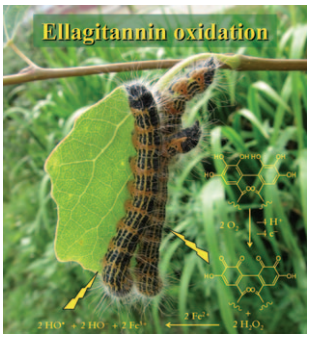
Auf diesen drei Seiten weisen wir auf wichtige aktuelle Beiträge in unseren Schwesterzeitschriften hin. Wenn Sie die Seiten online lesen, dann können Sie die Artikel mit einem Klick direkt aufrufen, ansonsten sind sie durch Eingabe der DOIs über Wiley Online Library leicht online zugänglich.

Natural Products

J.-P. Salminen,* M. Karonen, J. Sinkkonen

Chemical Ecology of Tannins: Recent Developments in Tannin Chemistry Reveal New Structures and Structure–Activity Patterns

Underestimated molecules and activities: Modern time-of-flight mass spectrometry has revealed even undecameric ellagitannin molecules from plants, while the detection barrier remained earlier at the pentamer range. These complex, but non-studied natural compounds may possess important anti-herbivore activities that are triggered via oxidation reactions in the alkaline gut of insect herbivores (see scheme).



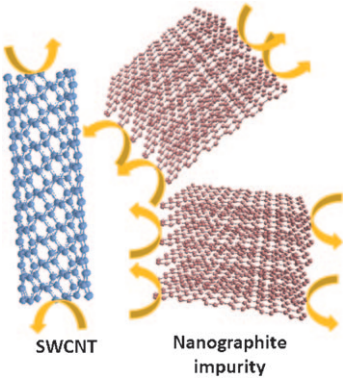
Chem. Eur. J.
DOI: **10.1002/chem.201002662**

Nanotubes

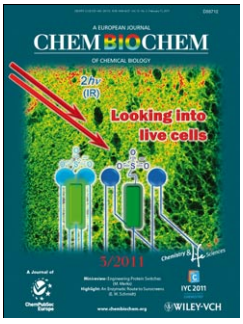
E. J. E. Stuart, M. Pumera*

Nanographite Impurities of Single-Walled and Double-Walled Carbon Nanotubes Are Responsible for the Observed "Electrocatalytic" Effect towards the Reduction of Azo Groups

Not all impurities are evil: We demonstrate here that the electrochemistry of single-walled carbon nanotubes (SWCNTs) and double-walled carbon nanotubes (DWCNTs) towards the reduction of azo groups is actually driven by the nanographite impurities within these CNTs. Put differently, most of the electrochemical activity of SWCNTs and DWCNTs towards the reduction of azo groups is due to the presence of the nanographite impurities contained within them.



Chem. Asian J.
DOI: **10.1002/asia.201000656**

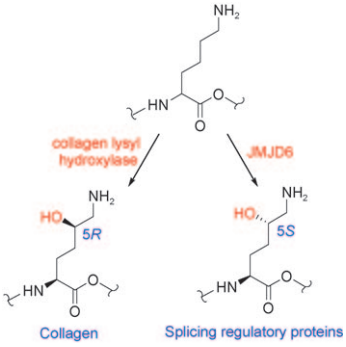


Enzyme Catalysis

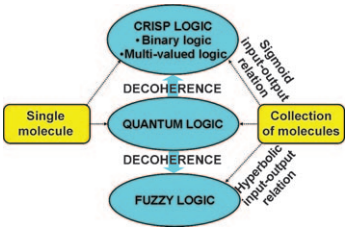
M. Mantri, N. D. Loik, R. B. Hamed, T. D. W. Claridge, J. S. O. McCullagh,* C. J. Schofield*

The 2-Oxoglutarate-Dependent Oxygenase JMJD6 Catalyses Oxidation of Lysine Residues to give 5*S*-Hydroxylysine Residues

Amino acid analyses reveal that JMJD6-catalysed hydroxylation of RNA-splicing regulatory protein fragments occurs to give hydroxylysine products with 5*S* stereochemistry. This contrasts with collagen lysyl hydroxylases, which give 5*R*-hydroxylated products. The work suggests that more than one subfamily of lysyl hydroxylases has evolved and illustrates the importance of stereochemical assignments in proteomic analyses.



