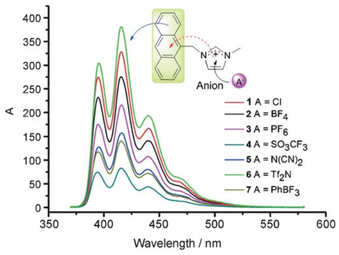
On these pages, we feature a selection of the excellent work that has recently been published in our sister journals. If you are reading these pages on a computer, click on any of the items to read the full article. Otherwise please see the DOIs for easy online access through Wiley InterScience.

Functionalized Ionic Liquids

Z. Fei, D.-R. Zhu, X. Yang, L. Meng, Q. Lu, W. H. Ang, R. Scopelliti, C. G. Hartinger, P. J. Dyson*

An Internal Fluorescent Probe Based on Anthracene to Evaluate Cation–Anion Interactions in Imidazolium Salts

Cation–anion interactions: An anthracene moiety that has been incorporated into an imidazolium unit acts as an internal probe revealing insights into cation–anion interactions in the solid state and in solution (see graphic).



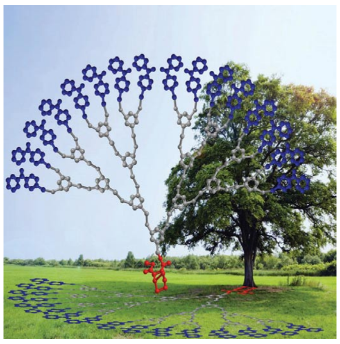
Chem. Eur. J.
DOI: **10.1002/chem.201000253**

Energy Transfer

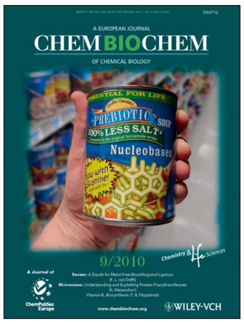
Y. Zeng, Y.-Y. Li, J. Chen,* G. Yang,* Y. Li*

Dendrimers: A Mimic Natural Light-Harvesting System

Passed on through the generations: Dendrimers are well-defined tree-like macromolecules having numerous chain ends all emanating from a single core, which make them mimics of natural light-harvesting systems. Recent developments of light-harvesting dendrimers will be discussed in this article, focusing on their energy transfer and electron transfer properties.



Chem. Asian J.
DOI: **10.1002/asia.200900653**

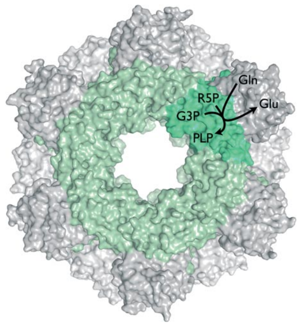


Vitamins

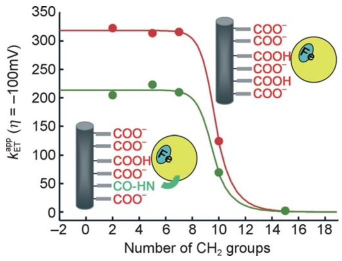
T. B. Fitzpatrick,* C. Moccand, C. Roux

Vitamin B_6 Biosynthesis: Charting the Mechanistic Landscape

Enzyme of the rings: Vitamin B_6 biosynthesis through the DXP-independent route is catalyzed by PLP synthase. The enzyme utilizes ribose 5-phosphate, glyceraldehyde 3-phosphate and ammonia to synthesize the cofactor form of the vitamin, pyridoxal 5′-phosphate (PLP). This review provides the emerging mechanistic details of this remarkable Pdx1:Pdx2 glutamine amidotransferase complex.



ChemBioChem
DOI: **10.1002/cbic.201000084**



ChemPhysChem

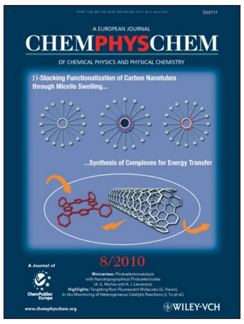
DOI: **10.1002/cphc.200900966**

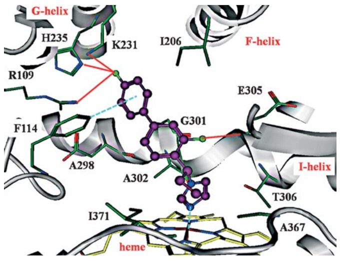
Electron Transfer

H. K. Ly, M. A. Marti, D. F. Martin, D. Alvarez-Paggi, W. Meister, A. Kranich, I. M. Weidinger, P. Hildebrandt,* D. H. Murgida*

Thermal Fluctuations Determine the Electron-Transfer Rates of Cytochrome c in Electrostatic and Covalent Complexes

Interfacial electron-transfer processes of cytochrome c covalently or electrostatically bound to electrodes coated with self-assembled monolayers (SAMs) of ω-functionalized alkanethiols are studied by time-resolved surface-enhanced resonance Raman spectroscopy and molecular dynamics simulations (see picture).





