



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

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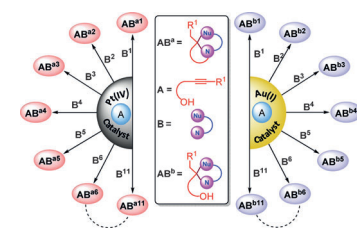


Relay Catalysis

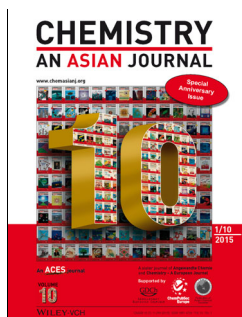
A. H. Bansode, A. C. Shaikh, R. D. Kavthe, S. Thorat, R. G. Gonnade, N. T. Patil*

Catalyst-Dependent Selectivity in the Relay Catalytic Branching Cascade

DOS prompt: Catalyst-dependent selectivity in the relay catalytic branching cascade has been reported. The reaction of a common type of substrate (alkynols, **A**) with variable scaffold-building agents (bis-nucleophiles, **B**) gave two different types of molecular scaffolds (**AB^a** and **AB^b**) and their formation is essentially dependent on the type of catalyst used.



Chem. Eur. J.
DOI: 10.1002/chem.201405736

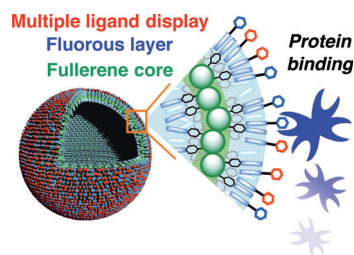


Self-Assembly

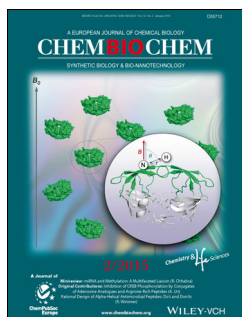
K. Harano,* J. Yamada, S. Mizuno, E. Nakamura*

High-Density Display of Protein Ligands on Self-Assembled Capsules via Noncovalent Fluorous Interactions

Getting a lot of coverage: Display of bioactive ligands is an important tool in chemical biology. This communication reports the display of sugar and biotin molecules on sub-100 nm-sized capsules with a high surface coverage using fluorous interactions between fluorous-tagged ligands and a fullerene vesicle covered with fluorous chains. Even after the high-density ligand display and protein binding, the capsule retained its structural integrity, in contrast to lipid vesicles.



Chem. Asian J.
DOI: 10.1002/asia.201403144

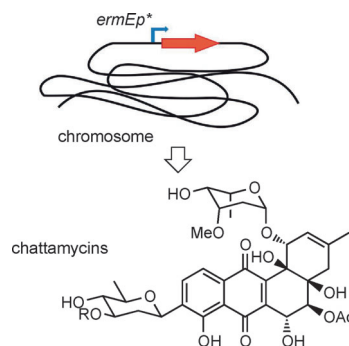


Polyketide Synthesis

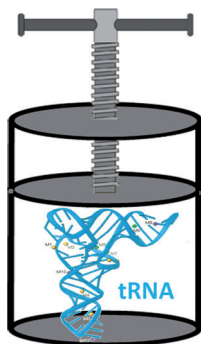
Z. Zhou, Q. Xu, Q. Bu, Y. Guo, S. Liu, Y. Liu, Y. Du, Y. Li*

Genome Mining-Directed Activation of a Silent Angucycline Biosynthetic Gene Cluster in *Streptomyces chattanoogensis*

No longer hidden: Overexpression of a pathway-specific regulator gene under the constitutive *ermE** promoter led to activation of a cryptic angucycline biosynthetic gene cluster. Two novel members of the angucycline family of antibiotics were isolated and elucidated.



ChemBioChem
DOI: 10.1002/cbic.201402577



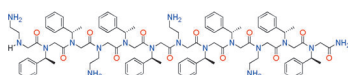
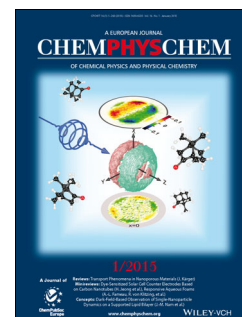
ChemPhysChem
DOI: 10.1002/cphc.201402676

High-Pressure Chemistry

C. Schuabb, M. Berghaus, C. Rosin, R. Winter*

Exploring the Free Energy and Conformational Landscape of tRNA at High Temperature and Pressure

RNA under pressure! Exploration of the conformational and free-energy landscape of the 76-residue yeast phenylalanine transfer RNA (tRNA^{Phe}; see figure) reveals that RNA unfolding differs not only from protein unfolding but also from DNA melting. Compared with the pronounced temperature effect, pressure-dependent changes in the secondary structure of tRNA^{Phe} are small, however, even up to the 1000 MPa range.



