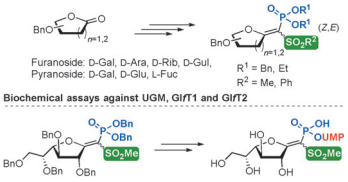
Auf diesen Seiten weisen wir auf wichtige aktuelle Beiträge in unseren Schwesterzeitschriften hin. Wenn Sie die Seiten online lesen, dann können Sie die Artikel mit einem Klick direkt aufrufen, ansonsten sind sie durch Eingabe der DOIs über Wiley Online Library leicht online zugänglich.

Carbohydrates

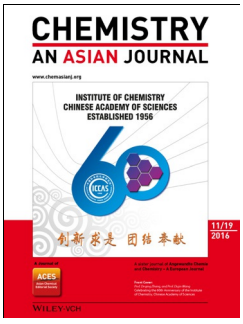
C. J.-M. Frédéric, A. Tikad, J. Fu, W. Pan, R. B. Zheng, A. Koizumi, X. Xue, T. L. Lowary, S. P. Vincent*

Synthesis of Unprecedented Sulfonylated Phosphono-*exo*-Glycals Designed as Inhibitors of the Three Mycobacterial Galactofuranose Processing Enzymes

New antimycobacterial agents: This study reports a new methodology to synthesize *exo*-glycals bearing both a sulfone and a phosphonate, which was applied to prepare two original UDP-galactofuranose analogues. The latter were evaluated as inhbitors of UGM, GlfT1, and GlfT2, three enzymes involved in the *Mycobacterium tuberculosis* cell wall biosynthesis.



Chem. Eur. J.
DOI: **10.1002/chem.201603161**

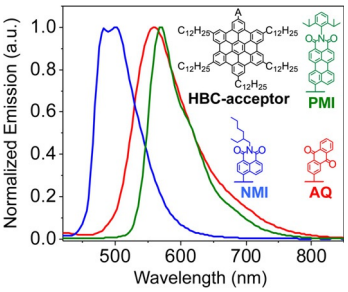


Nanographene

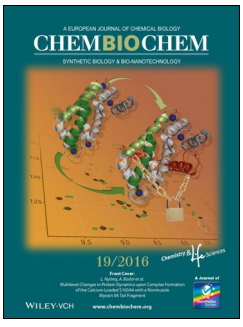
A. Keerthi, I. C.-Y. Hou, T. Marszalek, W. Pisula, M. Baumgarten, A. Narita*

Hexa-*peri*-hexabenzocoronene with Different Acceptor Units for Tuning Optoelectronic Properties

Give and take: Hexa-*peri*-hexabenzocoronene (HBC)-based donor–acceptor dyads were synthesized with three different acceptor units, 9,10-anthraquinone (**AQ**), naphthalene-1,8-dicarboximide (**NMI**), and perylene-3,4-dicarboximide (**PMI**). The three HBC–acceptor dyads demonstrated varying degrees of intramolecular charge-transfer interactions, allowing tuning of their photophysical and optoelectronic properties.



Chem. Asian J.
DOI: **10.1002/asia.201600638**

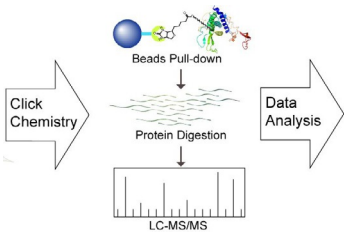


Protein Modifications

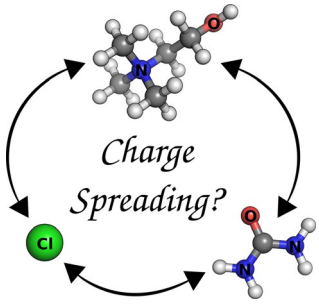
B. Zheng, G. K. Jarugumilli, B. Chen, X. Wu*

Chemical Probes to Directly Profile Palmitoleoylation of Proteins

Palmitoleoylation probes: We synthesized and characterized ω-alkynyl (*cis*- and *trans*-) palmitoleic acids as chemical probes to directly study monounsaturated fatty acid modified proteins. These studies provide new chemical tools and reveal new insights into palmitoleoylation in cell signaling.



