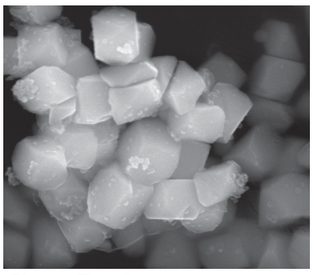
On these pages, we feature a selection of the excellent work that has recently been published in our sister journals. If you are reading these pages on a computer, click on any of the items to read the full article. Otherwise please see the DOIs for easy online access through Wiley InterScience.

Organometallic Chemistry

S. Schulz*

Low-Valent Organometallics—Synthesis, Reactivity, and Potential Applications

Far beyond lab curiosities: The synthesis of kinetically stabilized (sterically demanding substituents) and electronically stabilized (base stabilization) low-valent complexes of Groups 2, 12, 13, and 15 is summarized as well as their potential application as selective reductants, unusual ligands in coordination chemistry, and as novel precursors in material sciences (see graphic).



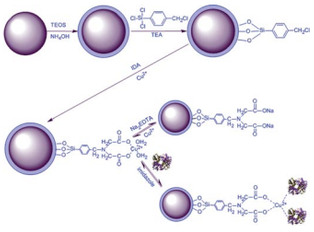
Chem. Eur. J.
DOI: **10.1002/chem.201000580**

Microspheres

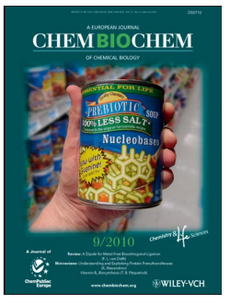
M. Zhang, D. Cheng, X. He, L. Chen,* Y. Zhang*

Magnetic Silica-Coated Sub-Microspheres with Immobilized Metal Ions for the Selective Removal of Bovine Hemoglobin from Bovine Blood

Vampire microspheres: Superparamagnetic silica-coated magnetite (Fe_3O_4) sub-microspheres with an immobilized metal-affinity ligand are prepared largely through a novel route (see scheme). Protein adsorption results show that the sub-microspheres have a high selective adsorption for bovine hemoglobin (BHb), low non-specific adsorption, and are capable of efficient removal of BHb from bovine blood.



Chem. Asian J.
DOI: **10.1002/asia.200900463**

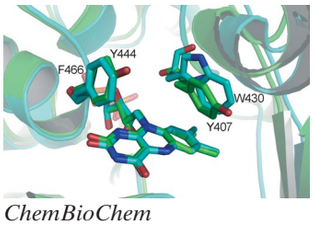


Enzyme Catalysis

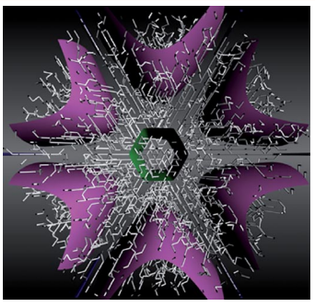
R. V. Dunn, A. W. Munro, N. J. Turner, S. E. J. Rigby, N. S. Scrutton*

Tyrosyl Radical Formation and Propagation in Flavin Dependent Monoamine Oxidases

MAO enzymes: Demonstration of the presence of tyrosyl radicals in partially reduced monoamine oxidases (MAO) was achieved by a combination of specific isotopic labelling and pulsed ENDOR techniques. Comparative studies between human MAO A and MAO N indicate that the equilibrium distribution of the radical species is not localised to the active site residues near the flavin cofactor.



ChemBioChem
DOI: **10.1002/cbic.201000184**



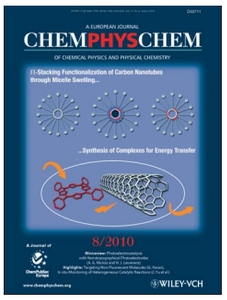
ChemPhysChem
DOI: **10.1002/cphc.201000232**

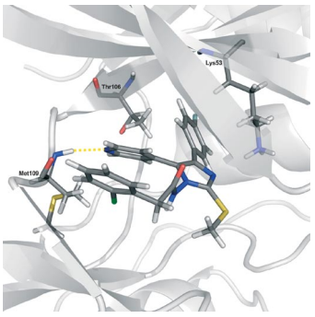
Nanocomposites

J. Brickmann,* R. Paparcone, S. Kokolakis, D. Zahn, P. Duchstein, W. Carrillo-Cabrera, P. Simon, R. Kniep*

Fluorapatite–Gelatine Nanocomposite Superstructures: New Insights into a Biomimetic System of High Complexity

The beauty of complexity is reflected by the formation of hierarchical patterns on various length scales (see picture). The simulation of the fibril pattern inside a fluorapatite-gelatine nanocomposite superstructure reveals excellent agreement with TEM data and seems to be a key scenario for the development of biogenic composite shapes and architectures.





