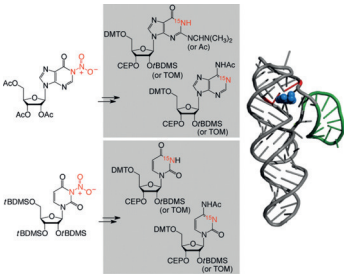
On these pages, we feature a selection of the excellent work that has recently been published in our sister journals. If you are reading these pages on a computer, click on any of the items to read the full article. Otherwise please see the DOIs for easy online access through Wiley Online Library.

RNA Synthesis

S. Neuner, T. Santner, C. Kreutz, R. Micura*

The "Speedy" Synthesis of Atom-Specific ^{15}N Imino/Amido-Labeled RNA

Fast syntheses for ^{15}N-labeled nucleoside phosphoramidites are urgently needed to generate access to RNA with selective labeling patterns. These are in turn needed for advanced NMR spectroscopic experiments to explore RNA structure, folding, and dynamics (see figure). In this concept study, we present our preferred synthetic routes and show applications on riboswitch RNA.



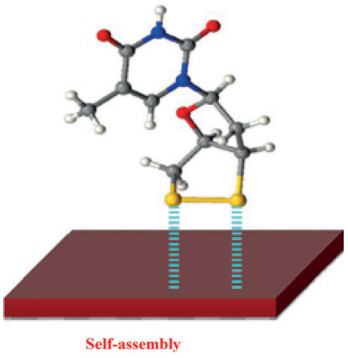
Chem. Eur. J.
DOI: **10.1002/chem.201501275**

Electroanalysis

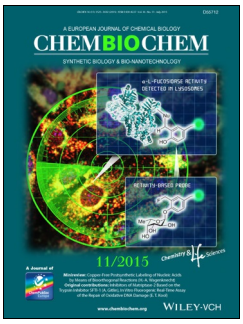
D. Datta, R. K. Bera, S. Jana, B. Manna, D. Roy, A. Anoop, C. R. Raj,* T. Pathak*

A Rationally Designed Thymidine-Based Self-Assembled Monolayer on a Gold Electrode for Electroanalytical Applications

Being picky: A thymidine-based self-assembly has been successfully utilized for the simultaneous and selective electroanalysis of ascorbate and urate. Subsequent studies demonstrate the application of the molecular assemblies for the electroanalysis of bioanalytes.



Chem. Asian J.
DOI: **10.1002/asia.201500045**

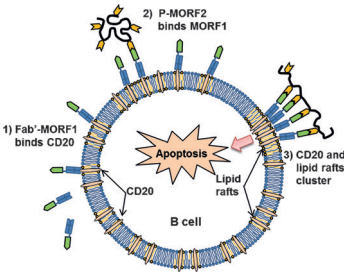


Super-Resolution Imaging

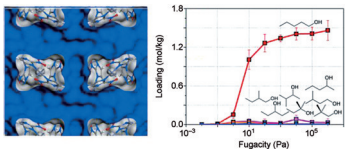
J. M. Hartley, T.-W. Chu, E. M. Peterson, R. Zhang, J. Yang, J. Harris, J. Kopeček*

Super-Resolution Imaging and Quantitative Analysis of Membrane Protein/Lipid Raft Clustering Mediated by Cell-Surface Self-Assembly of Hybrid Nanoconjugates

Hybrid nanomaterials: Super-resolution imaging was used to quantify organizational changes in the plasma membrane after treatment with hybrid nanoconjugates. The images were analyzed by using pair-correlation analysis to determine the density of bound conjugates, cluster size, and average number of molecules per cluster.



