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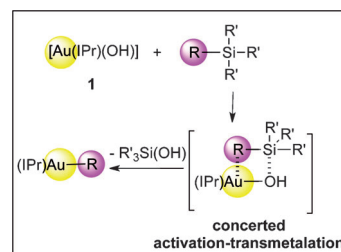


Transmetalation

S. Dupuy, A. M. Z. Slawin, S. P. Nolan*

The Fluoride-Free Transmetalation of Organosilanes to Gold

Golden transfer: The versatile gold(I) complex, $[\text{Au}(\text{IPr})(\text{OH})]$, permits very straightforward access to a series of aryl-, vinyl- and alkylgold silanols by reaction with the appropriate silane reagent. These silanolate compounds are key intermediates in a fluoride-free process that results in the net transmetalation of organosilanes to gold.



Chem. Eur. J.
DOI: 10.1002/chem.201202299

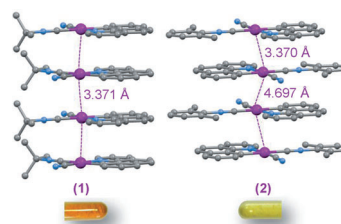


Platinum Complexes

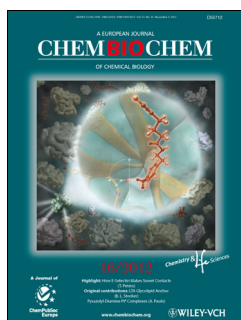
J. Forniés,* V. Sicilia,* P. Borja, J. M. Casas, A. Díez, E. Lalinde, C. Larraz, A. Martín, M. T. Moreno

Luminescent Benzoquinolate-Isocyanide Platinum(II) Complexes: Effect of Pt...Pt and $\pi\cdots\pi$ Interactions on their Photophysical Properties

Shining bright: New benzoquinolate isocyanide platinum(II) complexes, including the bright luminescent compounds (SP-4-3)-[Pt-(bzq)(CN)(CNR)] ($\text{R} = \text{tBu}$ (1), Xyl(2)), have been isolated as pure isomers. The title weak intermolecular interactions are responsible for their photophysical properties.



Chem. Asian J.
DOI: 10.1002/asia.201200585

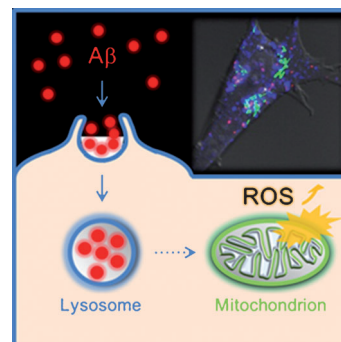


Endocytosis

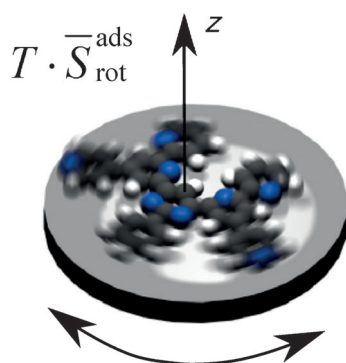
Y. Jiao, Y. Zhang, Y. Wei, Z. Liu, W. An, M. Guo*

Direct Observation of Internalization and ROS Generation of Amyloid β -Peptide in Neuronal Cells at Subcellular Resolution

Seeing in many colors: Confocal images acquired using fluorescently labeled amyloid β -peptide revealed its efficient internalization by endocytosis into endosomes/lysosomes of human neuronal cells with a small portion reaching mitochondria, inducing marked cellular and mitochondrial reactive oxygen species production.



ChemBioChem
DOI: 10.1002/cbic.201200465



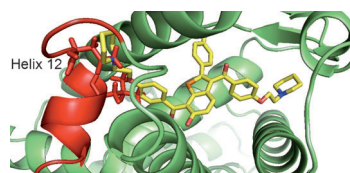
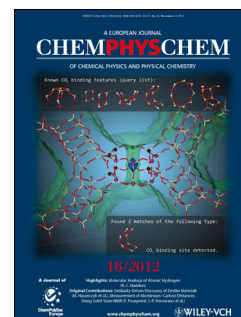
ChemPhysChem
DOI: 10.1002/cphc.201200531

Surface Science

T. Waldmann, J. Klein, H. E. Hoster, R. J. Behm*

Stabilization of Large Adsorbates by Rotational Entropy: A Time-Resolved Variable-Temperature STM Study

Big is best: Bis(terpyridine) adsorbates on a Ag(111) surface in combination with large data sets from scanning tunneling microscopy and statistical mechanics calculations are used as a model system for entropic stabilization of large rotating adsorbates (see picture). The general validity of this concept is tested for other typical small, mid-sized and large adsorbates.



