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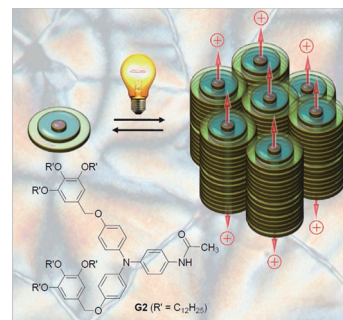


Liquid Crystals

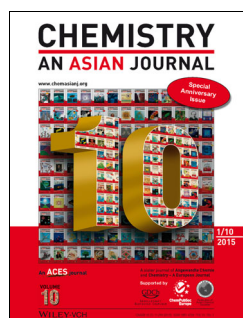
Y. Domoto, E. Busseron, M. Maaloum, E. Moulin, N. Giuseppone*

Control over Nanostructures and Associated Mesomorphic Properties of Doped Self-Assembled Triarylamine Liquid Crystals

Changing by packing: Chemically tailored triarylamine derivatives can be readily self-assembled upon visible light irradiation (see figure) to produce doped liquid crystals with complex mesophase behaviors.



Chem. Eur. J.
DOI: 10.1002/chem.201405567

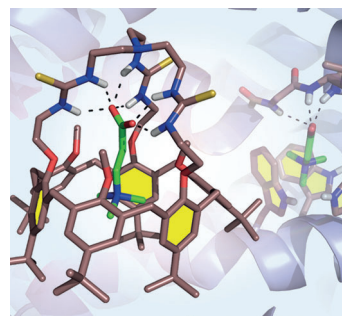


Supramolecular Chemistry

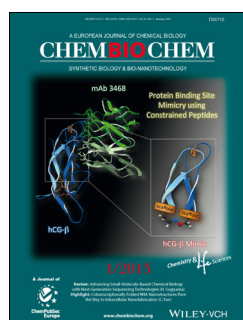
D. Cornut, S. Moerkerke, J. Wouters, G. Bruylants, I. Jabin*

A Biomimetic Heteroditopic Receptor for Zwitterions in Protic Media

Selective and biomimetic: The synthesis and unique recognition properties of a new host that combines a calix[6]arene pocket to a tris-thio-urea cap are described (see figure). This heteroditopic receptor binds zwitterions in protic media with an outstanding selectivity for β -alanine betaine and nicely mimics the binding site of glycine betaine encountered in natural systems.



Chem. Asian J.
DOI: 10.1002/asia.201403082

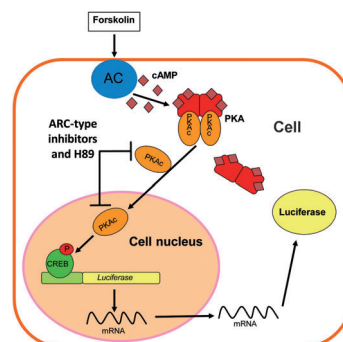


Kinase Inhibitors

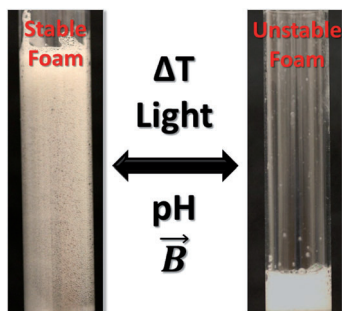
M. Kriisa, H. Sinijärvi, A. Vaasa, E. Enkvist, S. Kostenko, U. Moens, A. Uri*

Inhibition of CREB Phosphorylation by Conjugates of Adenosine Analogues and Arginine-Rich Peptides, Inhibitors of PKA Catalytic Subunit

Proteolytically stable cell plasma membrane-permeable protein kinase inhibitors, based on conjugates of adenosine analogues and arginine-rich peptides (ARCs), were tested for regulation of the cAMP/PKA/CREB signalling pathway. The study demonstrates that ARCs are capable of affecting the phosphorylation of proteins in nuclei of living cells.



