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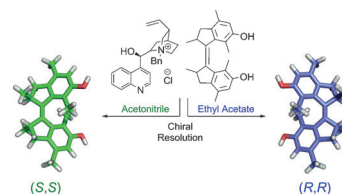


Solvent Effects

T. van Leeuwen, J. Gan, J. C. M. Kistemaker, S. F. Pizzolato, M.-C. Chang, B. L. Feringa*

Enantiopure Functional Molecular Motors Obtained by a Switchable Chiral-Resolution Process

Conformational isomerism: A method to obtain new and functionalizable overcrowded alkenes in enantiopure form is presented. The procedure involves a short synthesis of three steps and a solvent-switchable chiral resolution by using a readily available resolving agent (see scheme).



Chem. Eur. J.
DOI: 10.1002/chem.201600628

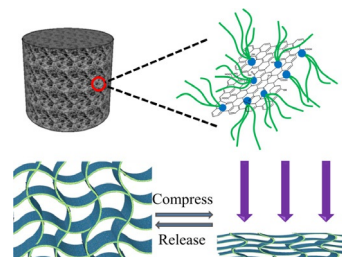


Graphene

P. Zhang, L. Lv, Z. Cheng, Y. Liang, Q. Zhou, Y. Zhao,* L. Qu*

Superelastic, Macroporous Polystyrene-Mediated Graphene Aerogels for Active Pressure Sensing

Under pressure: 3D macroporous polystyrene/graphene aerogels (MPS-GAs) with lightweight, superelasticity (80% strain), high strength (80 kPa), and good electrical properties have been achieved. The MPS-GAs show excellent electromechanical performance with stable cyclic resilient properties and sensitive resistance responses.



Chem. Asian J.
DOI: 10.1002/asia.201600038

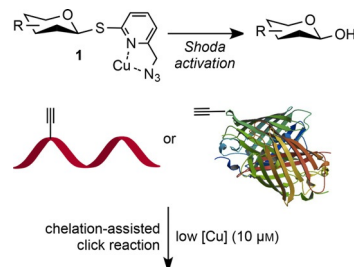


Bioconjugation

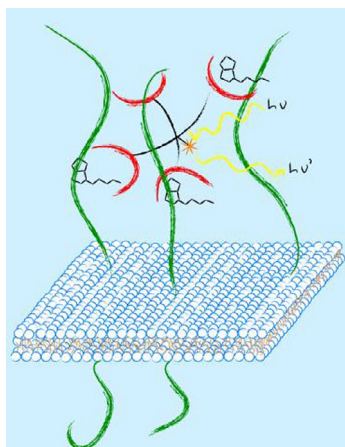
T. Machida, N. Winssinger*

One-Step Derivatization of Reducing Oligosaccharides for Rapid and Live-Cell-Compatible Chelation-Assisted CuAAC Conjugation

Chelation-assisted click chemistry at micromolar copper concentrations: A simple procedure enabling functionalization of unprotected reducing oligosaccharides and rapid glycoconjugation at low copper concentrations is reported. It can be used to functionalize biomolecules bearing alkyne moieties introduced through metabolic labeling, including in live cells.



ChemBioChem
DOI: 10.1002/cbic.201600003



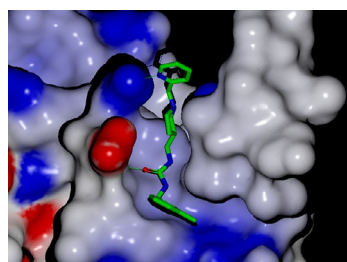
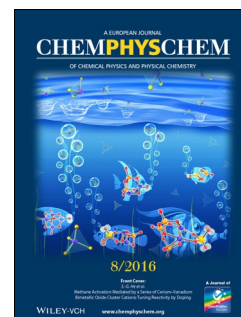
ChemPhysChem
DOI: 10.1002/cphc.201500809

Single-Molecule Tracking

L. Möckl, T. K. Lindhorst, C. Bräuchle*

Artificial Formation and Tuning of Glycoprotein Networks on Live Cell Membranes: A Single-Molecule Tracking Study

We're all connected: A method to artificially induce tunable interconnection of membrane proteins on living cells is presented. Membrane glycans are metabolically labeled with azido sugars to allow conjugation with biotin. The thus obtained biotin-tagged membrane proteins are interconnected with streptavidin to form an artificial protein network. This artificial network formation is studied in detail by means of single-molecule tracking.



