilized by Benzene Rings of Polystyrene Derivatives

*A. Müller, R. Stürmer, B. Hauer, B. Rosche**
Stereospecific Alkyne Reduction: Novel Activity of Old Yellow Enzymes

*A. Wakamiya, K. Mori, S. Yamaguchi**
3-Boryl-2,2'-bithiophene as a Versatile Core Skeleton for Full-Color Highly Emissive Organic Solids

*C. Defieber, M. A. Ariger, P. Moriel, E. M. Carreira**
Iridium-Catalyzed Synthesis of Primary Allylic Amines From Allylic Alcohols: Sulfamic Acid as an Ammonia Equivalent

*X. Xiao, P. Yu, H.-S. Lim, D. Sikder, T. Kodadek**
A Cell-Permeable Synthetic Transcription Factor Mimic

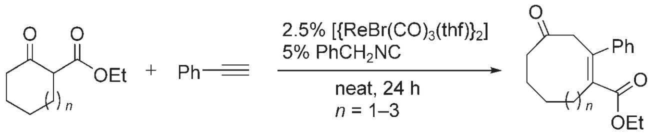
*L. C. Gontard, L.-Y. Chang, C. J. D. Hetherington, A. I. Kirkland, D. Ozkaya, R. E. Dunin-Borkowski**
Aberration-Corrected Imaging of Active Sites on Industrial Catalyst Nanoparticles

Obituary

Books

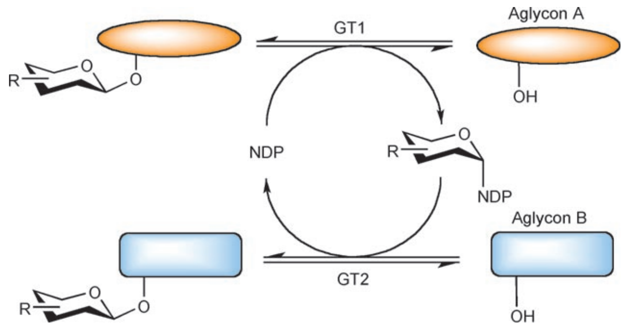
Highlights

C–C Activation



Making rings: The Re-catalyzed insertion of phenylacetylene into cyclic 1,3-keto esters to give medium-sized-ring compounds is discussed in context. The rhenium catalyst promises to be more general since it is required in low amounts and reacts under mild conditions with nonstrained substrates.

Natural Product Synthesis

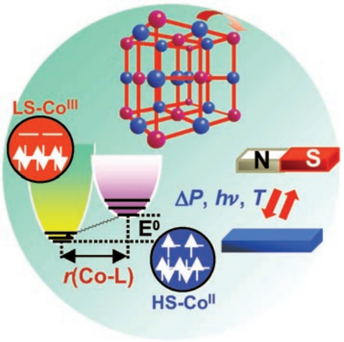


A bit of give and take: The recently described reversibility of sugar transfer by glycosyltransferases allows the exchange of sugar or aglycon moieties resulting in the formation of novel glycosylated compounds in a one-pot reaction (see picture; NDP = nucleoside diphosphate, GT = glycosyltransferase).

Reviews

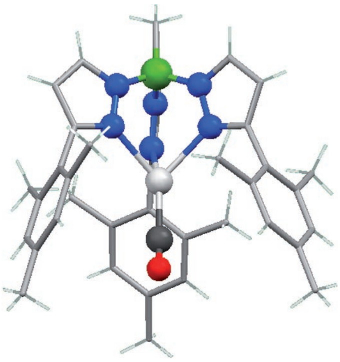
Spin Chemistry

Under control: The behavior of certain magnetic materials can be controlled by external stimuli such as temperature, light, and pressure. Typical examples of such switchable materials are valence-tautomeric compounds, molecular photomagnets, and spin-crossover complexes, which could find application in memory devices or optical switches.



Communications

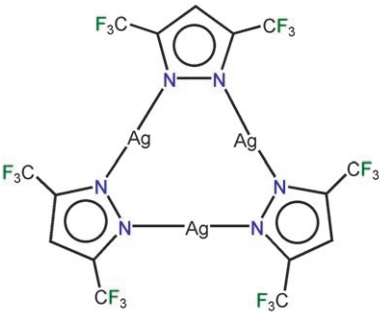
Coordination Chemistry



Sting in the tale: A thermally stable silver(I) ethylene complex and the first classical silver(I) carbonyl adduct (see structure) have been isolated using the nonfluorinated, relatively electron-rich scorpionate ligand [MeB{3-(Mes)pz}$_3$]$^-$ (Mes = 2,4,6-trimethylphenyl, pz = pyrazolate).

Sandwich Complexes

A silver filling: The π-acidic, trinuclear silver(I) pyrazolate [{[3,5-(CF_3)$_2$pz]Ag}$_3$] readily reacts with simple electron-rich aromatic hydrocarbon compounds to form sandwich complexes. The type of complex formed depends on the solvent and the arene, and includes supramolecular stacks. Additionally, some of these complexes appear to have interesting luminescence properties.



