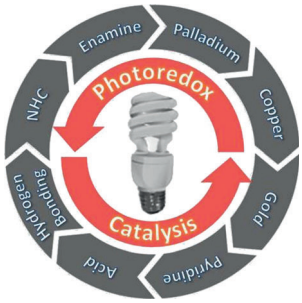
Auf diesen Seiten weisen wir auf wichtige aktuelle Beiträge in unseren Schwesterzeitschriften hin. Wenn Sie die Seiten online lesen, dann können Sie die Artikel mit einem Klick direkt aufrufen, ansonsten sind sie durch Eingabe der DOIs über Wiley Online Library leicht online zugänglich.

Dual Catalysis

M. N. Hopkinson, B. Sahoo, J.-L. Li, F. Glorius*

Dual Catalysis Sees the Light: Combining Photoredox with Organo-, Acid, and Transition-Metal Catalysis

De(light)ful catalysis! The merger of photoredox catalysis with another catalytic mode can result in novel, visible-light-promoted reactions that do not proceed by using either catalyst independently. Herein, the different ways that two catalytic modes can operate in tandem are highlighted, focusing on dual-catalyzed organic processes that merge photoredox with organo-, acid, and transition-metal catalysis.



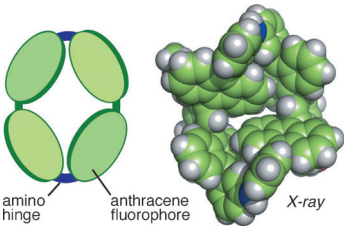
Chem. Eur. J.
DOI: **10.1002/chem.201304823**

Macrocycles

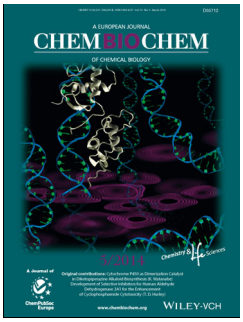
Z. Li, Y. Sei, M. Akita, M. Yoshizawa*

A Solvato-Fluorochromic Macrocycle of Multiple Anthracene Fluorophores in Close Proximity

Let's twist again: A fluorescent macrocycle containing four anthracene panels linked by *meta*-phenylene spacers and amino hinges was synthesized. The macrocycle adopts a twisted, compressed conformation that places embedded anthracene fluorophores in close contact. Emission from the convoluted macrocycle is highly solvatochromic and significantly enhanced as compared with that of the partial structures.



Chem. Asian J.
DOI: **10.1002/asia.201301648**

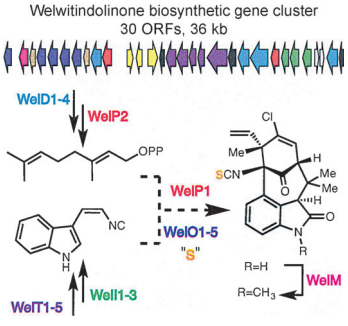


Biosynthesis

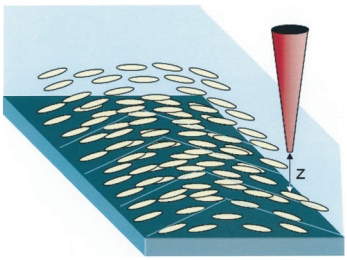
M. L. Hillwig, H. A. Fuhrman, K. Ittiamornkul, T. J. Sevco, D. H. Kwak, X. Liu*

Identification and Characterization of a Welwitindolinone Alkaloid Biosynthetic Gene Cluster in the Stigonematalean Cyanobacterium *Hapalosiphon welwitschii*

Convergence and divergence: The identification and characterization of a 36 kb welwitindolinone (*wel*) biosynthetic gene cluster in *Hapalosiphon welwitschii* UTEX B1830 allowed a comparative analysis of ambiguine and welwitindolinone biogenesis in two different organisms. This provided insights into the origins of diverse structures within hapalindole-type molecules.



