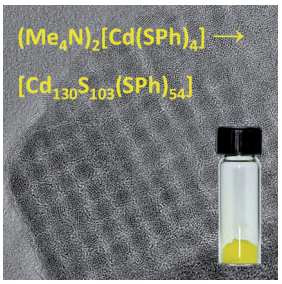
On these pages, we feature a selection of the excellent work that has recently been published in our sister journals. If you are reading these pages on a computer, click on any of the items to read the full article. Otherwise please see the DOIs for easy online access through Wiley Online Library.

Cluster Compounds

T. I. Levchenko, C. Kübel, Y. Huang,* J. F. Corrigan*

From Molecule to Materials: Crystalline Superlattices of Nanoscopic CdS Clusters

Make way for a superlattice! A crystalline 3D superlattice of 2.3 nm molecular CdS nanoclusters was prepared from a convenient mononuclear cadmium thiophenolate precursor. HRTEM and STEM tomography show highly crystalline repetition of monodisperse frameworks (see figure). This combined with elemental and thermogravimetric analyses suggests an approximate formula $[Cd_{130}S_{103}(SPh)_{54}]$.



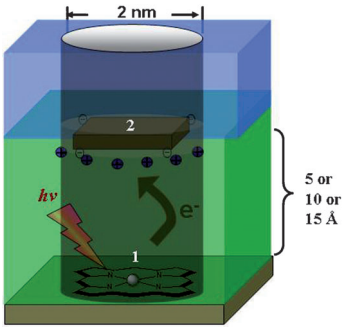
Chem. Eur. J.
DOI: **10.1002/chem.201102487**

Self-Assembly

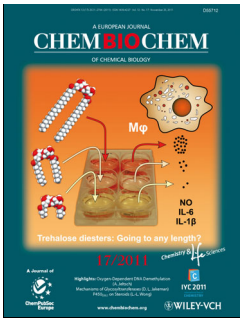
S. V. Bhosale,* S. Hackbarth,* S. J. Langford, S. V. Bhosale

Light-Induced Electron Transfer over Distances of 5, 10, and 15 Å within Water-Filled Yoctowells

All's well that yoctowells: Two different dyes (porphyrin **1** and quinone **2**) have been immobilized in a yoctoliter-sized cavity at defined subnanometer distances of 5, 10, and 15 Å in an aqueous medium. Upon photoexcitation of the bottom porphyrin, electron transfer occurred with varying amplitudes in the range 70–60%.



Chem. Asian J.
DOI: **10.1002/asia.201100533**

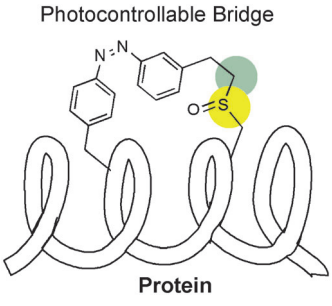


Click Chemistry

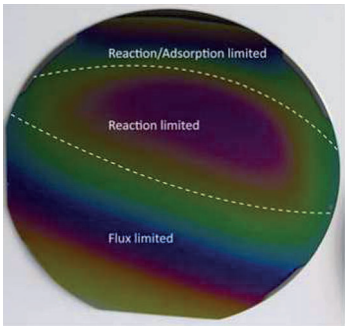
C. Hoppmann,* P. Schmieder, N. Heinrich, M. Beyermann

Photoswitchable Click Amino Acids: Light Control of Conformation and Bioactivity

Click the switch: By using a photoswitchable click amino acid (PSCaa) a light-induced intramolecular thiol-ene click reaction with a neighboring cysteine under very mild conditions results in an azobenzene bridge (see figure). By expanding the genetic code for PSCaa the specific incorporation of photoswitch units into proteins in living cells can result in an exciting approach for studying light-controllable activity, in vivo.