ChemBioChem
DOI: 10.1002/cbic.201402526



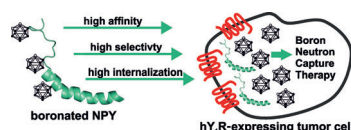
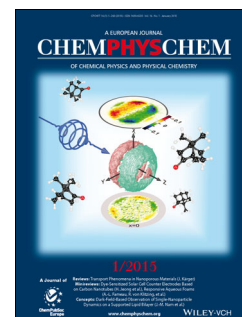
ChemPhysChem
DOI: 10.1002/cphc.201402580

Soft Matter

A.-L. Fameau,* A. Carl, A. Saint-Jalmes, R. von Klitzing*

Responsive Aqueous Foams

Responsiveness of aqueous foams: Responsive aqueous foams refer to foams for which the stability can be switched between stable and unstable states with a change in environment or with external stimuli. The different strategies to develop this soft material are reviewed. These responsive foams can find potential applications in diverse industries, in which both stabilization and on-demand destabilization of a foam is required.



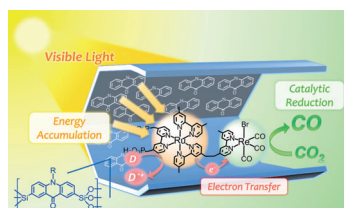
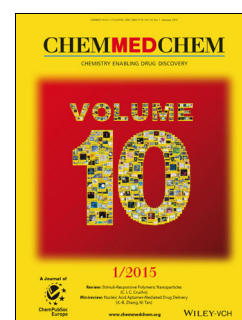
ChemMedChem
DOI: 10.1002/cmdc.201402368

Targeted Delivery

V. M. Ahrens, R. Frank, S. Boehnke, C. L. Schütz, G. Hampel, D. S. Iffland, N. H. Bings, E. Hey-Hawkins,* A. G. Beck-Sickingher*

Receptor-Mediated Uptake of Boron-Rich Neuropeptide Y Analogues for Boron Neutron Capture Therapy

NPY for BNCT: Neuropeptide Y (NPY) derivatives selective for only one receptor subtype are internalized into tumor cells that express these specific surface receptors. The cellular uptake of highly boron-loaded NPY analogues and their application as an efficient shuttle system for successful boron neutron capture therapy (BNCT) are demonstrated.



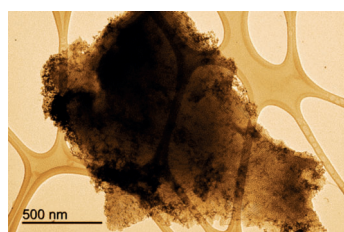
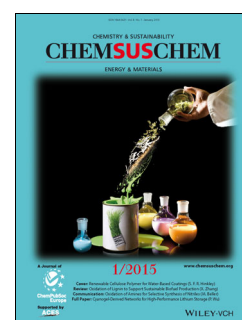
ChemSusChem
DOI: 10.1002/cssc.201403194

Carbon Dioxide Chemistry

Y. Ueda, H. Takeda, T. Yui, K. Koike, Y. Goto, S. Inagaki,* O. Ishitani*

A Visible-Light Harvesting System for CO₂ Reduction Using a Ru^{II}–Re^I Photocatalyst Adsorbed in Mesoporous Organosilica

Light my CO₂: A photocatalytic system for CO₂ reduction exhibiting visible-light harvesting is developed by preparing a hybrid consisting of a Ru^{II}–Re^I complex as photocatalyst and a periodic mesoporous organosilica as light harvester. The light-harvesting ability of the hybrid enhances the photocatalytic activity for CO evolution by a factor of up to ten.