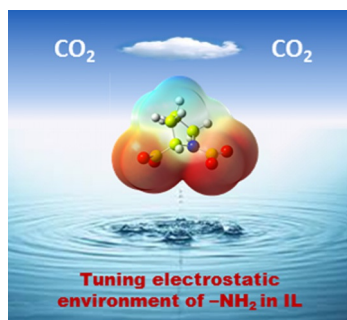
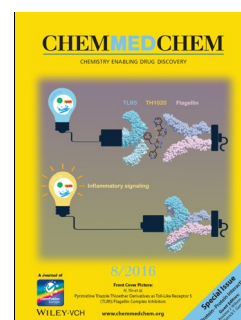
ChemMedChem
DOI: 10.1002/cmdc.201500515

Antimalarial Agents

A. U. P. Hain, A. S. Miller, J. Levitskaya, J. Bosch*

Virtual Screening and Experimental Validation Identify Novel Inhibitors of the *Plasmodium falciparum* Atg8–Atg3 Protein–Protein Interaction

Autophagy is essential to *Plasmodium falciparum*, which causes malaria. We virtually targeted a protein interaction in this pathway which is distinct from the human system. A small-molecule inhibitor from this screen shows modest inhibitory activity in parasite cultures, demonstrating the possibility of selectively inhibiting *Plasmodium* autophagy.



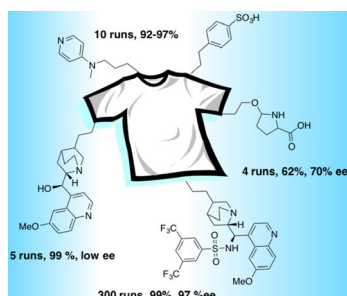
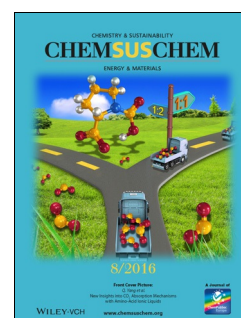
ChemSusChem
DOI: 10.1002/cssc.201501691

Carbon Dioxide Absorption

Q. Yang, Z. Wang, Z. Bao, Z. Zhang, Y. Yang, Q. Ren, H. Xing,* S. Dai

New Insights into CO₂ Absorption Mechanisms with Amino-Acid Ionic Liquids

Soak it up: The electrostatic environment around amine groups in ionic liquids (ILs) has critical influence on their CO₂ absorption mechanism, which enables the achievement of higher CO₂ capacity by tuning the local structure around the amine. Moreover, this work indicates that the actual CO₂ absorption mechanism by amino-acid ILs goes beyond the apparent CO₂/amine stoichiometry.



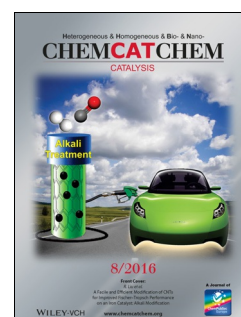
ChemCatChem
DOI: 10.1002/cctc.201501252

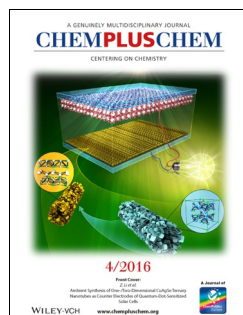
Textile Catalysts

T. Mayer-Gall,* J.-W. Lee, K. Opwis, B. List, J. S. Gutmann

Textile Catalysts—An unconventional approach towards heterogeneous catalysis

Smart textiles: textile catalysts are a new approach utilizing immobilization of different classes of catalysts onto robust, inexpensive textile materials. A series of different supported organocatalysts (organotextile catalysts) has been prepared by a photochemical approach, showing high catalytic activity and good reusability. The scope, limits and open questions of this innovative approach are presented.