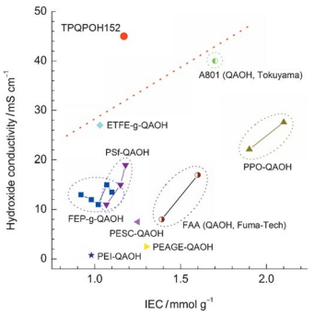
ChemMedChem
DOI: **10.1002/cmdc.201000114**

Drug Discovery

C. Bracht, D. R. J. Hauser, V. Schattel, W. Albrecht, S. A. Laufer*

Synthesis and Biological Testing of *N*-Aminoimidazole-Based p38α MAP Kinase Inhibitors

We developed novel tetrasubstituted pyridinylimidazoles with acyl residues at the imidazole N1 position that interact with specific regions of p38 mitogen-activated protein (MAP) kinase α to improve both selectivity and activity. The substitution pattern was optimized by variation of the acyl group at the N1 position of the *N*-aminoimidazole core.



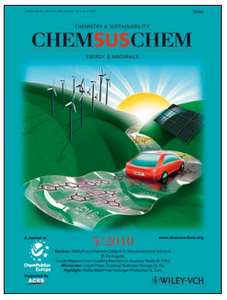
ChemSusChem
DOI: **10.1002/cssc.201000074**

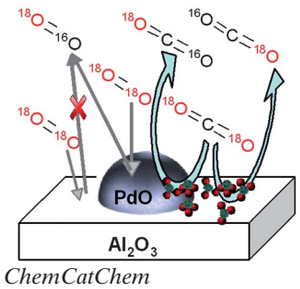
Fuel Cells

S. Gu, R. Cai, T. Luo, K. Jensen, C. Contreras, Y. S. Yan*

Quaternary Phosphonium-Based Polymers as Hydroxide Exchange Membranes

A new class of hydroxide exchange membranes (HEMs) is prepared by using a quaternary phosphonium-based polymer. The membranes display desirable properties, most notably a high conductivity. A corresponding fuel cell exhibits the highest HEM fuel cell performance to date and shows a better intrinsic catalyst-activity compared with state-of-the-art proton exchange membrane fuel cells.





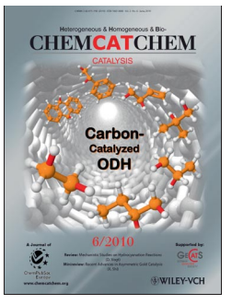
ChemCatChem
DOI: **10.1002/cctc.201000033**

Supported Catalysts

S. Ojala, N. Bion,* S. Rijo Gomes, R. L. Keiski, D. Duprez

Isotopic Oxygen Exchange over Pd/Al_2O_3 Catalyst: Study on $C^{18}O_2$ and $^{18}O_2$ Exchange

Exchange would do you good: Labeled $C^{18}O_2$ was used to study oxygen isotopic exchange over Pd/Al_2O_3 catalyst. The improvement in exchange rate compared with the exchange from $^{18}O_2$ is at least a factor of ten. The roles of PdO and carbonates are essential in enhancing the oxygen exchange from $C^{18}O_2$. $C^{18}O_2$ exchange can be applied instead of $^{18}O_2$, when oxygen activation on Pd/Al_2O_3 catalysts is studied at low temperatures.

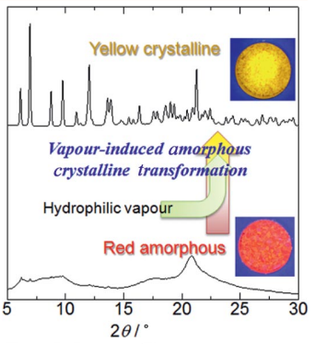


A Vapour History Sensor

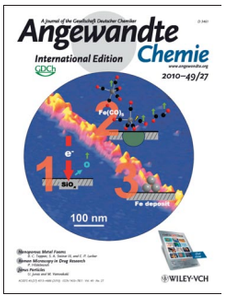
A. Kobayashi, T. Yonemura, M. Kato*

Vapour-Induced Amorphous–Crystalline Transformation of a Luminescent Platinum(II)–Diimine Complex

A newly synthesized Pt^{II}–diimine complex, $Na_2[Pt(CN)_2(dcbpy)]\cdot 2H_2O$, exhibited a vapour-induced amorphous–crystalline transformation responding to hydrophilic solvent vapour, which is a promising phenomenon for a vapour history sensor.



Eur. J. Inorg. Chem.
DOI: **10.1002/ejic.201000289**

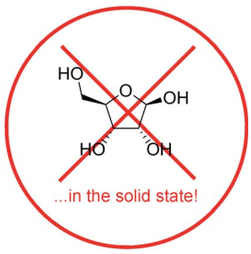


Structure Determination

D. Šišak, L. B. McCusker,* G. Zandomeneghi, B. H. Meier,* D. Bläser, R. Boese,* W. B. Schweizer, R. Gilmour, J. D. Dunitz*

The Crystal Structure of D-Ribose—At Last!

Better late than never! The β-furanose form of D-ribose, present in countless biomolecules, does not occur in the crystalline compound. X-ray diffraction and NMR experiments show that D-ribose occurs in two crystal forms that contain β- and α-pyranose forms in various ratios.



Angew. Chem. Int. Ed.
DOI: **10.1002/anie.201001266**

