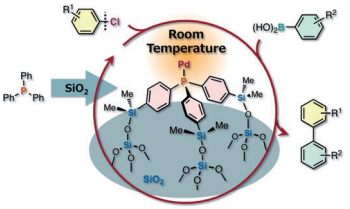
Auf diesen Seiten weisen wir auf wichtige aktuelle Beiträge in unseren Schwesterzeitschriften hin. Wenn Sie die Seiten online lesen, dann können Sie die Artikel mit einem Klick direkt aufrufen, ansonsten sind sie durch Eingabe der DOIs über Wiley Online Library leicht online zugänglich.

Heterogeneous Catalysis

T. Iwai, R. Tanaka, T. Harada, M. Sawamura*

Tripod Immobilization of Triphenylphosphane on a Silica-Gel Surface to Enable Selective Mono-Ligation to Palladium: Application to Suzuki–Miyaura Cross-Coupling Reactions with Chloroarenes

Immobilized tripods: A silica-supported triarylphosphane (Silica-3p-TPP), containing a Ph_3P core immobilized on a silica surface, was synthesized and characterized. Catalysts composed of Pd and Silica-3p-TPP enabled room-temperature Suzuki–Miyaura cross-coupling reactions with unactivated chloroarenes and showed potential in reactions with more challenging substrates (see scheme).



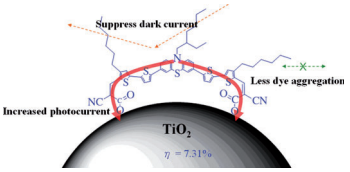
Chem. Eur. J.
DOI: **10.1002/chem.201304081**

Solar Cells

W.-I Hung, Y.-Y. Liao, C.-Y. Hsu, H.-H. Chou, T.-H. Lee, W.-S. Kao, J. T. Lin*

High-Performance Dye-Sensitized Solar Cells Based on Phenothiazine Dyes Containing Double Anchors and Thiophene Spacers

Anchors aweigh! A series of new push–pull phenothiazine-based dyes featuring various π spacers and double acceptors/anchors have been synthesized, characterized, and used as sensitizers for dye-sensitized solar cells. The best power conversion efficiency of phenothiazine dye is nearly comparable with that of an N719-based standard cell.



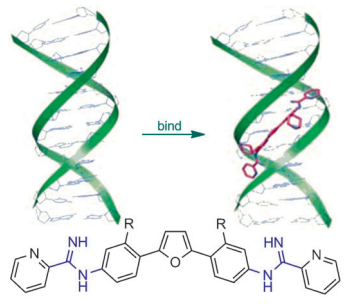
Chem. Asian J.
DOI: **10.1002/asia.201301228**

DNA-Binding Molecules

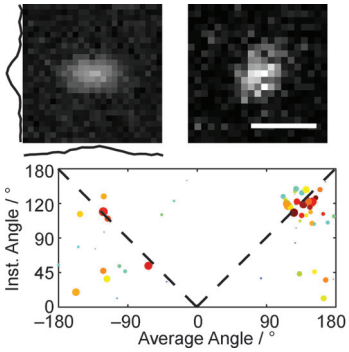
Y. Chai, M. Munde, A. Kumar, L. Mickelson, S. Lin, N. H. Campbell, M. Banerjee, S. Akay, Z. Liu, A. A. Farahat, R. Nhili, S. Depauw, M.-H. David-Cordonnier, S. Neidle, W. D. Wilson,* D. W. Boykin*

Structure-Dependent Binding of Arylimidamides to the DNA Minor Groove

Size, charge and polarity: The first detailed study of DNA complexes of modified AIAs shows a surprisingly large variation in DNA interactions with relatively small changes in the structure. Crystallographic analysis of DB1880 bound to an AATT site shows how it fits to the minor groove with big piperidinyl substituents.