ChemBioChem
DOI: **10.1002/cbic.201600403**



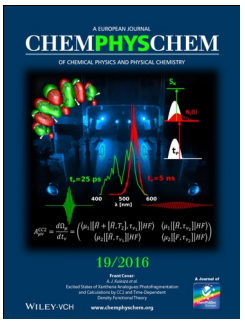
ChemPhysChem
DOI: **10.1002/cphc.201600348**

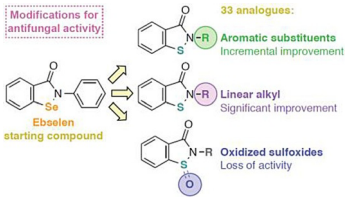
Eutectic Solvents

S. Zahn,* B. Kirchner, D. Mollenhauer

Charge Spreading in Deep Eutectic Solvents

Mysterious melting points: Ab initio molecular dynamic simulations reveal that charge spreading from the anion to the organic compound can only play a minor role for the decreased melting point of deep eutectic solvents.





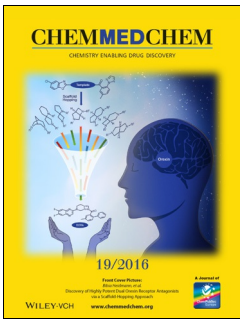
ChemMedChem
DOI: **10.1002/cmdc.201600236**

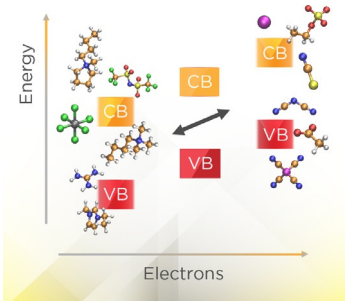
Antifungal Agents

H. X. Ngo, S. K. Shrestha, S. Garneau-Tsodikova*

Identification of Ebsulfur Analogues with Broad-Spectrum Antifungal Activity

Promising antifungals: Ebselen was previously shown to be safe during phase I (USA) and phase III (Japan) clinical trials. In this study, ebselen, ebsulfur, and 32 ebsulfur derivatives were found to display potent antifungal activity against a panel of clinically relevant fungal strains. SAR analysis was done to identify analogues with activity equivalent to or better than those of antifungal drugs in clinical use. These were then evaluated and found to be acceptable in terms of cytotoxicity against mammalian cells.





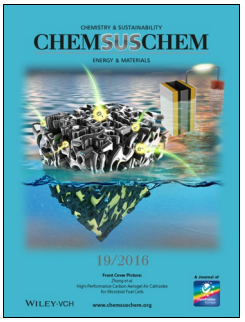
ChemSusChem
DOI: **10.1002/cssc.201600844**

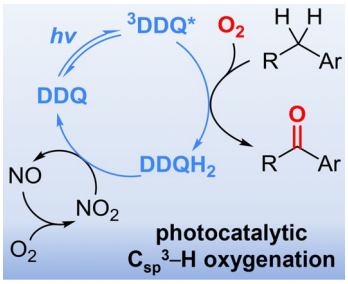
Ionic Liquids

H. Weber, B. Kirchner*

Ionic Liquid Induced Band Shift of Titanium Dioxide

The electrolyte effect! The adsorption of cations and anions from ionic liquids is decisive for the band level alignment in dye-sensitized solar cells. Electron deficiency typically caused by cations results in an energetic lowering of states, that is, valence and conduction bands. Consequently, electron donation from anions results in an energetic increase of states.





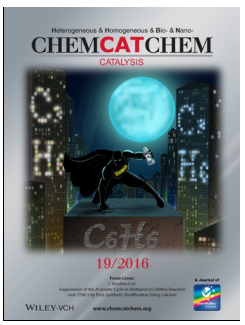
ChemCatChem
DOI: **10.1002/cctc.201600704**

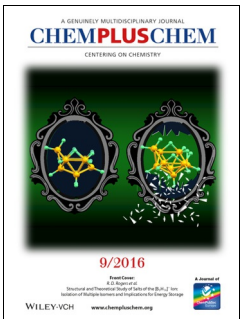
Photocatalysis

F. Rusch, J.-C. Schober, M. Brasholz*

Visible-Light Photocatalytic Aerobic Benzylic C(sp^3)–H Oxygenations with the ^{3}DDQ*/*tert*-Butyl Nitrite Co-catalytic System

DDQ can do: Visible-light-induced aerobic C(sp^3)–H oxygenations of benzylic substrates are efficiently performed by using a co-catalytic system of ^{3}DDQ* (DDQ = 2,3-dichloro-5,6-dicyano-1,4-benzoquinone) and *tert*-butyl nitrite. The photocatalytic method offers a dramatic increase in reaction rate compared to the thermal protocol.



