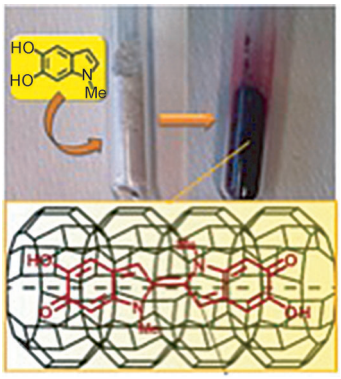
On these pages, we feature a selection of the excellent work that has recently been published in our sister journals. If you are reading these pages on a computer, click on any of the items to read the full article. Otherwise please see the DOIs for easy online access through Wiley Online Library.

Hybrid Materials

E. A. Prasetyanto, P. Manini, A. Napolitano, O. Crescenzi, M. d'Ischia,* L. De Cola*

Towards Eumelanin@Zeolite Hybrids: Pore-Size-Controlled 5,6-Dihydroxyindole Polymerization

Confinement in nanometer-sized channels of zeolite L allowed for the first time the formation and stabilization of the quinonoid 5,6-dihydroxyindole dimer(s) as a precursor step to synthetic eumelanin-like polymers. The entrapped species were characterized by an integrated spectroscopic and computational approach. In mesoporous silica, the larger diameter of the channels determines the formation of black eumelanin-type materials.



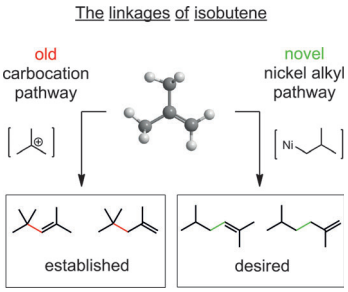
Chem. Eur. J.
DOI: **10.1002/chem.201303682**

Dimerization

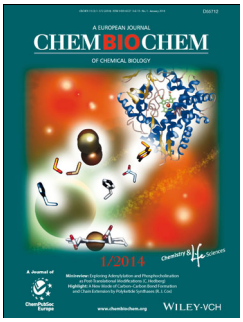
A. Behr,* N. Rentmeister, T. Seidensticker, J. Vosberg, S. Peitz, D. Maschmeyer

Highly Selective Dimerization and Trimerization of Isobutene to Linearly Linked Products by Using Nickel Catalysts

The path less traveled: A promising alternative to the industrially established carbocation oligomerization of isobutene has been found (see figure). Various nickel catalysts were used to generate linearly linked dimers and trimers from isobutene in very high selectivities. The resulting products are potential precursors in the production of plasticizer alcohols. The unique properties of substrate, products, and catalysts permitted interesting mechanistic insights.



Chem. Asian J.
DOI: **10.1002/asia.201301263**

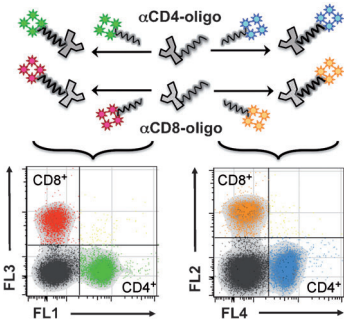


Flow Cytometry

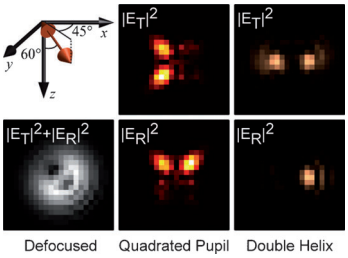
A. C. Flor, J. H. Williams, K. M. Blaine, R. C. Duggan, A. I. Sperling, D. A. Schwartz, S. J. Kron*

DNA-Directed Assembly of Antibody–Fluorophore Conjugates for Quantitative Multiparametric Flow Cytometry

Any color you like: Oligonucleotide-labeled antibodies and polyfluorophore constructs can be assembled to form fluorescent antibodies in any combination of fluorescent colors. The polyfluorophore-labeled antibodies can then be used for conventional staining of cells for flow cytometry and, when calibrated with polyfluorophore-labeled microspheres, for quantitative calculation of the number of antibodies bound per cell in a single- or multitarget assay.



ChemBioChem
DOI: **10.1002/cbic.201300464**



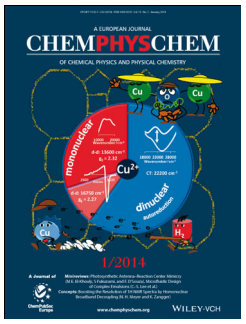
Super-Resolution Imaging

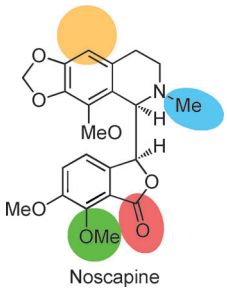
M. P. Backlund, M. D. Lew, A. S. Backer, S. J. Sahl, W. E. Moerner*

The Role of Molecular Dipole Orientation in Single-Molecule Fluorescence Microscopy and Implications for Super-Resolution Imaging

Orientation tour: Methods for determining the orientation of single molecules from fluorescence microscopy are reviewed (including those that produce the images pictured). The limits that molecular orientation imposes on single-molecule-based super-resolution microscopy are discussed. New data is presented, detailing the rotational mobility of fluorescent labels in a particular biological sample, namely microtubules immunolabeled with Alexa Fluor 647.

