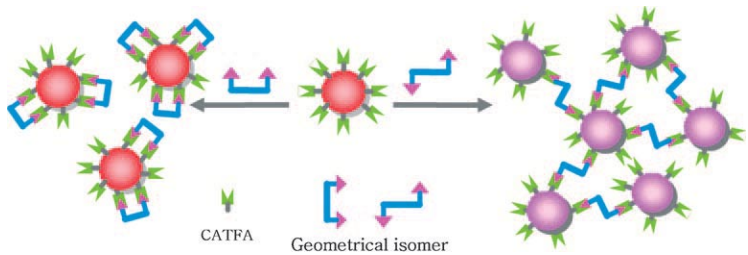
SPOTLIGHTS …

Colorimetric Sensing

A. Chatterjee, D. J. Oh, K. M. Kim, K.-S. Youk, K. H. Ahn*

Selective Colorimetric Sensing of Geometrical Isomers of Dicarboxylates in Water by Using Functionalized Gold Nanoparticles

Chem. Asian J.
DOI: **10.1002/asia.200800233**



The color of gold: There now exists a colorimetric sensing system based on Au nanoparticles functionalized with a water-soluble anion-recognition motif. This system discriminates specific geometrical isomers of dicarboxylates in water through a recognition-induced aggregation process. CATFA = *o*-(carboxamido)trifluoroacetophenone.

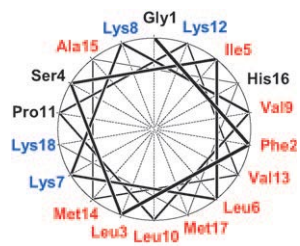
Antimicrobials

V. Čeřovský,* O. Hovorka, J. Cvačka, Z. Voburka, L. Bednárová, L. Borovičková, J. Slaninová, V. Fučík

Melectin: A Novel Antimicrobial Peptide from the Venom of the Cleptoparasitic Bee *Melecta albifrons*

ChemBioChem
DOI: **10.1002/cbic.200800476**

Melectin makes a buzz: In an α-helical wheel projection, melectin has a well-defined hydrophobic sector with large aliphatic residues (red), and a hydrophilic sector (black), dominated by cationic Lys residues (blue). Its ability to adopt such a structure within the bacterial cell membrane is essential for its antimicrobial activity.



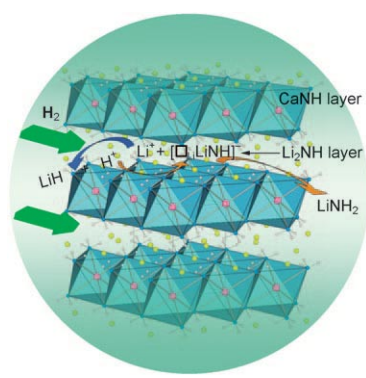
Hydrogen Storage

H. Wu*

Strategies for the Improvement of the Hydrogen Storage Properties of Metal Hydride Materials

ChemPhysChem
DOI: **10.1002/cphc.200800498**

Ions on the move: Layered crystals of $Li_2Ca(NH)_2$ promote Li^+ ions in 2D channels defined by slabs of $Ca[NH]_6$ octahedra (see picture). This facilitates hydrogenation, which results in a significantly lowered hydrogen-absorption temperature compared to pure Li_2NH. The enhanced ion mobility improves the dehydrogenation performance of this system, thus leading to lowered desorption temperatures and accelerated kinetics.



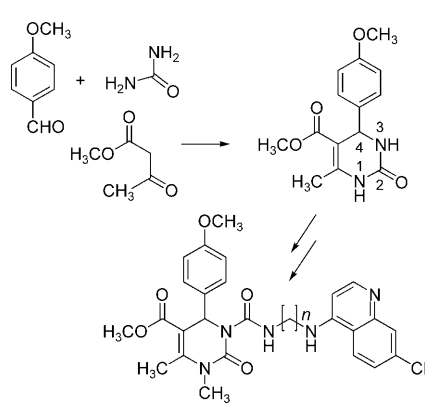
Antiviral Agents

N. October, N. D. Watermeyer, V. Yardley, T. J. Egan, K. Ncokazi, K. Chibale*

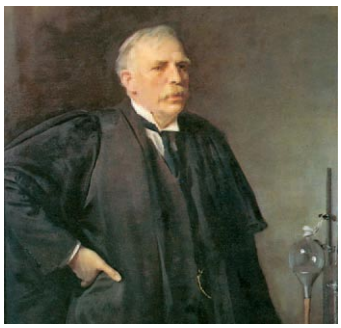
Reversed Chloroquines Based on the 3,4-Dihydropyrimidin-2(1*H*)-one Scaffold: Synthesis and Evaluation for Antimalarial, β-Haematin Inhibition, and Cytotoxic Activity

