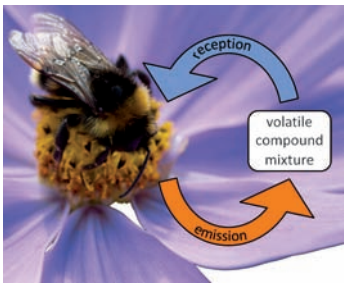
Auf diesen drei Seiten weisen wir auf wichtige aktuelle Beiträge in unseren Schwesterzeitschriften hin. Wenn Sie die Seiten online lesen, dann können Sie die Artikel mit einem Klick direkt aufrufen, ansonsten sind sie durch Eingabe der DOIs über Wiley Online Library leicht online zugänglich.

Dynamic Combinatorial Chemistry

A. Herrmann*

Dynamic Mixtures: Challenges and Opportunities for the Amplification and Sensing of Scents

Mixtures are annoying, but nevertheless the distinction of odorant mixtures is an important task in the everyday life of most species. Dynamic combinatorial/covalent chemistry impacts the emission and reception of bioactive volatile compounds at the air–water interface and might thus become a key concept in gaining fundamental insight into the molecular recognition of bioactive compound mixtures.



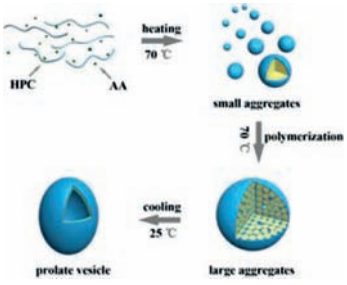
Chem. Eur. J.
DOI: **10.1002/chem.201200668**

Polymer Vesicles

H. Qian, W. Yao, S. Yu, Y. Chen, W. Wu, X. Jiang*

Spontaneous Formation of Giant Polymer Vesicles through a Nucleation and Growth Pathway

Big friendly giants: A nucleation and growth mechanism for vesicle formation that involved the creation of hydrogen-bonded complexes between thermo-responsive cellulose (HPC) and poly(acrylic acid) (PAA) was demonstrated experimentally. The dynamic formation of HPC-PAA vesicles, rather than a commonly believed membrane-closing mechanism, was observed through a nucleation and growth pathway.



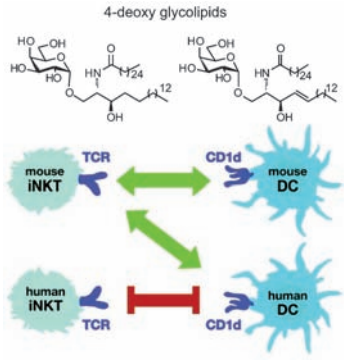
Chem. Asian J.
DOI: **10.1002/asia.201200155**

Glycolipids

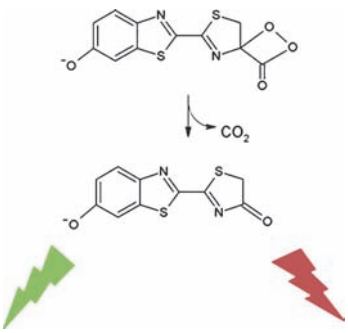
E. M. Dangerfield, J. M. H. Cheng, D. A. Knight, R. Weinkove, P. R. Dunbar, I. F. Hermans, M. S. M. Timmer,* B. L. Stocker*

Species-Specific Activity of Glycolipid Ligands for Invariant NKT Cells

Two 4-deoxy analogues of α-GalCer were synthesised and their species-specific activities investigated. Here, we show that the 4-hydroxyl of α-GalCer is critical for the activation of human, but not murine, iNKT cells. This species-specific activity is due to a lack of human iNKT cell recognition, rather than insufficient CD1d presentation.



