



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:

Q. Wang, M. Zhang, C. Chen, W. Ma, J. Zhao*

**Photocatalytic Aerobic Oxidation of Alcohols on TiO₂:
The Acceleration Effect of Brønsted Acids**

Ye Fu, Q. Dai, W. Zhang, J. Ren, T. Pan,* C. He*

**AlkB Domain of Mammalian ABH8 Catalyzes Hydroxylation of
5-Methoxycarbonylmethyluridine at the Wobble Position of tRNA**

S. Rizzato, J. Bergès, S. A. Mason, A. Albinati, J. Kozelka*

**Dispersion-Driven Hydrogen Bonding: Theoretically Predicted
H–bond between H₂O and Platinum(II) Identified by Neutron
Diffraction**

H. Amouri,* J. Moussa, A. K. Renfrew, P. J. Dyson, M. N. Rager,
L.-M. Chamoreau

**Metal Complex of Diselenobenzoquinone : Discovery, Structure,
and Anticancer Activity**

M. Rauschenberg, S. Bomke, U. Karst, B. J. Ravoo*

Dynamic Peptides as Biomimetic Carbohydrate Receptors

M. Baer, D. Marx, G. Mathias*

**Microsolvated Hydronium and Zundel Cations by Theoretical
Messenger Spectroscopy**

M. Roth, P. Kindervater, H.-P. Raich, J. Bargon, H. W. Spiess,*
K. Münnemann*

**Continuous ¹H and ¹³C Signal Enhancement in NMR and MRI
Using Parahydrogen and Hollow Fiber Membranes**

M. R. Leone, G. Lackner, A. Silipo, R. Lanzetta, A. Molinaro,*
C. Hertweck*

**An Unusual Galactofuranose Lipopolysaccharide Warrants
Intracellular Survival of Toxin–Producing Bacteria in Their Fungal
Host**

H. Zheng, J. Gao*

**Highly Specific Heterodimerization Mediated by Quadrupole
Interactions**

S. P. Annen, V. Bambagioni, M. Bevilacqua, J. Filippi,
A. Marchionni, W. Oberhauser, H. Schönerberg, F. Vizza,*
C. Bianchini,* H. Grützmacher*

**A Biologically Inspired Organometallic Fuel Cell (OMFC) that
Converts Renewable Alcohols into Energy and Chemicals**

H. Shao, J. Seifert, N. C. Romano, M. Gao, J. J. Helmus, C. P.
Jaroniec, D. A. Modarelli, J. R. Parquette*

Amphiphilic Self-Assembly of an *n*-Type Nanotube



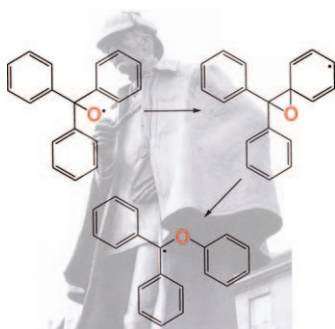
*“My ultimate goal is to assemble/discover artificial
(inorganic) biology.*

When I was eighteen I wanted to be a fast jet pilot ...”

This and more about Leroy (Lee) Cronin can be found
on page 6930.

Author Profile

Leroy (Lee) Cronin ————— 6930



Reopening the case: One hundred years after Wieland's original publication, the rearrangement of the trityloxy radical was studied by K. Ingold et al., who investigated the title reaction with the logical reasoning and intellectual prowess of true detectives.

Highlights

Trityloxy Radical

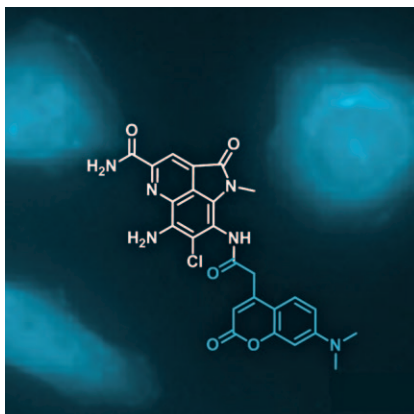
G. Bucher* ————— 6934 – 6935

The Rearrangement of the Trityloxy
Radical: Sherlock Holmes' Most Recent
Case

Ammosamides

D. Zurwerra, C. W. Wulschleger,
K.-H. Altmann* — 6936 – 6938

Treasures from the Sea: Discovery and
Total Synthesis of Ammosamides



Out of the blue: Ammosamides A (**1**) and B (**2**) were isolated from a marine streptomycete collected at a depth of more than 1600 m. By employing a blue-fluorescent diaminocoumarin conjugate of **2** (see structure), myosin was identified as a cellular target of these antiproliferative natural products. The total synthesis of **1** and **2** has now been completed, thus allowing further elaboration of the chemical biology of these fascinating compounds.

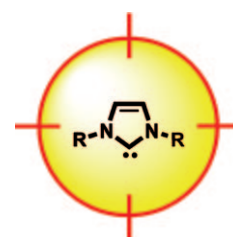
Minireviews

N-Heterocyclic Carbenes

T. Dröge, F. Glorius* — 6940 – 6952

The Measure of All Rings—N-Heterocyclic
Carbenes

Beyond measure? N-Heterocyclic carbenes (NHCs) have become ubiquitous ligands for organometallic chemistry as well as organocatalysts. The key concepts used for the quantification of the characteristic properties of NHCs are described. The ability to quantify, modify, maximize, or minimize these properties should eventually enable the design, selection, and utilization of tailor-made NHC ligands for a desired catalytic application.

