

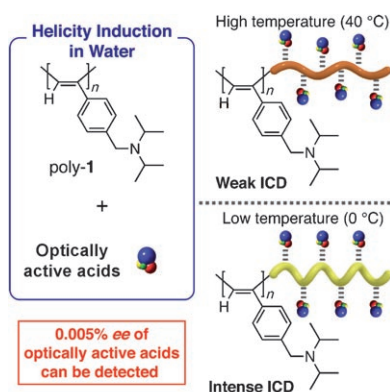
Helical Structures

K. Nagai, K. Maeda, Y. Takeyama,
T. Sato, E. Yashima*

Temperature-Induced Chiroptical
Changes in a Helical
Poly(phenylacetylene) Bearing
N,N-Diisopropylaminomethyl Groups
with Chiral Acids in Water

Chem. Asian J.

DOI: 10.1002/asia.200700185



Blowing hot and cold: The title compound (poly-1) is highly sensitive to the chirality of chiral acids and can detect small enantiomeric imbalances in these acids in water. Its one-handed helical structure produces induced circular dichroism (ICD), whose signal intensity and pattern depend on the temperature and concentration of poly-1.

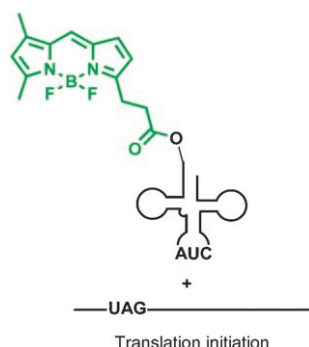
Protein Translation

N. Muranaka, M. Miura, H. Taira,
T. Hoshika*

Incorporation of Unnatural Non- α -Amino
Acids into the N Terminus of Proteins in
a Cell-Free Translation System

ChemBioChem

DOI: 10.1002/cbic.200700249



Expanding translation initiation. Incorporation of unnatural carboxylic acids without α -amino groups was achieved by using chemically acylated initiator tRNA (see figure). The results suggest that various unnatural compounds with a carboxyl group can be incorporated into the N terminus of proteins.

Xenon Biosensor

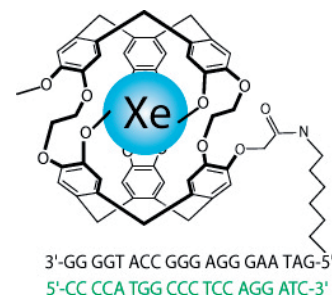
V. Roy, T. Brotin, J.-P. Dutasta,
M.-H. Charles, T. Delair, F. Mallet,
G. Huber, H. Desvaux, Y. Boulard,
P. Berthault*

A Cryptophane Biosensor for the
Detection of Specific Nucleotide Targets
through Xenon NMR Spectroscopy

ChemPhysChem

DOI: 10.1002/cphc.200700384

DNA sensor: A xenon host composed of a cryptophane structure with a DNA strand (see picture) serves to detect its complementary strand in the micromolar range through laser-polarized ^{129}Xe NMR spectroscopy.



Drug Stability

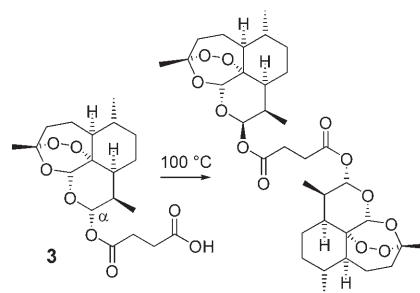
R. K. Haynes,* H.-W. Chan, C.-M. Lung,
N.-C. Ng, H.-N. Wong, L. Y. Shek,
I. D. Williams, A. Cartwright,
M. F. Gomes

Artesunate and Dihydroartemisinin
(DHA): Unusual Decomposition
Products Formed under Mild Conditions
and Comments on the Fitness of DHA
as an Antimalarial Drug