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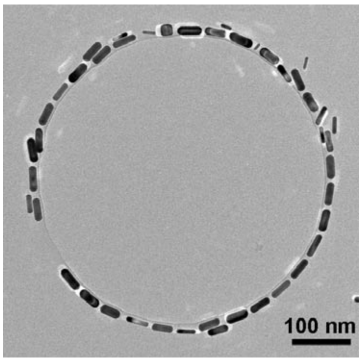
Nanostructures

B. P. Khanal, E. R. Zubarev* **2195 – 2198**

Rings of Nanorods

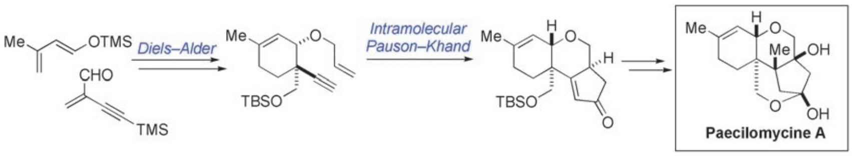
Ring-a-ring o'rods: Hybrid gold/polymer core–shell nanorods spontaneously organize into ringlike arrays when a drop of their solution is dried on a substrate. The process is highly reproducible and generates thousands of well-defined rings of nanorods in a matter of seconds (see TEM image). Studies revealed that water droplets, which condense on the surface of nonpolar solvents, template the formation of the rings.



Natural Product Synthesis

S.-J. Min, S. J. Danishefsky* **2199 – 2202**

Total Synthesis of Paecilomycine A

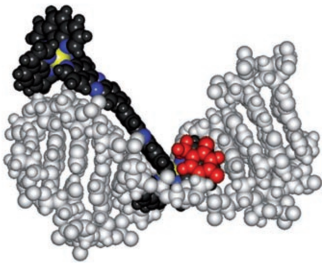


Piecing together paecilomycine: The first total synthesis of paecilomycine A, a terpenoid that enhances nerve growth factor levels in certain human cells, has been achieved. Two highly stereoselective key steps in this concise route include an intermolecular Diels–Alder reaction and an intramolecular Pauson–Khand reaction (see scheme).

DNA Recognition

P. Nordell, F. Westerlund,
L. M. Wilhelmsson, B. Nordén,
P. Lincoln* **2203 – 2206**

Kinetic Recognition of AT-Rich DNA by Ruthenium Complexes



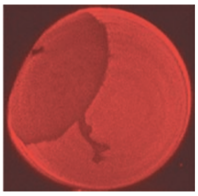
Finding AT tracts: High selectivity for long AT sequences can be attained through kinetically controlled DNA threading intercalation by binuclear ruthenium(II) complexes (see picture). The rate of intercalation is strongly correlated to the number of consecutive AT base pairs and is up to 2500-times higher with poly(dAdT)$_2$ than with mixed-sequence DNA.

Toxin Inhibitors

P. R. Rai, A. Saraph, R. Ashton, V. Poon,
J. Mogridge,* R. S. Kane* **2207 – 2209**

Raftlike Polyvalent Inhibitors of the Anthrax Toxin: Modulating Inhibitory Potency by Formation of Lipid Microdomains

The good fat: Anthrax toxin inhibitors that contain lipid microdomains have been synthesized. The clustering of inhibitory peptides in membrane microdomains results in a significant increase in inhibitory potency. Peptide clustering and microdomain formation can be actively modulated in response to an external stimulus.



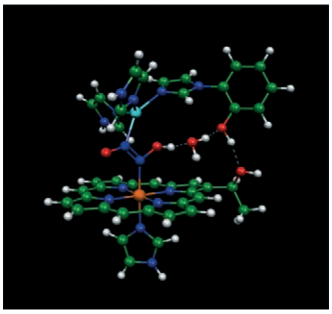
Contents

Bioinorganic Chemistry

C. Varotsis,* T. Ohta, T. Kitagawa,
T. Soulimane, E. Pinakoulaki **2210 – 2214**

The Structure of the Hyponitrite Species in a Heme Fe–Cu Binuclear Center

NO laughing matter: The enzymatic production of laughing gas (N_2O) from two molecules of NO requires the formation of the N–N bond and the subsequent cleavage of the N–OH bond. Resonance Raman spectroscopic studies have now provided evidence for the formation of the key intermediate, the hyponitrite species (see the optimized molecular structure), in the heme a_3 Fe–Cu_B binuclear center of *ba*$_3$-oxidoreductase from *Thermus thermophilus*.

