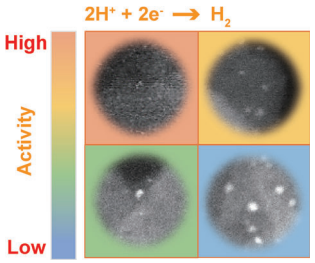
Auf diesen Seiten weisen wir auf wichtige aktuelle Beiträge in unseren Schwesterzeitschriften hin. Wenn Sie die Seiten online lesen, dann können Sie die Artikel mit einem Klick direkt aufrufen, ansonsten sind sie durch Eingabe der DOIs über Wiley Online Library leicht online zugänglich.

Cluster Size Effects

Y. H. Li, J. Xing, X. H. Yang, H. G. Yang*

Cluster Size Effects of Platinum Oxide as Active Sites in Hydrogen Evolution Reactions

Photolysis of water for the "green" hydrogen production was studied, for the first time, as a function of the size of oxidized platinum clusters as active sites (the light spots in each square in the figure). The maximum hydrogen evolution rate is found on the smallest-sized clusters. This effect can be attributed to the size-dependent free-energy change of protons adsorption of the clusters with respect to desorption of hydrogen molecules.



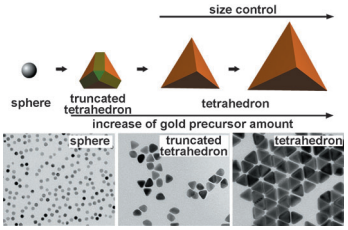
Chem. Eur. J.
DOI: **10.1002/chem.201402989**

Nanocrystals

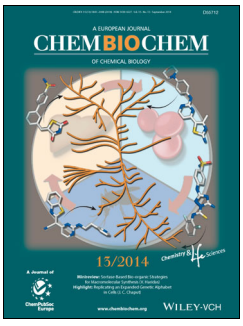
Y. Zheng, W. Liu, T. Lv, M. Luo, H. Hu, P. Lu, S.-I. Choi, C. Zhang, J. Tao, Y. Zhu, Z.-Y. Li, Y. Xia*

Seed-Mediated Synthesis of Gold Tetrahedra in High Purity and with Tunable, Well-Controlled Sizes

Nothing ever grows without a seed: Gold tetrahedra with well-controlled sizes in the range of 30–60 nm were synthesized in high yield using seed-mediated growth. We also monitored the evolution of shape from spherical seeds 10 nm in size to the tetrahedra. For the first time, Au nanocrystals with a tetrahedral shape could be obtained with an edge length as short as 30 nm.



Chem. Asian J.
DOI: **10.1002/asia.201402499**

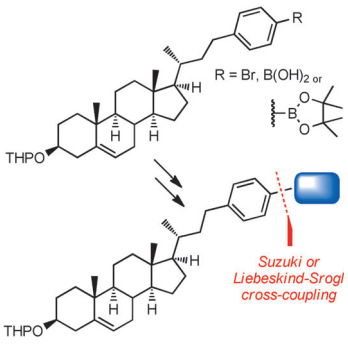


Fluorescence Imaging

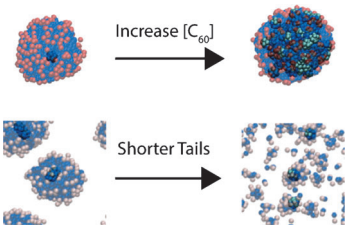
Z. Liu, S. G. Thacker, S. Fernandez-Castillejo, E. B. Neufeld, A. T. Remaley, R. Bittman*

Synthesis of Cholesterol Analogues Bearing BODIPY Fluorophores by Suzuki or Liebeskind–Srogl Cross-Coupling and Evaluation of Their Potential for Visualization of Cholesterol Pools

All roads lead to BODIPY: Versatile BODIPY–cholesterol conjugates were synthesized in which the key steps were Suzuki or Liebeskind–Srogl cross-coupling of cholesterol phenyl moieties with structurally diverse BODIPY scaffolds (blue). These conjugates were used to enable the simultaneous tracking of different cellular cholesterol pools by confocal microscopy and flow cytometry.



ChemBioChem
DOI: **10.1002/cbic.201402042**



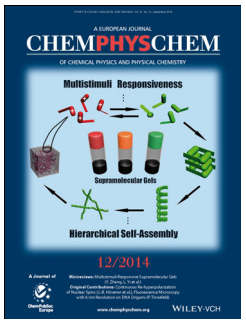
Fullerenes

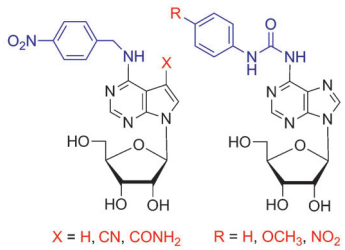
M. Dallavalle, M. Leonzio, M. Calvaresi,* F. Zerbetto*

Explaining Fullerene Dispersion by using Micellar Solutions

Behavior deconstructed: The dispersion of fullerenes by surfactants is described by dissipative particle dynamics simulations. A systematic study of the effect of the chain length, charge, and concentration of the stabilizer on fullerene aggregation is presented to explain the experimental results and to provide guidelines to understand the incorporation of C_{60} inside micelles.

