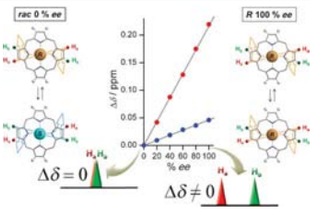
On these pages, we feature a selection of the excellent work that has recently been published in our sister journals. If you are reading these pages on a computer, click on any of the items to read the full article. Otherwise please see the DOIs for easy online access through Wiley Online Library.

Chiral Solvating Agents

J. Labuta, S. Ishihara, A. Shundo, S. Arai, S. Takeoka, K. Ariga, J. P. Hill*

Chirality Sensing by Nonchiral Porphines

Let's split the difference: Nonchiral porphine macrocycles have been used as chemical shift agents for the determination of the enantiomeric excesses of chiral carboxylic acids. This method is based on the observation of the relative splitting induced in the ^{1}H NMR resonances of the porphine protons. A mechanism for the recognition based on the fast exchange of the guest molecules has been proposed (see scheme).



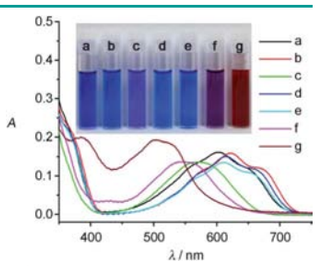
Chem. Eur. J.
DOI: **10.1002/chem.201100052**

Photovoltaics

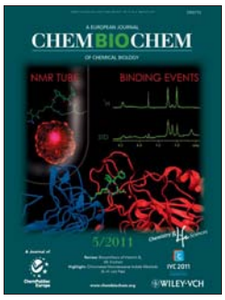
Q. Zhang,* J. Xiao, Z. Yin, H. M. Duong, F. Qiao, F. Boey, X. Hu, H. Zhang, F. Wudl*

Synthesis, Characterization, and Physical Properties of a Conjugated Heteroacene: 2-Methyl-1,4,6,7,8,9-hexaphenylbenz(*g*)isoquinolin-3(2*H*)-one (BIQ)

Taking the BIQ: The synthesis and characterization of a stable and blue heteroacene, 2-methyl-1,4,6,7,8,9-hexaphenylbenz(*g*)isoquinolin-3(2*H*)-one (BIQ) is described. With its relatively small π framework, BIQ has an absorption λ_{max} at 620 nm (see figure), which is larger than that of pentacene (λ_{max} = 582 nm), but more stable.



Chem. Asian J.
DOI: **10.1002/asia.201000659**

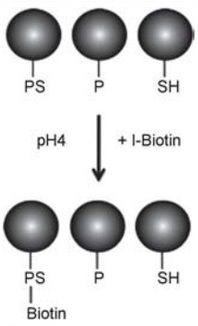


Chemical Genetics

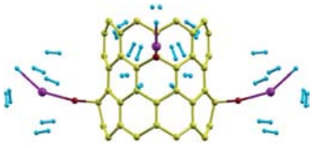
S. E. Lee, L. M. Elphick, H. B. Kramer, A. M. E. Jones, E. S. Child, A. A. Anderson, L. Bonnac, N. Suwaki, B. M. Kessler, V. Gouverneur, D. J. Mann*

The Chemoselective One-Step Alkylation and Isolation of Thiophosphorylated Cdk2 Substrates in the Presence of Native Cysteine

It's a kinase magic: The identification of protein substrates is hampered by the large number of kinases active in cells at a given time. Here we use a chemical genetic approach to specifically label the substrates of an analogue-sensitive kinase with thiophosphate and use pH-dependent S-alkylation to selectively recover thiophosphorylated peptides.



ChemBioChem
DOI: **10.1002/cbic.201000528**



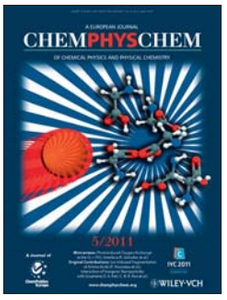
ChemPhysChem
DOI: **10.1002/cphc.201000790**

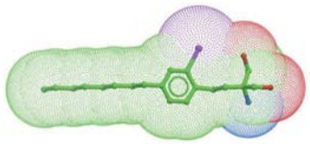
Hydrogen Storage

M. C. Nguyen, M.-H. Cha, J. Bae, Y. Kim, M. Kim, J. Ihm*

Calcium-Decorated, Hydroxylated Single-Walled Carbon Nanotubes for Hydrogen Storage: A First-Principles Study

Soaking up the H_2: Hydroxylated single-walled carbon nanotubes can be a promising candidate for high-capacity hydrogen storage material since the binding energy of the Ca atom on the hydroxyl group is larger than the bulk cohesive energy of Ca, suppressing the undesirable cluster formation of Ca atoms. Each Ca atom adsorbed on the hydroxyl group can bind up to seven H_2 molecules (see picture).





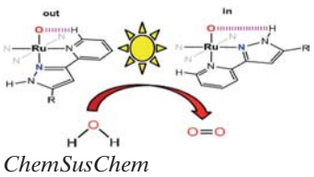
ChemMedChem
DOI: **10.1002/cmdc.201000477**

Imaging Agents

E. Briard,* D. Orain, C. Beerli, A. Billich, M. Streiff, M. Bigaud, Y. P. Auberson

BZM055, an Iodinated Radiotracer Candidate for PET and SPECT Imaging of Myelin and FTY720 Brain Distribution

Improve your image: FTY720 (fingolimod, Gilenya®) is an orally active S1P receptor modulator for the treatment of multiple sclerosis. 2-Iodo-FTY720 (BZM055) is proposed as a PET or SPECT tracer to study the pharmacokinetics and brain penetration of FTY720 in patients. Because this drug accumulates in myelin sheaths, [^{123}I]- or [^{124}I]BZM055 might also prove useful to image myelin in patients.



