

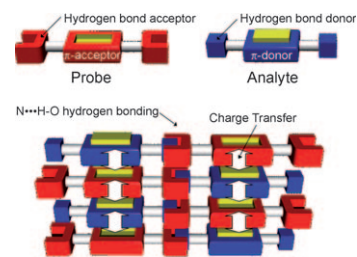


Colorimetric Analysis

D. R. Trivedi, Y. Fujiki, N. Fujita, S. Shinkai, K. Sada*

Crystal Engineering Approach To Design Colorimetric Indicator Array To Discriminate Positional Isomers of Aromatic Organic Molecules

Discriminating by color: A 2D colorimetric indicator array has been designed by a crystal engineering approach (N...H—O hydrogen bonding and charge-transfer complexation) involving solid-state co-grinding for the visual discrimination of positional isomers of dihydroxynaphthalene. Factors governing the close packing of π planes, and hence color of the complex, were determined by single-crystal X-ray analysis, allowing fine tuning by crystal engineering.



Chem. Asian J.
DOI: 10.1002/asia.200800341

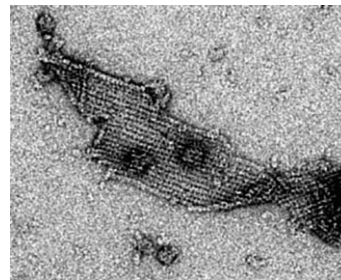


Natural Products

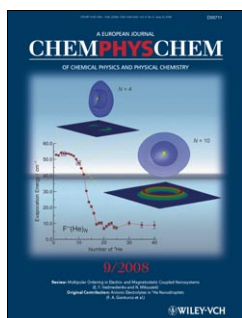
J. Gertsch, S. Meier, M. Müller, K.-H. Altmann*

Differential Effects of Natural Product Microtubule Stabilizers on Microtubule Assembly: Single Agent and Combination Studies with Taxol, Epopthilone B, and Discodermolide

Three of a kind and yet different: Microtubules (MTs) assembled from soluble tubulin by the potent natural product MT stabilizer discodermolide (DDM) were found to be morphologically distinct from those induced with taxol or epothilone B, and less stable against physical stress. At the same time, DDM shows a different pattern of β -tubulin isotype usage in the assembly process. MT assembly in the presence of both DDM and taxol appeared to produce a distinct new type of MT polymer with mixed morphology.



ChemBioChem
DOI: 10.1002/cbic.200800556

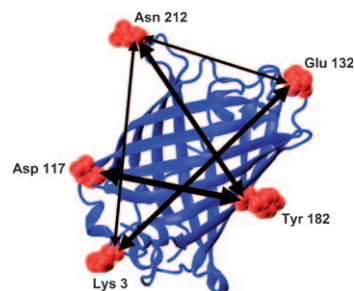


Protein Deformation

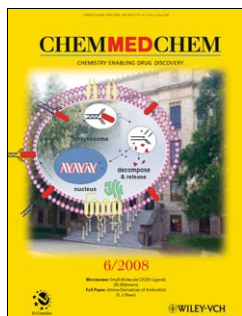
S. Sacquin-Mora,* R. Lavery

Modeling the Mechanical Response of Proteins to Anisotropic Deformation

Protein anisotropic mechanical behaviour: An elastic network model of the green fluorescent protein, in line with earlier single molecule experiments, shows considerable structure-dependent anisotropy in its mechanical response to forces applied to different pairs of residues. The arrows in the figure are proportional to the calculated force constants.



ChemPhysChem
DOI: 10.1002/cphc.200800480

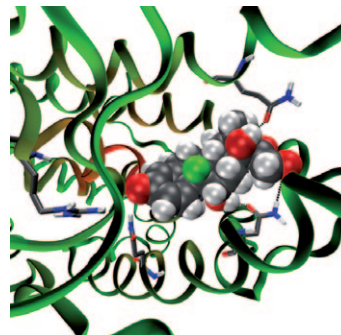


Molecular Modeling

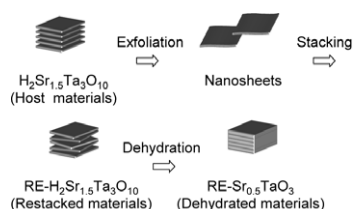
M. Spreafico, B. Ernst, M. A. Lill, M. Smiesko, A. Vedani*

Mixed-Model QSAR at the Glucocorticoid Receptor: Predicting the Binding Mode and Affinity of Psychotropic Drugs

A multidimensional QSAR (mQSAR) study was performed on the glucocorticoid receptor. Based on 118 compounds a family of receptor models was generated and validated using consensus scoring. The model was then employed to quantify adverse effects triggered by a series of 24 psychotropic drugs.