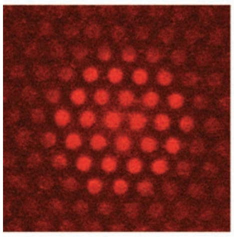


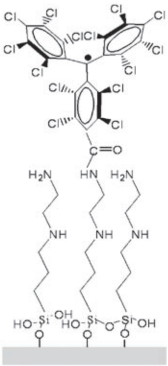
Surface Chemistry

N. Crivillers, M. Mas-Torrent, S. Perruchas,
N. Roques, J. Vidal-Gancedo, J. Veciana,
C. Rovira,* L. Basabe-Desmonts,
B. J. Ravoo, M. Crego-Calama,*
D. N. Reinhoudt **2215 – 2219**

Self-Assembled Monolayers of a Multifunctional Organic Radical

A radical switch: Covalent and noncovalent interactions have been used to functionalize silicon oxide surfaces with polychlorotriphenylmethyl radicals, which are electroactive and can be reversibly reduced or oxidized to nonmagnetic and nonfluorescent species. Thus, the self-assembled monolayers behave as chemical switches that combine electronic absorption, fluorescence emission (see picture), and magnetic outputs.



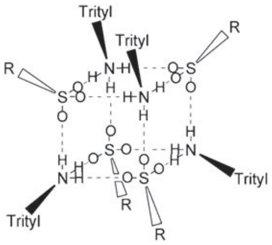


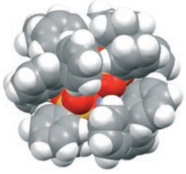
Supramolecular Chemistry

N. Tohnai,* Y. Mizobe, M. Doi, S. Sukata,
T. Hinoue, T. Yuge, I. Hisaki, Y. Matsukawa,
M. Miyata* **2220 – 2223**

Well-Designed Supramolecular Clusters Comprising Triphenylmethylamine and Various Sulfonic Acids

Potential nanoparticle precursors: Triphenylmethylamine ($TritylNH_2$) and various sulfonic acids (RSO_3H; R = phenyl in the space-filling representation) assemble into [4+4] ion-pair clusters in the solid state and in solution. The shapes and sizes of these clusters are controlled by the sulfonic acid substituents. Fabrication of the clusters is convenient and efficient, and this method may be used to synthesize organic nanoparticles.



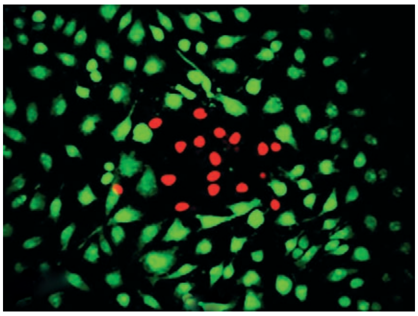


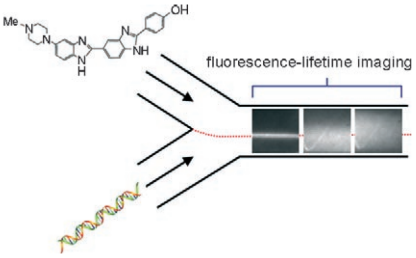
Drug Delivery

D. Gao, H. Xu, M. A. Philbert,
R. Kopelman* **2224 – 2227**

Ultrafine Hydrogel Nanoparticles: Synthetic Approach and Therapeutic Application in Living Cells

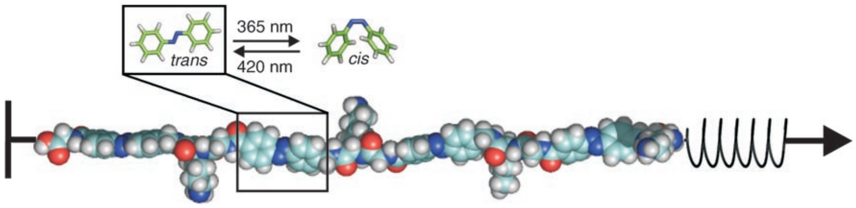
Licensed to kill: A method for obtaining ultrafine hydrophilic polyacrylamide-based nanoparticles that encapsulate *meta*-tetra(hydroxyphenyl)chlorin (*m*THPC) has been developed. Rat C6 glioma cells exposed to infrared light were killed (red) in the presence of the *m*THPC-encapsulating nanoparticles while the cells without exposure to light were still alive (green).





Light across the channel: The utility of time-resolved fluorescence imaging as a detection modality for microfluidic systems has been extended by a study of DNA–dye binding interactions. The combination of time-resolved fluorescence imaging and continuous-flow microfluidics provides a powerful route to the resolution and quantification of multistate biological systems with precise spatial and temporal reaction control.

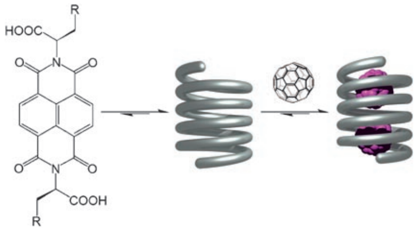
Microfluidics



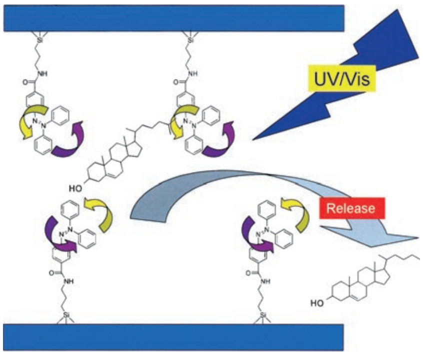
Promising future nanoscopic devices: Azobenzene polypeptides can be switched between an elongated *trans* and a compact *cis* conformation. Molecular dynamics simulations have been carried out to probe their elastic properties and to explain recent scanning probe microscopy experiments at the atomic level. The results should enable the rational design of photoswitchable polymers, as demonstrated by a first example.