Peptoid 16
L. mexicana promastigote ED₅₀: 7 μM
L. mexicana amastigote ED₅₀: 17 μM

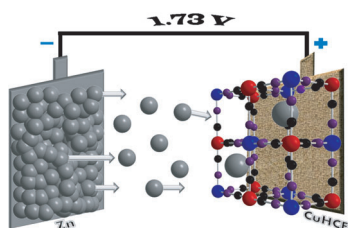
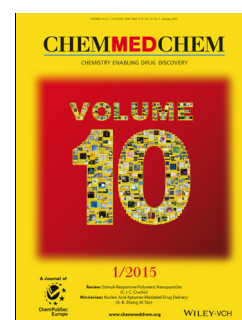
ChemMedChem
DOI: 10.1002/cmdc.201402416

Antiprotozoal Agents

G. A. Eggimann, H. L. Bolt, P. W. Denny,* S. L. Cobb*

Investigating the Anti-leishmanial Effects of Linear Peptoids

L. mex. meets its match: Peptoids—a class of peptide mimetics—have demonstrated their activities against a range of bacterial infections. In this work, we studied the anti-leishmanial properties of linear peptoids, which were observed to have promising activity against *Leishmania mexicana* axenic amastigotes, a causative agent of cutaneous leishmaniasis.



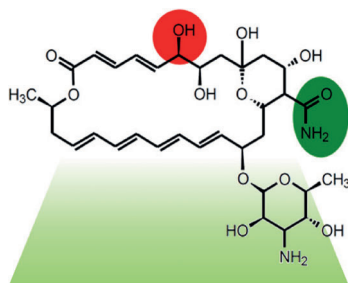
ChemSusChem
DOI: 10.1002/cssc.201403143

Zinc-Ion Batteries

R. Trócoli,* F. La Mantia*

An Aqueous Zinc-Ion Battery Based on Copper Hexacyanoferrate

1.7 V aqueous battery: A new zinc-ion battery based on copper hexacyanoferrate and zinc foil in a nontoxic, noncorrosive electrolyte has been developed. The system shows cyclability, rate capability, and specific energy values near to those of lithium-ion organic batteries based on Li₄Ti₅O₁₂ and LiFePO₄ at 10 °C.



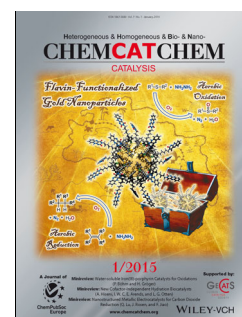
ChemCatChem
DOI: 10.1002/cctc.201402773

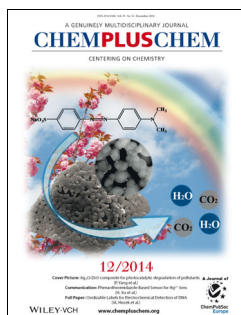
Tailoring Enzymes

J. Santos-Aberturas,* J. Engel, J. Dickerhoff, M. Dörr, F. Rudroff, K. Weisz, U. T. Bornscheuer

Exploration of the Substrate Promiscuity of Biosynthetic Tailoring Enzymes as a New Source of Structural Diversity for Polyene Macrolide Antifungals

Promise of promiscuity: The substrate promiscuity of two groups of biosynthetic tailoring enzymes opens up new perspectives for the creation of new valuable polyene macrolide antifungals. New hydroxylated and carboxamidated derivatives are described and possible epoxidations suggested.



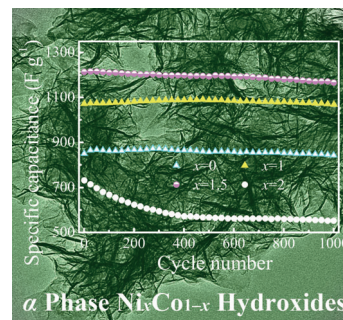


Nanomaterials

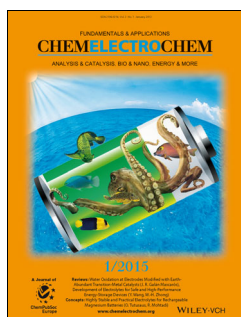
H. Chen, J. Jiang,* L. Zhang, Y. Zhao, D. Guo, Y. Ruan, D. Xia

One-Pot Fabrication of Layered α -Phase Nickel–Cobalt Hydroxides as Advanced Electrode Materials for Pseudocapacitors

Nanosheet arrays: Nickel-cobalt hydroxide nanosheets in the α phase and their arrays on Ni foam are synthesized with the help of 1-methyl-2-pyrrolidone. Their electrochemical properties are tuned by varying the Ni and Co contents. The bimetallic Ni–Co hydroxides exhibit much higher specific capacitances with improved rate capabilities and cycling stabilities compared with monometallic Ni hydroxide (see figure).



ChemPlusChem
DOI: 10.1002/cplu.201402214



Capacitors

P. Kurzweil,* B. Frenzel, A. Hildebrand

Voltage-Dependent Capacitance, Aging Effects, and Failure Indicators of Double-Layer Capacitors during Lifetime Testing

The age test: Aging phenomena, which occur during long-term cycling tests of so-called supercapacitors, complicate the exact determination of capacitance. Voltammetric methods allow useable capacitance, unwanted residual charges, and mechanical failure causes to be distinguished. Polymer-bound carbon electrodes show unexpected failure phenomena at high temperatures and voltages.



