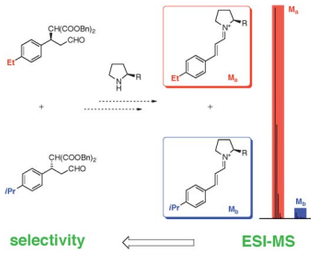
On these pages, we feature a selection of the excellent work that has recently been published in our sister journals. If you are reading these pages on a computer, click on any of the items to read the full article. Otherwise please see the DOIs for easy online access through Wiley InterScience.

Organocatalysis

I. Fleischer, A. Pfaltz*

Enantioselective Michael Addition to α,β-Unsaturated Aldehydes: Combinatorial Catalyst Preparation and Screening, Reaction Optimization, and Mechanistic Studies

Shortcut to chiral catalysts: An efficient combinatorial strategy based on back reaction screening by ESI-MS allows rapid evaluation of organocatalysts for the asymmetric Michael addition to α,β-unsaturated aldehydes (see scheme). An unexpected nonlinear effect has been observed in this reaction, resulting from a double nucleophilic–electrophilic activation mechanism involving two catalyst molecules.



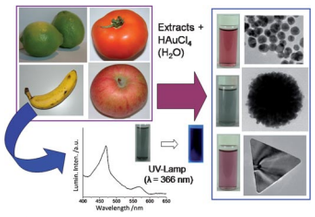
Chem. Eur. J.
DOI: **10.1002/chem.200902449**

Nanomaterials

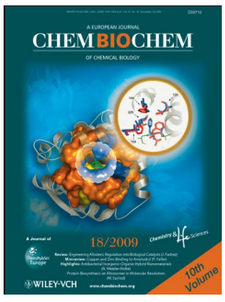
J. Sharma, Y. Tai,* T. Imae*

Biomodulation Approach for Gold Nanoparticles: Synthesis of Anisotropic to Luminescent Particles

Fruit salad nanoparticles: A simple biomodulation approach has been developed using extracts of apple (Malus domestica), lemon (Citrus limonia), tomato (Lycopersicon esculentum), and banana peel (Musa cavendish) to generate various nanostructures of gold, for example, spherical, marigold-like, and triangular plates. The synthesis of luminescent gold nanoparticles using fluorescent catabolites of chlorophyll is also demonstrated.



Chem. Asian J.
DOI: **10.1002/asia.200900316**

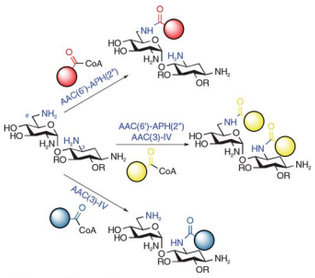


Antibiotics

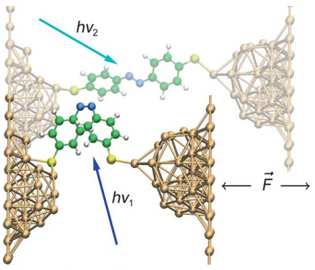
K. D. Green, W. Chen, J. L. Houghton, M. Fridman,*
S. Garneau-Tsodikova*

Exploring the Substrate Promiscuity of Drug-Modifying Enzymes for the Chemoenzymatic Generation of N-Acylated Aminoglycosides

Creating a synthesis tool: We have developed a chemoenzymatic method for the production of N-acylated aminoglycosides using aminoglycoside acetyltransferases and acyl coenzymes A. The methodology enables rapid production followed by antimicrobial testing of synthetically challenging aminoglycosides.



ChemBioChem
DOI: **10.1002/cbic.200900584**



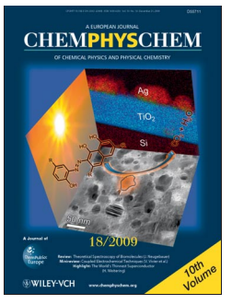
ChemPhysChem
DOI: **10.1002/cphc.200900690**

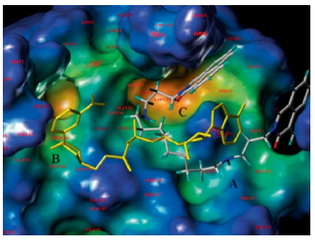
Nanoswitch

R. Turanský, M. Konôpka, N. L. Doltsinis, I. Štich,* D. Marx

Optical, Mechanical, and Opto-Mechanical Switching of Anchored Dithioazobenzene Bridges

Flip-flop: Mechanical and opto-mechanical switching cycle of a nanoswitch made up of single dithioazobenzene chromophore suspended between two gold tips (see picture). Mechanical switching proceeds on the ground-state S_0 surface while successful optical switching via S_1 state requires mechanical assistance.





