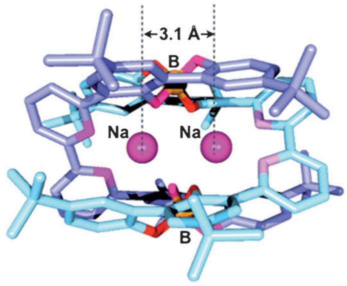
On these pages, we feature a selection of the excellent work that has recently been published in our sister journals. If you are reading these pages on a computer, click on any of the items to read the full article. Otherwise please see the DOIs for easy online access through Wiley Online Library.

Helical Structures

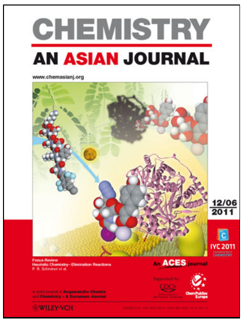
Y. Furusho, K. Miwa, R. Asai, E. Yashima*

Synthesis and Helical Structure of Spiroborate-Based Double-Stranded Helicate with Oligophenol Strands Bearing Bipyridine Units

Double wrapping: A new spiroborate-based double-stranded helicate was prepared from tetraphenol strands with a bipyridine unit in the middle and $NaBH_4$. The X-ray single crystallographic analysis revealed that the helicate adopts a double helical structure, in which the two Na cations with a very short distance of 3.1 Å (see figure), were held in the center of the complex.



Chem. Eur. J.
DOI: **10.1002/chem.201102511**

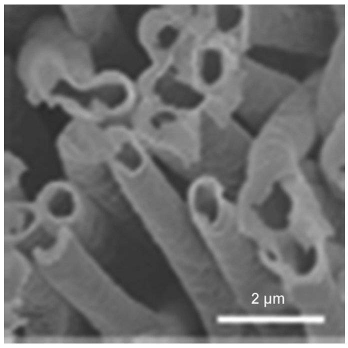


Nanostructures

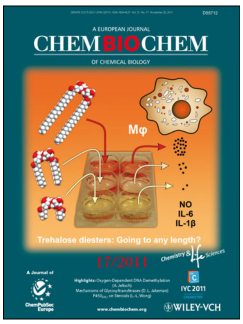
W. Cui, Y. Cui, P. Zhu, J. Zhao, Y. Su, Y. Yang, J. Li*

An Anticoagulant Activity System Using Nanoengineered Autofluorescent Heparin Nanotubes

The bleeding edge: Periodate-oxidized heparin (O-HEP) and chitosan (CHI) were assembled alternatively into the pore of polycarbonate membranes to form nanotube structures through a layer-by-layer method (see graphic). O-HEP/CHI nanotubes display an autofluorescent property without the addition of any fluorescent dye. They also have a lower anticoagulant activity.



Chem. Asian J.
DOI: **10.1002/asia.201100425**

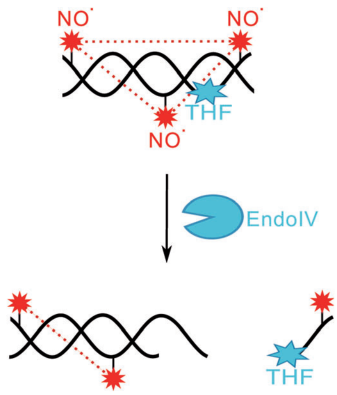


DNA Damage

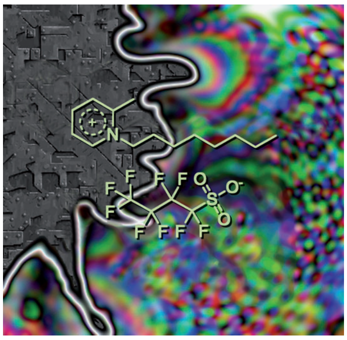
M. Flaender, G. Sicoli, S. Aci-Seche, T. Reignier, V. Maurel, C. Saint-Pierre, Y. Boulard, S. Gambarelli,* D. Gasparutto*

A Triple Spin-Labeling Strategy Coupled with DEER Analysis to Detect DNA Modifications and Enzymatic Repair

In a spin: Spin-labeled oligonucleotides produced by click chemistry can be studied by EPR, by using a DEER sequence. This was used to test a complex triple-labeling strategy with damaged DNA. Extensive and accurate analysis of DNA structure and enzymatic repair processes were performed after digestion by EndoIV (see scheme). Modified DNA structures and DNA–protein interactions can now be readily studied.



