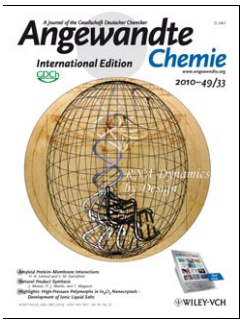
On these pages, we feature a selection of the excellent work that has recently been published in our sister journals. If you are reading these pages on a computer, click on any of the items to read the full article. Otherwise please see the DOIs for easy online access through Wiley InterScience.

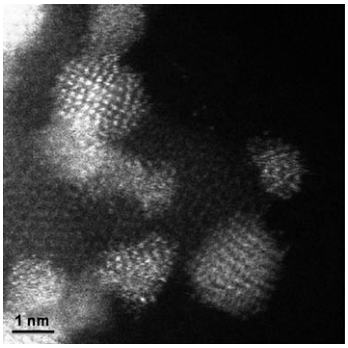


Nanoparticles

Y. Liu, C.-J. Jia, J. Yamasaki, O. Terasaki, F. Schüth*

Highly Active Iron Oxide Supported Gold Catalysts for CO Oxidation: How Small Must the Gold Nanoparticles Be?

The shape of gold: The title catalyst has been prepared through a colloidal deposition method. Scanning transmission electron microscopy studies confirmed that for the catalyst, gold clusters with a bilayer structure and a diameter of about 0.5 nm are not mandatory to achieve the high activity (see image).



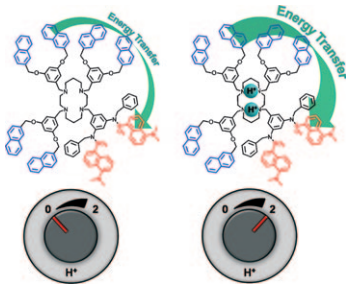
Angew. Chem. Int. Ed.
DOI: **10.1002/anie.201000452**

Dendrimers

G. Bergamini, A. Sottilotta, M. Maestri, P. Ceroni,* F. Vögtle*

Cyclam-Cored Dendrimers Appended with Four Dendrons of Two Different Types: Intradendrimer Energy Transfer

The H effect! Two cyclam-cored dendrimers appended with dendrons of two different types, by proper protection/deprotection of the cyclam unit, are synthesized. Interdendron naphthyl-to-dansyl energy transfer takes place within the same dendrimer: its efficiency can be reversibly tuned by protonation/deprotonation of the cyclam core.



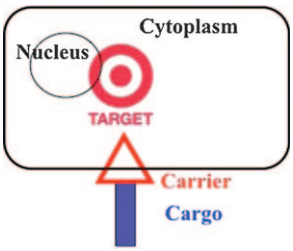
Chem. Asian J.
DOI: **10.1002/asia.201000170**

Drug Delivery

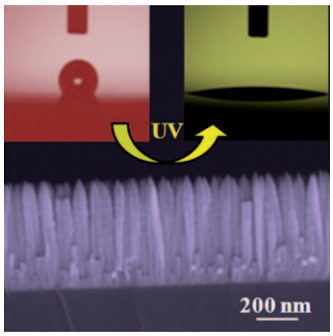
F. Marlin, P. Simon, T. Saison-Behmoaras, C. Giovannangeli*

Delivery of Oligonucleotides and Analogues: The Oligonucleotide Conjugate-Based Approach

Carrier conjugates: Oligonucleotide-based therapeutic strategies are moving closer to use in patients, but bench work is still needed. Although oligonucleotides are validated and powerful tools in basic research, their delivery is still the major issue impeding their use as therapeutics. Carrier–oligonucleotide conjugates currently in development are reviewed here.



ChemBioChem
DOI: **10.1002/cbic.201000138**



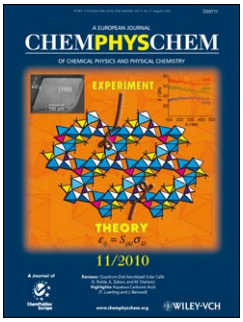
ChemPhysChem
DOI: **10.1002/cphc.201000333**

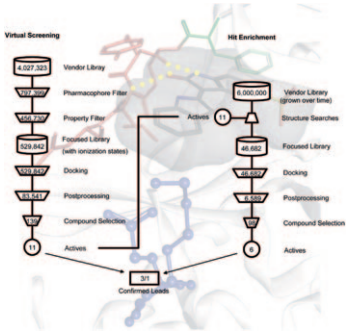
Nanostructures

D. Bekermann, A. Gasparotto,* D. Barreca, A. Devi, R. A. Fischer, M. Kete, U. Lavrenčič Štangar, O. I. Lebedev, C. Maccato, E. Tondello, G. Van Tendeloo

ZnO Nanorod Arrays by Plasma-Enhanced CVD for Light-Activated Functional Applications

Switch of the surface properties: Supported ZnO nanorod arrays with tailored roughness and aspect ratios are successfully synthesized by plasma-enhanced chemical vapor deposition. Such nanostructures exhibit significant superhydrophilic and photocatalytic properties tunable as a function of their morphological organization (see picture). This renders them promising building blocks for the fabrication of stimuli-responsive materials.





