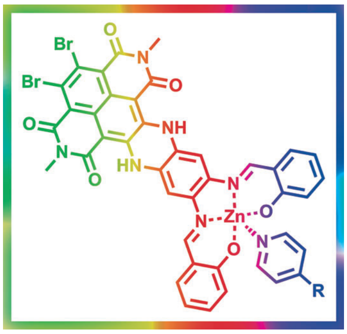
Auf diesen Seiten weisen wir auf wichtige aktuelle Beiträge in unseren Schwesterzeitschriften hin. Wenn Sie die Seiten online lesen, dann können Sie die Artikel mit einem Klick direkt aufrufen, ansonsten sind sie durch Eingabe der DOIs über Wiley Online Library leicht online zugänglich.

Chromophores

J. A. Rombouts, J. Ravensbergen, R. N. Frese, J. T. M. Kennis, A. W. Ehlers, J. C. Slootweg, E. Ruijter, K. Lammertsma,* R. V. A. Orru*

Synthesis and Photophysics of a Red Light Absorbing Supramolecular Chromophore System

Dye dyad design: The fusion of a naphthalene diimide dye to a zinc–bis-salicylimide phenylene (salphen; see figure) moiety creates an expanded red-light absorbing chromophore with an embedded metal atom for supramolecular interaction with substituted pyridines. A column-chromatography-free preparation of this novel scaffold is described and its photophysical properties are analyzed, which compare favorably with the widely used supramolecular light-harvester zinc tetraphenylporphyrin.



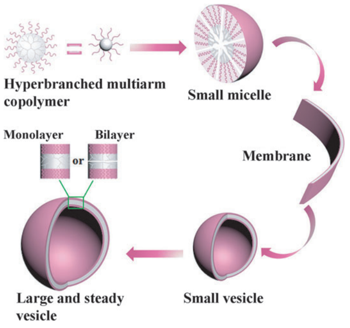
Chem. Eur. J.
DOI: **10.1002/chem.201402398**

Self-Assembly

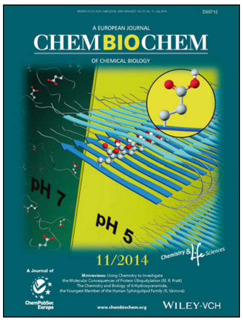
Y. Wang, B. Li, H. Jin, Y. Zhou,* Z. Lu,* D. Yan

Dissipative Particle Dynamics Simulation Study on Vesicles Self-Assembled from Amphiphilic Hyperbranched Multiarm Copolymers

Normal or the reverse: The formation mechanism and dynamics of both normal and reverse branched polymersomes from hyperbranched multiarm copolymers were studied in detail through dissipative particle dynamics simulations. A "unimers-to-spheres-to-membranes-to-vesicles" pathway without rod intermediates is disclosed. In addition, the bilayer or monolayer molecular packing models and microphase separation behaviors of these vesicles were also studied and compared.



Chem. Asian J.
DOI: **10.1002/asia.201402146**

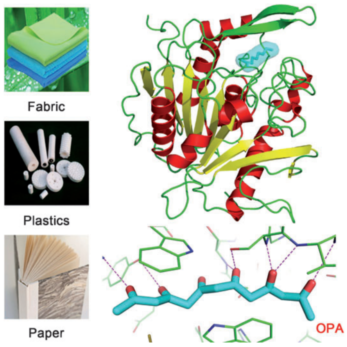


Environmental Chemistry

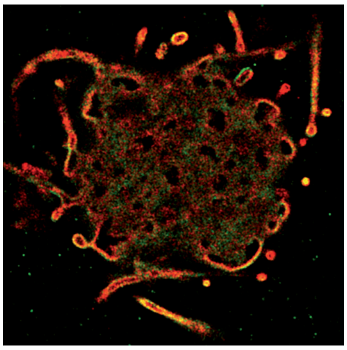
Y. Yang, T.-P. Ko, L. Liu, J. Li, C.-H. Huang, H.-C. Chan, F. Ren, D. Jia, A. H.-J. Wang, R.-T. Guo,* J. Chen,* G. Du*

Structural Insights into Enzymatic Degradation of Oxidized Polyvinyl Alcohol

Crystal-clear hydrolysis: The crystal structures of OPH with bound inhibitors from two PVA-degrading microbes were analyzed to elucidate the hydrolytic mechanism of oxi-PVA. Several site-directed mutants were also constructed to enhance the OPH activity.



