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:

L. Soderholm, P. M. Almond, S. Skanthakumar, R. E. Wilson, P. C. Burns**
The Structure of a 38-Plutonium Oxide Nanocluster: $[Pu_{38}O_{56}Cl_{54}(H_2O)_8]^{14-}$

*T. Dohi, M. Ito, K. Morimoto, M. Iwata, Y. Kita**
Single Electron Transfer Induced Oxidative Cross-Coupling of Arenes Leading to Biaryls by the Use of Organoiodine(III) Oxidants

Y. Filinchuk, D. Chernyshov, A. Nevidomskyy, V. Dmitriev*
High-Pressure Polymorphism as a Step towards Destabilization of $LiBH_4$

*V. Aubert, V. Guerchais, E. Ishow, K. Hoang-Thi, I. Ledoux, K. Nakatani, H. Le Bozec**
Efficient Photoswitching of the Nonlinear Optical Properties of Dipolar Photochromic Zinc(II) Complexes

*D. Maiti, D.-H. Lee, K. Gaoutchenova, C. Würtele, M. C. Holthausen, A. A. N. Sarjeant, J. Sundermeyer, S. Schindler, K. D. Karlin**
Copper(II)-Superoxo Complex Reactions Lead to C–H and O–H Substrate Oxygenations: Modeling Copper-Monooxygenase C–H Hydroxylation

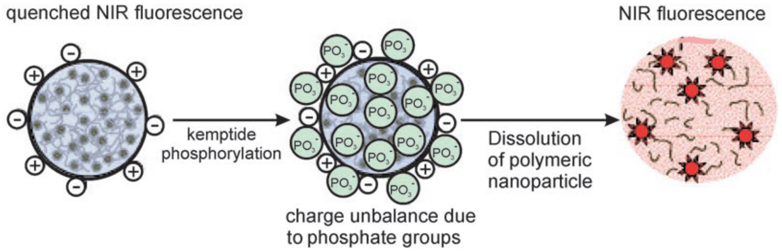
*K. Tanaka, T. Masuyama, K. Hasegawa, T. Tahara, H. Mizuma, Y. Wada, Y. Watanabe, K. Fukase**
A Submicrogram-Scale Protocol for Biomolecule-Based PET Imaging via Rapid 6π Azaelectrocyclization: Visualization of Sialic Acid Dependent Circulatory Residence of Glycoproteins

News

Books

Highlights

Imaging Agents

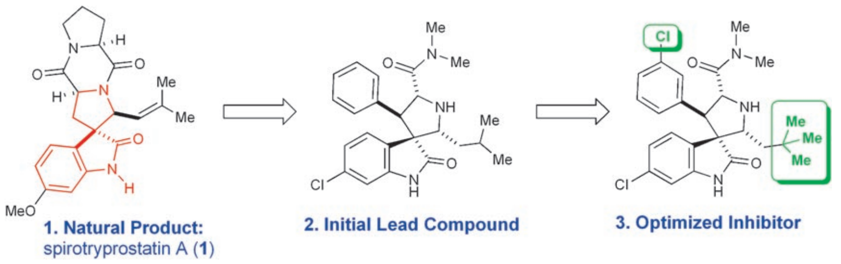


Cell-permeable, biocompatible nanoparticles consisting of a positively charged polymer, which is conjugated to a near-infrared (NIR) fluorochrome and a protein-kinase-specific peptide, and a negatively charged polymer constitute innovative probes for measuring protein kinase activity in living cells. Protein kinase activity selectively induces dissolution of the nanoparticles and is accompanied by a strong NIR fluorescence signal (see scheme).

Contents

Minireviews

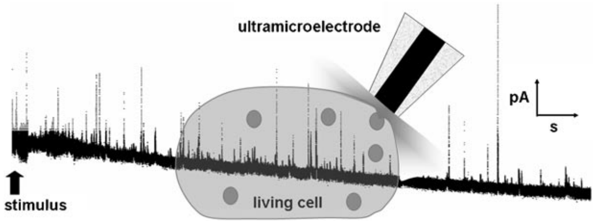
Medicinal Chemistry



1 % Inspiration, 99 % perspiration: Pyrrolidinyl-spirooxindole units are found in numerous bioactive natural products such as spirotryprostatin A (**1**). Synthetic advances toward the synthesis of this privileged structure have driven the development of analogue synthesis and programs of medicinal chemistry. The biological evaluation of analogues such as **2** shows great promise.

Reviews

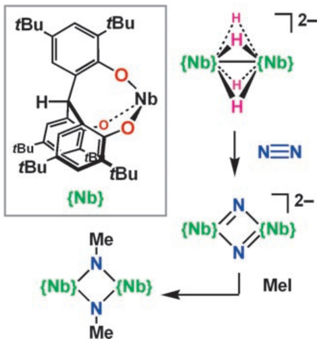
Scanning Electrochemical Microscopy



Celling points: Probing the chemical environment and activity (vesicular transmitter release shown in the picture) of single living cells with the small tips of precisely positionable voltammetric ultramicroelectrodes has become a competitive method for exploring cellular processes such as development and degeneration, cell communication, and synaptogenesis.

Communications

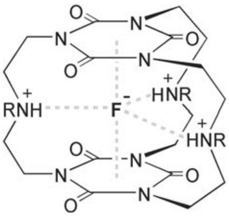
Dinitrogen Activation



Breaking up isn't hard to do: When a solution of the hydride complex $[K(dme)]_2[\{Nb\}_2(\mu\text{-}H)_4]$ (see scheme) is exposed to N_2, the nitride complex $[K(thf)_2]_2[\{Nb\}_2(\mu\text{-}N)_2]$ and H_2 form with concomitant cleavage of the dinitrogen triple bond. The nitride ligands undergo alkylation with MeI in a stepwise fashion, resulting in formation of a bis(imide) complex via a nitride imide complex.

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.

