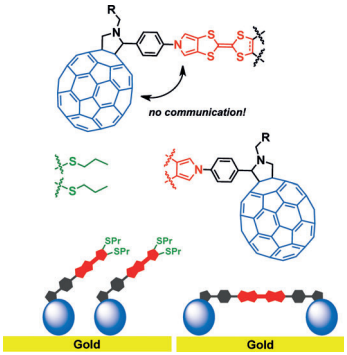
On these pages, we feature a selection of the excellent work that has recently been published in our sister journals. If you are reading these pages on a computer, click on any of the items to read the full article. Otherwise please see the DOIs for easy online access through Wiley Online Library.

Dyads and Triads

M. V. Solano, E. A. Della Pia, M. Jevric, C. Schubert, X. Wang, C. v. d. . Pol, A. Kadziola, K. Nørgaard, D. M. Guldi,* M. B. Nielsen,* J. O. Jeppesen*

Mono- and Bis(pyrrolo)tetrathiafulvalene Derivatives Tethered to C_{60}: Synthesis, Photophysical Studies, and Self-Assembled Monolayers

Communication breakdown: Dyads and triads composed of fullerenes and pyrrolotetrathiafulvalenes were prepared by Prato cycloaddition reactions and subjected to detailed electrochemical and photophysical studies, including absorption and fluorescence spectroscopy, as well as femtosecond and nanosecond transient absorption studies, which indicated no observable electronic communication between the tetrathiafulvalene and the C_{60} moieties (see figure). The dyad and triad molecules form self-assembled monolayers on gold surfaces.



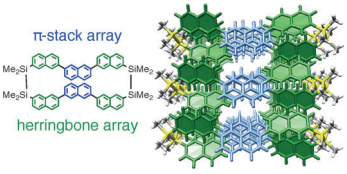
Chem. Eur. J.
DOI: **10.1002/chem.201402623**

Cyclophanes

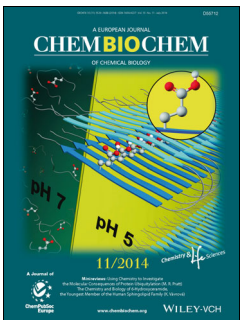
W. Nakanishi,* N. Matsuyama, D. Hara, A. Saeki, S. Hitosugi, S. Seki,* H. Isobe*

Disilanyl Double-Pillared Bisternaphthyl (^{Si}DPBT): Synthesis and Interfused Packing Structures with Herringbone and π-Stack Motifs

Packed in like herrings: A cyclophane molecule with disilanyl pillars was synthesized by using ternaphthyl as base arylene units to afford a macrocycle possessing interfused packing structures of π-stack and herringbone motifs.



Chem. Asian J.
DOI: **10.1002/asia.201402290**

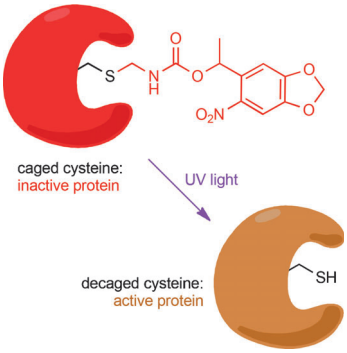


Genetic Code Expansion

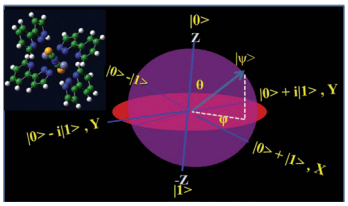
R. Uprety, J. Luo, J. Liu, Y. Naro, S. Samanta, A. Deiters*

Genetic Encoding of Caged Cysteine and Caged Homocysteine in Bacterial and Mammalian Cells

Photochemical OFF→ON switching of proteins: Caged cysteine and caged homocysteine were genetically incorporated into proteins in bacterial and mammalian cells, allowing photochemical control over the activity of these proteins and thus offering the potential for precise spatial and temporal regulation of a wide range of cellular processes.



ChemBioChem
DOI: **10.1002/cbic.201400073**



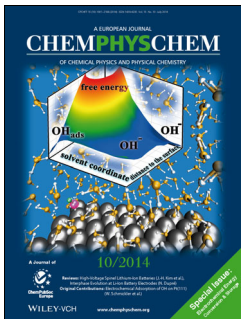
Quantum Computing

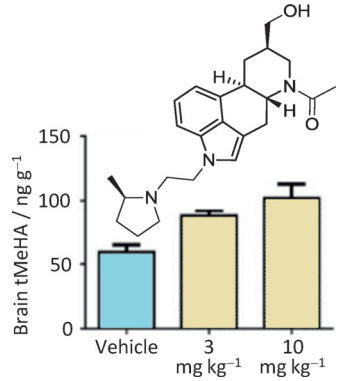
M. Chattopadhyaya, M. M. Alam, D. Sarkar, S. Chakrabarti*

Electrically Controlled Eight-Spin-Qubit Entangled-State Generation in a Molecular Break Junction

Tale of entanglement: An eight-spin-qubit quantum entangled state can be realized in a dinuclear Fe(II) complex which (under a specific set of quantum-logic-gate operations) can act as a source of multi-qubit generation. The large decoherence time with high quantum fidelity factor makes the system an efficient quantum-computing object.