ChemBioChem
DOI: **10.1002/cbic.201402166**



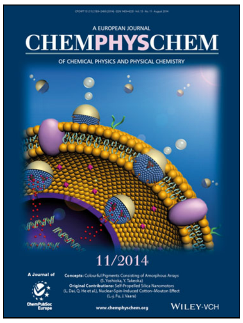
Super-Resolution Imaging

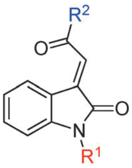
M. B. Stone, S. L. Veatch*

Far-Red Organic Fluorophores Contain a Fluorescent Impurity

A near-red fluorescent impurity is characterized in several commonly used far-red fluorescent dyes. This impurity can lead to artifacts in live-cell multicolor super-resolution measurements, subtle artifacts in chemically fixed cells, and highlights the importance of controls in super-resolution imaging.

ChemPhysChem
DOI: **10.1002/cphc.201402002**





6

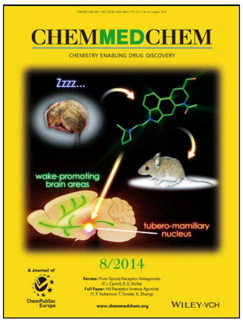
Anti-inflammatory Agents

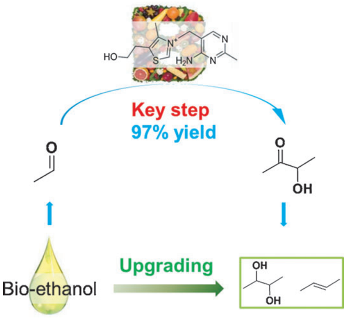
A. A. Nagle, S. A. Reddy, H. Bertrand, H. Tajima, T.-M. Dang, S.-C. Wong, J. D. Hayes, G. Wells,* E.-H. Chew*

3-(2-Oxoethylidene)indolin-2-one Derivatives Activate Nrf2 and Inhibit NF-κB: Potential Candidates for Chemoprevention

Better than 'Super': Compounds that elicit cytoprotective and anti-inflammatory effects are promising candidates for chemoprevention. Analogues of 1-methyl-3-(2-oxopropylidene)indolin-2-one ('supercinnamaldehyde') were synthesized and evaluated for their ability to induce Nrf2-mediated cytoprotection and suppress NF-κB-directed inflammation. Lead compound **6** (R^1: Me; R^2: Ph), with the supercinnamaldehyde scaffold, has the potential to yield derivatives with even greater chemopreventive activity.

ChemMedChem
DOI: **10.1002/cmdc.201402038**





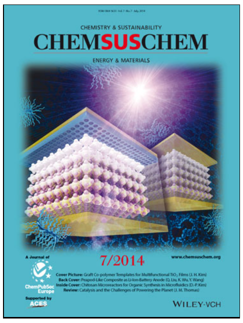
Bioethanol

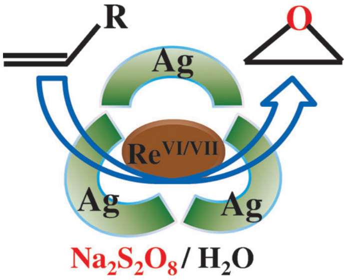
T. Lu, X. Li, L. Gu, Y. Zhang*

Vitamin B1-Catalyzed Acetoin Formation from Acetaldehyde: A Key Step for Upgrading Bioethanol to Bulk C_4 Chemicals

Take your vitamins: A highly selective process for the conversion of bioethanol to C_4 bulk chemicals, such as 2,3-butanediol and butene, is reported. The process involves the use of a vitamin B1 (thiamine)-derived *N*-heterocyclic carbene (NHC)-catalyzed acetoin condensation as the key step to assemble two C_2 acetaldehydes into a C_4 product. The environmentally benign and cheap natural catalyst vitamin B1 demonstrates high selectivity, high efficiency, and high tolerance toward ethanol and water impurities in the acetoin reaction.

