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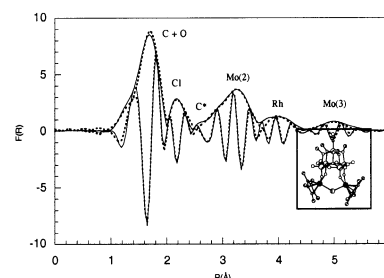
Papers

**Richard Villanneau, Anna Proust,
Francis Robert, Françoise Villain,
Michel Verdaguer, Pierre Guozerh**

Polyhedron 22 (2003) 1157

Polyoxoanion-supported pentamethylcyclopentadienylrhodium complexes: syntheses and structural characterization by EXAFS

Reaction of the defect Lindqvist-type oxonitrosyl species $[\text{Mo}_5\text{O}_{13}(\text{OMe})_4(\text{NO})]^{3-}$ with $[\text{Cp}^*\text{RhCl}_2]_2$ yields $\{[\text{Cp}^*\text{Rh}(\text{H}_2\text{O})]-\text{Mo}_5\text{O}_{13}(\text{OMe})_4(\text{NO})\}^-$ or $\{[\text{Cp}^*\text{Rh}]_2(\mu\text{-X})\text{Mo}_5\text{O}_{13}(\text{OMe})_4(\text{NO})\}$ ($\text{X} = \text{Cl}$ or Br) depending on the experimental conditions. These complexes have been isolated as crystalline solids which have been characterized structurally by X-ray diffraction and/or Rh K-edge extended X-ray absorption fine structure spectroscopy.

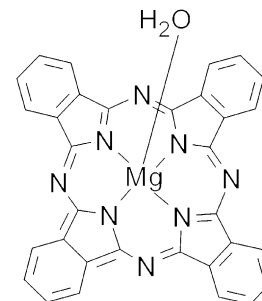


Jan Janczak, Ynara Marina Idemori

Polyhedron 22 (2003) 1167

Synthesis, crystal structure and characterisation of aquamagnesium phthalocyanine— $\text{MgPc}(\text{H}_2\text{O})$. The origin of an intense near-IR absorption of magnesium phthalocyanine known as ‘X-phase’

Crystals of the triclinic modification of $\text{MgPc}(\text{H}_2\text{O})$ are obtained. The 4+1 coordinated central Mg atom is significantly displaced from the N_4 -isoindole plane of the distorted Pc ring. In the crystal the $\text{MgPc}(\text{H}_2\text{O})$ molecules form dimers via $\text{O}-\text{H} \cdots \text{N}$ hydrogen bonds with strong $\pi-\pi$ interactions between Pc rings that are responsible for the observed intense absorption band in the near-IR spectral region. This molecular arrangement is different to that found in the monoclinic modification of $\text{MgPc}(\text{H}_2\text{O})$ that is not near-IR active.

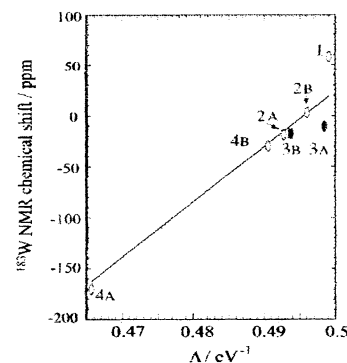


M. Inoue, T. Yamase, L.P. Kazansky

Polyhedron 22 (2003) 1183

NMR and UV spectra of lanthanide decatungstate complexes $\text{LnW}_{10}\text{O}_{36}^{n-}$ and $\text{W}_{10}\text{O}_{32}^{4-}$: a study of some peculiarities in spectra by the extended Hückel MO method

Lanthanide decatungstate (LDT) complexes have been synthesized and characterized by ^{183}W , ^{17}O NMR and UV spectra. Some peculiarities of LDTs in the spectra were explained by the extended Hückel molecular orbital method, which showed that the general trend in the change of ^{183}W NMR chemical shifts depended on the paramagnetic contribution that is determined by the excited states.

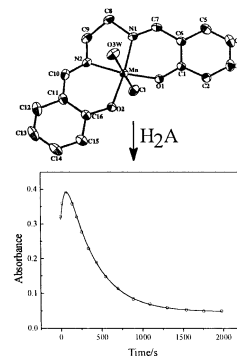


Anangamohan Panja, Nizamuddin Shaikh, Muhammad Ali, Pavel Vojtišek, Pradyot Banerjee

Polyhedron 22 (2003) 1191

Structural characterization of a new manganese(III)–salen complex $[H_2salen = N,N'$ -bis(salicylidene)ethane-1,2-diamine] and study of its electron transfer kinetics with hydroquinone and catechol

The synthesis and single-crystal X-ray characterization of the six-coordinated complex, $[Mn(salen)Cl(H_2O)] \cdot H_2O$, are described. In this complex, the Mn–Cl and Mn–OH₂ distances are quite longer than usual, probably due to the intermolecular hydrogen bonding. The electron transfer reactivity of this compound with hydroquinone and catechol has been followed kinetically over a wide range of pH.

