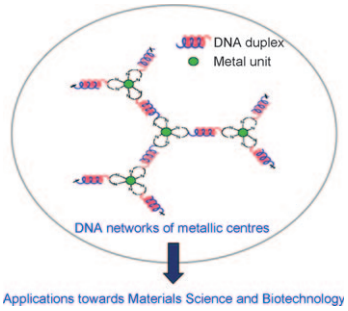
On these pages, we feature a selection of the excellent work that has recently been published in our sister journals. If you are reading these pages on a computer, click on any of the items to read the full article. Otherwise please see the DOIs for easy online access through Wiley Online Library.

DNA Nanoarrays

S. Ghosh, E. Defrancq*

Metal-Complex/DNA Conjugates: A Versatile Building Block for DNA Nanoarrays

DNA goes nano! Ordered networks of metallic units based on DNA self-assembly (see figure) exhibit interesting functions and properties and are currently being developed for the fabrication of nanometer-scale devices.



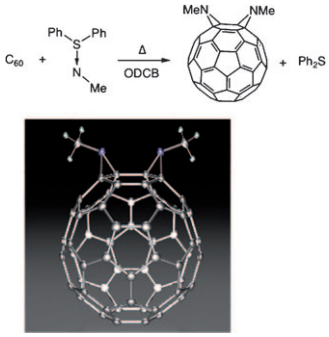
Chem. Eur. J.
DOI: **10.1002/chem.201001590**

Fullerenes

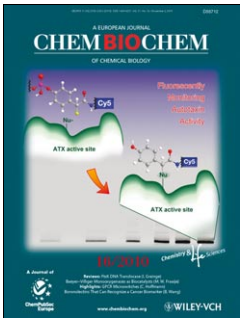
M. Okada, T. Nakahodo, M. O. Ishitsuka, H. Nikawa, T. Tsuchiya, T. Akasaka,* T. Fujie, T. Yoshimura, Z. Slanina, S. Nagase*

Highly Regioselective Synthesis of Bis-Aziridino[60]fullerene with Sulfilimine

In the ring: The Michael-type cycloaddition of C_{60} with (*S*,*S*)-diphenylsulfilimines (see scheme) was carried out to regioselectively afford bis- and tris-aziridinated fullerenes. The aziridination occurred exclusively at the same six-membered ring on C_{60} to give a sole isomer. Their structures were determined by spectroscopic and single-crystal X-ray analyses.



Chem. Asian J.
DOI: **10.1002/asia.201000244**

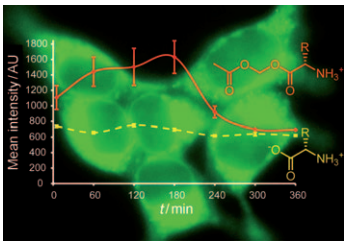


Genetic code expansion

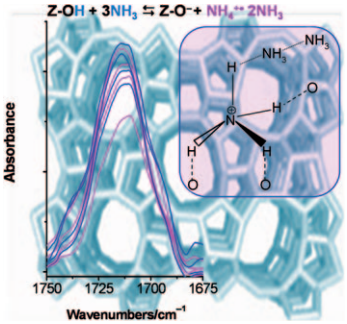
J. K. Takimoto, Z. Xiang, J.-Y. Kang, L. Wang*

Esterification of an Unnatural Amino Acid Structurally Deviating from Canonical Amino Acids Promotes Its Uptake and Incorporation into Proteins in Mammalian Cells

It's a cover up: Unnatural amino acids (UAAs) with noncanonical side chains can be efficiently transported into mammalian cells when the carboxyl group of the UAA is masked with selected ester groups. This greatly increases the UAA's uptake rate and intracellular concentration, thus reducing the amount of UAA required.



ChemBioChem
DOI: **10.1002/cbic.201000436**



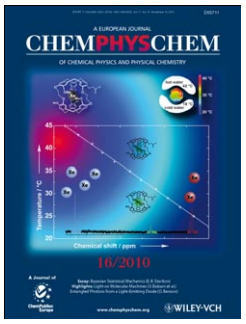
ChemPhysChem
DOI: **10.1002/cphc.201000477**

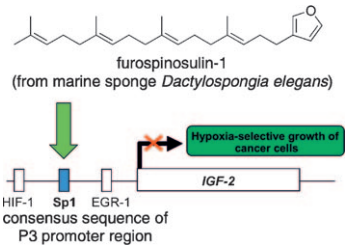
Zeolites

B. Bonelli, M. Armandi, C. O. Areán, E. Garrone*

Ammonia-Solvated Ammonium Species in the NH_4-ZSM-5 Zeolite

Interaction of gaseous ammonia with a NH_4-ZSM-5 zeolite was studied by means of IR spectroscopy in the temperature range 373–573 K. Ammonium species are tricoordinated to the zeolite surface. By increasing ammonia pressure, a monosolvated ammonium species is initially formed, evolving to a disolvated species. Coordination of the second ammonia molecule takes place at the already coordinated ammonia molecule and not at the ammonium cation (see figure).





