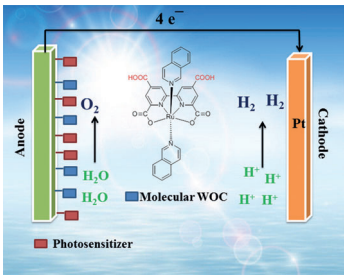
On these pages, we feature a selection of the excellent work that has recently been published in our sister journals. If you are reading these pages on a computer, click on any of the items to read the full article. Otherwise please see the DOIs for easy online access through Wiley Online Library.

Electrochemistry

T.-T. Li, W.-L. Zhao, Y. Chen, F.-M. Li, C.-J. Wang, Y.-H. Tian, W.-F. Fu*

Photochemical, Electrochemical, and Photoelectrochemical Water Oxidation Catalyzed by Water Soluble Mononuclear Ruthenium Complexes

WOC immobilized on a semiconductor: Two mononuclear Ru^{II} complexes with free carboxyl groups (water oxidation catalyst, WOC) can anchor covalently to a semiconductor. The electrochemical, photochemical, and photoelectrochemical water oxidation performance of the assembly devices in neutral aqueous solution is investigated (see figure).



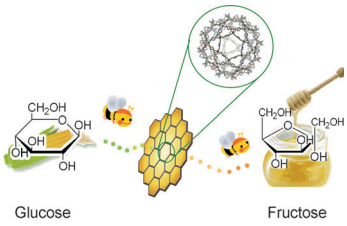
Chem. Eur. J.
DOI: **10.1002/chem.201403872**

Coordination Polymers

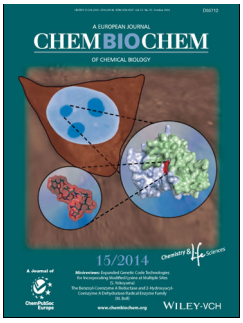
G. Akiyama, R. Matsuda,* H. Sato, S. Kitagawa*

Catalytic Glucose Isomerization by Porous Coordination Polymers with Open Metal Sites

Sugar, ah, honey, honey: Highly efficient catalytic isomerization reactions from glucose to fructose in aqueous media are presented by using porous coordination polymers (PCPs)/metal–organic frameworks (MOFs). Further, the materials are also applicable to catalytic one-pot conversion of amylose to fructose using a functionalized PCP with $-SO_3H$ groups, thanks to the high stability of the framework in an acidic solution.



Chem. Asian J.
DOI: **10.1002/asia.201402119**

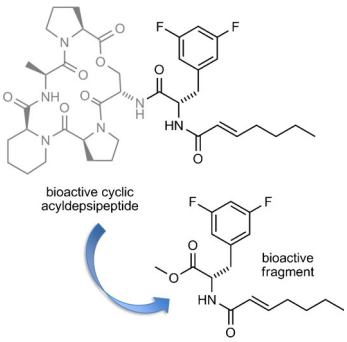


Cyclic Peptides

D. W. Carney, C. L. Compton, K. R. Schmitz, J. P. Stevens, R. T. Sauer, J. K. Sello*

A Simple Fragment of Cyclic Acyldepsipeptides Is Necessary and Sufficient for ClpP Activation and Antibacterial Activity

Just one piece: Through a combination of genetic and biochemical experiments, we established that the *N*-acyldifluorophenylalanine side chain of cyclic acyldepsipeptide antibacterial agents is necessary and sufficient for biological activity: fragments activate ClpP and retain antibacterial activity. This finding sets the stage for the design of novel ClpP activators.