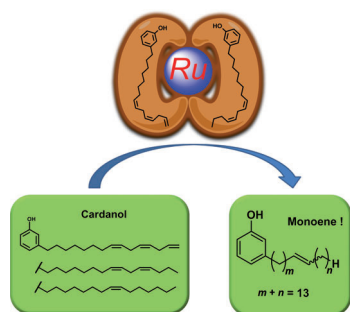
ChemMedChem
DOI: 10.1002/cmdc.201200307

Anticancer Agents

J. Rey, H. Hu, F. Kyle, C.-F. Lai, L. Buluwela, R. C. Coombes, E. A. Ortlund, S. Ali,* J. P. Snyder,* A. G. M. Barrett*

Discovery of a New Class of Liver Receptor Homolog-1 (LRH-1) Antagonists: Virtual Screening, Synthesis and Biological Evaluation

Targeting LRH-1: Virtual screening and molecular modeling were used to identify novel antagonists of liver receptor homolog-1 (LRH-1), an emerging therapeutic target for breast cancer. Hit compounds were synthesized and biologically assayed, and the preliminary results suggest that raloxifene-based analogues, substituted at the position C-7 of the benzothiophene ring, might generate an inactive protein conformation through binding and thus antagonize this nuclear receptor.



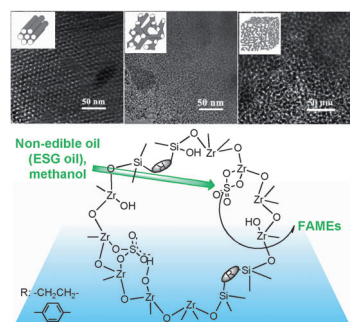
ChemSusChem
DOI: 10.1002/cssc.201200503

Biomass Conversion

S. Perdriau, S. Harder,* H. J. Heeres,* J. G. de Vries*

Selective Conversion of Polyenes to Monoenes by RuCl₃-Catalyzed Transfer Hydrogenation: The Case of Cashew Nutshell Liquid

A nutty mechanism is found in the transfer hydrogenation of cardanol, which is a phenolic polyene constituent of cashew nutshell liquid, to the monoene with RuCl₃ and isopropanol (see picture). It turns out that the catalyst is homogeneous and the substrate forms the ligand.



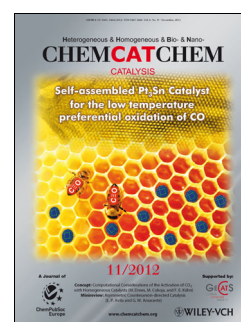
ChemCatChem
DOI: 10.1002/cctc.201200199

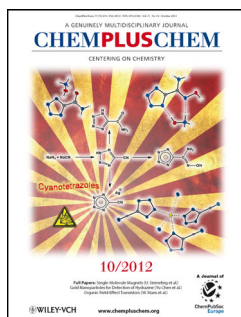
Porous Catalysts

W. Li, F. Ma, F. Su, L. Ma, S. Zhang, Y. Guo*

Pore Morphology Control of Mesostructured SO₄²⁻/ZrO₂-Based Hybrid Catalysts Functionalized by Alkyl-Bridged Organosilica Moieties for Biodiesel Production From Non-Edible Oil

Eruca! We struck biodiesel! SO₄²⁻/ZrO₂-SiO₂(Ph/Et) hybrid materials with different structural ordering and pore geometries are prepared. The different pore morphologies lead to materials with different porosities, which in turn influence the catalytic performance in the transesterification of *Eruca sativa* Gars. oil to produce biodiesel. FAMES: fatty acid monoalkyl esters (e.g., methyl palmitin, methyl stearate, methyl oleate, and methyl linoleate).



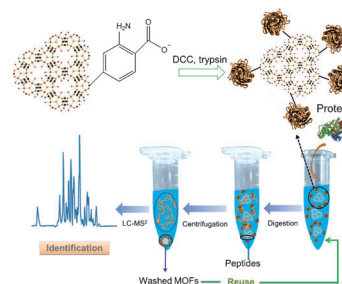


Nanobiocatalysis

Y.-H. Shih, S.-H. Lo, N.-S. Yang, B. Singco, Y.-J. Cheng, C.-Y. Wu, I.-H. Chang, H.-Y. Huang,* C.-H. Lin*

Trypsin-Immobilized Metal–Organic Framework as a Biocatalyst In Proteomics Analysis

Enzyme immobilization: The protease enzyme was successfully immobilized onto dicyclohexylcarbodiimide (DCC)-activated metal–organic frameworks (MOFs). After separation by nano-LC-MS² (liquid chromatography–mass spectrometry), detection, and database searching the protein digestion efficiency of trypsin-MOF was comparable to traditional in-solution digestion (see figure). Furthermore, the trypsin-MOF was reusable.



