

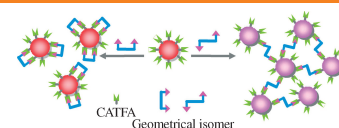


Colorimetric Sensing

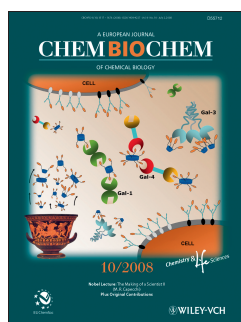
A. Chatterjee, D. J. Oh, K. M. Kim, K.-S. Youk, K. H. Ahn*

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

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)tri-fluoroacetophenone.



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

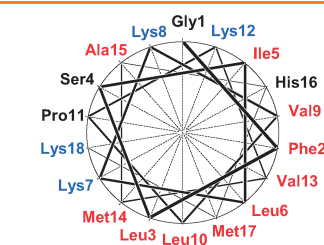


Antimicrobials

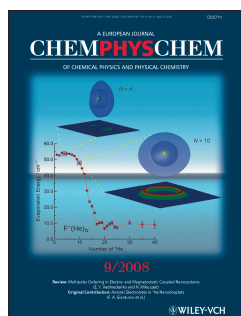
V. Čeřovský,* O. Hovorka, J. Cvačka, Z. Voburka, L. Bednářová, L. Borovičková, J. Slaninová, V. Fučík

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

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.



ChemBioChem
DOI: 10.1002/cbic.200800476

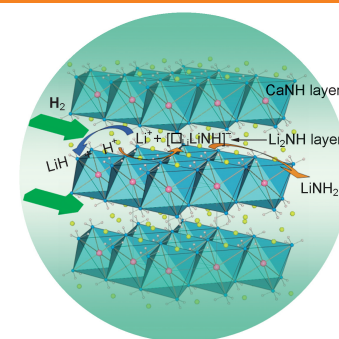


Hydrogen Storage

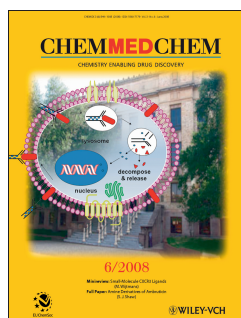
H. Wu*

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

Ions on the move: Layered crystals of $\text{Li}_2\text{Ca}(\text{NH})_2$ promote Li^+ ions in 2D channels defined by slabs of $\text{Ca}[\text{NH}]_6$ 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.



ChemPhysChem
DOI: 10.1002/cphc.200800498

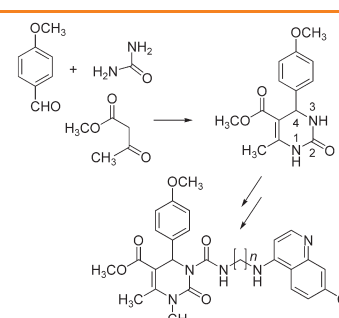


Antiviral Agents

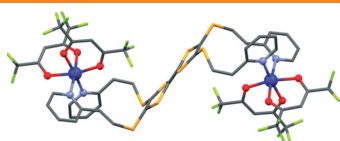
N. October, N. D. Watermeyer, V. Yardley, T. J. Egan, K. Ncokazi, K. Chibale*

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

The synthesis, cytotoxicity, and antimalarial activity of resistance-reversing bifunctional dihydropyrimidinone-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*.



ChemMedChem
DOI: 10.1002/cmdc.200800172



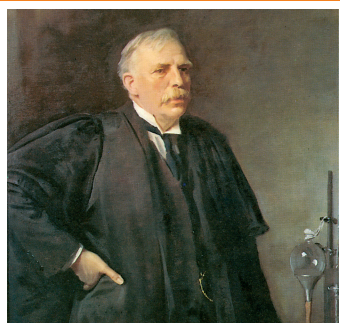
Eur. J. Inorg. Chem.
DOI: 10.1002/ejic.200800660

Bimetallic Cobalt Complexes

S. I. G. Dias, A. I. S. Neves, S. Rabaça, I. C. Santos, M. Almeida*

Tetrapyrroline and Tetrapyrroline TTF Derivatives: Synthesis, Characterization and Preparation of a Bimetallic Co^{II} Complex

A new series of tetrapyrroline- and tetrapyrroline-substituted TTF donors were prepared. The synthesis of a new dinuclear Co^{II}-coordination complex with the tetrapyrroline TTF donor acting as a bridging ligand demonstrates their potential use in preparing polynuclear complexes and higher hierarchy structures.



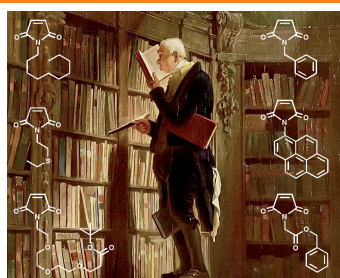
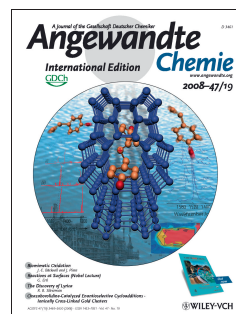
Angew. Chem. Int. Ed.
DOI: 10.1002/anie.200803876

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

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.



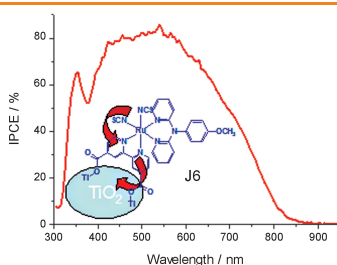
Chem. Eur. J.
DOI: 10.1002/chem.200801237

Polymerization

S. Pfeifer, J.-F. Lutz*

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

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).



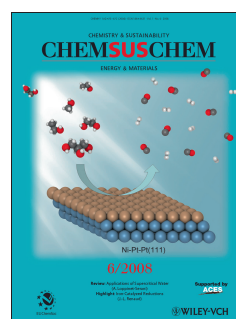
ChemSusChem
DOI: 10.1002/cssc.200800173

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

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 TiO₂ conduction band.



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