A fluoride sandwich: A cylindrophane macrocycle framed with cyanuric acid rings selectively complexes fluoride ion by a combination of anion–π interactions and ion-pair-reinforced hydrogen bonds. This compound is the first example of a purpose-designed host that exploits anion–π bonding.



Anion–π Interactions

M. Mascal,* I. Yakovlev, E. B. Nikitin, J. C. Fettinger ———— **8782 – 8784**

Fluoride-Selective Host Based on Anion–π Interactions, Ion Pairing, and Hydrogen Bonding: Synthesis and Fluoride-Ion Sandwich Complex

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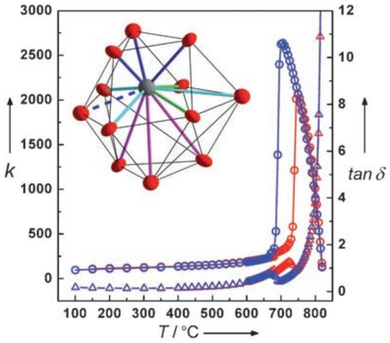

Getting the lead out: The bonding preferences of three octahedral-site cations permit the accommodation of the small, low-symmetry Bi^{3+} cation on the twelve-coordinate A site of the perovskite structure, affording a lead-free ferroelectric material (see picture). The graph shows the temperature dependence of the relative permittivity (○, left axis) and the dielectric loss (△, right axis).

Ferroelectric Materials

C. A. Bridges, M. Allix, M. R. Suchomel, X. Kuang, I. Sterianou, D. C. Sinclair, M. J. Rosseinsky* ———— **8785 – 8789**

A Pure Bismuth A Site Polar Perovskite Synthesized at Ambient Pressure

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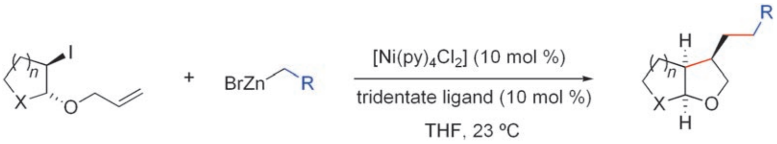

Two for the price of one: The formation of two C(sp^3)–C(sp^3) bonds can be achieved in a single operation by sequential cyclization and cross-coupling of alkyl zinc bromides with iodoalkanes containing an alkene group (see scheme). The reaction is catalyzed by [Ni(py)$_4$Cl$_2$] in the presence of tridentate nitrogen ligands, shows a high functional-group compatibility, and seems to follow a radical mechanism.

Homogeneous Catalysis

V. B. Phapale, E. Buñuel, M. García-Iglesias, D. J. Cárdenas* ———— **8790 – 8795**

Ni-Catalyzed Cascade Formation of C(sp^3)–C(sp^3) Bonds by Cyclization and Cross-Coupling Reactions of Iodoalkanes with Alkyl Zinc Halides

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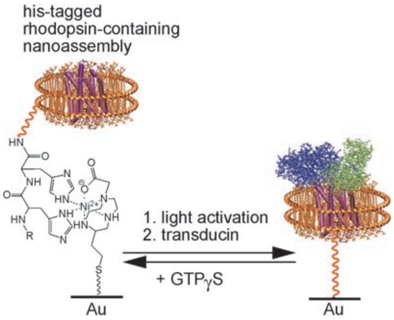


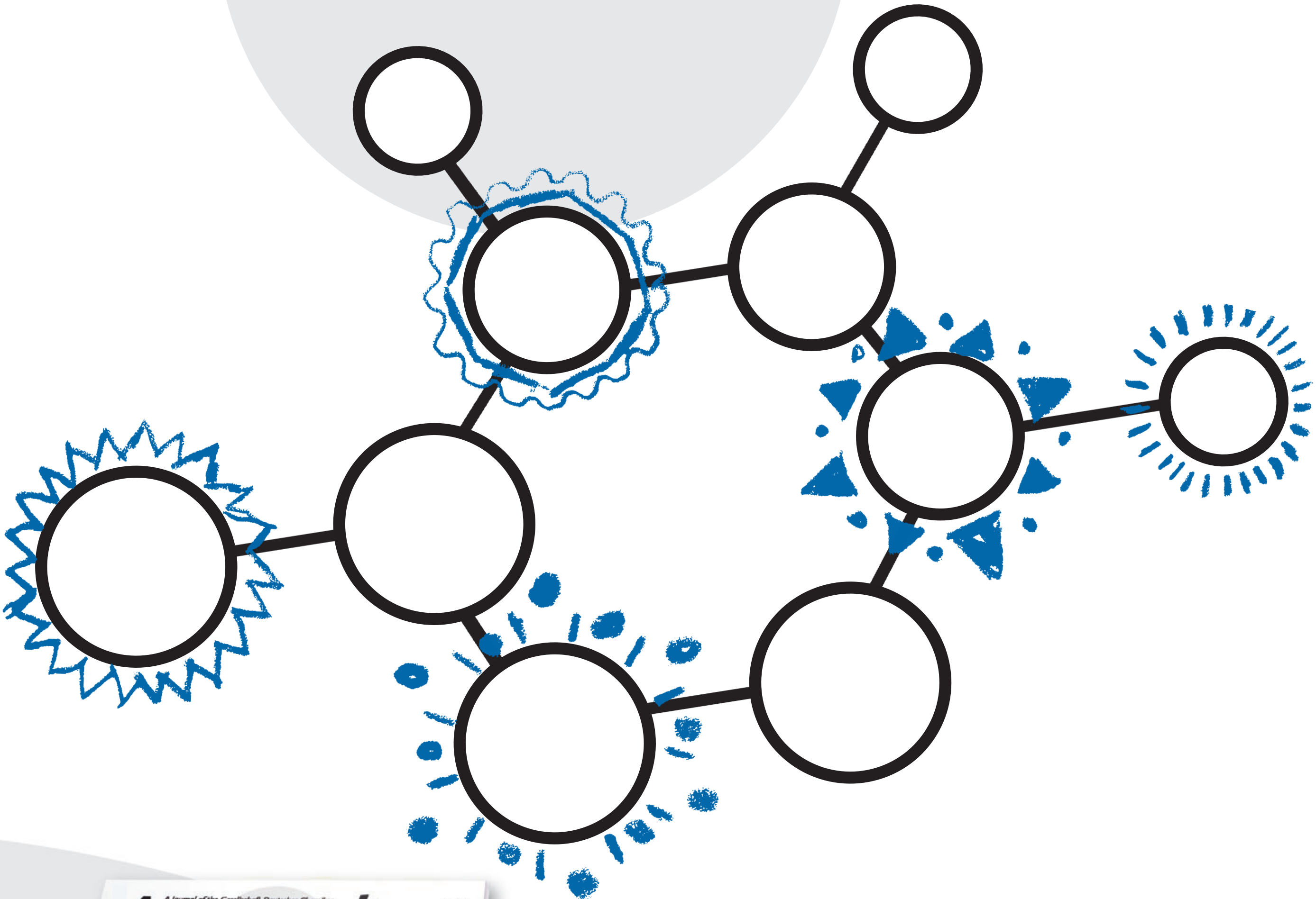
Delicate probing: When nanodisc assemblies are used to present membrane proteins on a biochip surface, interactions of these proteins can be studied by mass spectrometry. The method is illustrated with the protein rhodopsin, which is immobilized to a self-assembled monolayer by way of a his-tagged membrane scaffold protein. Upon activation of rhodopsin with light, the protein complex transducin binds and can be detected using SAMDI mass spectrometry.