ChemSusChem
DOI: **10.1002/cssc.201402396**





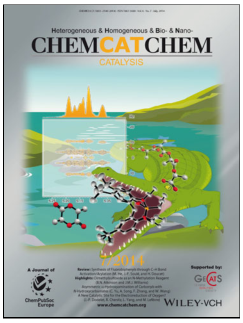
Epoxidation

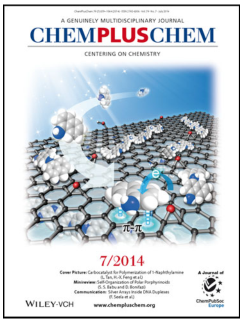
A. Indra, M. Greiner, A. K. Gericke, R. Schlögl, D. Avnir,* M. Driess*

High Catalytic Synergism between the Components of the Rhenium Complex@Silver Hybrid Material in Alkene Epoxidations

A call for synergy: Catalytic synergism in the epoxidation of alkenes is observed if a rhenium complex is immobilized in the silver matrix. The catalytic activity of the heterogenized system is better than that of the individual components. Furthermore, the epoxidation reactions are performed in water with persulfate as the oxidant under environmentally benign conditions.

ChemCatChem
DOI: **10.1002/cctc.201402042**



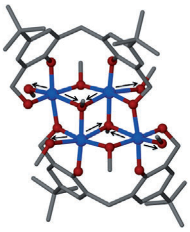


Cluster Compounds

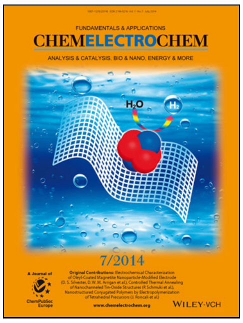
R. McLellan, M. A. Palacios, E. K. Brechin,* S. J. Dalgarno*

Influencing the Orientation of Jahn–Teller Axes in Butterfly-Like Mn^{III}_4 Clusters

In the wings: A bis-phenolate with calixarene character influences the orientation of Jahn–Teller axes (shown by arrows in the figure) in a tetranuclear Mn^{III} cluster. Structural changes and prevailing magnetic properties are presented.



ChemPlusChem
DOI: **10.1002/cplu.201400031**

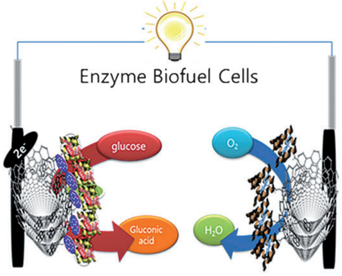


Enzymatic Fuel Cells

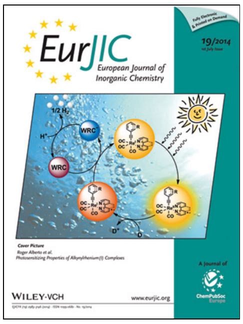
D. Fapyane, Y. Lee, C. Y. Lim, J.-H. Ahn, S.-W. Kim, I. S. Chang*

Immobilisation of Flavin-Adenine-Dinucleotide-Dependent Glucose Dehydrogenase α Subunit in Free-Standing Graphitised Carbon Nanofiber Paper Using a Bifunctional Cross-Linker for an Enzymatic Biofuel Cell

Talk faster! Non-covalent functionalisation of nano-sized carbon structures through π–π stacking is shown to be a practical method of immobilising enzymes for construction of an enzyme–electrode hybrid. This mode of immobilisation preserves the structure and properties of the nanomaterial and facilitates fast enzyme–electrode electrical communication for applications in enzymatic fuel cells.



