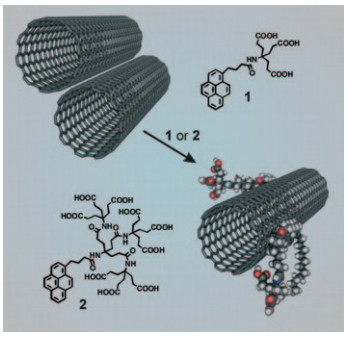
On these pages, we feature a selection of the excellent work that has recently been published in our sister journals. If you are reading these pages on a computer, click on any of the items to read the full article. Otherwise please see the DOIs for easy online access through Wiley InterScience.

Carbon Nanotubes

C. Backes, U. Mundloch, A. Ebel, F. Hauke, A. Hirsch*

Dispersion of HiPco® and CoMoCAT® Single-Walled Nanotubes (SWNTs) by Water Soluble Pyrene Derivatives—Depletion of Small Diameter SWNTs

Nanotube surfactant design—the dispersion of SWNTs by designed surfactants based on water- soluble pyrene derivatives is reported. Significantly, nanotubes of small diameters are depleted in the supernatant after centrifugation presenting the foundation for future nanotube separation by selective dispersion.



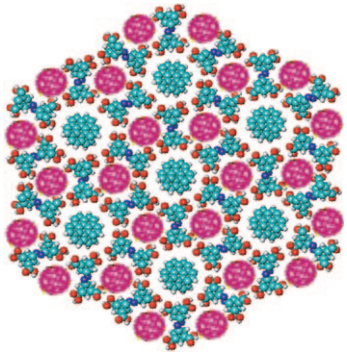
Chem. Eur. J.
DOI: **10.1002/chem.200903420**

Molecular Recognition

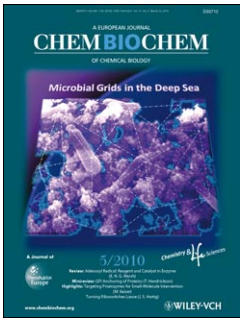
Y.-T. Shen, M. Li, Y.-Y. Guo, K. Deng, Q.-D. Zeng,* C. Wang*

The Site-Selective Molecular Recognition of Ternary Architectures by using Supramolecular Nanoporous Networks at a Liquid–Solid Interface

Selective holes! The tetra-acidic azobenzene (NN4A) molecules (see figure) can serve as a supramolecular nanoporous template for the accommodation of C_{60} and coronene molecules at the same time. Experimental results indicate that C_{60} and coronene molecules have obvious site-selectivity for cavities formed by NN4A.



Chem. Asian J.
DOI: **10.1002/asia.200900439**

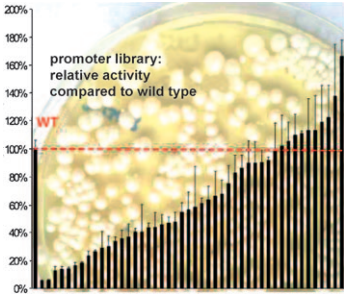


Biocatalysis

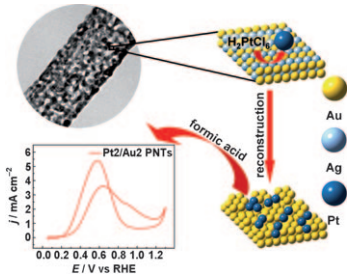
C. Ruth, A. Glieder*

Perspectives on Synthetic Promoters for Biocatalysis and Biotransformation

Synthetic promoters facilitate high-level enzyme expression and balanced expression of multiple proteins in complex systems. Although different in their details, there are similarities in the concepts of synthetic promoter design and construction for prokaryotes and eukaryotes. Thus, synthetic biology offers simple, quickly implementable and efficient tools for future industrial bioprocesses.



ChemBioChem
DOI: **10.1002/cbic.200900761**



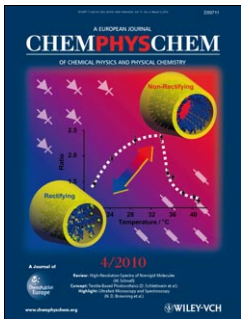
Fuel Cells

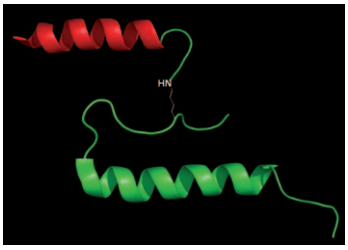
X. Gu, X. Cong, Y. Ding*

Platinum-Decorated Au Porous Nanotubes as Highly Efficient Catalysts for Formic Acid Electro-Oxidation

Pt-decorated Au porous nanotubes (Pt/Au PNTs) are fabricated via a simple galvanic replacement between H_2PtCl_6 and residual Ag in Au PNTs (see figure). As a new kind of supportless Pt-based catalyst with unique combination of dimensions at multiple length scales, they show excellent performance toward electro-oxidation of formic acid, thus suggesting their potential in direct formic acid fuel cells.