ChemBioChem
DOI: **10.1002/cbic.201300794**



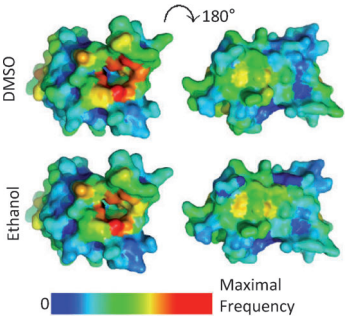
ChemPhysChem
DOI: **10.1002/cphc.201300978**

Liquid Crystals

C. Rosenblatt*

Optical Imaging of Liquid Crystals at the Nanoscale

Coming closer: Near-field scanning optical microscopy (NSOM) is exploited to provide three-dimensional structure and dynamic information about liquid crystals at scales as small as a few nanometers. (Image courtesy of Prof. Antonio De Luca.)



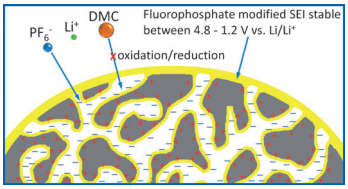
ChemMedChem
DOI: **10.1002/cmdc.201300156**

Epigenetics

D. Huang,* E. Rossini, S. Steiner, A. Caflisch*

Structured Water Molecules in the Binding Site of Bromodomains Can Be Displaced by Cosolvent

Virtual domains! Using molecular dynamics (MD) simulations, the importance of structured water molecules in bromodomains, an important class of emerging drug targets, was investigated. The results show that structured water molecules in the acetyl-lysine binding site can be replaced by co-solvent molecules. This result has important implications for the design of selective drugs against bromodomain targets.



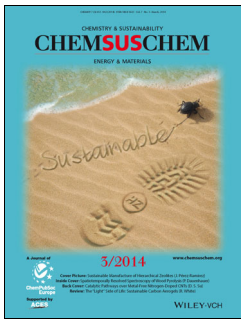
ChemSusChem
DOI: **10.1002/cssc.201300858**

Electrochemistry

W. Qu, E. Dorjpalam, R. Rajagopalan,* C. A. Randall

Role of Additives in Formation of Solid–Electrolyte Interfaces on Carbon Electrodes and their Effect on High-Voltage Stability

Solid results: The formation of stable solid–electrolyte interfaces SEIs on high-surface-area activated carbon electrodes helps to extend their electrochemical voltage window, to 4.8 –1.2 V vs Li/Li^+. SEI layers with higher inorganic contents are formed due to the presence of fluorophosphates-based additives in the electrolyte.



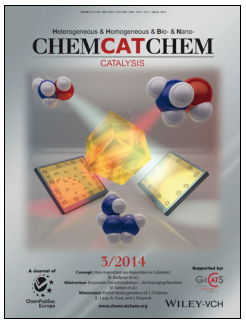
ChemCatChem
DOI: **10.1002/cctc.201300976**

Green Catalysis?

Y. Ni, D. Holtmann, F. Hollmann*

How Green is Biocatalysis? To Calculate is To Know

It's not easy being green: Biocatalysis is generally recognized as an environmentally benign technology. This green claim, however, is seldom substantiated. The use of simple mass-based metrics such as the *E* factor may represent an appropriate compromise between significance and effort.

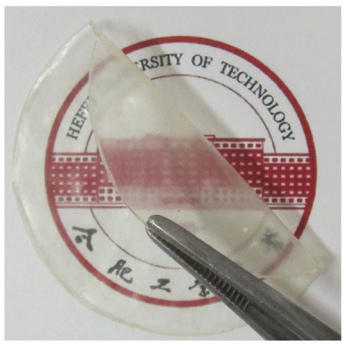


Thin Films

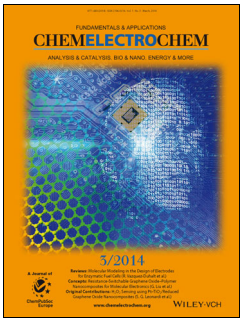
W. Hao,* S. Ding, L. Zhang, W. Liu, W. Yang*

Nacrelike Nanocomposite Films from Fluorescent Hyperbranched Poly(amido amine)s and Clay Nanosheets

Mother-of-pearl films: Flexible, transparent, and glossy nanocomposite films have been fabricated through vacuum-aided filtration self-assembly of hyperbranched poly(amido amine)s (HPAMAMs) and clay nanosheets. Such hybrid films show strong fluorescence properties and high strength (see figure). As a result of the good biocompatibility of HPAMAMs, the hybrid films are promising in biomedical research.