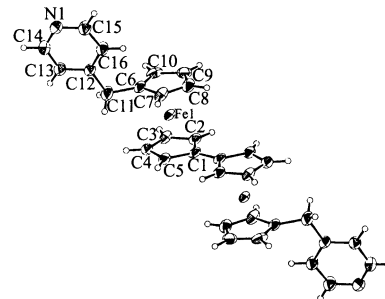


Teng-Yuan Dong, Bor-Ruey Huang, Mei-Ching Lin, Michael Y. Chiang

Polyhedron 22 (2003) 1199

A functionalized pyridinyl ligand containing binuclear ferrocene

A functionalized pyridinyl ligand containing redox ferrocene as a spacer to separate the metal-binding domains has been prepared from 1',1''-dilithioferrocene and the electrophilic reagent 4-pyridine carboxaldehyde. The new ferrocene compounds are useful for the preparation of polymeric mixed-valence ferrocenium metallosupramolecules. Electrochemical measurement of 1',1''-dipyridinylmethylferrocene shows two reversible redox waves.

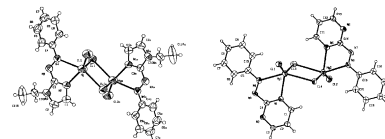


Brojogopal Chand, Umashankar Ray, Prasanta Kumar Santra, Golam Mostafa, Tian-Huey Lu, Chittaranjan Sinha

Polyhedron 22 (2003) 1205

Synthesis, spectral characterization and X-ray crystal structures of mercury(II)-azoimine compounds

This article describes the coordination chemistry of 1-ethyl-2-(phenylazo)imidazoles and 2-(aryloxy)pyrimidines with mercury(II). The structure determination shows that mercury(II) forms a chloro-bridged dinuclear azoimine chelated system. Bond length data reveals that Hg(II) has a higher affinity to imidazole-N than that of pyrimidine-N.

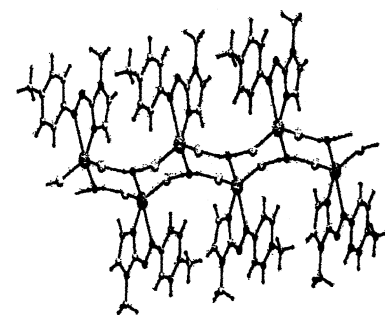


B.G. Chand, U.S. Ray, J. Cheng, T.-H. Lu, C. Sinha

Polyhedron 22 (2003) 1213

Studies on the zinc(II)-azoimine system. Single-crystal X-ray structure of $Zn(MeaaiMe)Cl_2 \cdot H_2O$ and $Zn(HaaiMe)_2(NCS)_2$ (MeaaiMe = 1-methyl-2-(*p*-tolylazo)imidazole, HaaiMe = 1-methyl-2-(phenylazo)imidazole)

Zinc(II) complexes of azoimidazoles exhibit distorted TBP geometry. The presence of coordinated water leads to a hydrogen bonded 1D chain in dichloro-{1-methyl-2-(*p*-tolylazo)imidazole}zinc(II) monohydrate. The X-ray structure of dithiocyanato-bis-{1-methyl-2-(phenylazo)imidazole}zinc(II) shows a difference in the coordination of the organic molecule. One molecule binds as a bidentate chelator and the second one is a monodentate N-donor. In both cases Zn(II) shows a high affinity for the imidazole N-donor center.

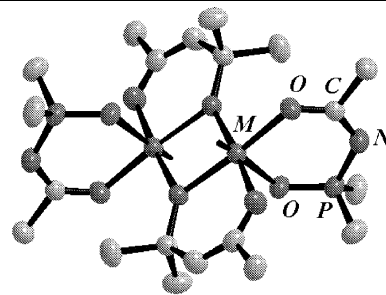


Elizaveta A. Trush,
Vladimir M. Amirkhanov,
Vladimir A. Ovchinnikov,
Jolanta Swiatek-Kozłowska,
Kateryna A. Lanikina,
Konstantin V. Domasevitch

Polyhedron 22 (2003) 1221

Metal carbacylamidophosphates: ability of coordination patterns to di- and polymerization

Nickel(II), cobalt(II) and copper(II) complexes with carbacylamidophosphate ligands $\{RC(O)NP(O)R_2\}^-$ reveal a variety of di- and polymeric patterns. The association takes place either by μ^2 -phosphorylic bridges, donor atoms of the substitutes or additional neutral ligands.

