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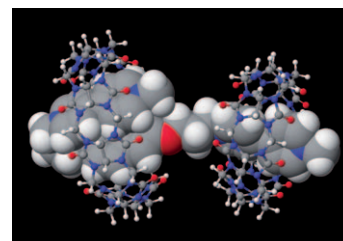


Supramolecular Chemistry

W. Jiang, Q. Wang, I. Linder, F. Klautzsch, C. A. Schalley*

Self-Sorting of Water-Soluble Cucurbituril Pseudorotaxanes

Social self-sorting: A binary and a ternary pseudorotaxane, which both contain cucurbituril homologues and share methylviologen as the guest, can self-sort. These two self-sorting pseudorotaxanes were further integrated into one well-defined hetero[3]pseudorotaxane with one symmetrical axle that exclusively selects a pair of different cucurbiturils in a social self-sorting process. Vice versa, a “necklace” of three cucurbit[8]urils is formed, which bind two complementary axes inside their cavities with high fidelity.



Chem. Eur. J.
DOI: 10.1002/chem.201003194

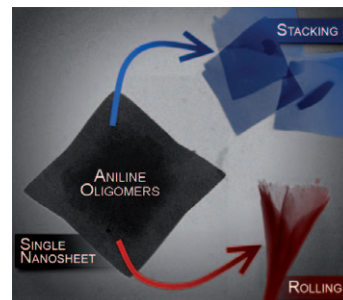


Nanosheets

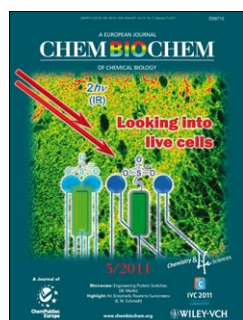
Z. D. Zujovic,* C. Laslau, J. Travas-Sejdic*

Lamellar-Structured Nanoflakes Comprised of Stacked Oligoaniline Nanosheets

Three sheets to the wind: The self-assembly of polyaniline nanostructures is strongly dependent on single oligoanilinic nanosheets that undergo subsequent interactions, such as stacking and rolling. Imaging and spectroscopy tools detailed the stacking of nanosheets to form thicker nanoflakes and subsequently serve as nucleation sites for polyaniline synthesis.



Chem. Asian J.
DOI: 10.1002/asia.201000703

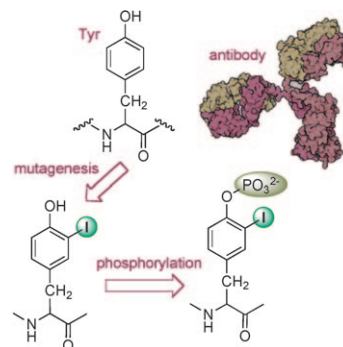


Signal Transduction

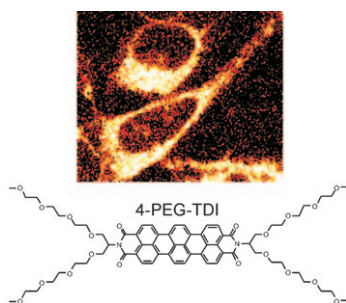
A. Hayashi, N. Hino, T. Kobayashi, R. Arai, M. Shirouzu, S. Yokoyama,* K. Sakamoto*

Dissecting Cell Signaling Pathways with Genetically Encoded 3-Iodo-L-tyrosine

Marking the proteome: A single amino acid residue in the proteome was labeled by mammalian genetic code expansion, which incorporated 3-iodotyrosine at a particular tyrosine phosphorylation site in cell-signaling pathways. Phosphorylation at the site was analyzed by an antibody specific for the tyrosine derivative.



ChemBioChem
DOI: 10.1002/cbic.201000665



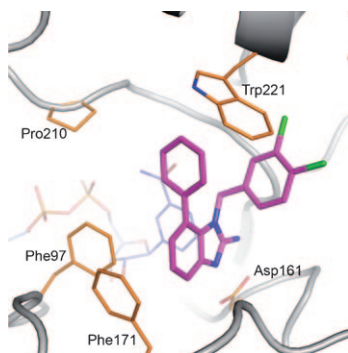
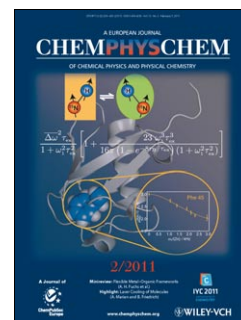
ChemPhysChem
DOI: 10.1002/cphc.201000666

Dyes

M. Davies, C. Jung, P. Wallis, T. Schnitzler, C. Li, K. Müllen, C. Bräuchle*

Photophysics of New Photostable Rylene Derivatives: Applications in Single-Molecule Studies and Membrane Labelling

Three new photostable rylene derivatives were synthesised and characterized with regard to fluorescence labels in biological applications. Single-molecule techniques show excellent photostability of these dyes. Additionally it is shown that one of them (4-PEG-TDI) can be used for membrane labelling (see picture).



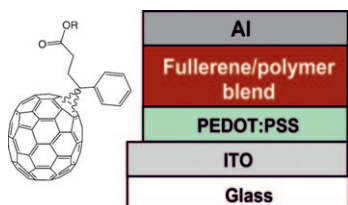
ChemMedChem
DOI: 10.1002/cmdc.201000450

Antiprotozoal Agents

D. Spinks, H. B. Ong, C. P. Mpamhanga, E. J. Shanks, D. A. Robinson, I. T. Collie, K. D. Read, J. A. Frearson, P. G. Wyatt, R. Brenk, A. H. Fairlamb, I. H. Gilbert*

Design, Synthesis and Biological Evaluation of Novel Inhibitors of *Trypanosoma brucei* Pteridine Reductase 1

Picking pockets for progressing potency! The optimisation of some hits for *Trypanosoma brucei* pteridine reductase 1 (PTR1) discovered through virtual screening (*J. Med. Chem.*, **2009**, 52, 4454) is described. We were able to derive potent competitive inhibitors of PTR1 ($K_i^{app} = 7$ nM), which displayed weak activity against the parasites, probably due to accumulation of the dihydrobiopterin substrate displacing the inhibitor from PTR1.