ChemBioChem
DOI: **10.1002/cbic.201100550**

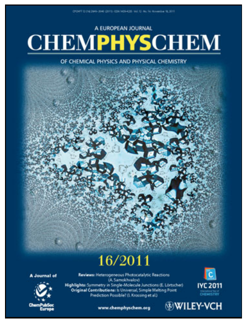


Organic Salts

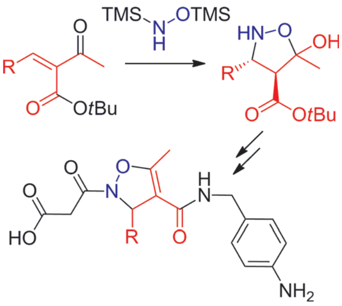
U. P. Preiss, W. Beichel, A. M. T. Erle, Y. U. Paulechka, I. Krossing*

Is Universal, Simple Melting Point Prediction Possible?

Computer-aided synthesis? During the development of an automated protocol for the thermodynamic prediction of the melting point of a wide range of organic salts, possible pitfalls on the experimental and computational side were elucidated. Being aware of these limits, the described protocol can be used to predict melting points between −25 and +300 °C with an average/relative error of 33.5 °C/9.3 %.



ChemPhysChem
DOI: **10.1002/cphc.201100522**

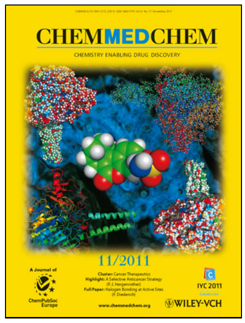


Drug Discovery

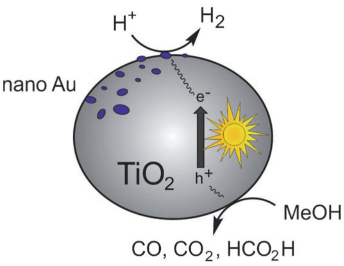
A. Tolomelli,* L. Gentilucci, E. Mosconi, A. Viola, S. D. Dattoli, M. Baiula, S. Spampinato, L. Belvisi, M. Civera

Development of Isoxazoline-Containing Peptidomimetics as Dual $\alpha_v\beta_3$ and $\alpha_5\beta_1$ Integrin Ligands

Molecular copycats! Isoxazoline-containing peptidomimetics, designed to be effective $\alpha_v\beta_3$ and $\alpha_5\beta_1$ integrin ligands, were synthesized by hydroxyamine conjugate addition to alkylidene acetoacetates followed by intramolecular hemiketalization. Cell adhesion assay results suggest a very effective ligand–receptor interaction, as confirmed by docking studies.



ChemMedChem
DOI: **10.1002/cmdc.201100372**

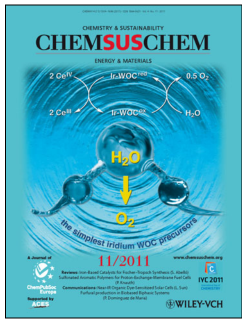


Water splitting

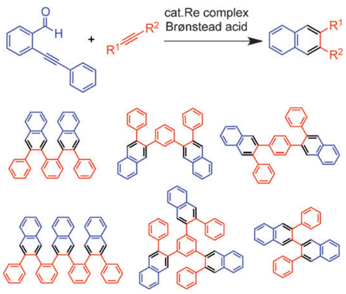
F. Gärtner, S. Losse, A. Boddien, M.-M. Pohl, S. Denurra, H. Junge, M. Beller*

Hydrogen Evolution from Water/Alcohol Mixtures: Effective In Situ Generation of an Active Au/TiO_2 catalyst

Gold standard: Au/TiO_2 catalysts, easily prepared in situ from different Au precursors and TiO_2, generate hydrogen from water/alcohol mixtures. Different alcohols, and even glucose, can serve as sacrificial reductants. The best system produces hydrogen on a liter scale, and is stable for more than two days. Deuteration studies show that proton reduction is likely the rate-limiting step in this reaction.



