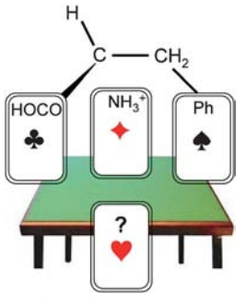
On these pages, we feature a selection of the excellent work that has recently been published in our sister journals. If you are reading these pages on a computer, click on any of the items to read the full article. Otherwise please see the DOIs for easy online access through Wiley Online Library.

Gas-Phase Chemistry

C. Fraschetti, M. Pierini,* C. Villani, F. Gasparrini, S. L. Mortera, A. Filippi, M. Speranza*

The "Bridge" Game: Role of the Fourth Player in Chiral Recognition

A new team player: The "three-point interaction" model, which is usually employed to rationalize chiral recognition, does not account for the amazing enantioselectivity measured for the receptors of many proteic acceptors. Gas-phase experiments have indicated that at least a fourth "player" must be considered: the rigidity that a receptor opposes to the distortions of its cavity resulting from noncovalent interactions with a chiral molecule (see picture).



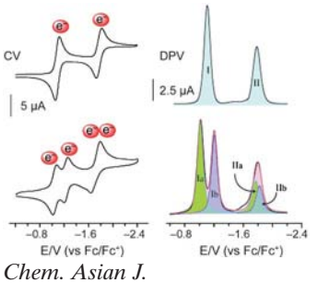
Chem. Eur. J.
DOI: **10.1002/chem.201002828**

Redox Chemistry

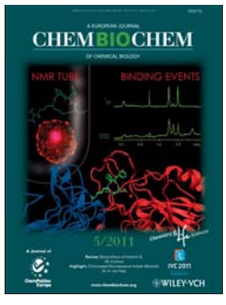
X. Wang, W. Ma, Y. Ying, J. Liang, Y.-T. Long*

Bis-Coenzyme Q_0: Synthesis, Characteristics, and Application

The great communicator: Methylene-bridged bis(2,3-dimethoxy-5-methyl-l,4-benzoquinone)methane (Bis-CoQ_0), which shows intramolecular electronic communications, has been synthesized for the first time. An electron-transfer process is proposed based on CV, in situ UV/Vis, and electron paramagnetic resonance (EPR) spectroelectrochemistry (see figure).



Chem. Asian J.
DOI: **10.1002/asia.201000477**

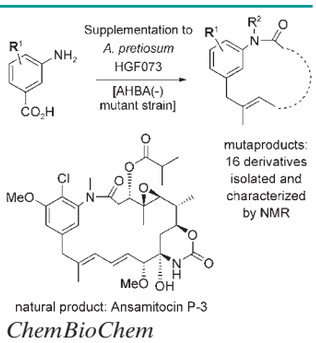


Polyketide Biosynthesis

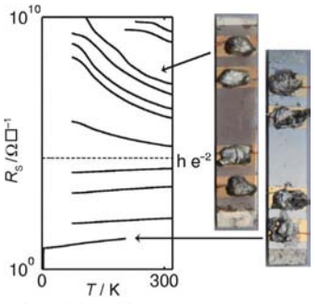
T. Knobloch, K. Harmrolfs, F. Taft, B. Thomaszewski, F. Sasse, A. Kirschning*

Mutational Biosynthesis of Ansamitocin Antibiotics: A Diversity-Oriented Approach to Exploit Biosynthetic Flexibility

Mutasynthesis: Feeding aminobenzoic acid derivatives to a *Actinosynnema pretiosum* mutant that could not biosynthesize the essential starter unit 3-amino-5-hydroxybenzoic acid led to novel ansamitocin derivatives, which were isolated, characterized and subjected to in vitro biological testing. Our studies provided insights into the flexibility of ansamitocin biosynthesis in *A. pretiosum* and gave a deeper understanding of structure–activity relationships.



ChemBioChem
DOI: **10.1002/cbic.201000608**



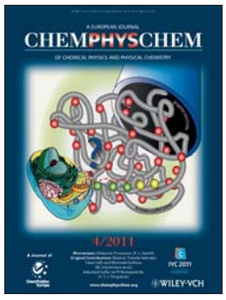
ChemPhysChem
DOI: **10.1002/cphc.201000762**

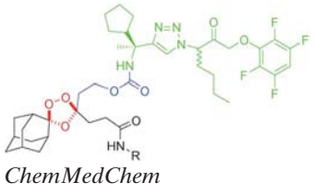
(Super)conductive Plastic Films

A. P. Stephenson, A. P. Micolich, K. H. Lee, P. Meredith,* B. J. Powell

A Tunable Metal–Organic Resistance Thermometer

Mixing thin Sn films into polyetheretherketone (PEEK) substrates using Sn^+ ion beams can turn this inherently insulating polymer metallic. Control of this process changes the sample's conductivity by over ten orders of magnitude (see picture). This can be used to produce high-performance, robust, low-cost thermometers, which can be easily tailored to the desired temperature range.