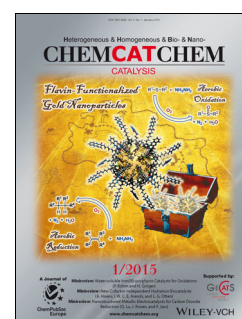
ChemCatChem
DOI: 10.1002/cctc.201402802

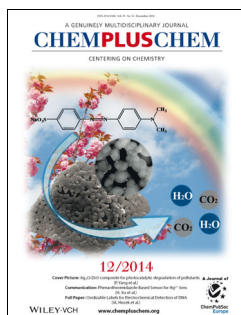
Continuous Flow Preparation

A. Yepez, F. L. Y. Lam, A. A. Romero, C. O. Kappe, R. Luque*

Continuous Flow Preparation of Iron Oxide Nanoparticles Supported on Porous Silicates

Nanoparticles in full flow: Nanoparticles supported on porous materials are prepared directly in continuous flow by using a metal precursor solution flowing through heated packed-bed reactors that contain the support material. The support affects nanoparticle loading, distribution, and agglomeration in the system, with an Fe/Al synergy that leads to optimum results.



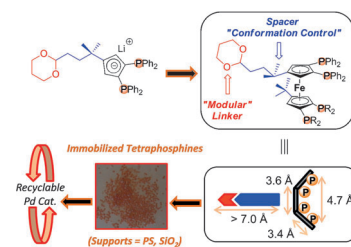


Molecular Catalyst

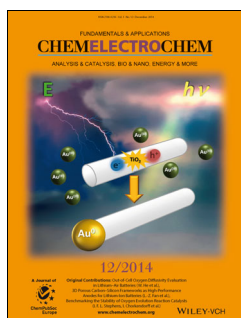
M. Beaupérin, R. Smaliy, H. Cattey, P. Meunier, J. Ou, P. H. Toy, J.-C. Hierso*

Functionalized Tri- and Tetraphosphine Ligands as a General Approach for Controlled Implantation of Phosphorus Donors with a High Local Density in Immobilized Molecular Catalysts

Lean on Me: Modular formation of functionalized polyphosphines is a general solution for generating localized high-density phosphorus donors on supports. The conformational arrangement of P donors in the immobilized catalysts is evidenced by ^{31}P NMR spectroscopic “through-space” coupling. Pd-catalyzed direct C–H arylation of heteroaromatics with chloroarenes illustrates the performance of these polydentate catalytic materials.



ChemPlusChem
DOI: 10.1002/cplu.201402195

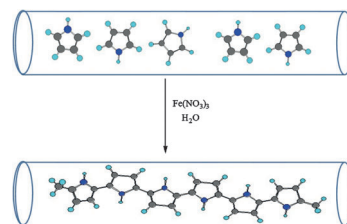


Materials Science

L. A. C. Smith,* F. Romer, M. L. Trudeau, M. E. Smith, J. V. Hanna, D. M. Antonelli*

Effect of Synthesis Parameters on the Electrochemical Properties of High-Surface-Area Mesoporous Titanium Oxide with Polypyrrole Nanowires in the Pores

Pure pore-faction: High-surface-area mesoporous TiO_2 with polypyrrole nanowires within the pores are synthesised and fully characterised. The variation of the polymer-loading level and pore size is explored to optimise electrochemical performance.



ChemElectroChem
DOI: 10.1002/celec.201402296

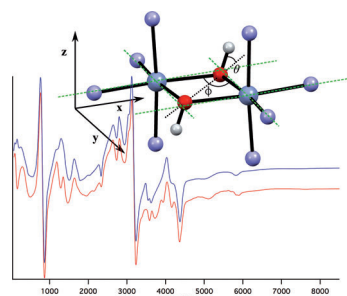


Chromium Dimer

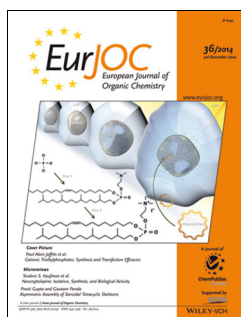
T. J. Morsing,* H. Weihe, J. Bendix*

Synthesis, Characterisation and Modelling of a Ferromagnetically Coupled Chromium(III) Dimer:
Di- μ -hydroxobis[tetrakis(isothiocyanato)chromate(III)]

The di- μ -hydroxobis[tetrakis(isothiocyanato)chromate(III)] ion has been isolated and investigated by EPR spectroscopy. The magnetic susceptibility was measured in the temperature range 2–300 K. Both experiments show this system to be ferromagnetically coupled with a septet ground state. This is the third example of a ferromagnetically coupled Cr^{III} dimer, the first to be investigated by EPR.



