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die Artikel mit einem Klick direkt aufrufen, ansonsten sind sie durch Eingabe der DOIs über Wiley Online Library leicht online zugänglich.

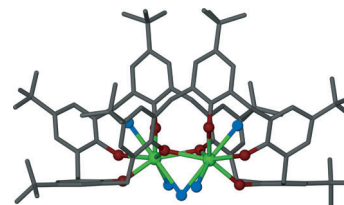


Calixarenes

S. M. Taylor, S. Sanz, R. D. McIntosh, C. M. Beavers, S. J. Teat, E. K. Brechin,* S. J. Dalgarno*

p-tert-Butylcalix[8]arene: An Extremely Versatile Platform for Cluster Formation

It's all metallated: *p*-tert-Butylcalix[8]arene (see structure) is a flexible ligand that has been shown to form a common dinuclear lanthanide complex. This can be used as a building unit in the construction of larger polynuclear metal complexes by varying reactant ratios and conditions employed in synthesis. This approach facilitates access to new Ln_4 , Ln_5 , Ln_6 , Ln_7 and Ln_8 clusters.



Chem. Eur. J.
DOI: 10.1002/chem.201202644

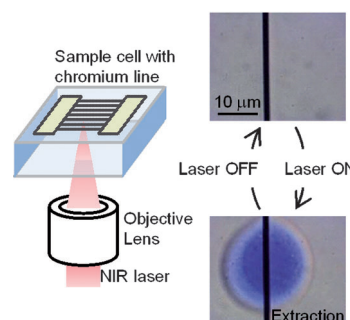


Polymers

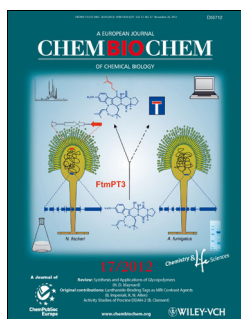
H. Inoue, T. Yamamoto, S. Kuwahara, K. Katayama*

Local Extraction and Condensation under a Microscope Using the Optically Controlled Phase Separation of a Thermoresponsive Polymer

Local heat advisory: In-situ extraction/condensation of various dyes was carried out in a local phase-separation region of a thermoresponsive polymer aqueous solution, which was induced through heating by an NIR laser under a microscope. A necessary condition for extraction/condensation is the hydrophobicity of the dye, and the main reason for the condensation is the molecular interaction between the side chain of the polymer and the functional group of the dyes.



Chem. Asian J.
DOI: 10.1002/asia.201200591

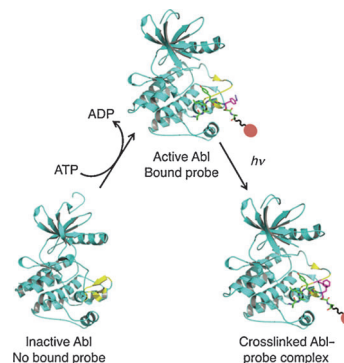


Protein Kinases

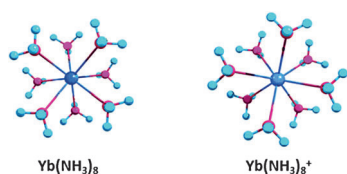
Y. Deng, B. A. Couch, A. J. Koleske, B. E. Turk*

A Peptide Photoaffinity Probe Specific for the Active Conformation of the Abl Tyrosine Kinase

An Abl label: The design of sensors to monitor the activity state of specific protein kinases is challenging due to the complexity of eukaryotic kinomes. Here we describe a peptide-based photoaffinity probe that specifically labels the active conformation of the Abl tyrosine kinase.



ChemBioChem
DOI: 10.1002/cbic.201200560



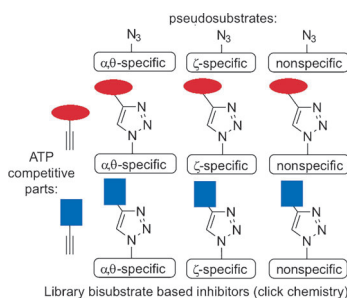
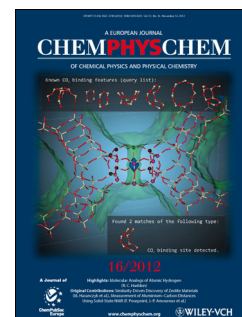
ChemPhysChem
DOI: 10.1002/cphc.201200691

Rare-Earth Complexes

M. J. Guttridge, S. H. Don, A. M. Ellis*

Photoionization of Yb(NH₃)_n Complexes

Come on inside: The ionization energies of complexes between a rare-earth metal (Yb) and ammonia were measured for the first time using photoionization mass spectrometry and the findings are supported by calculations. The results are consistent with the formation of “interior” complexes in which the Yb atom is embedded within a shell of NH₃ molecules, rather than sitting on the surface of an (NH₃)_n cluster (see picture).