Nanotechnology

Pack them in: The complexation of C_{60} molecules within self-assembled helical nanotubes (see picture) represents a new strategy for solubilizing C_{60}. The C_{60} molecules in this supramolecular assembly are closely packed in a one-dimensional array and experience the helicity of their environment.



Fullerenes



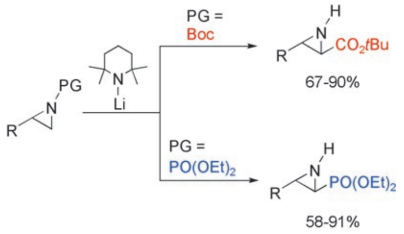
Kicking out cholesterol: The release of guest molecules (cholesterol) included in the pores of mesoporous silica is promoted by simultaneous irradiation with UV and visible light. The reversible *cis*–*trans* photoisomerization of azobenzene substituents on the pore surface causes a stirring action, which accelerates the diffusion of the guest from the pores (see picture), thus providing an intelligent controlled-release method.

Nanodevices

Protecting-Group Migration

D. M. Hodgson,* P. G. Humphreys, Z. Xu, J. G. Ward ______ **2245 – 2248**

Lithiation-Induced Migrations from Nitrogen to Carbon in Terminal Aziridines

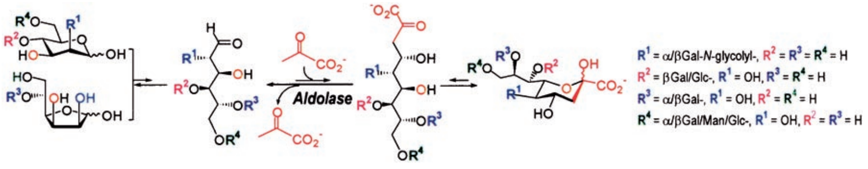


Benefiting from deprotection: Lithium 2,2,6,6-tetramethylpiperidide induces *N*-Boc or *N*-phosphonate terminal aziridines to undergo regio- and stereoselective N-to-C migration of the protecting group, giving synthetically valuable *trans*-aziridinylesters and *trans*-aziridinylphosphonates.

Chemoenzymatic Synthesis

S. Huang, H. Yu, X. Chen* _ **2249 – 2253**

Disaccharides as Sialic Acid Aldolase Substrates: Synthesis of Disaccharides Containing a Sialic Acid at the Reducing End

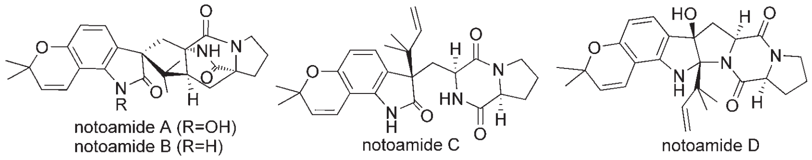


Synthesis with an unfussy enzyme: *Escherichia coli* sialic acid aldolase has been found to be unusually flexible in accepting disaccharides containing a mannose (Man) or *N*-glycolylmannosamine (ManNGc) at the reducing end as substrates for synthesizing disaccharides containing deaminoneuraminic acid (KDN)or *N*-glycolylneuraminic acid (Neu5Gc) at the reducing end (see scheme; Gal: galactose; Glc: glucose). The chemoenzymatic method is general and efficient.

Fungal Metabolites

H. Kato, T. Yoshida, T. Tokue, Y. Nojiri, H. Hirota, T. Ohta, R. M. Williams, S. Tsukamoto* ______ **2254 – 2256**

Notoamides A–D: Prenylated Indole Alkaloids Isolated from a Marine-Derived Fungus, *Aspergillus* sp.

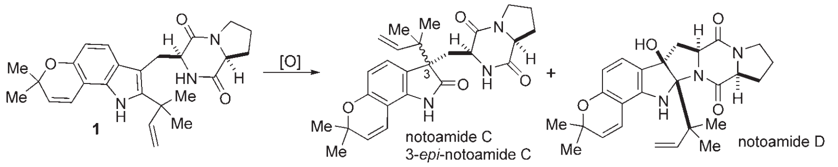


Mussel power: The structures and configurations have been determined of four new indole alkaloids, notoamides A–D, which were isolated from mussel-derived *Aspergillus* sp. Notoamides A–C show moderate cytotoxicity against cancer cell lines. The relationship between these and other metabolites suggests that the fungus uses a diverse biosynthetic pathway.