ChemBioChem
DOI: **10.1002/cbic.201100578**



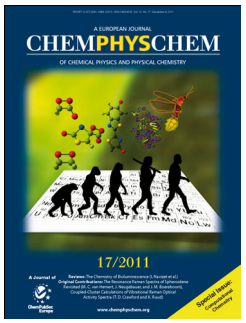
ChemPhysChem
DOI: **10.1002/cphc.201100637**

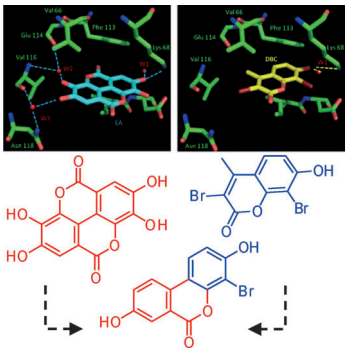
Chemical Vapor Deposition

A. Dabirian,* Y. Kuzminykh, E. Wagner, G. Benvenuti, S. A. Rushworth, P. Hoffmann*

Chemical Vapor Deposition Kinetics and Localized Growth Regimes in Combinatorial Experiments

Laser-assisted deposition: The discovery of chemical vapor deposition (CVD) conditions under which the growth rate is a decreasing function of the precursor flux has the potential to boost the resolution of laser-assisted CVD processes whereas flux- and desorption-limited conditions appear to be the ideal environment for spatially addressable combinatorial experiments (see picture).





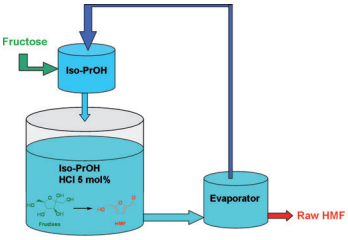
ChemMedChem
DOI: **10.1002/cmdc.201100338**

Drug Design

G. Cozza, A. Gianoncelli, P. Bonvini, E. Zorzi, R. Pasquale, A. Rosolen, L. A. Pinna, F. Meggio, G. Zagotto, S. Moro*

Urolithin as a Converging Scaffold Linking Ellagic acid and Coumarin Analogues: Design of Potent Protein Kinase CK2 Inhibitors

Two become one: Comparing the crystallographic binding modes of ellagic acid (red) and 3,8-dibromo-7-hydroxy-4-methylchromen-2-one (DBC; blue), an X-ray structure-driven merging approach to the design of novel casein kinase 2 (CK2) inhibitors was taken. Using this strategy, a potent and selective urolithin derivative, 4-bromo-3,8-dihydroxy-benzo[*c*]chromen-6-one was identified, which exhibits a K_i value of 7 nM against CK2.



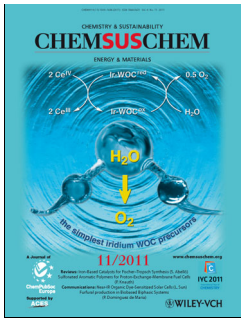
ChemSusChem
DOI: **10.1002/cssc.201100489**

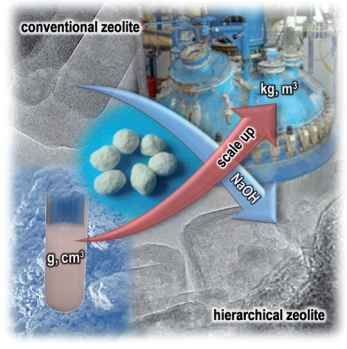
Renewable Resources

L. Lai, Y. Zhang*

The Production of 5-Hydroxymethylfurfural from Fructose in Isopropyl Alcohol: A Green and Efficient System

Solving problems: An isopropyl alcohol-mediated reaction system for the production of 5-hydroxymethylfurfural (HMF) from fructose reaches a yield of up to 87%. The solvent can be easily recycled by evaporation, giving the HMF product. The system avoids the use of large amounts of organic solvent, has a minimal environmental impact, and offers a new route to large-scale economically viable processes.





