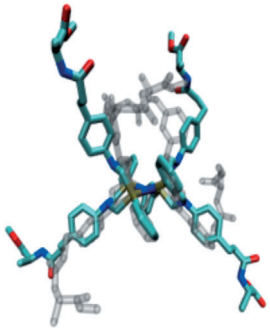
On these pages, we feature a selection of the excellent work that has recently been published in our sister journals. If you are reading these pages on a computer, click on any of the items to read the full article. Otherwise please see the DOIs for easy online access through Wiley Online Library.

Homogeneous Catalysis

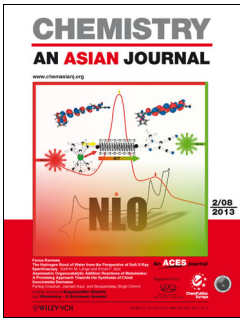
M. L. Reback, B. Ginovska-Pangovska, M.-H. Ho, A. Jain, T. C. Squier, S. Raugei,* J. A. S. Roberts,* W. J. Shaw*

The Role of a Dipeptide Outer-Coordination Sphere on H_2-Production Catalysts: Influence on Catalytic Rates and Electron Transfer

Peptide-like scaffold enhancements: $[Ni(P^{Ph}_2N^{Ph\text{-}dipeptide}_2)_2]^{+2}$ electrocatalysts containing dipeptides in the outercoordination sphere (such as depicted) show an impact on rate and overpotential. Amide functional groups enhance the rate modestly, while polar and aromatic groups do not impact catalysis. This work shows the impact that an outer-coordination sphere can have on a molecular catalyst system.



Chem. Eur. J.
DOI: **10.1002/chem.201202849**

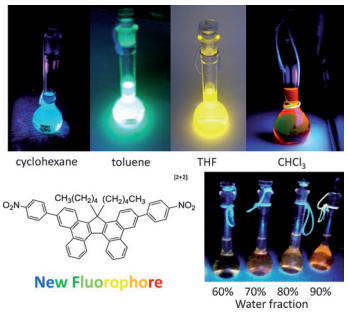


Fluorescent Compounds

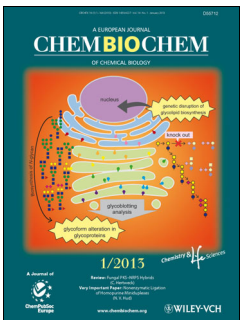
Y. Ueda, Y. Tanigawa, C. Kitamura, H. Ikeda,* Y. Yoshimoto, M. Tanaka, K. Mizuno, H. Kurata, T. Kawase*

3,14-Bis(*p*-nitrophenyl)-17,17-dipentyltetrabenzo[*a*,*c*,*g*,*i*]-fluorene: A New Fluorophore Displaying Both Remarkable Solvatochromism and Crystalline-Induced Emission

A fluorophore displaying both large solvatochromism and CIE: A series of 17,17-dialkyl-3,14-diaryltetrabenzofluorenes including the 3,14-bis(*p*-nitrophenyl) derivative were prepared by using Suzuki–Miyaura cross-coupling reactions. The fluorescence of the dinitro derivative in aqueous THF exhibits a considerably large solvent effect ($\Delta\lambda_{em} > 90$ nm) and crystalline-induced emission (CIE).



Chem. Asian J.
DOI: **10.1002/asia.201200976**

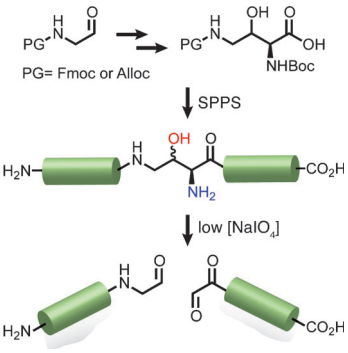


Peptides

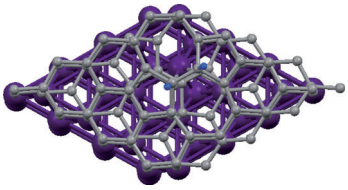
A. Amore, K. Wals, E. Koekoek, R. Hoppes, M. Toebes, T. N. M. Schumacher, B. Rodenko,* H. Ovaa*