ChemPhysChem
DOI: **10.1002/cphc.201300880**





Noscapine

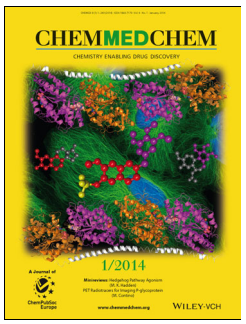
Natural Product Analogues

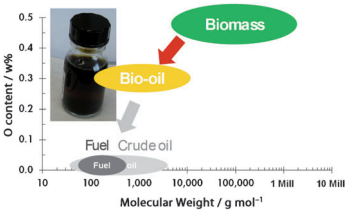
A. J. DeBono, S. J. Mistry, J. Xie, D. Muthiah, J. Phillips, S. Ventura, R. Callaghan, C. W. Pouton, B. Capuano,* P. J. Scammells*

The Synthesis and Biological Evaluation of Multifunctionalised Derivatives of Noscapine as Cytotoxic Agents

Yes to noscapine: A series of noscapine derivatives with modifications to the 6′, 9′, 1 and 7-positions were prepared as potential anticancer agents. The study identified interesting compounds able to induce G2/M cell-cycle arrest and that possess improved cytotoxic activity against the PC3 (prostate), MCF-7 (breast) and PANC-1 (pancreatic) cancer cell lines.

ChemMedChem
DOI: **10.1002/cmdc.201300395**





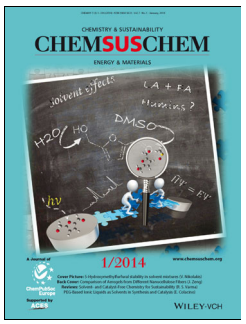
Biomass Reforming

G. van Rossum,* W. Zhao, M. Castellvi Barnes, J.-P. Lange,* S. R. A. Kersten

Liquefaction of Lignocellulosic Biomass: Solvent, Process Parameter, and Recycle Oil Screening

Liquefying biomass in its own juice: The liquefaction of lignocellulosic biomass is studied for the production of liquid (transportation) fuels. The concept process uses a product recycle as a liquefaction medium and produces a bio-oil that can be co-processed in a conventional oil refinery.

ChemSusChem
DOI: **10.1002/cssc.201300297**



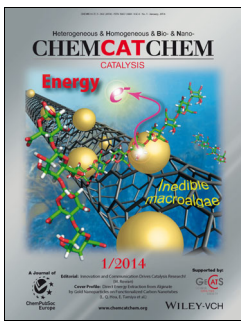
CO_2 Conversion

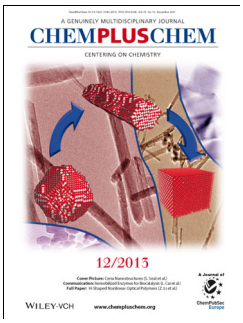
B. Wang, E. H. M. Elageed, D. Zhang, S. Yang, S. Wu, G. Zhang, G. Gao*

One-Pot Conversion of Carbon Dioxide, Ethylene Oxide, and Amines to 3-Aryl-2-oxazolidinones Catalyzed with Binary Ionic Liquids

Hit the pot! An effective one-pot method for the conversion of carbon dioxide, ethylene oxide, and amines to 3-aryl-2-oxazolidinones catalyzed with binary ionic liquids has been developed. This method consists of two parallel reactions and a subsequent cascade reaction between the two products of the corresponding parallel reactions.

ChemCatChem
DOI: **10.1002/cctc.201300801**



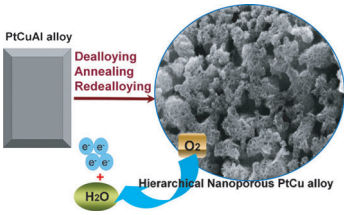


Nanoporous Materials

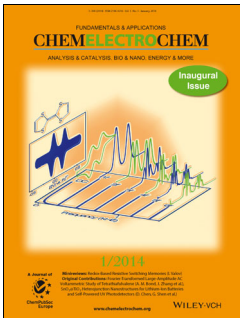
C. Xu,* H. Zhang, Q. Hao, H. Duan

A Hierarchical Nanoporous PtCu Alloy as an Oxygen-Reduction Reaction Electrocatalyst with High Activity and Durability

A binding agreement: A hierarchical nanoporous PtCu (HNP-PtCu) alloy with a bimodal interconnected network nanostructure was easily fabricated based on a dealloying/annealing/redealloying strategy (see figure). With the specific bimodal nanoporous architecture, HNP-PtCu shows superior electrocatalytic activity towards the oxygen-reduction reaction compared with Pt/C and single NP-PtCu catalysts.



