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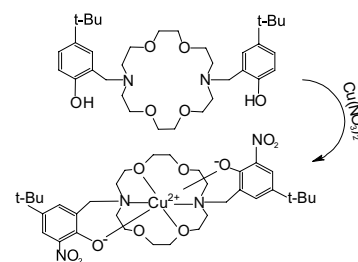
Papers

Shu-Lan Ma, Wen-Xiang Zhu
Miao-Qiong Xu, Ying-Li Wang,
Qian-Ling Guo, Ying-Chun Liu

Polyhedron 22 (2003) 3249

Syntheses and crystal structures of copper complexes of 7,16-bis (5-*t*-butyl-2-hydroxybenzyl)-1,4,10,13-tetraoxa-7,16-diazacyclooctadecane

Two copper complexes of a double-armed crown ether were synthesized. Structural characterization shows that the side-arm *p*-*tert*-butylphenols of the original crown ether unexpectedly were nitrated in the complex prepared from $\text{Cu}(\text{NO}_3)_2$. Electrochemical studies indicate that the two complexes undergo irreversible reduction in DMF solution.

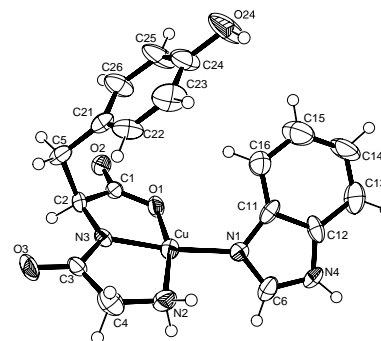


Ángel García-Raso, Juan J. Fiol,
Bartomeu Adrover, Pere Tauler, Antoni Pons,
Ignasi Mata, Enrique Espinosa, Elies Molins

Polyhedron 22 (2003) 3255

Reactivity of copper(II) peptide complexes with bioligands (benzimidazole and creatinine)

In the ternary benzimidazole complexes the lateral chain of the peptide moiety play an important role on the relative orientation of the ligand. In contrast, in the creatinine complexes the presence of two important intramolecular hydrogen bonds yield a nearly co-planar system which is independent of the nature of the peptidic lateral chain.

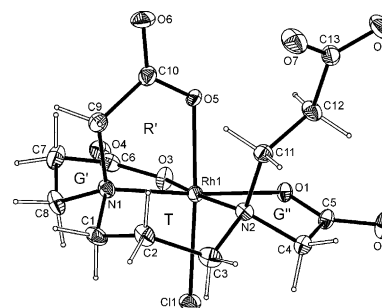


Urszula Rychlewska, Miloš I. Djuran,
Beata Warżajtis, Dusanka D. Radanović,
Miorad M. Vasojević, Dušan J. Radanović

Polyhedron 22 (2003) 3265

Crystal structure of *cis*-polar,*trans*(Cl,O₅)-Na₂[Rh(1,3-pddadp)Cl]·7H₂O and structural correlations between octahedral pentadentate metal(III) complexes with diaminepolycarboxylato-type ligands

The structural characteristics of a new pentadentate rhodium(III) complex, the *cis*-polar,*trans*(Cl,O₅)-isomer of Na₂[Rh(1,3-pddadp)Cl]·7H₂O, obtained in the reaction of RhCl₃·3H₂O with the 1,3-pddadp ligand (1,3-pddadp is the 1,3-propanediamine-*N,N'*-diacetate-*N,N'*-di-3-propionate ion) have been reported. The electronic absorption spectrum of this complex is also given and compared with those of hexadentate *trans*(O₅O₆)-[Rh(1,3-pddadp)]⁻ and *trans*(O₅)-[Rh(1,3-pddadp)]⁻ complexes.