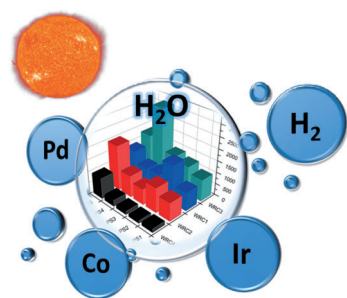
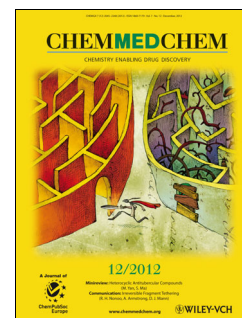
ChemMedChem
DOI: 10.1002/cmdc.201200349

Kinase Inhibitors

L. T. M. van Wandelen, J. van Ameijde, A. S. A. Mady, A. E. M. Wammes, A. Bode, A. J. Poot, R. Ruijtenbeek, R. M. J. Liskamp*

Directed Modulation of Protein Kinase C Isozyme Selectivity with Bisubstrate-Based Inhibitors

More than the sum of its parts: A modular approach to tuning the selectivity of bisubstrate-based inhibitors towards highly homologous protein kinase C isozymes is explored. By systematically varying the ATP-competitive and pseudosubstrate peptide components, selectivity could be effectively modulated.



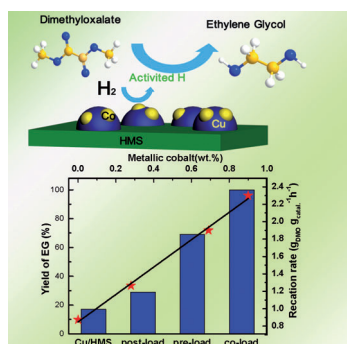
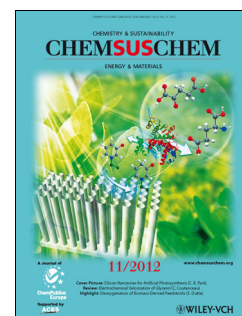
ChemSusChem
DOI: 10.1002/cssc.201200617

Water Splitting

S. Hansen, M.-M. Pohl, M. Klahn, A. Spannenberg, T. Beweries*

Investigation and Enhancement of the Stability and Performance of Water Reduction Systems based on Cyclometallated Iridium(III) Complexes

Teamwork 2.0: A highly active system for photocatalytic water reduction consisting of an Ir photosensitizer and a Pd dichloro complex as the source of catalytically active Pd⁰ is described. Additionally, the introduction of a hitherto unknown dinuclear Co complex as a water reduction centre resulted in a system with a comparably high initial activity.



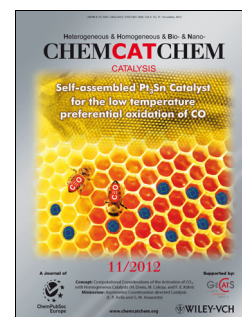
ChemCatChem
DOI: 10.1002/cctc.201200444

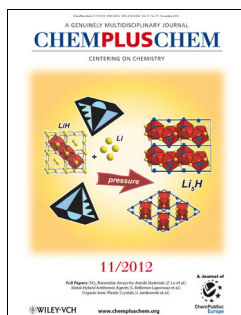
Hydrogenation

C. Wen, Y. Cui, A. Yin, K. Fan, W.-L. Dai*

Remarkable Improvement of Catalytic Performance for a New Cobalt-Decorated Cu/HMS Catalyst in the Hydrogenation of Dimethylxalate

Evaporate to invigorate: The catalytic activity of the Cu/HMS catalyst is greatly enhanced by decorating with only 1 wt. % of cobalt. The co-ammonia-evaporation method leads to stronger interactions between the copper and cobalt species and more metallic cobalt may facilitate the activation of hydrogen.



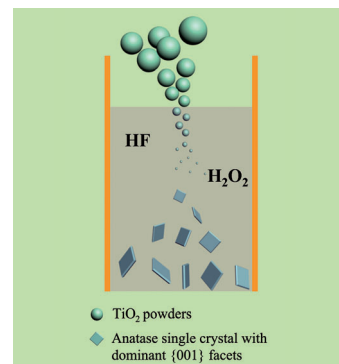


Anatase Single Crystals

H. Li, Y. Zeng, T. Huang, L. Piao,* M. Liu*

Controlled Synthesis of Anatase TiO₂ Single Crystals with Dominant {001} Facets from TiO₂ Powders

Easy does it: Anatase TiO₂ single crystals with dominant {001} facets have been fabricated in a controlled manner from TiO₂ powders through a facile route (see figure). The obtained crystals show a superior photoreactivity to that of P25 TiO₂ powders, thus opening a new avenue to the preparation of highly active TiO₂ single crystals with {001} facets from low-cost TiO₂ powders.