ChemMedChem
DOI: **10.1002/cmdc.200800172**

The synthesis, cytotoxicity, and antimalarial activity of resistance-reversing bifunctional dihydropyrimidone–chloroquinoline conjugates are reported herein. In vitro assay results indicate this class of compounds is highly active against both chloroquine-resistant and chloroquine-sensitive strains of *P. falciparum*.



EurJIC European Journal of Inorganic Chemistry



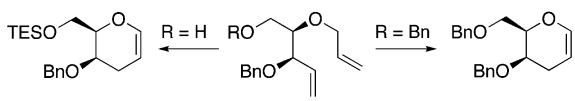
On the shoulders of giants: Lord Rutherford, who developed the theory of nuclear disintegration and a model of the nuclear atom, was lauded as one of the greatest scientists of all time. His research career witnessed the beginning of the atomic age, and his research group was a hotbed of talented young scientists.

History of Science

J. M. Thomas*

Lord Rutherford (1871–1937): The Newton of the Atom and the Winner of the Nobel Prize for Chemistry, 1908

Angew. Chem. Int. Ed.
DOI: **10.1002/anie.200803876**



Tandem RCM/hydrosilylation/isomerization

Tandem RCM/isomerization

3-Deoxygalactal was synthesized by using the tandem RCM/isomerization method. The tandem sequence can also be extended by a dehydrogenative silylation step, resulting in the formation of a 3-deoxy glycal bearing two orthogonally protected alcohol groups.

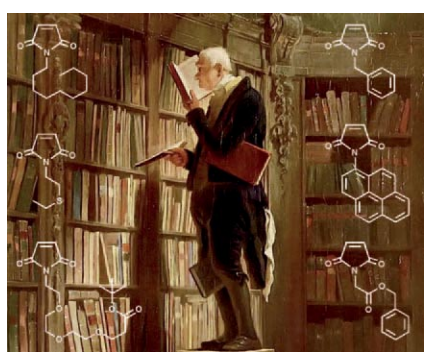
3-Deoxy Glycals

B. Schmidt,* A. Biernat

Synthesis of 3-Deoxy Glycals via Tandem Metathesis Sequences and Their Use in an Intermolecular Heck Arylation

Eur. J. Org. Chem.
DOI: **10.1002/ejoc.200800824**

Sequence-controlled polymers: Well-defined polymer chains with local functional groups were synthesized by atom transfer radical copolymerization of an excess of styrene with discrete amounts of *N*-substituted maleimides. This kinetically-controlled approach is wide in scope and can be applied to a broad library of functional maleimides (see scheme).



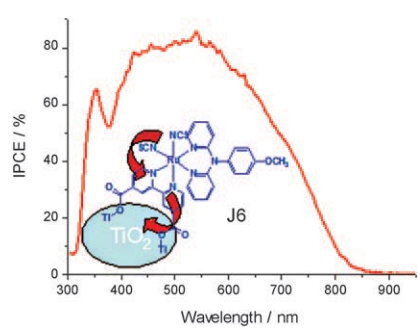
Polymerization

S. Pfeifer, J.-F. Lutz*

Development of a Library of *N*-Substituted Maleimides for the Local Functionalization of Linear Polymer Chains

Chem. Eur. J.
DOI: **10.1002/chem.200801237**

Super sensitizers: Solar cells sensitized by triarylamine-functionalized ruthenium dyes (e.g. J6) display a high power conversion efficiency. Density functional theory calculations suggest that absorption in the visible region originates from metal-to-ligand charge-transfer transitions from Ru(NCS) to the anchoring bipyridyl ligand, leading to efficient electron transfer from the excited dye to the TiO_2 conduction band.



Dye-Sensitized Solar Cells

Z. Jin, H. Masuda,* N. Yamanaka, M. Minami, T. Nakamura, Y. Nishikitani

Triarylamine-Functionalized Ruthenium Dyes for Efficient Dye-Sensitized Solar Cells

ChemSusChem
DOI: **10.1002/cssc.200800173**

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