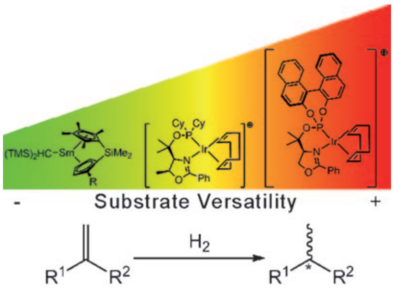
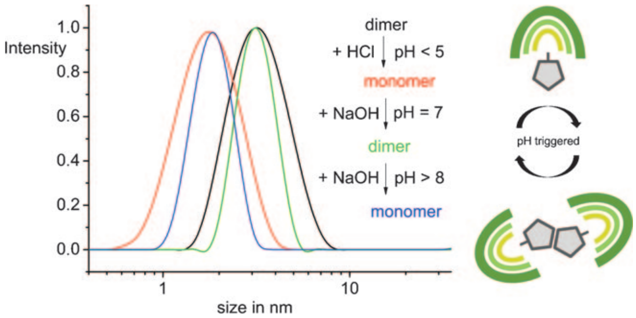
CONTENTS

MINIREVIEWS



Chiral hydrocarbons through hydrogenation: This minireview highlights the progress made in the preparation of chiral hydrocarbons through asymmetric hydrogenation of minimally functionalised terminal olefins (see scheme).

COMMUNICATIONS



pH-dependent dimerization: Zwitterionic polyglycerol dendrons self-assemble into discrete and well-defined dimers in water as shown by dynamic light scattering (DLS), gel permeability chromatography (GPC), and DOSY NMR spectroscopy. However, self-assembly occurs only at neutral pH as either protonation or deprotonation destroys the self-complementary zwitterionic binding motif in the core of the dendrimer. Hence, structure formation can be triggered back and forth by changing the pH of the solution.

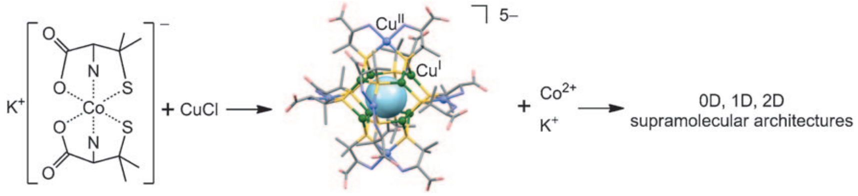
$[M_6M'_8(\text{D-pen})_{12}Cl]^{5-}$

To coil or not to coil: Chiral S-bridged 14-nuclear clusters with 12 free carboxylate groups, $[M_6M'_8(\text{D-pen})_{12}Cl]^{5-}$ ($M = Pd^{II}$, Ni^{II}; $M' = Cu^{I}$, Ag^{I}; D-pen = D-penicillaminate; see scheme), prepared from $[M(\text{D-pen})_2]^{2-}$ and M′Cl, were organized into heterotrimetallic supramolecular structures in combination with La^{3+}.

Cluster Compounds

N. Yoshinari, K. Tatsumi,
A. Igashira-Kamiyama,
*T. Konno** .... 14252 – 14255

Redox-Mediated Self-Organization of Metallosupramolecular Architectures Composed of D-Penicillaminato $Cu^I_8Cu^{II}_6$ Clusters: Drastic Structural Change by Subtle pH Changes

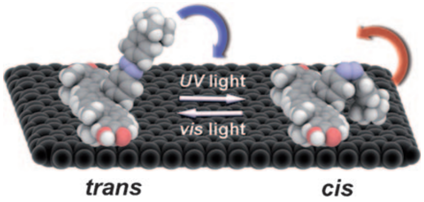


pH-dependent architecture: Cluster-based metallosupramolecular compounds, which are composed of $[Cu^I_6Cu^{II}_8(\text{D-pen})_{12}Cl]^{5-}$ (D-H$_2$pen = D-penicillamine) cluster anions linked by Co^{2+} and/or K^+ cations through D-pen carboxylate groups, were spontaneously synthesized by simple treatment of K[Co^{III}(D-pen)$_2$] with Cu^ICl in potassium acetate buffer solutions, accompanied by the redox between Co^{III} and Cu^I mediated by thiolate.

Self-Assembly

*D. Bléger, A. Ciesielski, P. Samorì,**
*S. Hecht** .... 14256 – 14260

Photoswitching Vertically Oriented Azobenzene Self-Assembled Monolayers at the Solid–Liquid Interface

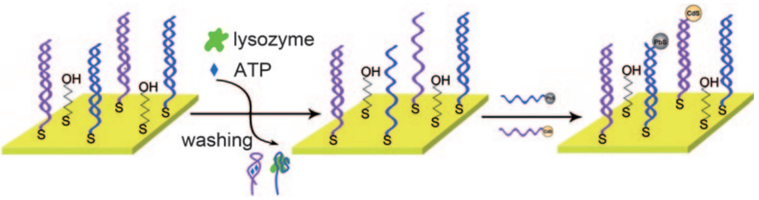


Up or down? Making use of self-assembly, the graphite surface is decorated with upright oriented photochromic units organized by a terfluorene platform. The azobenzenes within the monolayer could be converted from the *trans* to the *cis* form leading to substantial and reversible structural reorganization, as revealed by scanning tunneling microscopy (STM) studies.

