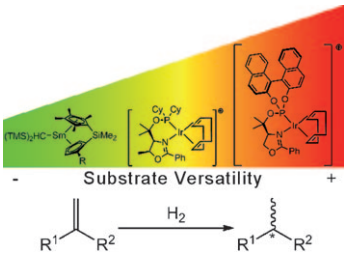
On these pages, we feature a selection of the excellent work that has recently been published in our sister journals. If you are reading these pages on a computer, click on any of the items to read the full article. Otherwise please see the DOIs for easy online access through Wiley Online Library.

Asymmetric Synthesis

O. Pàmies, P. G. Andersson, M. Diéguez*

Asymmetric Hydrogenation of Minimally Functionalised Terminal Olefins: An Alternative Sustainable and Direct Strategy for Preparing Enantioenriched Hydrocarbons

Chiral hydrocarbons through hydrogenation: This minireview highlights the progress made in the preparation of chiral hydrocarbons through asymmetric hydrogenation of minimally functionalised terminal olefins (see scheme).



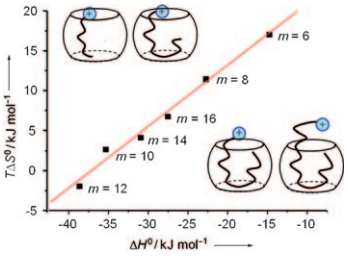
Chem. Eur. J.
DOI: **10.1002/chem.201001909**

Host–Guest Systems

Y. H. Ko,* Y. Kim, H. Kim, K. Kim*

U-Shaped Conformation of Alkyl Chains Bound to a Synthetic Receptor Cucurbit[8]uril

This guest is bent on fitting in: Alkyltrimethylammonium and cucurbit[8]uril (CB[8]) form 1:1 host–guest complexes with a high binding constant ($K \approx 10^6\ M^{-1}$). A short hexyl chain can be fully encapsulated in an extended conformation inside the CB[8] cavity while for longer aliphatic chains, from octyl to cetyl, the alkyl tails take on a U-shaped conformation inside the cavity, which follows the enthalpy–entropy compensation rule commonly observed in molecular recognition systems.



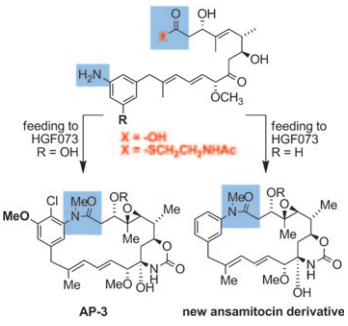
Chem. Asian J.
DOI: **10.1002/asia.201000665**

Total Synthesis

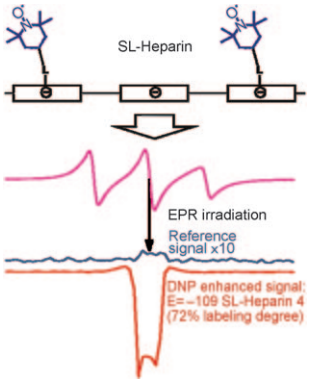
K. Harmrolfs, M. Brünjes, G. Dräger, H. G. Floss, F. Sasse, F. Taft, A. Kirschning*

Cyclization of Synthetic *seco*-Proansamitocins to Ansamitocin Macrolactams by *Actinosynnema pretiosum* as Biocatalyst

Ring closure is possible with *seco*-proansamitocin and two activated SNAC esters, which can be processed to ansamitocin P3 and 19-deschloro-20-demethoxy AP-3, respectively, by an AHBA-blocked mutant of *Actinosynnema pretiosum*. This work sheds light on the synthetic potential of macrolactamizing amide synthases. The new ansamitocin derivative showed similar to enhanced antiproliferative activity against several cancer cell lines relative to AP-3.



ChemBioChem
DOI: **10.1002/cbic.201000422**



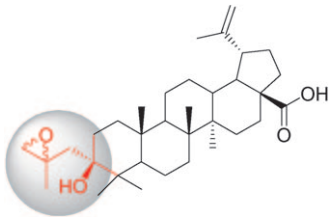
ChemPhysChem
DOI: **10.1002/cphc.201000559**

Dynamic Nuclear Polarization

B. C. Dollmann, A. L. Kleschyov, V. Sen, V. Golubev, L. M. Schreiber, H. W. Spiess, K. Münnemann,* D. Hinderberger*

Spin-Labeled Heparins as Polarizing Agents for Dynamic Nuclear Polarization

Enhanced signals: Spin-labeled (SL) heparins are introduced as a class of polarizing agents for Overhauser-type dynamic nuclear polarization (DNP). All presented SL-heparins show high ^{1}H DNP enhancement factors up to $E=-110$. These high enhancements—despite broad continuous-wave electron paramagnetic resonance (CW EPR) lines—are achieved by using heterogeneously distributed (along the heparin backbone) spin labels.



