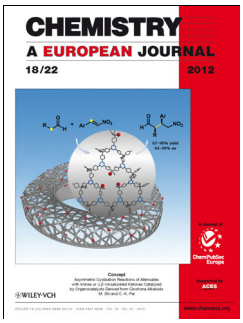
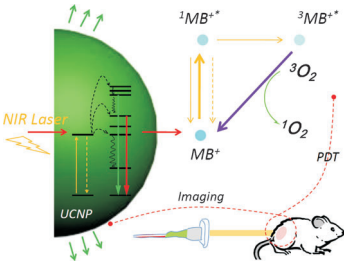


Helical Nanowires

F. Chen, S. Zhang, W. Bu,* Y. Chen, Q. Xiao, J. Liu, H. Xing, L. Zhou, W. Peng,* J. Shi*

A Uniform Sub-50 nm-Sized Magnetic/Upconversion Fluorescent Bimodal Imaging Agent Capable of Generating Singlet Oxygen by Using a 980 nm Laser

Movin' on up: Selected bifunctional, Gd-ion-doped upconverting nanoparticles (UCNPs) and water-soluble methylene blue (MB) were combined in a silica matrix to form a new kind of UCNP/MB-based photodynamic therapy drug. It was able to generate singlet oxygen under 980 nm laser excitation and also possesses optical/magnetic bimodal imaging capabilities (see figure).



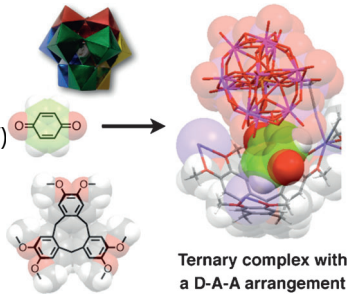
Chem. Eur. J.
DOI: **10.1002/chem.201103611**

Charge-Transfer Complexes

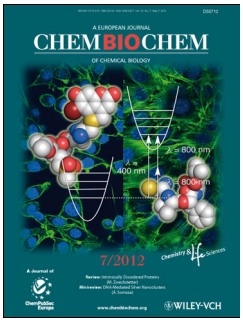
S. Tashiro, S. Hashida, M. Shionoya*

A Ternary Charge-Transfer Complex composed of Cyclotriveratrylene (CTV) and a Polyoxometalate (POM) with Quinone as an Electronic Modulator

Triple stack: A facile synthesis of charge-transfer-type crystals composed of CTV and POM was demonstrated. The crystals further accommodated 1,4-benzoquinone as a guest to form a ternary crystal with a donor–acceptor–acceptor arrangement. The electronic spectra of the crystals suggested that the incorporated quinone served as an electronic modulator to adjust the charge-transfer property.



Chem. Asian J.
DOI: **10.1002/asia.201200057**

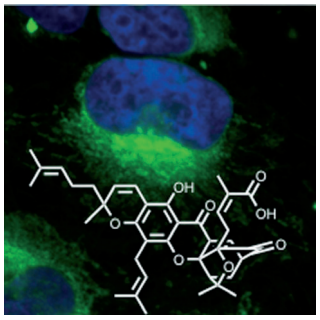


Mitochondria

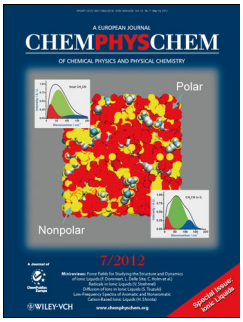
G. Guizzunti,* A. Batova, O. Chantarasriwong, M. Dakanali, E. A. Theodorakis*

Subcellular Localization and Activity of Gambogic Acid

Target acquired: Gambogic acid induces apoptosis by directly targeting mitochondria and represents a new class of mitocans. Using fluorescence microscopy and immunblotting, we show that apoptosis is induced by cleavage of caspase-3 and -9 and that induction of the mitochondrial pathway was not related to morphological changes to other subcellular structures.