ChemBioChem
DOI: **10.1002/cbic.201200095**

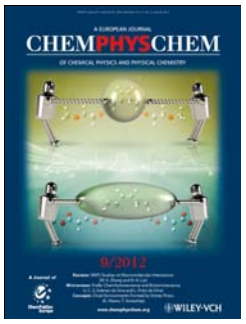


Luminescence

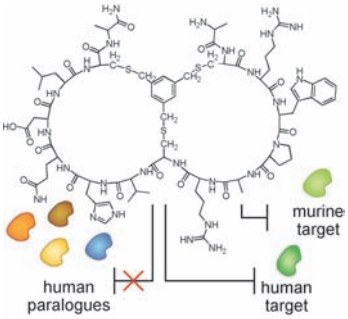
L. Pinto da Silva, J. C. G. Esteves da Silva*

Firefly Chemiluminescence and Bioluminescence: Efficient Generation of Excited States

Efficient bio- and chemiluminescence of firefly oxyluciferin are reviewed. The thermal decomposition of firefly dioxetanones and 1,2-dioxetanes is discussed (see picture), as are their chemiexcitation mechanisms.



ChemPhysChem
DOI: **10.1002/cphc.201200195**



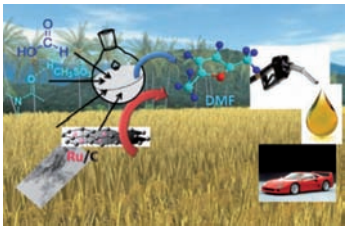
Peptidic Macrocycles

V. Baeriswyl, H. Rapley, L. Pollaro, C. Stace, D. Teufel, E. Walker, S. Chen, G. Winter,* J. Tite,* C. Heinis*

Bicyclic Peptides with Optimized Ring Size Inhibit Human Plasma Kallikrein and its Orthologues While Sparing Paralogous Proteases

Picky push bikes! Bicyclic peptides with low to sub-nanomolar inhibitory activities towards the serine protease plasma kallikrein were developed. By modulating the size of the macrocyclic rings, inhibitors with the desired specificity profile could be generated.

ChemMedChem
DOI: **10.1002/cmdc.201200071**

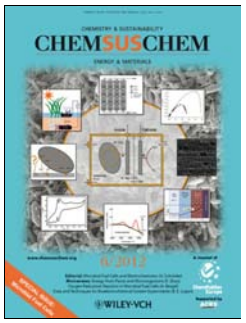


Renewable Fuels

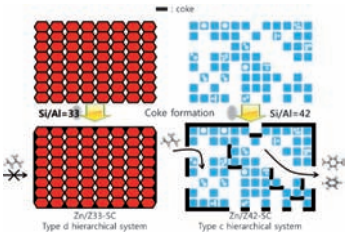
S. De, S. Dutta, B. Saha*

One-Pot Conversions of Lignocellulosic and Algal Biomass into Liquid Fuels

Biomass breakdown in one pot: The one-pot conversion of lignocellulosic and algal biomass into liquid fuel, 2,5-dimethylfuran, has been achieved by using a multicomponent catalytic system comprising $[DMA]^+[CH_3SO_3]^-$ (DMA = *N*,*N*-dimethylacetamide), Ru/C, and formic acid. A reaction route has been elucidated based on ^1H and ^{13}C NMR spectroscopic data. Another promising biofuel has also been synthesized by using $[DMA]^+[CH_3SO_3]^-$ as catalyst.



ChemSusChem
DOI: **10.1002/cssc.201200031**

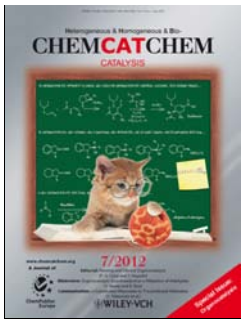


Coke Reduction

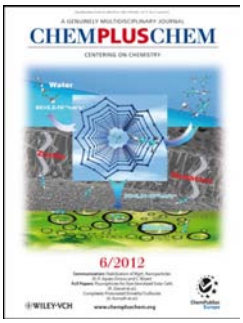
Y. H. Kim, K. H. Lee, C.-M. Nam, J. S. Lee*

Formation of Hierarchical Pore Structures in Zn/ZSM-5 to Improve the Catalyst Stability in the Aromatization of Branched Olefins

A maze of pores: The effect of hierarchical pore systems on the stability of the catalyst when the same amount of coke was formed on the external surface of the catalysts was investigated. Externally connected mesopores were not completely blocked by the coke.