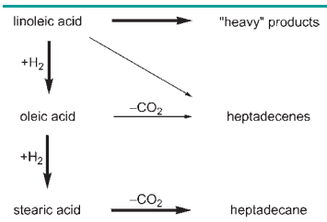
ChemMedChem
DOI: **10.1002/cmdc.201100002**

Tropical Diseases

S. S. Mahajan, E. Deu, E. M. W. Lauterwasser, M. J. Leyva, J. A. Ellman, M. Bogyo,* A. R. Renslo*

A Fragmenting Hybrid Approach for Targeted Delivery of Multiple Therapeutic Agents to the Malaria Parasite

Hybrid drugs with a twist: The coupling of iron(II)-promoted trioxolane ring scission with a β-elimination reaction enables the targeted delivery of multiple drug activities to the malaria parasite. A prototypical fragmenting hybrid (shown) comprises an iron(II)-reactive 1,2,4-trioxolane ring (red) joined via a masked retro-Michael linker (blue) to a partner drug—in this case a protease inhibitor (green). Successful delivery of the protease inhibitor to intra-erythrocytic *Plasmodium falciparum* parasites is demonstrated using a chemical–biological approach.



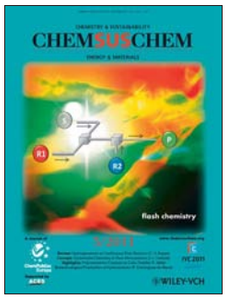
ChemSusChem
DOI: **10.1002/cssc.201000370**

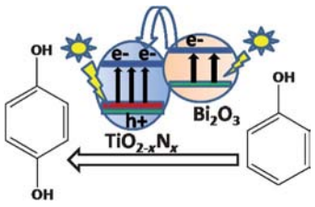
Biorenewables

J. Fu, X. Lu, P. E. Savage*

Hydrothermal Decarboxylation and Hydrogenation of Fatty Acids over Pt/C

In hot water: The conversion of saturated and unsaturated alkanes, catalyzed by Pt/C in the absence of H_2, in high-temperature water has been investigated (see figure). H_2 is formed in situ during the hydrothermal catalytic process. This hydrothermal decarboxylation route represents a new path for using renewable resources to make molecules with value as liquid transportation fuels.





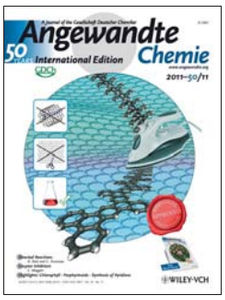
ChemCatChem
DOI: **10.1002/cctc.201000233**

Photocatalysis

B. Naik, K. M. Parida,* G. C. Behera

Facile Synthesis of $Bi_2O_3/TiO_{2-x}N_x$ and its Direct Solar-Light-Driven Photocatalytic Selective Hydroxylation of Phenol

Stay in the sun: Mesoporous $Bi_2O_3/TiO_{2-x}N_x$ nanocomposites, synthesized by a template-free homogeneous coprecipitation technique, show excellent catalytic activity for selective phenol hydroxylation under direct sunlight without using any oxidant. One of the nanocomposites gives a phenol conversion of 99% in aqueous medium with 100% selectivity towards hydroquinone.

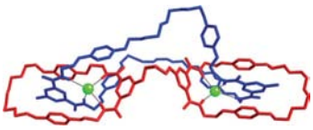


Catenanes

N. H. Evans, C. J. Serpell, P. D. Beer*

Chloride Anion Templated Synthesis and Crystal Structure of a Handcuff Catenane

Chloride, you're nicked! A novel handcuff catenane was prepared by anion templation and π-π stacking interactions. In addition, the first crystal structure determination of such a catenane is reported (see picture).



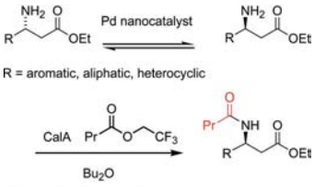
Angew. Chem. Int. Ed.
DOI: **10.1002/anie.201007741**

Heterogeneous Catalysts Extending DKR

K. Engström, M. Shakeri, J.-E. Bäckvall*

Dynamic Kinetic Resolution of β-Amino Esters by a Heterogeneous System of a Palladium Nanocatalyst and *Candida antarctica* Lipase A

Enantiomerically pure β-amino esters are prepared in a dynamic kinetic resolution (DKR) at 50 °C. Aromatic, heteroaromatic and aliphatic β-amino esters are accepted, and the products were obtained in 96–99% *ee* and high yields.



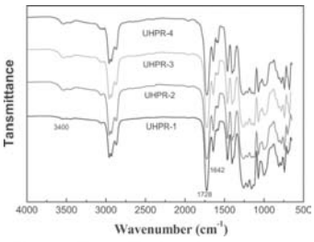
Eur. J. Org. Chem.
DOI: **10.1002/ejoc.201001714**

Polyester Resin

D. Zhang*, J. Wang, T. Li, A. Zhang, D. Jia

Synthesis and Characterization of a Novel Low-Viscosity Unsaturated Hyperbranched Polyester Resin

A novel low-viscosity (<10000 cP) unsaturated hyperbranched polyester resin (UHPR) is synthesized by the reaction between maleic anhydride monoisooctyl alcohol ester and a hydroxyl-ended hyperbranched polyester resin. It can be applied in the field of environment-friendly coatings and in toughening and reinforcing linear unsaturated polymers.



Chem. Eng. Technol.
DOI: **10.1002/ceat.201000329**