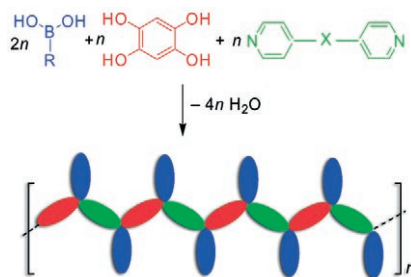
ChemMedChem

DOI: 10.1002/cmdc.200700064

The front-line antimalarial drugs artesunate and DHA undergo thermal decomposition under mild conditions to give unusual dimeric peroxides, a glycol and a rearranged peroxide, in addition to benign decomposition products. The implications of the decomposition in relation to shelf-life determination according to the International Conference of Harmonization guidelines and use of DHA as an antimalarial drug are discussed.



The three-component reaction of aryl boronic acids with 1,2,4,5-tetrahydroxybenzene and 1,2-bis(4-pyridyl)ethylene or 4,4'-bipyridine leads to the formation of boronate ester polymers, which are deeply colored due to efficient intra-strand charge-transfer excitations.



Multicomponent Self-Assembly

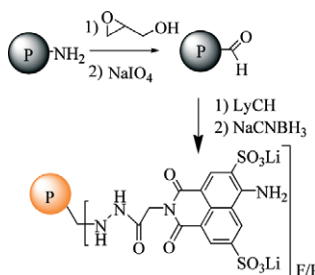
N. Christinat, E. Croisier, R. Scopelliti, M. Cascella, U. Röthlisberger, K. Severin*

Formation of Boronate Ester Polymers with Efficient Intrastrand Charge-Transfer Transitions by Three-Component Reactions

Eur. J. Inorg. Chem.

DOI: 10.1002/ejic.200700723

The reactions between glycidol and either the nonglycosylated protein BSA or the glycoprotein avidin (AV), followed by mild oxidation of the intermediate glycol moieties, afforded reactive aldehyde functionalities. As an application, the functionalized proteins were derivatized with the fluorescent dye Lucifer Yellow CH, affording highly fluorescent bioprobes.



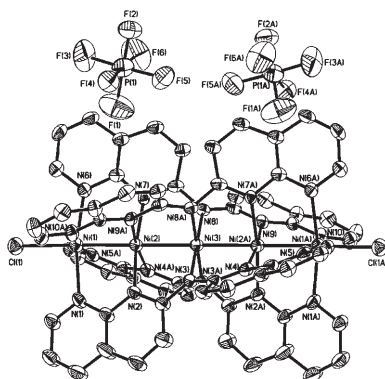
Bioconjugation Using Glycidol

J.-M. Heldt, N. Fischer-Durand, M. Salmain, A. Vessi res,* G. Jaouen

The Use of Glycidol to Introduce Aldehyde Functions Into Proteins – Application to the Fluorescent Labelling of Bovine Serum Albumin and Avidin

Eur. J. Org. Chem.

DOI: 10.1002/ejoc.200700429



Metal string! The first linear nickel framework in which the usual sequence of Ni^{II} atoms has been reduced by two electrons is presented. The electronic structure of the metal framework appears intermediate between a localized picture corresponding to $\text{Ni}^{\text{II}}\text{-Ni}^{\text{I}}\text{-Ni}^{\text{II}}\text{-Ni}^{\text{I}}$ and a fully delocalized model represented as $(\text{Ni}_2)^{3+}\text{-Ni}^{\text{II}}\text{-(Ni}_2)^{3+}$.

Mixed-Valent Compounds

I. P.-C. Liu, M. B nard,* H. Hasanov, I.-W. P. Chen, W.-H. Tseng, M.-D. Fu, M.-M. Rohmer, C.-h. Chen, G.-H. Lee, S.-M. Peng*

A New Generation of Metal String Complexes: Structure, Magnetism, Spectroscopy, Theoretical Analysis, and Single Molecular Conductance of an Unusual Mixed-Valence Linear $[\text{Ni}_5]^{8+}$ Complex

Chem. Eur. J.

DOI: 10.1002/chem.200700750



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