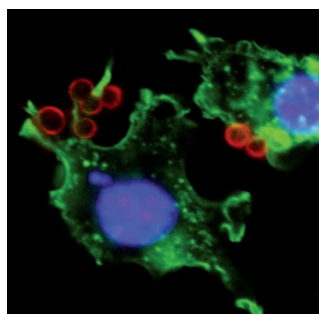


Reviews

Designed to Deliver

L. J. De Cock, S. De Koker,
B. G. De Geest,* J. Grooten, C. Vervaet,
J. P. Remon, G. B. Sukhorukov,
M. N. Antipina — 6954 – 6973

Polymeric Multilayer Capsules in Drug
Delivery



Layer-by-layer coating of a sacrificial template followed by dissolution of the template can be used to generate polymeric multilayer capsules. By varying the capsule components and their physicochemical properties, multifunctional microcarriers (red circles) can be designed with high potential for drug delivery.

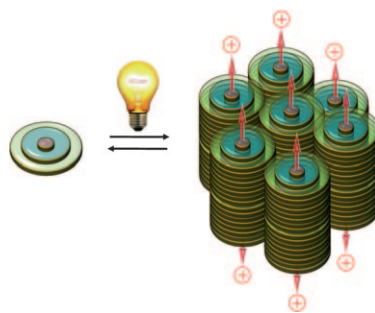
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national chemical society prices are available
on request. Postage and handling charges
included. All prices are subject to local VAT/
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Communications

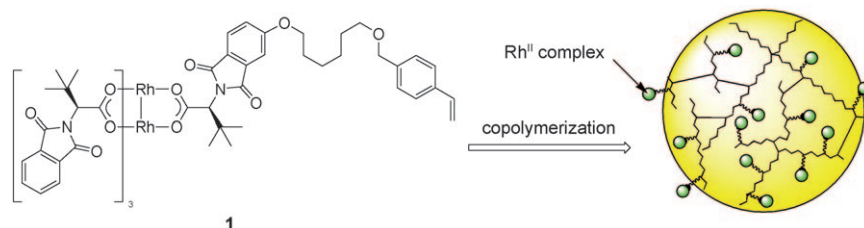
Let there be more light: Triarylamine-based building blocks respond to visible-light exposure by the formation of cationic radicals that hierarchically self-assemble into molecular wires, which in turn combine within larger fibers (see picture). The stimuli-responsive supramolecular scaffold, which is created by charge transfer and reversibly broken up by heating, prevents the quenching of holes within the wires.



Self-Assembly

E. Moulin, F. Niess, M. Maaloum,
E. Buhler, I. Nyrkova,
N. Giuseppone* _____ **6974–6978**

The Hierarchical Self-Assembly of Charge Nanocarriers: A Highly Cooperative Process Promoted by Visible Light



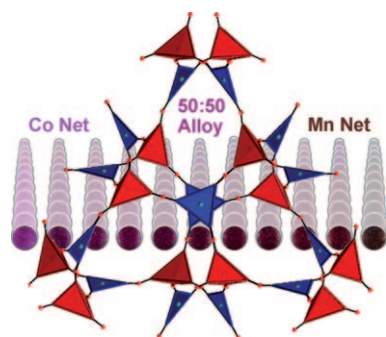
A highly effective immobilization of $[\text{Rh}_2(\text{S-PTTL})_4]$ (PTTL = *N*-phthaloyl-*tert*-leucinate) has been achieved by copolymerization of monomer **1** with styrene and a flexible cross-linker. The immobilized cat-

alyst promoted the title reaction at -78°C with high enantioselectivity, and could be used for up to 100 cycles with a low level of leaching (0.28 ppm).

Heterogeneous Catalysis

K. Takeda, T. Oohara, M. Anada,
H. Nambu, S. Hashimoto* _____ **6979–6983**

A Polymer-Supported Chiral Dirhodium(II) Complex: Highly Durable and Recyclable Catalyst for Asymmetric Intramolecular C–H Insertion Reactions

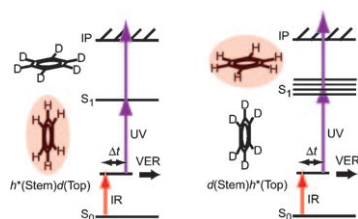


Alloy, alloy: A pure cobalt-based Keggin network linked by W–O–Co interactions is “alloyed” with a pure manganese-based Keggin network, linked by W–O–Mn interactions. These isostructural alloys are solid solutions of the Co and Mn nets. The alloys are prepared by the stoichiometric mixing of the components of each discrete network, leading to a series of single-crystalline mixed transition-metal frameworks with novel redox properties.

Polyoxometalate Frameworks

J. Thiel, C. Ritchie, H. N. Miras, C. Streb,
S. G. Mitchell, T. Boyd,
M. N. Corella Ochoa, M. H. Rosnes,
J. McIver, D.-L. Long,
L. Cronin* _____ **6984–6988**

Modular Inorganic Polyoxometalate Frameworks Showing Emergent Properties: Redox Alloys



VERY relaxing: Vibrational energy relaxation (VER) of benzene dimer isotopologues in the CH stretching vibrational level has been investigated by picosecond time-resolved IR–UV pump–probe spectroscopy (see picture, $h = \text{C}_6\text{H}_6$, $d = \text{C}_6\text{D}_6$). A remarkable difference is found in the relaxation lifetime: the lifetime of the stem site (110 ps) is 4.5 times shorter than that of the top site (500 ps).