Mass Spectrometry

V. L. Marin, T. H. Bayburt, S. G. Sligar,* M. Mrksich* ———— **8796 – 8798**

Functional Assays of Membrane-Bound Proteins with SAMDI-TOF Mass Spectrometry

Incredibly versatile!

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International Edition

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2007–46/9

1st March Issue

Magnetic Materials

[Fe (TCNE)$_2$]

Total Synthesis of Quinine
J. I. Seeman

Thermally Responsive Polymer Vesicles
Y. Morishima

Decarboxylative Biaryl Coupling
O. Baudoin

ACIEFS 46 (9) 1351–1544 (2007) · ISSN 1433–7851 · Vol. 46 · No. 9

BICENTENNIAL 1807 WILEY 2007

WILEY-VCH

Theme variety on the one hand: Many articles in *Angewandte Chemie* cover the classical themes such as organic synthesis or coordination chemistry. Besides these, current topics like (bio)nanotechnology, chemical biology, and green chemistry are well represented. And then there are the „must-see articles“, such as those on the detection of anthrax spores*, or the characteristic scent of iron,** or the artificial lily-of-the-valley flavor.***
Section variety on the other: Communications, Reviews, Highlights, Essays, Obituaries, Meeting Reviews, as well as Website and Book Reviews are regularly found in *Angewandte*.

* M. Tamborrini, D.B. Werz, J. Frey, G. Pluschke, P.H. Seeberger, Angew. Chem. Int. Ed. 2006, 45, 6581-6582.
** D. Glindemann, A. Dietrich, H.-J. Staerk, P. Kuschk, Angew. Chem. Int. Ed. 2006, 45, 7006-7009.
*** L. Doszczak, P. Kraft, H.-P. Weber, R. Bertermann, A. Triller, H. Hatt, R. Tacke, Angew. Chem. Int. Ed. 2007, 46, 3367--3371

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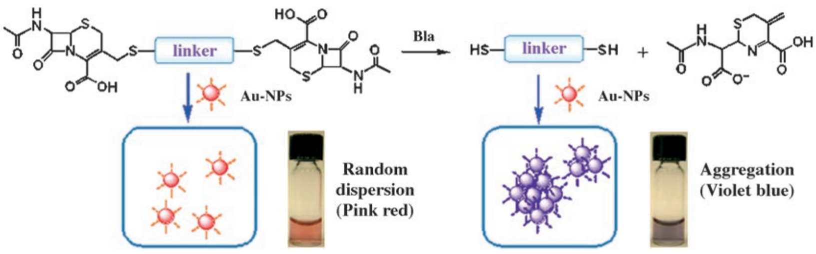
Colorimetric Assays

R. Liu, R. Liew, J. Zhou,
B. Xing* ________ **8799–8803**

A Simple and Specific Assay for Real-Time Colorimetric Visualization of β-Lactamase Activity by Using Gold Nanoparticles

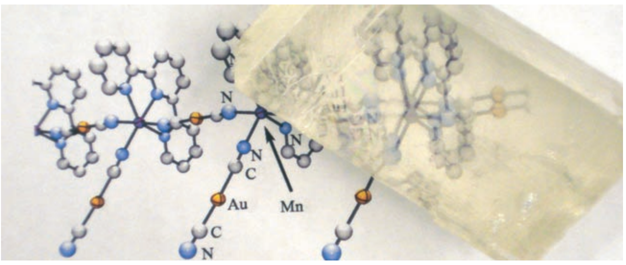


The color of gold: Bacterial β-lactamases (Blas) can be rapidly identified by a simple and specific colorimetric assay with gold nanoparticles (Au-NPs). This assay can evaluate enzymatic kinetic reactions and screen inhibitors of Blas in real time, and offers a simple and economical method for the rapid detection of β-lactam resistant bacteria in clinical studies.