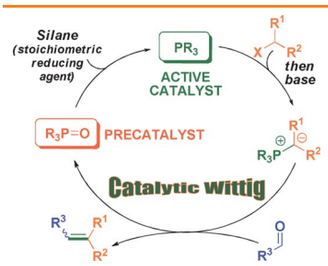
ChemMedChem
DOI: **10.1002/cmdc.200900367**

Drug Discovery

J. Tavares, A. Ouaissi, P. Kong Thoo Lin, I. Loureiro, S. Kaur, N. Roy, A. Cordeiro-da-Silva*

Bisnaphthalimidopropyl Derivatives as Inhibitors of *Leishmania* SIR2 Related Protein 1

We have identified a new class of NAD^+-competitive SIR2 inhibitors that preferentially inhibit the *L. infantum* form of sirtuin (LiSIR2RP1). Despite the well-conserved catalytic core domain of SIR2 enzymes, subtle structural differences in the inhibitors can provide selective targeting.



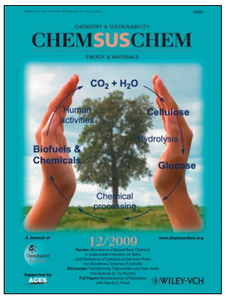
ChemSusChem
DOI: **10.1002/cssc.200900208**

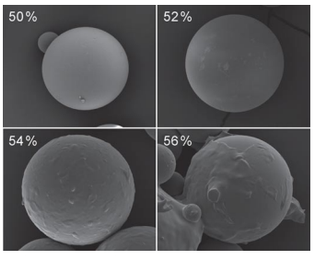
Organic Chemistry

I. J. S. Fairlamb*

The Phosphine-Catalyzed Wittig Reaction: A New Vista for Olefin Synthesis?

The design of a catalytic manifold for the Wittig reaction is highlighted. Arsenine-, telluride-, and the recently discovered phosphine-catalyzed processes are discussed and placed into context with the related silyl-Reformatsky process. The specific type of phosphine oxide precatalyst employed is compared with an aza-Wittig process and related transformations.





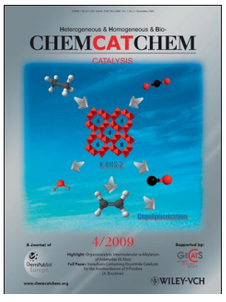
ChemCatChem
DOI: **10.1002/cctc.200900199**

Enzyme Models

L. O. Wiemann, R. Nieguth, M. Eckstein, M. Naumann, O. Thum,* M. B. Ansorge-Schumacher*

Composite Particles of Novozyme 435 and Silicone: Advancing Technical Applicability of Macroporous Enzyme Carriers

Leach out (Si'll be there): The mechanical and leaching stability of enzymes adsorbed on macroporous carriers both benefit from the deposition of silicone on the carrier surface. For silicone-coated Novozyme 435, maximum leaching stability corresponds to the formation of a complete layer of silicone on the outer surface of the carrier at silicone concentrations of 54% w/w and more (see picture). This layer also aids mechanical stabilization.

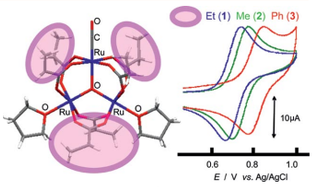


Ruthenium Cluster Compounds

A. Inatomi, M. Abe,* Y. Hisaeda*

Carboxylato-Modified New Oxo-Centred Triruthenium Cluster Compounds with CO and Solvent Ligands: The X-ray Structure of $[Ru_3O(C_2H_5CO_2)_6(CO)(THF)_2]$

A new series of μ_3-oxo-triruthenium cluster compounds with varied bridging carboxylato groups of the type $[Ru_3O(RCO_2)_6(CO)(solvent)_2]$ where R = C_2H_5 and C_6H_5 has been synthesised and the structures, redox chemistry and photo-induced CO dissociation reactions have been examined.



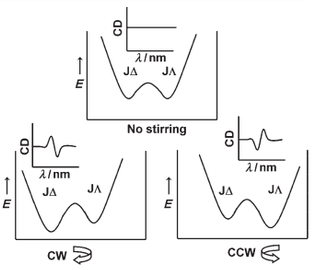
Eur. J. Inorg. Chem.
DOI: **10.1002/ejic.200900701**

Nanoscale Chirality

A. D'Urso, R. Randazzo, L. Lo Faro, R. Purrello*

Vortexes and Nanoscale Chirality

J-aggregates respond dynamically to vortexes created by stirring. The CD signal inverts with stirring sense and its intensity increases. Prolonged stirring leads to deposition of chiral aggregates on the cuvette wall, the chirality of the deposits depends on the stirring sense. Stirring shifts the equilibrium of a racemic mixture towards the side chosen (and favored) by the stirring sense (see picture, CW = clockwise, CCW = counter clockwise stirring).



Angew. Chem. Int. Ed.
DOI: **10.1002/anie.200903543**