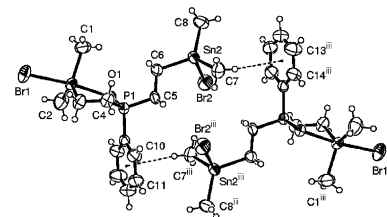


**William T.A. Harrison, R. Alan Howie,
Marcel Jaspars, Solange M.S.V. Wardell,
James L. Wardell**

Polyhedron 22 (2003) 3277

Further studies of [ω -(haloalkylstannyl)alkyl] phosphine oxides. Structures of bis[2-(bromodimethylstannyl)ethyl] phenylphosphine oxide and *t*-butyl [3-(iododimethylstannyl)propyl] phenylphosphine oxide

Structures of $(\text{BrMe}_2\text{SnCH}_2\text{CH}_2)_2\text{P}(\text{O})\text{Ph}$ and $\text{IME}_2\text{SnCH}_2\text{CH}_2\text{CH}_2\text{P}(\text{O})\text{PhBu}^t$ are reported and compared with those of related compounds.



**Eduardo R. Pérez, Rogerio M. Carvalho,
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T. P. Gambardella,
Benedito S. Lima-Neto**

Polyhedron 22 (2003) 3289

Synthesis of *trans*- $[\text{RuCl}_2(\text{dppe})_2]$ using the tetraalkylammonium chloride under transfer phase catalysis conditions. Crystal structure of the novel *trans*- $[\text{RuBrCl}(\text{dppe})_2]$

The complex *trans*- $[\text{RuCl}_2(\text{dppe})_2]$ was synthesized by solid state reaction of $\text{RuCl}_3 \cdot 3\text{H}_2\text{O}$ with Bu_4NCl as catalyst and subsequent coordination with dppe in dichloromethane. The complex *trans*- $[\text{RuBrCl}(\text{dppe})_2]$ was obtained when the TBAB was used. The crystal structure of the later complex was determined.

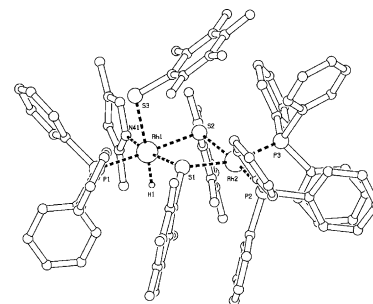


**Viorel Cîrcu, Manuel A. Fernandes,
Laurence Carlton**

Polyhedron 22 (2003) 3293

Reactions of $[\text{Rh}(\text{Tp}^*)(\text{PPh}_3)_2]$ ($\text{Tp}^* = \text{hydrotris}(3,5\text{-dimethylpyrazolyl})\text{-borate}$) involving fragmentation or loss of Tp^* . Structures of $[\text{Rh}(\text{Cl})_2(\text{H})(\text{PPh}_3)_2(\text{pz}^*)]$, $[(\text{PPh}_3)_2\text{Rh}(\mu\text{-SC}_6\text{F}_5)_2\text{Rh}(\text{SC}_6\text{F}_5)(\text{H})(\text{PPh}_3)(\text{pz}^*)]$ ($\text{pz}^* = 3,5\text{-dimethylpyrazole}$) and $[\{\text{Rh}(\text{Cl})_2(\text{PPh}_3)_2\}_2\text{Hg}]$

In the reaction of $[\text{Rh}(\text{Tp}^*)(\text{PPh}_3)_2]$ with $\text{Ph}_3\text{SiH}/\text{CH}_2\text{Cl}_2$, and $\text{C}_6\text{F}_5\text{SH}$ the Tp^* ligand is broken up; with HgCl_2 it is lost altogether. Structures of $[\text{Rh}(\text{Cl})_2(\text{H})(\text{PPh}_3)_2(\text{pz}^*)]$, $[(\text{PPh}_3)_2\text{Rh}(\mu\text{-SC}_6\text{F}_5)_2\text{Rh}(\text{SC}_6\text{F}_5)(\text{H})(\text{PPh}_3)(\text{pz}^*)]$ and $[\{\text{Rh}(\text{Cl})_2(\text{PPh}_3)_2\}_2\text{Hg}]$ are reported.