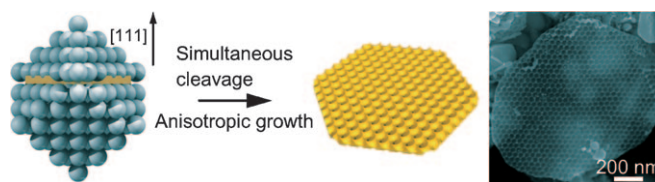
Time-Resolved Spectroscopy

R. Kusaka, T. Ebata* _____ **6989–6992**

Remarkable Site Difference of Vibrational Energy Relaxation in Benzene Dimer: Picosecond Time-Resolved IR–UV Pump–Probe Spectroscopy

Dimpled Gold Nanoplates

Y. Kuroda, K. Kuroda* — 6993 – 6997



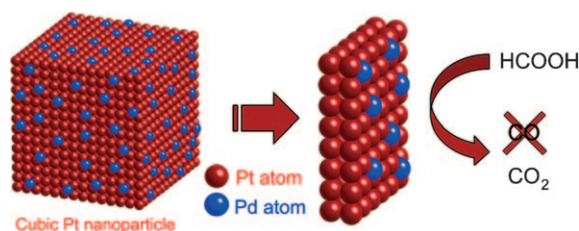
Morphosynthesis of Nanostructured Gold Crystals by Utilizing Interstices in Periodically Arranged Silica Nanoparticles as a Flexible Reaction Field

Rigid but flexible: Gold nanoplates with highly ordered surface dimples (see picture) are deposited in the interstices of periodically arranged silica nanoparticles. The silica nanoparticles not only act as

rigid templates to form dimples or mesopores, but also provide a flexible reaction field that allows anisotropic crystal growth of gold in a simultaneously formed two-dimensional nanospace.

Decorated Pt Nanoparticles

F. J. Vidal-Iglesias, J. Solla-Gullón, E. Herrero, A. Aldaz, J. M. Feliu* — 6998 – 7001



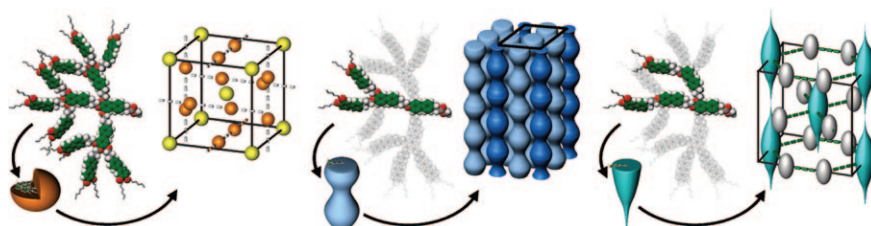
Pd Adatom Decorated (100) Preferentially Oriented Pt Nanoparticles for Formic Acid Electrooxidation

Decorating platinum nanoparticles having preferential (100) orientation with palladium adatoms in the submonolayer range enhances their catalytic performance in the electrooxidation of formic acid (see picture). Moreover, as the palladium ada-

toms are deposited in a similar way to that used in analogous single-crystal studies, proper relationships between single-crystal and nanoparticle catalysis or electrocatalysis can be established.

Dendrimers

B. M. Rosen, M. Peterca, C. Huang, X. Zeng, G. Ungar, V. Percec* — 7002 – 7005



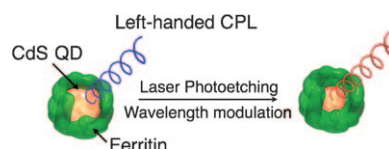
Deconstruction as a Strategy for the Design of Libraries of Self-Assembling Dendrons

Bringing down the dendron: The deconstruction of self-assembling dendrons represents a new strategy for the rational design of libraries of self-assembling dendrons with unprecedented primary structure (see picture). In this strategy,

molecular targets are designed by systematically removing branches from a parent dendron. This approach provides a diversity of molecular topologies unencountered in the generational synthesis of dendrons.

Chiral Quantum Dots

M. Naito,* K. Iwahori,* A. Miura, M. Yamane, I. Yamashita — 7006 – 7009



Circularly Polarized Luminescent CdS Quantum Dots Prepared in a Protein Nanocage

CdS quantum dots prepared in ferritin, an α -helix-rich rhombic dodecahedral protein, showed left-handed circularly polarized luminescence (CPL) from both direct transition and surface-trapping sites with relatively large anisotropy factors. Utilizing laser photoetching, the PL/CPL bands from surface-trapping sites blue-shifted with decreased QD size, but the direct transition band disappeared.



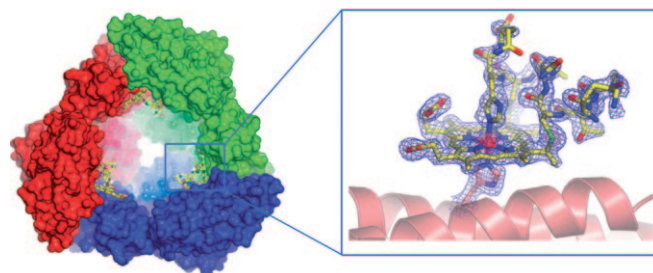
All roads lead to ... atropisomeric diaryl ethers containing a benzylic hydroxy group and an aldehyde unit. The isomers were synthesized in enantiomerically enriched form by desymmetrizing atroposelective enzymatic oxidation (with a galactose oxidase (GOase) variant) or reduction (with a ketoreductase (KRED); see scheme).

atroposelective enzymatic oxidation (with a galactose oxidase (GOase) variant) or reduction (with a ketoreductase (KRED); see scheme).