Birefringent Coordination Polymers

M. J. Katz, H. Kaluarachchi, R. J. Batchelor,
A. A. Bokov, Z.-G. Ye,*
D. B. Leznoff* ________ **8804–8807**

Highly Birefringent Materials Designed Using Coordination Polymer Synthetic Methodology

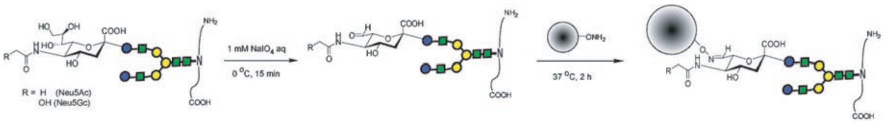


Seeing double: Use of the highly anisotropic terpyridine ligand in combination with the anisotropic, linear dicyanoaurate anion produces a series of coordination polymers that are among the most strongly birefringent solid materials ever reported (see picture).

Focused Glycoproteomics

M. Kurogochi, M. Amano, M. Fumoto,
A. Takimoto, H. Kondo,
S.-I. Nishimura* ________ **8808–8813**

Reverse Glycoblotting Allows Rapid-Enrichment Glycoproteomics of Biopharmaceuticals and Disease-Related Biomarkers

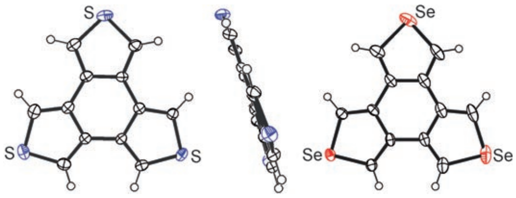


Identification of glycopeptides: A high-throughput glycoproteomics approach was established by using novel reverse-glycoblotting technology. The method involves highly selective oxidation of the terminal sialic acid residues of glycopeptides and subsequent enrichment by chemical ligation with a polymer reagent (see schematic representation; Neu5Ac: *N*-acetylneuraminic acid; Neu5Gc: *N*-glycolylneuraminic acid; green: *N*-acetyl-D-glucosamine; yellow: D-mannose; blue: D-galactose).

Radialenes

A. Patra, Y. H. Wijsboom, L. J. W. Shimon,
M. Bendikov* ________ **8814–8818**

Planar [6]Radialenes: Structure, Synthesis, and Aromaticity of Benzotriselenophene and Benzotrithiophene

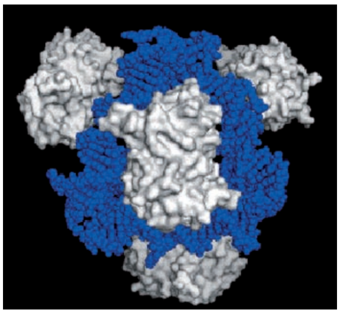


Planar, but non-aromatic: The title [6]radialenes, which contain thiophene and selenophene units (see the ORTEP diagrams), can be prepared in a straightforward manner. X-ray crystal structures and the results of theoretical studies show that the central six-membered ring of these compounds, although planar and composed entirely of sp^2-hybridized carbon atoms, is completely non-aromatic.

Protein–DNA Conjugates

B. P. Duckworth, Y. Chen, J. W. Wollack,
Y. Sham, J. D. Mueller, T. A. Taton,
M. D. Distefano* ________ **8819 – 8822**

A Universal Method for the Preparation of Covalent Protein–DNA Conjugates for Use in Creating Protein Nanostructures

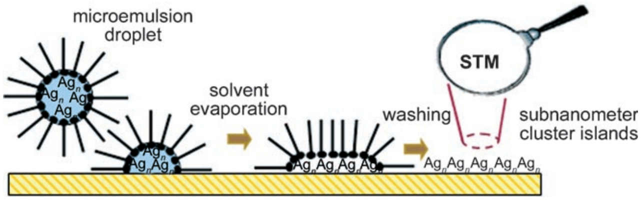


Protein patterning: A protein, selectively labeled with an azide tag, was reacted with alkyne-functionalized DNA. These protein–DNA conjugates were used to create a DNA-assembled protein nanostructure. This method should facilitate the preparation of a range of protein–DNA hybrid structures with useful structural and functional features.

Nanostructures

A. Ledo-Suárez, J. Rivas,
C. F. Rodríguez-Abreu, M. J. Rodríguez,
E. Pastor, A. Hernández-Creus,
S. B. Oseroff,
M. A. López-Quintela* ____ **8823 – 8827**

Facile Synthesis of Stable Subnanosized Silver Clusters in Microemulsions

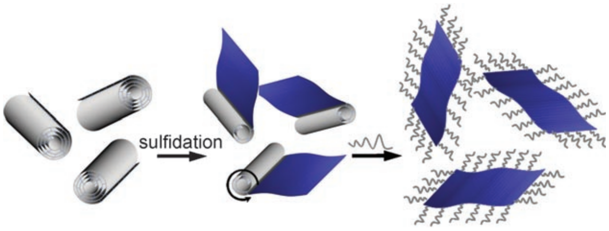


Island clusters: By using kinetic control, stable Ag_n clusters ($n \leq 10$) are synthesized in microemulsions. Nanoislands composed of the subnanosized clusters can be deposited onto a substrate (see picture). The clusters are characterized by a variety of methods, including scanning tunneling microscopy (STM), mass spectrometry, UV/Vis spectroscopy, and differential pulse voltammetry.

Nanostructures

J.-w. Seo, Y.-w. Jun, S.-w. Park, H. Nah,
T. Moon, B. Park, J.-G. Kim, Y. J. Kim,
J. Cheon* ______________ **8828 – 8831**

Two-Dimensional Nanosheet Crystals



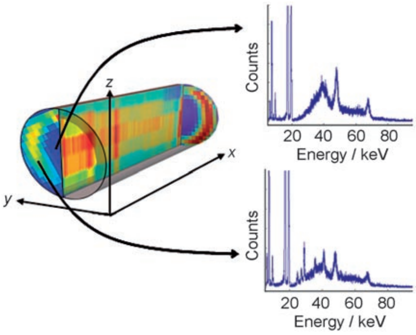
Roll model: A new “shape-transformation” concept (see picture) that proceeds through a rolling out of 1D tungsten oxide nanorods for the fabrication of laterally confined 2D WS_2 nanosheet crystals has been developed. The resulting 2D WS_2 nanosheet crystals show a significantly enhanced discharge capacity for applications in lithium ion batteries owing to their 2D nanoscale characteristics.