Development of a Hypersensitive Periodate-Cleavable Amino Acid that is Methionine- and Disulfide-Compatible and its Application in MHC Exchange Reagents for T Cell Characterisation

Cleavable linkers: 1,2-Amino alcohol systems were developed for solid-phase synthesis of conditional peptides that would be hypersensitive to periodate oxidation without undergoing cooxidation of methionine and cysteine residues present. These cleavable peptide ligands were applied in the generation of MHC exchange reagents for the detection of antigen-specific T cells in peripheral blood cells.



ChemBioChem
DOI: **10.1002/cbic.201200540**



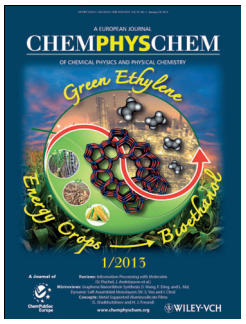
ChemPhysChem
DOI: **10.1002/cphc.201200831**

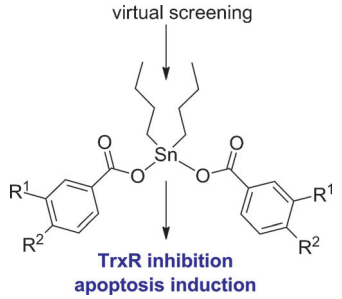
Catalysts

A. Y. Yermakov, D. W. Boukhvalov,* M. A. Uimin, E. S. Lokteva, A. V. Erokhin, N. N. Schegoleva

Hydrogen Dissociation Catalyzed by Carbon-Coated Nickel Nanoparticles: Experiment and Theory

Wrap it! A novel carbon-based catalytic material is reported based on the combination of experimental measurements and first-principles calculations. A significant acceleration of the hydrogenation of magnesium at room temperature in the presence of nickel nanoparticles wrapped in multilayer grapheme (see picture) is observed.





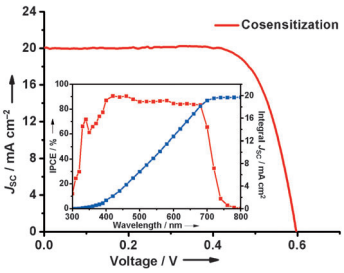
ChemMedChem
DOI: **10.1002/cmdc.201200505**

Bioorganometallics

K. Navakoski de Oliveira, V. Andermark, S. von Grafenstein, L. A. Onambele, G. Dahl, R. Rubbiani, G. Wolber, C. Gabbiani, L. Messori, A. Prokop, I. Ott*

Butyltin(IV) Benzoates: Inhibition of Thioredoxin Reductase, Tumor Cell Growth Inhibition, and Interactions with Proteins

Metal masterpieces: The mode of action of cytotoxic tin organometallics is largely unknown. Virtual screening suggested inhibition of thioredoxin reductase (TrxR) as a contributing factor for organotin biochemistry. Its relevance was confirmed in an interdisciplinary pilot study of a series of tin(IV) complexes with benzoate ligands.



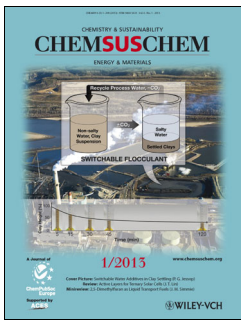
ChemSusChem
DOI: **10.1002/cssc.201200655**

Solar Cells

M. Cheng, X. Yang,* J. Li, F. Zhang, L. Sun*

Co-sensitization of Organic Dyes for Efficient Dye-Sensitized Solar Cells

Sensitive dyes absorb it all: Co-sensitization of three spectrally complementary dyes on a TiO_2 film in a well-designed sequence significantly improves the photovoltaic performance of the device, and an efficiency of 8.2% is achieved. The devices demonstrate a panchromatic response with an incident photon-to-current conversion efficiency >80% over the entire visible spectral region from 400 to 700 nm.