ChemBioChem
DOI: **10.1002/cbic.201300622**



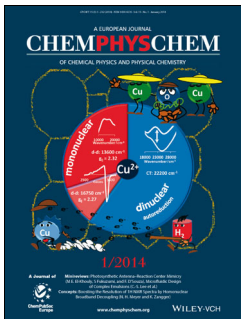
ChemPhysChem
DOI: **10.1002/cphc.201300774**

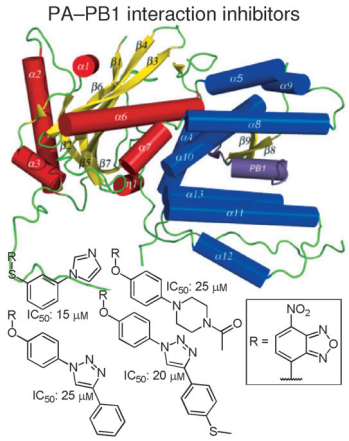
Single Molecules

D. J. Rowland, J. S. Biteen*

Top-Hat and Asymmetric Gaussian-Based Fitting Functions for Quantifying Directional Single-Molecule Motion

Single molecules on the move: Two fitting functions are introduced for measuring in-frame motion of isolated fluorescent emitters. These methods determine the instantaneous directionality and velocity of motion without sacrificing the localization precision. Theory, simulation, and experiments are used to validate the methods, and the fitting algorithms are applied to the motion of live bacteria cells (see picture).





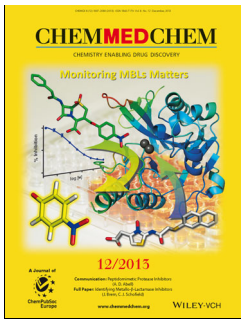
ChemMedChem
DOI: **10.1002/cmdc.201300378**

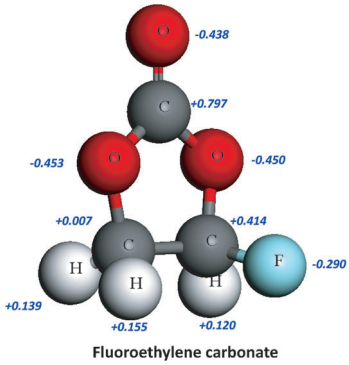
Antiviral Agents

M. Pagano, D. Castagnolo, M. Bernardini, A. L. Fallacara, I. Laurenzana, D. Deodato, U. Kessler, B. Pilger, L. Stergiou, S. Strunze, C. Tintori, M. Botta*

The Fight against the Influenza A Virus H1N1: Synthesis, Molecular Modeling, and Biological Evaluation of Benzofurazan Derivatives as Viral RNA Polymerase Inhibitors

In the fight against influenza virus A/WSN/33 (H1N1), the PA–PB1 protein–protein interaction is emerging as a new drug target. To identify small molecules able to inhibit the viral RNA polymerase complex, the benzofurazan scaffold was explored by synthesizing a large library of derivatives. Some compounds showed high anti-H1N1 activity and emerged as effective inhibitors of the PA–PB1 interaction, with IC_{50} values in the micromolar range.





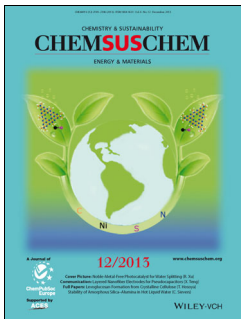
ChemSusChem
DOI: **10.1002/cssc.201300770**

Electrolytes

X. Chen, X. Li, D. Mei, J. Feng, M. Y. Hu, J. Hu, M. Engelhard, J. Zheng, W. Xu, J. Xiao, J. Liu,* J.-G. Zhang*

Reduction Mechanism of Fluoroethylene Carbonate for Stable Solid–Electrolyte Interphase Film on Silicon Anode

To protect and serve: The mechanism by which the electrolyte additive fluoroethylene carbonate (FEC) protects anode materials is proposed. 1) FEC is reduced through the opening of the five-membered ring leading to the formation of lithium poly(vinyl carbonate), LiF, and some dimers; 2) the FEC-derived lithium poly(vinyl carbonate) enhances the stability of the SEI film. The proposed reduction mechanism could help identify new electrolyte additives.