ChemBioChem
DOI: **10.1002/cbic.201200065**

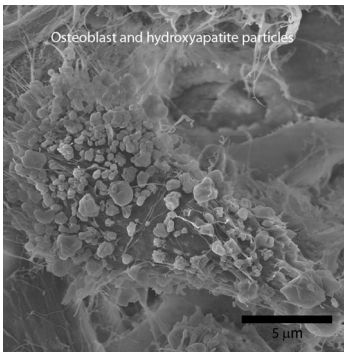


Nanomaterials

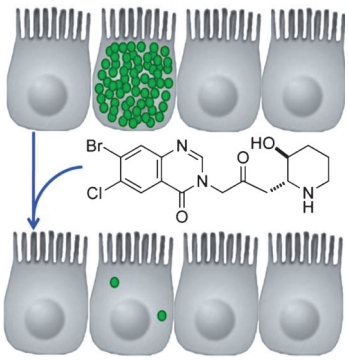
K. Fox,* P. A. Tran, N. Tran*

Recent Advances in Research Applications of Nanophase Hydroxyapatite

Biocompatible nanomaterials: Nano-hydroxyapatite materials combine the benefits of nanosized particles with the main organic phase of bone, hydroxyapatite. The advantages of nano-hydroxyapatite are biocompatibility, controlled delivery and capacity to couple with hydrophobic materials. This Minireview discusses the syntheses of nano-hydroxyapatite materials and their applications in the fields of hard tissue repair, drug delivery, antibacterial treatments, magnetic delivery and gene therapy.



ChemPhysChem
DOI: **10.1002/cphc.201200080**



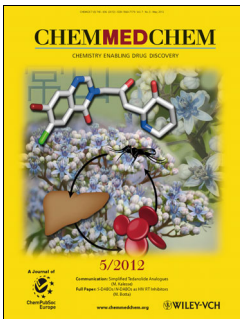
ChemMedChem
DOI: **10.1002/cmdc.201200045**

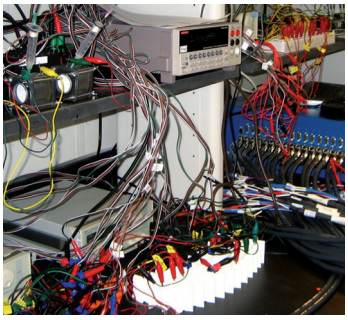
Antimalarial Agents

E. R. Derbyshire, R. Mazitschek,* J. Clardy*

Characterization of *Plasmodium* Liver Stage Inhibition by Halofuginone

Battling a silent killer: Before malaria symptoms even appear several parasites have silently invaded and propagated within the liver. We developed cell-based assays amenable to high-throughput screening to evaluate compounds for their ability to decrease parasite load in liver cells and to inhibit parasite traversal. These assays helped to identify halofuginone (shown) as a low-nanomolar inhibitor of liver-stage malaria parasites.





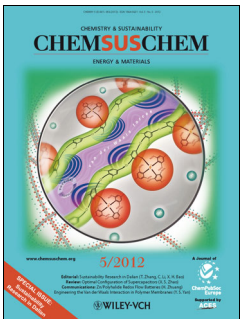
ChemSusChem
DOI: **10.1002/cssc.201100604**

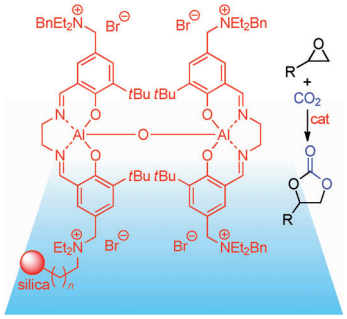
Microbial Fuel Cells

B. E. Logan*

Essential Data and Techniques for Conducting Microbial Fuel Cell and other Types of Bioelectrochemical System Experiments

Electromicrobiology: The study of microbial fuel cells (MFCs) and other types of bioelectrochemical systems have great potential for renewable energy production. Certain data are essential for these systems, such as electrode-specific surface areas, solution conductivities, power densities, and electrochemical characterization. This Minireview describes how results can be better conveyed through the full description of materials, the use of proper controls, and electrochemical analyses.





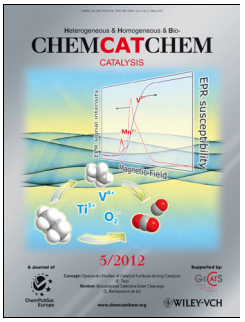
ChemCatChem
DOI: **10.1002/cctc.201200117**

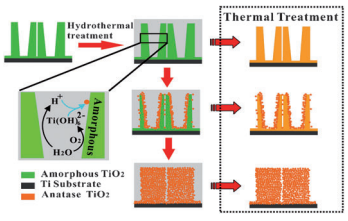
Supported Catalysts

M. North,* P. Villuendas

Influence of Support and Linker Parameters on the Activity of Silica-Supported Catalysts for Cyclic Carbonate Synthesis

The long and the short of it: The influences of silica pore and particle size and linker length on the activity and lifetime of silica-supported bimetallic aluminium(salen) complexes as catalysts for the synthesis of cyclic carbonates from epoxides and carbon dioxide are investigated.