ChemPhysChem
DOI: **10.1002/cphc.201400029**





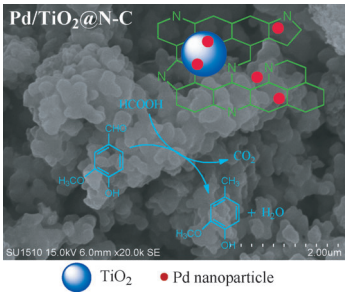
Drug Discovery

Y. P. Auberson,* T. Troxler,* X. Zhang,* Ch. R. Yang, M. Fendt, D. Feuerbach, Y.-Ch. Liu, B. Lagu, A. Lerchner, M. Perrone, L. Lei, C. Zhang, C. Wang, T.-L. Wang, M. G. Bock

Ergoline-Derived Inverse Agonists of the Human H3 Receptor for the Treatment of Narcolepsy

Time to wake up! Histamine H3 receptor (H3R) inverse agonism is a well-established paradigm for the treatment of narcolepsy. Unfortunately, all drug candidates so far proved to have a long duration of action, causing insomnia on the following night. The chance discovery of a novel, ergoline-based scaffold opens a new avenue towards derivatives that exhibit potent, but short-acting, inhibition of H3R.

ChemMedChem
DOI: **10.1002/cmdc.201402055**



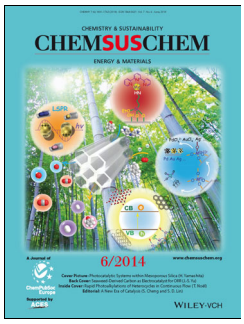
Biofuels

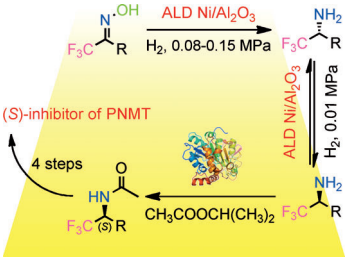
L. Wang, B. Zhang, X. Meng, D. S. Su, F.-S. Xiao*

Hydrogenation of Biofuels with Formic Acid over a Palladium-Based Ternary Catalyst with Two Types of Active Sites

Triple play: A ternary Pd/TiO_2@N–C catalyst is developed by supporting palladium nanoparticles onto a composite support of titania (TiO_2) and nitrogen-modified porous carbon. The catalyst is able to fully hydrogenate vanillin, using formic acid, available from biomass, as hydrogen source. Its unique catalytic properties for hydrogenation are due to a synergistic effect between two different types of palladium sites in the catalyst: one for formic acid dehydrogenation and on for vanillin hydrogenation.

ChemSusChem
DOI: **10.1002/cssc.201400039**





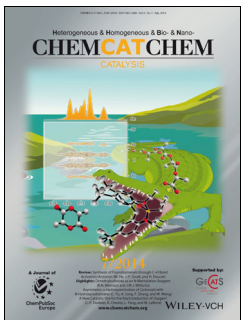
Cascade Reactions

G. Cheng, Q. Wu, Z. Shang, X. Liang,* X. Lin*

Stereoselective Transformations of α-Trifluoromethylated Ketoximes to Optically Active Amines by Enzyme–Nanometal Cocatalysis: Synthesis of (*S*)-Inhibitor of Phenylethanolamine N-Methyltransferase

No inhibitions: One-pot cascade chemoenzymatic synthesis of chiral α-trifluoromethylated amines from ketoximes is performed by using catalysts prepared by atomic-layer deposition (ALD) method combined with *Candida antarctica* lipase B. The obtained amine was treated as an important raw material for total synthesis of an (*S*)-inhibitor of phenylethanolamine N-methyltransferase (PNMT).

ChemCatChem
DOI: **10.1002/cctc.201402114**

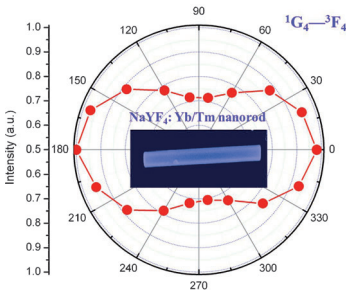


Lanthanide-Doped Nanocrystals

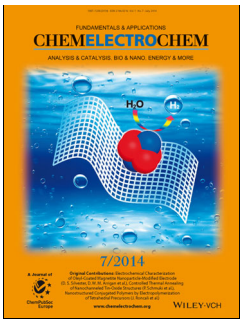
G. Dong,* H. He, Q. Pan, G. Chen, J. Xie, Z. Ma, M. Peng

Controllable Synthesis and Peculiar Optical Properties of Lanthanide-Doped Fluoride Nanocrystals

Transition period: Yb^{3+}/Tm^{3+}-codoped $NaYF_4$ nanocrystals with different phases (cubic α and hexagonal β) and morphologies (nanoparticles, nanorods, nanoplates) can be controllably fabricated by a convenient hydrothermal synthesis technique. Anisotropic polarization emission is obtained in individual $NaYF_4$:Yb,Tm nanorods, which have potential applications as polarized light resources, bio-labels, photodetectors, lasers, and so forth (see picture).



