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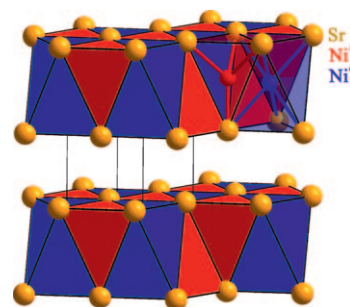


Intermetallic Compounds

P. Höhn, S. Agrestini, A. Baranov, S. Hoffmann, M. Kohout, F. Nitsche, F. R. Wagner, R. Kniep*

Sr_2Ni_3 —A Strontium Subnickelide?

Filled or empty? The layered crystal structure of Sr_2Ni_3 (see graphic) is closely related to Sr_2N . According to a chemical-bonding analysis the intermetallic compound may be described as a strontium subnickelide with the heteropolar formulation $[\text{Sr}_2]^{2+}[\text{Ni}_3]^{2-}$.



Chem. Eur. J.
DOI: [10.1002/chem.201002867](https://doi.org/10.1002/chem.201002867)

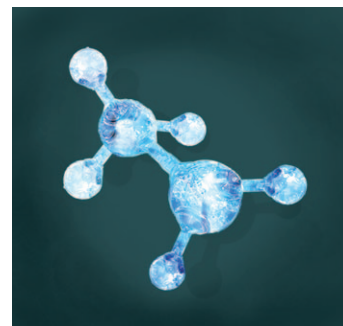


Addition Reactions

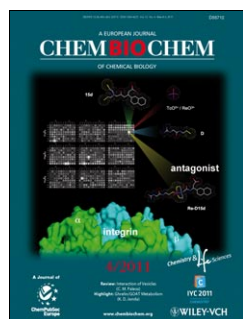
P.-R. Lee, C.-W. Lee, J.-K. Kim, E.-S. Moon, H. Kang*

Electrophilic Addition Reaction of Ethene with Hydrogen Chloride on Cold Molecular Films: Evidence of Ethyl Cationic Intermediate

A cold ice surface can halt a reaction at an intermediate stage. An ethyl cationic intermediate is kinetically trapped on the ice surface in the course of the electrophilic addition reaction of ethene with hydrogen chloride, as revealed by reactive ion scattering and thermal desorption mass spectrometry.



Chem. Asian J.
DOI: [10.1002/asia.201000631](https://doi.org/10.1002/asia.201000631)

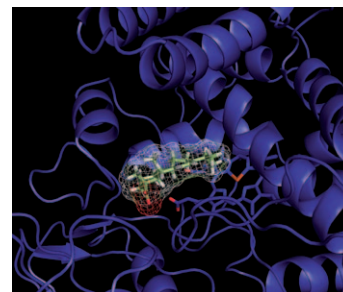


Cytochromes

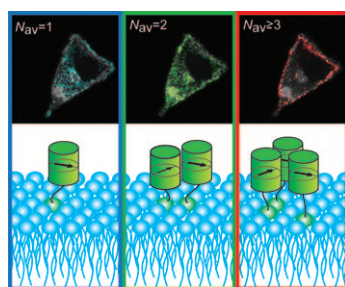
S. Bleif, F. Hannemann, M. Lisurek, J. P. von Kries, J. Zapp, M. Dietzen, I. Antes, R. Bernhardt*

Identification of CYP106A2 as a Regioselective Allylic Bacterial Diterpene Hydroxylase

Bacterial allylic hydroxylation: CYP106A2 has been identified as the first reported bacterial cytochrome P450 diterpene hydroxylase. It is able to carry out a one-step regioselective allylic hydroxylation of the diterpene abietic acid. An effective whole-cell catalyst for the selective allylic 12 α - and 12 β -hydroxylation was developed.



ChemBioChem
DOI: [10.1002/cbic.201000404](https://doi.org/10.1002/cbic.201000404)



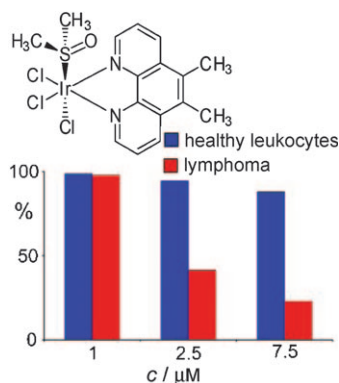
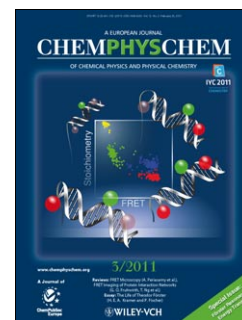
ChemPhysChem
DOI: 10.1002/cphc.201000801

Fluorescence Anisotropy Imaging

A. N. Bader, S. Hoetzel, E. G. Hofman, J. Voortman,
P. M. P. van Bergen en Henegouwen, G. van Meer, H. C. Gerritsen*

Homo-FRET Imaging as a Tool to Quantify Protein and Lipid Clustering

Clustering of proteins or lipids in, for example, membranes in cells can be quantitatively imaged using homo-FRET. Various methods based on fluorescence anisotropy to study this molecular scale (< 5 nm) interactions are reviewed (see picture).