ChemPlusChem
DOI: **10.1002/cplu.201300371**

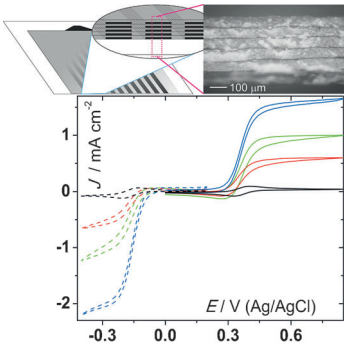


Electroanalysis

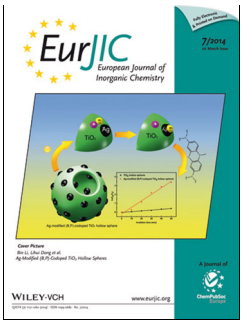
M. Y. Vagin,* A. N. Sekretaryova, R. S. Reategui, I. Lundstrom, F. Winquist, M. Eriksson

Arrays of Screen-Printed Graphite Microband Electrodes as a Versatile Electroanalysis Platform

Microband electrode arrays: Arrays of microband electrodes on a plastic support are developed by screen printing followed by cutting. Convergent diffusion, with current densities similar to those of a single microelectrode, is observed, which causes an enhancement in the analytical characteristics relative to those of the macroelectrodes; this is illustrated with detection of ascorbic acid and a mediated glucose oxidase biosensor.



ChemElectroChem
DOI: **10.1002/celc.201300204**

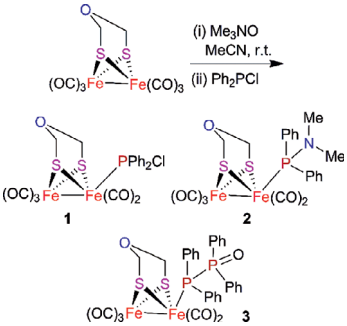


Ligand Conversion

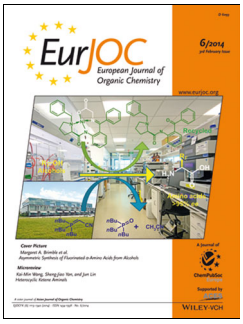
L.-C. Song,* M. Cao, Z.-Q. Du, Z.-H. Feng, Z. Ma, H.-B. Song

CO Substitution Reactions of Diiron Complexes $[\{(\mu\text{-}SCH_2)_2X\}Fe_2(CO)_6]$ and $[\{(\mu\text{-}SeCH_2)_2X\}Fe_2(CO)_6]$ (X = O, CH_2) with Ph_2PCl/Me_3NO to Give Ph_2PCl-, Ph_2PNMe_2-, and $Ph_2PP(=O)Ph_2$-Substituted Complexes Related to [FeFe] Hydrogenases

The functionalized phosphine-substituted complexes **1**–**9** have been prepared by the reaction of $[\{(\mu\text{-}ECH_2)_2X\}Fe_2(CO)_6]$ (E = S, Se; X = O, CH_2) with Ph_2PCl/Me_3NO. Some of these complexes have been found to be catalysts for proton reduction to H_2 under CV conditions.