Biomimetic Alkaloid Synthesis

A. W. Grubbs, G. D. Artman III, S. Tsukamoto, R. M. Williams* ______ **2257 – 2261**

A Concise Total Synthesis of the Notoamides C and D

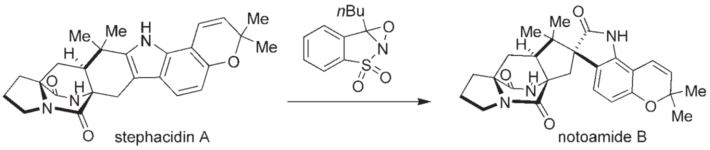


A unique oxidation: The first total synthesis of the prenylated indole alkaloids notoamide C and D was accomplished by using a biomimetic oxidation pathway. Oxidation of the putative biosynthetic precursor **1** was achieved in a one-pot reaction to afford notoamide C, its epimer, and notoamide D (see scheme).

Biomimetic Alkaloid Synthesis

T. J. Greshock, A. W. Grubbs,
S. Tsukamoto,
R. M. Williams* **2262–2265**

A Concise, Biomimetic Total Synthesis of Stephacidin A and Notoamide B

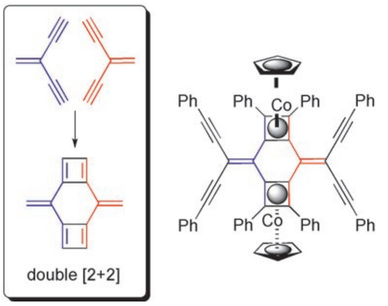


Copying nature: A biomimetic total synthesis of stephacidin A has been accomplished using an intramolecular Diels–Alder reaction. Stephacidin A was then converted into notoamide B in a single step by oxaziridine-mediated oxidation to provide the first biomimetic total synthesis of notoamide B (see scheme).

Organometallic Chemistry

J. E. Taylor, M. F. Mahon,
J. S. Fossey* **2266–2268**

An Intermolecular Double [2+2] Cyclodimerization of a Tetraalkyne

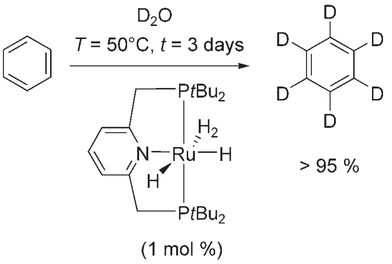


Double take: An intermolecular double [2+2] cyclodimerization of vinylidene bisalkynes gives an air-stable organometallic complex with an extraordinary ligand motif (see scheme). The central six-membered ring has all sp^2-hybridized carbon atoms and two exocyclic double bonds, and is a stable de-aromatized analogue of *p*-xylene.

Homogeneous Catalysis

M. H. G. Prechtl, M. Hölscher,
Y. Ben-David, N. Theyssen, R. Loschen,
D. Milstein, W. Leitner* **2269–2272**

H/D Exchange at Aromatic and Heteroaromatic Hydrocarbons Using D_2O as the Deuterium Source and Ruthenium Dihydrogen Complexes as the Catalyst

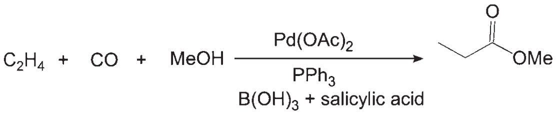


Getting heavy: At temperatures as low as 50 °C, D_2O can serve as a cheap and readily available deuterium source for the efficient deuteration of aromatic and heteroaromatic substrates if nonclassical ruthenium hydride complexes are used as catalysts (see scheme). DFT calculations support a catalytic cycle comprising σ-bond metathesis as the key step for the exchange processes.

Carbonylation

A. C. Ferreira,* R. Crous, L. Bennie,
A. M. M. Meij, K. Blann,
B. C. B. Bezuidenhoudt, D. A. Young,
M. J. Green, A. Roodt* **2273–2275**

Borate Esters as Alternative Acid Promoters in the Palladium-Catalyzed Methoxycarbonylation of Ethylene



Out with convention! The use of borosalicylic acid, derived from boric and salicylic acids, as the acid promoter in the methoxycarbonylation of ethylene to give methyl propionate has been investigated (see scheme). Not only was moderate catalyst activity observed, but much lower formation of phosphonium salts occurred than with conventional acids.

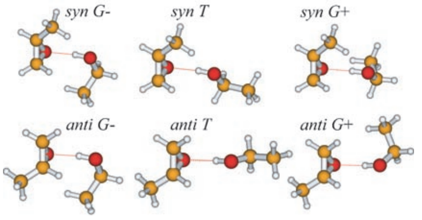
Contents

Molecular Complexes

N. Borho, Y. Xu* ________ **2276 – 2279**

Lock-and-Key Principle on a Microscopic Scale: The Case of the Propylene Oxide···Ethanol Complex

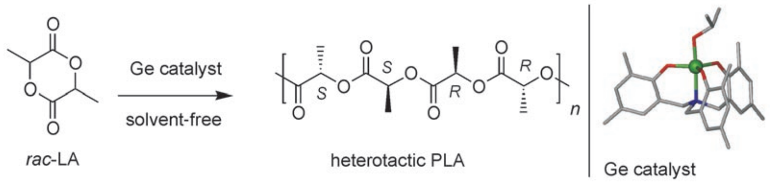
Molecular recognition: The binding between propylene oxide (PO) and ethanol resembles the lock-and-key principle, with (*R*)-PO as a rigid lock and *G*−, *G*+, and *T* conformers of EtOH as different keys (see picture; C yellow, O red). Six hydrogen-bonded PO···EtOH conformers were studied using rotational spectroscopy and ab initio calculations, revealing which EtOH key fits best into the PO lock.