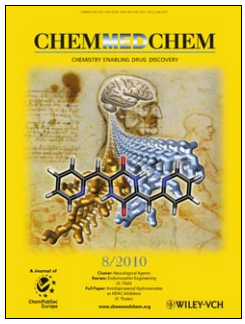
ChemMedChem
DOI: **10.1002/cmdc.201000157**

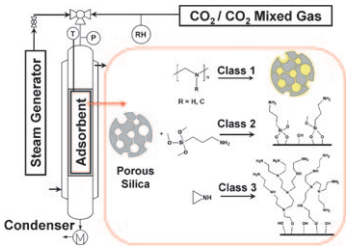
Bioinformatics

K. Engels, C. Beyer, M. L. Suárez Fernández, F. Bender, M. Gaßel, G. Unden, R. J. Marhöfer, J. C. Mottram, P. M. Selzer*

Inhibition of *Eimeria tenella* CDK-Related Kinase 2: From Target Identification to Lead Compounds

Targeting coccidiosis: Cyclin-dependant kinases (CDKs) of the protozoan parasite *Eimeria tenella*, which causes the severe poultry disease coccidiosis, were identified from genomic sequence data. The cell cycle and most well-characterized kinase (EtCRK2) of *E. tenella* were chemically validated as drug targets in enzyme and cell culture assays. Promising lead compounds were identified in a combined in silico/in vitro screening approach.





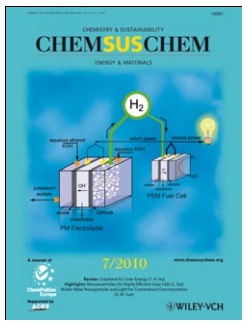
ChemSusChem
DOI: **10.1002/cssc.201000131**

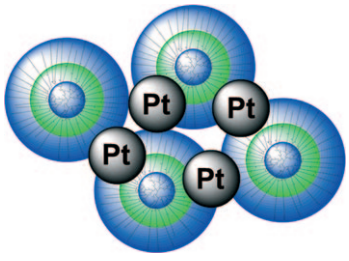
Carbon Dioxide Capture

W. Li, S. Choi, J. H. Drese, M. Hornbostel, G. Krishnan, P. M. Eisenberger, C. W. Jones*

Steam-Stripping for Regeneration of Supported Amine-Based CO_2 Adsorbents

Amine-based solid CO_2 adsorbents have been investigated intensively in recent years. However, the focus has routinely been on their adsorption capacity and not on their regeneration. Here, a practical desorption process for supported amine adsorbents, steam-stripping, is demonstrated for the first time.





ChemCatChem
DOI: **10.1002/cctc.201000013**

Core–Shell Catalysts

J. Keilitz, M. Schwarze, S. Nowag, R. Schomäcker, R. Haag*

Homogeneous Stabilization of Pt Nanoparticles in Dendritic Core–Multishell Architectures: Application in Catalytic Hydrogenation Reactions and Recycling

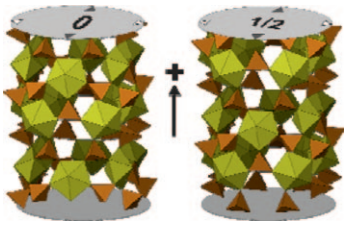
Cores and effect: The synthesis and stabilization of Pt nanoparticles in dendritic core–multishell polymers and their application to hydrogenation reactions are described. The catalyst is reused 14 times (total TON = 22000) and can be recovered by ultrafiltration or phase separation with very low metal leaching into the product.

Modeling Actinide Compounds

S. V. Krivovichev*

Actinyl Compounds with Hexavalent Elements (S, Cr, Se, Mo) – Structural Diversity, Nanoscale Chemistry, and Cellular Automata Modeling

Basic features of the structural chemistry of actinyl compounds with TO_4 tetrahedral oxyanions (T = S, Cr, Se, and Mo) are outlined with particular attention to structural topologies, nanoscale units, and algorithmic generation of structures by using cellular automata.



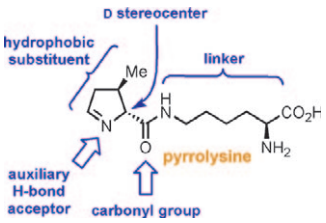
Eur. J. Inorg. Chem.
DOI: **10.1002/ejic.201000168**

Pyrrolysine

T. Fekner, X. Li, M. K. Chan*

Pyrrolysine Analogs for Translational Incorporation into Proteins

A combination of crystallographic, biochemical, and synthetic studies related to pyrrolysine and its biochemical machinery led to the formulation of a set of principles for the design of successful analogs for site-specific modification of proteins. The journey leading to it and recent practical applications of the acquired knowledge are discussed.



Eur. J. Org. Chem.
DOI: **10.1002/ejoc.201000204**