ChemMedChem
DOI: 10.1002/cmdc.200800274



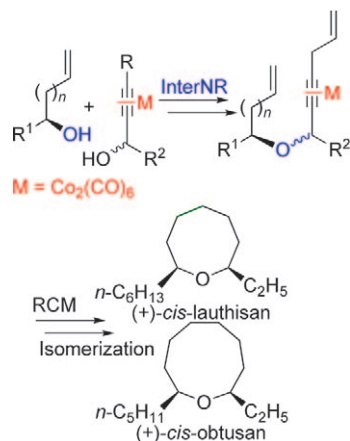
Eur. J. Inorg. Chem.
DOI: 10.1002/ejic.200800776

Nanosheet Processing

K. Inaba,* S. Suzuki, Y. Noguchi, M. Miyayama, K. Toda, M. Sato

Metastable $\text{Sr}_{0.5}\text{TaO}_3$ Perovskite Oxides Prepared by Nanosheet Processing

Metastable $\text{Sr}_{0.5}\text{TaO}_3$ was prepared by using layer-structured $\text{H}_2\text{Sr}_{1.5}\text{Ta}_3\text{O}_{10}$ by direct dehydration and nanosheet processing. Nanosheet processing can provide a possible route for the synthesis of materials with novel disordered structures.



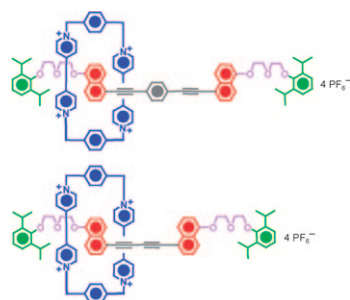
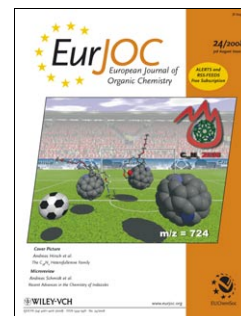
Eur. J. Org. Chem.
DOI: 10.1002/ejoc.200801063

Medium-Sized Cyclic Ethers

N. Ortega, T. Martín,* V. S. Martín*

Synthesis of α,α' -Disubstituted Linear Ethers by an Intermolecular Nicholas Reaction – Application to the Synthesis of (+)-cis/(–)-trans-Lauthisan and (+)-cis/(+)-trans-Obtusan

A method for the preparation of α,α' -disubstituted linear ethers through an intermolecular Nicholas reaction (interNR) is described. Key steps include the ether linkage formation by interNR, RCM of the suitable acyclic dieny ether, and isomerization of the complexed cycloalkyne. The $\text{Co}_2(\text{CO})_6$ -cycloalkyne complex was found to act as a stereochemical modulator of the final stereochemistry.



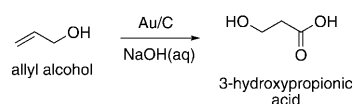
Chem. Eur. J.
DOI: 10.1002/chem.200802096

Rotaxanes

I. Yoon, D. Benítez, Y.-L. Zhao, O. Š. Miljanić, S.-Y. Kim, E. Tkatchouk, K. C.-F. Leung, S. I. Khan, W. A. Goddard, III, J. F. Stoddart*

Functionally Rigid and Degenerate Molecular Shuttles

Rigidity makes for faster molecular shuttles: In the rigid donor–acceptor degenerate [2]rotaxanes, the tetracationic cyclophane shuttles back and forth between the two monosubstituted naphthalene stations via the rigid linker in the dumbbell-shaped components. Introducing rigidity has led to faster shuttling processes, corresponding to lower energy barriers than those formed in more flexible donor–acceptor rotaxanes.



ChemSusChem
DOI: 10.1002/cssc.200800172

Heterogeneous Catalysis

C. Della Pina, E. Falletta, M. Rossi*

Oxidation of Allyl Alcohol in the Presence of a Gold Catalyst: A Route to 3-Hydroxypropionic Acid

Paving the route with gold: 3-Hydroxypropionic acid is considered to be a potential building block for both organic synthesis and high-performance polymers. However, there is currently no large-scale chemical process to produce this important molecule. With this aim in mind, a new approach is proposed: aerobic oxidation of allyl alcohol to 3-hydroxypropionic acid using a supported Au/C catalyst.

