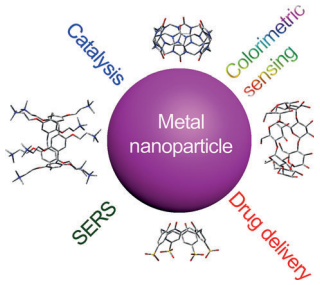
Auf diesen Seiten weisen wir auf wichtige aktuelle Beiträge in unseren Schwesterzeitschriften hin. Wenn Sie die Seiten online lesen, dann können Sie die Artikel mit einem Klick direkt aufrufen, ansonsten sind sie durch Eingabe der DOIs über Wiley Online Library leicht online zugänglich.

Supramolecular Chemistry

V. Montes-García, J. Pérez-Juste,* I. Pastoriza-Santos, L. M. Liz-Marzán*

Metal Nanoparticles and Supramolecular Macrocycles: A Tale of Synergy

Nanoparticles and macrocycles: Recent literature regarding the combination of supramolecular macrocycles and metal nanoparticles is reviewed, with particular emphasis on the synthesis, surface modification and assembly, as well as the potential applications of the obtained nanocomposites.



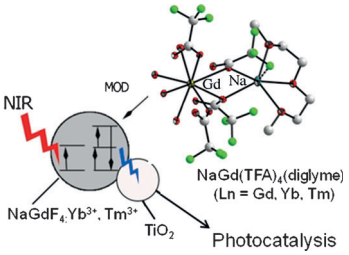
Chem. Eur. J.
DOI: **10.1002/chem.201403107**

Photocatalysis

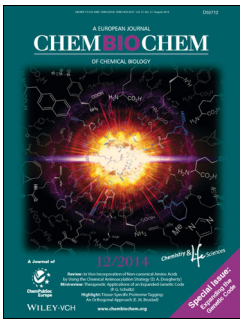
Y. Chen, S. Mishra,* G. Ledoux, E. Jeanneau, M. Daniel, J. Zhang, S. Daniele*

Direct Synthesis of Hexagonal $NaGdF_4$ Nanocrystals from a Single-Source Precursor: Upconverting $NaGdF_4$:Yb^{3+},Tm^{3+} and Its Composites with TiO_2 for Near-IR-Driven Photocatalysis

Up, up, and away! Using a novel single-source precursor, the most efficient hexagonal phase of the upconverting $NaGdF_4$:Yb^{3+},Tm^{3+} nanocrystals was obtained under mild conditions. These nanocrystals were used to form a composite with TiO_2 as a new photocatalyst, enabling titania to extend its absorption range from ultraviolet to the near-infrared region.



Chem. Asian J.
DOI: **10.1002/asia.201402347**

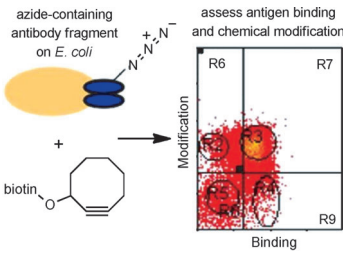


Protein Engineering

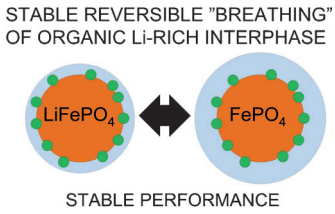
J. A. Van Deventer, K. P. Yuet, T. H. Yoo, D. A. Tirrell*

Cell Surface Display Yields Evolvable, Clickable Antibody Fragments

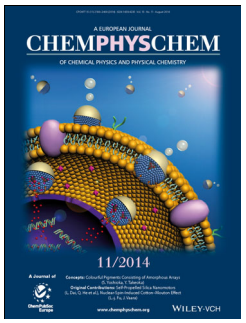
Protein engineering: Combining *E. coli*-based protein display with non-canonical amino acids has enabled the isolation of clickable, functional proteins. This work opens new possibilities for protein engineering, including modulation of molecular recognition events with non-canonical amino acids and direct screening of libraries of chemically modified proteins.