Bionanotechnology

X. Q. Qian, Y. Xiang, H. X. Zhang,*
Y. Chen, Y. Q. Chai,
*R. Yuan** .... 14261 – 14265

Aptamer/Nanoparticle-Based Sensitive, Multiplexed Electronic Coding of Proteins and Small Biomolecules through a Backfilling Strategy

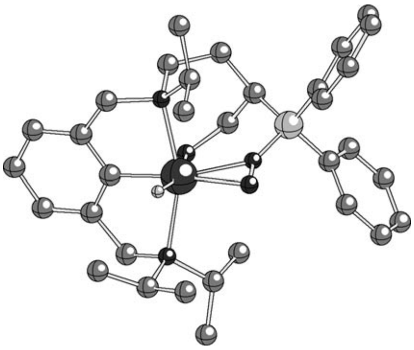


Sensing large and small simultaneously: Sensitive and multiplexed analysis of lysozyme and ATP analytes is achieved through target-induced release of aptamers from the DNA duplexes on a sensing surface, followed by backfilling hybridization of the resulting single-stranded DNAs with aptamers conjugated to the electrochemically encoded nanoparticles (see graphic).

Homogeneous Catalysis

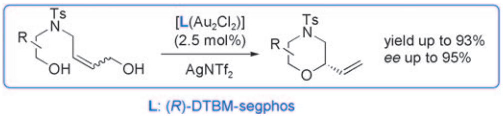
*M. Hölscher,**
*W. Leitner** .... 14266 – 14271

Lewis Acid Assisted Stabilization of Side-On Bonded N_2 in [Ru(NCN)]-Pincer Complexes—Computational Catalyst Design Directed at NH_3 Synthesis from N_2 and H_2



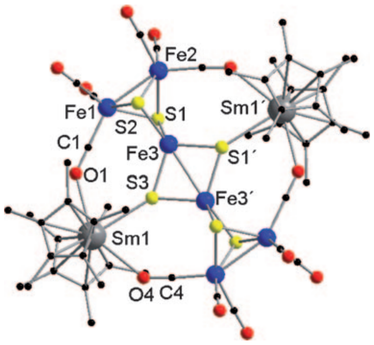
With a little help of my boron: Ruthenium pincer complexes with Lewis acidic side arms help to stabilize side-on coordinated N_2, which is necessary for catalytic reduction to NH_3 with H_2.

Asymmetric Synthesis



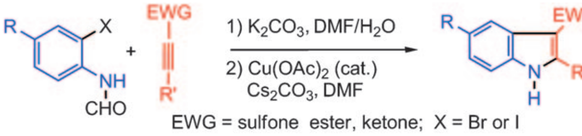
Alcohol versus alcohol: A highly stereocontrolled synthesis of substituted morpholines is realized by means of gold-catalyzed dehydrative allylic cyclization of diols (see scheme for one example; segphos = 5,5′-bis[di(3,5-di-*tert*-butyl-4-methyoxyphenyl)phosphine]-4,4′-bi-1,3-benzodioxole). The present methodology represents one of the few examples of enantioselective gold-catalyzed transformations involving unactivated alkenes.

Lanthanide Structures



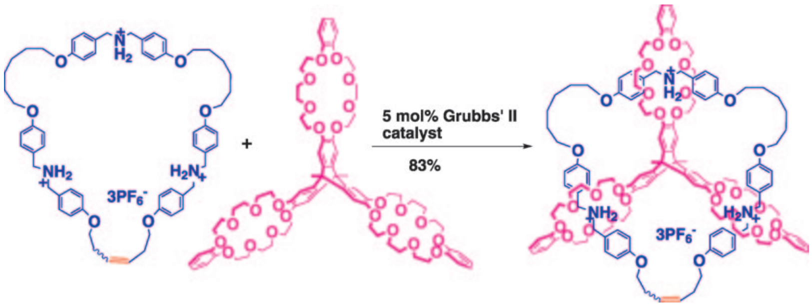
Octanuclear lanthanide–iron clusters: The first lanthanide–carbonyl–sulfide–iron clusters were obtained by redox reactions of $[(\eta^5\text{-}C_5Me_5)_2Ln(thf)_2]$ (Ln = Sm, Yb) and $[Fe_2(\mu\text{-}S_2)(CO)_6]$. The resulting wheel-shaped clusters have 14-membered peripheral rings with $[Fe_6(\mu_3\text{-}S)_6(CO)_{12}]^{2-}$ units in the center (see picture).

Indoles



Air and water welcome—ligands need not apply! A simple and efficient new synthesis of variously functionalized and substituted indoles was achieved by the addition and copper-catalyzed coupling of *N*-formyl-*o*-haloanilines with acetylenic sulfones, esters and ketones (see scheme; EWG = electron-withdrawing group). The reaction employs copper(II) acetate under ligand-free conditions without the need for exclusion of air and moisture.

Supramolecular Chemistry

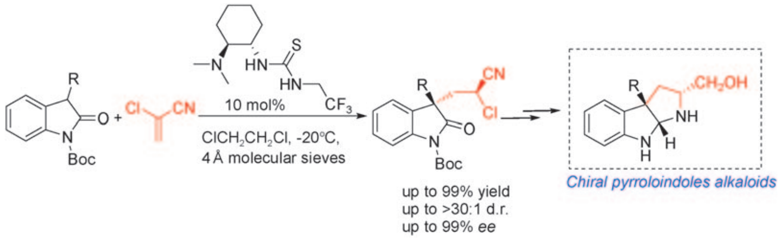


As if by magic: On the basis of formation of a novel multivalency-directed complex between a trisdialkylammonium strand ion and a triptycene-derived homotritopic host, an interesting magic-ring [2](3)catenane was obtained by reversible olefin metathesis (see scheme).

Organocatalysis

*X. Li, S. Luo,**
J.-P. Cheng .... 14290 – 14294

Asymmetric Conjugate Addition of Oxindoles to 2-Chloroacrylonitrile: A Highly Effective Organocatalytic Strategy for Simultaneous Construction of 1,3-Nonadjacent Stereocenters Leading to Chiral Pyrroloindolines



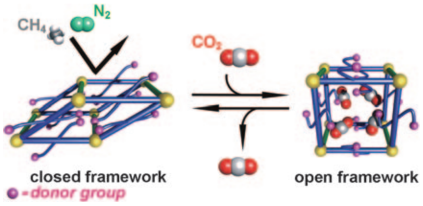
Chiral pyrroloindoles: A highly enantioselective catalytic conjugate addition of 3-substituted oxindoles with 2-chloroacrylonitrile has been developed with a readily accessible alkyl bifunctional tertiary amine thiourea catalyst. Excellent stereoselectivity of up to >30:1 diastereomeric ratio and 99 % enantiomeric excess was achieved. The obtained Michael products could be easily converted to chiral pyrroloindole structures, which are widely distributed in natural indole alkaloids (see scheme).

