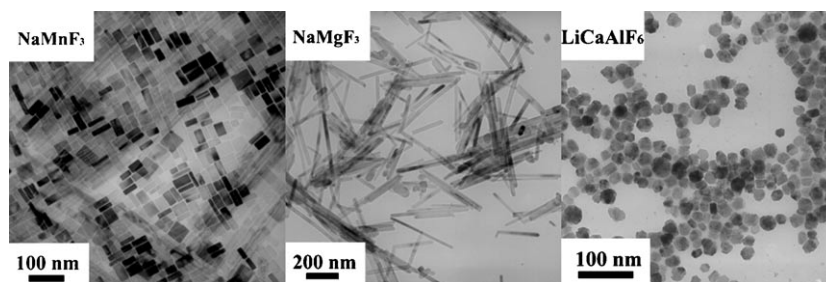


Nanostructures

Y.-P. Du, Y.-W. Zhang,* Z.-G. Yan,
L.-D. Sun, S. Gao, C.-H. Yan*

Single-Crystalline and
Near-Monodispersed NaMF_3 ($M = \text{Mn},$
 $\text{Co}, \text{Ni}, \text{Mg}$) and LiMAlF_6 ($M = \text{Ca}, \text{Sr}$)
Nanocrystals from Cothermolysis of
Multiple Trifluoroacetates in Solution

Chem. Asian J.
DOI: 10.1002/asia.200700054



Geometric designs: High-quality NaMF_3 ($M = \text{Mn}, \text{Co}, \text{Ni}, \text{Mg}$), LiMAlF_6 ($M = \text{Ca}, \text{Sr}$), and $\text{NaMgF}_3\text{:Yb,Er}$ nanocrystals can be synthesized from their corresponding trifluoroacetates in surfactant solutions

with high boiling points. NaMnF_3 nanoplates and $\text{NaMgF}_3\text{:Yb,Er}$ nanorods display interesting magnetic and fluorescence upconversion properties, respectively.

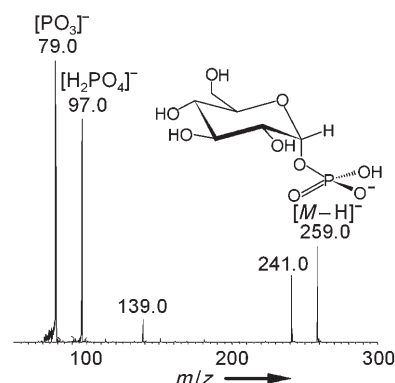
Mass Spectrometry

J. P. M. Hui, J. Yang, J. S. Thorson,
E. C. Soo*

Selective Detection of Sugar Phosphates
by Capillary Electrophoresis/Mass
Spectrometry and Its Application to an
Engineered *E. coli* Host

ChemBioChem
DOI: 10.1002/cbic.200700116

Unique sugar-1-phosphate and NDP-sugar libraries. Natural and “unnatural” sugar phosphates resulting from in vivo galactokinase (Galk) bioconversion were identified in cell lysates from an engineered *E. coli* host by a highly selective capillary electrophoresis and electrospray mass spectrometry (CE-ESMS) method, followed by tandem mass spectrometry (MS/MS) for structural confirmation.

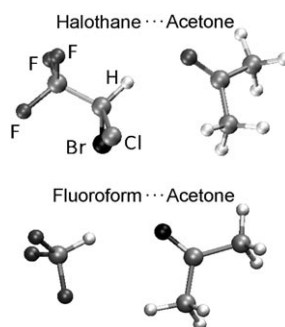


Hydrogen Bonding

K. Pluháčková, P. Hobza*

On the Nature of the Surprisingly Small
(Red) Shift in the Halothane...Acetone
Complex

ChemPhysChem
DOI: 10.1002/cphc.200700153



One red shift, the other blue: Halothane- and fluoroform-acetone complexes (see figure) both contain a $\text{CH}\cdots\text{O}$ bond; however, the halothane complex exhibits a small red shift of the C–H stretching frequency upon complexation, and fluoroform shows a pronounced blue shift. This intriguing problem is investigated in detail theoretically.

