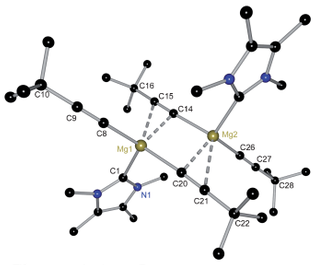
On these pages, we feature a selection of the excellent work that has recently been published in our sister journals. If you are reading these pages on a computer, click on any of the items to read the full article. Otherwise please see the DOIs for easy online access through Wiley InterScience.

Alkynyl Complexes

A. Stasch, S. P. Sarish, H. W. Roesky,* K. Meindl, F. Dall'Antonia, T. Schulz, D. Stalke*

Synthesis and Characterization of Alkynyl Complexes of Groups 1 and 2

Metal connection: Synthesis of organolithium and magnesium *N*-heterocyclic carbene adducts have been achieved by utilizing the σ-donor ability of *N*-heterocyclic carbenes. The solid-state structures of the corresponding metal alkynyl compounds show intermolecular contacts of the C≡C unit with the metal centers.



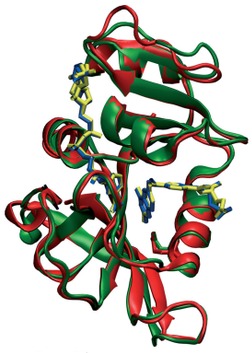
Chem. Asian J.
DOI: **10.1002/asia.200900178**

Enzyme Catalysis

S. Hay, R. M. Evans, C. Levy, E. J. Loveridge, X. Wang, D. Leys, R. K. Allemann,* N. S. Scrutton*

Are the Catalytic Properties of Enzymes from Piezophilic Organisms Pressure Adapted?

Life under pressure: We compare the X-ray crystal structures and pressure dependence of the catalytic parameters of dihydrofolate reductase (DHFR) from *E. coli* and *M. profunda* and find no obvious evidence for pressure adaptation in the piezophilic MpDHFR.



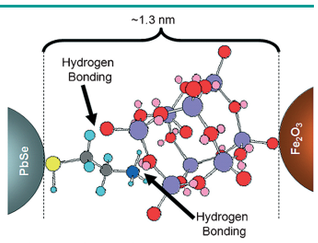
ChemBioChem
DOI: **10.1002/cbic.200900367**

Quantum Dots

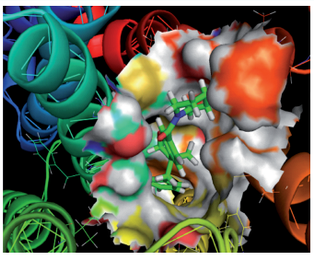
L. Etgar, G. Leitus, L. Fradkin, Y. G. Assaraf, R. Tannenbaum,* E. Lifshitz*

Optical and Magnetic Properties of Conjugate Structures of PbSe Quantum Dots and γ-Fe_2O_3 Nanoparticles

On the dot: Ligand–ligand interaction via hydrogen bonding occurs in conjugate nanostructures consisting o γ-Fe_2O_3 nanoparticles (NPs) and PbSe nanocrystal quantum dot (NQD) chromophores (see picture). The emission quantum efficiency and radiative lifetime of the individual NQDs are retained on conjugation to the dielectric surroundings of γ-Fe_2O_3 NPs, and the superparamagnetism of the NPs is maintained.



ChemPhysChem
DOI: **10.1002/cphc.200900345**



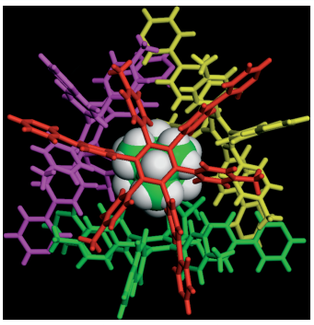
ChemMedChem
DOI: **10.1002/cmdc.200900226**

Drug Discovery

P. Diaz, S. S. Phatak, J. Xu, F. R. Fronczek, F. Astruc-Diaz, C. M. Thompson, C. N. Cavasotto, M. Naguib*

2,3-Dihydro-1-Benzofuran Derivatives as a Series of Potent Selective Cannabinoid Receptor 2 Agonists: Design, Synthesis, and Binding Mode Prediction through Ligand-Steered Modeling

Pain relief: We present the design and synthesis of a new series of 2,3-dihydro-1-benzofuran derivatives equipped with an asymmetric carbon center that behave as potent and selective cannabinoid receptor 2 (CB_2) agonists. Shown here is one of the agonists in complex with CB_2: transmembrane regions are shown as ribbons, and the ligand site is represented by the van der Waals radial surface.