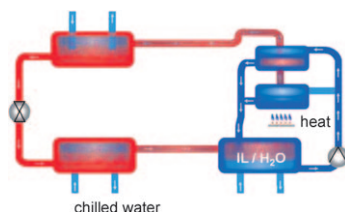
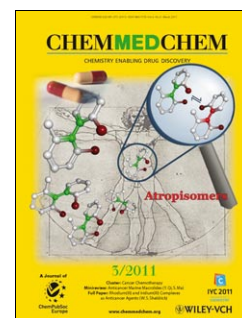
ChemMedChem
DOI: 10.1002/cmdc.201000517

Metal Complexes in Medicine

Y. Geldmacher, I. Kitanovic, H. Alborzinia, K. Bergerhoff, R. Rubbiani,
P. Wefelmeier, A. Prokop, R. Gust, I. Ott, S. Wölfl, W. S. Sheldrick*

Cellular Selectivity and Biological Impact of Cytotoxic Rhodium(III) and Iridium(III) Complexes Containing Methyl-Substituted Phenanthroline Ligands

A complex situation: Trichlorido Ir and Rh complexes with methyl-substituted phenanthroline ligands represent a novel class of potent anticancer agents with pronounced selectivity toward adherent cancer cells and lymphoma relative to normal cells. Their distinct pharmacodynamic profile includes high ROS levels, apoptosis induction, and inhibition of cell respiration.



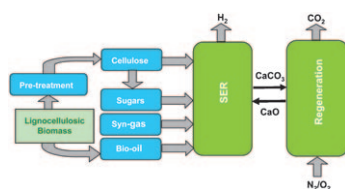
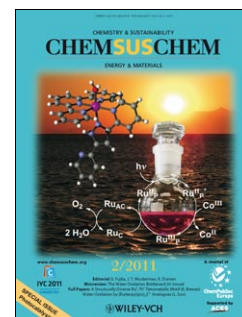
ChemSusChem
DOI: 10.1002/cssc.201000191

Ionic Liquids

P. Wasserscheid,* M. Seiler*

Leveraging Gigawatt Potentials by Smart Heat-Pump Technologies Using Ionic Liquids

Pump & Circumstance: The enormous energetic potential of low-caloric heat streams (40–80 °C) can be unlocked through a new generation of smart heat pumps operating with novel ionic liquid (IL)-based working pairs. The new technology is expected to allow significantly higher potential efficiencies, lower specific investments and broader possibilities to incorporate heat from renewable sources.



ChemCatChem
DOI: 10.1002/cctc.201000345

Hydrogen Production

D. Chen,* L. He

Towards an Efficient Hydrogen Production from Biomass: A Review of Processes and Materials

The future is bright the future is bio: Sorption enhanced reforming is a remarkably flexible process in terms of feedstock composition (see figure), owing to its low coking potential. It has a great potential to produce a high concentration of hydrogen in a single stage.



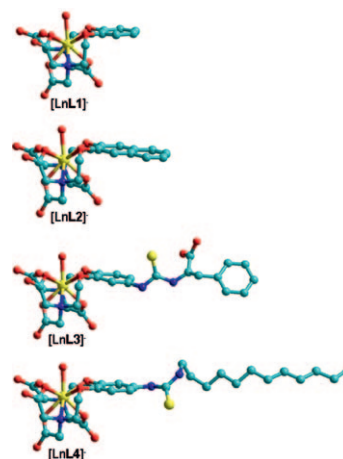


Rigidified Gadolinium Chelates

M. Botta,* S. Avedano, G. B. Giovenzana, A. Lombardi, D. Longo, C. Cassino, L. Tei, S. Aime*

Relaxometric Study of a Series of Monoaqua Gd^{III} Complexes of Rigidified EGTA-Like Chelators and Their Noncovalent Interaction with Human Serum Albumin

The solution properties of lanthanide(III) complexes of rigidified EGTA derivatives were investigated in aqueous media by ¹H and ¹³C NMR spectroscopy and by ¹H and ¹⁷O NMR relaxometric techniques. Their binding affinity to human serum albumin was evaluated both experimentally and by docking simulations.



Eur. J. Inorg. Chem.
DOI: 10.1002/ejic.201001103

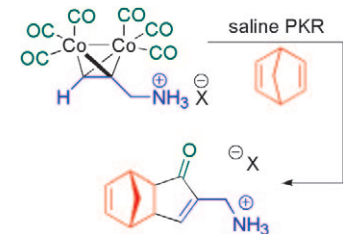


Pauson–Khand Reaction

Y. Ji, A. Riera,* X. Verdaguer*

Saline Intermolecular Pauson–Khand Reactions of Propargyl Amine

The intermolecular Pauson–Khand cycloaddition of propargyl ammonium salts is reported. Ammonium salts with non-nucleophilic counterions stabilize the corresponding dicobalthexacarbonyl complexes, allowing their isolation for the first time. These complexes readily undergo stoichiometric and catalytic cycloaddition reaction with norbornadiene.



Eur. J. Org. Chem.
DOI: 10.1002/ejoc.201001617

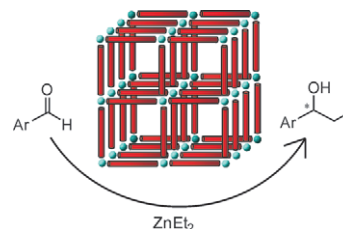


Chiral Metal-Organic Frameworks

G. Nickerl, A. Henschel, R. Gr nker, K. Gedrich, S. Kaskel*

Chiral Metal-Organic Frameworks and their Application in Asymmetric Catalysis and Stereoselective Separation

With the increasing demand for enantiomerically pure compounds the search for appropriate catalysts and separating materials intensifies. This review summarizes reactions that are asymmetrically catalyzed by Metal-Organic Frameworks (MOFs), a new class of porous materials. In addition, some examples concerning the stereoselective separation properties of MOFs are presented.



Chem. Ing. Tech.
DOI: 10.1002/cite.201000188