ChemBioChem
DOI: **10.1002/cbic.201500278**



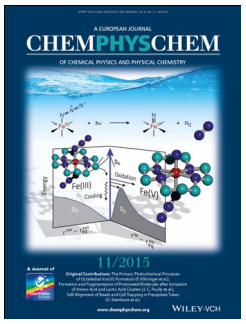
Alcohol Separation

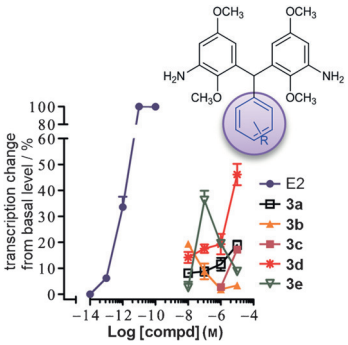
R. Bueno-Perez, J. J. Gutiérrez-Sevillano, D. Dubbeldam, P. J. Merkling,* S. Calero*

Separation of Amyl Alcohol Isomers in ZIF-77

Separation based on molecular branching: ZIF-77 is a promising candidate for the separation of mixtures of amyl alcohols and other compounds, according to the shape of the molecules, as demonstrated by a molecular simulation study of the adsorption and diffusion of these molecules.

ChemPhysChem
DOI: **10.1002/cphc.201500319**





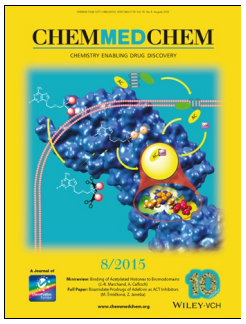
Drug Discovery

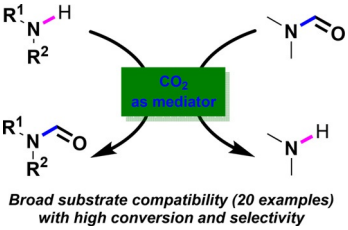
G. Guedes, Á. Amesty, R. Jiménez-Monzón, J. Marrero-Alonso, M. Díaz, L. Fernández-Pérez,* A. Estévez-Braun*

Synthesis of 4,4′-Diaminotriphenylmethanes with Potential Selective Estrogen Receptor Modulator (SERM)-like Activity

SERM much to do, so little time: A series of 4,4′-diaminotriphenylmethanes was synthesized and evaluated for antiproliferative activity against estrogen receptor (ER)-positive MCF-7 cell lines and for antagonist/agonist transcriptional activity. Docking and competition studies of triphenylmethanes and radiolabeled estradiol determined that these compounds do not bind the ER.

ChemMedChem
DOI: **10.1002/cmdc.201500148**





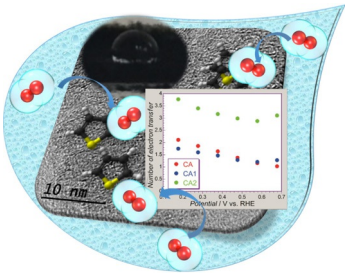
Carbon Dioxide Chemistry

Y. Wang, J. Zhang, J. Liu, C. Zhang, Z. Zhang, J. Xu,* S. Xu, F. Wang, F. Wang*

C–N and N–H Bond Metathesis Reactions Mediated by Carbon Dioxide

CO_2-mediated reactions: CO_2-mediated metathesis reactions between amines and DMF to synthesize formamides are described. The *N*-formylation of amines to formamides is achieved by activating amines, not DMF, via a C–N and N–H bond metathesis reaction. Using this method, primary, secondary, aromatic, and heterocyclic amines as well as diamines can be obtained with good to excellent formamide yields.

ChemSusChem
DOI: **10.1002/cssc.201500318**



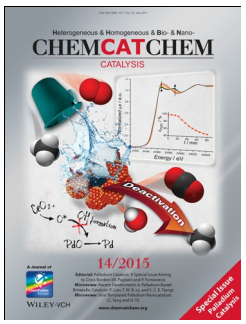
Carbon Aerogel

M. Seredych, K. László, T. J. Bandosz*

Sulfur-Doped Carbon Aerogel as a Metal-Free Oxygen Reduction Catalyst

Pores for thought: The thermal treatment of a carbon aerogel with H_2S results in the introduction of thiophenic compounds to the carbon matrix, which increased the efficiency of the oxygen reduction reaction. As a result of their hydrophobicity, the aerogels withdraw O_2 from the electrolyte. The specific micro-/mesoporosity enhances the accessibility of the surface sites to oxygen dissolved in water.

