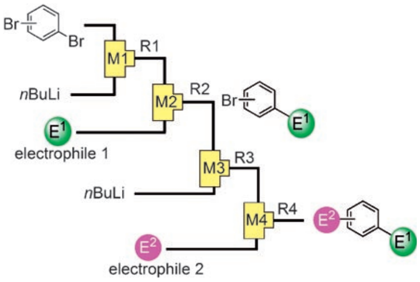
Micro Flow Synthesis

*A. Nagaki, Y. Tomida, H. Usutani, H. Kim, N. Takabayashi, T. Nokami, H. Okamoto, J.-i. Yoshida**

Integrated Micro Flow Synthesis Based on Sequential Br–Li Exchange Reactions of *p*-, *m*-, and *o*-Dibromobenzenes

Chem. Asian J.
DOI: **10.1002/asia.200700231**



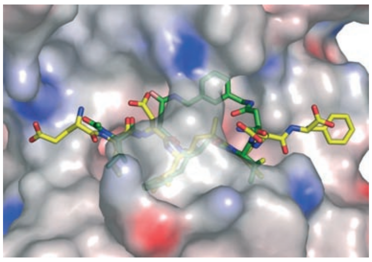
On… and on… and on… A variety of *p*-, *m*-, and *o*-disubstituted benzenes can be synthesized based on the Br–Li exchange reaction of the corresponding dibromobenzene by using a micro flow system. This method allows the use of much higher temperatures than are required for conventional macro batch systems.

Inhibitors

*A. Barazza, M. Götz, S. A. Cadamuro, P. Goettig, M. Willem, H. Steuber, T. Kohler, A. Jestel, P. Reinemer, C. Renner, W. Bode, L. Moroder**

Macrocyclic Statine-Based Inhibitors of BACE-1

ChemBioChem
DOI: **10.1002/cbic.200700383**



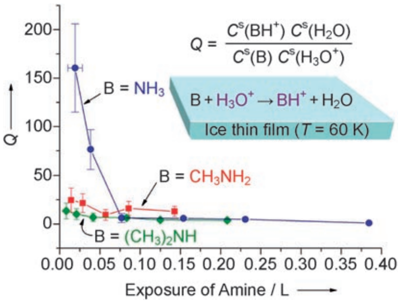
Hitting BACE. A 23-membered macrocyclic inhibitor of BACE-1 containing statine as a transition state analogue in the ring structure (green) was found to bind with the peptide backbone in an extended conformation to the active-site cleft, in a manner almost identical to that of a substrate-derived linear hydroxyethylene-octapeptide (yellow), without steric clashes with the flap domain.

Acid/Base Chemistry

*S.-C. Park, J.-K. Kim, C.-W. Lee, E.-S. Moon, H. Kang**

Acid–Base Chemistry at the Ice Surface: Reverse Correlation Between Intrinsic Basicity and Proton-Transfer Efficiency to Ammonia and Methyl Amines

ChemPhysChem
DOI: **10.1002/cphc.200700489**



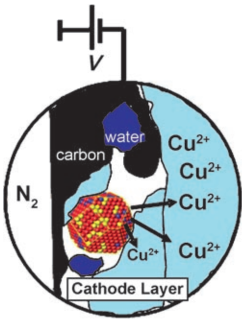
On thin ice: A surface-sensitive mass spectrometric method quantifies the efficiency of proton transfer from the hydronium ion to amine molecules (B) at the ice surface. The proton-transfer efficiency defined by reaction quotient Q (see figure), exhibits the order $NH_3 > (CH_3)NH_2 = (CH_3)_2NH$, which opposes the trend of amine basicity in the gas phase or aqueous solution.

Electrocatalysis

*R. Srivastava, P. Mani, N. Hahn, P. Strasser**

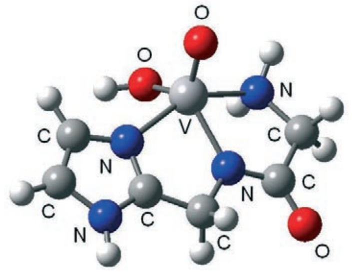
Efficient Oxygen Reduction Fuel Cell Electrocatalysis on Voltammetrically Dealloyed Pt–Cu–Co Nanoparticles

Angew. Chem. Int. Ed.
DOI: **10.1002/anie.200703331**



Getting rid of copper: A class of ternary Pt–Cu–Co electrocatalysts for the reduction of oxygen in polymer electrolyte membrane fuel cells shows unprecedented activity improvements over state-of-the-art Pt catalysts. The active phase of the catalysts is synthesized by selective electrochemical dissolution (dealloying, see picture) of Cu-rich alloy-particle precursors, resulting in Pt-enriched core–shell particles.

Vanadium Coordination Chemistry



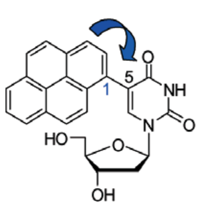
Simple bis(imidazol-2-yl) derivatives form mono- and bis-chelate complexes under acidic and neutral conditions with the $V^{IV}O$ ion. The bis-chelates show *cis-trans* isomerism. With bis(imidazol-2-yl) amino acid derivatives the complexation process takes place also in the basic pH range with the deprotonation and coordination of the amide nitrogen to give $VOLH_{-1}$ and $VOLH_{-2}$.

K. Várnagy, T. Csorba, D. Kiss,
E. Garribba, G. Micera,* D. Sanna*

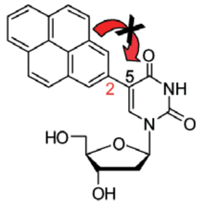
$V^{IV}O$ Complexes of Bis(imidazol-2-yl) Derivatives: A Potentiometric, Spectroscopic and DFT Study

Eur. J. Inorg. Chem.
DOI: **10.1002/ejic.200700502**

DNA



1PydU



2PydU

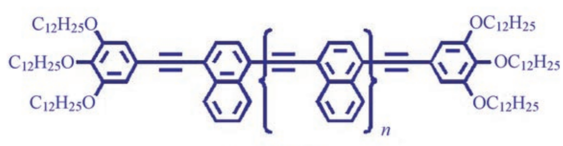
Electronically coupled or not? The position of the chromophore attachment in pyrene-modified uridines is critical for the optical properties of this nucleoside label.

*C. Wanninger-Weiß, H.-A. Wagenknecht**

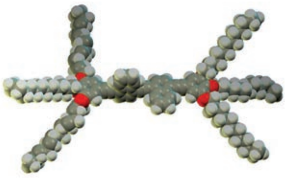
Synthesis of 5-(2-Pyrenyl)-2′-deoxyuridine as a DNA Modification for Electron-Transfer Studies: The Critical Role of the Position of the Chromophore Attachment

Eur. J. Org. Chem.
DOI: **10.1002/ejoc.200700818**

Conducting Polymers



$n = 1, 2, 3, 5$ n



Spare the rod but don't spoil the triplet! Increasing the length of supposedly highly conjugated molecular rods does not necessarily lead to a lowering of their spectroscopic triplet energies. The synthesis and characterization of molecular rods, such as depicted, is also described.

A. C. Benniston, A. Harriman,**
D. B. Rewinska, S. Yang, Y.-G. Zhi

On the Conjugation Length for Oligo(ethynylnaphthalene)-Based Molecular Rods

Chem. Eur. J.
DOI: **10.1002/chem.200701235**

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