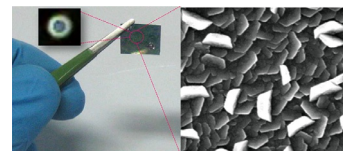


Hybrid Nanostructures

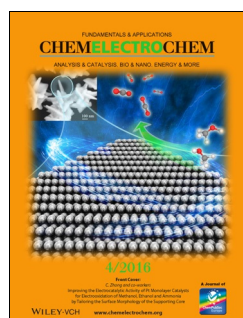
M. K. Manna, Aaryashree, S. Verma, S. Mukherjee, A. K. Das*

Lamellar Peptide–Cadmium-Doped Zinc Oxide Nanohybrids That Emit White Light

Bright lights: White-light-emitting systems of cadmium-doped zinc oxide nanosheets and complex lamellar nanostructures that consist of alternating inorganic cadmium-doped zinc oxide domains with a self-assembled aromatic-capped peptide are reported (see figure). The white-light luminescence is attributed to cadmium doping and the presence of the dipeptide fluorophore.



ChemPlusChem
DOI: 10.1002/cplu.201500402

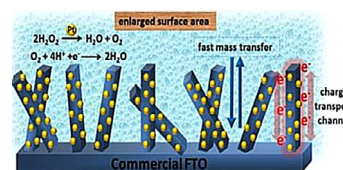


Biosensors

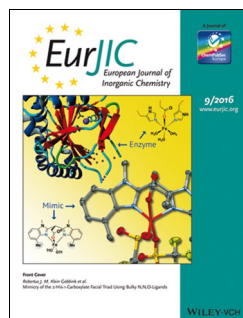
Y.-C. Lo, K.-T. Lee, Y.-C. Liang, D.-M. Liu, N. Matsushita, T. Ikoma, S.-Y. Lu*

Three-Dimensionally Extended Host Electrodes for Biosensor Applications

Extend a warm welcome: Three-dimensionally extended host electrodes drastically enhance the sensitivities of non-enzymatic hydrogen peroxide sensing by two orders of magnitude.



ChemElectroChem
DOI: 10.1002/celec.201500524

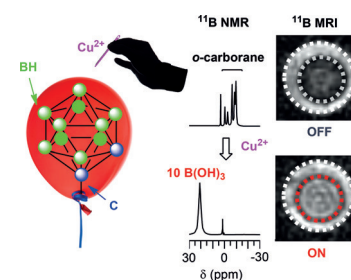


Boron NMR Probes

T. Tanaka, Y. Nishiura, R. Araki, T. Saido, R. Abe, S. Aoki*

¹¹B NMR Probes of Copper(II): Finding and Implications of the Cu²⁺-Promoted Decomposition of *ortho*-Carborane Derivatives

It is found that copper(II) ion promotes full decomposition reactions of *o*-carborane derivatives in aqueous solution to release 10 equiv. of B(OH)₃. The application of this discovery to ¹¹B NMR/MRI detection of Cu²⁺ is also presented.



Eur. J. Inorg. Chem.
DOI: 10.1002/ejic.201600117



Macrocycles

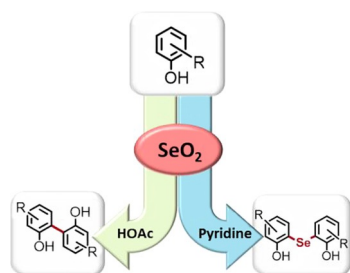
V. Hoffmann, N. Jenny, D. Häussinger, M. Neuburger, M. Mayor*

Rotationally Restricted 1,1'-Bis(phenylethynyl)ferrocene Subunits in Macrocycles

Instead of muscular strength, macrocyclization is applied to attempt to force a phenylethynyl–ferrocene junction into an elongated arrangement. The modular approach allows the construction of macrocycles of varying sizes.