Heterotactic Polymers

A. J. Chmura, C. J. Chuck, M. G. Davidson,* M. D. Jones, M. D. Lunn, S. D. Bull, M. F. Mahon ________ **2280 – 2283**

A Germanium Alkoxide Supported by a C_3-Symmetric Ligand for the Stereoselective Synthesis of Highly Heterotactic Polylactide under Solvent-Free Conditions



Ge whiz: Highly stereoselective bulk ring-opening polymerization of *rac*-lactide to afford a heterotactic polymer was achieved for the first time through the use of a single-site germanium alkoxide initiator. The C_3 symmetry of the ligand may play an important role in controlling stereoselective chain propagation from the racemic monomer.

Cyclization

I. Nakamura,* U. Yamagishi, D. Song, S. Konta, Y. Yamamoto ____ **2284 – 2287**

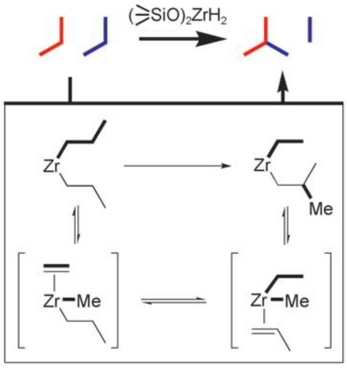
Gold- and Indium-Catalyzed Synthesis of 3- and 6-Sulfonylindoles from *ortho*-Alkynyl-*N*-sulfonylanilines

Consecutive formation of C–N and C–S bonds: The gold-catalyzed intramolecular aminosulfonylation of 2-alkynyl-*N*-sulfonylanilines **1** ($R^1 = H$) produces 3-sulfonylindoles **2** in good to high yields, whereas the indium-catalyzed aminosulfonylation of 2-alkynyl-6-methoxy-*N*-sulfonylanilines **1** ($R^1 = MeO$) affords 6-sulfonylindoles **3** as the major products (see scheme).

Alkanes

C. Thieuleux,* A. Maraval, L. Veyre, C. Copéret, D. Soulivong, J.-M. Basset,* G. J. Sunley ________ **2288 – 2290**

Homologation of Propane Catalyzed by Oxide-Supported Zirconium Dihydride and Dialkyl Complexes

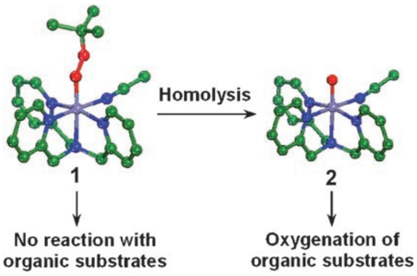


Under supercritical conditions and at moderate temperatures, propane is transformed into higher-branched homologues in the presence of a zirconium–dihydride catalyst supported on an oxide material such as silica. Products are formed by a reaction similar to Ziegler–Natta olefin polymerization. Olefinic units generated on one alkyl branch are inserted into the other branch to make a longer alkyl chain (see scheme).

Enzyme Models

M. S. Seo, T. Kamachi, T. Kouno, K. Murata, M. J. Park, K. Yoshizawa,* W. Nam* ______ **2291 – 2294**

Experimental and Theoretical Evidence for Nonheme Iron(III) Alkylperoxo Species as Sluggish Oxidants in Oxygenation Reactions

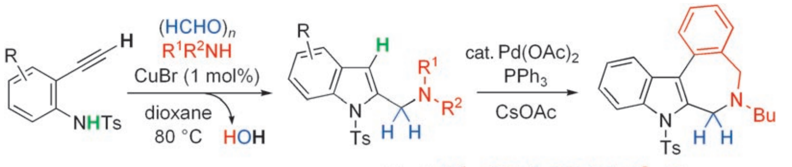


The active oxidant that oxygenates organic substrates is an iron(IV) oxo intermediate, namely, $[(\mathrm{tpa})\mathrm{Fe}^{\mathrm{IV}}(\mathrm{O})(\mathrm{CH_3CN})]^{2+}$ (**2**), which is formed through O–O bond homolysis, according to experimental and computational studies on the reactivity of nonheme iron(III) alkylperoxo complex $[(\mathrm{tpa})\mathrm{Fe}^{\mathrm{III}}(\mathrm{OO}t\mathrm{Bu})(\mathrm{CH_3CN})]^{2+}$ (**1**), which was shown to be a sluggish electrophilic oxidant that is incapable of oxygenating organic substrates. tpa = tris(2-pyridylmethyl)amine.