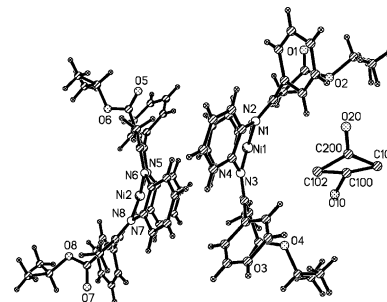


**Julita Eilmes, Marcin Ptaszek,
Łukasz Dobrzycki, Krzysztof Woźniak**

Polyhedron 22 (2003) 3299

New alkoxy-carbonyl derivatives of dibenzotetraaza[14]annulene. Crystal and molecular structure of [5,14-dihydro-7,16-diisopropoxy-carbonyl-8,15-dimethyl-6,17-diphenyldi benzo [b,i][1,4,8,11]tetraazacyclotetradecinato(2-)- $\kappa^4\text{N}$]nickel(II)

New supramolecular receptors equipped with two extended concave surfaces have been synthesized based on dibenzotetraaza[14]annulene framework. The X-ray diffraction data of diisopropoxycarbonyl derivative of dibenzotetraaza[14]annulene Ni(II) complex revealed its potential to associate with the molecules of appropriate guests.

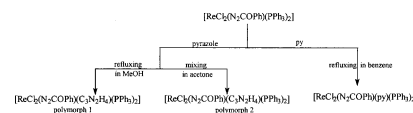


Jan O. Dzięgielewski, S. Michalik,
R. Kruszynski, T.J. Bartzak, J. Kusz

Polyhedron 22 (2003) 3307

The syntheses, crystal, molecular and electronic structures of two polymorphs of $[\text{ReCl}_2(\text{N}_2\text{COPh})(\text{C}_3\text{N}_2\text{H}_4)(\text{PPh}_3)_2]$ and $[\text{ReCl}_2(\text{N}_2\text{COPh})(\text{py})(\text{PPh}_3)_2]$ complexes

The $[\text{ReCl}_2(\eta^2\text{-N}_2\text{COPh-N',O})(\text{PPh}_3)_2]$ complex is a precursor of a variety organodiazenido complexes. $[\text{ReCl}_2(\eta^2\text{-N}_2\text{COPh-N',O})(\text{PPh}_3)_2]$ reacts with neutral donor ligands L, such as pyrazole and pyridine, giving organodiazenido species $[\text{ReCl}_2(\text{N}_2\text{COPh})\text{L}(\text{PPh}_3)_2]$.

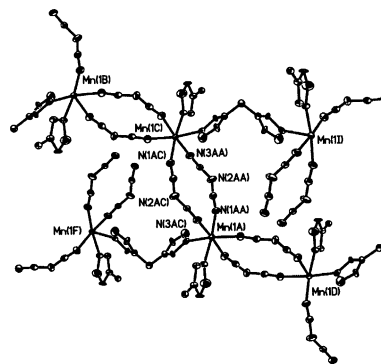


Wen Dong, Qing-Lun Wang, Zhan-Quan Liu,
Dai-Zheng Liao, Zong-Hui Jiang,
Shi-Ping Yan, Peng Cheng

Polyhedron 22 (2003) 3315

Syntheses, structures and magnetic properties of 1-D complex $\{[\text{Ni}(\mu_{1,5}\text{-dca})(\text{pn})_2](\text{ClO}_4)\}_n$, 2-D complex $[\text{Mn}(\mu_{1,5}\text{-dca})_2(\text{phen})]_n$ and 3-D complex $[\text{Mn}(\mu_{1,5}\text{-dca})_2\text{L}]_n$ (dca = dicyanamide, $\text{N}(\text{CN})_2^-$; pn = 1,3-propane diamine; phen = phenanthroline; L = 4,4'-ditriazole methane)