Eur. J. Inorg. Chem.
DOI: 10.1002/ejic.201402779

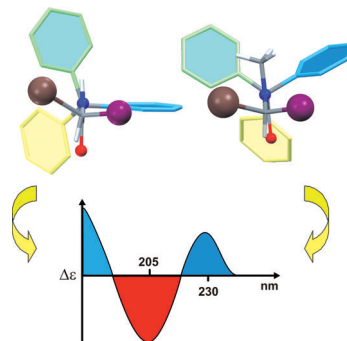


Conformation Analysis

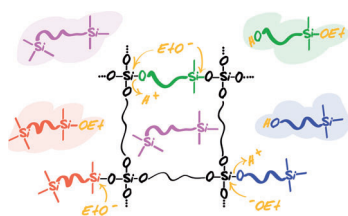
N. Prusinowska, W. Bendzińska-Berus, M. Jelecki, U. Rychlewska,* M. Kwit*

Triphenylacetic Acid Amides: Molecular Propellers with Induced Chirality

Weak but cooperative intramolecular interactions, either $\text{CH}\cdots\text{O}$ hydrogen bonds or local CH/CO dipole/dipole interactions, play a key role in the process of spectacular chirality transfer in triphenylacetamides.



Eur. J. Org. Chem.
DOI: 10.1002/ejoc.201403182



ChemistryOpen

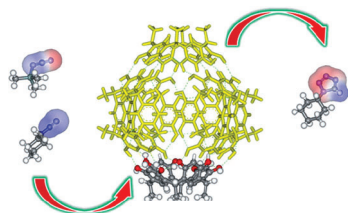
DOI: 10.1002/open.201402048

Polymer Mass Spectrometry

T. Fouquet*

Mass Spectrometry of Synthetic Polysiloxanes: From Linear Models to Plasma Polymer Networks

Controlled degradation allowed silicon-based plasma polymers to be fully or partly solubilized and amenable to electrospray ionization (ESI) for their mass analysis. Application of the fragmentation routes defined for polysiloxane standards turned the tandem mass spectrometry behavior of these newly soluble plasma oligomers into pieces of information to further reconstruct the original architecture of the plasma polymer deposits.



Asian J. Org. Chem.

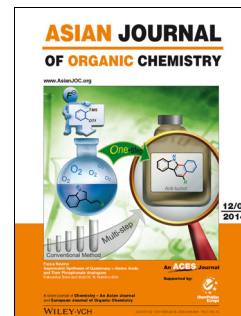
DOI: 10.1002/ajoc.201402229

Supramolecular Catalysis

S. Giust, G. La Sorella, L. Sporni, F. Fabris, G. Strukul, A. Scarso*

Supramolecular Catalysis in the Synthesis of Substituted 1H-Tetrazoles from Isonitriles by a Self-Assembled Hexameric Capsule

Step inside: A self-assembled capsule of hexameric resorcin[4]arene promotes the synthesis of 1-substituted 1H-tetrazoles from a wide range of aliphatic and aromatic isonitriles. The capsule binds the isonitrile substrate and favors its chemoselective reaction with trimethylsilyl azide over hydration to a formamide. The capsule exhibits a degree of substrate selectivity due to its preference for binding aliphatic rather than aromatic isonitriles.



ChemViews magazine

DOI: 10.1002/chemv.201400138

Science Communication

V. Köster

Bridge Science and the Public - Interview with Donna Nelson

Professor Donna Nelson has worked as science advisor for the hit TV show Breaking Bad. *ChemViews Magazine* talked with her about her experiences with Hollywood, improving the image of scientists, and communicating science to the public.