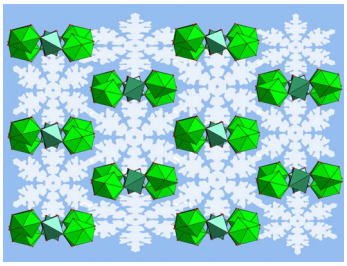


Metal–Organic Frameworks

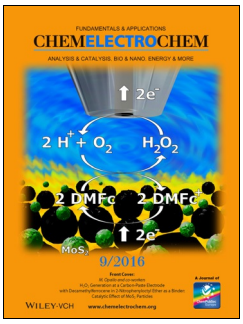
S. Zhang, P. Cheng*

Magnetocaloric Effect of Two Isostructural Heterometallic Organic Frameworks Based on $\{M^{II}Gd^{III}_2\}$ Clusters (M^{II} = Mn, Ni)

Cool chemistry: Two isostructural 3D heterometallic coordination polymers (HCPs) based on $\{M^{II}Gd^{III}_2\}$ clusters were synthesized (see figure) that present high thermal stability. According to magnetic results, they represent rare examples of multidimensional HCP-based magnetic refrigerants.



ChemPlusChem
DOI: **10.1002/cplu.201600143**

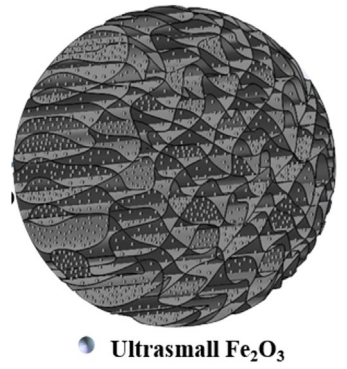


Supercapacitors

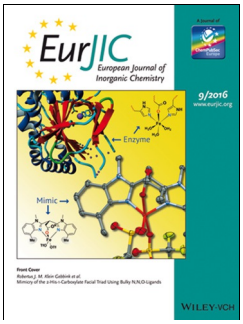
Z. Zhang, H. Zhang,* Y. Chen, Z. Li, Y. Li, T. Luo, Q. Wu, Y. Xu, C. Zhi

Ultrasmall Fe_2O_3 Nanoparticles Anchored on Three-Dimensional Hierarchical Porous Graphene-like Networks for High Rate Capability Supercapacitors

Smaller does it: An ultrasmall Fe_2O_3 nanoparticle/3D hierarchical porous graphene-like (Fe_2O_3/3D HPG) composite has been synthesized and investigated as an electrode material for supercapacitors. The Fe_2O_3/3D HPG composite electrode exhibits good electrochemical performance with a maximum specific capacitance of 967 Fg^{-1} at 1.0 Ag^{-1} and excellent cycling performance with 92% capacitance retention after 5000 cycles at 1.0 Ag^{-1}.



ChemElectroChem
DOI: **10.1002/celc.201600393**



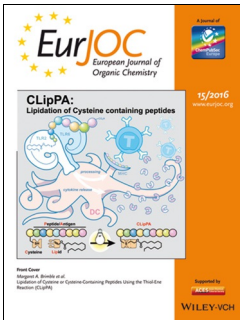
Cluster Compounds

H. Zhang, J. Zhang, R. Liu, Y. Li,* W. Liu, W. Li

Five Disc-Shaped $[M^{II}_7]$ (M = Mn, Fe, Co, Cu, Zn) and One Capsule-Like $[Cu^{II}_6Na^{I}_2]$ Clusters Assembled from an Identical Schiff Base Ligand

Five transition-metal $[M^{II}_7]$ clusters and one capsule-like $[Cu_6Na_2]$ compound have been synthesized by employing an identical Schiff base ligand. Complex $[Co^{II}_7]$ exhibits single molecule magnetic behavior.

Eur. J. Inorg. Chem.
DOI: **10.1002/ejic.201600455**

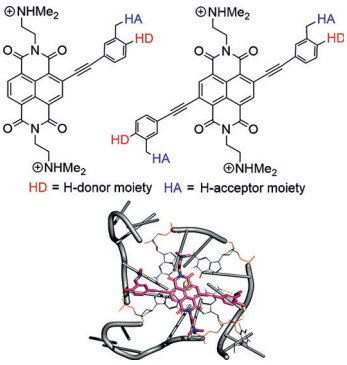


Nucleic Acid Recognition

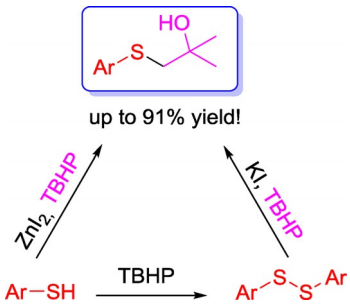
F. Doria, M. Nadai, G. Costa, G. Sattin, C. Gallati, G. Bergamaschi, F. Moraca, S. Alcaro, M. Freccero,* S. N. Richter*

