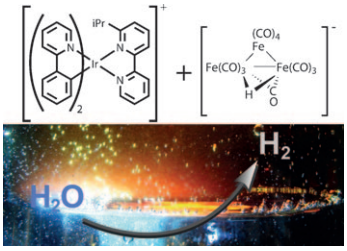
On these pages, we feature a selection of the excellent work that has recently been published in our sister journals. If you are reading these pages on a computer, click on any of the items to read the full article. Otherwise please see the DOIs for easy online access through Wiley Online Library.

Photochemistry

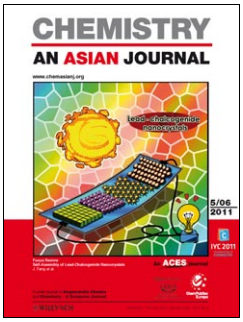
F. Gärtner, D. Cozzula, S. Losse, A. Boddien, G. Anilkumar, H. Junge, T. Schulz, N. Marquet, A. Spannenberg, S. Gladiali,* M. Beller*

Synthesis, Characterisation and Application of Iridium(III) Photosensitisers for Catalytic Water Reduction

Light-driven water reduction: The synthesis and characterisation of new iridium(III) photosensitisers is described. Active water-reduction systems were established with various water-reduction catalysts (WRCs). The best system contained $[Ir(6\text{-}i\text{Pr-bpy})(ppy)_2]PF_6$ (bpy: 2,2′-bipyridine, ppy: 2-phenylpyridine) and $[HNEt_3][HFe_3(CO)_{11}]$ together with a P ligand (see figure).



Chem. Eur. J.
DOI: **10.1002/chem.201100235**

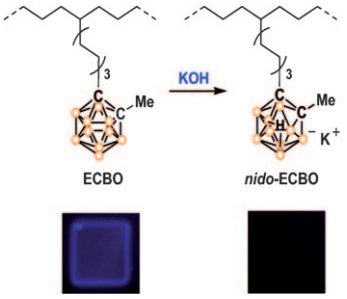


Carboranes

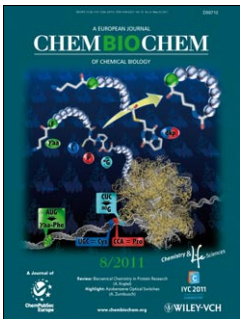
M. H. Park, K. M. Lee, T. Kim, Y. Do,* M. H. Lee*

Ortho-Carborane-Functionalized Luminescent Polyethylene: Potential Chemodosimeter for the Sensing of Nucleophilic Anions

Ortho's, Athos, and Aramis: The *ortho*-carborane-functionalized polyethylene, a new family of carborane-functionalized polymer, has been designed and synthesized by the copolymerization of ethylene with ω-*ortho*-carboranyl-α-olefin using a metallocene catalyst. A thin film of the copolymer displayed strong blue emission under UV irradiation whilst degradation of the carborane cage led to disappearance of the emission.



Chem. Asian J.
DOI: **10.1002/asia.201100012**

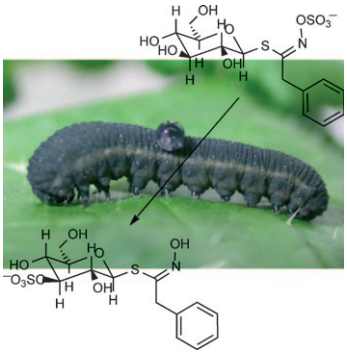


Metabolism

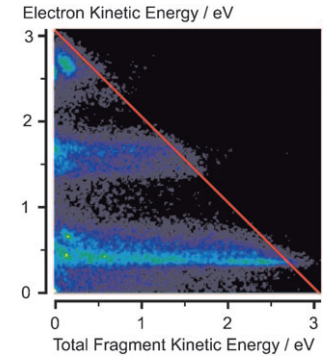
S. E. W. Opitz, A. Mix, I. B. Winde, C. Müller*

Desulfation Followed by Sulfation: Metabolism of Benzylglucosinolate in *Athalia rosae* (Hymenoptera: Tenthredinidae)

Detoxification of glucosinolates: Larvae of the sawfly species *Athalia rosae* sequester glucosinolates from Brassicaceae host plants in their haemolymph for defence purposes. There, sequestered benzylglucosinolate is metabolized to desulfobenzylglucosinolate, which is further conjugated with sulfate to afford desulfobenzylglucosinolate-3-sulfate. This metabolite is excreted and cannot be degraded by plant myrosinases.