FULL PAPERS

Structural Changes

S. Henke, R. Schmid, J.-D. Grunwaldt,
*R. A. Fischer** .... 14296 – 14306

Flexibility and Sorption Selectivity in Rigid Metal–Organic Frameworks: The Impact of Ether-Functionalised Linkers

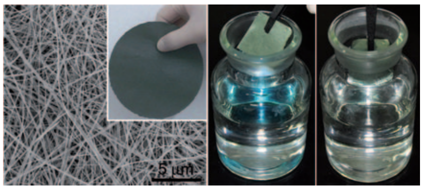


Just breathe! The implementation of linkers functionalised with flexible ether groups in known, but rigid metal–organic frameworks (MOFs), yields isoreticular frameworks that exhibit unexpected responsiveness towards small molecules and high sorption selectivity for CO_2 (see figure).

Nanostructures

R. Zou, Z. Zhang, L. Yu, Q. Tian,
J. Wu, Y. Sun, Z. Chen,
*J. Hu** .... 14307 – 14312

Oriented Free-Standing Ammonium Vanadium Oxide Nanobelt Membranes: Highly Selective Absorbent Materials

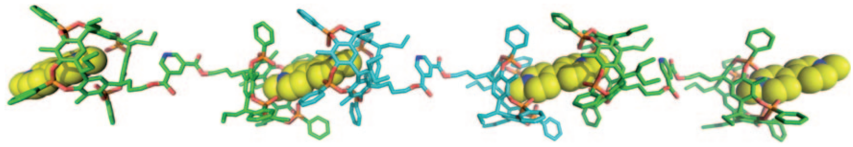


Tighten your belts! Highly selective, absorbent, free-standing, paper-like membranes made of ammonium vanadium oxide ($NH_4V_4O_{14}$) nanobelts have been engineered by taking advantage of the nanoscaled self-assembly of this architecture. These selective, absorbent membrane materials are ideal candidates for separation and removal of pollution in industrial and environmental applications.

Supramolecular Chemistry

F. Tancini, R. M. Yebeutchou,
L. Pirondini, R. De Zorzi, S. Geremia,
O. A. Scherman,
*E. Dalcanale** .... 14313 – 14321

Host–Guest-Driven Copolymerization of Tetraphosphonate Cavitands

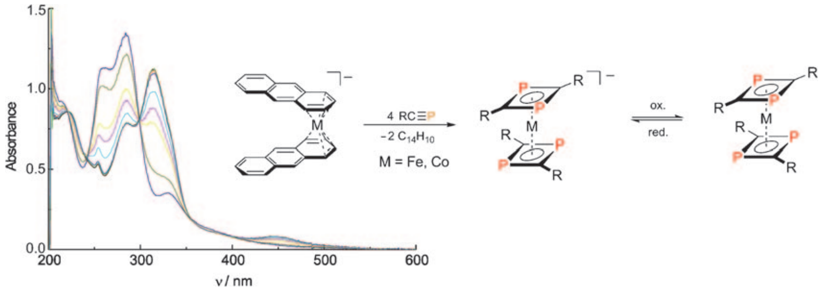


Supramolecular alternating copolymers: Cyclic and linear AABB supramolecular copolymers were prepared by connecting complementary monomeric units through host–guest interactions. Thermodynamic and topological control of this process was achieved by controlling the flexibility of the ditopic guest spacer, solvent and concentration. The structure of the alternating copolymer formed by self-assembly of a bis(tetraphosphonate cavitand) and methyl viologen is shown.

Sandwich Complexes

R. Wolf, A. W. Ehlers, M. M. Khusniyarov, F. Hartl, B. de Bruin, G. J. Long, F. Grandjean, F. M. Schappacher, R. Pöttgen, J. C. Slootweg, M. Lutz, A. L. Spek, K. Lammertsma** .... 14322 – 14334

Homoleptic Diphosphacyclobutadiene Complexes [M(η^4-P$_2$C$_2$R$_2$)$_2$]$^{x-}$ (M = Fe, Co; x = 0, 1)

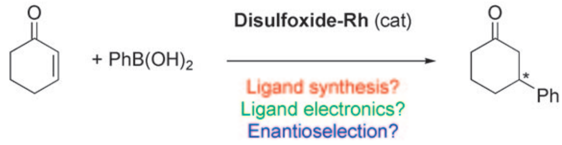


Fancy a sandwich? Homoleptic sandwich anions that contain diphosphacyclobutadiene ligands result from the reaction of anthracene metalates [Fe(η^4-C$_{14}$H$_{10}$)$_2$]$^-$ and [Co(η^4-C$_{14}$H$_{10}$)$_2$]$^-$ with phosphaalkynes. Electrochemical and preparative investigations of [M(η^4-P$_2$C$_2$tBu$_2$)$_2$]$^-$ (M = Fe, Co) revealed that these anions are readily oxidized to neutral derivatives [M(η^4-P$_2$C$_2$tBu$_2$)$_2$]. The electronic structures of the new sandwich complexes have been elucidated by using spectroscopic techniques and density functional theory calculations.