ChemCatChem
DOI: **10.1002/cctc.201500192**

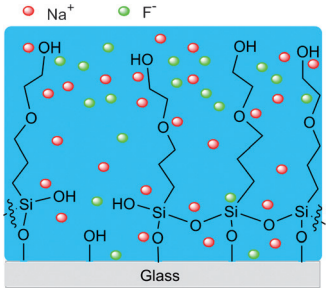


Antifouling

R. Machado, C. Blaszykowski, S. Sheikh, Y. Suganuma, M. Thompson*

Ultrathin Surface Chemistry to Delay Anion Fouling

Unwanted ion adsorption: Ultrathin, hydrogel-like antifouling surface chemistry on glass, which features monoethylene glycol based molecular residues, markedly reduces the rate of fluoride depletion from aqueous solution. At room temperature, anion adsorption until surface saturation is delayed by several hours.



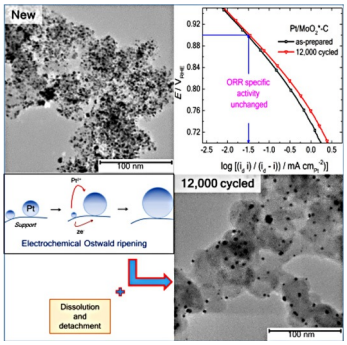
ChemPlusChem
DOI: **10.1002/cplu.201500027**

Oxygen Reduction Reaction

P. F. B. D. Martins, E. A. Ticianelli*

Electrocatalytic Activity and Stability of Platinum Nanoparticles Supported on Carbon–Molybdenum Oxides for the Oxygen Reduction Reaction

Tuned Pt nanoparticles: Durability and electrocatalytic activity in the oxygen reduction reaction is extensively investigated for platinum nanoparticles (Pt NPs) supported on carbon and molybdenum oxides. These studies reveal that Pt NPs supported on MoO_2*–C are more electrochemically stable compared to Pt/C and Pt/MoO_3–C.



ChemElectroChem
DOI: **10.1002/celc.201500196**

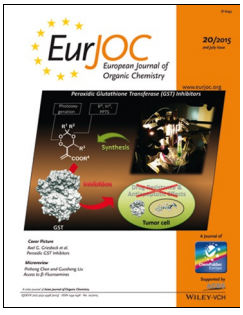
Artificial Metalloenzymes

T. Heinisch, T. R. Ward*

Latest Developments in Metalloenzyme Design and Repurposing

Artificial metalloenzymes (AMEs) combine homogeneous catalysis with enzymatic catalysis. In this microreview the authors describe recent developments in this fascinating field, ranging from artificial zinc hydrolases, metathesases, new heme protein reactions to light-driven redox reactions and enzyme models.

Eur. J. Inorg. Chem.
DOI: **10.1002/ejic.201500408**

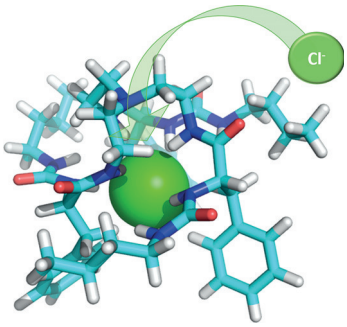


Anion Transport

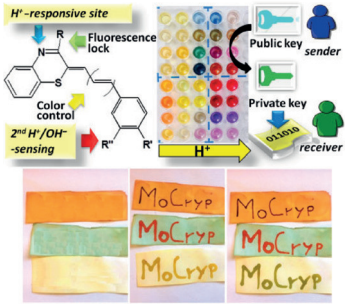
I. Martí, M. I. Burguete, P. A. Gale,* S. V. Luis*

Acyclic Pseudopeptidic Hosts as Molecular Receptors and Transporters for Anions

Pseudopeptidic structures offer access to the design of efficient anion transmembrane carriers.