ChemMedChem

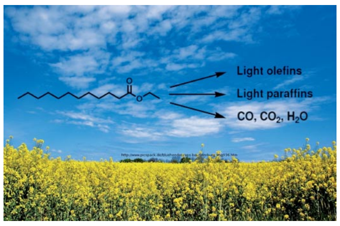
DOI: **10.1002/cmdc.201000065**

Antitumor Agents

Q. Hu, M. Negri, S. Olgen, R. W. Hartmann*

The Role of Fluorine Substitution in Biphenyl Methylene Imidazole-Type CYP17 Inhibitors for the Treatment of Prostate Carcinoma

CYP17 inhibition is a promising approach for the treatment of prostate cancer. Modification of biphenyl methylene imidazoles by fluorine substitution significantly increases the inhibitory potency of this compound class and prolongs plasma half-life. Compound **9** (ball-and-stick structure) was found to be a potent CYP17 inhibitor ($IC_{50} = 131$ nM) with good pharmacokinetic properties.



ChemSusChem

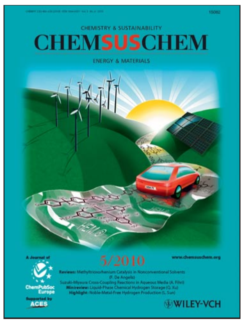
DOI: **10.1002/cssc.200900234**

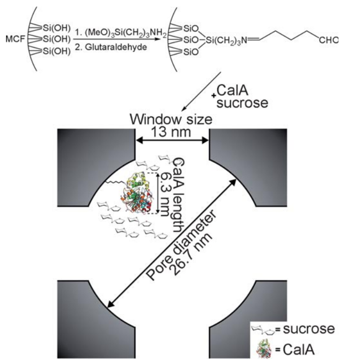
Biorenewables

O. Busse, K. Räuchle, W. Reschetilowski*

Hydrocracking of Ethyl Laurate on Bifunctional Micro-/Mesoporous Zeolite Catalysts

Olefins from biomass: Metal-modified micro- and mesoporous composite materials are promising catalyst systems for the conversion of ethyl laurate, as a model compound for vegetable oils. The selectivity to light olefins can be enhanced up to 60 wt %.





ChemCatChem

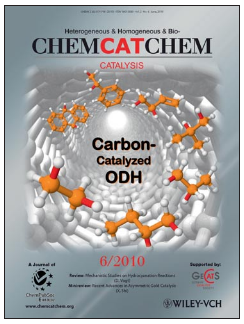
DOI: **10.1002/cctc.201000027**

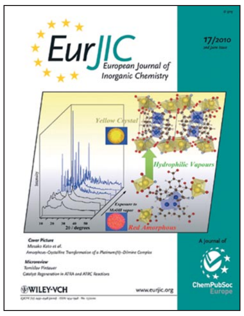
Supported Enzymes

M. Shakeri, K. Engström, A. G. Sandström, J.-E. Bäckvall*

Highly Enantioselective Resolution of β-Amino Esters by *Candida antarctica* Lipase A Immobilized in Mesocellular Foam: Application to Dynamic Kinetic Resolution.

***Candida antarctica* lipase A** (CALA) immobilized in functionalized mesocellular foam (MCF) in the presence of sucrose facilitated a dramatic increase in enantioselectivity for the kinetic resolution (KR) of representative β-amino esters. The temperature of optimum activity of CALA shifted from 20–30 °C to 80–90 °C on immobilization in the MCF. Combination of the immobilized CALA with a ruthenium complex allowed dynamic KR at 90 °C.



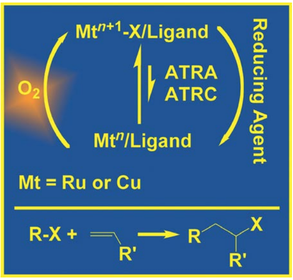


Catalyst Regeneration

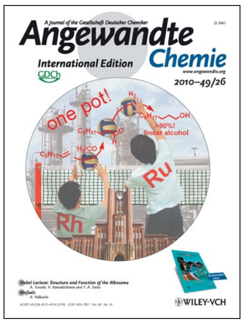
T. Pintauer*

Catalyst Regeneration in Transition-Metal-Mediated Atom-Transfer Radical Addition (ATRA) and Cyclization (ATRC) Reactions

Recent advances in the area of catalyst regeneration in copper- and ruthenium-mediated atom transfer radical addition (ATRA) and cyclization (ATRC) reactions in the presence of free-radical diazo initiators or magnesium as reducing agents were reviewed. Reducing agents regenerate the activator in both processes, enabling selective ATRA and ATRC reactions using very small amounts of metal catalysts.



Eur. J. Inorg. Chem.
DOI: **10.1002/ejic.201000234**

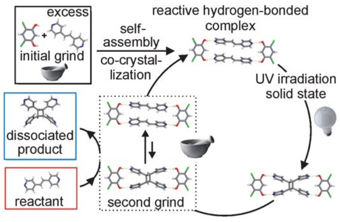


Supramolecular Catalysis

A. N. Sokolov, D.-K. Bučar, J. Baltrusaitis, S. X. Gu,
L. R. MacGillivray*

Supramolecular Catalysis in the Organic Solid State through Dry Grinding

Chemical mechanics: Hydrogen-bond-driven self-assembly and mechanochemistry are used to facilitate supramolecular catalysis in the solid state. Mortar-and-pestle grinding proves to be an efficient means to achieve co-crystal formation and turnover using a physical mixture composed of an olefin and catalytic amounts of a ditopic template (see scheme).



Angew. Chem. Int. Ed.
DOI: **10.1002/anie.201000874**