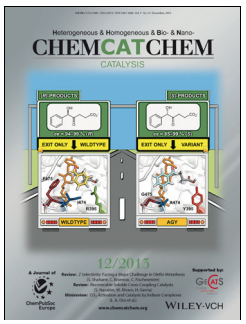
ChemCatChem
DOI: **10.1002/cctc.201300731**

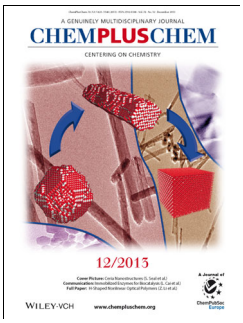
Cellulose Conversion

T. Komanoya, H. Kobayashi, K. Hara, W.-J. Chun, A. Fukuoka*

Kinetic Study of Catalytic Conversion of Cellulose to Sugar Alcohols under Low-Pressure Hydrogen

High in sugar: High-yield production of sugar alcohols (68%) is demonstrated in the hydrolytic hydrogenation of cellulose over Ru/AC (AC = activated carbon) catalyst under low H_2 pressure (< 1 MPa) without soluble catalysts and with a mix-milling pretreatment. This pretreatment selectively leads to acceleration of the rate-determining hydrolysis step to maximize the yield of sugar alcohols.



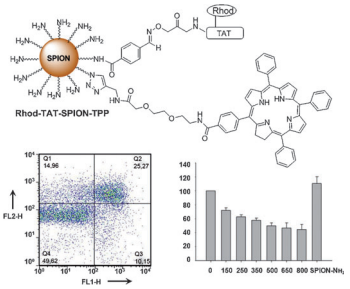


Photodynamic Therapy

M. Thandu, V. Rapozzi, L. Xodo, F. Albericio,* C. Comuzzi,* S. Cavalli*

"Clicking" Porphyrins to Magnetic Nanoparticles for Photodynamic Therapy

Theranostic nanoagents: A porphyrin is "clicked" to a rhodamine-TAT-functionalized superparamagnetic iron oxide nanoparticle (see figure). Upon light irradiation, these nanodevices behave as promising theranostics for achieving the combined action of localizing and tracking drugs through magnetic resonance imaging (MRI)-based techniques and treating cancer cells through photodynamic therapy (PDT).



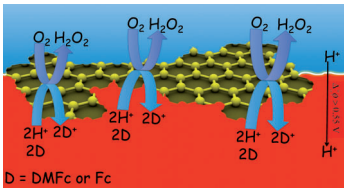
ChemPlusChem
DOI: **10.1002/cplu.201300276**

Electrocatalysis

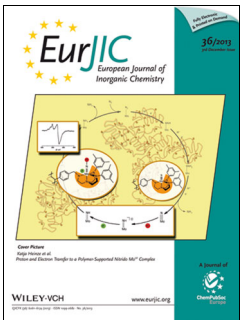
S. Rastgar, H. Deng, F. Cortés-Salazar, M. D. Scanlon, M. Pribil, V. Amstutz, A. A. Karyakin, S. Shahrokhian, H. H. Girault*

Oxygen Reduction at Soft Interfaces Catalyzed by In Situ-Generated Reduced Graphene Oxide

Face to face: Flakes of reduced graphene oxide, synthesized in situ at the liquid/liquid interface from a graphene-oxide precursor, are capable of catalyzing the biphasic reduction of protons to hydrogen peroxide in the presence of molecular oxygen and an organic solubilized electron donor. This offers a new perspective for the bulk production of a green oxidant through biphasic electrolysis.