Multicomponent Reactions

H. Ohno,* Y. Ohta, S. Oishi, N. Fujii* ______ **2295 – 2298**

Direct Synthesis of 2-(Aminomethyl)-indoles through Copper(I)-Catalyzed Domino Three-Component Coupling and Cyclization Reactions



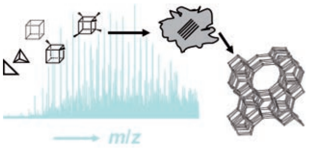
$R = H, R^1 = CH_2(2\text{-}BrC_6H_4), R^2 = Bu$

Tying up loose ends: A copper(I)-catalyzed three-component reaction has been developed that leads to the formation of 2-(aminomethyl)indole derivatives. Water is the sole theoretical by-product in this reaction in which two C–N bonds and one C–C bond are formed. This route to the indole nucleus in combination with a palladium-catalyzed functionalization of a C–H bond is also useful for the synthesis of polycyclic indoles (see scheme).

Zeolites

S. A. Pelster, R. Kalamajka, W. Schrader, F. Schüth* ______ **2299 – 2302**

Monitoring the Nucleation of Zeolites by Mass Spectrometry

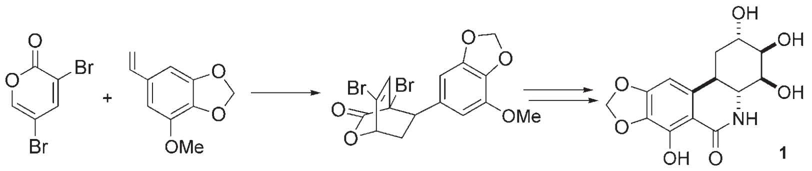


Mass production: A combination of mass spectrometry and dynamic light scattering has been used to monitor the nucleation and crystallization of all-silica MFI and MEL zeolites from aqueous solution. The formation of the crystals involves hydrolysis of the alkoxysilane, oligomerization of the silicates, nucleation of amorphous Si colloids, and transformation of these colloids to crystal structures (see picture).

Natural Product Synthesis

I.-J. Shin, E.-S. Choi, C.-G. Cho* ______ **2303 – 2305**

Total Synthesis of (±)-*trans*-Dihydronarciclasine through a Highly *endo*-Selective Diels–Alder Cycloaddition of 3,5-Dibromo-2-pyrone

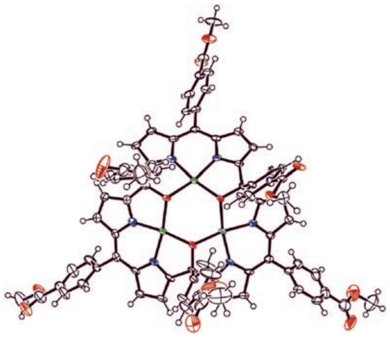


All essential functional groups in the natural product (±)-*trans*-dihydronarciclasine (**1**) were introduced with the correct relative configuration in a highly *endo*-selective Diels–Alder cycloaddition of 3,5-dibromo-2-pyrone with a styrene dienophile (see scheme). The total synthesis of **1** from these starting materials was completed in 11 steps and 15.8% overall yield.

Porphyrinoids

M. Inoue, C. Ikeda, Y. Kawata,
S. Venkatraman, K. Furukawa,
A. Osuka* ______________ **2306 – 2309**

Synthesis of Calix[3]dipyrrins by a Modified Lindsey Protocol

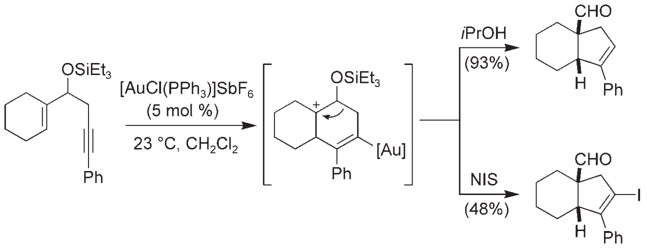


Bowled over: Calix[3]dipyrrins were synthesized from pyrrole and aryl aldehyde precursors by the Lindsey protocol, modified by the presence of a small amount of water. These bowl-shaped macrocycles can accommodate three metal (M) ions such as Ni^{II} and Cu^{II} in a hexagonal M_3O_3 manner (see structure; Cu green, N blue, O red, C black).

Domino Reactions

S. F. Kirsch,* J. T. Binder, B. Crone,
A. Duschek, T. T. Haug, C. Liébert,
H. Menz ______________ **2310 – 2313**

Catalyzed Tandem Reaction of 3-Silyloxy-1,5-enynes Consisting of Cyclization and Pinacol Rearrangement

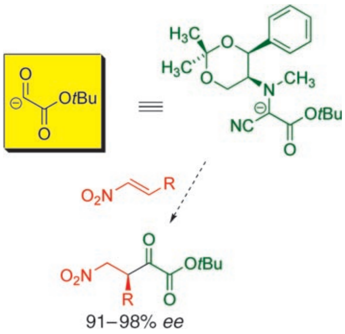


Au-spicious! Under silver-free conditions, simple 3-silyloxy-1,5-enynes were converted into complex cyclopentenes by a gold(I)-catalyzed sequence that likely proceeds through a carbocyclization followed by a pinacol rearrangement. For the final demetalation step, isopropyl alcohol and *N*-iodosuccinimide are effectively utilized, and the resulting products are set up for a wealth of further reactions.