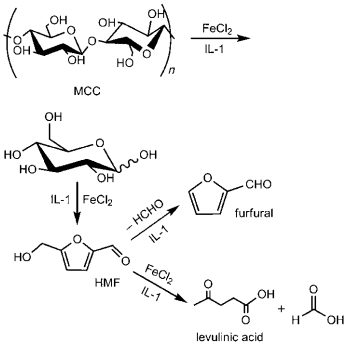
ChemMedChem
DOI: **10.1002/cmdc.201000329**

Structure–Activity Relationships

C. Genet, C. Schmidt, A. Strehle, K. Schoonjans, J. Auwerx, R. Saladin, A. Wagner*

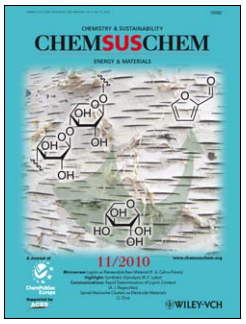
Redefining the TGR5 Triterpenoid Binding Pocket at the C-3 Position

A defining characteristic: Syntheses of potent TGR5 agonists were used to characterize binding interactions. A serie of C-3 modified betulinic acid derivatives were synthesized and evaluated. Among them, epoxide **15** showed nanomolar activity.



ChemSusChem
DOI: **10.1002/cssc.201000184**

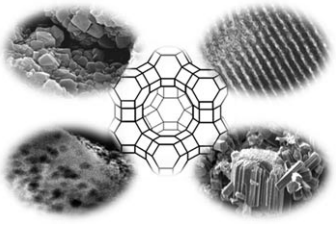
Renewable Resources



F. Tao, H. Song, L. Chou*

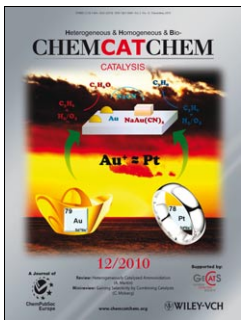
Hydrolysis of Cellulose by Using Catalytic Amounts of $FeCl_2$ in Ionic Liquids

The use of $FeCl_2$ as catalyst in an ionic liquid, 1-(4-sulfonic acid) butyl-3-methylimidazolium hydrogen sulfate (IL-1), is found to be effective for the hydrolysis of microcrystalline cellulose (MCC). The conversion reaches >84%, and yields of 5-hydroxymethylfurfural (HMF) and furfural of 34% and 19%, respectively, are achieved; small amounts of levulinic acid and total reducing sugars are also generated.



ChemCatChem
DOI: **10.1002/cctc.201000158**

Industrial Catalysis



R. Chal, C. Gérardin, M. Bulut, S. van Donk*

Overview and Industrial Assessment of Synthesis Strategies towards Zeolites with Mesopores

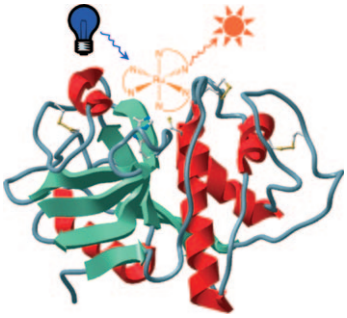
Industrial zeolite and magic: The accessibility of zeolites (see figure) is of paramount importance to capitalize on their effectiveness in industrial catalysis. The variety of synthesis strategies proposed today for the preparation of 'hierarchical' zeolite materials combining micro- and mesoporosity is discussed.

Luminescent Ruthenium Complexes

P. Haquette, J. Jacques, S. Dagorne, C. Fosse, M. Salmain*

Synthesis, Characterization and Luminescence Properties of Dipyridin-2-ylamine Ligands and Their Bis(2,2′-bipyridyl)ruthenium(II) Complexes and Labelling Studies of Papain from *Carica papaya*

Reaction of dipyridin-2-ylamine complexes of Ru^{II} functionalized with a maleimide moiety with papain occurred in a stereoselective fashion and yielded bioconjugates displaying enhanced luminescence with respect to the starting materials.



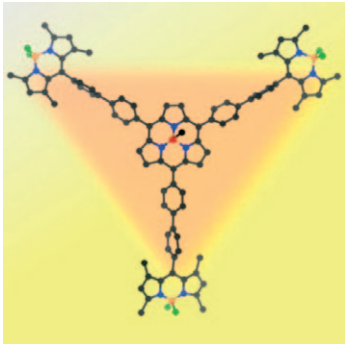
Eur. J. Inorg. Chem.
DOI: **10.1002/ejic.201000585**

Porphyrinoids

H. Sugimoto, M. Muto, T. Tanaka, A. Osuka*

Synthesis of BODIPY-Appended Subporphyrins

Intramolecular excitation energy transfer in BODIPY-appended subporphyrins was found to occur from the subporphyrin to the BODIPY part. Fluorescence from BODIPY follows the intrinsic fluorescence properties of BODIPY references. *meso*-Oligo(1,4-phenylene) substituents can interact electronically with the subporphyrin core to cause redshifted absorption bands and to increased fluorescence quantum yields.



Eur. J. Org. Chem.
DOI: **10.1002/ejoc.201001188**