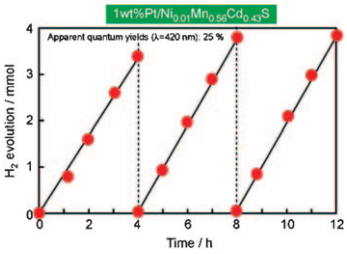
ChemMedChem
DOI: **10.1002/cmdc.201000302**

Natural Products

M. Arai,* T. Kawachi, A. Setiawan, M. Kobayashi*

Hypoxia-Selective Growth Inhibition of Cancer Cells by Furospinosulin-1, a Furanosesterterpene Isolated from an Indonesian Marine Sponge

Cancer sponged away under low O_2: Furospinosulin-1 is a hypoxia-selective inhibitor of cancer cell growth that exhibits in vivo antitumor activity. Mechanistic analysis revealed that this selective activity results from the inhibition of *IGF-2* gene expression by preventing formation of the complex between nuclear proteins and the Sp1 consensus sequence in the *IGF-2* promoter region.



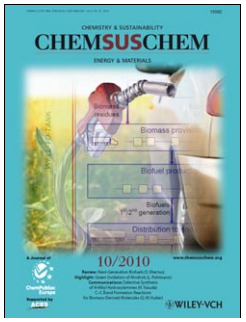
ChemSusChem
DOI: **10.1002/cssc.201000166**

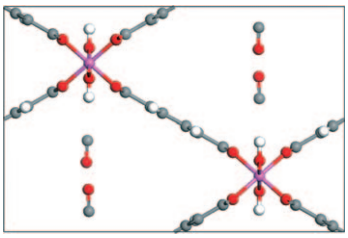
Water splitting

K. Ikeue, S. Shiiba, M. Machida*

Hydrothermal Synthesis of a Doped Mn-Cd-S Solid Solution as a Visible-Light-Driven Photocatalyst for H_2 Evolution

Solid results: A solid solution with composition $Ni_{0.01}Mn_{0.56}Cd_{0.43}S$ shows a high rate of H_2 evolution, ca. 1 mmol h^{-1}, in the presence of a Pt co-catalyst and sacrificial reagents (Na_2S and Na_2SO_3) under visible-light irradiation. The apparent quantum yield measured at $\lambda = 420$ nm reaches 25%.





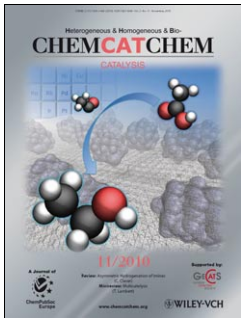
ChemCatChem
DOI: **10.1002/cctc.201000055**

Metal-Organic Frameworks

U. Ravon, G. Chaplais, C. Chizallet, B. Seyyedi, F. Bonino, S. Bordiga, N. Bats, D. Farrusseng*

Investigation of Acid Centers in MIL-53(Al, Ga) for Brønsted-Type Catalysis: In Situ FTIR and Ab Initio Molecular Modeling

Run of the MIL: In contrast to MIL-53(Al), IM-19 (MIL-53 (Ga)) is extremely active and selective for the alkylation of aromatics. The reaction proceeds through the protonation of the aromatic substrate. CO adsorption and molecular modeling show that the bridging μ_2-OH of IM-19 exhibits stronger Brønsted-type acidity than does MIL-53(Al).

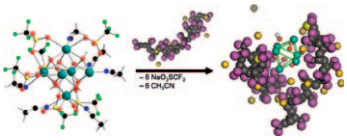


Bismuth Oxido Composites

L. Miersch, T. Rüffer, H. Lang, S. Schulze, M. Hietschold, D. Zahn,* M. Mehring*

A Novel Water-Soluble Hexanuclear Bismuth Oxido Cluster – Synthesis, Structure and Complexation with Polyacrylate

The novel water-soluble bismuth oxido cluster $[Bi_6O_4(OH)_4(OTf)_6(CH_3CN)_6]\cdot 2CH_3CN$ (**1**) was obtained by modification of $[Bi_6O_4(OH)_4](NO_3)_6\cdot H_2O$ with CF_3SO_3H. The synthesis, crystal structure, and complexation behavior of **1** towards polyacrylate were studied by methods including molecular dynamics simulations.



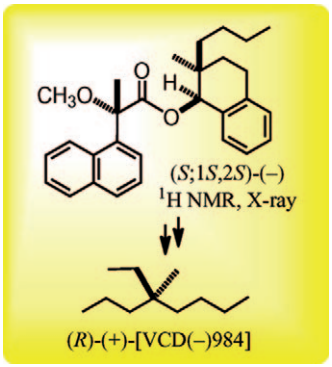
Eur. J. Inorg. Chem.
DOI: **10.1002/ejic.201000753**

Configuration Determination

T. Fujita, K. Obata, S. Kuwahara, A. Nakahashi, K. Monde, J. Decatur, N. Harada*

(*R*)-(+)-[VCD(–)984]-4-Ethyl-4-methyloctane: A Cryptochiral Hydrocarbon with a Quaternary Chiral Center. (1) Synthesis of the Enantiopure Compound and Unambiguous Determination of Absolute Configuration

(*R*)-(+)-[VCD(–)984]-4-Ethyl-4-methyloctane, a fundamental cryptochiral hydrocarbon with a quaternary chiral center, was synthesized in enantiopure form, and its absolute configuration was unambiguously determined by a combination of X-ray crystallographic analysis, ^{1}H NMR anisotropy, and synthesis, whereby two methods were useful for enantioresolution.



Eur. J. Org. Chem.
DOI: **10.1002/ejoc.201000777**