Asymmetric Synthesis

D. Enders,* M. H. Bonten,
G. Raabe ______________ **2314 – 2316**

Asymmetric Nucleophilic Glyoxylation through a Metalated α-Aminonitrile Derivative in Michael Additions to Nitroalkenes

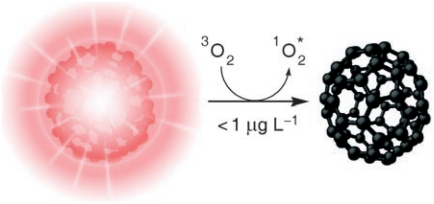


Efficient and selective: An asymmetric nucleophilic glyoxylation has been achieved for the first time using a metalated glyoxylate aminonitrile derivative in Michael additions to nitroalkenes. After conversion of the aminonitrile back into the keto function with removal of the chiral auxiliary, the γ-nitro α-keto esters were available in good yields and excellent enantiomeric excesses (see scheme).

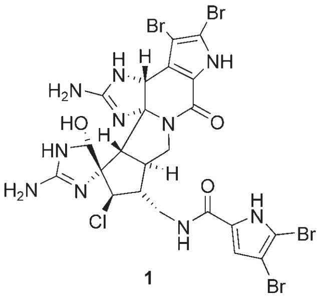
Oxygen Sensors

S. Nagl, C. Baleizão, S. M. Borisov,
M. Schäferling, M. N. Berberan-Santos,
O. S. Wolfbeis* ______________ **2317 – 2319**

Optical Sensing and Imaging of Trace Oxygen with Record Response



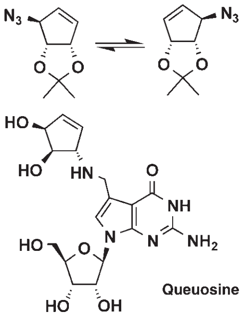
Ultratrace quantities of oxygen can be determined at single spots as well as spatially resolved, and over a temperature range of more than 100 K, by exploiting the extremely efficient quenching of the delayed fluorescence of the fullerene C_{70} incorporated into matrices of organosilica or ethyl cellulose.



1

Products of the Caribbean: The palau'amine derivative tetrabromostyloguanidine **1** was isolated from the sponge *Stylissa caribica* and the elucidation of its structure with the focus on the relative configuration is discussed in detail. Results from NMR studies and molecular calculations suggest that the relative configuration for members of the palau'amine family differs from that earlier reported.

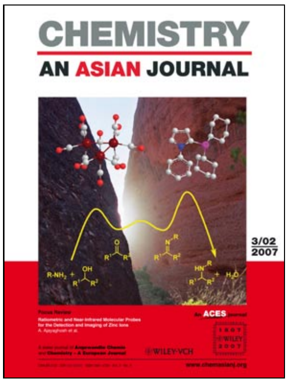
Chilled out: Chiral allyl azides are rarely used in natural product synthesis because of their tendency to undergo a [3.3] sigmatropic rearrangement (see scheme, top). In allylic cyclopentenyl azides, this rearrangement can be suppressed at just 0 °C, enabling a short convergent synthesis of the hypermodified transfer-RNA nucleoside queuosine.



Supporting information is available on the WWW (see article for access details).

A video clip is available as Supporting Information on the WWW (see article for access details).

Service



Contents

Corrigendum

Hydrogen-Bonded Helical Organic Nanotubes

G. D. Pantoş, P. Pengo,
J. K. M. Sanders* ____________ **194–197**

Angew. Chem. Int. Ed. **2007**, *46*

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In this Communication, the structures of the D- and L-amino acid naphthalenediimide (NDI) derivatives in Scheme 1 were inadvertently interchanged. The correct scheme is shown below.

L-**1**: $R^1 = R^2 = \mathrm{STrt}$, R = H
L-**2**: $R^1 = R^2 = \mathrm{OBzl}$, R = H
L-**3**: $R^1 = R^2 = (CH_2)_3\mathrm{NHBoc}$, R = H
4: $R^1 = R^2 = \mathrm{STrt}$, R = Me
5: $R^1 = \mathrm{STrt}$, $R^2 = \mathrm{OBzl}$, R = H
6: $R^1 = CH_2CO_2t\mathrm{Bu}$, $R^2 = CH_2\mathrm{CONHEt}$, R = H
7: $R^1 = (CH_2)_3\mathrm{NHAc}$, $R^2 = (CH_2)_3\mathrm{NHBoc}$, R = H

D-**1**: $R^1 = R^2 = \mathrm{STrt}$
D-**2**: $R^1 = R^2 = \mathrm{OBzl}$
D-**3**: $R^1 = R^2 = (CH_2)_3\mathrm{NHBoc}$

Scheme 1. Amino acid NDI derivatives. Boc = *tert*-butyloxycarbonyl, Bzl = benzyl, Trt = trityl.