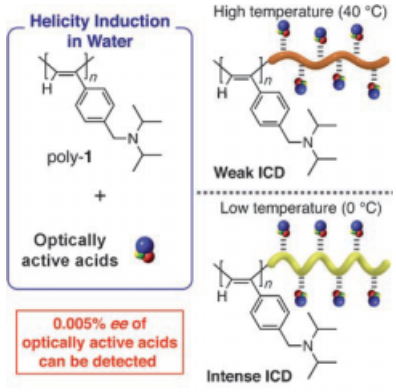
SPOTLIGHTS …

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**



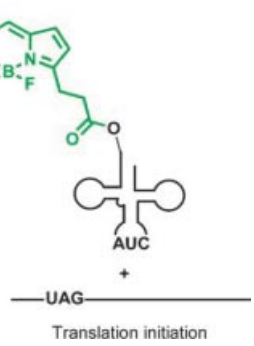
Blowing hot and cold: The title compound (poly-**1**) is highly sensitive to the chirality of chiral acids and can detect small enantiomeric imbalances in these acids in water. Its one-handed helical structure produces induced circular dichroism (ICD), whose signal intensity and pattern depend on the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

Protein Translation

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

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.

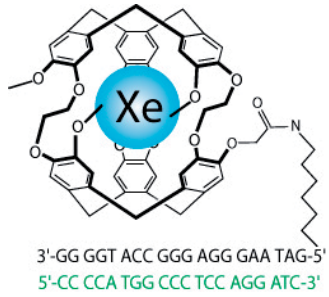
Xenon Biosensor

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.



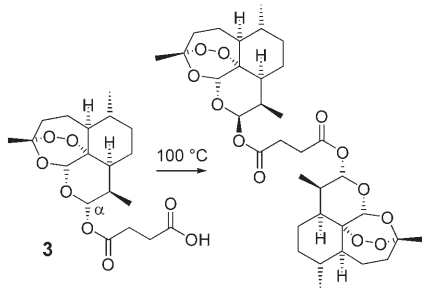
Drug Stability

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

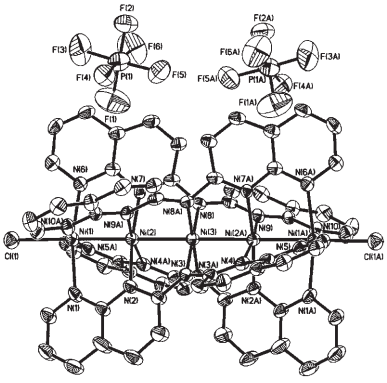
ChemMedChem
DOI: **10.1002/cmdc.200700064**

The front-line antimalarial drugs artesunate and DHA undergo thermal decomposition under mild conditions to give unusual dimeric peroxides, a glycal 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.



… ON OUR SISTER JOURNALS

EurJIC European Journal of Inorganic Chemistry



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 Ni^{II}-Ni^{I}-Ni^{II}-Ni^{I}-Ni^{II} and a fully delocalized model represented as $(Ni_2)^{3+}$-Ni^{II}-$(Ni_2)^{3+}$.

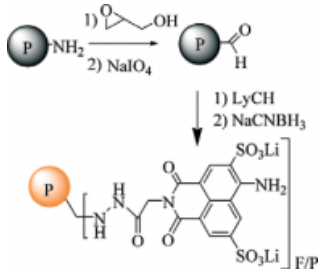
Mixed-Valent Compounds

I. P.-C. Liu, M. Bénard,* 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 $[Ni_5]^{8+}$ Complex

Chem. Eur. J.
DOI: **10.1002/chem.200700750**

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.

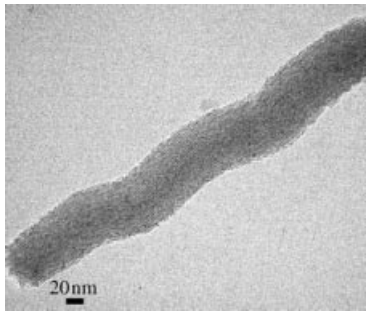


Bioconjugation Using Glycidol

J.-M. Heldt, N. Fischer-Durand, M. Salmain, A. Vessières,* 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**



Keep this handy! Periodic mesoporous organosilica-based compounds with chiral channels are prepared by using an achiral fluorinated surfactant (FC-4911) and cetyltrimethylammonium bromide as structure-directing agents. Spiral samples synthesized from 1,4-bis(triethoxysilyl)benzene exhibit structural periodicity and a crystal-like mesoporous wall (see TEM image).

Mesoporous Materials

X. Meng, T. Yokoi, D. Lu, T. Tatsumi*

Synthesis and Characterization of Chiral Periodic Mesoporous Organosilicas

Angew. Chem. Int. Ed.
DOI: **10.1002/anie.200702666**

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