

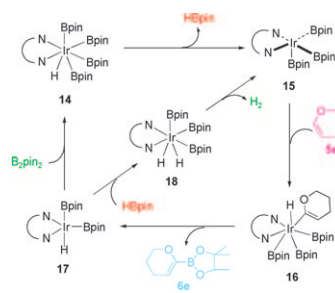


Cross-Coupling

T. Kikuchi, J. Takagi, H. Isou, T. Ishiyama,* N. Miyaoura*

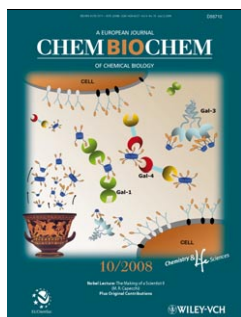
Vinylic C–H Borylation of Cyclic Vinyl Ethers with Bis(pinacolato)diboron Catalyzed by an Iridium(I)-dtbpy Complex

A simple cycle: Vinylic C–H borylation of cyclic vinyl ethers by bis(pinacolato)diboron or pinacolborane was effectively catalyzed by iridium complexes comprised of 1/2[Ir(OMe)(cod)]₂ and 4,4'-di-*tert*-butyl-2,2'-bipyridine in hexane or octane to give the corresponding vinylboron compounds in good yields.



Chem. Asian J.

DOI: 10.1002/asia.200800157

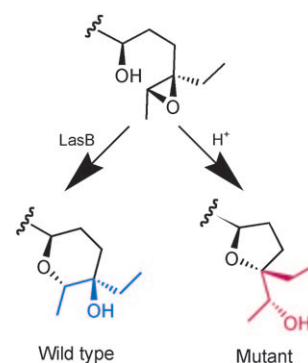


Biosynthesis

L. Smith, H. Hong, J. B. Spencer, P. F. Leadlay*

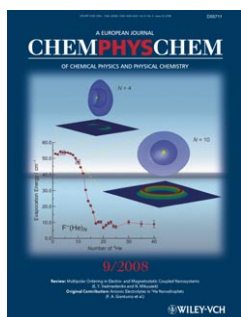
Analysis of Specific Mutants in the Lasalocid Gene Cluster: Evidence for Enzymatic Catalysis of a Disfavoured Polyether Ring Closure

Baldwin's rules bent: The biosynthesis of the polyether ionophore lasalocid in *Streptomyces lasaliensis* involves a kinetically disfavoured ring closure to form a six-membered tetrahydropyran. In a mutant lacking the novel epoxide hydrolase LasB, the intermediate instead forms the five-membered ring product predicted by Baldwin's rules; this shows the key role of LasB in stereocontrol.



ChemBioChem

DOI: 10.1002/cbic.200800585

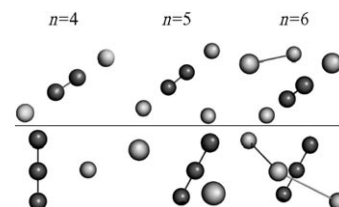


Helium Clusters

F. Marinetti, E. Bodo, F. A. Gianturco,* E. Yurtserver

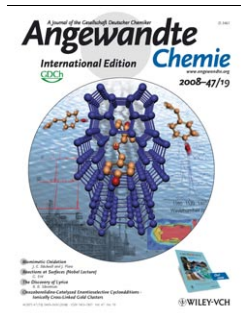
Energetics and Structures of Charged Helium Clusters: Comparing Stabilities of Dimer and Trimer Cationic Cores

Three in a row: The ionization of small cationic helium clusters is analyzed by investigating the equilibrated cluster structural energy obtained after their optimization in the presence of two competing cores (see picture). The results show that upon equilibration of the ionized clusters, the trimeric ionic core should be the more abundant residual species.



ChemPhysChem

DOI: 10.1002/cphc.200800457

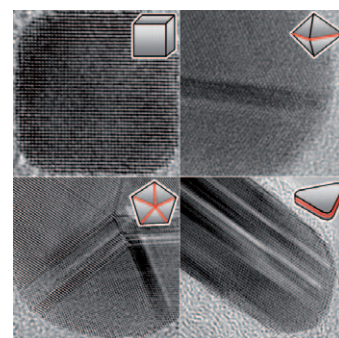


Nanostructures

Y. Xia,* Y. Xiong, B. Lim, S. E. Skrabalak

Shape-Controlled Synthesis of Metal Nanocrystals: Simple Chemistry Meets Complex Physics?