ChemPhysChem
DOI: **10.1002/cphc.201402282**





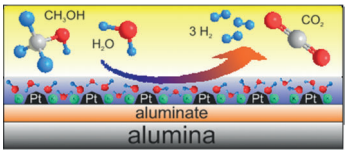
Antiproliferative Agents

R. Rayala, P. Theard, H. Ortiz, S. Yao, J. D. Young, J. Balzarini, M. J. Robins, S. F. Wnuk*

Synthesis of Purine and 7-Deazapurine Nucleoside Analogues of 6-*N*-(4-Nitrobenzyl)adenosine; Inhibition of Nucleoside Transport and Proliferation of Cancer Cells

Transporters! The 4-*N*-(4-nitrobenzyl) derivatives of tubercidin, toyocamycin and sangivamycin inhibited cross-membrane transport of labelled uridine by nucleoside transporter hENT1 and proliferation of L1210, HeLa, and PC-3 tumor cells at micromolar levels. These compounds represent tool compounds for the continued study of the structure and function of nucleoside transporter proteins.

ChemMedChem
DOI: **10.1002/cmdc.201402047**



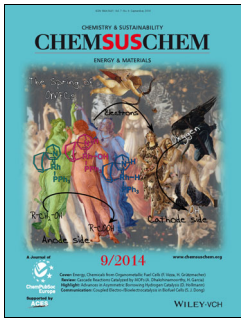
Ionic Liquids

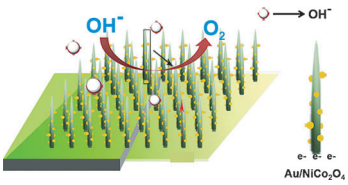
M. Kusche, F. Agel, N. Ní Bhriain, A. Kaftan, M. Laurin, J. Libuda, P. Wasserscheid*

Methanol Steam Reforming Promoted by Molten Salt-Modified Platinum on Alumina Catalysts

Molten salts might have a new life: Platinum-on-alumina catalysts are boosted in their selectivity and activity for methanol steam reforming by a surface coating with basic and hygroscopic alkali salts. As evidenced by diffuse reflectance infrared Fourier transform spectroscopy (DRIFTS) and temperature-programmed desorption (TPD) studies, alkali doping through the salt coating is an important factor for this enhanced performance.

ChemSusChem
DOI: **10.1002/cssc.201402357**





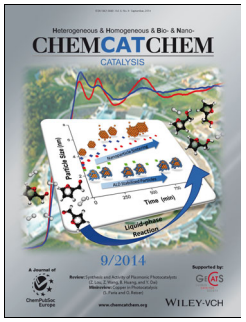
Water Oxidation

X. Liu, J. Liu,* Y. Li, Y. Li, X. Sun*

$Au/NiCo_2O_4$ Arrays with High Activity for Water Oxidation

The man with the golden array: Electrodes made from a novel $Au/NiCo_2O_4$ hybrid array exhibit high catalytic activity for the oxygen evolution reaction and outperform commercial Ir/C. The enhanced performance can be attributed to the optimized chemical environment of the Co ions and the construction of well-aligned nanoarrays.

ChemCatChem
DOI: **10.1002/cctc.201402217**

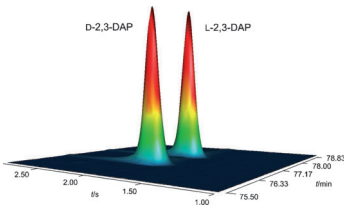


Multidimensional Gas Chromatography

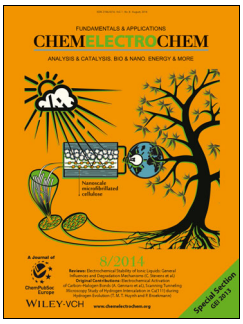
C. Meinert,* U. J. Meierhenrich*

Derivatization and Multidimensional Gas-Chromatographic Resolution of α-Alkyl and α-Dialkyl Amino Acid Enantiomers

Touching base: Baseline separation of enantiomers of α-dialkyl amino acids is achieved by employing a novel derivatization method in combination with comprehensive two-dimensional GC coupled to time-of-flight mass spectrometry (see figure for D,L-2,3-diaminopropanoic acid (DAP)). The data are important for analyses of samples relevant for D-amino acid related sciences and the origin of homochirality on Earth.



ChemPlusChem
DOI: **10.1002/cplu.201300328**

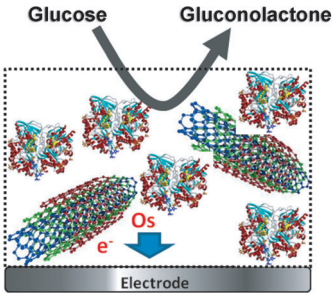


Glucose Oxidation

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.