Eur. J. Inorg. Chem.
DOI: **10.1002/ejic.201301553**

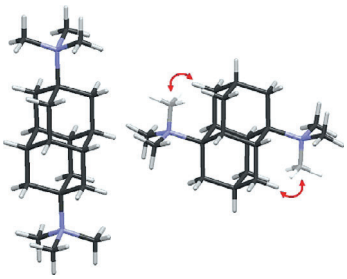


Diamantane Diammonium Salts

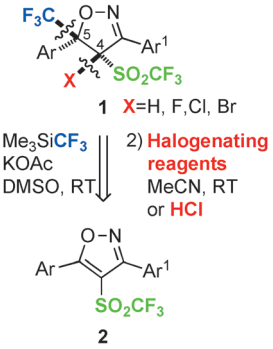
M. Šekutor, K. Molčanov, L. Cao, L. Isaacs,* R. Glaser,* K. Mlinarić-Majerski*

Design, Synthesis, and X-ray Structural Analyses of Diamantane Diammonium Salts: Guests for Cucurbit[*n*]uril (CB[*n*]) Hosts

Diam-4,9-di(NMe_3I) (left) was readily prepared, whereas corresponding Diam-1,6-di(NMe_3I) (right) could not be obtained even under strong reaction conditions. Stereochemical analysis suggests that the cause is very severe steric non-bonding *cis*-1,3-diaxial type H···H interactions between the "axial"-type NMe_3 group and neighboring "axial" proton neighbors that cannot be alleviated by skeletal distortion.



Eur. J. Org. Chem.
DOI: **10.1002/ejoc.201301844**



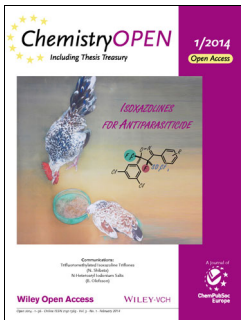
ChemistryOpen
DOI: **10.1002/open.201300044**

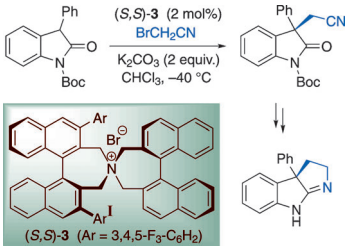
Trifluoromethylation

H. Kawai, Y. Sugita, E. Tokunaga, H. Sato, M. Shiro, N. Shibata*

Diastereoselective Additive Trifluoromethylation/Halogenation of Isoxazole Triflones: Synthesis of All-Carbon-Functionalized Trifluoromethyl Isoxazoline Triflones

The SO_2CF_3 group acts three! Highly functionalized 5-trifluoromethyl-2-isoxazoline derivatives featuring a triflyl (SO_2CF_3) group at the 4-position were successfully synthesized via diastereoselective trifluoromethylation and halogenation of isoxazole triflones using the Ruppert–Prakash reagent. The triflyl group activates isoxazoles and the 4-position of CF_3 adducts, and has a potential biological function.





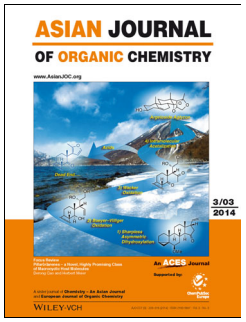
Asian J. Org. Chem.
DOI: **10.1002/ajoc.201400011**

Phase-Transfer Catalysis

F. Deng,* S. A. Moteki, K. Maruoka*

Catalytic Asymmetric Alkylation of 3-Aryl-Substituted Oxindoles to give 3,3-Disubstituted Oxindoles under Phase-Transfer Conditions

Between phases: An enantioselective method for the construction of all-carbon quaternary stereocenters from 3-aryl-substituted oxindoles via asymmetric phase-transfer alkylation has been developed. The products are obtained in high yields and optical purity of up to 93% *ee* by the use of (*S*,*S*)-3,4,5-trifluorophenyl-NAS bromide (**I**) as chiral phase-transfer catalyst. Boc = *tert*-butyloxycarbonyl.



ChemViews magazine
DOI: **10.1002/chemv.201400012**

Chemical Education

Innovative Learning and Teaching Practices

The advent of new information technologies is transforming the way in which chemistry is learnt. Successful examples of these technologies include online courses on cheminformatics and chemical information sciences and programs to enable the visualization of the molecular world. To help these tools become integrated in chemistry education, research on the best practices is being performed.