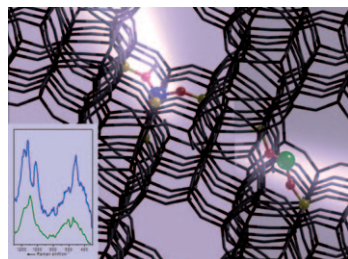
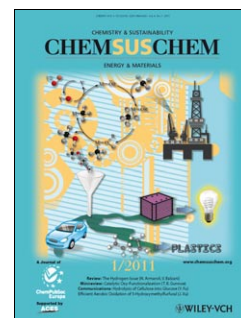
ChemSusChem
DOI: 10.1002/cssc.201000246

Solar Cells

P. A. Troshin,* H. Hoppe, A. S. Peregudov, M. Egginger, S. Shokhovets, G. Gobsch, N. S. Sariciftci, V. F. Razumov

[70]Fullerene-Based Materials for Organic Solar Cells

She sells C cells: Novel highly soluble derivatives of [70]fullerene show promising efficiencies in organic bulk heterojunction solar cells comprising the polymers MDMO-PPV and P3HT as electron donors. A clear correlation is revealed between the degree of phase separation in the fullerene/polymer blends (average cluster size) and their photovoltaic performance.



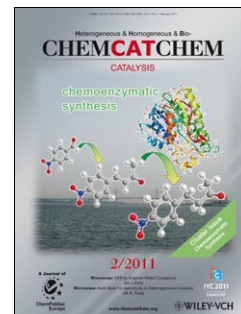
ChemCatChem
DOI: 10.1002/cctc.201000265

Spectroscopy

F. Bonino,* A. Damin, A. Piovano, C. Lamberti, S. Bordiga, A. Zecchina

Direct Evidence of Highly Dispersed Iron in Fe-silicalite: A Raman Spectroscopic Study

Raman knows: UV resonance Raman spectroscopy, performed under a controlled atmosphere, is able to highlight extra-framework iron species, both before and after interaction with NO probe molecule. Furthermore, this work demonstrates that resonance Raman spectra are complementary to those obtained by IR spectroscopy.



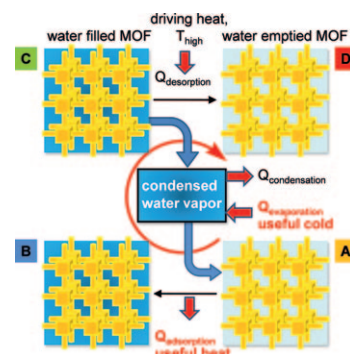


MOFs for Heat Transformation

J. Ehrenmann, S. K. Henninger,* C. Janiak*

Water Adsorption Characteristics of MIL-101 for Heat-Transformation Applications of MOFs

A new application for MOFs – heat transformation and adsorption chilling: MIL-101 is one of the most promising water sorbent materials for heat-transformation applications known so far, as 1 g adsorbs up to 1 g of water and is stable even over several cycles.



Eur. J. Inorg. Chem.
DOI: 10.1002/ejic.201001156

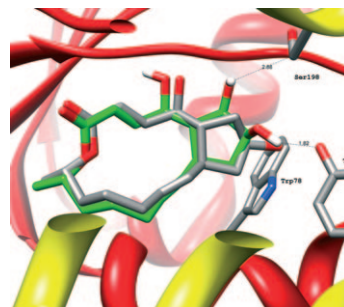


Brefeldin Analogues

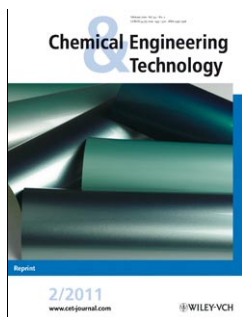
S. Förster, E. Persch, O. Tverskoy, F. Rominger, G. Helmchen,* C. Klein, B. Gönen, B. Brügger

Syntheses and Biological Properties of Brefeldin Analogues

Syntheses of brefeldin analogues are described. (6*R*)-Hydroxy-BFA (5) was obtained through a total synthesis and several other analogues by partial syntheses from BFA (1). The structures of the analogues were determined by X-ray analyses. Their activities on the Golgi apparatus were determined. Molecular mechanics calculations and docking into an established receptor of BFA were carried out.



Eur. J. Org. Chem.
DOI: 10.1002/ejoc.201001297

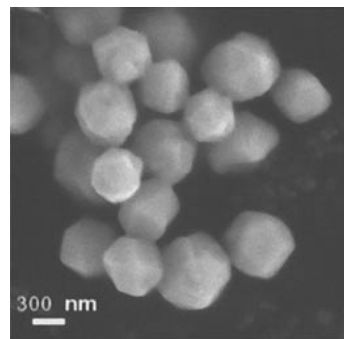


Gold Nanoparticle Synthesis

P. Alexandridis

Gold Nanoparticle Synthesis, Morphology Control, and Stabilization Facilitated by Functional Polymers

A methodology for the synthesis in aqueous media of gold nanoparticles with controlled size and shape and exceptional colloidal stability is reviewed. This methodology is based on designer polymers that can exhibit multiple functions on the basis of the polymer intramolecular and supramolecular organization.



Chem. Eng. Technol.
DOI: 10.1002/ceat.201000335