VIP Catalyst Preparation

A. M. Beale, S. D. M. Jacques,
J. A. Bergwerff, P. Barnes,
B. M. Weckhuysen* _______ **8832 – 8835**

Tomographic Energy Dispersive Diffraction Imaging as a Tool To Profile in Three Dimensions the Distribution and Composition of Metal Oxide Species in Catalyst Bodies

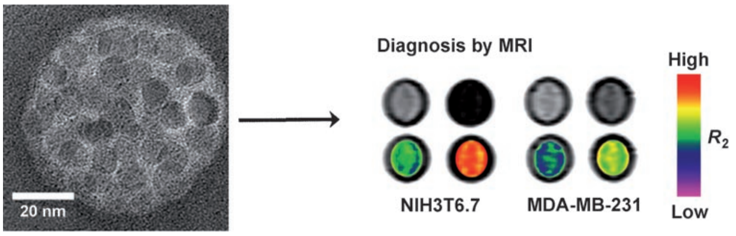
Catalyst extrudate in 3D: Through the use of tomographic energy dispersive diffraction imaging it is possible to obtain detailed three-dimensional insight into the metal oxide distribution inside a catalyst extrudate during its preparation. The picture shows such a 3D map of an extrudate along with examples of the detector signal for two different locations in the catalyst.



Theranostics

J. Yang, C.-H. Lee, H.-J. Ko, J.-S. Suh, H.-G. Yoon, K. Lee, Y.-M. Huh,* S. Haam* **8836 – 8839**

Multifunctional Magneto-Polymeric Nanohybrids for Targeted Detection and Synergistic Therapeutic Effects on Breast Cancer

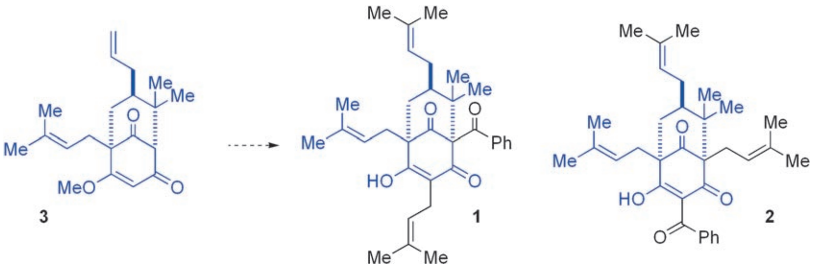


Diagnosis and treatment all in one: Multifunctional magneto-polymeric nanohybrids (MMPNs) have been synthesized using ultrasensitive MnFe$_2$O$_4$ nanocrystals, chemotherapeutic agents, and encapsulating amphiphilic block copolymers for targeted detection by MRI and treatment of breast cancer. See the TEM image (left) of an MMPN and T_2-weighted MR images (top row) and color map (bottom row) of the relaxivity R_2 for NIH3T6.7 and MDA-MB-231 cells.

Natural Product Synthesis

C. Tsukano, D. R. Siegel, S. J. Danishefsky* **8840 – 8844**

Differentiation of Nonconventional "Carbanions"—The Total Synthesis of Nemorosone and Clusianone

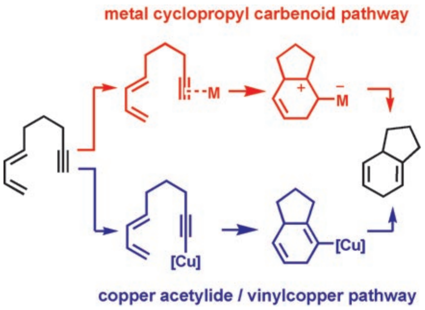


An unconventional approach: The total syntheses of nemorosone (**1**) and clusianone (**2**) have been achieved in a direct fashion through the generation and exploitation of nonconventional anions arising from a common intermediate (**3**, see scheme). The key skeleton-building stages are allylative de-aromatization and iodinative cyclization. These acylphloroglucinol natural products display promising cytotoxic and anti-HIV activity, respectively.

Cycloadditions

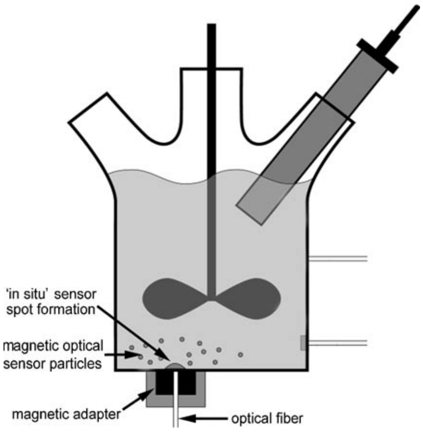
A. Fürstner,* C. C. Stimson **8845 – 8849**

Two Manifolds for Metal-Catalyzed Intramolecular Diels–Alder Reactions of Unactivated Alkynes



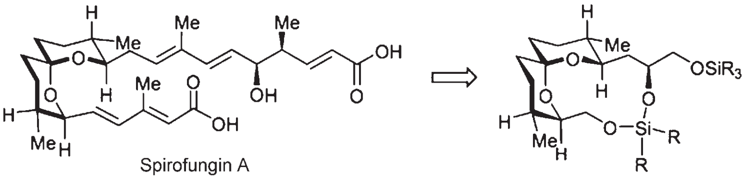
Being unconventional: Although conventional metal-catalyzed [4+2] cycloaddicloadditions of inactivated dienynes are known to proceed by an oxidative cyclization/insertion mechanism, two entirely different pathways also result in formal Diels–Alder reactions (see scheme). These alternative mechanisms open new vistas for further functionalization of the products, as exemplified by an unprecedented cycloaddition/alkylation cascade.