Atroposelectivity

B. Yuan, A. Page, C. P. Worrall, F. Escalettes, S. C. Willies, J. J. W. McDouall, N. J. Turner,* J. Clayden* — 7010–7013

Biocatalytic Desymmetrization of an Atropisomer with both an Enantioselective Oxidase and Ketoreductases



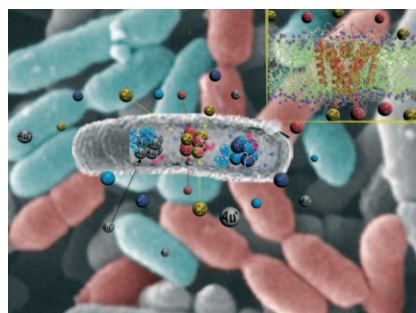
Caged to submission: The zinc-ion-directed assembly of tetrahedral protein cages (Zn_{30} :CFMC-1₁₂) in a rhombohedral crystal lattice is presented. The histidine side chains and exposed hydrophobic groups lining up the cavities of these

cages enabled a flexible α -type heme peptide fragment (a microperoxidase) to be immobilized within and its crystal structure to be determined at 1.9 Å resolution.

Peptide Structures

T. W. Ni, F. A. Tezcan* — 7014–7018

Structural Characterization of a Microperoxidase Inside a Metal-Directed Protein Cage



A metal-nanoparticle factory: Various metal nanoparticles with tailored optical, electronic, chemical, and magnetic properties were synthesized in vivo in a size-tunable manner in recombinant *E. coli* (see picture) through interaction with the metal-binding protein metallothionein and the metal-binding peptide phytochelatins, which was synthesized by phytochelatase synthase.

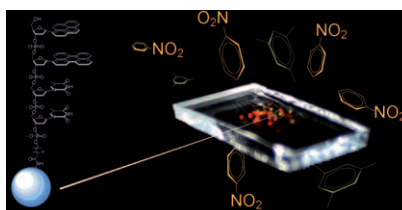
Biogenic Nanoparticles

T. J. Park, S. Y. Lee,* N. S. Heo, T. S. Seo — 7019–7024

In Vivo Synthesis of Diverse Metal Nanoparticles by Recombinant *Escherichia coli*



With a response for any occasion: Oligodeoxyfluorosides (ODFs) conjugated to poly(ethylene glycol)–polystyrene beads were used as fluorescent sensors of multiple organic vapors (see picture). The ODFs—DNA-like oligomers in which fluorophores, spacers, and quencher groups replace DNA bases—had sufficient electronic diversity to show a wide range of responses to chemically varied volatile organic compounds.



Fluorescence Sensing

F. Samain, S. Ghosh, Y. N. Teo, E. T. Kool* — 7025–7029

Polyfluorophores on a DNA Backbone: Sensors of Small Molecules in the Vapor Phase

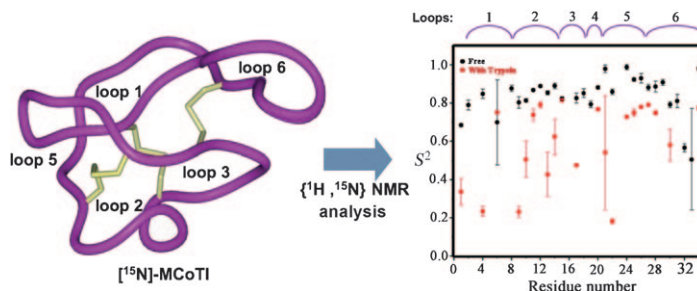


Molecular Dynamics

S. S. Puttamadappa, K. Jagadish,
A. Shekhtman,
J. A. Camarero* — 7030 – 7034



Backbone Dynamics of Cyclotide MCoTI-I
Free and Complexed with Trypsin



Showing some backbone: Most of the backbone NH groups of cyclotide MCoTI-I are constrained in the free state, which results in a well-folded compact structure, as indicated by $\{^{15}\text{N}, ^1\text{H}\}$ NMR spectroscopy

(see picture). According to the backbone order parameter S^2 , the backbone mobility in trypsin-bound MCoTI-I is significantly increased.

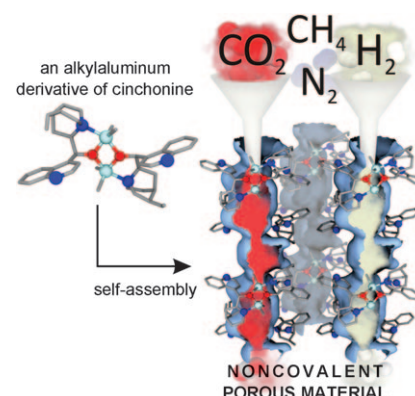
Gas Separation

J. Lewiński,* T. Kaczorowski,
D. Prochowicz, T. Lipińska, I. Justyniak,
Z. Kaszukur, J. Lipkowski — 7035 – 7039



Cinchona Alkaloid–Metal Complexes:
Noncovalent Porous Materials with
Unique Gas Separation Properties

Pores for thought: Dinuclear aluminum–cinchone complexes are used to construct chiral architectures through noncovalent-interaction-driven self-assembly (see picture). The flexible desolvated material with ultramicropores is a selective adsorbent with unique properties, such as temperature-triggered adsorption of N_2 and high affinities for H_2 , CO_2 , and CH_4 .