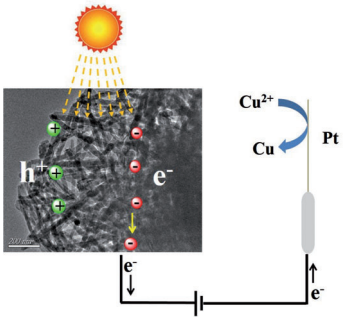
ChemElectroChem
DOI: **10.1002/celc.201402136**

Carbon Nitride Nanorods

L. Xu, J. X. Xia, L. G. Wang,* H. Y. Ji, J. Qian, H. Xu, K. Wang, H. M. Li*

Graphitic Carbon Nitride Nanorods for Photoelectrochemical Sensing of Trace Copper(II) Ions

A metal-free polymeric material, graphitic carbon nitride (g-C_3N_4) nanorods, has been designed and fabricated by means of hydrothermally treated bulk g-C_3N_4 using NH_4Cl. A highly selective and sensitive photoelectrochemical (PEC) sensing platform based on the g-C_3N_4 nanorods has also been developed for detecting the trace copper(II) ions in aqueous solution.



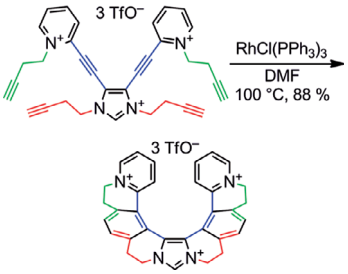
Eur. J. Inorg. Chem.
DOI: **10.1002/ejic.201402051**

Helical Imidazolia

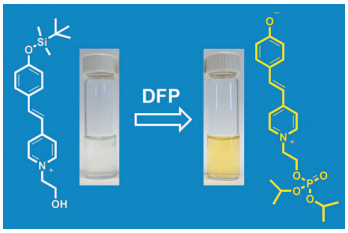
M. Čížková, D. Šaman, D. Koval, V. Kašička, B. Klepetářová, I. Císařová, F. Teplý*

Modular Synthesis of Helicene-Like Compounds Based on the Imidazolium Motif

Straightforward assembly of helicene-like cationic systems based on the imidazolium core is introduced. The strategy takes advantage of double [2+2+2] cycloaddition reactions and opens rapid four-step access to a cationic helical species featuring nine *ortho*-annulated rings.



Eur. J. Org. Chem.
DOI: **10.1002/ejoc.201402746**



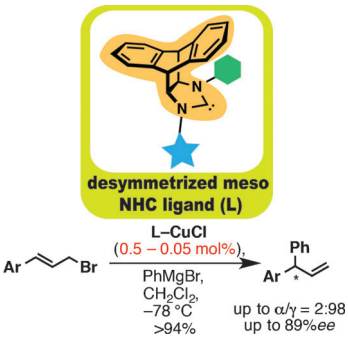
ChemistryOpen
DOI: **10.1002/open.201402014**

Molecular Sensors

S. El Sayed, L. Pascual, A. Agostini, R. Martínez-Máñez,*
F. Sancenón, A. M. Costero,* M. Parra, S. Gil

A Chromogenic Probe for the Selective Recognition of Sarin and Soman Mimic DFP

Detecting chemical warfare agents: A colorimetric molecular probe for the highly selective detection of diisopropylfluorophosphate (DFP), a mimic of sarin and soman nerve gases, in water and in the gas phase is reported. Other nerve agent simulants, anions, oxidant species and other organophosphorous compounds were unable to induce colour changes.



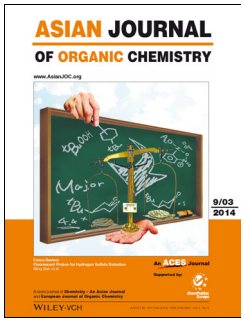
Asian J. Org. Chem.
DOI: **10.1002/ajoc.201402089**

N-Heterocyclic Carbenes

S. Ando,* H. Matsunaga, T. Ishizuka*

Use of a Desymmetrized *meso* Molecule as a Chiral Ligand: Development of Chiral N-Heterocyclic Carbene Ligands for Asymmetric Allylic Arylations with Grignard Reagents

Broken symmetry: The desymmetrization of a *meso* molecule was used for the development of a chiral *N*-heterocyclic carbene (NHC) ligand. The stereocontrol in asymmetric allylic arylations was improved to 89% *ee* via derivatization studies. The resultant copper catalyst was effective at the level of 0.05 mol% loading for gram-scale reactions.



ChemViews magazine
DOI: **10.1002/chemv.201400066**

Chemical Patents

V. Köster

Career: A Chemist Who Deals with Patents

In an interview series, ChemistryViews.org gives readers a glimpse into the wide range of career paths in chemistry. This time, a patent counsel introduces us to a job at the forefront of development and innovation that is more exciting than it might seem at first glance: helping companies make decisions with often far-reaching consequences.