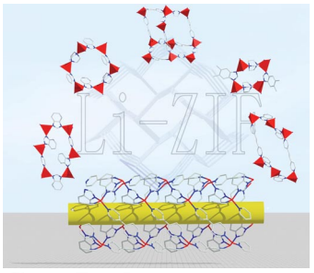
On these pages, we feature a selection of the excellent work that has recently been published in our sister journals. If you are reading these pages on a computer, click on any of the items to read the full article. Otherwise please see the DOIs for easy online access through Wiley Online Library.

Metal–Organic Frameworks

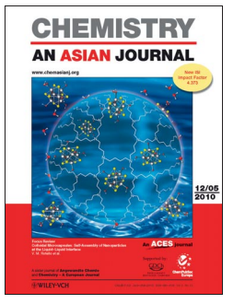
S.-T. Zheng, Y. Li, T. Wu, R. A. Nieto, P. Feng,* X. Bu*

Porous Lithium Imidazolate Frameworks Constructed with Charge-Complementary Ligands

Lightest tetrahedral node: While silica-type tetrahedral frameworks can be readily emulated with divalent metal compounds (e.g., zinc imidazolate frameworks), it is more difficult with Li^+. Here, a new series of Li-based ZIFs has been synthesized using a strategy based on charge-complementary ligands designed to prevent excessively negative charge surrounding Li sites. Among them, some exhibit a high CO_2 adsorption capacity (e.g., 49 $cm^3 g^{-1}$ at 273 K and 1 atm).



Chem. Eur. J.
DOI: **10.1002/chem.201002316**

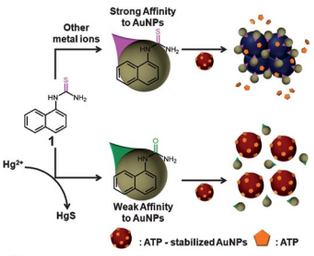


Colorimetric Sensors

S. Kim, N. H. Lee, S. H. Seo, M. S. Eom, S. Ahn, M. S. Han*

Selective Colorimetric Sensor for Hg^{2+} Ions Using a Mixture of Thiourea Derivatives and Gold Nanoparticles Stabilized with Adenosine Triphosphate

The mercury prize: A highly selective and sensitive unmodified gold-nanoparticle (AuNP)-based colorimetric sensor for Hg^{2+} ions in aqueous media uses the Hg^{2+}-promoted desulfurization reaction of a thiourea derivative and the reactivity of a thiourea derivative to gold nanoparticles. This sensor also allows a quantitative assay of the analyte in a neutral aqueous solution, down to a concentration of 10^{-7} M.



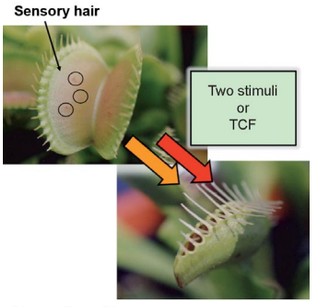
Chem. Asian J.
DOI: **10.1002/asia.201000483**

Polysaccharides

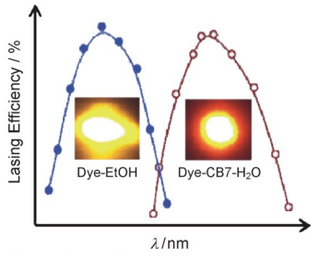
M. Ueda,* T. Tokunaga, M. Okada, Y. Nakamura, N. Takada, R. Suzuki, K. Kondo

Trap-Closing Chemical Factors of the Venus Flytrap (*Dionaea muscipulla* Ellis)

"Memory" has been observed in the leaf closure of the insectivorous Venus flytrap (*Dionaea muscipula*). The rapid closure of the traps requires two stimuli within 30 s on the sensory hairs of their internal surface. We found that *Dionaea* has two endogenous chemical factors that induce the closure of traps without stimuli.



ChemBioChem
DOI: **10.1002/cbic.201000392**



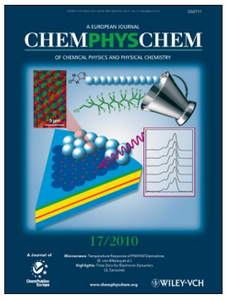
ChemPhysChem
DOI: **10.1002/cphc.201000532**

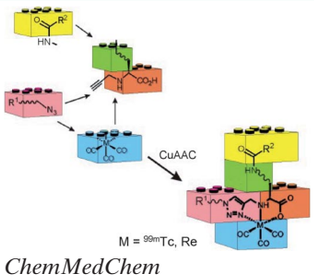
Fluorescent dyes

J. Mohanty,* K. Jagtap, A. K. Ray,* W. M. Nau,* H. Pal

Molecular Encapsulation of Fluorescent Dyes Affords Efficient Narrow-band Dye Laser Operation in Water

Supramolecular dye lasers: Two practically useful narrow-band dye laser systems in aqueous solution have been demonstrated, which are based on the addition of small amounts of the macrocycle cucurbit[7]uril as stabilizing agent (see picture). In comparison to conventional dye–EtOH systems, the novel supramolecular dye systems are not only similarly efficient with complementary tuning ranges, but possess superior thermo-optic characteristics and unmatched beam profiles.