ChemBioChem
DOI: **10.1002/cbic.201000641**



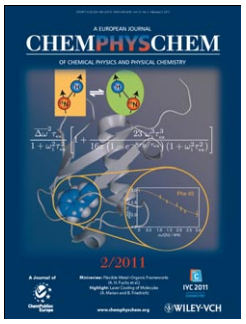
ChemPhysChem
DOI: **10.1002/cphc.201000844**

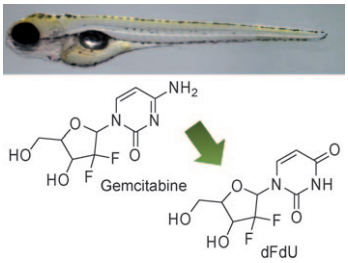
Artificial Intelligence

P. Luigi Gentili*

Molecular Processors: From Qubits to Fuzzy Logic

Chemical intelligence: Different types of logic can be implemented with molecules. In absence of decoherent effects, quantum logic can be carried out. Otherwise crisp logics can be processed (see flowchart). In case of collections of molecules, there are conditions favourable for building fuzzy logic systems which are playing an increasingly important role in the development of artificial intelligence.





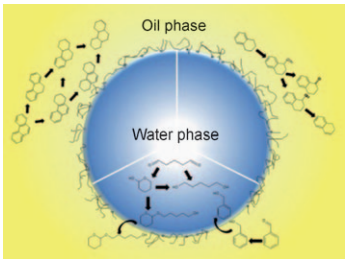
ChemMedChem
DOI: **10.1002/cmdc.201000447**

Antitumor Agents

A. Benyumov, V. J. Gurvich, L. G. Lis, B. W. Williams, M. N. Kirstein*

Combinatorial Pharmacologic Effects of Gemcitabine and its Metabolite dFdU

Conditional pharmacology: An improved synthetic and purification strategy was implemented to produce dFdU (80% yield; >95% purity). The biological activity of dFdU (alone and in combination with gemcitabine to mimic concurrent pharmacokinetic exposure) was tested using zebrafish embryo screens and human breast and lung cancer cell lines. The data demonstrate that the anticancer activity of dFdU is cell-type dependent.



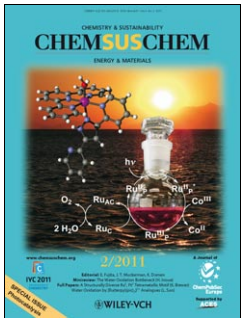
ChemSusChem
DOI: **10.1002/cssc.201000322**

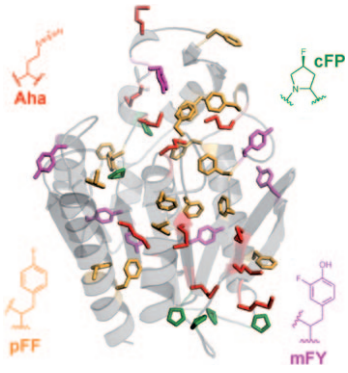
Catalysis

M. P. Ruiz, J. Faria, M. Shen, S. Drexler, T. Prasomsri, D. E. Resasco*

Nanostructured Carbon–Metal Oxide Hybrids as Amphiphilic Emulsion Catalysts

The amphiphilic character of nanostructured carbon supported on metal oxides favors the stabilization of emulsions. At the same time these nanohybrid nanoparticles act as a support for active species to catalyze reactions at the water/oil interface. The conversion and selectivity of these reactions are strongly influenced by the intrinsic properties of the nanohybrids to both stabilize emulsions and anchor the catalytic species.