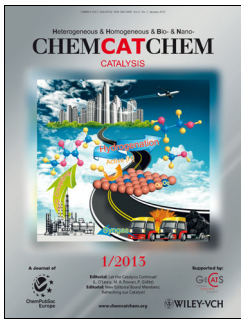
ChemCatChem
DOI: **10.1002/cctc.201200580**

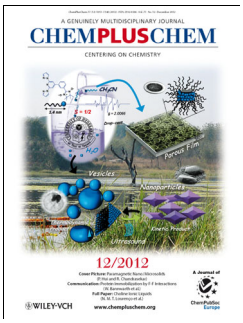
In Situ Microscopy

V. Van Speybroeck,* K. Hemelsoet, K. De Wispelaere, Q. Qian, J. Van der Mynsbrugge, B. De Sterck, B. M. Weckhuysen,* M. Waroquier

Mechanistic Studies on Chabazite-Type Methanol-to-Olefin Catalysts: Insights from Time-Resolved UV/Vis Microspectroscopy Combined with Theoretical Simulations

Let the light shine: The formation of cationic hydrocarbon pool species that absorb at specific wavelengths is followed by using in situ UV/Vis spectroscopy. Experimentally derived activation energies for their formation correlate well with calculated kinetic rate constants for methylation reactions. The studied species are crucial intermediates in active methanol-to-olefin routes. Our results show that the zeolite cage plays a decisive role in their activity.



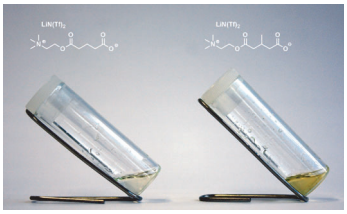


Ionic Liquids

Â. Rocha, T. Carvalho, P. Vidinha, N. M. T. Lourenço*

Synthesis and Properties of Room-Temperature Choline Carboxylate Zwitterionic Ionic Liquids as Potential Electrolytes

Choline ionic liquids: Two new choline carboxylate zwitterions have been prepared by two different synthetic routes through esterification with anhydrides. Their conjugation with lithium bis(trifluoromethylsulfonyl)imide resulted in the formation of room-temperature ionic liquids with excellent conductivities (see figure).



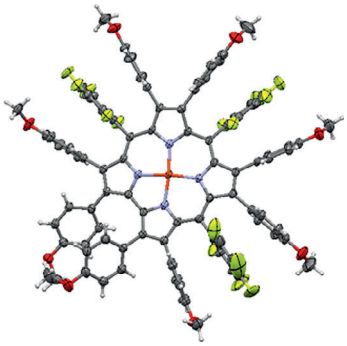
ChemPlusChem
DOI: **10.1002/cplu.201200247**

Copper Corroles

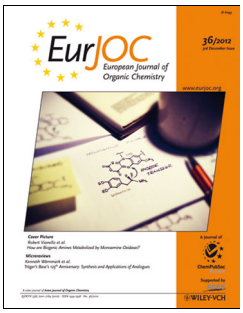
D. Gao, G. Canard,* M. Giorgi, T. S. Balaban

Synthesis and Characterization of Copper Undecaarylcorroles and the First Undecaarylcorrole Free Base

Saddle undecaaryl copper corroles were prepared by a Suzuki cross-coupling procedure. Their saddling dihedral angles strongly depend on the *meso* substituents, whereas the β-aryl groups induce a redshift of their UV/Vis absorption maxima. The X-ray structure of the demetalated undecaarylcorrole free base shows that full aryl substitution has no impact on the conformation of the corrole.