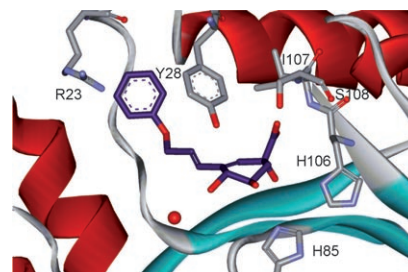
Enzyme Inhibition

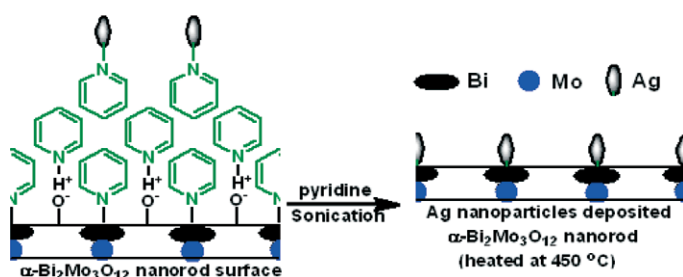
R. J. Payne, F. Peyrot, O. Kerbarh,
A. D. Abell, C. Abell*

Rational Design, Synthesis, and
Evaluation of Nanomolar Type II
Dehydroquinase Inhibitors

ChemMedChem
DOI: 10.1002/cmdc.200700032

Closing the lid: A range of potent type II dehydroquinase inhibitors are described. All incorporate an anhydroquinone core, designed to mimic the reaction intermediate. Linkers of various length and rigidity were attached at C3 to place a phenyl substituent into an adjacent binding pocket where it can interact with residues on a mobile loop which closes the active site.





Silver nanoparticles with an average size of about 10 nm were uniformly deposited on the surface of $\alpha\text{-Bi}_2\text{Mo}_3\text{O}_{12}$ nanorods by using power ultrasound. Pyridine as a

medium assisted the deposition process of the Ag nanoparticles, whereas Bi was observed to be the preferred binding site on the surface of the nanorods.

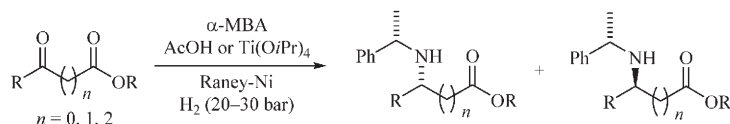
Hybrid Nanocomposites

A. V. Ghule, K. Ghule, S.-H. Tzing, Y.-C. Ling*

Synthesis and Characterization of Silver-Nanoparticle-Deposited $\alpha\text{-Bi}_2\text{Mo}_3\text{O}_{12}$ Nanorods

Eur. J. Inorg. Chem.

DOI: [10.1002/iejc.200700181](https://doi.org/10.1002/iejc.200700181)



Unnatural α -, β - and γ -amino esters are synthesized by reductive amination of keto esters with α -methylbenzylamine,

hydrogen and Raney-Ni. This strategy obviates the need for the isolation of enamine or imine intermediates.

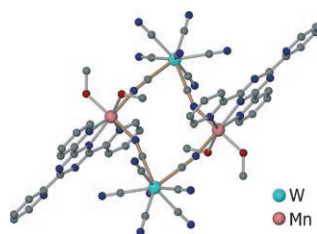
Reductive Amination of Keto Esters

T. C. Nugent,* A. K. Ghosh

Selective Synthesis of Unnatural α -, β - and γ -Amino Esters

Eur. J. Org. Chem.

DOI: [10.1002/ejoc.200700345](https://doi.org/10.1002/ejoc.200700345)



A series of heterobimetallic complexes such as depicted has been synthesized by combining $[\text{W}(\text{CN})_8]^{3-/4-}$ anions with mononuclear precursors of Mn^{2+} ions and tridentate organic ligand 2,4,6-tris(2-pyridyl)-1,3,5-triazine (tptz). Crystal structures of all these complexes are derived from the same basic structural fragment, namely, a cyanide-bridged Mn_2W_2 square.

Heterobimetallic Complexes

H. Zhao, M. Shatruk, A. V. Prosvirin, K. R. Dunbar*

Variation of Heterometallic Structural Motifs Based on $[\text{W}(\text{CN})_8]^{3-}$ Anions and Mn^{II} Ions as a Function of Synthetic Conditions

Chem. Eur. J.

DOI: [10.1002/chem.200700298](https://doi.org/10.1002/chem.200700298)



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