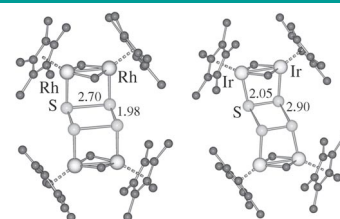


Coordination Chemistry

A. Poduska, R. Hoffmann,* A. Ienco, C. Mealli

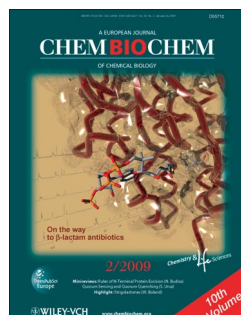
“Half-Bonds” in an Unusual Coordinated S_4^{2-} Rectangle

Don't be square! A rare S_4^{2-} rectangle bridging two $M_2Cp_2(\mu_2-CH_2)_2$ ($M = Rh, Ir$) fragments is found to contain two “half-bonds” with S–S distances of 2.70 or 2.90 Å. Computational studies explore the connection between these “half-bonds” and a Jahn–Teller distortion, as well as possible intermediates that form $M_4S_4^{2+}$ clusters having the S_4^{2-} rectangle rotated by 90° .



Chem. Asian J.

DOI: 10.1002/asia.200800333

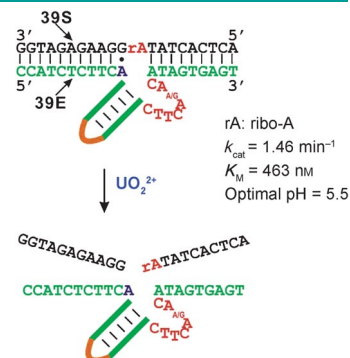


DNzyme

A. K. Brown, J. Liu, Y. He, Y. Lu*

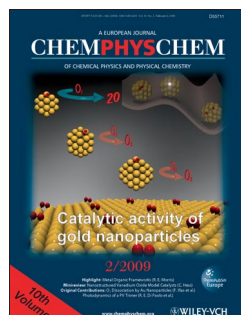
Biochemical Characterization of a Uranyl Ion-Specific DNzyme

Uranyl ion-specific DNzyme: A DNzyme (lower strand) cleaves the substrate (upper strand) in the presence of the uranyl ion. The enzyme folds into a bulged three-way-junction structure with catalytically important nucleotides residing in the bulge. A highly conserved G·A mismatch is also crucial for the enzyme's activity.



ChemBioChem

DOI: 10.1002/cbic.200800632

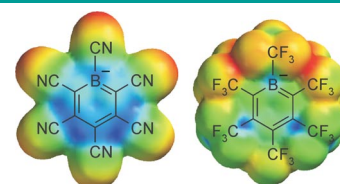


Superacids

A. Kütt, I. Koppel, I. A. Koppel, I. Leito*

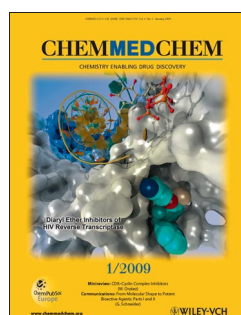
Boratabenzene Anions $C_5B(CN)_6^-$ and $C_5B(CF_3)_6^-$ and the Superacidic Properties of their Conjugate Acids

Designing superacids: A computational study of protonated boratabenzenes and the gas-phase acidity of their conjugate acids is presented. Conjugate acids of boratabenzenes substituted with CN or CF_3 groups (see figure) are highly acidic species; the protonated hexacyanoboratabenzene and hexakis(trifluoromethyl)-boratabenzene have computational gas-phase acidities of 250.5 and 276.8 kcal mol $^{-1}$, respectively.



ChemPhysChem

DOI: 10.1002/cphc.200800305

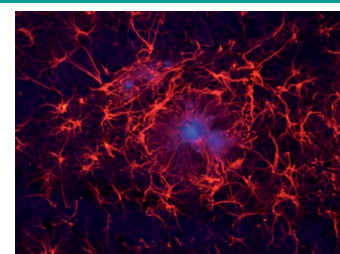


Alzheimer's disease

T. van Groen,* I. Kadish, K. Wiesehan, S. A. Funke, D. Willbold

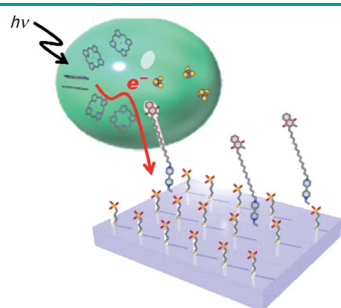
In vitro and in vivo Staining Characteristics of Small, Fluorescent, A β 42-Binding D-Enantiomeric Peptides in Transgenic AD Mouse Models

Plaque visualisation: We identified three different D-enantiomeric peptides that bind to Alzheimer's amyloid β ($A\beta$ 1-42). As there is currently no definitive pre-mortem diagnosis for Alzheimer's disease, we investigated the peptides' suitability as molecular probes for in vivo imaging in transgenic mouse models.