ChemCatChem
DOI: **10.1002/cctc.201200007**

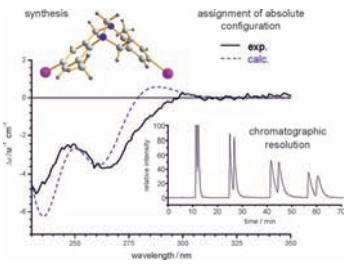


Tröger Base Derivatives

C. Benkhäuser-Schunk, B. Wezisla, K. Urbahn, U. Kiehne, J. Daniels, G. Schnakenburg, F. Neese,* A. Lützen*

Synthesis, Chiral Resolution, and Absolute Configuration of Functionalized Tröger's Base Derivatives: Part II

Tröger's base derivatives have been prepared and resolved by HPLC or recycling HPLC techniques on a chiral stationary phase on a semipreparative scale. The absolute configurations of the resolved enantiomers were assigned by quantum chemical circular dichroism calculations and/or by X-ray crystallography (see figure).



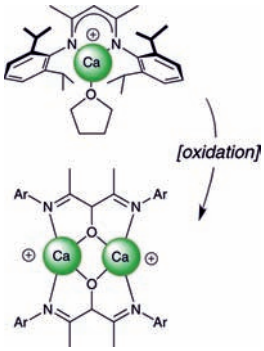
ChemPlusChem
DOI: **10.1002/cplu.201200029**

β-Diketiminato Complexes

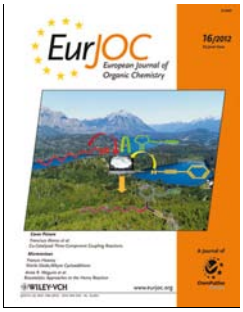
B. Liu, V. Dorcet, L. Maron, J.-F. Carpentier,* Y. Sarazin*

β-Diketiminato–Alkaline Earth Cationic Complexes: Synthesis, Structures, Lactide Polymerization and Unusual Oxidative Reactivity of the Ancillary Ligand

Well-defined (β-diketiminato)calcium and -strontium cationic complexes are highly electrophilic species that efficiently catalyze the immortal ring-opening polymerization of lactide and display unusual reactivity by providing a unique example of oxidation of a {BDI^{iPr}} core to give a diiminoalkoxide.



Eur. J. Inorg. Chem.
DOI: **10.1002/ejic.201200183**

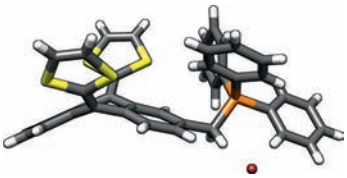


Donor–Acceptor Systems

A. Molina-Ontoria, R. García, A. Gouloumis, F. Giacalone, M. R. Torres, N. Martín*

A Straightforward Electroactive π-Extended Tetrathiafulvalene (exTTF) Building Block

The synthesis and X-ray structure of a new and readily available exTTF derivative bearing a methyltriphenylphosphonium bromide moiety as a new building block for the construction of electroactive molecules is described.



Eur. J. Org. Chem.
DOI: **10.1002/ejoc.201200115**

Chemistry and Music

K. Roth

Chemical Secrets of the Violin Virtuosi – Part 1

The enchanting sound of Stradivari's stringed instruments being played by experts may seem far removed from the realm of chemistry. But only chemistry can uncover the secrets of Stradivari's masterpieces; from the varnish to the choice of wood, and finally reveal whether a Stradivarius *really* sounds better than all the rest.

ChemViews magazine
DOI: **10.1002/chemv.201200057**