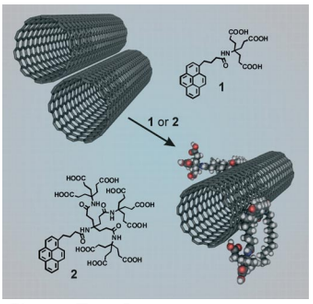
On these pages, we feature a selection of the excellent work that has recently been published in our sister journals. If you are reading these pages on a computer, click on any of the items to read the full article. Otherwise please see the DOIs for easy online access through Wiley InterScience.

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.



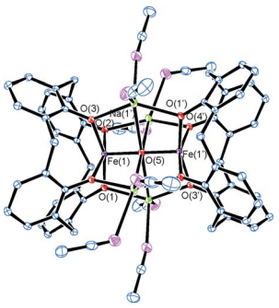
Chem. Eur. J.
DOI: **10.1002/chem.200903420**

Ring-Opening Polymerization

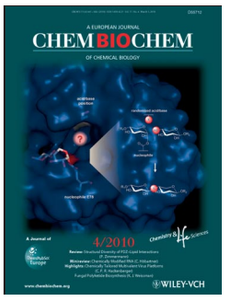
A. Arbaoui, C. Redshaw,* M. R. J. Elsegood, V. E. Wright, A. Yoshizawa, T. Yamato

Iron(III) and Zinc(II) Calixarene Complexes: Synthesis, Structural Studies, and Use as Procatalysts for ε-Caprolactone Polymerization

Opening rings: Synthetic routes have been investigated towards new iron(III) procatalysts for ε-caprolactone, utilizing the heterobimetallic reagents $[(THF)MFe(O\mathit{t}Bu)_3]_2$ (M = Na, K) and calix[n]arenes or oxacalixarenes. Improved polymerization activity is observed in the case of the related zinc(II) systems over that observed for the iron(III) heterobimetallic systems.



Chem. Asian J.
DOI: **10.1002/asia.200900514**

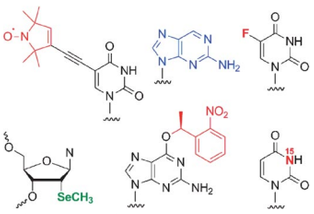


RNA

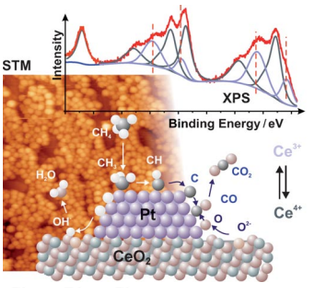
F. Wachowius, C. Höbartner*

Chemical RNA Modifications for Studies of RNA Structure and Dynamics

RNA watching: Artificial nucleoside modifications (see figure for examples) add unique properties to functional RNAs for the exploration of RNA structures, folding pathways, dynamic conformations, catalysis mechanisms, and small-molecule recognition by using various biophysical methods including NMR, EPR, and fluorescence spectroscopies and X-ray crystallography. This article provides an overview of recent applications.



ChemBioChem
DOI: **10.1002/cbic.200900697**



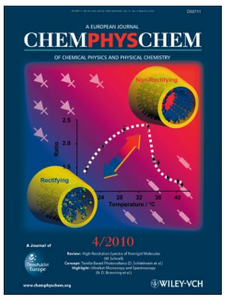
ChemPhysChem
DOI: **10.1002/cphc.200900673**

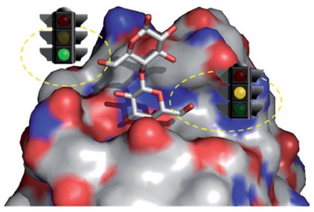
Pt/Ceria Catalysts

Y. Lykhach,* T. Staudt, M. P. A. Lorenz, R. Streber, A. Bayer, H.-P. Steinrück, J. Libuda

Microscopic Insights into Methane Activation and Related Processes on Pt/Ceria Model Catalysts

Supporting role: Ceria-supported noble-metal catalysts release oxygen, which may help to reduce the formation of carbonaceous residues during hydrocarbon reforming. The microscopic origins of these effects are examined using single-crystal-based supported model catalysts. The systems involve Pt nanoparticles on well-defined $CeO_2(111)$ films studied by molecular beam experiments, XPS, and STM (see picture).