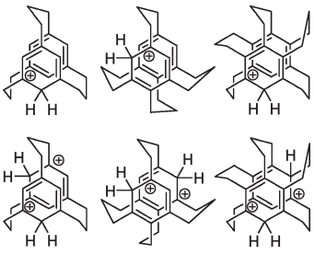
Angew. Chem. Int. Ed.
DOI: **10.1002/anie.200902652**

Molecular Capsules

S. Hiraoka,* K. Harano, T. Nakamura, M. Shiro, M. Shionoya*

Induced-Fit Formation of a Tetrameric Organic Capsule Consisting of Hexagram-Shaped Amphiphile Molecules

Fitting in: Hexagram-shaped amphiphiles self-assemble in the presence of a spherical, hydrophobic guest molecule to form a tetrahedron-shaped tetrameric organic capsule in an aqueous methanol solution (see picture). In the presence of adamantane, an aqueous solution of a box-shaped hexameric capsule composed of hexagram-shaped amphiphiles was converted into a novel 1.7 nm sized tetrameric capsule that has an encapsulated adamantane template molecule.



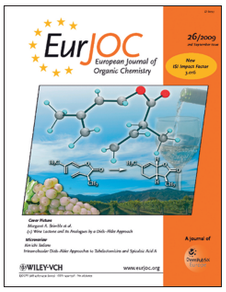
Eur. J. Org. Chem.
DOI: **10.1002/ejoc.200900479**

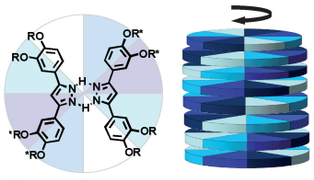
Cationic Multibridged Cyclophanes

K. K. Laali,* T. Okazaki, T. Kitagawa, T. Shinmyozu

Stable-Ion NMR Spectroscopy and GIAO-DFT Study of Carbocations Derived from Multibridged [3$_n$]Cyclophanes

Stable-ion NMR spectroscopy and theoretical studies (GIAO-DFT and NICS) are reported for carbocations derived from multibridged [3*n*] (n = 3, 4, and 5) cyclophanes.





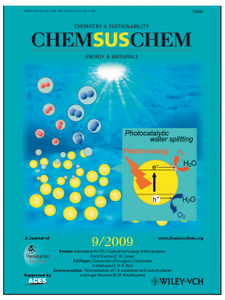
Chem. Eur. J.
DOI: **10.1002/chem.200901154**

Supramolecular Chirality

E. Beltrán, E. Cavero, J. Barberá, J. L. Serrano, A. Elduque,* R. Giménez*

Self-Assembly in Helical Columnar Mesophases and Luminescence of Chiral 1*H*-Pyrazoles

Stack with a twist: Hierarchically built superstructures, in which H-bonded dimers stack to form a hexagonal columnar mesophase at room temperature, have been found for tailored 1*H*-pyrazoles (see structure).This mesophase, in turn, exhibits a helical structure and displays luminescence.

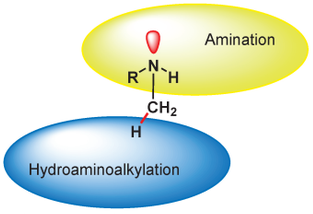


Amine Synthesis

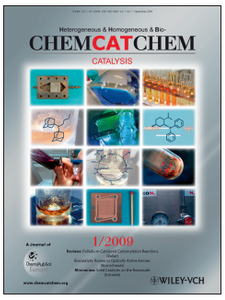
K. Krüger, A. Tillack, M. Beller*

Recent Innovative Strategies for the Synthesis of Amines: From C–N Bond Formation to C–N Bond Activation

Reconsider the use of amines: A new trend for the synthesis of different amine derivatives is presented by using the inherent reactivity of an existing C–N bond of simpler amines. Typical amination methods are based on the addition of the N–H bond enabled through the nucleophilicity of the amine. Novel reactions using amines as reagent also concentrate on the use of the mentioned C–N bond to activate the α-carbon atom as reacting part of the amine.



ChemSusChem
DOI: **10.1002/cssc.200900121**

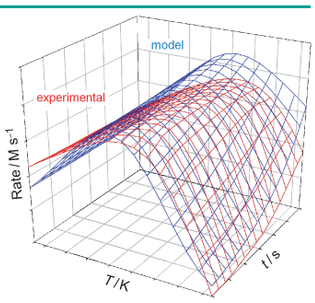


Biocatalysis

T. A. Rogers, R. M. Daniel,* A. S. Bommarius*

Deactivation of TEM-1 β-Lactamase Investigated by Isothermal Batch and Non-Isothermal Continuous Enzyme Membrane Reactor Methods

The Equilibrium Model is used in conjunction with isothermal batch deactivation data of TEM-1 β-lactamase to locate the enzyme's optimum operating temperature. In comparison, non-isothermal continuous data are collected in a membrane reactor system (CSTR) and fitted to a four-state deactivation model. Both methods demonstrate that TEM-1 β-lactamase does not follow the Lumry–Eyring model of protein denaturation.



ChemCatChem
DOI: **10.1002/cctc.200900120**