ChemBioChem
DOI: **10.1002/cbic.201100053**



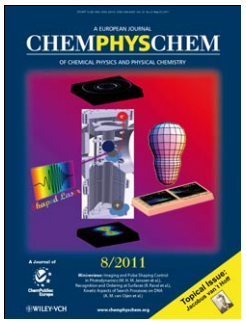
ChemPhysChem
DOI: **10.1002/cphc.201100107**

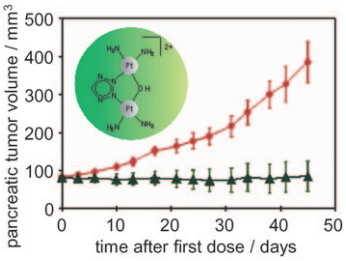
Photodynamics

A. Vredenborg, C. S. Lehmann, D. Irimia, W. G. Roeterdink, M. H. M. Janssen*

The Reaction Microscope: Imaging and Pulse Shaping Control in Photodynamics

Molecular holograms: The three-dimensional structure of molecules leads to three-dimensional patterns of ejected electrons and ions after excitation by photons of sufficient energy. The application of advanced photoelectron and photoion coincidence imaging techniques (see figure) to make pictures of those three-dimensional photon-induced patterns is discussed. These experiments foster our insight into molecular photodynamics and chemical structure.





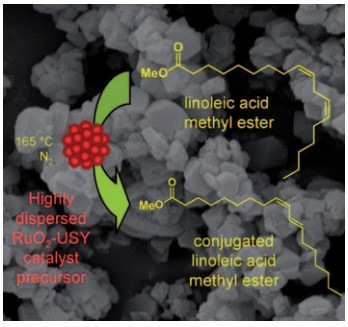
ChemMedChem
DOI: **10.1002/cmdc.201100141**

Drug Discovery

S. Komeda,* Y.-L. Lin, M. Chikuma*

A Tetrazolato-Bridged Dinuclear Platinum(II) Complex Exhibits Markedly High in vivo Antitumor Activity against Pancreatic Cancer

Coordinated against cancer: We synthesized the structural isomers of two tetrazolato-bridged dinuclear Pt^{II} complexes: $[\{cis\text{-}Pt(NH_3)_2\}_2(\mu\text{-}OH)(\mu\text{-tetrazolato-}N1,N2)](ClO_4)_2$ and $[\{cis\text{-}Pt(NH_3)_2\}_2(\mu\text{-}OH)(\mu\text{-tetrazolato-}N2,N3)](ClO_4)_2$. The in vivo antitumor activity of the latter was evaluated on xenograft tumors of H460 NSCLC and PANC-1 pancreatic cancer. The complex shows high efficacy against pancreatic cancer and inhibits tumor growth by 99% relative to untreated control.



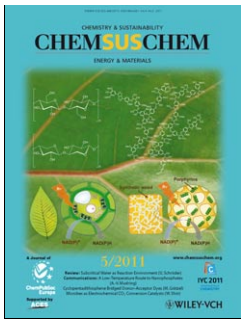
ChemSusChem
DOI: **10.1002/cssc.201100015**

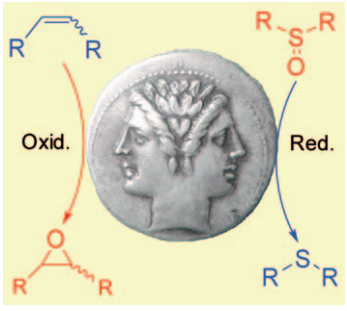
Biorenewables

A. Philippaerts, S. Goossens, W. Vermandel, M. Tromp, S. Turner, J. Geboers, G. Van Tendeloo, P. Jacobs, B. Sels*

Design of Ru–Zeolites for Hydrogen-Free Production of Conjugated Linoleic Acids

Edible addition: Conjugated vegetable oils are attractive substrates in drying oils, paints and bioplastics. Moreover, some conjugated linoleic acids (CLAs) are associated with beneficial health effects. A highly dispersed Ru-USY zeolite catalyst is very active and selective for the production of CLA without the use of a hydrogen source.