ChemPlusChem
DOI: 10.1002/cplu.201200158



Silica–Carbonate Materials

M. Kellermeier,* H. Cölfen,* J. M. García-Ruiz*

Silica Biomorphs: Complex Biomimetic Hybrid Materials from “Sand and Chalk”

When crystallized in the presence of silica, alkaline earth carbonates can self-assemble into elaborate nanoparticle superstructures showing curved morphologies and a level of hierarchy reminiscent of biominerals. This review summarizes recent work on these so-called silica biomorphs, focusing on structural aspects and the underlying mechanism of formation.



Eur. J. Inorg. Chem.
DOI: 10.1002/ejic.201201029

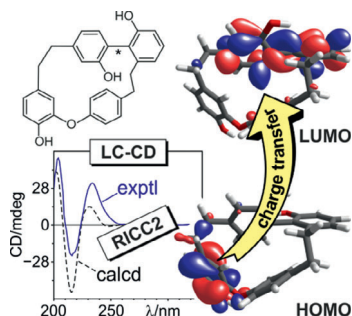


Chiral Macrocycles

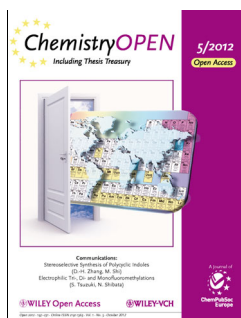
A. Schaumlöffel, M. Groh, M. Knauer, A. Speicher,* G. Bringmann*

Configurational Assignment of Cyclic Bisbibenzyls by HPLC-CD and Quantum-Chemical CD Calculations

The chiroptical properties of atropo-enantiomeric plagiocins and riccardins are investigated by means of HPLC-CD in combination with quantum-chemical CD calculations. An increased degree of charge-transfer in the excited states makes the use of the coupled-cluster method mandatory to unambiguously determine the absolute configuration.



Eur. J. Org. Chem.
DOI: 10.1002/ejoc.201200873

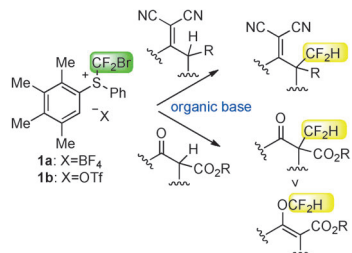


Difluoromethylation

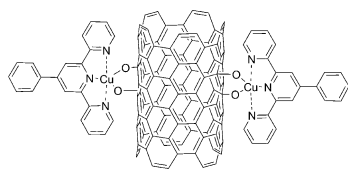
G. Liu, X. Wang, X. Lu, X.-H. Xu, E. Tokunaga, N. Shibata*

Efficient Difluoromethylation of sp³ Carbon Nucleophiles by Bromodifluoromethylation Reagents with Organic Bases

Bromodifluoromethylation reagents **1** can be used during electrophilic difluoromethylation for sp³ carbon nucleophiles mediated by organic bases. Allylic difluoromethylation of dicyanoalkylidens proceeds nicely by **1** in the presence of P₁ base to give CF₂H instead of CF₂Br products in high to excellent yields. A wide range of β-ketoesters are also efficiently reacted with **1**, mediated by DBU to provide C–CF₂H compounds as major products with a small amount of O–CF₂H products in high to excellent yields.



ChemistryOpen
DOI: 10.1002/open.201200033



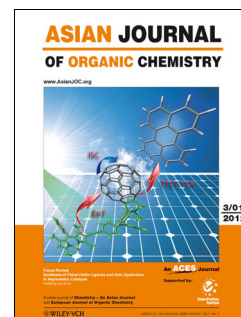
Synthetic Methods

H. Sharghi,* S. Ebrahimpourmoghaddam, M. M. Doroodmand,* A. Purkhosrow

Synthesis of Vasorelaxing 1,4-Disubstituted 1,2,3-Triazoles Catalyzed by a 4'-Phenyl-2,2':6',2''-Terpyridine Copper(II) Complex Immobilized on Activated Multiwalled Carbon Nanotubes

One, two, three: A one-pot, two-step, regioselective, efficient, mild, and environmentally benign three-component synthesis of diverse 1,4-disubstituted 1,2,3-triazoles catalyzed by a heterogeneous terpyridine system has been developed. The exceptional efficacy of the terpyridine framework as a copper scavenger guarantees negligible leaching of copper from the catalyst. The triazole derivatives are potentially valuable therapies for hypertension.

Asian J. Org. Chem.
DOI: 10.1002/ajoc.201200012



ChemViews magazine
DOI: 10.1002/chemv.201200109

Chemical Education

Vera Köster

Where Chemical Education is Heading: Interview with Peter Mahaffy

Peter Mahaffy, Professor at King's University College, Canada, has served as Chair of IUPAC's Committee on Chemistry Education. He talks to *ChemViews magazine* about the challenges in chemistry education and how to make the best use of multimedia and visualization techniques.