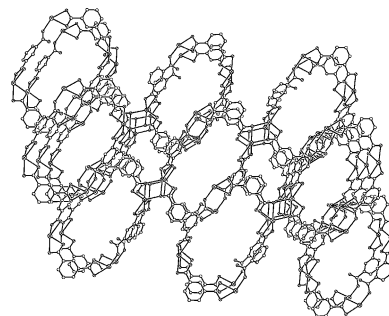


You-Fu Zhou, Ying-Jun Zhao,
Dao-feng Sun, Jia-Bao Weng, Rong Cao,
Mao-Chun Hong

Polyhedron 22 (2003) 1231

Syntheses, crystal structures and photoluminescent properties of two isophthalate-bridged complexes

Two interesting isophthalate-bridged coordination polymers, $[Cd_2(2,2'\text{-bpy})_2(ip)_2]_n$ (**1**) and $[Zn_2(2,2'\text{-bpy})_2(ip)_2]_n$ (**2**) (2,2'-bpy = 2,2'-bipyridine, ip = isophthalate) have been hydrothermally synthesized and structurally characterized. X-ray single-crystal diffraction analyses reveal that compound **1** contains a three-dimensional polymeric channel with tetra $-Cd-ip-$ as building units and compound **2** forms a double-helical structure linked by $Zn_2O_4C_2$ cores.

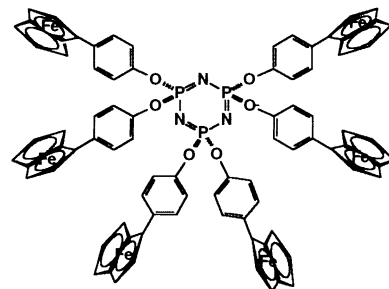


Saumitra Sengupta

Polyhedron 22 (2003) 1237

A hexaferrocenyl cluster based on a cyclotriphosphazene core: synthesis and electrochemistry

Sixfold substitution reaction of hexachlorocyclotriphosphazene with 4-ferrocenylphenol gave a covalent hexaferrocenyl cluster in which all six ferrocene units were found to be electrochemically equivalent. On the other hand, reaction of hexachlorocyclotriphosphazene with ferrocene methanol produced ferrocene aldehyde in high yield.

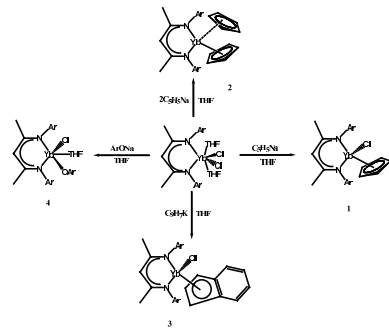


Yong Zhang, Ying-Ming Yao, Yun-Jie Luo,
Qi Shen, Yan Cui, Kai-Bei Yu

Polyhedron 22 (2003) 1241

Ytterbium complexes supported by β -diketiminate ligands: cyclopentadienyl, indenyl, and aryloxide derivatives

Four ytterbium β -diketiminate complexes, $(C_5H_5)(L)YbCl$ (**1**), $(C_5H_5)_2YbL$ (**2**), $(C_9H_7)(L)YbCl$ (**3**) and $(ArO)(L)YbCl(THF)$ (**4**) ($L = N,N\text{-}2,6\text{-diisopropylphenyl-}2,4\text{-pentanediiimine}$), were synthesized in high yield using $LYbCl_2(THF)_2$ as a precursor. Crystal structures analysis revealed that complex **3** is an unsolvated monomer, while complex **4** is a THF solvated monomer.

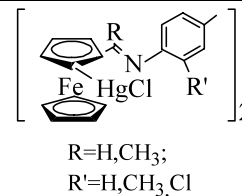


**Xueling Hou, Xiuling Cui, Maoping Song,
Xinqi Hao, Yangjie Wu**

Polyhedron 22 (2003) 1249

Studies on cyclomercuration of bisferrocenyl-
limines

The cyclomercuration of bisferrocenylimines $[(\eta^5\text{-C}_5\text{H}_5)\text{Fe}\{\eta^5\text{-C}_5\text{H}_4\text{-CR=N-(C}_6\text{H}_3\text{-2-R}')\}]_2$ occurred predominantly in the *ortho*-position of the substituted ferrocenyl ring to obtain double 2-mercurated ferrocenylimines, which arise from the activation of two $\sigma(\text{C}_{\text{sp}^2, \text{ferrocene-H}})$ bonds.