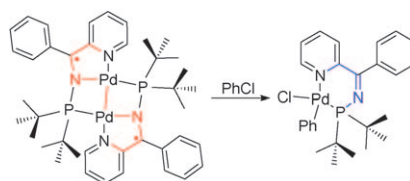


Non-Innocent Ligands

D. A. Smith, A. S. Batsanov, K. Costuas,
R. Edge, D. C. Apperley, D. Collison,
J.-F. Halet, J. A. K. Howard,
P. W. Dyer* — 7040 – 7044



Exploiting Non-Innocent Ligands to
Prepare Masked Palladium(0) Complexes



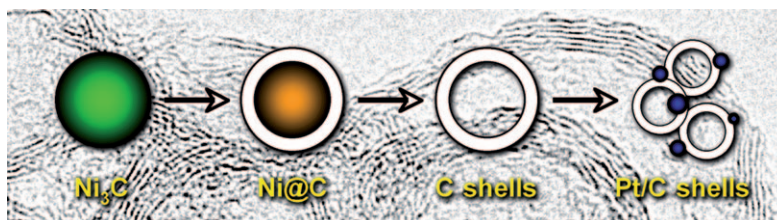
Is it or isn't it: Reaction of $[\text{PdMe}_2\text{-(tmeda)}]$ with pyridyl-*N*-di(*tert*-butyl)-phosphinoimine spontaneously affords an unusual bimetallic palladium(I) ligand-based biradical complex, which behaves as a “masked” form of Pd^0 in its reactions with neutral ligands and chlorobenzene.

Nanotechnology

Z. L. Schaefer, M. L. Gross, M. A. Hickner,
R. E. Schaak* — 7045 – 7048

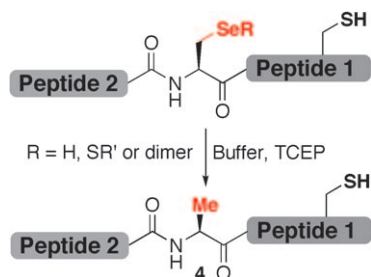


Uniform Hollow Carbon Shells:
Nanostructured Graphitic Supports for
Improved Oxygen-Reduction Catalysis



C-shell catalysts: Uniform hollow nano-shells of graphitic carbon have been synthesized by phase separation of Ni_3C nanoparticles (NPs) followed by chemical

leaching of the nickel core gave graphite-shell particles (see picture). Pt NPs anchored onto the shell show high apparent activity for the oxygen reduction reaction.

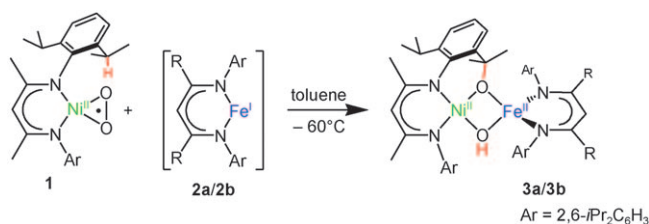


Selective deselenization: Native chemical ligation at selenocysteine is followed by selective deselenization of the selenocysteine to alanine, in the presence of cysteine residues without protecting groups (see scheme). This selectivity is achieved by using the water-soluble tris(2-carboxyethyl)phosphine (TCEP) in the absence of a radical initiator.

Peptide Ligation

N. Metanis, E. Keinan,*
P. E. Dawson* 7049–7053

Traceless Ligation of Cysteine Peptides Using Selective Deselenization



Pool together: Oxidative addition of the superoxo ligand inherent to the nickel(II) superoxide **1** onto iron(II) precursor complexes **2a/2b** leads unexpectedly and exclusively to the first NiFe alkoxo

hydroxides **3a** (R = Me) and **3b** (R = *t*Bu). The latter result from an unexpected, selective oxygenation of a C–H bond of one of the isopropyl groups at the β -diketiminato ligand coordinated to nickel.

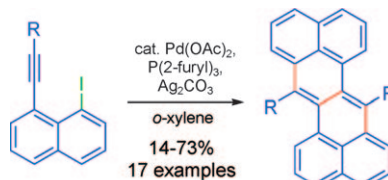
Heterobimetallic Oxygenation

S. Yao, C. Herwig, Y. Xiong, A. Company, E. Bill, C. Limberg,*
M. Driess* 7054–7058

Monooxygenase-Like Reactivity of an Unprecedented Heterobimetallic {FeO₂Ni} Moiety



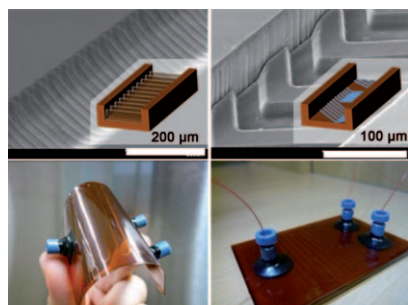
Zethrenes were synthesized by Pd-catalyzed cyclodimerization of 1-ethynyl-8-iodonaphthalenes. The structure of these cycloadducts was confirmed by X-ray crystal analysis. The bond lengths and bond alternation in the crystal structures reveal that the central two six-membered rings of the title compounds lack aromaticity.



Zethrenes

T.-C. Wu, C.-H. Chen, D. Hibi, A. Shimizu, Y. Tobe, Y.-T. Wu* 7059–7062

Synthesis, Structure, and Photophysical Properties of Dibenzo[*de,mn*]-naphthalenes



Keeping limber: A monolithic and flexible polyimide film microreactor is introduced for organic reactions and syntheses. Unlike glass microreactors, it is easy to fabricate, yet it is inert to solvents and acids under harsh conditions, unlike other polymer microreactors.