ChemElectroChem
DOI: **10.1002/celc.201300140**

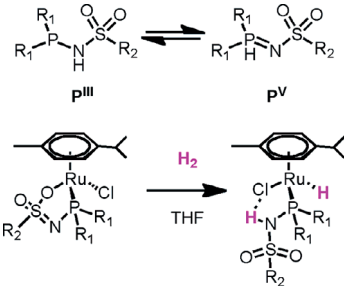


Cooperative Ligands

F. G. Terrade, M. Lutz, J. I. van der Vlugt,* J. N. H. Reek*

Synthesis, Coordination Chemistry, and Cooperative Activation of H_2 with Ruthenium Complexes of Proton-Responsive METAMORPhos Ligands

The synthesis of an extended family of highly tunable proton-responsive sulfonamidophosphorus (METAMORPhos) ligands are reported, together with the first Ru complexes in which these ligands coordinate as anionic P,O chelates. A bis(ligated) derivative is reported, which is proposed to undergo an autoprotonolysis process.



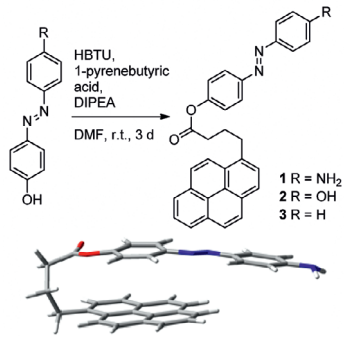
Eur. J. Inorg. Chem.
DOI: **10.1002/ejic.201301215**

Photo Modulation

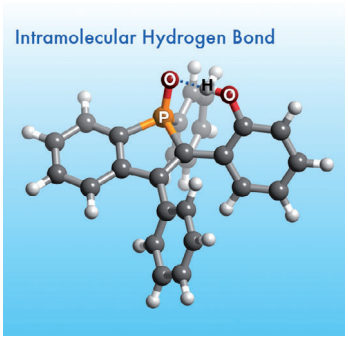
O. Nachtigall, R. Lomoth, C. Dahlstrand, A. Lundstedt, A. Gogoll, M. J. Webb,* H. Grennberg

Pyrene–Azobenzene Dyads and Their Photochemistry

The facile synthesis and preliminary characterization of three pyrenebutyric acid azobenzene esters (compounds **1**–**3**) revealed the capacity of the systems to fold, resulting in the modulation of azobenzene photoisomerization through excitation energy transfer from the pyrene chromophore to azobenzene.



Eur. J. Org. Chem.
DOI: **10.1002/ejoc.201301301**



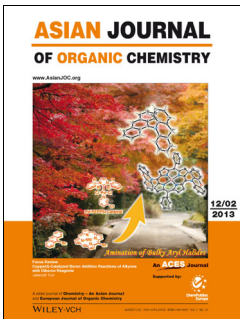
Asian J. Org. Chem.
DOI: **10.1002/ajoc.201300227**

Phospholes

A. Fukazawa,* H. Osaki, S. Yamaguchi*

Hydroxyphenyl-Substituted Benzophosphole Oxides: Impact of the Intramolecular Hydrogen Bond on the Fluorescence Properties

In hyd-ing: Benzophosphole oxides with an *o*-hydroxyphenyl group at the 2-position have been synthesized. A 3-phenylated derivative is fluorescent in solvents that accept hydrogen bonds, but virtually non-emissive in toluene, CH_2Cl_2, and MeCN. This suggests an excited-state character switch from a non-emissive excited-state intramolecular proton transfer (ESIPT) state in weak hydrogen-bonding solvents to an emissive excited state in hydrogen-bonding solvents.



Breaking Bad

ChemViews magazine
DOI: **10.1002/chemv.201300114**

Chemistry in the Media

Falk Harnisch, Tunga Salthammer

The Chemistry of Breaking Bad

Falk Harnisch and Tunga Salthammer discuss the plausibility of the chemistry portrayed in Breaking Bad, a popular TV series about a chemistry teacher who starts a narcotics business. The synthetic routes to N-methylamphetamine (crystal meth) are examined and the credibility of dissolving a body in hydrofluoric acid and poisoning drug dealers with ricin are considered.