

Gas Adsorption

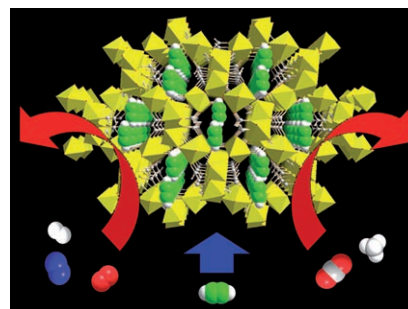
D. G. Samsonenko, H. Kim, Y. Sun,
G.-H. Kim, H.-S. Lee, K. Kim*

Microporous Magnesium and
Manganese Formates for Acetylene
Storage and Separation

Chem. Asian J.

DOI: 10.1002/asia.200600390

Exclusive entry: Microporous magnesium and manganese formates show not only a high capacity for acetylene sorption but also remarkable selectivity over CO_2 , CH_4 , N_2 , O_2 , and H_2 at room temperature. The single-crystal X-ray structure analysis of the acetylene-adsorbed metal formates reveals two acetylene sorption sites.



Solid-state NMR Spectroscopy

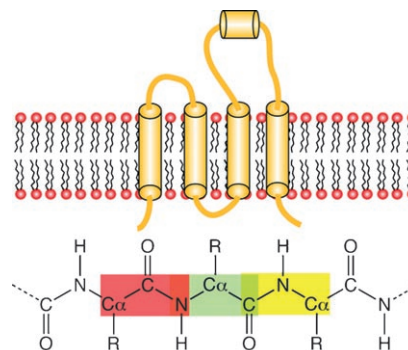
Y. Li, D. A. Berthold, H. L. Frericks,
R. B. Gennis, C. M. Rienstra*

Partial ^{13}C and ^{15}N Chemical-Shift
Assignments of the Disulfide-Bond-
Forming Enzyme DsbB by 3D Magic-
Angle Spinning NMR Spectroscopy

ChemBioChem

DOI: 10.1002/cbic.200600484

Another piece of the puzzle. A 20 kDa integral membrane protein DsbB has been studied by 2D and 3D solid-state NMR. Partial chemical-shift assignments have been made in the transmembrane helices.



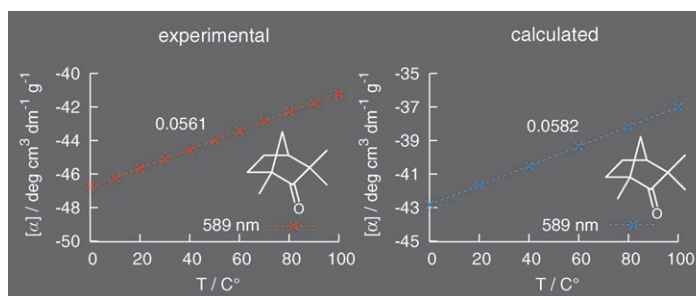
Optical Rotation

B. C. Mort, J. Autschbach*

Temperature Dependence of the Optical
Rotation in Six Bicyclic Organic
Molecules Calculated by Vibrational
Averaging

ChemPhysChem

DOI: 10.1002/cphc.200600757



Accurate predictions: A computational model which includes vibrational corrections is used to compute optical rotations in bicyclic molecules. The inclusion

of temperature effects in the vibrational averaging elucidates the temperature dependence (see figure) of the optical rotation from a purely vibrational effect.

Functionalized Nanoparticles

J. Li, X. Wang,* C. Wang, B. Chen,
Y. Dai, R. Zhang, M. Song, G. Lv, D. Fu

The Enhancement Effect of Gold
Nanoparticles in Drug Delivery and as
Biomarkers of Drug-Resistant Cancer
Cells

ChemMedChem

DOI: 10.1002/cmdc.200600264

A golden opportunity: Functionalized gold nanoparticles (NPs) synergistically enhance the delivery of drugs to, and serve as biomarkers of drug-resistant leukemia cells. The combination of 3-mercaptopropionic acid capped Au NPs with anticancer drugs could be a new approach to the treatment of cancer.





Four cyanido-bridged complexes derived from the $[\text{Cr}(\text{CN})_5(\text{NO})]^{3-}$ anion and Mn^{III} Schiff-base cations have been synthesized with trinuclear, 1D chain or 2D

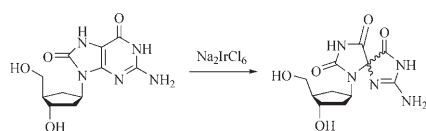
layered molecular structures. Antiferromagnetic $\text{Mn}^{\text{III}}\text{--Cr}^{\text{I}}$ coupling has been exclusively observed in these complexes.

Heterodimetallic Complexes

Z.-H. Ni, Lei Zheng, L.-F. Zhang,
A.-L. Cui, W.-W. Ni, C.-C. Zhao,
H.-Z. Kou*

Cyano-Bridged Dimetallic Complexes
Derived from Manganese(III) Schiff
Bases and Pentacyanonitrosyl-
chromate(I): Synthesis, Crystal Structure
and Magnetic Properties

Eur. J. Inorg. Chem.
DOI: 10.1002/ejic.200600958



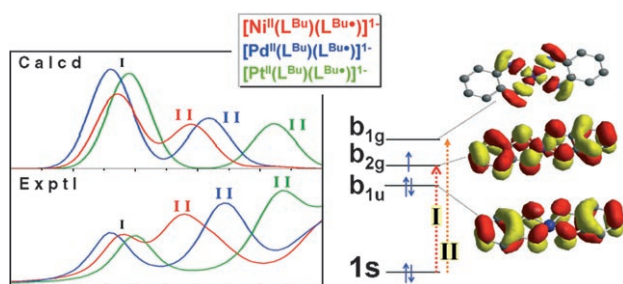
Carbocyclic DNA lesion analogs provide a powerful tool for the investigation of the recognition of DNA lesions by DNA glycosylases. Here, we report the synthesis of carbocyclic analogs of the DNA lesions 7,8-dihydro-8-oxo-2'-deoxyguanosine and spiroiminodihydroantoin as a nucleoside as well as in single-stranded DNA.

Carbocyclic Spiroiminodihydroantoin

H. Müller, T. Carell*

A Carbocyclic Analog of the Oxidatively
Generated DNA Lesion
Spiroiminodihydroantoin

Eur. J. Org. Chem.
DOI: 10.1002/ejoc.200600982



A new methodology based on quasi-relativistic time-dependent density functional theory (TD-DFT) has been applied in order to interpret experimental covalen-

cies from the S K-edge pre-edge intensities obtained for a series of transition-metal dithiolene complexes (see example in diagram).

Coordination Modes

K. Ray, S. DeBeer George,
E. I. Solomon, K. Wieghardt,* F. Neese*

Description of the Ground-State
Covalencies of the Bis(dithiolato)
Transition-Metal Complexes from X-ray
Absorption Spectroscopy and
Time-Dependent Density-Functional
Calculations

Chem. Eur. J.
DOI: 10.1002/chem.200601425



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graphic details are given where available at the time of this issue's publication. If you are reading these pages on a computer, click on any of the items to read the full article.