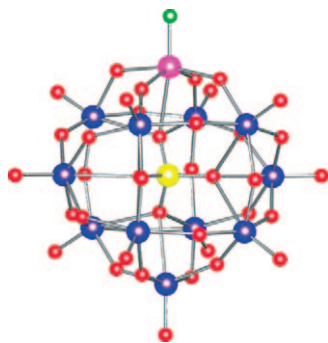
Function follows form: Controlling the shape of nanocrystals may initially seem like a scientific curiosity, but its goal goes far beyond aesthetic appeal. For metal nanocrystals, shape not only determines their intrinsic physical and chemical properties but also their relevance for electronic, magnetic, optical, catalytic, and sensing applications.



Angew. Chem. Int. Ed.

DOI: 10.1002/anie.200802248

(Nitrido)chromium Derivatives



V. Lahootun, J. Karcher, C. Courillon, F. Launay, K. Mijares, E. Maatta,*
A. Proust*

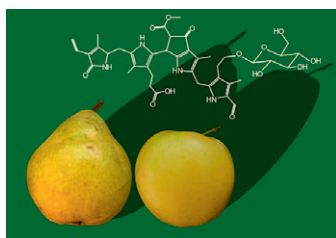
A (Nitrido)chromium(V) Function Incorporated in a Keggin-Type Polyoxometalate: $[PW_{11}O_{39}CrN]^{5-}$ – Synthesis, Characterization and Elements of Reactivity

The synthesis of a (nitrido)chromium derivative of a Keggin-type POM is reported. Its characterization is illustrated by various spectroscopic methods and nucleophilic reactivity towards trifluoroacetic anhydride has been established.

Eur. J. Inorg. Chem.
DOI: 10.1002/ejic.200800609



Chlorophyll Catabolites

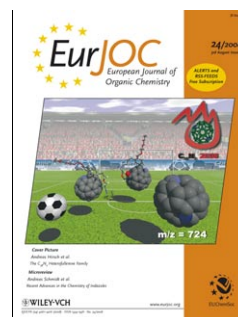


S. Moser, T. Müller, M. Oberhuber, B. Kräutler*

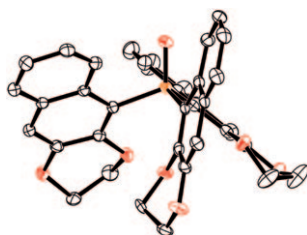
Chlorophyll Catabolites – Chemical and Structural Footprints of a Fascinating Biological Phenomenon

The elucidation of the chemical nature of chlorophyll catabolites has allowed the first structural insights into chlorophyll breakdown, assisting in developing understanding of the molecular basis and possible roles of this biological phenomenon. Current knowledge on chlorophyll catabolites in higher plants is outlined, as are their properties. Their antioxidant activity may give added value to fresh fruit.

Eur. J. Org. Chem.
DOI: 10.1002/ejoc.200800804



Chirality



T. Benincori, A. Marchesi, P. R. Mussini, T. Pilati, A. Ponti, S. Rizzo,
F. Sannicolò*

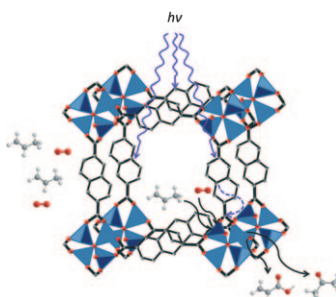
Chirality in the Absence of Rigid Stereogenic Elements: The Absolute Configuration of Residual Enantiomers of C_3 -Symmetric Propellers

Which enantiomer? The enantiopure residual antipodes of phosphane oxide shown here were obtained by quartz-induced crystallisation of the racemate and their absolute configuration was determined by anomalous X-ray diffraction scattering measurements. Configurational descriptors are suggested for propeller-shaped residual enantiomers.

Chem. Eur. J.
DOI: 10.1002/chem.200801489



Metal-Organic Frameworks



J. Gascon,* M. D. Hernández-Alonso, A. R. Almeida, G. P. M. van Klink,
F. Kapteijn, G. Mul

Isorecticular MOFs as Efficient Photocatalysts with Tunable Band Gap: An Operando FTIR Study of the Photoinduced Oxidation of Propylene

Photo frame(work): The first spectroscopic evidence of metal-organic frameworks (MOFs) acting as photocatalysts has been obtained. Isorecticular MOFs act as efficient photocatalysts in the photooxidation of propylene. The band gap energy can be tuned by changing the organic linker. Among the MOFs tested, the 2,6-naphthalenedicarboxylic acid based IRMOF was the most active, showing a higher activity than ZnO.

ChemSusChem
DOI: 10.1002/cssc.200800203