ChemBioChem
DOI: **10.1002/cbic.201402358**

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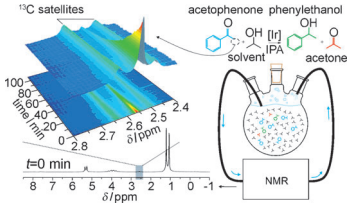


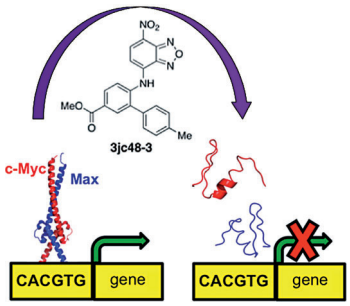
Nuclear Magnetic Resonance

E. Danieli,* J. Perlo, A. L. L. Duchateau, G. K. M. Verzijl, V. M. Litvinov, B. Blümich, F. Casanova

On-Line Monitoring of Chemical Reactions by using Bench-Top Nuclear Magnetic Resonance Spectroscopy

Keepin′ it real: Real-time nuclear magnetic resonance measurements can be performed with a compact system installed next to the reactor inside a laboratory fume hood. In a transfer hydrogenation reaction, employing Ir as the catalyst in isopropanol (IPA), the mixture from the reactor is pumped continuously to the magnet and back in a closed loop (see figure). High sensitivity and resolution can be achieved.

ChemPhysChem
DOI: **10.1002/cphc.201402049**



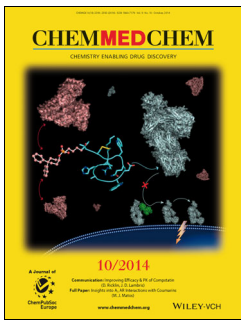
Protein–Protein Interactions

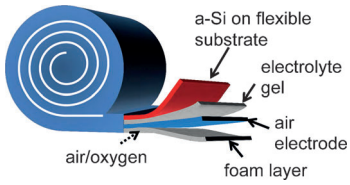
J. Chauhan, H. Wang, J. L. Yap, P. E. Sabato, A. Hu, E. V. Prochownik, S. Fletcher*

Discovery of Methyl 4′-Methyl-5-(7-nitrobenzo[*c*][1,2,5]-oxadiazol-4-yl)-[1,1′-biphenyl]-3-carboxylate, an Improved Small-Molecule Inhibitor of c-Myc–Max Dimerization

Splitting Myc & Max! A congener of the previously characterized c-Myc inhibitor 10074-G5, termed 3jc48-3, was identified that is five times more potent (IC_{50} = 34 μM) at inhibiting c-Myc–Max dimerization than the parent compound. It inhibits the proliferation of c-Myc-over-expressing HL60 and Daudi cells with single-digit micromolar IC_{50} values. 3jc48-3 is one of the most potent, cellularly active c-Myc inhibitors to date.

ChemMedChem
DOI: **10.1002/cmdc.201402189**





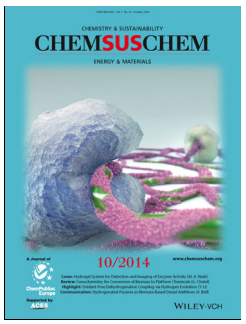
Batteries

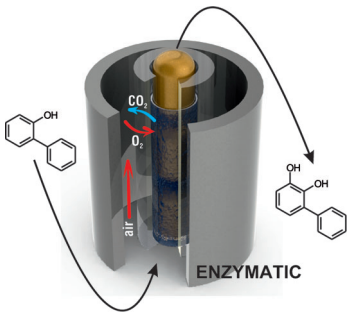
A. Garamoun, M. B. Schubert, J. H. Werner*

Thin-Film Silicon for Flexible Metal–Air Batteries

Roll with it! Silicon is a promising candidate material for metal–air batteries because of its high theoretical energy density. Depositing thin films of doped amorphous silicon on ultrathin flexible foil substrates opens the door for flexible and rollable Si–air batteries with high specific and volumetric energy density. It is expected that avoiding self-discharge and enhancing specific capacity can be realized by using different electrolytes and modifying the silicon anodes.