Magnetic Sensors



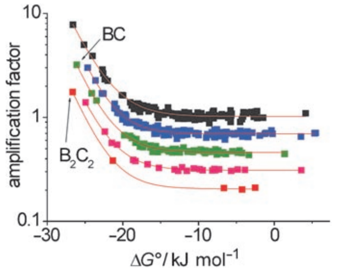
A magnetic personality: An optical sensor with magnetic properties can be prepared by the sol–gel technique. The silica matrix contains both a luminescent indicator sensitive to oxygen and magnetic nanobeads, which enable magnetic separation. Such sensors can be maneuvered within the sample vessel, such as microtiter plates or bioreactors (see picture).

Natural Product Synthesis



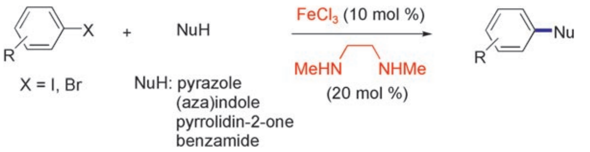
Lock it in: A temporary silicon-based configurational lock (see scheme) has enabled an efficient and fully diastereoselective assembly of the spiroketal subunit of spirofungin A. This complex natural product was synthesized in 20 steps, including a rapid polyketide assembly based on the ring-opening metathesis of a cyclopropenone acetal. It was established that spirofungin A elicited notable antiproliferative activity against several human cancer cell lines and selectively inhibited isoleucyl-tRNA synthetase in vitro.

Combinatorial Chemistry



Small talk: Molecular recognition events involving a small subset of members of a dynamic combinatorial library (DCL) can affect all other species in the mixture. For example, patterns emerge in a calculated 322-component DCL (see picture), depending on the random distribution of the binding constants. These events provide an intriguing means for transmitting information between molecules.

Cross-Coupling

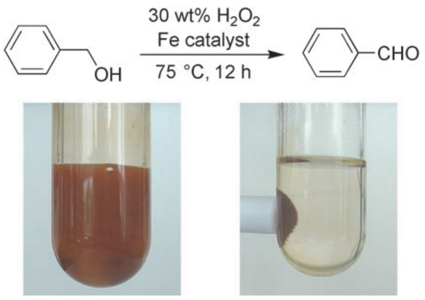


Easy does it! A simple procedure for the N-arylation of nitrogen-containing heterocycles and primary amides relies on a catalyst formed in situ from inexpensive and environmentally benign $FeCl_3$ and a diamine ligand. The cross-coupling reaction with aryl halides provides N-arylated compounds in high yields (see scheme; R = H, Cl, Me, OMe, CO_2Et, F, CF_3).

Nanoparticle Catalysts

F. Shi, M. K. Tse, M.-M. Pohl, A. Brückner, S. Zhang, M. Beller* ______ **8866 – 8868**

Tuning Catalytic Activity between Homogeneous and Heterogeneous Catalysis: Improved Activity and Selectivity of Free Nano-Fe_2O_3 in Selective Oxidations

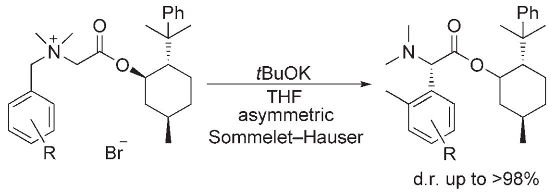


A light sprinkling of rust: Nanoparticulate Fe_2O_3 is an active catalyst for the selective oxidation of alcohols and olefins. Nano-Fe_2O_3 can be easily isolated by using a magnetic stirrer bar and directly reused without any deactivation over at least five cycles (see picture).

Stereoselective Rearrangements

E. Tayama,* H. Kimura ______ **8869 – 8871**

Asymmetric Sommelet–Hauser Rearrangement of *N*-Benzylic Ammonium Salts

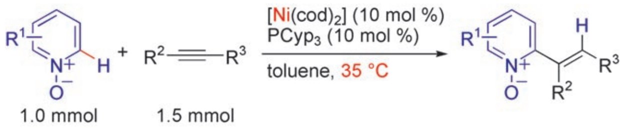


[2,3] over [1,2]: The asymmetric Sommelet–Hauser rearrangement of an ammonium salt derived from *N*-benzylic proline-derived or *N*-benzylic glycine (−)-8-phenylmenthol ester is shown to proceed with remarkably high levels of stereoselectivity. The method provides unique and efficient access to optically active α-aryl amino acid derivatives.

Pyridine-N-Oxide Functionalization

K. S. Kanyiva, Y. Nakao,* T. Hiyama* ______ **8872 – 8874**

Nickel-Catalyzed Addition of Pyridine-*N*-oxides across Alkynes

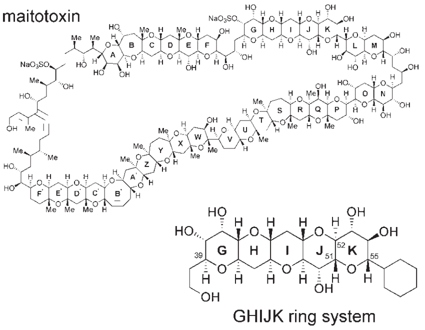


An alternative to pyridine: Pyridine-*N*-oxides undergo direct C–H activation and add across alkynes under mild nickel catalysis to afford (*E*)-2-alkenylpyridine-*N*-oxides in modest to good yields with high selectivity. Subsequent deoxygenation and deoxygenative functionalization proceed smoothly to give a wide variety of 2-substituted pyridines. $PCyp_3$ = tricyclopentylphosphine, cod = cyclooctadiene.