ChemElectroChem
DOI: **10.1002/celc.201402035**

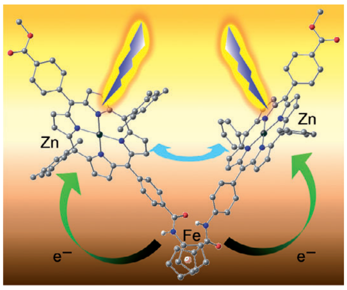


Photoinduced Electron Transfer

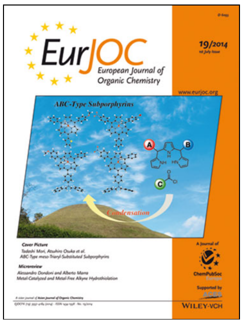
J. Melomedov, J. R. Ochsmann, M. Meister, F. Laquai, K. Heinze*

Aminoferrocene and Ferrocene Amino Acid as Electron Donors in Modular Porphyrin–Ferrocene and Porphyrin–Ferrocene–Porphyrin Conjugates

Porphyrin–ferrocene dyads and porphyrin–ferrocene–porphyrin tweezers with tuneable electron density at the porphyrin arms and ferrocene cores are prepared, and the reductive photoinduced electron transfer from ferrocene to the electronically excited porphyrins is investigated. Singlet–singlet energy transfer between the porphyrin arms in the tweezers is also feasible in a V-shaped conformation.



Eur. J. Inorg. Chem.
DOI: **10.1002/ejic.201402138**

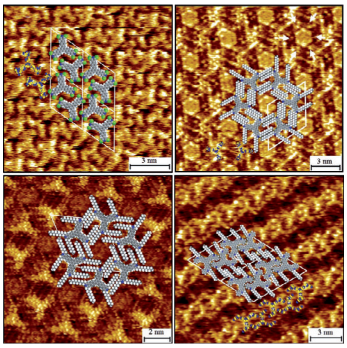


Self-Assembly

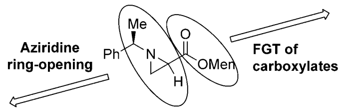
D. Trawny, L. Vandromme, J. P. Rabe,* H.-U. Reissig*

The Side Chain Makes the Difference: Investigation of the 2D Self-Assembly of 1,3,5-Tris[4-(4-pyridinyl)phenyl]benzene Derivatives by Scanning Tunneling Microscopy

A series of star-shaped compounds with different pyridine end groups is prepared, and the 2D self-assembly of these compounds is investigated by scanning tunneling microscopy (STM). Small variations in the substitution pattern lead to remarkably different self-assembly behavior. A reduction of the symmetry of the compounds has a particularly strong effect on the self-assembly result.



Eur. J. Org. Chem.
DOI: **10.1002/ejoc.201402178**



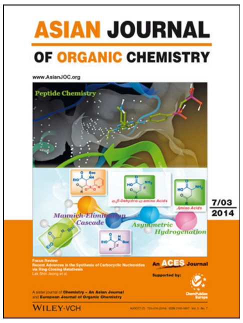
Asian J. Org. Chem.
DOI: **10.1002/ajoc.201402098**

Aziridine Chemistry

H.-J. Ha,* J.-H. Jung, W. K. Lee*

Application of Regio- and Stereoselective Functional Group Transformations of Chiral Aziridine-2-carboxylates

Boxing clever: This Focus Review highlights the chemistry of chiral aziridine-2-carboxylates as building blocks based on regio- and stereoselective functional group transformations of the carboxylate group and aziridine ring. This chemistry is exemplified by the efficient and highly stereoselective synthesis of many biologically important amines, including several natural products.



ChemViews magazine
DOI: **10.1002/chemv.201400050**

Biocatalysis

K. Jones

Enantioselective Preparation of δ-Valerolactones

Professor Vicente Gotor-Fernández of the University of Oviedo, Spain, discovered that horse liver alcohol dehydrogenase (HLADH) is a versatile biocatalyst for the desymmetrization of prochiral 3-arylpentane-1,5-diols. He speaks about this finding which was published in *ChemCatChem* with one of the Editors of the journal.