Asymmetric Catalysis

R. Mariz, A. Poater, M. Gatti, E. Drinkel, J. J. Bürgi, X. Luan, S. Blumentritt, A. Linden, L. Cavallo, R. Dorta** .... 14335 – 14347

C_2-Symmetric Chiral Disulfoxide Ligands in Rhodium-Catalyzed 1,4-Addition: From Ligand Synthesis to the Enantioselection Pathway

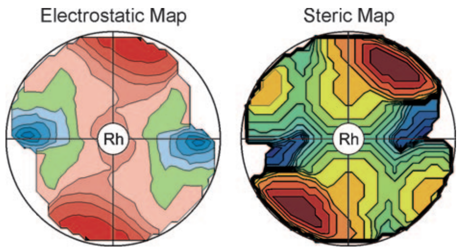


S=O selective! Chiral C_2-symmetric disulfoxide ligands that possess biaryl atropisomeric backbones are synthesized by the Andersen methodology (see picture). Their synthesis, optical purity, electronic properties, and catalytic behavior in the prototypical rhodium-catalyzed 1,4-addition of phenylboronic acid to 2-cyclohexen-1-one are presented.

Homogeneous Catalysis

A. Poater, F. Ragone, R. Mariz, R. Dorta, L. Cavallo** . . 14348 – 14353

Comparing the Enantioselective Power of Steric and Electrostatic Effects in Transition-Metal-Catalyzed Asymmetric Synthesis



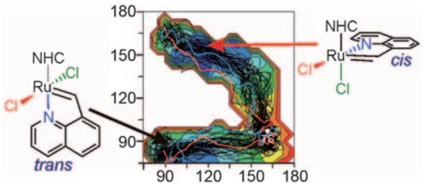
Steric versus electronic: Analysis of two prototype Rh catalysts show that high enantioselectivity in asymmetric synthesis can be achieved using either steric or electrostatic effects. Topographic maps of the interaction surface between the catalyst and the substrate are proposed as a tool to quantify these effects.

Reaction Mechanisms

*A. Poater, F. Ragone, A. Correa, A. Szadkowska, M. Barbasiewicz, K. Grela, L. Cavallo** .... 14354 – 14364

Mechanistic Insights into the *cis–trans* Isomerization of Ruthenium Complexes Relevant to Catalysis of Olefin Metathesis

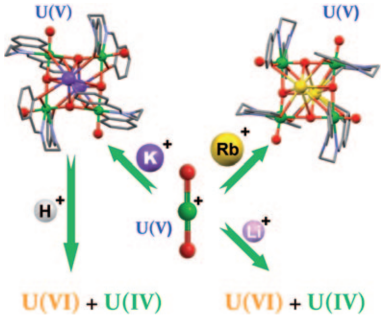
All change! The mechanism of *cis* to *trans* isomerizations in Ru complexes (see figure) relevant to olefin metathesis is investigated with a combined experimental and theoretical approach.



Cluster Compounds

*V. Mougel, P. Horeglad, G. Nocton, J. Pécaut, M. Mazzanti** 14365–14377

Cation–Cation Complexes of Pentavalent Uranyl: From Disproportionation Intermediates to Stable Clusters

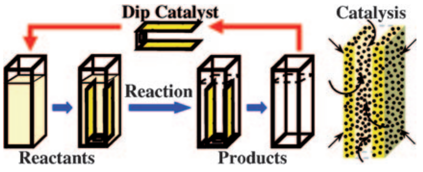


Size matters: Large alkali ions promote the assembly of Schiff base complexes of pentavalent uranyl into three new stable polynuclear cation–cation clusters, while small cations assemble unstable intermediates, resulting in disproportionation (see figure). Protons also promote disproportionation.

Nanoparticle Catalysis

*E. Hariprasad, T. P. Radhakrishnan** 14378–14384

A Highly Efficient and Extensively Reusable "Dip Catalyst" Based on a Silver-Nanoparticle-Embedded Polymer Thin Film

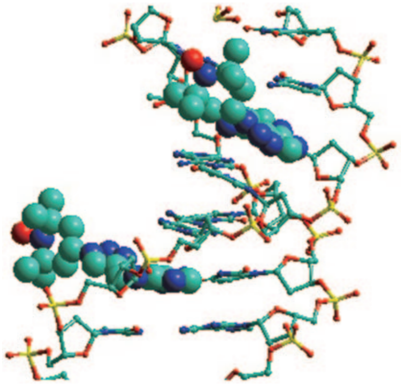


A reusable silver nanoparticle catalyst: The high efficiency and extensive reusability of a nanocomposite polymer thin-film catalyst in the reduction of 4-nitrophenol by sodium borohydride demonstrates effective harnessing of the benefits of homogeneous and heterogeneous catalysis (see figure).

Spin Labeling of DNA

P. Ding, D. Wunnicke, H.-J. Steinhoff, F. Seela** 14385–14396

Site-Directed Spin-Labeling of DNA by the Azide–Alkyne 'Click' Reaction: Nanometer Distance Measurements on 7-Deaza-2′-deoxyadenosine and 2′-Deoxyuridine Nitroxide Conjugates Spatially Separated or Linked to a 'dA-dT' Base Pair

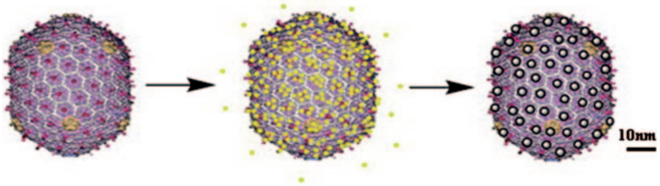


'Clicked' DNA spin labels: Spin labels (spheres in the figure) have been incorporated by click chemistry into DNA duplexes at spatially separated positions or into a 'dA-dT' base pair with high efficiency. Very accurate distances between spin labels, within a range of 1–2 nm, were measured by continuous wave and pulse EPR spectroscopy.