ChemPlusChem
DOI: **10.1002/cplu.201300373**

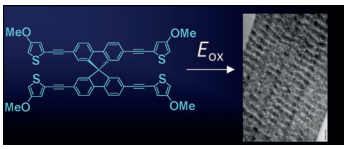


Conjugated Polymers

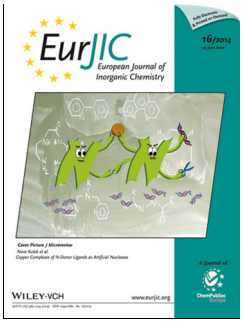
A. Yassin, R. Mallet, P. Leriche, J. Roncali*

Production of Nanostructured Conjugated Polymers by Electropolymerization of Tailored Tetrahedral Precursors

The long ranger: Transmission electron microscopy analysis of the material produced by the potentiostatic electropolymerization of a rigid, highly symmetrical, slender precursor with four reactive 3-methoxythiophene end-groups provides evidence for the formation of organized nanostructures.



ChemElectroChem
DOI: **10.1002/celc.201402007**

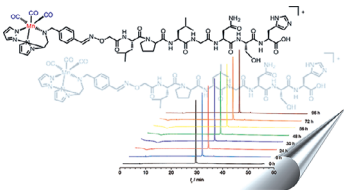


Hydrometallation

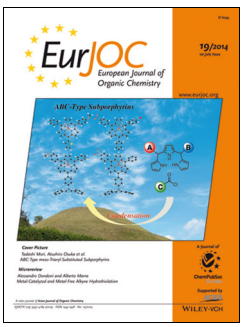
W. Uhl,* S. Pelties, M. Rohling, J. Tannert

Alkenyl-Alkynylgermanes Functionalised by Lewis Acids: Intramolecular Aluminium– and Gallium–Alkyne Interactions and Potential Ge–C Bond Activation

Bond activation by intramolecular interactions of alkynyl carbon with highly Lewis acidic aluminium atoms was observed for functionalised alkenyl-alkynylgermanes. Such mixed germanium–aluminum or –gallium compounds were obtained by hydrometallation of dialkynylgermanes and are promising candidates for secondary reactions such as cyclisation or insertion.



Eur. J. Inorg. Chem.
DOI: **10.1002/ejic.201402123**

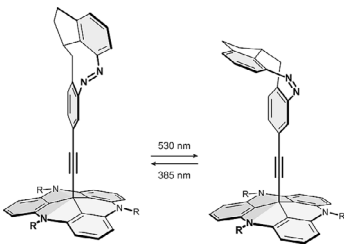


Surface Functionalization

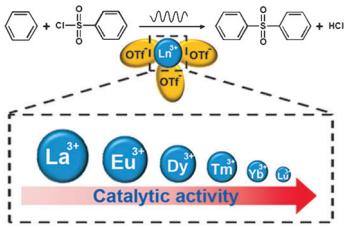
T. Tellkamp, J. Shen, Y. Okamoto, R. Herges*

Diazocines on Molecular Platforms

A bridged diazocine has been synthesized whose switching direction is restricted to one side. The diazocine was mounted onto a molecular platform which is known to have a high affinity to gold Au(111) surfaces. Upon irradiation of the thermodynamically more stable *cis* configuration in solution with light of 385 nm the *trans* isomer is formed and with green light (530 nm) back-isomerization to the *cis* form is achieved.



Eur. J. Org. Chem.
DOI: **10.1002/ejoc.201402541**



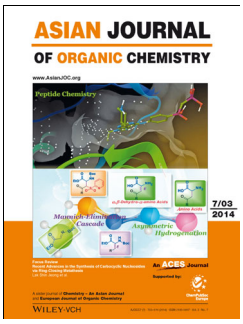
Asian J. Org. Chem.
DOI: **10.1002/ajoc.201402067**

Lanthanide Catalysis

V. T. A. Nguyen, F. Duus, T. N. Le*

Upward Trend in Catalytic Efficiency of Rare-Earth Triflate Catalysts in Friedel–Crafts Aromatic Sulfonylation Reactions

Going up! The upward trend in efficiency of lanthanide (Ln) triflates in catalyzing aromatic sulfonylation reaction correlates with the lanthanide sequence in the periodic table. Various related physical properties of lanthanide ions were found to have some influence on the catalytic activity.



ChemViews magazine
DOI: **10.1002/chemv.201400054**

Food Chemistry

Chemistry of Caipirinha

Caipirinha is not only the World Cup 2014 cocktail, but Brazil's national cocktail. In a picture the preparation and chemistry related to this drink is explained.