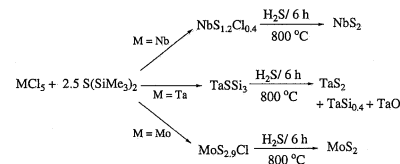


**Claire J. Carmalt, Christopher W. Dinnage,
Ivan P. Parkin, Emily S. Peters,
Kieran Molloy, Marie A. Colucci**

Polyhedron 22 (2003) 1255

The use of hexamethyldisilathiane for the
synthesis of transition metal sulfides

Reactions of metal halides (TiCl₄, NbCl₅ and MoCl₅) with S(SiMe₃)₂ formed black amorphous precipitates that when annealed under H₂S or static vacuum result in the formation of single phase crystalline TiS₂, NbS₂ and MoS₂. A new solid solution Nb_{0.5}Ta_{0.5}S₂ was readily prepared by this method. The reaction of metal halides with S(SiMe₃)₂ has potential for the synthesis of a wide range of mixed metal sulfides.

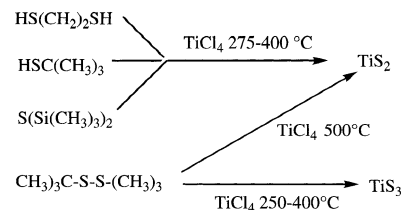


**Claire J. Carmalt, Ivan P. Parkin,
Emily S. Peters**

Polyhedron 22 (2003) 1263

Atmospheric pressure chemical vapour de-
position of TiS₂ thin films on glass

Atmospheric pressure chemical vapour deposition (APCVD) of TiS₂ thin films was achieved on glass by reaction of HS(CH₂)₂SH, HSC(CH₃)₃ and S(Si(CH₃)₃)₂ with TiCl₄ at 275–400 °C. The films were gold, reflective and showed semi-metal conductivity. APCVD reaction of (CH₃)₃C-S-S-(CH₃)₃ at 250–400 °C produced TiS₃ thin films. All TiS_x films were adhesive to the substrates and showed good elemental purity with negligible chlorine and carbon contamination.

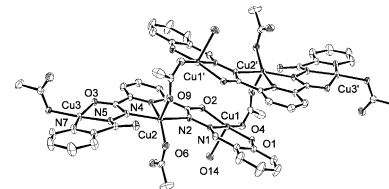


**Victoria A. Milway, Liang Zhao,
Tareque S.M. Abedin,
Laurence K. Thompson, Zhiqiang Xu**

Polyhedron 22 (2003) 1271

Trinuclear complexes of a series of 'tritopic'
hydrazide ligands—structural and magnetic
properties

Linear trinuclear complexes of some tritopic dihydrazide ligands, e.g. [Cu₃(L1-3H)-(CH₃COO)₃(H₂O)₂·H₂O (1) and [Cu₃(L2-4H)(H₂O)₃(CH₃OH)](NO₃)₂ (3), have three copper(II) centers bridged by *trans*-N–N diazine linkages and exhibit moderate anti-ferromagnetic exchange. The complex [Mn₃(L3)₂(CH₃CN)₂(H₂O)₂](ClO₄)₆·2H₂O (5) has an unusual trinuclear structure involving an alkoxy-bridged dinuclear center and an essentially isolated mononuclear Mn(II) center.

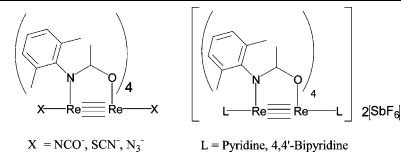


Donocadh P. Lydon, Trevor R. Spalding,
John F. Gallagher

Polyhedron 22 (2003) 1281

Substitution reactions of rhenium–chloride bonds in $[\text{Re}_2(\text{DMAA})_4\text{Cl}_2]$, (DMAA = 2',6'-dimethylacetanilido); synthesis and characterisation of $[\text{Re}_2(\text{DMAA})_4\text{X}_2]$ (X = NCO, NCS, N_3) and $[\text{Re}_2(\text{DMAA})_4\text{L}_n]\text{[SbF}_6\text{]}_2$ ($n = 2$, L = pyridine; $n = 1$, L = 4,4'-bipyridine)

Substitution of chloride ligands in $[\text{Re}_2(\text{DMAA})_4\text{Cl}_2]$ (**1**) affords $[\text{Re}_2(\text{DMAA})_4\text{X}_2]$ with X = $[\text{N}_3]^-$, **2**, $[\text{SCN}]^-$; **3**, or $[\text{NCO}]^-$, while the reaction of **1** and $\text{Ag}[\text{SbF}_6]$ in air affords $[\text{Re}_2(\text{DMAA})_4(\text{H}_2\text{O})_2][\text{SbF}_6]_2 \cdot \text{H}_2\text{O}$. The aquo ligands in this molecule can be displaced by pyridine or 4,4'-bipyridine $[\text{Re}_2(\text{DMAA})_4(\text{pyridine})_2][\text{SbF}_6]_2$ (**6**) (68%), and $[\text{Re}_2(\text{DMAA})_4(4,4'\text{-bipyridine})][\text{SbF}_6]_2$.



Corrigendum	1289
Erratum	1291

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