Microreactors

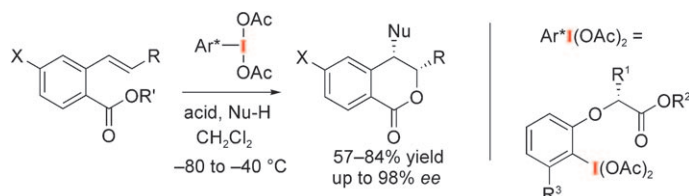
K. I. Min, T. H. Lee, C. P. Park, Z. Y. Wu, H. H. Girault, I. Ryu, T. Fukuyama, Y. Mukai, D. P. Kim* 7063–7067

Monolithic and Flexible Polyimide Film Microreactors for Organic Microchemical Applications Fabricated by Laser Ablation



Oxidation

M. Fujita,* Y. Yoshida, K. Miyata,
A. Wakisaka, T. Sugimura — **7068–7071**



It's the hype: The asymmetric synthesis of 3-alkyl-4-oxyisochroman-1-one is achieved by oxylactonization of *ortho*-alk-1-enylbenzoate with a series of optically active hypervalent iodine(III) reagents prepared

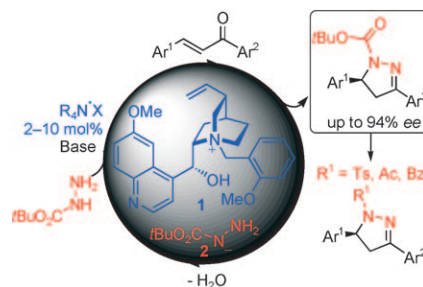
from lactate or valine as a chiral source (see scheme). The oxylactonization is highly regio-, diastereo-, and enantioselective.

Organocatalysis

O. Mahé, I. Dez, V. Levacher,
J.-F. Brière* — **7072–7075**

Enantioselective Phase-Transfer Catalysis:
Synthesis of Pyrazolines

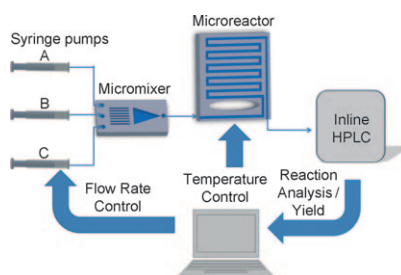
All paired up: Under catalytic phase-transfer conditions the formation of a chiral ion pair between quininium cation **1** and hydrazine anion **2** led to an enantioselective aza-Michael cyclocondensation domino reaction to furnish pyrazolines. A convenient one-pot protocol allowed exchange of the functional group (R^1) on the nitrogen atom.



Microreactors

J. P. McMullen, M. T. Stone,
S. L. Buchwald,*
K. F. Jensen* — **7076–7080**

An Integrated Microreactor System for
Self-Optimization of a Heck Reaction:
From Micro- to Mesoscale Flow Systems



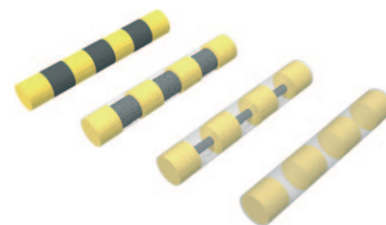
Set it and forget it: The combination of feedback control and continuous-flow operations in microreactors (see picture) enables online and fully automated reaction optimization. A Heck reaction demonstrates the potential for rapid multi-variable reaction optimization while requiring a minimal amount of material. Optimal conditions are quickly scaled-up by a factor of 50.

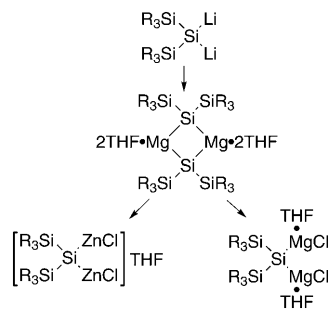
Nanostructures

C. M. Hangarter, Y.-I. Lee,
S. C. Hernandez, Y.-h. Choa,*
N. V. Myung* — **7081–7085**

Nanopeapods by Galvanic Displacement
Reaction

Like peas in a pod: Galvanic displacement of electrodeposited multisegmented nanowires was used to synthesize nanopeapod structures at room temperature (see scheme). Depending on the redox potential of the displacement process, a variety of nanopeapod materials could be prepared, e.g., semiconductor/metal, p-type/n-type, metal/metal, ferromagnetic/nonmagnetic materials.



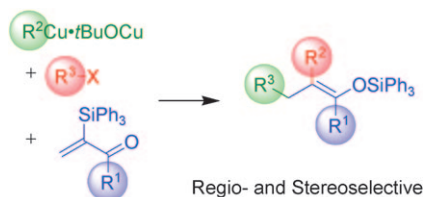


Two metals are better than one: A cyclic 1,1-dimagnesiosilane, a 1,1-di(chloro-magnesio)silane, and a 1,1-di(chlorozincio)silane have been synthesized using transmetalation reactions (see scheme; THF = tetrahydrofuran) and characterized by X-ray crystallography. Cyclic 1,1-dimagnesiosilane was studied in redox reactions that led to a lithium-substituted silyl radical and a vicinal 1,2-dilithiosilane.

Silicon Compounds

R. Dobrovetsky, D. Bravo-Zhivotovskii,*
B. Tumanskii, M. Botoshansky,
Y. Apeloig* ————— **7086–7088**

Synthesis, Isolation, and Characterization
of 1,1-DiGrignard and 1,1-Dizincio Silanes

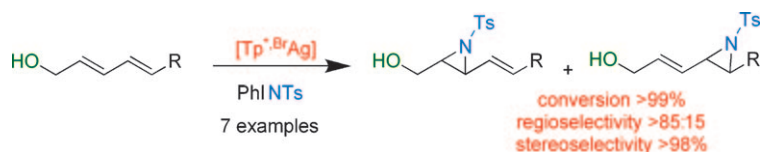


Three components for total control: Tri-substituted silyl enol ethers were prepared by three-component coupling of α -silyl α,β -unsaturated ketones, organo-copper reagents, and organic halides with complete regio- and stereoselectivity (see scheme). The reaction proceeded through a 1,3 migration of the silyl group via cyclic silicate intermediates, which controlled the configuration of the silyl enol ethers.