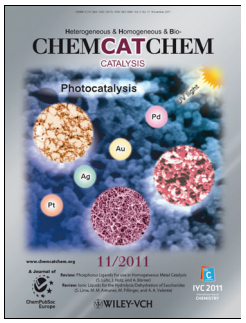
ChemCatChem
DOI: **10.1002/cctc.201100264**

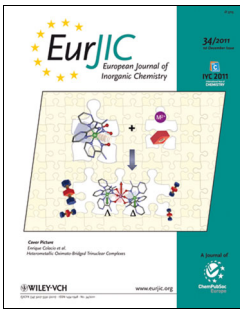
Industrial Catalysis

J. Pérez-Ramírez,* S. Mitchell, D. Verboekend, M. Milina, N.-L. Michels, F. Krumeich, N. Marti, M. Erdmann

Expanding the Horizons of Hierarchical Zeolites: Beyond Laboratory Curiosity towards Industrial Realization

Scale up for the win! Hierarchically structured zeolites are prepared on a large scale by desilication followed by forming into mm-sized bodies. Extrapolation of the superior catalytic properties is proven by the remarkable similarity between pilot and laboratory scale results. The binder and the shaping process did not alter the enhanced porous properties of the mesoporous zeolite. These results unlock the door towards the study of further key steps in the design of mesoporous zeolite catalysts for large scale applications.



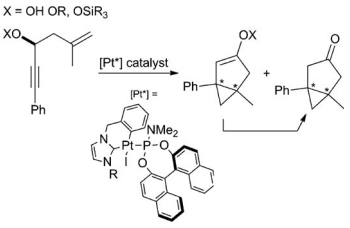


Enantioselective Cycloisomerizations

H. Jullien, D. Brissy, P. Retailleau, A. Marinetti*

Enantioselective Cycloisomerization of 1,5-Enynes Promoted by Cyclometalated NHC–Pt^{II}–Monophos Catalysts

A Monophos–Pt complex has been used to catalyze the enantioselective cycloisomerization of 1,5-enynes displaying a non-migrating oxygen function at the propargylic carbon. Significant matching–mismatching effects have been highlighted between the chiral catalyst and chiral substrates with opposite configurations at the stereogenic carbon.



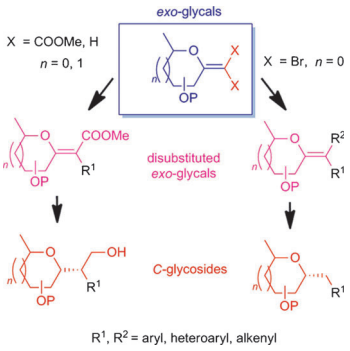
Eur. J. Inorg. Chem.
DOI: **10.1002/ejic.201100818**

exo-Glycal Chemistry

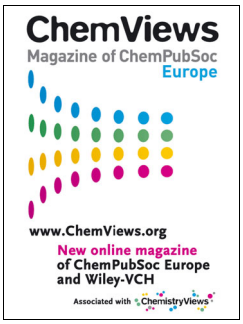
H.-T. T. Thien, A. Novoa, N. Pellegrini-Moïse, F. Chrétien, C. Didierjean, Y. Chapleur*

Tetrasubstituted *C*-Glycosylidenes and *C*-Glycosyl Compounds from Di- and Monobromo-Substituted *exo*-Glycals

Readily available *exo*-glycal derivatives can be transformed into more highly elaborated ones through vinylic bromination and palladium-catalysed cross-coupling. Chemical manipulation and stereoselective hydrogenation of new selected derivatives afforded access to *C*-glycosides in a stereoselective manner.



Eur. J. Org. Chem.
DOI: **10.1002/ejoc.201100949**



Ullmann's and the Future of Chemical Engineering

Vera Köster

K. Sundmacher: Ullmann's and the Future of Chemical Engineering

Kai Sundmacher talks about how chemical engineering is evolving and about the integration of bioscientific principles to chemical engineering and multi scale consideration. When thinking of tools like molecular modeling, quantum chemistry, there are improvements in theoretical chemistry which strongly influence chemical engineering.

ChemViews magazine
DOI: **10.1002/chemv.201000138**