ChemBioChem
DOI: **10.1002/cbic.201402184**



Energy Materials

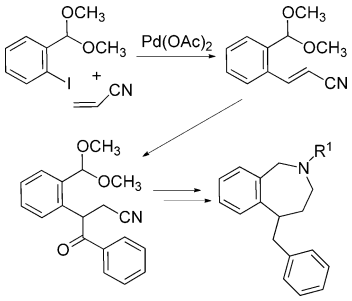


N. Dupré,* M. Cuisinier, J.-F. Martin, D. Guyomard

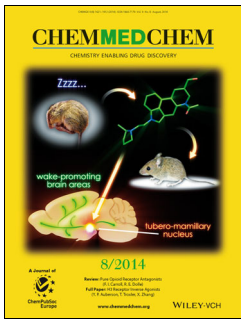
Interphase Evolution at Two Promising Electrode Materials for Li-Ion Batteries: $LiFePO_4$ and $LiNi_{1/2}Mn_{1/2}O_2$

The importance of the chemical history of the electrode surface before electrochemical cycling as well as the correlation between interface phenomena, the formation/evolution of an interphase, and the electrochemical behavior of $LiFePO_4$ and $LiNi_{1/2}Mn_{1/2}O_2$ electrodes are investigated by magic-angle-spinning nuclear magnetic resonance, electron energy loss spectroscopy, and X-ray photoelectron spectroscopy. These techniques allow the study of interface aging and failure mechanisms.

ChemPhysChem
DOI: **10.1002/cphc.201400070**



Neurological Agents

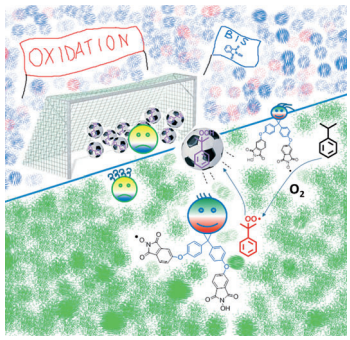


P. Hasebein, B. Frehland, D. Schepmann, B. Wünsch*

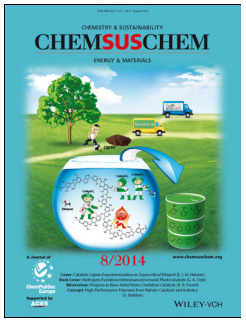
Synthesis, σ Receptor Affinity, and Pharmacological Evaluation of 5-Phenylsulfanyl- and 5-Benzyl-Substituted Tetrahydro-2-benzazepines

Size matters: A set of 5-phenylsulfanyl- and 5-benzyl-substituted tetrahydro-2-benzazepines was synthesized by the novel strategy of connecting C6–C1 and C3–*N* building blocks. Diverse N substituents were introduced, and the compounds were pharmacologically evaluated. High σ_1 receptor affinity was observed for 2-benzazepines with N substituents larger than a linear propyl group. The *N*-(4-fluorobenzyl)-substituted derivative is a promising starting point for development of σ_1 ligands with cognition-enhancing and analgesic activity.

ChemMedChem
DOI: **10.1002/cmdc.201402110**



Catalysis

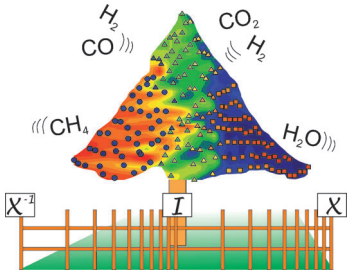


M. Petroselli, P. Franchi, M. Lucarini, C. Punta,* L. Melone*

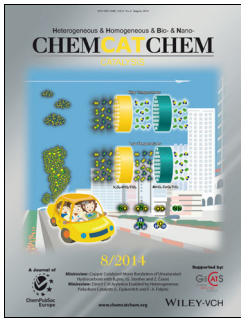
Aerobic Oxidation of Alkylaromatics using a Lipophilic *N*-Hydroxyphthalimide: Overcoming the Industrial Limit of Catalyst Solubility

Lipophilic and selective: A new lipophilic analogous of *N*-hydroxyphthalimide, operating with reduced amounts of polar cosolvent, reaches the goal of promoting the aerobic oxidation of alkylaromatics to the corresponding hydroperoxides with good yields and high selectivity. The catalyst is selected on the basis of a study on the influence of substituents on the aromatic ring of *N*-hydroxyphthalimide.