ChemSusChem
DOI: **10.1002/cssc.201100281**

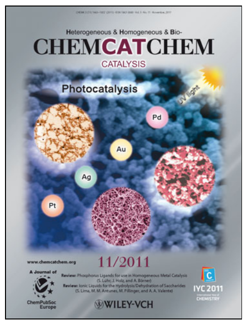


Rhenium Catalysis

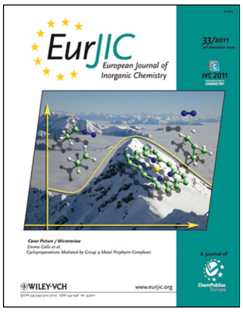
R. Umeda, K. Kaiba, S. Morishita, Y. Nishiyama*

Rhenium-Catalyzed Benzannulation of *o*-Alkynylbenzaldehyde with Alkynes to Multiple 2,3-Disubstituted Naphthalenes

Bring on the super-subs: Rhenium-catalyzed benzannulation of *o*-alkynylbenzaldehydes and alkynes in the presence of trichloroacetic acid, afforded the corresponding 2,3-disubstituted naphthalenes. Furthermore, this benzannulation protocol can be applied to the synthesis of multiple and sterically hindered polycyclic aromatic hydrocarbons having 2,3-disubstituted naphthalene units.



ChemCatChem
DOI: **10.1002/cctc.201100203**

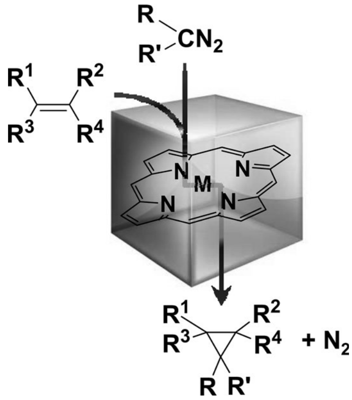


Metal Porphyrin Catalysts

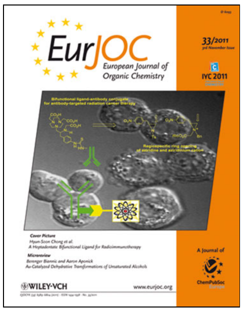
D. Intrieri, A. Caselli, E. Gallo*

Cyclopropanation Reactions Mediated by Group 9 Metal Porphyrin Complexes

The reaction of diazo derivatives with olefins represents a valid tool to synthesise cyclopropanes. Rhodium and cobalt porphyrin complexes have been extensively employed as catalysts, and in several cases outstanding stereocontrol has been achieved. Recent advances in understanding the reaction mechanism will be crucial to plan new and more efficient catalytic systems.



Eur. J. Inorg. Chem.
DOI: **10.1002/ejic.201100664**

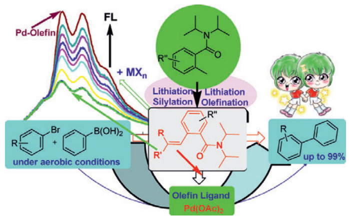


Olefin Chemistry

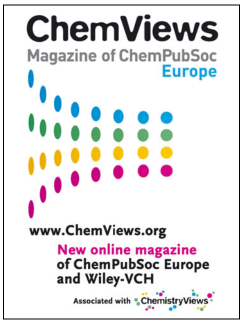
L.-W. Xu,* X.-H. Chen, H. Shen, Y. Deng, J.-X. Jiang, K. Jiang, G.-Q. Lai, C.-Q. Sheng

Substituted Functional Olefins Through Lateral Sequential Lithiation/Silylation/Condensation of Tertiary Aromatic Amides: A Ligand for Phosphane-Free Palladium-Catalyzed Suzuki Coupling Reactions

A new type of olefin was prepared by an unprecedented lateral sequential lithiation/silylation/condensation of tertiary aromatic amides in good yield. The resulting functional olefin, containing an amide moiety, could act as an efficient ligand in phosphane-free palladium-catalyzed Suzuki cross-coupling reactions.



Eur. J. Org. Chem.
DOI: **10.1002/ejoc.201101284**

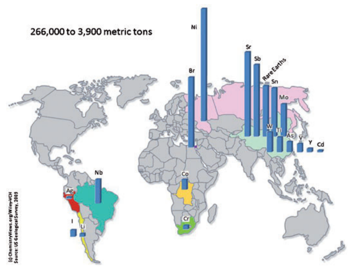


Places of Production of the Elements

ChemViews

Interview with Tobias Stengel – Fine Arts & Chemistry

This month's Clever Picture shows the location of the main producer of each element and the amount produced. Ranging from iron, which is produced by China on a 900 million metric ton-scale, to rhodium, which has an annual production from Chile totaling 25 metric tons.



ChemViews magazine
DOI: **10.1002/chemv.201000124**