Natural Product Synthesis

K. C. Nicolaou,* K. P. Cole, M. O. Frederick, R. J. Aversa, R. M. Denton ______ **8875 – 8879**

Chemical Synthesis of the GHIJK Ring System and Further Experimental Support for the Originally Assigned Structure of Maitotoxin



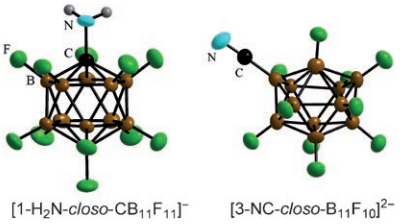
Accepting the proposal: The originally proposed structure of maitotoxin has recently come under scrutiny based on biosynthetic and computational considerations. A newly synthesized ring framework corresponding to the GHIJK ring domain (see structure) of the molecule provided, through ^{13}C NMR spectroscopic comparisons, strong experimental support for the originally proposed structure.

Halogenated Carborates

M. Finze* ______ **8880 – 8882**

Carbon Extrusion/Cluster Contraction: Synthesis of the Fluorinated Cyano-*closo*-Undecaborate $K_2[3\text{-NC-}closo\text{-}B_{11}F_{10}]$

Releasing carbon: Deprotonation of the amino group of the $[1\text{-}H_2N\text{-}closo\text{-}CB_{11}F_{11}]^-$ anion results in a transformation of the carba-*closo*-dodecaborate cluster into a *closo*-undecaborate dianion. The rearrangement is accompanied by loss of a fluoride anion, and the C–N fragment is converted into a cyano ligand (see scheme).

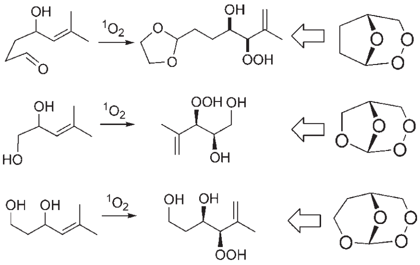


Photooxygenation

A. G. Griesbeck,* D. Blunk,*
T. T. El-Idreesy, A. Raabe ______ **8883 – 8886**

Bicyclic Peroxides and Perorthoesters with 1,2,4-Trioxane Structures

Resistance effects to the antimalarial agent artemisinin and its derivatives spurs on the search for new compounds with related cyclic peroxide structures. A flexible route to new bicyclic peroxides and perorthoesters is provided by a sequence of $^1O_2$ ene reaction and subsequent Lewis acid catalyzed peroxyacetalization.

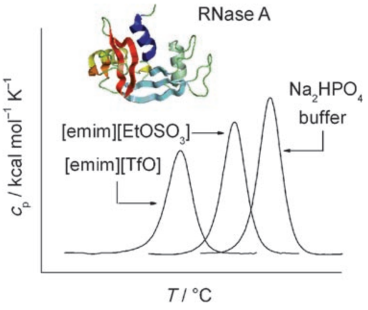


Protein–Ion Interactions

D. Constantinescu, H. Weingärtner,*
C. Herrmann ______ **8887 – 8889**

Protein Denaturation by Ionic Liquids and the Hofmeister Series: A Case Study of Aqueous Solutions of Ribonuclease A

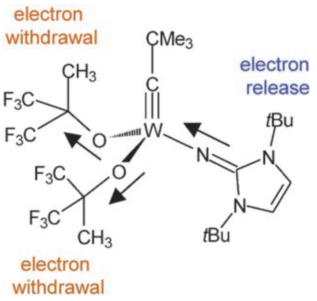
The rating game: The effect of cations and anions of ionic liquids (ILs) on the stability of ribonuclease A in aqueous solutions was studied by differential scanning calorimetry (DSC thermogram shown). The salt-induced shifts of the transition temperature are used to rank the cations and anions of ILs in the Hofmeister series.



Alkyne Metathesis

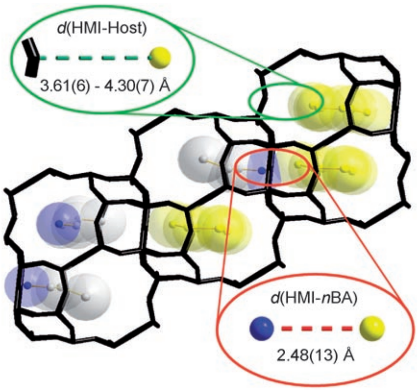
S. Beer, C. G. Hrib, P. G. Jones,
K. Brandhorst, J. Grunenberg,
M. Tamm* ______ **8890 – 8894**

Efficient Room-Temperature Alkyne Metathesis with Well-Defined Imidazolin-2-iminato Tungsten Alkylidyne Complexes



It's a game of give and take: Following the successful design strategy for high-oxidation-state alkene metathesis catalysts of the Schrock type, one of the most active homogeneous catalyst systems for alkyne metathesis has been developed. The activity of the tungsten alkylidyne complex (see picture) stems from the use of a strong electron-donating imidazolin-2-iminato ligand together with electron-withdrawing fluorinated alkoxides.

Filling the holes: CAL-1, a novel precursor for the acidic solid-state catalyst H-SAPO-34, was characterized by X-ray diffraction and Fourier transform IR spectroscopy. Synthesis starting from a layered aluminophosphate precursor yields a product with a layered organization of the organic templates *n*-butylammonium (*n*BA, blue/gray), and hexamethylenimine (HMI, yellow).



Solid-State Catalysts

C. Gieck, C. Bisio, L. Marchese,*
Y. Filinchuk, C. E. da Silva,
H. O. Pastore* ——— **8895 – 8897**

Layered Assembly of Organic Molecules and Host–Guest Interactions in a CAL-1 Chabasite-Type Precursor of H-SAPO-34 Catalysts

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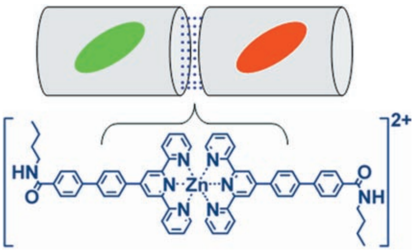

In splendor arrayed: Coordinative interactions between zinc ions and terpyridine ligands were used to produce self-assembled one-dimensional arrays of zeolite L crystals. By intercalating zeolite crystals with different organic fluorophores (pyronine: green, oxonine: red), multicolor emitters can be obtained (see picture).