Stereoselective Synthesis

A. Tsubouchi,* S. Enatsu, R. Kanno,
T. Takeda* ————— **7089–7091**

Complete Regio- and Stereoselective
Construction of Highly Substituted Silyl
Enol Ethers by Three-Component
Coupling



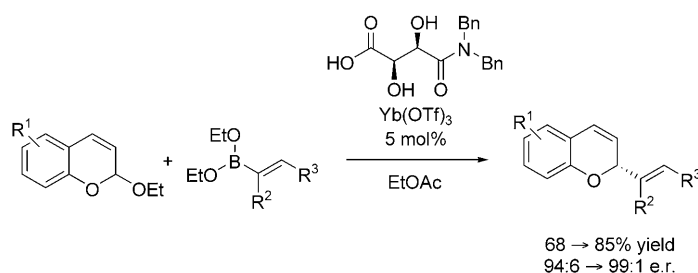
Nitrene transfer: Unsymmetric dienes bearing a terminal hydroxy group can be regio- and stereospecifically converted into vinylaziridines upon nitrene transfer from PhINTs using a silver-based catalyst. Stoichiometric mixtures of dienes and

PhINTs were employed at low catalyst loadings (0.5%; see scheme). The method has been applied to the synthesis of ($\pm$)-sphingosine and gave good yields in a three-step procedure. Ts = 4-toluenesulfonyl.

Synthetic Methods

J. Llaveria, Á. Beltrán,
M. M. Díaz-Requejo,* M. I. Matheu,*
S. Castellón,* P. J. Pérez* — **7092–7095**

Efficient Silver-Catalyzed Regio- and
Stereospecific Aziridination of Dienes



Chiral α,β -dihydroxy carboxylic acids catalyze the enantioselective addition of alkenyl and aryl boronates to chromene acetals. The optimal carboxylic acid is the easily available tartaric acid amide shown in the scheme. Spectroscopic and kinetic

mechanistic studies demonstrate that an exchange process generates a reactive dioxaborolane intermediate leading to enantioselective addition to the pyrylium ion formed from the chromene acetal.

Asymmetric Catalysis

P. N. Moquist, T. Kodama,
S. E. Schaus* ————— **7096–7100**

Enantioselective Addition of Boronates to
Chromene Acetals Catalyzed by a Chiral
Brønsted Acid/Lewis Acid System



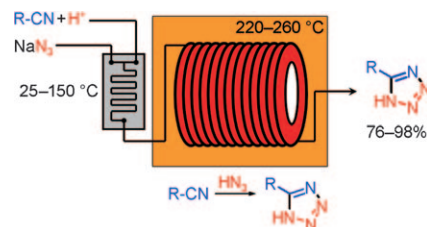
Microreactors

B. Gutmann, J.-P. Roduit, D. Roberge,*
C. O. Kappe* **7101–7105**



Synthesis of 5-Substituted 1*H*-Tetrazoles from Nitriles and Hydrazoic Acid by Using a Safe and Scalable High-Temperature Microreactor Approach

Harnessing hydrazoic acid in a micro-reactor! Tetrazoles have been synthesized in a very efficient manner by using a high-temperature/high-pressure process intensification regime. Despite the toxic and explosive nature of hydrazoic acid, the synthesis was conducted safely in continuous flow format with residence times as short as 2.5 minutes at 260 °C (see picture).



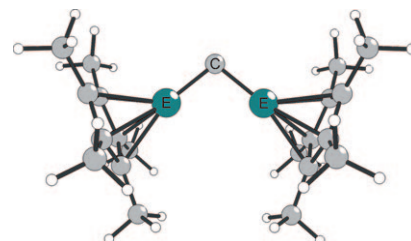
Carbon(0) Compounds

S. Klein, G. Frenking* **7106–7110**



Carbodiylides $C(ECp^*)_2$ ($E = B-Tl$): Another Class of Theoretically Predicted Divalent Carbon(0) Compounds

Carbone machine: Quantum-chemical calculations predict that the experimentally still unknown carbodiylides $C(ECp^*)_2$ ($E = B-Tl$; $Cp^* = C_5Me_5^-$) are a class of divalent carbon(0) compounds (“carbones”) that should be synthetically accessible.



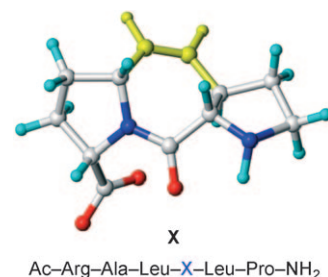
Peptide Mimetics

J. Zaminer, C. Brockmann, P. Huy,
R. Opitz, C. Reuter, M. Beyermann,
C. Freund, M. Müller, H. Oschkinat,
R. Kühne,* H.-G. Schmalz* **7111–7115**



Addressing Protein–Protein Interactions with Small Molecules: A Pro-Pro Dipeptide Mimic with a PPII Helix Conformation as a Module for the Synthesis of PRD-Binding Ligands

X marks the spot: The synthetic tricyclic amino acid **X** (see structure; C gray, H cyan, N blue, O red, double bond yellow) can be incorporated, without loss of binding ability, as a Pro-Pro substitute into two peptides that bind to the proline-rich motif-recognizing domains Fyn-SH3. The dipeptide analogue **X**, which is locked in a polyproline type II helix conformation, is created by stereoselective introduction of a vinylidene bridge into a diproline unit.