Eur. J. Org. Chem.
DOI: 10.1002/ejoc.201600158



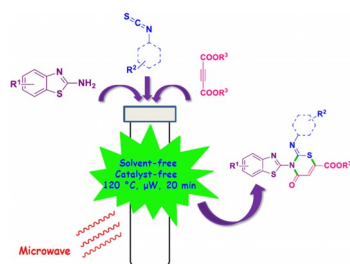
ChemistryOpen
DOI: 10.1002/open.201500206

Catalysis

T. Quell, M. Mirion, D. Schollmeyer, K. M. Dyballa, R. Franke, S. R. Waldvogel*

Solvent-Dependent Facile Synthesis of Diaryl Selenides and Biphenols Employing Selenium Dioxide

Solvent says it all. Biphenols are important structure motifs for ligand systems in organic catalysis and are considered “privileged ligands”. We developed a new synthetic pathway to construct these structures using selenium dioxide, a stable, powerful, and commercially available oxidizer. The solvent directs the different chemical routes for the conversion of phenols. In protic solvents, biphenols are selectively formed, whereas in pyridine, the generation of diaryl selenides derivatives is almost exclusively promoted.



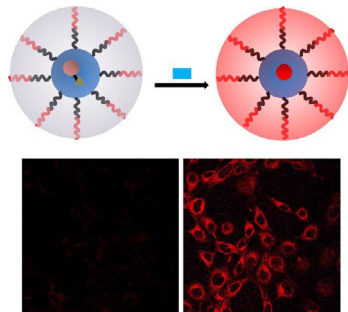
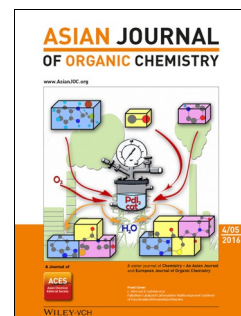
Asian J. Org. Chem.
DOI: 10.1002/ajoc.201600098

Microwave-Assisted Chemistry

P. Wadhwa, T. Kaur, A. Sharma*

Solvent-Free Pot-, Atom- and Step-Economic Synthesis of Novel Benzo[d]thiazole-1,3-thiazine Hybrids in a One-Pot Reaction

Ready in minutes: A first catalyst- and solvent-free synthesis of novel benzo[d]thiazole-1,3-thiazine hybrids from benzo[d]thiazol-2-amines, isothiocyanates and dialkyl acetylenedicarboxylates is described. These reactions are assisted by microwave irradiation for up to only 30 minutes.



ChemNanoMat
DOI: 10.1002/cnma.201600019

Micelles

L. Huang, R. Duan, Z. Li, Y. Zhang, J. Zhao, G. Han*

BODIPY-Based Nanomicelles as Near-Infrared Fluorescent “Turn-On” Sensors for Biogenic Thiols

A BODIPY-based NIR-emitting nanomicelle thiol sensor was designed. The nanomicelles are readily water soluble and show highly selective thiol detection. This work offers a general method to generate intracellular nanoprobes for biogenic thiols and paves the way to other fluorescence-dye-based sensor designs.



ChemViews magazine
DOI: 10.1002/chemv.201600025

Colors

J. P. Renoult, B. Valeur

The Colors of Life

The colors of plants and animals are produced by a wide variety of mechanisms. While some are a consequence of the chemical makeup of organisms, many colors perform important functions and were selected through evolution: from a firefly's light enticing mates, to a flower attracting bees, to mimicry protecting insects from predators.