ChemMedChem

DOI: 10.1002/cmdc.200800289



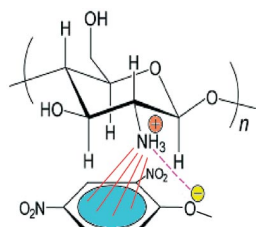
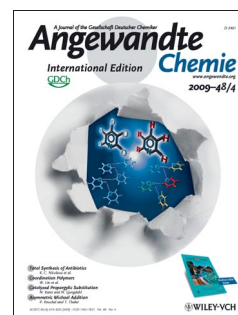
Angew. Chem. Int. Ed.
DOI: 10.1002/anie.200805748

Photoelectron Transfer

N. Terasaki,* N. Yamamoto, T. Hiraga,* Y. Yamanoi, T. Yonezawa, H. Nishihara,* T. Ohmori, M. Sakai, M. Fujii,* A. Tohri, M. Iwai, Y. Inoue,* S. Yoneyama, M. Minakata,* I. Enami

Plugging a Molecular Wire into Photosystem I: Reconstitution of the Photoelectric Conversion System on a Gold Electrode

Plug and play: Photoinduced electron transfer occurs from photoexcited P700 in photosystem I (PSI) to a gold surface (see picture). A novel molecular connector system is used, in which an artificial molecular wire, which is assembled on the gold surface, was plugged into PSI by reconstitution. Analysis of the photoelectron transfer kinetics proved both the output of electrons from PSI and the effectiveness of the molecular wire.



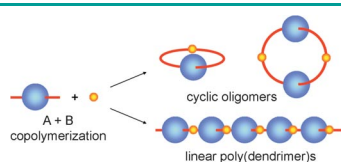
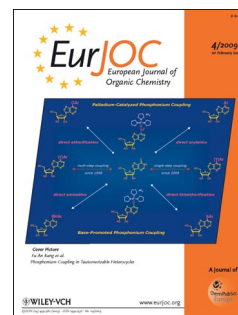
Eur. J. Org. Chem.
DOI: 10.1002/ejoc.200801103

Chemomechanical Motions

K. Kato, H.-J. Schneider*

Supramolecular Interactions in Chitosan Gels

Selective size changes of chitosan gels are triggered by complexation with anionic effector molecules, mostly due to water uptake or release. Significant enantioselectivity is observed with aromatic tartaric acid derivatives. Cooperativity between different effectors leads to logic AND gate functions. Smaller particles enhance the speed and sensitivity of the chemomechanical effect significantly.



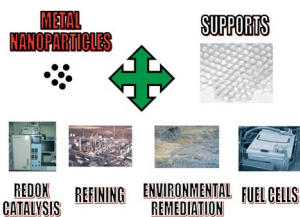
Chem. Eur. J.
DOI: 10.1002/chem.200802306

Dendrimers

S.-Y. Cheung, H.-F. Chow,* T. Ngai, X. Wei

Synthesis of Organometallic Poly(dendrimer)s by Macromonomer Polymerization: Effect of Dendrimer Size and Structural Rigidity on the Polymerization Efficiency

Cyclization versus propagation: The copolymerization behavior of a dendritic macromonomer with a metal-containing linker is controlled by the dendrimer size and its structural rigidity. Structurally more flexible dendritic monomers tend to form more cyclic oligomers than structurally rigid monomers.



ChemSusChem
DOI: 10.1002/cssc.200800227

Supported Catalysts

J. M. Campelo, D. Luna, R. Luque,* J. M. Marinas, A. A. Romero

Sustainable Preparation of Supported Metal Nanoparticles and Their Applications in Catalysis

Supporting sustainable chemistry: Supported metal nanoparticles are widely employed in catalysis. Recent advances in controlling the shape and size of nanoparticles have opened the possibility to optimise the particle geometry for enhanced catalytic activity, providing the optimum size and surface properties for specific applications.