Superstructures

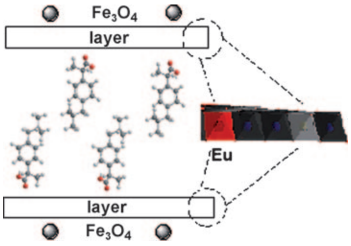
L. Hou, F. Gao, N. Li* . . 14397–14403

T4 Virus-Based Toolkit for the Direct Synthesis and 3D Organization of Metal Quantum Particles



An ideal bioscaffold: The highly regular and symmetrical protein surface of a T4 capsid allows the site-directed adsorption and subsequent reduction of metal ions. Therefore, the growth of metal particles on a viral capsid in situ enables them to exist at a quantum size with a high degree of monodispersity (see scheme).

Illuminate your chemistry! Fe_3O_4 nanoparticles are coated on the ibuprofen intercalated Eu-doped Mg–Al layered double hydroxide (see figure). This composite exhibits superparamagnetic and luminescent properties as well as sustained release in simulated body fluid.



Drug Delivery

J. Wang, J. Zhou, Z. Li, Y. Song, Q. Liu, Z. Jiang, M. Zhang* .... 14404 – 14411

Magnetic, Luminescent Eu-Doped Mg–Al Layered Double Hydroxide and Its Intercalation for Ibuprofen

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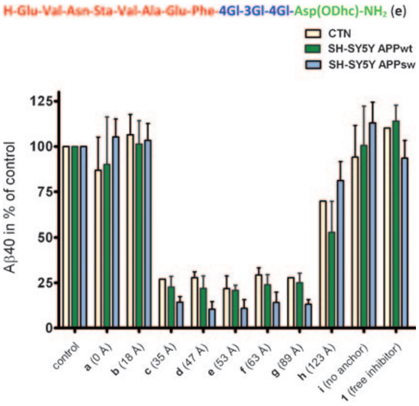
Anchoring of β-secretase inhibitors to the lipid raft domains of the cell membrane by using a spacer-linked dihydrocholesterol leads to tripartite structures with substantially improved efficacy. The concept is applicable to different pharmacophores (**a**–**i**; **e** shown in picture) and the best spacer lengths are in the range of 35–89 Å. Moreover, significant differences were demonstrated in the Aβ-peptide secretion from wild-type(wt) versus Swedish(sw)-mutant APP. The present results provide a basis for the development of potential new drugs for the treatment of Alzheimer's disease.

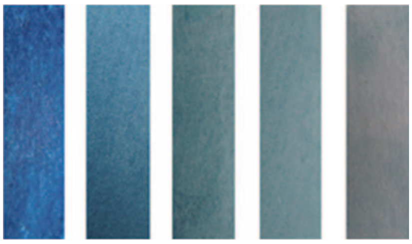


β-Secretase Inhibition

H. Schieb, S. Weidlich, G. Schlechtingen, P. Linning, G. Jennings, M. Gruner, J. Wiltfang, H.-W. Klafki, H.-J. Knölker** .... 14412 – 14423

Structural Design, Solid-Phase Synthesis and Activity of Membrane-Anchored β-Secretase Inhibitors on Aβ Generation from Wild-Type and Swedish-Mutant APP

Mercury stops the blues: Near-infrared (NIR) ratiometric thiourea chemodosimeters exhibit several advantages, such as convenient synthesis, long wavelengths falling in the NIR region (650–900 nm), and clear color changes for use as indicator paper (see image). Their distinct response with Hg^{2+} ions is dependent on the electron-donating effect of the thiourea substituents.



Chemosensors

Z. Q. Guo, W. H. Zhu, M. M. Zhu, X. M. Wu, H. Tian** ...... 14424 – 14432

Near-Infrared Cell-Permeable Hg^{2+}-Selective Ratiometric Fluorescent Chemodosimeters and Fast Indicator Paper for $MeHg^+$ Based on Tricarbocyanines

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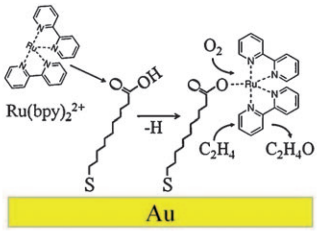
Surface immobilization: Highly active undercoordinated metal complexes may be prepared in the gas-phase through collision-induced dissociation and immobilized on surfaces through ion-reactive landing (see scheme). In situ TOF-SIMS analysis shows that the immobilized complexes exhibit behavior consistent with catalytic activity.



Organometallic Catalysts

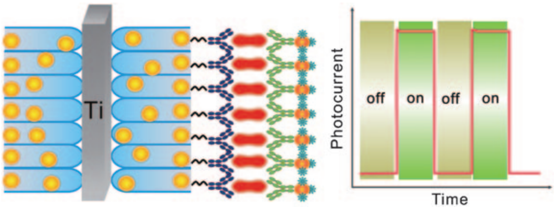
*G. E. Johnson, J. Laskin** .... 14433 – 14438

Preparation of Surface Organometallic Catalysts by Gas-Phase Ligand Stripping and Reactive Landing of Mass-Selected Ions

Sensors

*Y. An, L. Tang, X. Jiang, H. Chen, M. Yang, L. Jin, S. Zhang, C. Wang, W. Zhang** .... 14439 – 14446

A Photoelectrochemical Immunosensor Based on Au-Doped TiO_2 Nanotube Arrays for the Detection of α-Synuclein

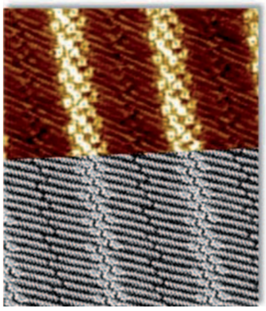


The straight dope: Highly ordered Au-doped TiO_2 nanotubes were used to construct arrays that effectively immobilized primary antibodies with high stability and bioactivity to bind α-synuclein (see figure). Moreover, the Au-doped TiO_2 nanotubes facilitated the improvement of the photocurrent response.