ChemSusChem
DOI: **10.1002/cssc.201402132**



Steam Reforming



C. Sprung, B. Arstad, U. Olsbye*

Methane Steam Reforming over a $Ni/NiAl_2O_4$ Model Catalyst—Kinetics

Kinetics change: A detailed investigation of methane steam reforming over a nickel catalyst is performed at steam-to-carbon (S/C) ratios of 0.2–7.1 at 843, 858, and 873 K. Kinetic orders (red for high and blue for low values) of the reactants change as a function of S/C. The background color represents steam and the color of the symbols methane kinetic order. The actual position of the symbols represents the steam conversion rate as a function of S/C.

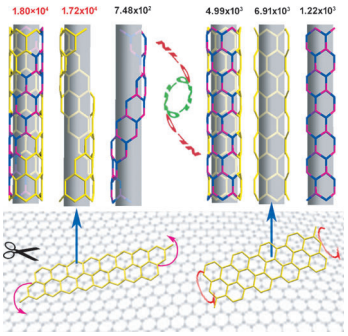
ChemCatChem
DOI: **10.1002/cctc.201402017**

Nonlinear Optics

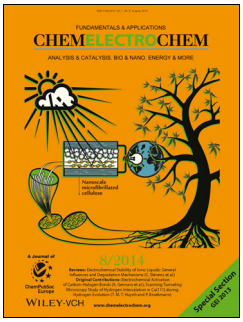
R.-L. Zhong, S.-L. Sun, H.-L. Xu,* Y.-Q. Qiu, Z.-M. Su*

Helical Carbon Segment in Carbon–Boron–Nitride Heteronanotubes: Structure and Nonlinear Optical Properties

Helix topological effect: The helix C segment in HA-9 leads to fascinating long-range charge-transfer character. As a result, the β_0 value of HA-9 is 1.80×10^4 a.u., which is clearly larger than that of PA-9 (4.99×10^3 a.u.). Further investigations show that the larger β_0 value of HA-9 is essentially induced by the helix topological effect of the C-segment (see figure).



ChemPlusChem
DOI: **10.1002/cplu.201300381**

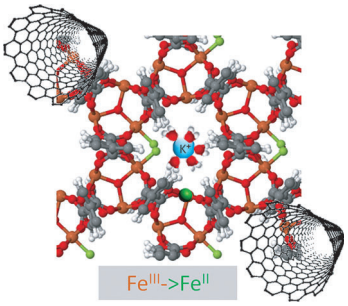


Supercapacitors

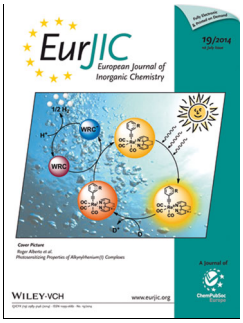
N. Campagnol, R. Romero-Vara, W. Deleu, L. Stappers, K. Binnemans, D. E. De Vos, J. Fransaer*

A Hybrid Supercapacitor based on Porous Carbon and the Metal-Organic Framework MIL-100(Fe)

Charged and ready: Composite supercapacitor electrodes based on metal–organic frameworks and carbon nanotubes are tested with environmentally friendly electrolytes. The energy-storage mechanism followed by these materials is explored and explained, and promising results are obtained with the electrodes.