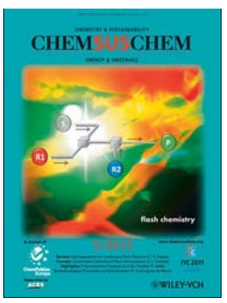
ChemSusChem
DOI: **10.1002/cssc.201000358**

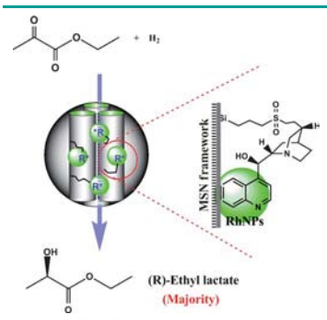
Photocatalysis

S. Roeser, P. Farràs, F. Bozoglian, M. Martínez-Belmonte, J. Benet-Buchholz, A. Llobet*

Chemical, Electrochemical, and Photochemical Catalytic Oxidation of Water to Dioxygen with Mononuclear Ruthenium Complexes

The age of aqua-Ru's: Mononuclear ruthenium-aqua complexes that are capable of acting as water oxidation catalysts following chemical, electrochemical, or photochemical induction are reported. Investigations of their electronic and geometric properties provide a rationale for their performance.





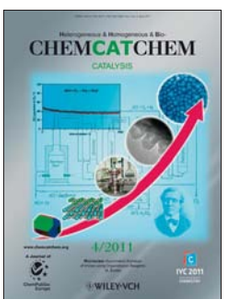
ChemCatChem
DOI: **10.1002/cctc.201000363**

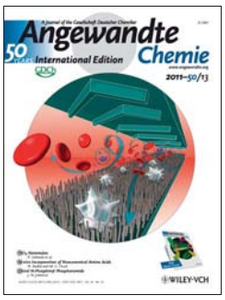
Catalyst Design

Y. Huang,* S. Xu, V. S.-Y. Lin

New Strategy for Enantioselective Heterogeneous Catalysis: Immobilization of both Metal Nanoparticles and Chiral Modifiers on Mesoporous Silica Nanoparticles

Are you a silican or a silican't? By using a cocondensation method, well defined rhodium nanoparticles and chiral reagent (−)-cinchonidine were immobilized and stabilized on mesoporous silica nanoparticle surface simultaneously. For the enantioselective hydrogenation of ethyl pyruvate, the enantioselectivity was very well preserved during the catalyst recycling without any additional chiral reagent supplement.



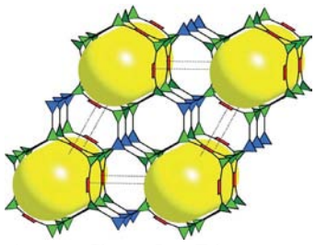


Metal–Organic Frameworks

Z. Guo, H. Wu, G. Srinivas, Y. Zhou, S. Xiang, Z. Chen, Y. Yang, W. Zhou,* M. O'Keeffe, B. Chen*

A Metal–Organic Framework with Optimized Open Metal Sites and Pore Spaces for High Methane Storage at Room Temperature

Holey MOF! Open copper sites and optimal pore spaces in UTSA-20 (see picture), a MOF based on the novel trinodal (3,3,4) net, has made UTSA-20 into the material with the highest methane storage density (0.22 $g\,cm^{-3}$) in micropores, and one of the few porous MOFs with storage volume capacity (195 $cm^3\,cm^{-3}$) surpassing the DOE methane target of 180 $cm^3\,cm^{-3}$ at room temperature and 35 bar.



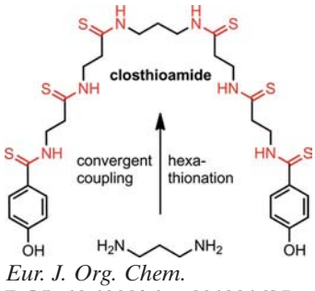
Angew. Chem. Int. Ed.
DOI: **10.1002/anie.201007583**

Natural Product Synthesis

F. Kloss, T. Lincke, C. Hertweck*

Highly Efficient Total Synthesis of the *Clotridium*-Derived anti-MRSA Antibiotic Closthioamide

The antibiotic closthioamide from *Clostridium cellulolyticum*, the first example of a secondary metabolite from strictly anaerobic bacteria, was synthesized by a versatile and highly efficient route starting from simple building blocks, involving convergent peptide coupling and polythionation.



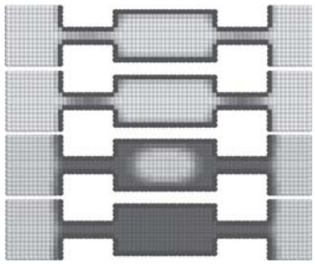
Eur. J. Org. Chem.
DOI: **10.1002/ejoc.201001695**

Fluids Confined in Porous Materials

P. A. Monson

Fluids Confined in Porous Materials: Towards a Unified Understanding of Thermodynamics and Dynamics

Density functional theory (DFT) has had substantial impact on our ability to model the thermodynamics of adsorption and desorption of fluids in porous materials. A dynamical version of the theory can be used to describe the evolution of the state of a confined fluid in response to step changes in the bulk chemical potential such as in a dynamic uptake adsorption experiment.



Chem. Ing. Tech.
DOI: **10.1002/cite.201000181**