Noncovalent Interactions

*K. S. Mali, K. Lava, K. Binnemans, S. De Feyter** .... 14447 – 14458

Hydrogen Bonding Versus van der Waals Interactions: Competitive Influence of Noncovalent Interactions on 2D Self-Assembly at the Liquid–Solid Interface

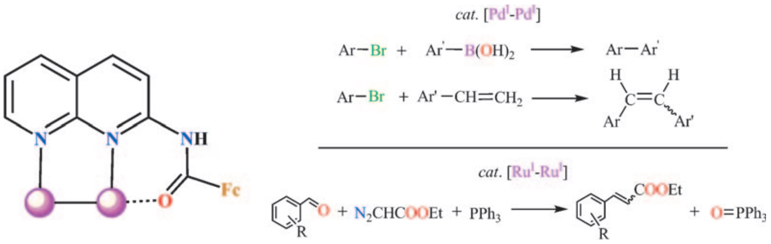


Discontinuous but ordered: Noncovalent interactions play an exceedingly decisive role in the process of self-assembly. To gain better insight into the role of noncovalent interactions, the competitive influence of hydrogen-bonding and van der Waals interactions was explored in the monolayers formed by simple 4-alkoxybenzoic acids at the liquid–solid interface (see image).

Catalysis

*R. K. Das, B. Saha, S. M. W. Rahaman, J. K. Bera** .... 14459 – 14468

Bimetallic Catalysis Involving Dipalladium(I) and Diruthenium(I) Complexes

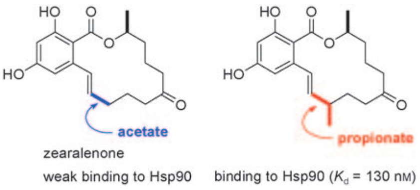


Good couple: Metal–metal singly bonded [Pd^I–Pd^I] and [Ru^I–Ru^I] complexes exhibit bimetallic synergy in the catalytic C−C bond-coupling and aldehyde-olefination reactions, respectively (see figure).

Synthetic Methods

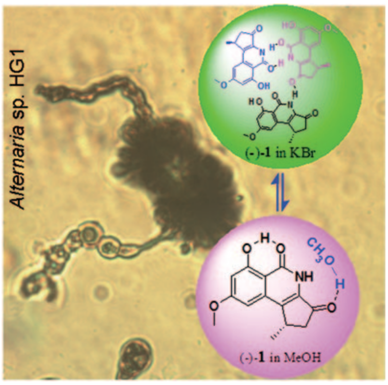
*C. Rink, F. Sasse, A. Zubrienė, D. Matulis, M. E. Maier** 14469 – 14478

Probing the Influence of an Allylic Methyl Group in Zearalenone Analogues on Binding to Hsp90



Gimme five: The preparation and testing of zearalenone analogues in which acetate number five was replaced by a propionate is reported. The shown stereoisomer was slightly more active in binding to Hsp90; studies show that the position and stereochemistry of a methyl-bearing center can cause a significant difference in binding (see scheme).

Double the framework: The absolute configuration, chirality-activity relevance and self-aggregation of (−)-alternarlactam [(−)-**1**], a cytotoxin from *Alternaria* sp. HG1 culture with double antitumor pharmacophores in a new framework, were assigned by a combination of synthetic, spectroscopic and computational approaches.

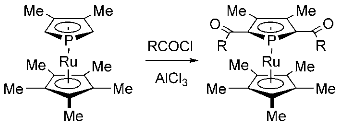


Antitumor Agents

*A. H. Zhang, N. Jiang, W. Gu, J. Ma, Y. R. Wang, Y. C. Song, R. X. Tan** .... 14479 – 14485

Characterization, Synthesis and Self-Aggregation of (−)-Alternarlactam: A New Fungal Cytotoxin with Cyclopentenone and Isoquinolinone Scaffolds

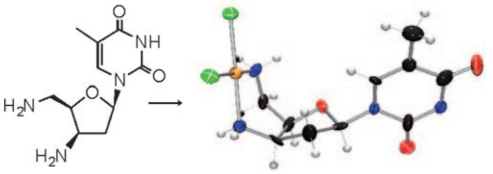
Pathfinders: Double electrophilic acylation of the phospholyl ring occurs upon treatment of a phospharuthenocene with the classical Friedel–Crafts acylating agent $MeCOCl/AlCl_3$ (see scheme). Theoretical calculations suggest that two pathways, mediated by either the ruthenium centre or the phosphorus atom, are available to the incoming acylium ion.



Metallocenes

D. Carmichael, P. Le Floch, X. F. Le Goff, O. Piechaczyk,* N. Seeboth* .... 14486 – 14497

Double Friedel–Crafts Acylation Reactions on the Same Ring of a Metallocene: Synthesis of a 2,5-Diacetylphospharuthenocene

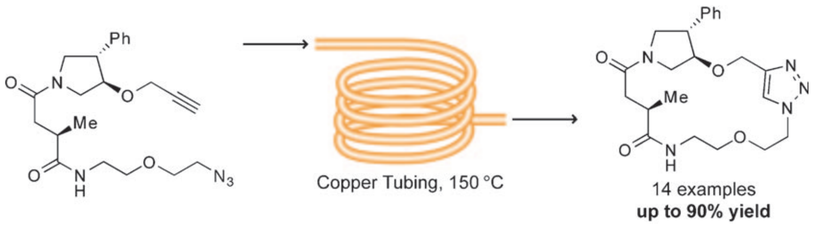


Prove your metal: Cisplatin analogues with platinum(II) and palladium(II) complexes based on 3′,5′-diamino thymidines were synthesized (see figure for an example) and one was found to induce apoptosis mediated by caspase-9 and -3 processing. Thymiplatin was proven to be active on cisplatin, vincristin and daunorubicin resistant leukemia cells, and was synergistic with cytarabin, vincristin, daunorubicin, and doxorubicin in lymphoma cells.