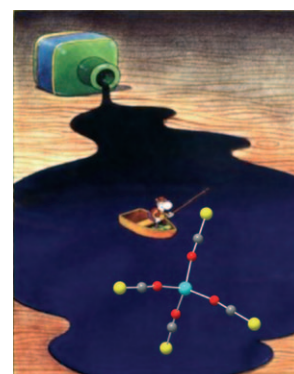
Ionic Liquids

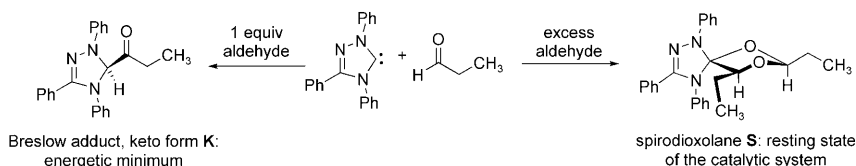
T. Peppel, M. Köckerling,*
M. Geppert-Rybczyńska, R. V. Ralys,
J. K. Lehmann, S. P. Verevkin,
A. Heintz* **7116–7119**



Low-Viscosity Paramagnetic Ionic Liquids with Doubly Charged $[Co(NCS)_4]^{2-}$ Ions

Magic ink: Ionic liquids that consist of paramagnetic $[Co(NCS)_4]^{2-}$ anions and imidazolium-based cations have glass-transition temperatures below $-60^\circ C$. The ink-like liquids also have unexpected low viscosities, ion conductivities, and low heats of vaporization, along with high hydrolytic stability and insensitivity to air.





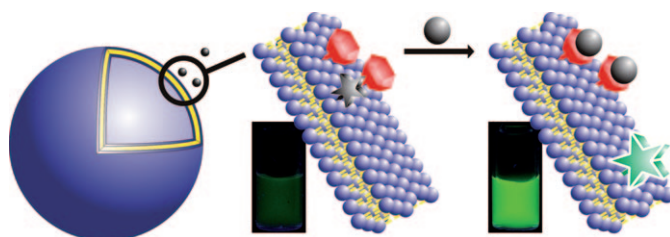
Surprises from a classic: The Breslow intermediate of triazolyldene-catalyzed benzoin condensations was characterized for the first time by NMR spectroscopy in its keto form (**K**, energetic minimum). The

hitherto unknown spiro-dioxolane **S**, generated from the carbene catalyst and two equivalents of aldehyde, is the resting state of the catalytic system.

Organocatalysis

A. Berkessel,* S. Elfert,
K. Etzenbach-Effers,
J. H. Teles _____ **7120–7124**

Aldehyde Umpolung by N-Heterocyclic Carbenes: NMR Characterization of the Breslow Intermediate in its Keto Form, and a Spiro-Dioxolane as the Resting State of the Catalytic System



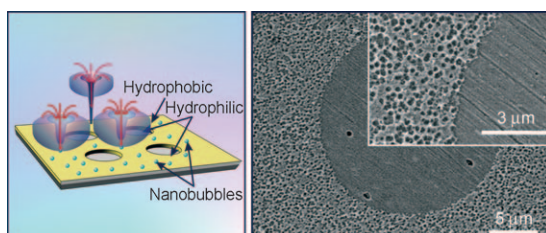
Tiny analysts: Co-embedding of amphiphilic binding sites and environment-sensitive dyes in vesicular membranes allows rapid and easy preparation of self-

assembled modular chemosensors. The fluorescent particles thus obtained respond to the presence of analytes by changes in their emission intensity.

Luminescence Chemosensors

B. Gruber, S. Stadlbauer, A. Späth,
S. Weiss, M. Kalinina,
B. König* _____ **7125–7128**

Modular Chemosensors from Self-Assembled Vesicle Membranes with Amphiphilic Binding Sites and Reporter Dyes



Sonochemistry at surfaces can be controlled by suitable surface patterning. Bubble nucleation occurs predominantly on hydrophobic surfaces (see picture, left), which thus can be selectively treated

by ultrasound. The right-hand picture shows a structurally modified aluminum plate after ultrasound treatment. The inner circular region is hydrophobic, and the outer region is hydrophilic.

Sonochemistry

V. Belova, D. A. Gorin, D. G. Shchukin,
H. Möhwald* _____ **7129–7133**

Selective Ultrasonic Cavitation on Patterned Hydrophobic Surfaces



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

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Spotlight on Angewandte's Sister Journals _____ **6926–6928**

Keywords _____ **7134**

Authors _____ **7135**

Preview _____ **7137**

Corrigendum

Bis(1,3-trimethylsilylallyl)beryllium

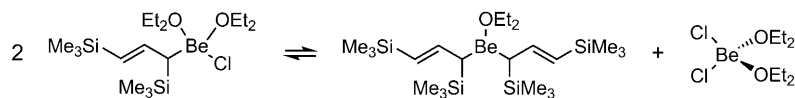
S. C. Chmely, T. P. Hanusa,*

W. W. Brennessel _____ **5870–5874**

Angew. Chem. Int. Ed. **2010**, 49

DOI 10.1002/anie.201001866

The equation in the artwork for this Communication (DOI: 10.1002/anie.201001866) on page 5870 has been inadvertently rearranged. It should read as follows:



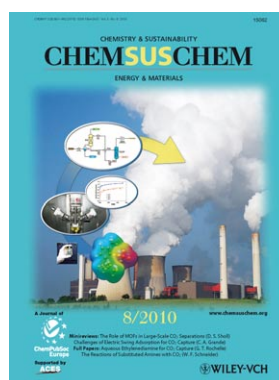
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