ChemElectroChem
DOI: **10.1002/celc.201402022**

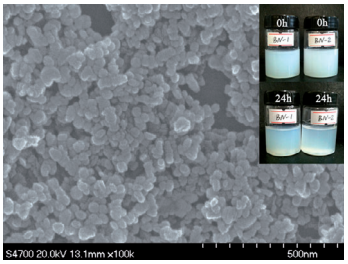


Nanoparticles

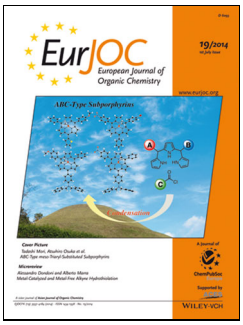
C. Xiong, W. Tu*

Synthesis of Water-Dispersible Boron Nitride Nanoparticles

Small-sized hexagonal boron nitride (*h*-BN) nanoparticles have been synthesized. Copper oxide plays a role in changing the surface properties of *h*-BN nanoparticles and improving their aqueous dispersibility. The *h*-BN nanoparticles can be well dispersed and are stable in aqueous solution.



Eur. J. Inorg. Chem.
DOI: **10.1002/ejic.201402150**

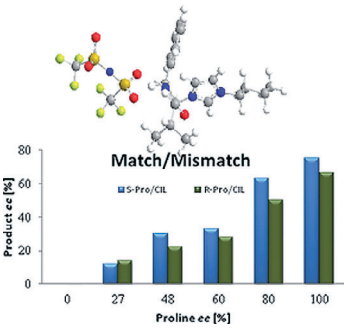


Chiral Ionic Liquids

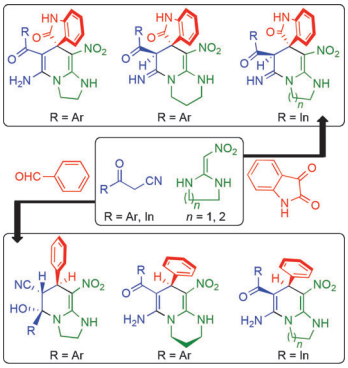
L. González, J. Escorihuela, B. Altava,* M. I. Burguete, S. V. Luis*

Chiral Room Temperature Ionic Liquids as Enantioselective Promoters for the Asymmetric Aldol Reaction

Chiral ionic liquids derived from natural amino acids are shown to be efficient solvents or additives for direct asymmetric aldol reactions. A match/mismatch effect between the configuration of the chiral ionic liquid and that of proline has been observed, with a higher enantioselectivity obtained for the (*S*)-proline/CIL **2** complex.



Eur. J. Org. Chem.
DOI: **10.1002/ejoc.201402436**



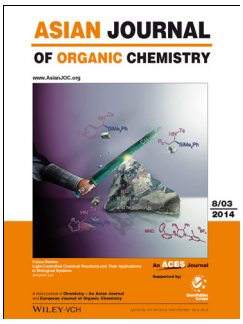
Asian J. Org. Chem.
DOI: **10.1002/ajoc.201402100**

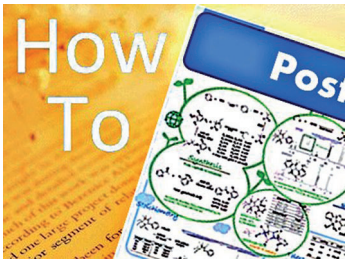
Domino Reactions

S. Sivakumar, R. R. Kumar*

Domino Knoevenagel Condensation/Aza-Ene Addition/*N*-Cyclization Route to Functionalized Imidazo[1,2-*a*]pyridines and Pyrido-[1,2-*a*]pyrimidines

One-pot wonder! The syntheses of imidazo[1,2-*a*]pyridines and pyrido-[1,2-*a*]pyrimidines were carried out by using a one-pot three-component protocol. The reaction proceeds in a single step through a domino Knoevenagel condensation/aza-ene addition/imine–enamine tautomerization/chemoselective *N*-cyclization sequence of reactions (In = indolyl).





ChemViews magazine
DOI: **10.1002/chemv.201400053**

Chemistry Education

R. Threlfall

Tips for Your Poster: Planning Your Poster (2)

In his new Education Series, Dr. Richard Threlfall, Editor of the *Asian Journal of Chemistry* and author of Tips for Writing Better Science Papers (*ChemViews Mag.*) shows how to make an outstanding poster that invites others to take interest in your research.