Antitumor Agents

L. A. Onambele, D. Koth, J. A. Czaplewska, U. S. Schubert, H. Görls, S. Yano, M. Obata, M. Gottschaldt, A. Prokop** .... 14498 – 14505

Mitochondrial Mode of Action of a Thymidine-Based Cisplatin Analogue Breaks Resistance in Cancer Cells



Making macrocycles on the move! A series of 12- to 22-membered macrocycles with druglike functionality and properties have been generated by using the copper-catalyzed azide–acetylene cycloaddition reaction, conducted in flow in high-temperature copper tubing. The triazole-containing macrocycles have been generated in up to 90 % yield in a 5 min reaction, without resorting to high-dilution conditions.

Flow Chemistry

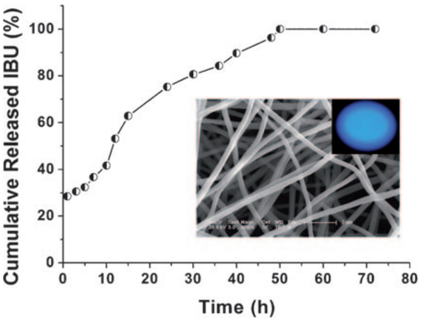
*A. R. Bogdan, K. James** 14506 – 14512

Efficient Access to New Chemical Space Through Flow—Construction of Druglike Macrocycles Through Copper-Surface-Catalyzed Azide–Alkyne Cycloaddition Reactions

Porous Silica Materials

Z. Hou, C. Zhang, C. Li, Z. Xu, Z. Cheng, G. Li, W. Wang, C. Peng, J. Lin** .... 14513 – 14519

Luminescent Porous Silica Fibers as Drug Carriers

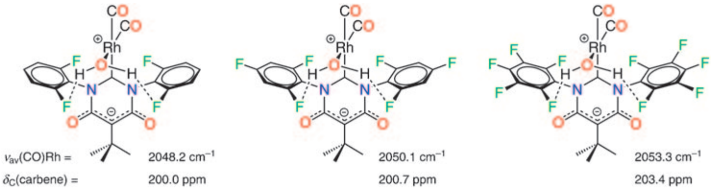


Multifunctional silica fibers, which possess a porous structure and display blue luminescence, can serve as a drug delivery host carrier, using ibuprofen (IBU) as a model drug, allowing the investigation of storage/release properties. The emission intensities of the silica fibers in the drug carrier system vary with the amount of IBU released, thus allowing easy monitoring.

Donor–Acceptor Systems

*M. G. Hobbs, C. J. Knapp, P. T. Welsh, J. Borau-Garcia, T. Ziegler, R. Roesler** .... 14520 – 14533

Anionic N-Heterocyclic Carbenes with *N,N′*-Bis(fluoroaryl) and *N,N′*-Bis(perfluoroaryl) Substituents

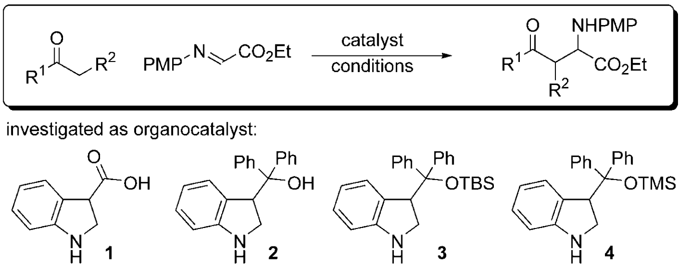


^{19}F in carbenes: A series of anionic N-heterocyclic carbenes with six-membered ligand frameworks and varying degrees of fluorination have been incorporated into rhodium complexes (see scheme). Structural, spectroscopic and computational studies of these complexes revealed that the degree of fluorination can be used to efficiently tune their electronic properties over a broad range.

Organocatalysis

J. Pietruszka, R. C. Simon* .... 14534 – 14544

Indoline-3-Carboxylic Acid Derived Organocatalysts for the *anti*-Mannich Reaction

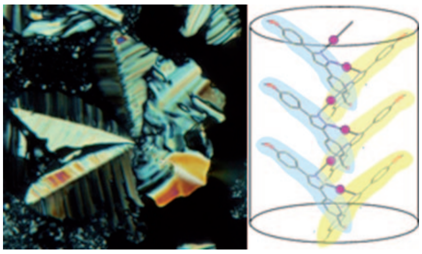


Enzymatic kinetic resolution ($E \gg 100$) was applied in the synthesis of enantiopure indoline-3-carboxylic acid (**1**); the corresponding derivatives **2**–**4** were readily obtained after standard transformations. Compounds **1**–**4** were applied as organocatalysts in Mannich-type reactions (see scheme) to afford the products with high *anti* selectivity at low temperatures, in moderate to good yields

Metallomesogens

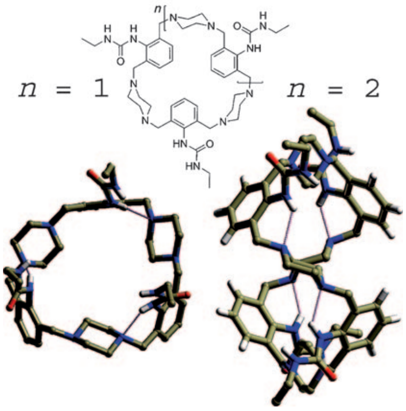
J. Barberá, I. Lantero, S. Moyano, J. L. Serrano, A. Elduque, R. Giménez** .... 14545 – 14553

Silver Pyrazolates as Coordination-Polymer Luminescent Metallomesogens



Silver beats gold in promoting stable columnar liquid-crystalline self-organization. Whereas gold complexes of 3,5-diarylpyrazolate ligands are composed of discrete cyclic trinuclear molecules, the analogous silver complexes are 1D polymers that self-assemble in helical columns (see picture for a micrograph of a mesophase and a schematic of one helix).

