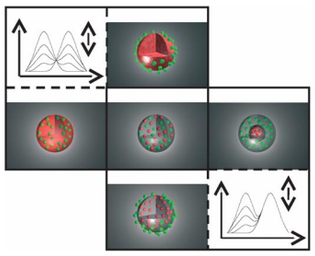
On these pages, we feature a selection of the excellent work that has recently been published in our sister journals. If you are reading these pages on a computer, click on any of the items to read the full article. Otherwise please see the DOIs for easy online access through Wiley Online Library.

Fluorescent Nanosensors

T. Doussineau,* A. Schulz, A. Lapresta-Fernandez, A. Moro, S. Körsten, S. Trupp, G. J. Mohr*

On the Design of Fluorescent Ratiometric Nanosensors

Small but well-grounded! Recently developed nanoparticle-based sensors (see figure) appear as new powerful tools to provide quantitative information about different species (ions, metabolites, biomolecules) in biosamples through ratiometric measurements. This article describes some of the methodologies developed so far in the design of such nanosensors.



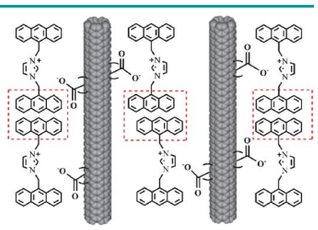
Chem. Eur. J.
DOI: **10.1002/chem.201000829**

Nanotubes

L. Meng,* C. Fu, Z. Fei,* Q. Lu,* P. J. Dyson

Photochemical Behavior of High Quantum Yield SWNTs Functionalized with Anthracene Salts

I hope you like bamim too: Anthracene derivatives attached to functionalized single-walled carbon nanotubes through Coulombic interactions undergo a partial (and reversible) photodimerization process upon irradiation with UV light of appropriate wavelengths.



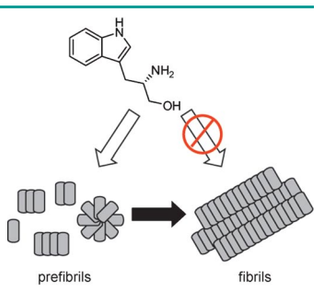
Chem. Asian J.
DOI: **10.1002/asia.201000236**

Oligomers

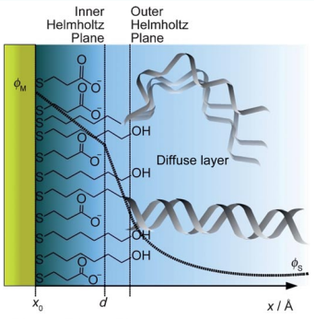
A. A. Reinke, G. A. Abulwerdi, J. E. Gestwicki*

Quantifying Prefibrillar Amyloids in vitro by Using a "Thioflavin-Like" Spectroscopic Method

In a glass darkly: The formation of fibrillar amyloids is linked to many neurodegenerative diseases. However, recent models suggest an important role for prefibrillar amyloids. Here, we develop a facile, inexpensive assay for specifically detecting prefibrillar amyloids in opaque plates. Results obtained with this method suggest that prefibrillar amyloids are depleted during the aggregation process.



ChemBioChem
DOI: **10.1002/cbic.201000358**



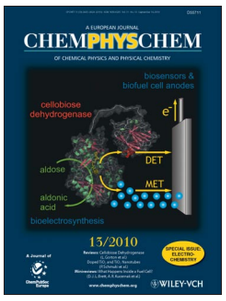
ChemPhysChem
DOI: **10.1002/cphc.201000210**

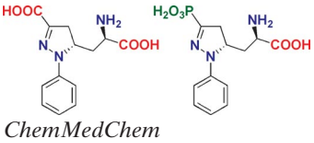
DNA Hybridization

M. Gębala, W. Schuhmann*

Controlled Orientation of DNA in a Binary SAM as a Key for the Successful Determination of DNA Hybridization by Means of Electrochemical Impedance Spectroscopy

The composition of the monolayer, the ionic strength, the surface coverage with single-stranded DNA (ssDNA), and the electrode pretreatment are prerequisites for reliably detecting DNA hybridization using electrochemical impedance spectroscopy. Co-assembly of mercaptopropionic acid is proposed as a means to control the electrode/electrolyte interface (see figure).