ChemPlusChem
DOI: 10.1002/cplu.201200186

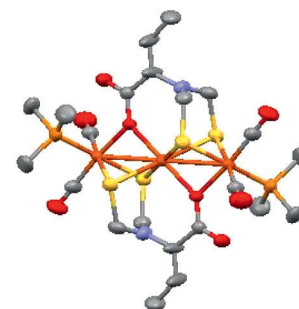


Iron Hydrogenases

Y. Huang, W. Gao,* T. Åkermark, M. Li, B. Åkermark*

An Air-Stable Fe₃S₄ Complex with Properties Similar to Those of the H_{OX}^{air} State of the Diiron Hydrogenases

An air-stable Fe₃S₄ complex was prepared as a mimic of the H_{OX}^{air} state of the active site of [FeFe]-hydrogenases. Electrochemical and photoinduced hydrogen evolution is promoted by this catalyst.



Eur. J. Inorg. Chem.
DOI: 10.1002/ejic.201200632

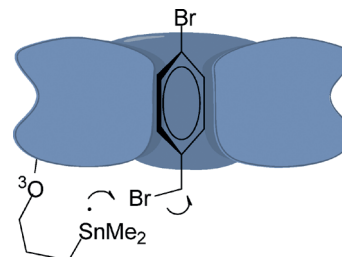


Enzyme Models

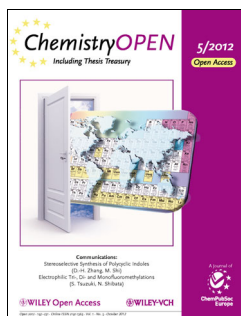
Y. Zhou, L. Marinescu, C. M. Pedersen, M. Bols*

Synthesis of Tin-Containing Cyclodextrins as Potential Enzyme Models

Although modified tin hydrides are difficult to make, they are incredibly useful promoters of radical reactions. In this paper we report the first synthesis of an organotinchloride covalently bound to a cyclodextrin as a potential enzyme model.



Eur. J. Org. Chem.
DOI: 10.1002/ejoc.201200756

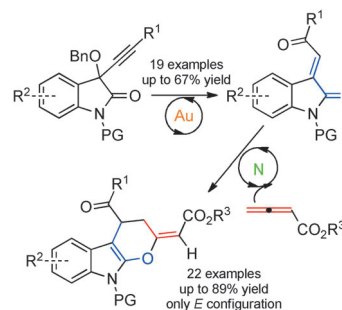


Sequential Catalysis

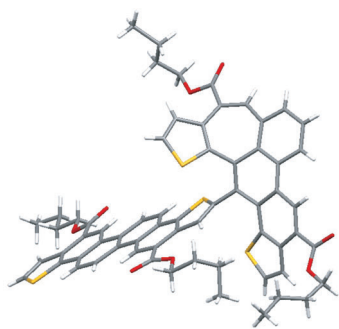
D.-H. Zhang, M. Shi*

Highly Stereoselective Synthesis of Polycyclic Indoles through Rearrangement/[4+2] Cycloaddition under Sequential Catalysis

Cascade transformation: A highly regioselective and stereoselective synthesis of polyfunctional indoles from isatin derivatives and allenic esters is disclosed. The novel cascade transformation is a direct and rapid entry to polycyclic indoles through sequential catalysis of rearrangement and [4+2] cycloaddition under very mild conditions bearing various substituents at many positions.



ChemistryOpen
DOI: 10.1002/open.201200028



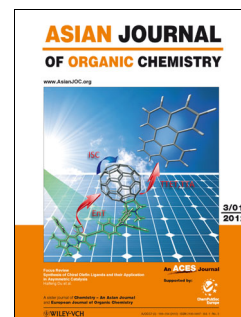
Asian J. Org. Chem.
DOI: 10.1002/ajoc.201200098

Polycyclic Arenes

P. Sarkar, P. Dechambenoit, F. Durola, H. Bock*

Synthesis of Carboxy-Functionalized Polycyclic Arenes by Oxidative Cyclizations of 2,3-Diarylacrylates

Perkin up: The scope and limitations of 2,3-dichloro-5,6-dicyanobenzoquinone (DDQ) with methanesulfonic acid as a cyclizing system for the formation of polycyclic arenecarboxylates from esters of Perkin condensation products is examined. Thiophene-based systems are particularly versatile and form products that include annelated pleiadene.



ChemViews magazine
DOI: 10.1002/chemv.201200121

Alternative Fuels

Charlotte Brückner and Sarah Millar

ChemCar Competition 2012

The Challenge: Design and build a model car powered by a chemical or biochemical reaction. The Rules: The car must drive a set distance carrying a given weight, both of which are unknown until the day of the competition. The Result: Seven highly imaginative cars powered by everything from enzymes to electrochemistry.