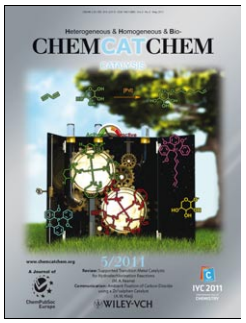
ChemCatChem
DOI: **10.1002/cctc.201100007**

Epoxidation

S. Krackl, A. Company, S. Enthaler,* M. Driess*

Low-Valent Molybdenum-Based Dual Pre-Catalysts for Highly Efficient Catalytic Epoxidation of Alkenes and Deoxygenation of Sulfoxides

Molybdenum, the hero: A series of triply bonded dimolybdenum(III) hexaalkoxides were tested as pre-catalysts in olefin epoxidation and sulfoxide deoxygenation. The complexes exhibited high performance in both types of reactions. For example, in the catalytic epoxidation of cyclooctene, turnover frequencies of above 60000 h^{-1} were achieved at elevated temperatures (≈50 °C). In general, their activities are very high, surpassing those previously reported for other molybdenum-based catalysts in analogous transformations.

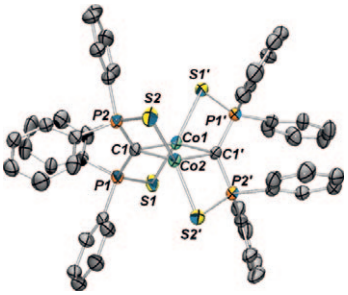


Coordination Complexes

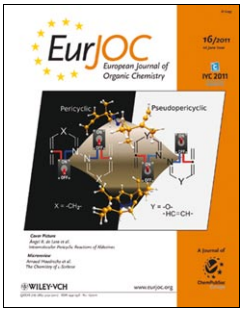
H. Heuclin, T. Cantat, X. F. Le Goff, P. Le Floch, N. Mezailles*

Coordination Behavior of the S–C–S Monoanion and O–C–O and S–C–S Dianions toward Co^{II}

Reactions of geminal dianions derived from bis(dimethylthiophosphinoyl)methane and tetraisopropyl methylenediphosphonate with $CoCl_2$ yield dinuclear Co^{II} complexes featuring a Co_2C_2 square core.



Eur. J. Inorg. Chem.
DOI: **10.1002/ejic.201100144**

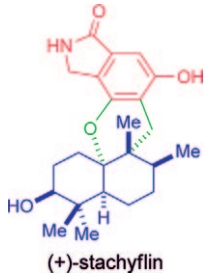


Natural Product Synthesis

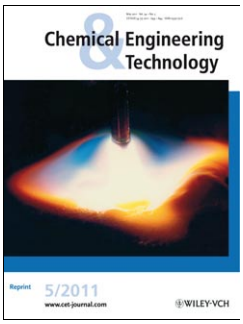
J. Sakurai, T. Kikuchi, O. Takahashi, K. Watanabe, T. Katoh*

Enantioselective Total Synthesis of (+)-Stachyflin: A Potential Anti-Influenza A Virus Agent Isolated from a Microorganism

A potential anti-influenza A virus agent, (+)-stachyflin, a novel hemagglutinin inhibitor, has been synthesized in an enantioselective manner for the first time starting from (+)-5-methyl-Wieland–Miescher ketone. The method features a $BF_3{\cdot}Et_2O$-induced cascade epoxide-opening/rearrangement/cyclization reaction to construct the requisite pentacyclic ring system in one step.



Eur. J. Org. Chem.
DOI: **10.1002/ejoc.201100173**

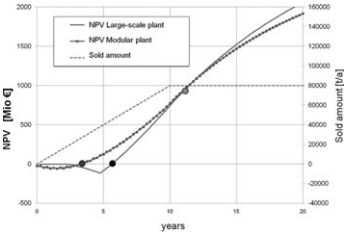


Modular Production Plants

S. Lier*, M. Grünewald

Net Present Value Analysis of Modular Chemical Production Plants

The economics of a modular chemical plant are compared with those of a traditional large-scale plant by investigating investment and operation costs, combined with revenues, using a net present value analysis. The modular plant displays earlier breakeven points but will eventually be overtaken by the large-scale plant because of the latter's economies of scale.



Chem. Eng. Technol.
DOI: **10.1002/ceat.201000380**