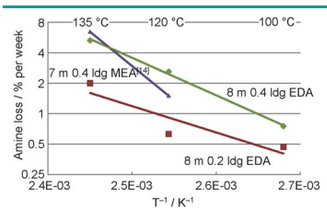
ChemMedChem
DOI: **10.1002/cmdc.201000184**

Neuroprotection

P. Conti,* A. Pinto, L. Tamborini, U. Madsen, B. Nielsen, H. Bräuner-Osborne, K. B. Hansen, E. Landucci, D. E. Pellegrini-Giampietro, G. De Sarro, E. Donato Di Paola, C. De Micheli

Novel 3-Carboxy- and 3-Phosphonopyrazoline Amino Acids as Potent and Selective NMDA Receptor Antagonists: Design, Synthesis, and Pharmacological Characterization

Calming the storm: New NMDA receptor antagonists and their pharmacological activity toward various types and subtypes of glutamate receptors are described. Among these derivatives, two compounds exhibit promising in vitro and in vivo pharmacological activity as neuroprotective and anticonvulsant agents.



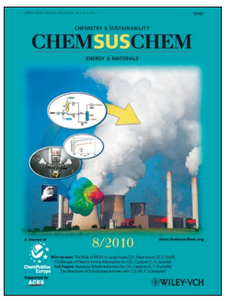
ChemSusChem
DOI: **10.1002/cssc.200900293**

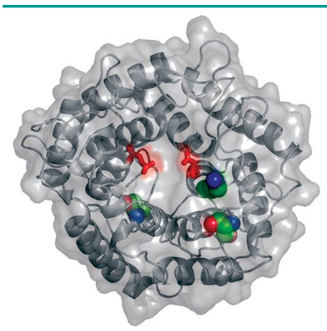
Carbon Dioxide Capture

S. Zhou, X. Chen, T. Nguyen, A. K. Voice, G. T. Rochelle*

Aqueous Ethylenediamine for CO_2 Capture

Aqueous ethylenediamine (EDA) is investigated as a solvent for CO_2 capture from flue gas. Similar to monoethanolamine, EDA can be used up to 120 °C in a stripper without significant thermal degradation. The results indicate that EDA is a suitable choice for capturing CO_2.





ChemCatChem
DOI: **10.1002/cctc.201000112**

Biocatalysis

M. Anbar, R. Lamed, E. A. Bayer*

Thermostability Enhancement of *Clostridium thermocellum* Cellulosomal Endoglucanase Cel8A by a Single Glycine Substitution

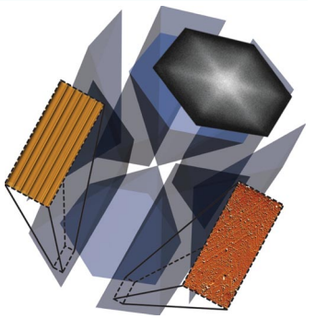
Thermostable mutant enzymes: The X-ray crystal structure of the *Clostridium thermocellum* Cel8A cellulase depicts the amino acid substitutions which enable the protein to withstand elevated temperatures while maintaining wild-type levels of activity. The mutant enzyme may be used in combination with other selected glycoside hydrolases to efficiently degrade lignocellulosic materials used in the biofuel industry.

Molecular Sieves

L. Karwacki, H. E. van der Bij, J. Kornatowski, P. Cubillas, M. R. Drury, D. A. M. de Winter, M. W. Anderson, B. M. Weckhuysen*

Unified Internal Architecture and Surface Barriers for Molecular Diffusion of Microporous Crystalline Aluminophosphates

Starless molecular sieves: The starlike appearance of confocal fluorescence microscopy (CFM) images of large crystals of the AlPO-5 family of microporous materials is due to the presence of barriers to molecular diffusion in the internal crystal architecture (see picture) rather than a star-shaped subcrystal according to studies by CFM, focused ion beam milling, electron backscatter diffraction, and atomic force microscopy.



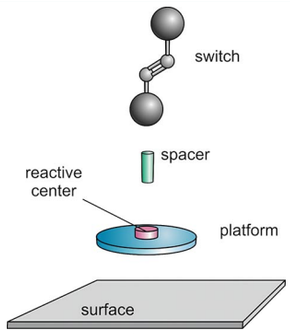
Angew. Chem. Int. Ed.
DOI: **10.1002/anie.201003273**

Molecules for Switchable Monolayers

J. Kubitschke, C. Näther, R. Herges*

Synthesis of Functionalized Triazatriangulenes for Application in Photo-Switchable Self-Assembled Monolayers

The synthesis of functionalized triazatriangulenes is presented and the *trans*/*cis* isomerization of azobenzene derivatives in solution is investigated. The described attachment of various molecular functions to the TATA platform represents a modular system for the formation of switchable SAMs.



Eur. J. Org. Chem.
DOI: **10.1002/ejoc.201000650**