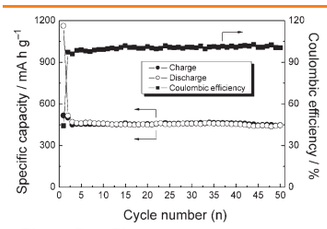
ChemMedChem
DOI: **10.1002/cmdc.200900476**

Drug Discovery

J. P. Ribeiro, S. André, F. J. Cañada, H.-J. Gabius, A. P. Butera, R. J. Alves, J. Jiménez-Barbero*

Lectin-Based Drug Design: Combined Strategy to Identify Lead Compounds using STD NMR Spectroscopy, Solid-phase Assays and Cell Binding for a Plant Toxin Model

Carbohydrate chemistry: Sugar-binding proteins, lectins, are an increasingly valid target in drug design with growing awareness of the biological importance of glycans. A series of modified lactosides containing aromatic aglycan moieties were tested in a plant toxin model for their ability to block lectin binding to cell-surface glycans and consequently prevent the uptake of the plant toxin by the cell.



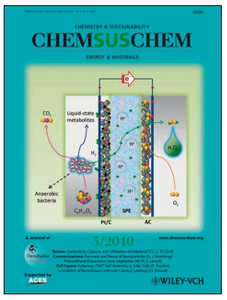
ChemSusChem
DOI: **10.1002/cssc.200900191**

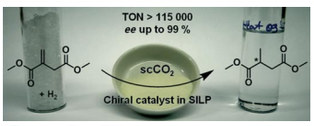
Lithium Storage

Y.-S. Hu,* P. Adelhelm, B. M. Smarsly,* J. Maier

Highly Stable Lithium Storage Performance in a Porous Carbon/Silicon Nanocomposite

A porous carbon/silicon nanocomposite was synthesized in a one-step procedure based on a "soft-templating" methodology, taking advantage of phase separation between mesophase-pitch and organic polymers as soft templates. The resulting nanocomposite exhibits a highly stable reversible capacity of 450 mA h g^{-1} in a vinylene carbonate-containing electrolyte.





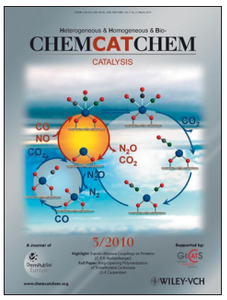
ChemCatChem
DOI: **10.1002/cctc.200900261**

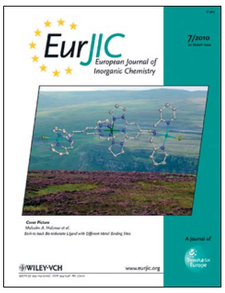
Ionic Liquids

U. Hintermair, T. Höfener, T. Pullmann, G. Franciò, W. Leitner*

Continuous Enantioselective Hydrogenation with a Molecular Catalyst in Supported Ionic Liquid Phase under Supercritical CO_2 Flow

Highly efficient continuous-flow asymmetric catalysis was achieved by combination of supported ionic liquid phase (SILP) catalysts with supercritical CO_2 ($scCO_2$) as the mobile phase, as demonstrated for enantioselective hydrogenation in the presence of a molecular rhodium–QUINAPHOS complex. The integrated reaction and separation process yielded chemically and enantiomerically pure products without the need for organic solvents.



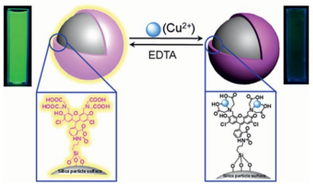


Cu Chemosensors

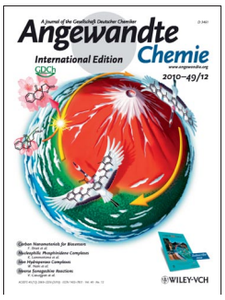
S. Seo, H. Y. Lee, M. Park, J. M. Lim, D. Kang,* J. Yoon,* J. H. Jung*

Fluorescein-Functionalized Silica Nanoparticles as a Selective Fluorogenic Chemosensor for Cu^{2+} in Living Cells

The optical binding ability of fluorescein-functionalized silica nanoparticles to heavy metal ions was investigated in aqueous solution. These nanoparticles act as a new type of synthetic fluorogenic chemosensor for imaging Cu^{2+} ions in living cells.



Eur. J. Inorg. Chem.
DOI: **10.1002/ejic.200901039**

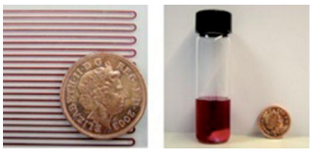


Process Optimization

F. E. Valera, M. Quaranta, A. Moran, J. Blacker,* A. Armstrong,* J. T. Cabral,* D. G. Blackmond*

The Flow's the Thing…Or Is It? Assessing the Merits of Homogeneous Reactions in Flask and Flow

Against the flow?! What factors dictate the relative merits of microflow reactors versus batch-reaction flasks for homogeneous catalytic reactions? The optimal reaction protocol must be decided on a case-by-case basis. Flask reactors equipped with in situ detection devices provide a concise and information-rich means of obtaining the intrinsic kinetic information required to make this decision.



Angew. Chem. Int. Ed.
DOI: **10.1002/anie.200906095**

