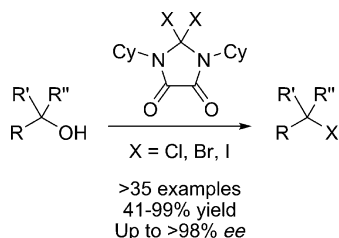




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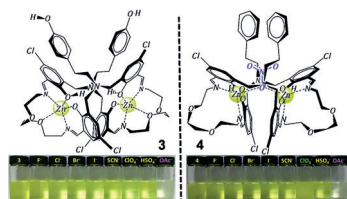
Chem. Eur. J.
DOI: 10.1002/chem.201403407

Halodehydration

J. P. Moerdyk, C. W. Bielawski*

Dihaloimidazolidinediones as Versatile Halodehydrating Agents

X-Caliber: A series of dihaloimidazolidinediones were synthesized and found to facilitate the halodehydration of various alcohols to the corresponding alkyl halides R-X (X = Cl, Br, I). The corresponding reactions were found to proceed under mild conditions and tolerated a wide range of functional groups (see scheme). Mechanistic details are also discussed.



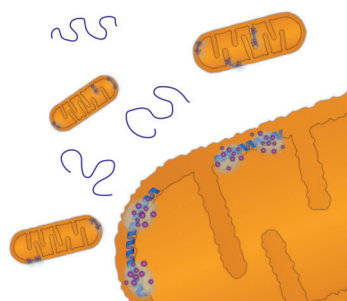
Chem. Asian J.
DOI: 10.1002/asia.201402357

Macrocycles

K. Zhang, C. Jin, H.-Q. Chen, G. Yin, W. Huang*

Construction of Pendant-Armed Schiff-Base Macrocyclic Dinuclear Zinc Complexes and Their Selective Recognition of Acetate Ions

Long arm of the law: Two flexible extended dialdehydes with different functional pendant arms have been designed and synthesized to produce two 42-membered folded [2+2] macrocyclic dinuclear Zn^{II} complexes with 1,2-bis(2-aminoethoxy)ethane. These complexes exhibited selective recognition of acetate ions, as verified by changes in their UV/Vis and MS (ESI) spectra and even changes visible to the naked eye.



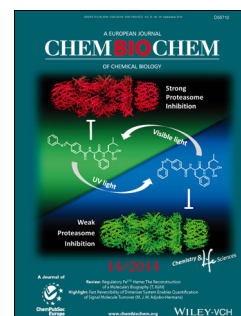
ChemBioChem
DOI: 10.1002/cbic.201402281

Amyloid Proteins

M. Robotta, H. R. Gerding, A. Vogel, K. Hauser, S. Schildknecht, C. Karreman, M. Leist, V. Subramaniam, M. Drescher*

Alpha-Synuclein Binds to the Inner Membrane of Mitochondria in an α -Helical Conformation

The complex environment of mitochondria requires background-free methods to determine the conformation of membrane-bound alpha-synuclein (α S). EPR spectroscopy in combination with site-directed spin labeling revealed that the α -helical binding mode often observed for α S interacting with artificial membranes also holds for the inner membrane of mitochondria.



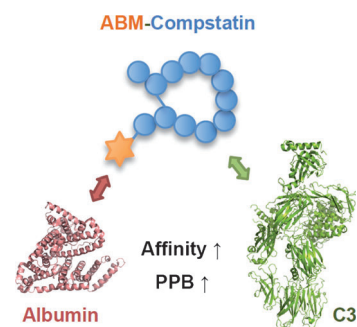


Immuno-inflammatory Disorders

Y. Huang, E. S. Reis, P. J. Knerr, W. A. van der Donk, D. Ricklin, J. D. Lambris*

Conjugation to Albumin-Binding Molecule Tags as a Strategy to Improve Both Efficacy and Pharmacokinetic Properties of the Complement Inhibitor Compstatin

Two birds with one stone: Conjugates of the complement inhibitor compstatin and albumin-binding molecules were designed to improve the drug's pharmacokinetic properties. The resulting chimera ABM2-Cp20 indeed showed improved plasma protein binding, yet also largely enhanced target affinity, producing the most potent compstatin analogue so far.



ChemMedChem
DOI: 10.1002/cmdc.201402212

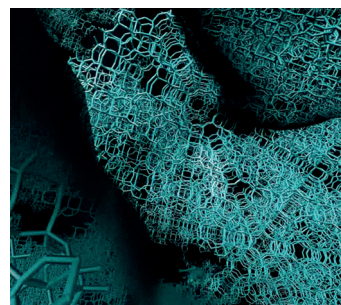


VIP: Catalyst Analysis

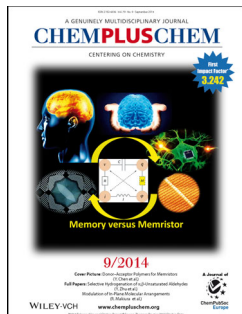
J. Garcia-Martinez,* C. Xiao, K. A. Cychosz, K. Li, W. Wan, X. Zou,* M. Thommes*

Evidence of Intracrystalline Mesoporous Porosity in Zeolites by Advanced Gas Sorption, Electron Tomography and Rotation Electron Diffraction

Advanced characterization by electron tomography, three-dimensional rotation electron diffraction, and high resolution gas adsorption coupled with hysteresis scanning and density functional theory unambiguously revealed the intracrystalline nature and connectivity of the introduced mesopores in the surfactant-templated mesoporous zeolite Y.