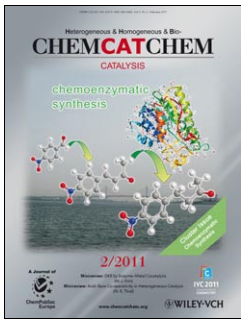
ChemCatChem
DOI: **10.1002/cctc.201000253**

Biocatalysis

M. G. Hoesl, C. G. Acevedo-Rocha, S. Nehring, M. Royter, C. Wolschner, B. Wiltschi, N. Budisa,* G. Antranikian

Lipase Congeners Designed by Genetic Code Engineering

Gene genius: Congeners of lipase from *Thermoanaerobacter thermohydrosulfuricus* containing globally substituted methionine, proline, phenylalanine, and tyrosine with related synthetic analogues (see examples in figure) have special features not found in nature. These features include changes in substrate accessibility and tolerance, as well as optimal temperature, pH, and enzymatic activity profiles.

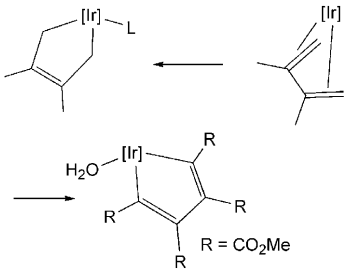


Iridacycles

M. Paneque,* M. L. Poveda, N. Rendón

Synthesis and Reactivity of Iridacycles Containing the $Tp^{Me2}Ir$ Moiety

Many kinds of iridacycles containing the $Tp^{Me2}Ir$ moiety (iridacyclopentene, -pentadiene, -heptadiene, -heptatriene and -benzenoid derivatives) have been obtained starting from the Ir^{I} precursors $Tp^{Me2}Ir(C_2H_4)_2$ and/or $Tp^{Me2}[\eta^4\text{-}CH_2{=}C(R)C(R){=}CH_2]$ (R = H, Me). The synthesis and reactivity of these species is the subject of the present review.



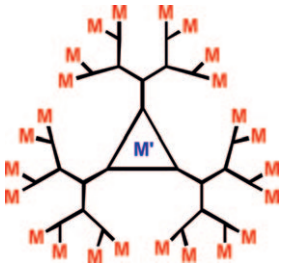
Eur. J. Inorg. Chem.
DOI: **10.1002/ejic.201000809**

Metals in Dendrimers

E. Badetti, G. Franc, J.-P. Majoral, A.-M. Caminade,* R. M. Sebastián,* M. Moreno-Mañas

Macrocyclic Core Phosphorus Dendrimers Covered on the Surface by N,P Ligands

A family of dendrimers containing a 15-membered macrocycle in the core and γ-iminophosphane groups on the surface has been synthesized up to the third generation. The coordination of metals in the core (Pd^0 and Pt^0) and on the surface (Pd^{II}) has been studied. New palladium and platinum nanoparticles stabilized by this type of dendrimer are described.



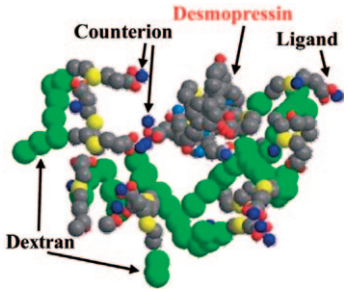
Eur. J. Org. Chem.
DOI: **10.1002/ejoc.201001464**

Adsorbent Media

J.-C. Wang, A. I. Liapis*

Design of Polymeric Porous Adsorbent Media and the Dynamic Behavior of Transport and Adsorption of Bioactive Molecules in Such Media

Adsorption is a major separation process used for isolating and purifying a product, and ion exchange chromatography (IEC) has become a very important method for these purposes. A methodology based on molecular dynamics modeling and simulation was developed to study IEC that utilizes polymeric porous adsorbent media with charged affinity ligands linked to the base matrix of the porous media.



Chem. Ing. Tech.
DOI: **10.1002/cite.201000139**