Extended Naphthalene Diimides with Donor/Acceptor Hydrogen-Bonding Properties Targeting G-Quadruplex Nucleic Acids

X-shaped naphthalene diimides with synergic donor and acceptor hydrogen-bonding moieties selectively bind parallel G-quadruplex nucleic acids (c-myc, bcl-2 and parallel hTel22). The hydrogen-bonding network involving the outside rim of the G-quartet is a key factor controlling the selectivity



Eur. J. Org. Chem.
DOI: **10.1002/ejoc.201600757**



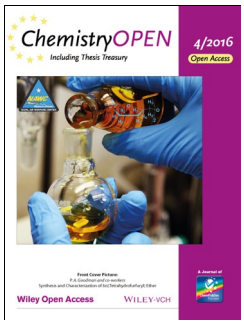
ChemistryOpen
DOI: **10.1002/open.201600023**

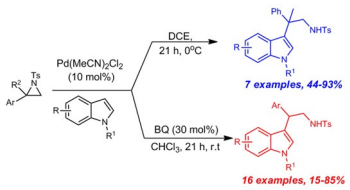
Oxidative Synthesis

J.-B. Feng, X.-F. Wu*

Synthesis of β-Hydroxysulfides from Thiophenols and Disulfides with *tert*-Butyl Hydroperoxide as the Oxidant and Reactant

Quick to react: A procedure for the oxidative synthesis of β-hydroxysulfides is reported, in which thiophenols or diaryl disulfides are reacted with *tert*-butyl hydroperoxide (TBHP). In the presence of zinc iodide or potassium iodide, with TBHP as the oxidant and pre-reactant, thiophenols and diaryl disulfides react with the methyl group of *t*BuOH smoothly and selectivity to give the corresponding 2-methyl-1-(arylthio)propan-2-ols as the terminal products in moderate to good yields.





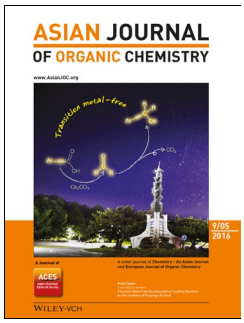
Asian J. Org. Chem.
DOI: **10.1002/ajoc.201600280**

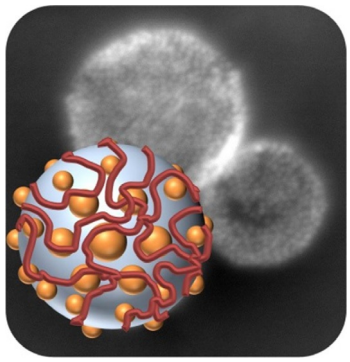
Homogeneous Catalysis

J. Yin, D. C. J. T. Hyland*

Palladium(II)-Catalyzed C3-Selective Friedel–Crafts Reaction of Indoles with Aziridines

C3 is the magic number: A simple Pd^{II} catalyst that is activated by a 1,4-benzoquinone (BQ) additive has been found to be effective for the ring-opening of arylaziridines, thereby providing a range of functionalized tryptamine derivatives. Importantly, no racemization was observed when a chiral aziridine starting material was used, which opens up a route to enantioenriched β-branched tryptamine derivatives.





ChemNanoMat
DOI: **10.1002/cnma.201600155**

Self-Assembly

F. Sciortino, G. Casterou, P.-A. Eliat, M.-B. Troadec, C. Gaillard, S. Chevance, M. L. Kahn,* F. Gauffre*

Simple Engineering of Polymer–Nanoparticle Hybrid Nanocapsules

Hybridosomes: Although water and THF are known as miscible solvents, their mixtures contain droplets that template the self-assembly of nanoparticles and polymers. This strategy was successfully applied to create hollow nanocapsules (~100 nm) with a hybrid shell made of crosslinked polymers and nanoparticles. Magnetic nanocapsules proved to be efficient as in vivo MRI contrast agents for tumor imaging.

ChemViews magazine
DOI: **10.1002/chemv.201600077**

Metal–Organic Frameworks

D. Bradley

Methanol and MOFs for Heat Pumps

Methanol has the potential to outperform water in heat pumps, which could reduce the energy usage of air-conditioned buildings and improve sustainability. Researchers in Vietnam, the United States, and Saudi Arabia have developed new metal–organic frameworks (MOFs) with high methanol uptake capacities for heat pump applications.