ChemPlusChem
DOI: **10.1002/cplu.201300311**

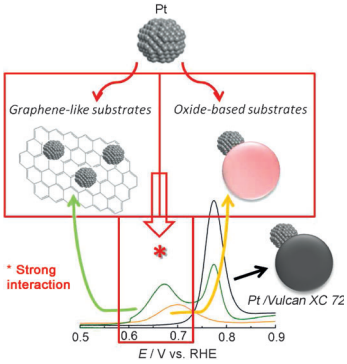


Fuel Cells

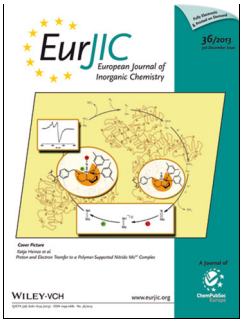
J. Ma, A. Habrioux, N. Alonso-Vante*

The Effect of Substrates at Cathodes in Low-temperature Fuel Cells

The electrocatalytic activity of platinum-based nanoclusters is affected by their interaction (hybridization) with the support. Ways that lead to a strong interaction with the substrates (carbon-based and oxide-based materials) are discussed.



ChemElectroChem
DOI: **10.1002/celc.201300105**

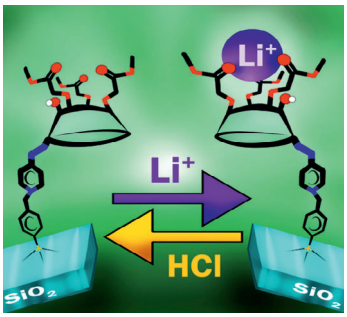


Ion Recognition

A. Gulino,* F. Lupo, D. A. Cristaldi, S. Pappalardo, C. Capici, G. Gattuso, A. Notti, M. F. Parisi*

A Viable Route for Lithium Ion Detection

A monolayer of 5-(4′-pyridylazo)-25,26,27-tris(ethoxycarbonylmethoxy)-28-hydroxycalix[4]arene molecules covalently grafted on quartz substrates provides recognition properties for Li ions at ppm levels in aqueous solutions. The system is fast, reversible, and selective.



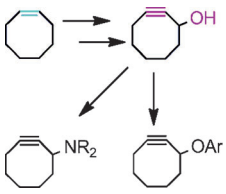
Eur. J. Inorg. Chem.
DOI: **10.1002/ejic.201301213**

Cycloalkyne Synthesis

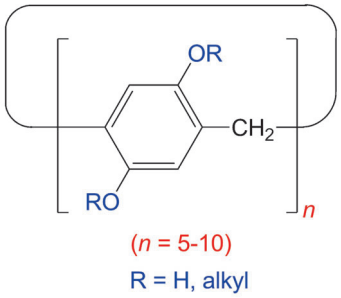
T. Hagendorn, S. Bräse*

A Route to Cyclooct-2-ynol and Its Functionalization by Mitsunobu Chemistry

A new synthesis for cyclooct-2-ynol is presented that does not employ silver salts. The obtained alcohol was further functionalized by Mitsunobu chemistry to afford new cyclooctynes.



Eur. J. Org. Chem.
DOI: **10.1002/ejoc.201301375**



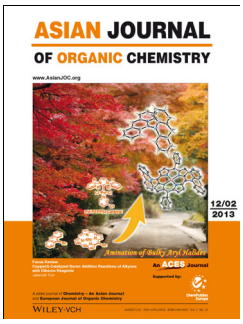
Asian J. Org. Chem.
DOI: **10.1002/ajoc.201300224**

Pillar[n]arenes

D. Cao,* H. Meier*

Pillar[*n*]arenes—a Novel, Highly Promising Class of Macrocyclic Host Molecules

Upstanding citizens: This Focus Review provides a survey of the preparation and the structures of pillar[*n*]arenes. A second focus concerns the possibilities of complexation of pillar[*n*]arenes and the selectivity of the process.



ChemViews magazine
DOI: **10.1002/chemv.201300117**

Crystallography

Vera Köster

Gautam Desiraju: Follow Your Convictions

Professor Gautam Radhakrishna Desiraju has played a major role in the development and growth of crystal engineering. As President of the International Union of Crystallography (IUCr) he talks to Dr. Vera Koester about plans for the upcoming International Year of Crystallography (IYCr 2014). He also discusses chemistry research and education in India and his hopes for the future.