ChemSusChem
DOI: **10.1002/cssc.201402463**





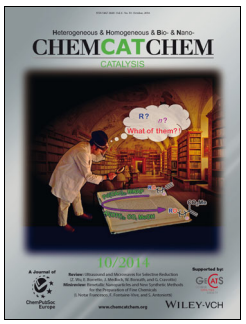
Microreactors

B. Tomaszewski, R. C. Lloyd, A. J. Warr, K. Buehler, A. Schmid*

Regioselective Biocatalytic Aromatic Hydroxylation in a Gas–Liquid Multiphase Tube-in-Tube Reactor

Flow power: A tube-in-tube reactor is presented for a gas-dependent biocatalytic reaction, overcoming typical limitations such as mass transfer, product and substrate inhibition, and challenges with gas delivery with productivities superior to standard batch reactors or conventional microreactors.

ChemCatChem
DOI: **10.1002/cctc.201402354**



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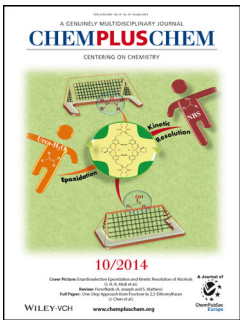
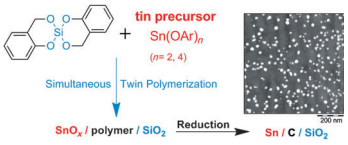


Twin Polymerization

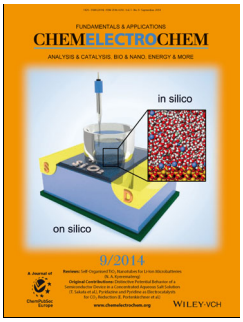
C. Leonhardt, S. Brumm, A. Seifert, A. Lange, S. Csihony, M. Mehring*

Tin Nanoparticles in Carbon/Silica Hybrid Materials by the Use of Twin Polymerization

Twin-(em)bedded: Uniformly distributed tin nanoparticles embedded in a carbon/silica matrix have been obtained from tin and silica precursors by the use of the twin polymerization process followed by reduction with Ar/H_2 (see figure). The final $Sn@C/SiO_2$ hybrid materials have high BET surface areas up to 352 $m^2 g^{-1}$ and tin particle sizes in the range of 20–100 nm.



ChemPlusChem
DOI: **10.1002/cplu.201402137**

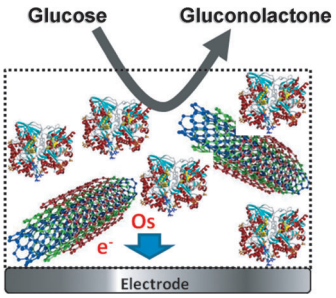


Enzymatic Fuel Cells

I. Osadebe, D. Leech*

Effect of Multi-Walled Carbon Nanotubes on Glucose Oxidation by Glucose Oxidase or a Flavin-Dependent Glucose Dehydrogenase in Redox-Polymer-Mediated Enzymatic Fuel Cell Anodes

Lending support: The use of multi-walled carbon nanotubes increases catalysis of glucose oxidation by glucose oxidase or flavin-dependent glucose dehydrogenase in redox-polymer-mediated enzymatic fuel cell anodes to yield a current density of 1.1 $mA\,cm^{-2}$ in a physiologically relevant 5 mM glucose solution.



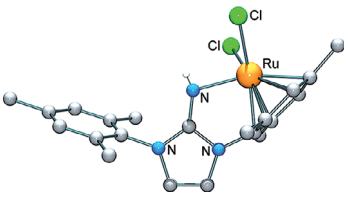
ChemElectroChem
DOI: **10.1002/celc.201402136**

Half-Sandwich Complexes

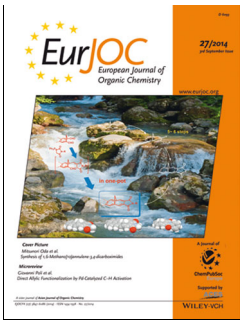
J. Tönnemann, R. Scopelliti, K. Severin*

(Arene)ruthenium Complexes with Imidazolin-2-imine and Imidazolidin-2-imine Ligands

(Arene)Ru complexes with imidazolin-2-imine and imidazolidin-2-imine ligands of the general formula $[(cymene)RuCl_2L]$ are described. Photochemical activation allows the preparation of complexes in which the imines act as π ligands with tethered imine groups.