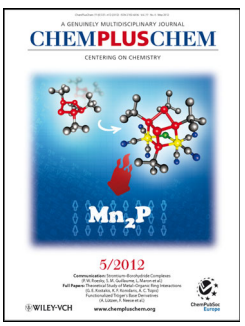
ChemPlusChem
DOI: **10.1002/cplu.201200024**

Heterostructured Nanoparticles

K. Huo,* H. Wang, X. Zhang, Y. Cao, P. K. Chu*

Heterostructured TiO_2 Nanoparticles/Nanotube Arrays: In Situ Formation from Amorphous TiO_2 Nanotube Arrays in Water and Enhanced Photocatalytic Activity

An array of possibilities: Heterostructured TiO_2 nanoparticle/nanotube arrays (NPs/NTAs) have been produced spontaneously from as-anodized amorphous TiO_2 nanotube arrays at a low temperature by water-assisted dissolution and a recrystallization process (see figure). This advanced architecture enhances photocatalytic activity and photoelectrochemical properties compared to anatase TiO_2 NTAs.

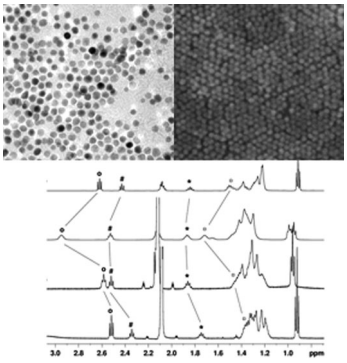


ZnO Nanoparticle Superlattices

Y. Coppel, G. Spataro, V. Collière, B. Chaudret, C. Mingotaud, A. Maisonnat, M. L. Kahn*

Self-Assembly of ZnO Nanoparticles – An NMR Spectroscopic Study

NMR spectroscopic evidence was provided for the role of ion-paired ammonium carboxylate on the formation of nanoparticle superlattice structures (NSSs). The ligand present on the nanoparticle surface was studied as a function of the colloid concentration. The effect of the alkyl chain length of the ligand on NSS formation was investigated.



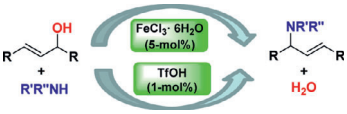
Eur. J. Inorg. Chem.
DOI: **10.1002/ejic.201200019**

Allylic Amination

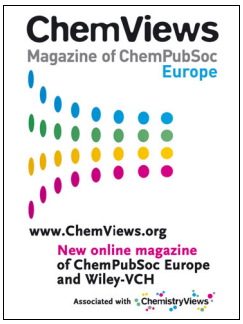
P. Trillo, A. Baeza, C. Nájera*

$FeCl_3 \cdot 6H_2O$ and TfOH as Catalysts for Allylic Amination Reaction: A Comparative Study

A comparative study for the direct allylic amination employing $FeCl_3 \cdot 6H_2O$ and TfOH as efficient and readily available catalysts is described. From the results of this study it can be concluded that, with some exceptions, TfOH performed better with lower catalyst loading and milder reaction conditions. The stereochemical course of the reaction is also discussed concluding that depends on the stability of the final product.



Eur. J. Org. Chem.
DOI: **10.1002/ejoc.201101844**



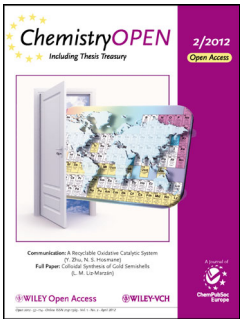
REACH Legislation

Vera Koester

J. de Bruijn on the Impact and Future of REACH

As the European Chemical Agency (ECHA) gears up for the second REACH deadline, which requires all substances manufactured or imported into the EU in quantities of 100–1000 t to be registered, ChemViews magazine talks to Jack de Bruijn, Director of Risk Management, ECHA.

ChemViews magazine
DOI: **10.1002/chemv.201200027**

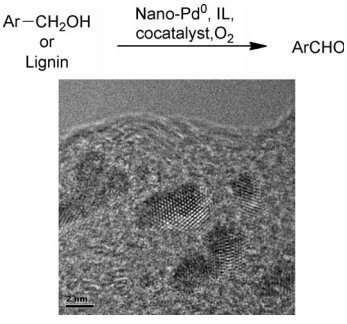


Ionic Liquids

Y. Zhu,* L. Chuanzhao, M. Sudarmadji, N. Hui Min, A. O. Biying, J. A. Maguire, N. S. Hosmane*

An Efficient and Recyclable Catalytic System Comprising Nanopalladium(0) and a Pyridinium Salt of Iron Bis(dicarbollide) for Oxidation of Substituted Benzyl Alcohol and Lignin

It's teamwork! A composite of ionic liquid (IL)-stabilized palladium(0) nanoparticles and a pyridinium salt of iron bis(dicarbollide) (**5**) was found to be efficient for oxidation of substituted benzyl alcohols and lignin to produce aromatic aldehydes.



ChemistryOpen
DOI: **10.1002/open.201100014**