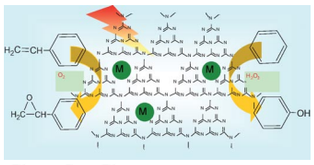
ChemMedChem
DOI: **10.1002/cmdc.201000342**

Imaging Agents

T. L. Mindt,* H. Struthers, B. Spingler, L. Brans, D. Tourwé, E. García-Garayoa, R. Schibli*

Molecular Assembly of Multifunctional ^{99m}Tc Radiopharmaceuticals Using "Clickable" Amino Acid Derivatives

Extended "click-to-chelate". The use of side-chain-functionalized N(α)-propargyl amino acid precursors enables the concurrent one-pot "click" assembly of multifunctional conjugates that contain a $^{99m}Tc(CO)_3$ chelate for SPECT and two different biological and/or chemical entities.



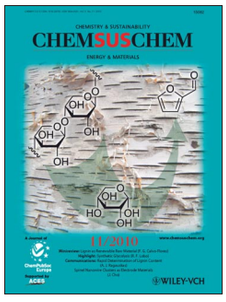
ChemSusChem
DOI: **10.1002/cssc.201000149**

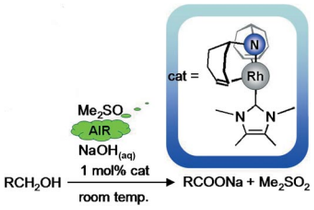
Photocatalysis

Z. Ding, X. Chen, M. Antonietti, X. Wang*

Synthesis of Transition Metal-Modified Carbon Nitride Polymers for Selective Hydrocarbon Oxidation

Modification of graphitic carbon nitride (g-C_3N_4) photocatalyst with transition metals is achieved with a simple soft-chemical approach using dicyandiamide and metal chloride as precursors. Fe- and Cu-modified carbon nitrides are shown to be active for the hydroxylation of benzene to phenol with H_2O_2, whereas Co- and Fe-modified samples are shown to be active for the epoxidation of styrene with O_2.





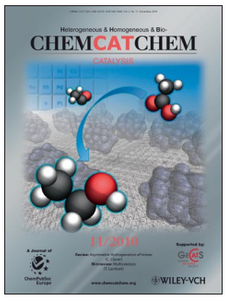
ChemCatChem
DOI: **10.1002/cctc.201000100**

Homogeneous Catalysis

S. Annen, T. Zweifel, F. Ricatto, H. Grützmacher*

Catalytic Aerobic Dehydrogenative Coupling of Primary Alcohols and Water to Acids Promoted by a Rhodium(I) Amido N-Heterocyclic Carbene Complex

As good acid gets: With a Rh^I amido olefin complex with an N-heterocyclic carbene ligand as catalyst, the chemoselective aerobic oxidation of primary alcohols to the corresponding carboxylic acids proceeds in aqueous alkaline medium with good to moderate yields under mild conditions. Dimethylsulfoxide serves as stoichiometric co-oxidant.

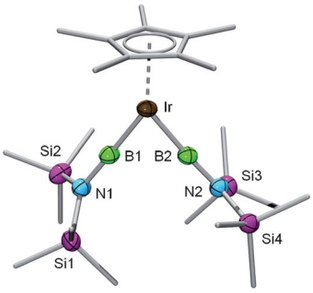


Bis(borylene) Complexes

S. Bertsch, H. Braunschweig,* B. Christ, M. Forster, K. Schwab, K. Radacki

Towards Homoleptic Borylene Complexes: Incorporation of Two Borylene Ligands into a Mononuclear Iridium Species

Place two B: The isolation of the first terminal, mononuclear bis-(borylene) complex (see structure) represents a significant step towards the synthesis of homoleptic borylene complexes, and also provides deeper insight into the bonding characteristics of borylene complexes in general. A preliminary elucidation of the question of how two terminal BR ligands affect each other when bound to the same metal center is presented.



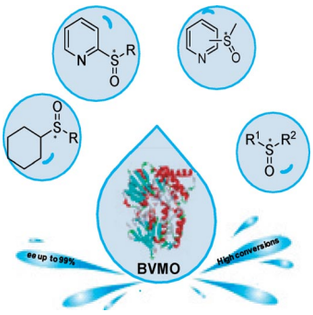
Angew. Chem. Int. Ed.
DOI: **10.1002/anie.201004103**

Enzymatic Catalysis

A. Rioz-Martínez, G. de Gonzalo, D. E. Torres Pazmiño, M. W. Fraaije, V. Gotor*

Enzymatic Synthesis of Novel Chiral Sulfoxides Employing Baeyer–Villiger Monooxygenases

A large variety of enantiopure sulfoxides have been obtained by using Baeyer–Villiger monooxygenase catalyzed oxidation in aqueous media under mild reaction conditions. Some reaction parameters were studied to improve the catalytic efficiency of these enzymes.



Eur. J. Org. Chem.
DOI: **10.1002/ejoc.201000890**