Eur. J. Inorg. Chem.
DOI: **10.1002/ejic.201402583**

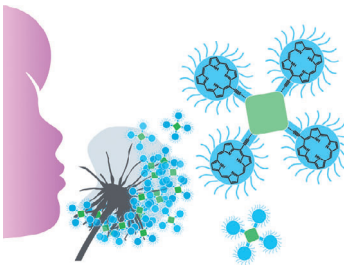


Fluorinated Oligoporphyrins

L. Felix, U. Sezer, M. Arndt, M. Mayor*

Synthesis of Highly Fluoroalkyl-Functionalized Oligoporphyrin Systems

Massive but volatile molecules have been obtained by functionalizing the periphery of oligoporphyrins with highly fluorinated alkyl chains. The statistical nature of the reaction gives libraries consisting of molecules with well-defined masses but small structural diversity. Laser desorption and post-ionization studies demonstrated the potential of these libraries as sources of heavy particles.



Eur. J. Org. Chem.
DOI: **10.1002/ejoc.201402816**

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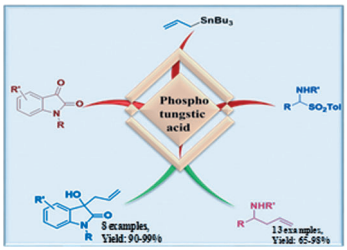


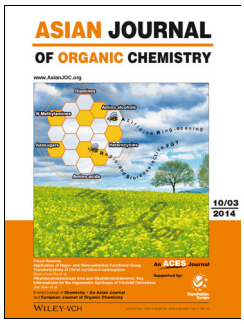
Asian J. Org. Chem.
DOI: **10.1002/ajoc.201402130**

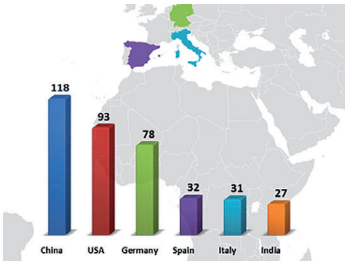
Catalysis

D. Ghosh , S. Saravanan, N. Gupta, S. H. R. Abdi,* N.-u. H. Khan, R. I. Kureshy, H. C. Bajaj

Phosphotungstic Acid as an Efficient Catalyst for Allylation of Isatins and *N-tert*-Butyloxycarbonylamido Sulfones Under Solvent-Free Conditions

Allyl in style: The present work discloses the highly efficient allylation of isatin derivatives as well as *N-tert*-butyloxycarbonylamido sulfones using phosphotungstic acid as the catalyst under ambient and solvent-free reaction conditions. The allylation products *N-tert*-butyloxycarbonyl (Boc) homoallyl amines were successfully epoxidized to get the corresponding epoxides in very good yields.





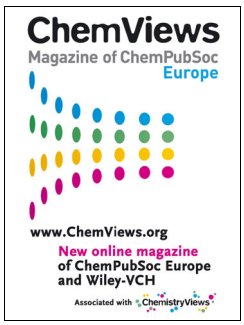
ChemViews magazine
DOI: **10.1002/chemv.201400087**

Renewable Resources

ChemViews Magazine

Renewable Energy Trends

Diminishing resources and rising costs of fossil fuels, the long-term effects of nuclear energy production, and global warming caused by human greenhouse gas emissions make the development of renewable energies an important concern. *ChemViews Magazine* gives a graphical overview of recent trends in the renewables industry.



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