ChemElectroChem
DOI: 10.1002/celc.201402300

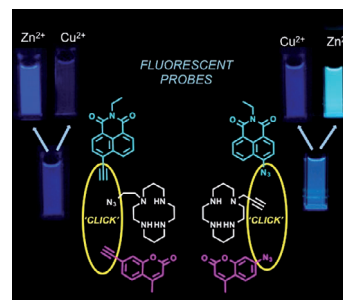


Scorpionand Probes

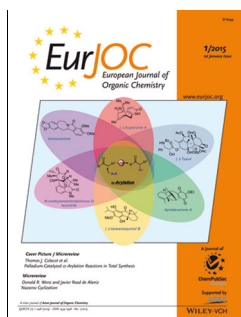
S. Ast, S. Kuke, P. J. Rutledge,* M. H. Todd*

Using Click Chemistry to Tune the Properties and the Fluorescence Response Mechanism of Structurally Similar Probes for Metal Ions

In these scorpionand molecular probes, the triazole connectivity, the carbon linker, and the fluorescent tail all combine to modulate photo-physical behavior and metal responsiveness.



Eur. J. Inorg. Chem.
DOI: 10.1002/ejic.201402811

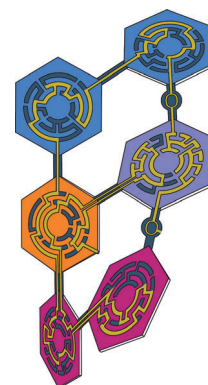


Helical Structures

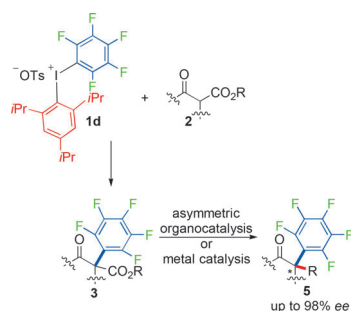
M. Rickhaus, L. M. Bannwart, O. Unke, H. Gsellinger, D. Häussinger, M. Mayor*

Through the Maze: Cross-Coupling Pathways to a Helical Hexaphenyl “Geländer” Molecule

The synthesis of a helical, interlinked Geländer (banister) type hexaphenyl oligomer is symbolized in the figure as a maze; this is a representation of both the often convoluted synthetic possibilities as well as the successful resolution of the maze to reach the target structure.



Eur. J. Org. Chem.
DOI: 10.1002/ejoc.201403322



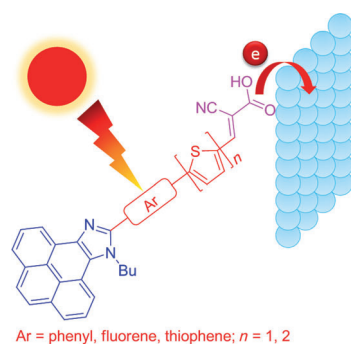
ChemistryOpen
DOI: 10.1002/open.201402045

Enantioselective Synthesis

K. Matsuzaki, K. Okuyama, E. Tokunaga, M. Shiro, N. Shibata*

Sterically Demanding Unsymmetrical Diaryl- λ^3 -iodanes for Electrophilic Pentafluorophenylation and an Approach to α -Pentafluorophenyl Carbonyl Compounds with an All-Carbon Stereocenter

Bulky C_6F_5 ! Sterically demanding unsymmetrical pentafluorophenyl-triisopropylphenyl- λ^3 -iodane **1d** was developed as an effective reagent for the electrophilic pentafluorophenylation of β -keto esters and β -keto amide **2**. The resulting α -pentafluorophenylated compounds **3** with a quaternary carbon center can be converted into α -pentafluorophenyl ketones in high yields and enantioselectivities.



Asian J. Org. Chem.
DOI: 10.1002/ajoc.201402214

Dye-Sensitized Solar Cells

D. Kumar, K. R. J. Thomas,* C.-P. Lee, K.-C. Ho

Triarylamine-Free Pyrenoimidazole-Containing Organic Dyes with Different π -Linkers for Dye-Sensitized Solar Cells

A piece of the π : A series of amine-free bipolar dyes featuring a pyrenoimidazole donor, a cyanoacrylic acid acceptor, and different π -linkers is reported. The dyes were used as sensitizers in dye-sensitized solar cells and their efficiencies are moderate.



ChemViews magazine
DOI: 10.1002/chemv.201400111

Interview

D. Gryko

10 Years Ago And Now

Chemistry—An Asian Journal celebrates its 10th volume in 2015. Looking back, the journal's editors have asked featured authors like Daniel Gryko and Eiichi Nakamura to provide a glimpse of themselves and how their world has changed over the past decade for an interview series published in *ChemViews Magazine*.