Multicolored Emitters

Z. Popović, M. Busby, S. Huber,
G. Calzaferri, L. De Cola* — **8898 – 8902**

Assembling Micro Crystals through Cooperative Coordinative Interactions

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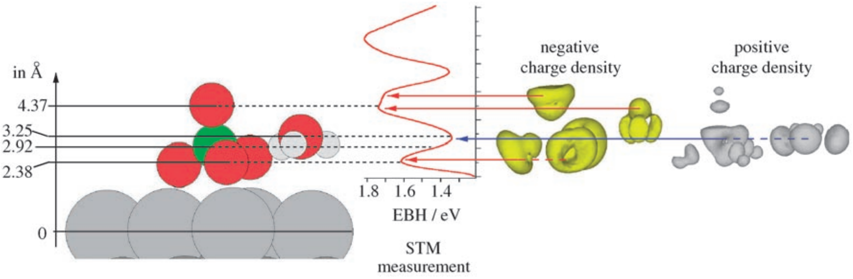

The interface of experiment and theory: A combination of distance tunneling spectroscopy (left; Au gray, H white, O red, S green) and density functional theory calculations has been employed to derive a detailed model of the electric double layer for Au(111) in H_2SO_4 at positive potential. Evidence for a double layer structure normal to the surface is presented, and the absolute width of the tunnel gap was determined through the DFT calculations.

Electrochemical Interfaces

F. C. Simeone, D. M. Kolb,
S. Venkatachalam, T. Jacob* **8903 – 8906**

The Au(111)/Electrolyte Interface: A Tunnel-Spectroscopic and DFT Investigation

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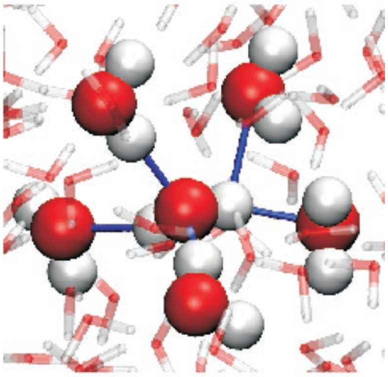

The “free water” phase in a aqueous salt solution behaves similarly to water under pressure in terms of thermal expansion, dynamics, and local structure. Molecular dynamics simulations reproduce the anomalous properties of water and salt solutions almost quantitatively. Under supercooled conditions solvated ions stabilize the “high-density” configuration of water (see picture; H white, O red, blue: hydrogen bonds).

Water Structures

J. Holzmann, R. Ludwig,* A. Geiger,
D. Paschek* ——— **8907 – 8911**

Pressure and Salt Effects in Simulated Water: Two Sides of the Same Coin?

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

Corrigendum

Total Synthesis of the Potent Antitumor Macrolides Pladienolide B and D

R. M. Kanada, D. Itoh, M. Nagai,
J. Niijima, N. Asai, Y. Mizui, S. Abe,
Y. Kotake* ____ **4350–4355**

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

DOI 10.1002/anie.200604997

The authors of this Communication wish to cite additional papers relevant to their work. Burkart and co-workers reported the synthesis of the undecenolide core of mycolactone by ring-closing metathesis. This synthesis of a highly functionalized 12-membered macrolide core is related to that reported by the authors. A. L. Mandel presented the synthesis of side-chain stereoisomers of pladienolide B. This synthesis is closely related to the synthetic route of the authors. The authors apologize for the unintentional oversight in not citing these two reports and wish to add these as references [5b] and [7g].

To establish the independence of their work to the above-mentioned reports, the authors would like to cite their patent as reference [35], to be added to the first sentence in concluding paragraph: "In conclusion, we have achieved the first total synthesis of pladienolides B (**2**) and D (**3**),[35] [...]"

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[5] a) N. Asai, Y. Kotake, N. Fukuda, J. Niijima, T. Uehara, T. Sakai, *J. Antibiot.*, submitted; b) for side-chain stereochemistry, see A. L. Mandel, M. D. Burkart, Abstracts of papers, 232nd ACS National Meeting, San Francisco, CA, USA, September 10–14, **2006**, ORGN-693.

[7] For previous examples of the use of RCM for construction of 12-membered aliphatic macrolides, see a) A. Fürstner, K. Langemann, *Synthesis* **1997**, 792–803; b) A. Fürstner, T. Müller, *J. Am. Chem. Soc.* **1999**, *121*, 7814–7821; c) S. Sasmal, A. Geyer, M. E. Maier, *J. Org. Chem.* **2002**, *67*, 6260–6263; d) M. D. Ronsheim, C. K. Zercher, *J. Org. Chem.* **2002**, *67*, 1878–1885; e) X. Wang, J. A. Porco, Jr., *Angew. Chem.* **2005**, *117*, 3127–3131; *Angew. Chem. Int. Ed.* **2005**, *44*, 3067–3071; f) M. Prakesch, U. Sharma, M. Sharma, S. Khadem, D. M. Leek, P. Arya, *J. Comb. Chem.* **2006**, *8*, 715–734; g) M. D. Alexander, S. D. Fontaine, J. J. La Clair, A. G. DiPasquale, A. L. Rheingold, M. D. Burkart, *Chem. Commun.* **2006**, *44*, 4602-4604.

[35] R. M. Kanada, D. Itoh, T. Sakai, N. Asai, Y. Kotake, J. Niijima, PCT Int. Appl. WO 2007/043621 (US60/727845, JP2005-299228).