ChemPhysChem
DOI: **10.1002/cphc.200900927**





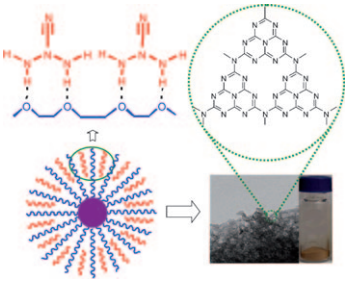
Obesity

S. L. Pedersen, P. G. Sasikumar, N. Vrang,* K. J. Jensen*

Peptide Architecture: Adding an α-Helix to the PYY Lysine Side Chain Provides Nanomolar Binding and Body-Weight-Lowering Effects

Branching out: An additional amphipathic α-helix attached to the Lys 4 side chain of PYY3-36 resulted in novel analogues with nanomolar Y2 receptor binding affinities, as well as increased Y receptor selectivity. Structure–affinity studies indicated that the branch motif determines the Y1 receptor activity. Acute mice studies showed the retro-sequences to be inactive even though the binding data demonstrated high potency.

ChemMedChem
DOI: **10.1002/cmdc.200900521**



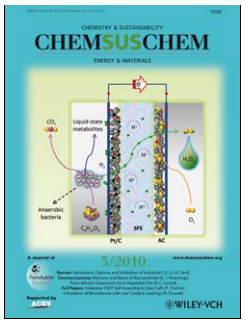
Semiconductors

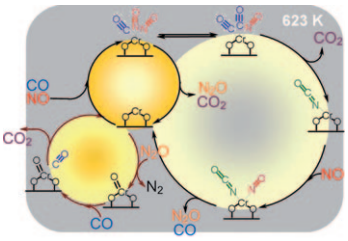
Y. Wang, X. Wang, M. Antonietti, Y. Zhang*

Facile One-Pot Synthesis of Nanoporous Carbon Nitride Solids by Using Soft Templates

Nitrider: A polymeric semiconductor is synthesized by a one-step process, using a variety of block copolymers, nonionic surfactants, and even ionic liquids as a soft templates. The pore size and specific surface area are tunable via the template content and processing conditions. Triton X-100 and some selected ionic liquids give CN-materials with accessible pore systems and high relative nitrogen contents.

ChemSusChem
DOI: **10.1002/cssc.200900284**





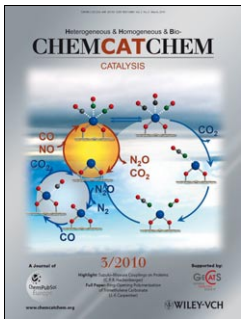
Supported Catalysts

A. Zecchina, C. Otero Areán, E. Groppo*

Highly Unsaturated Cr^{II}/SiO_2 Single-Site Catalysts for Reducing Nitrogen Oxides with CO: Reaction Intermediates and Catalytic Cycle

Wherefore art thou, Chromia? Owing to the redox chemistry of Cr^{II} and the high coordinative unsaturation of the metal cation forming the active site, silica-supported chromia acts as a single-site catalyst for the reduction of nitrogen oxides by CO. The mechanism is elucidated by surface FTIR spectroscopy, which also allows characterization of the intermediate species involved in three coupled catalytic cycles.

ChemCatChem
DOI: **10.1002/cctc.200900295**

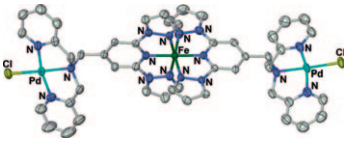


Back-to-Back Ligands

C. A. Tovee, C. A. Kilner, S. A. Barrett, J. A. Thomas, M. A. Halcrow*

A Back-to-Back Ligand with Dipyrazolylpyridine and Dipicolylamine Metal-Binding Domains

The new ligand 4-bis(pyrid-2-ylmethyl)aminomethyl-2,6-bis(pyrazol-1-yl)pyridine (**L**) is metallated sequentially at its dipicolylamino and then its dipyrazolylpyridyl sites. The FeM_2 (M = Pd and Pt) complexes undergo gradual thermal spin transitions in the solid state and (when M = Pt) in solution.



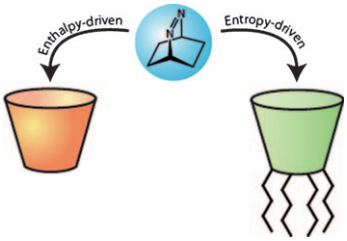
Eur. J. Inorg. Chem.
DOI: **10.1002/ejic.200901107**

Molecular Recognition

J. Cui, V. D. Uzunova, D.-S. Guo, K. Wang, W. M. Nau,* Y. Liu*

Effect of Lower-Rim Alkylation of *p*-Sulfonatocalix[4]arene on the Thermodynamics of Host–Guest Complexation

Complex stability constants and thermodynamic parameters for the complexation of *p*-sulfonatocalix[4]arene (SC4A) and 5,11,17,23-tetrasulfonato-25,26,27,28-tetrakis(*n*-butyl)calix[4]arene (SC4A-Bu) with organic ammonium cations and neutral spherical organic molecules have been determined by isothermal titration calorimetry. These results show that, upon complexation with these guests by SC4A-Bu, the enthalpy changes become less favorable, whereas the entropy changes become more favorable relative to SC4A complexation.



Eur. J. Org. Chem.
DOI: **10.1002/ejoc.200901361**