ChemCatChem
DOI: 10.1002/cctc.201402499

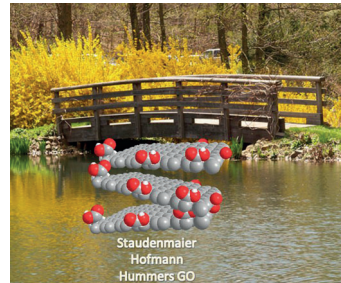


Graphene Oxides

W. Z. Teo, M. Pumera*

Graphene Oxides: Transformations in Natural Waters over a Period of Three Months

Natural waters: Graphene oxide nanomaterials prepared from different oxidative treatments of graphite underwent different and even opposing transformations in natural waters (lake water, rainwater, and seawater) over a period of three months (see figure).



ChemPlusChem
DOI: 10.1002/cplu.201400033

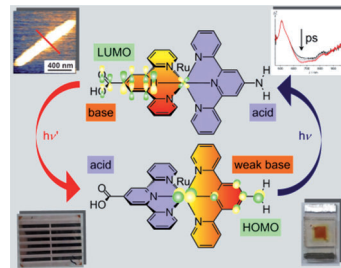


Metallo Amino Acids

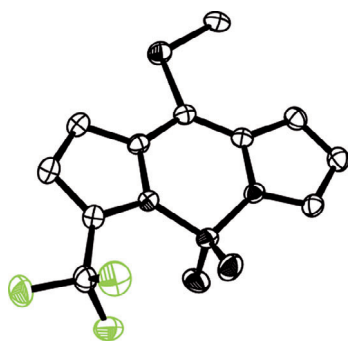
A. Breivogel, C. Kreitner, K. Heinze*

Redox and Photochemistry of Bis(terpyridine)ruthenium(II) Amino Acids and Their Amide Conjugates – from Understanding to Applications

Ruthenium(II) amino acid $[Ru(4'-tpy-COOH)(4'-tpy-NH_2)]^{2+}$ interacts with photons, electrons, and/or protons, to lead to phosphorescence, oxidative and reductive chemistry, acid/base chemistry, proton-coupled electron transfer, photoinduced reductive and oxidative electron transfer, excited-state proton transfer, and energy transfer. Applications include light-emitting electrochemical and dye-sensitized solar cells.



Eur. J. Inorg. Chem.
DOI: 10.1002/ejic.201402466



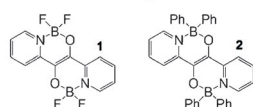
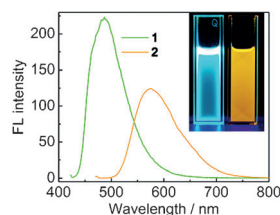
Eur. J. Org. Chem.
DOI: 10.1002/ejoc.201402874

Trifluoromethylation

N. Santschi,* J. Cvengroš, C. Matthey, E. Otth, A. Togni

Rapid and Selective Electrophilic Trifluoromethylation of the 4,4-Difluoro-4-bora-3a,4a-diaza-s-indacene (BODIPY) Scaffold

A protocol for the rapid trifluoromethylation of the BODIPY scaffold, based on a mixture of 3,3-dimethyl-1-(trifluoromethyl)-3H-1λ3,2-benziodoxole and *i*PrSH, is presented. The electronic and structural changes imparted by the CF₃ moiety are studied by NMR and UV/Vis spectroscopy and X-ray crystallography.



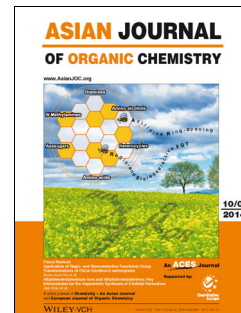
Asian J. Org. Chem.
DOI: 10.1002/ajoc.201402131

Organic Dyes

H. Zhang, X. Hong, X. Ba,* B. Yu, X. Wen, S. Wang, X. Wang, L. Liu, J. Xiao*

Synthesis, Physical Properties, and Photocurrent Behavior of Strongly Emissive Boron-Chelate Heterochrysenes Derivatives

Crysene point: A N,O-chelated boron complex **2** and its analogue **1** have been synthesized and characterized. Single crystal analysis of **1** shows that all carbon and nitrogen atoms are almost in a single plane. **1** and **2** emit green and yellow light in dichloromethane, respectively. The photocurrent response of a **1**-single-walled carbon nanotube thin film is steady and reproducible.



ChemViews magazine
DOI: 10.1002/chemv.201400067

Supramolecular Chemistry

M. Preuss

Think What Nobody Has Thought

Vincenzo Balzani, a highly cited chemist who has worked on an impressive range of topics from photochemistry and supramolecular chemistry to nanotechnology, spoke to ChemViews Magazine about his research, teaching both good scientific practice and good citizenship, and the responsibility of scientists to actively inform sustainable policies.