A fitting location: The rigid 27-membered triprotonated triurea cyclophane ($n=1$) binds an unprecedented anion pair, $H_2PO_4^- \cdots HPO_4^{2-}$, in the solid state. The tetra-*N*-ethylurea cyclophane ($n=2$) is less rigid and demonstrates an induced-fit recognition of diisopropyl ether in the solid state. The guest is encapsulated within the lipophilic interior of a quasicapsule formed through intramolecular hydrogen-bond-driven folding of the 36-membered cyclophane skeleton (see figure).



Cyclophane Receptors

* Author to whom correspondence should be addressed

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

VIP Full Papers labeled with this symbol have been judged by two referees as being "very important papers".

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

SERVICE

The editorial staff and the publishers thank all readers, authors, referees, and advertisers for their interest and support over the past year and wish them all a
Happy New Year.

CORRIGENDA

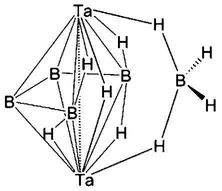
S. K. Bose, K. Geetharani,
V. Ramkumar, S. M. Mobin,
*S. Ghosh** 13483–13490

Fine Tuning of Metallaborane Geometries: Chemistry of Metallaboranes of Early Transition Metals Derived from Metal Halides and Monoborane Reagents

Chem. Eur. J., **2009**, *15*

DOI: 10.1002/chem.200901819

In the Full Paper by S. Ghosh et al., mistakes have been found in the interpretation of proton resonances for compound **4**. Previously, it was deduced that the resonance at $\delta = -10.9$ ppm corresponded to four protons, which was incorrect. The corrections are as follows: On page 13487, in paragraph 2, as the temperature is lowered the resonance at $\delta = -10.9$ ppm collapses into four resonances. The two resonances appearing at $\delta = -10.7$ and -11.4 ppm should be assigned to two Ta–H–B protons, the resonance at $\delta = 4.15$ ppm is assigned to two B5–H$_t$ (t = terminal) protons, and the signal at $\delta = -15.9$ ppm is assigned to Ta–H$_t$. These results illustrate that Ta1 and Ta2 become inequivalent at the lowest experimental temperatures due to the tantalum hydride. Therefore, the correct chemical formula of compound **4** in the abstract; on page 13486 and in the legend of Figure 5; on page 13488 and in entry 6 of Table 2; and in the Table of Contents should be $[(Cp^*Ta)_2B_4H_9(\mu\text{-}BH_4)]$. In the abstract, on page 13483, and on page 13486, $[(Cp^*Ta)_2B_4H_8]$ should be replaced with $[(Cp^*Ta)_2B_4H_9]$. In the Experimental Section on page 13489, the following corrections should be made to the synthesis of **4**: ^{1}H NMR: $\delta = -10.91$ (br, 5H); elemental analysis calcd (%) for $^{12}C_{20}{}^{1}H_{43}{}^{11}B_5{}^{180}Ta_2$: C 34.34, H 6.20. Additionally, the schematic diagram of **4** in Figure 7 on page 13488 is shown correctly here. The authors sincerely apologize for these oversights and thank Prof. R. B. King for bringing this error to our attention.



4

K. Geetharani, S. K. Bose, B. Varghese,
*S. Ghosh** 11357–11366

From Metallaborane to Borylene Complexes: Syntheses and Structures of Triply Bridged Ruthenium and Tantalum Borylene Complexes

Chem. Eur. J., **2010**, *16*

DOI: 10.1002/chem.201001208

In the Full Paper by S. Ghosh et al., there is a mistake in formula of the tantalaborane compound. In the abstract on page 11357; on page 11362 in two places; on page 11364; and in the Table of Contents, $[(Cp^*Ta)_2B_4H_8(\mu\text{-}BH_4)]$ should be replaced with $[(Cp^*Ta)_2B_4H_9(\mu\text{-}BH_4)]$. The authors apologize for this oversight.

RETRACTIONS

F. Xu , C. Dong , C. Xie,
*J. Ren** 1010–1016

Ultrahighly Sensitive Homogeneous Detection of DNA and MicroRNA Using Single Silver Nanoparticles Counting

Chem. Eur. J., **2010**, *16*

DOI: 10.1002/chem.200902555

The article “Ultrahighly Sensitive Homogeneous Detection of DNA and MicroRNA Using Single Silver Nanoparticles Counting” by Fagong Xu, Chaoqing Dong, Chao Xie, and Jicun Ren, published online on November 24, 2009 in Wiley Online Library (http://www.onlinelibrary.wiley.com/10.1002/chem.2009002555) and in print (*Chem. Eur. J.* **2010**, *16*, 1010–1016), has been retracted (October 22, 2010) by agreement between the authors, the journal Editor-in-Chief Neville Compton, and Wiley-VCH. The retraction has been agreed due to wrong results on DNA and microRNA hybridization detection by using an incorrect data processing method. The authors regret any confusion that may have been created by the paper’s publication.

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*C.-L. Pan, X. Li, H. Zhang**

Lanthanide–Alkali Metal Sandwich Complexes: Synthesis, Structure, and Solvent-Mediated Redox Transformations, and One-Dimensional Frameworks Assembled through Cation–Arene π Interactions

Chem. Eur. J., **2010**, *16*

DOI: 10.1002/chem.200901991

The article “Lanthanide–Alkali Metal Sandwich Complexes: Synthesis, Structure, and Solvent-Mediated Redox Transformations, and One-Dimensional Frameworks Assembled through Cation–Arene π Interactions” by Cheng-Ling Pan, Xingwei Li, and Hongjie Zhang, published online on November 24, 2009 in Wiley Online Library (http://www.onlinelibrary.wiley.com/10.1002/chem.200901991) has been retracted (October 9, 2010) by the journal editor-in-chief, Dr. Neville Compton, and Wiley-VCH, in accordance with the “EUCheMS Ethical Guidelines for Publication in Journals and Reviews” adhered to by the journal (EUCheMS Ethical Guidelines for Publication in Journals and Reviews, 2006), due to lack of agreement among the authors regarding its publication.