Eur. J. Org. Chem.
DOI: **10.1002/ejoc.201500390**



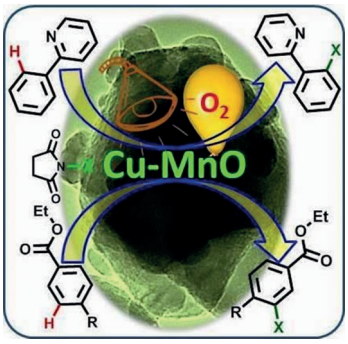
ChemistryOpen
DOI: **10.1002/open.201402164**

Molecular Cryptography

L. Leone, A. Pezzella, O. Crescenzi, A. Napolitano,* V. Barone, M. d'Ischia

Trichocyanines: a Red-Hair-Inspired Modular Platform for Dye-Based One-Time-Pad Molecular Cryptography

Color-coded chemical cryptography: A versatile dye platform could generate an expandable palette of colors specifically suited to implement an unprecedented single-use asymmetric molecular cryptography (MoCryp) system. Eight representative acidichromic cyanine-type dyes were used in the system. The trichocyanine dyes, originally inspired by red hair pigments, were pH-sensitive and tunable through four different control points.



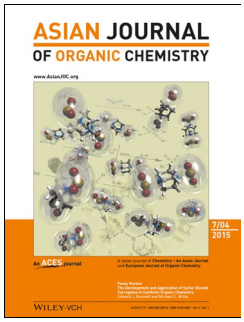
Asian J. Org. Chem.
DOI: **10.1002/ajoc.201500245**

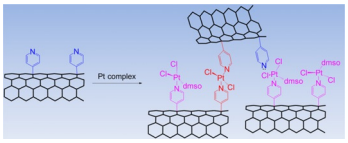
Photocatalysis

P. Pal, H. Singh, A. B. Panda,* S. C. Ghosh*

Heterogeneous Cu-MnO Catalyzed Monoselective *ortho*-Halogenation of Aromatic C–H Bonds under Visible Light

I-NXS: Heterogeneous Cu-MnO-catalyzed selective monohalogenation of aromatic compounds with cheap *N*-halosuccinimide (NXS) as a halogenating agent in the presence of molecular oxygen as an oxidant under irradiation with visible light is reported. Our catalyst works well without any additive and ligands for halogenation, selective chlorination, bromination, and iodinations were achieved. Moreover, chlorination occurs efficiently with the more challenging substrates benzoic esters.





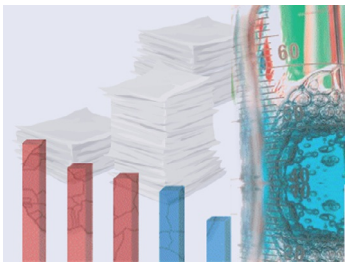
ChemNanoMat
DOI: **10.1002/cnma.201500035**

Carbon Nanotubes

A. S. Jombert,* M. K. Bayazit,* K. S. Coleman, D. A. Zeze

Platinum(II)-Coordinated Pyridine-Functionalized Single-Wall Carbon Nanotubes and Electron Transport in Their Films

Networking with platinum: The dominant conduction mechanism in films of platinum-coordinated carbon nanotubes using pyridine moieties is presented. The functionalization method favors formation of platinum bridges between the carbon nanotubes, ultimately creating three-dimensional networks.



ChemViews magazine
DOI: **10.1002/chemv.201500046**

Publishing

Understanding Impact Factors

Journal impact factors influence not only the publishing industry and libraries, but are also often used to make decisions on research funding and scientists' careers. But what does a journal's impact factor really mean, and what are its limitations? *ChemViews Magazine* gives a graphical overview explaining journal metrics.