Eur. J. Inorg. Chem.
DOI: **10.1002/ejic.201201158**

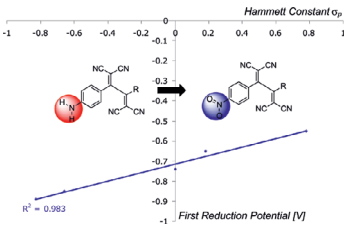


Molecular Electronics

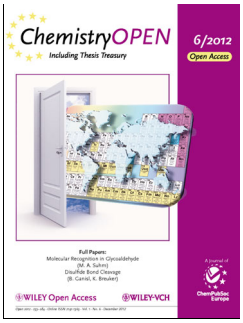
A. R. Lacy, A. Vogt, C. Boudon, J.-P. Gisselbrecht, W. B. Schweizer, F. Diederich*

Post-Cycloaddition–Retroelectrocyclization Transformations of Polycyanobutadienes

The use of ethynylated anilines as activated alkynes in cycloaddition–retroelectrocyclization reactions with tetracyanoethene and tetracyanoquinodimethane provides access to novel, highly electron-deficient polycyanobutadienes and unprecedented chromophores. Electrochemical studies show that the electron-accepting abilities are strongly enhanced upon elimination of the amino donor substituent.



Eur. J. Org. Chem.
DOI: **10.1002/ejoc.201201371**



Scientometrics

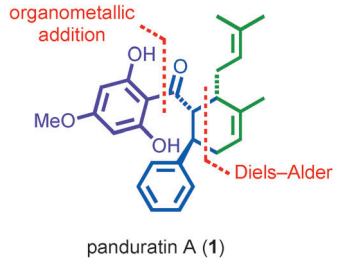
A. Barth,* W. Marx

Stimulation of Ideas through Compound-Based Bibliometrics: Counting and Mapping Chemical Compounds for Analyzing Research Topics in Chemistry, Physics, and Materials Science

Hot topics and white patches! Counting compounds rather than publications or citations opens a new perspective to quantitative analysis of research activities. Compound classes can be mapped in order to visualize both the existing and the not yet synthesized compound species. As applications of our method, we have chosen three examples from inorganic chemistry: rare earth compounds, rare earth cuprates and quasicrystals.

RE	Sc	Y	La	Ce	Pr
Be		4			
Mg	12	8	28	3	
Ca	2	82	134	4	26
Sr	5	77	734	14	70
Ba	22	1552	711	30	303
SUM	41	1723	1607	51	399

ChemistryOpen
DOI: **10.1002/open.201200029**



panduratin A (**1**)

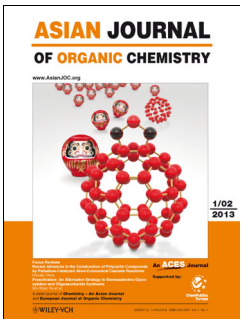
Total Synthesis

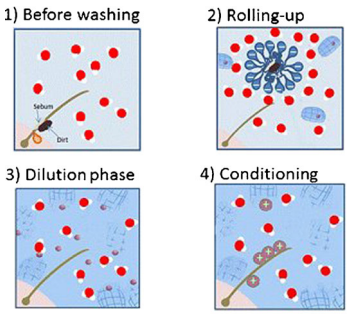
L. A. Pasfield, L. de la Cruz, J. Ho, M. L. Coote, G. Otting, M. D. McLeod*

Synthesis of (±)-Panduratin A and Related Natural Products Using the High Pressure Diels–Alder Reaction

Under pressure: Panduratin A (**1**) has been synthesized in six steps including a high pressure Diels–Alder reaction. This divergent sequence also allowed the synthesis of 4-hydroxypanduratin A, panduratin H, panduratin I, nicolaioidesin B, and 2-hydroxyisopanduratin A. The binding of panduratin A to the dengue virus NS2B-NS3 protease was investigated by NMR spectroscopy.

Asian J. Org. Chem.
DOI: **10.1002/ajoc.201200171**





Hair Care

Shampoo Science

A typical shampoo is an aqueous dispersion containing surfactants such as alkyl sulfates, foaming and dispersing agents, simple salts as thickeners, and a host of other ingredients. *ChemViews* magazine looks at the common components of a shampoo and the role each one plays in the cleaning, strengthening, and protection of hair or in the stability of the aqueous dispersion.

ChemViews magazine
DOI: **10.1002/chemv.201200149**