

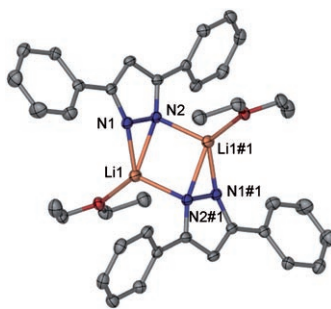
Metal Clusters

S. Beaini, G. B. Deacon,* A. P. Erven,
P. C. Junk,* D. R. Turner

Alkali-Metal Pyrazolate Complexes with
Unusual Pyrazolate Coordination Modes
and Pseudocubane Motifs

Chem. Asian J.

DOI: 10.1002/asia.200700005



Oddly bound: The synthesis and structural characterization of dimeric, tetranuclear, polymeric, pseudocubane, and oxo-centered M_8 cage pyrazolate complexes illustrate the wide variety of coordination modes possible for pyrazolate ligands. Unusual modes include the contracted $\mu\text{-}\eta^2\text{:}\eta^1$ shown, as well as the $\mu_3\text{-}\eta^5\text{:}\eta^2\text{:}\eta^2$, $\mu_3\text{-}\eta^5\text{:}\eta^2\text{:}\eta^1$, and $\mu_3\text{-}\eta^4\text{:}\eta^2\text{:}\eta^1$ modes with five-, six-, and seven-coordinate metal atoms.

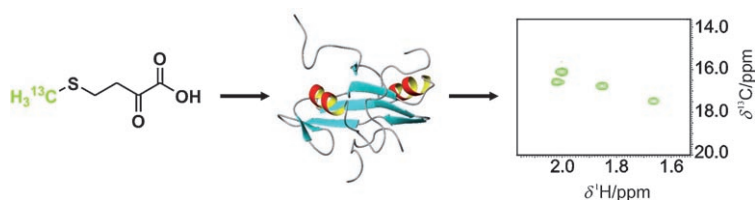
NMR Spectroscopy

M. Fischer, K. Kloiber, J. Häusler,
K. Ledolter, R. Konrat,* W. Schmid*

Synthesis of a ^{13}C -Methyl-Group-Labeled
Methionine Precursor as a Useful Tool
for Simplifying Protein Structural
Analysis by NMR Spectroscopy

ChemBioChem

DOI: 10.1002/cbic.200600551



Marked for life. For the characterization of larger proteins new NMR spectroscopy methods that focus on side-chain methyl groups have been developed by using selectively isotope-labeled precursor compounds. Here we report on the

synthesis of a ^{13}C -methyl-group-labeled methionine precursor on a preparative scale, and its incorporation into the SH2 domain of the protein PLC- γ 1 (see scheme).

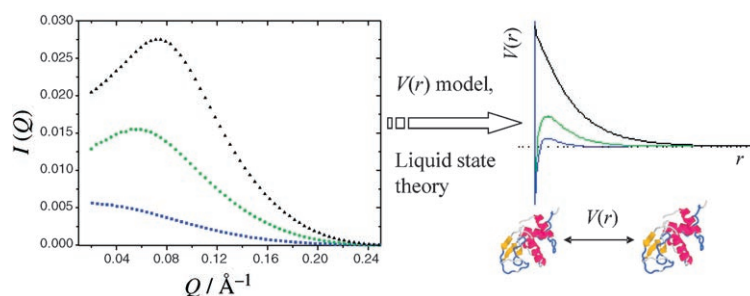
Biophysics

N. Javid, K. Vogtt, C. Krywka, M. Tolan,
R. Winter*

Protein–Protein Interactions in Complex
Cosolvent Solutions

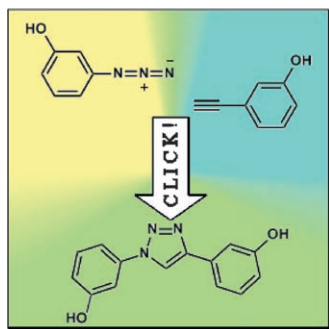
ChemPhysChem

DOI: 10.1002/cphc.200600631



Solution effects: Various kosmotropic and chaotropic cosolvents and salts are added to solutions of lysozyme, and static structure factors are determined experimentally (see picture). Statistical

mechanical analysis allows for deconvolution of repulsive and attractive interactions, lending insight into protein–protein interactions on a molecular level.



Fast and simple: the complexity of steroids can be mimicked by two phenol rings linked together by the easiest of reactions: the click [3+2] azide-alkyne cycloaddition.

Steroid Chemistry

T. Pirali, S. Gatti, R. Di Brisco, S. Tacchi, R. Zaninetti, E. Brunelli, A. Massarotti, G. Sorba, P. L. Canonico, L. Moro, A. A. Genazzani, G. C. Tron,* Billington

Estrogenic Analogues Synthesized by Click Chemistry

ChemMedChem

DOI: 10.1002/cmdc.200600192

Various Cl...H-O hydrogen-bonding motifs are identified in a series of pyrazolato-based dinickel complexes, where either the H-donor (MeOH or H₂O) or the H-acceptor (chlorido) or both are bound to a nickel ion.



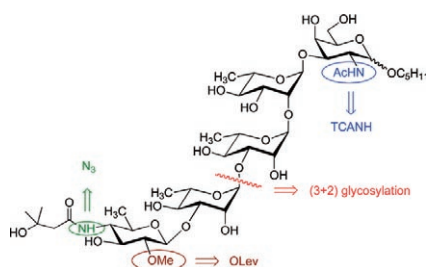
Dinuclear Nickel(II) Complexes

F.-M. Nie, G. Leibel, S. Demeshko, S. Dechert, F. Meyer*

Intra- and Intermolecular H...Cl-Ni Bonding Patterns in a Series of Highly Preorganized Dinuclear Nickel(II) Complexes

Eur. J. Inorg. Chem.

DOI: 10.1002/ejic.200600889



The first total synthesis of the pentasaccharide attached to BclA spore surface protein of *Bacillus anthracis* is reported. Key to differentiating the two amino groups is the one-pot conversion of an *N*-trichloroacetyl into an *N*-acetyl group and simultaneous reduction of the azide to a free amine by excess tributyltin hydride under radical-forming conditions.

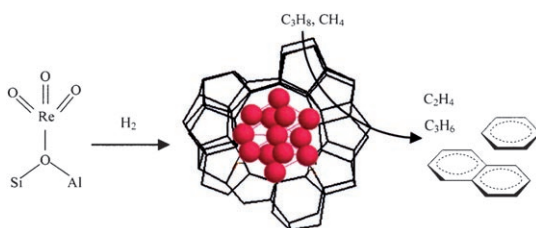
Carbohydrate Synthesis

D. B. Werz, A. Adibekian, P. H. Seeberger*

Synthesis of a Spore Surface Pentasaccharide of *Bacillus anthracis*

Eur. J. Org. Chem.

DOI: 10.1002/ejoc.200601082



Zeolite-encapsulated rhenium: Thermally stable rhenium was prepared by using H-ZSM5 as a support. The vapor-phase exchange of rhenium within a medium-pore zeolite to form isolated structures that are thermally stable and highly active catalysts for alcohol oxidation is

demonstrated. Reduction of the resulting materials formed metal clusters (see figure) within zeolitic channels that resist agglomeration and convert methane and propane to higher alkanes and arenes.

Rhenium Clusters

H. S. Lacheen, P. J. Cordeiro, E. Iglesia*

Isolation of Rhenium and ReO_x Species within ZSM5 Channels and their Catalytic Function in the Activation of Alkanes and Alkanols

Chem. Eur. J.

DOI: 10.1002/chem.200601602