

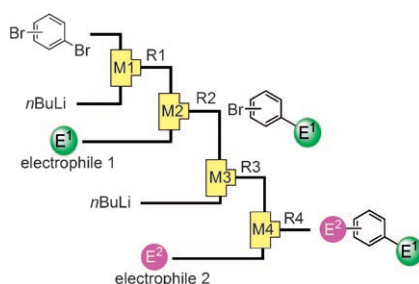
Micro Flow Synthesis

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 dibromo-benzene by using a micro flow system. This method allows the use of much higher temperatures than are required for conventional macro batch systems.

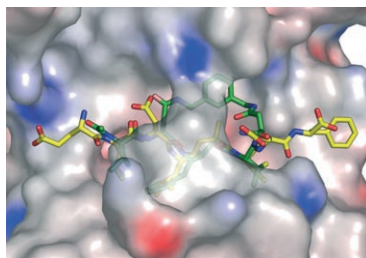
Inhibitors

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 hydroxy-ethylene-octapeptide (yellow), without steric clashes with the flap domain.

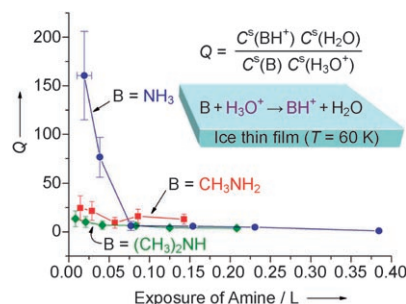
Acid/Base Chemistry

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 $\text{NH}_3 > (\text{CH}_3)\text{NH}_2 = (\text{CH}_3)_2\text{NH}$, which opposes the trend of amine basicity in the gas phase or aqueous solution.

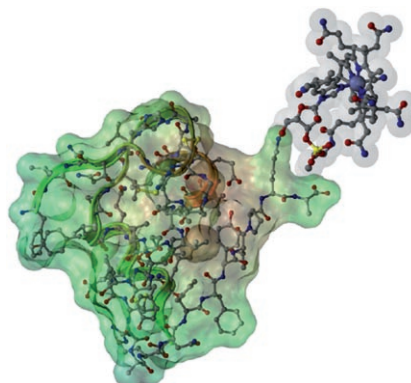
Bioconjugates

A. K. Petrus, A. R. Vortherms,
T. J. Fairchild,* R. P. Doyle*

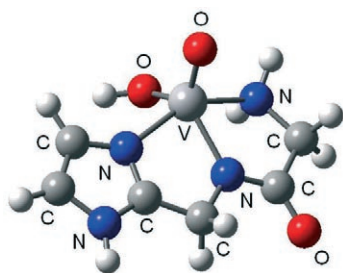
Vitamin B₁₂ as a Carrier for the Oral
Delivery of Insulin

ChemMedChem

DOI: 10.1002/cmdc.200700239



The noninvasive delivery of insulin continues to be a major goal for the treatment of diabetes mellitus. Oral–enteric administration would make insulin delivery easier and more effective, as higher patient compliance and improved glycemic control are likely; yet the oral–enteric pathway has been unfeasible owing to insulin's susceptibility to proteolytic degradation and inefficient enteric uptake. Herein we show that a noninvasive oral delivery route for insulin is possible through the vitamin B₁₂ uptake pathway. In diabetic rat models, insulin–B₁₂ conjugates can significantly lower blood glucose levels when administered orally.



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 $VOLH_{-2}$.

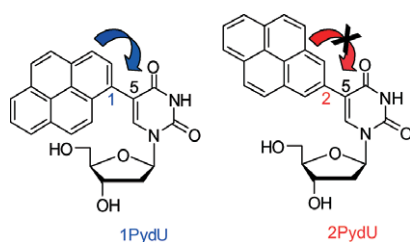
Vanadium Coordination Chemistry

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](https://doi.org/10.1002/ejic.200700502)



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

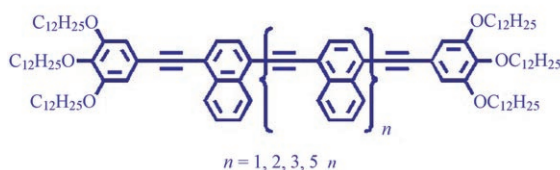
DNA

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

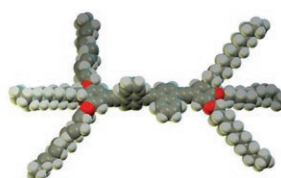
Eur. J. Org. Chem.

DOI: [10.1002/ejoc.200700818](https://doi.org/10.1002/ejoc.200700818)



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.



Conducting Polymers

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

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

Chem. Eur. J.

DOI: [10.1002/chem.200701235](https://doi.org/10.1002/chem.200701235)



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