Three novel dicyanamide complexes $\{[\text{Ni}(\mu_{1,5}\text{-dca})(\text{pn})](\text{ClO}_4)\}_n$ (**I**), $[\text{Mn}(\mu_{1,5}\text{-dca})_2(\text{phen})]_n$ (**II**) and $[\text{Mn}(\mu_{1,5}\text{-dca})_2\text{L}]_n$ (**III**) have been synthesized and structurally characterized. Complex **I** forms 1-D chain and **II** forms 2-D layer structure, whereas complex **III** contains 3-D networks bridging via $\mu_{1,5}\text{-dca}$ and 4,4'-ditriazole methane ligands. The magnetic measurements indicate that all these complexes exhibit weak antiferromagnetic interaction through the dicyanamide ligands.

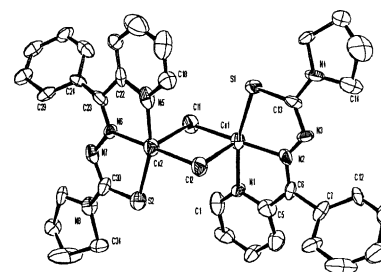


Anantharam Sreekanth, Maliyeckal
R. Prathapachandra Kurup

Polyhedron 22 (2003) 3321

Structural and spectral studies on four coordinate copper(II) complexes of 2-benzoylpyridine $N(4),N(4)$ -(butane-1,4-diyl)thiosemicarbazone

Eight new copper(II) complexes of 2-benzoylpyridine $N(4),N(4)$ -(butane-1,4-diyl)thiosemicarbazone (HBpypTsc) with general stoichiometry CuBpypTscX [$\text{X} = \text{N}_3, \text{Cl}, \text{NO}_3, \text{NCS}, \text{ClO}_4, \text{Br}, \text{SH}$ and CN] were synthesized and characterized by IR and UV/Vis spectroscopies. The terdentate nature of the ligand is inferred from the IR spectra. Spin Hamiltonian parameters of the compounds were calculated from the EPR spectra. The structures of the compounds CuBpypTscCl (**2**), CuBpypTscBr (**6**) and CuBpypTscSH (**7**) were solved by single crystal X-ray diffraction. CuBpypTscCl (**2**) is a centrosymmetric dimer with chloro bridges. The geometry around copper in other two complexes is square planar.

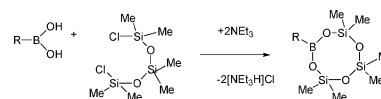


Michael A. Beckett, Martin P. Rugen-
Hankey, K. Sukumar Varma

Polyhedron 22 (2003) 3333

Synthesis and characterisation of *cyclo*-boratetrasiloxane, $(\text{RBO})(\text{Me}_2\text{SiO})_3$ ($\text{R} = \text{tBu}, \text{Ar}$), derivatives

Cyclo-boratetrasiloxanes, $(\text{RBO})(\text{Me}_2\text{SiO})_3$, were obtained as colourless oils in moderate yields from reactions of the 1,5-dichloro-1,1,3,3,5,5-hexamethyltrisiloxane with boronic acids in the presence of a twofold excess of Et_3N . The *cyclo*-boratetrasiloxanes are weakly Lewis acidic, with acceptor number (AN) values of ~ 30 , but do not form adducts with amines.

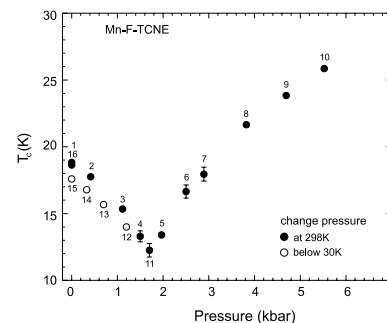


C.W. Looney, K. Falk, James J. Hamlin, Takahiro Tomita, James S. Schilling, W. Haase, Z. Tomkowicz

Polyhedron 22 (2003) 3339

Hydrostatic pressure dependence of the Curie temperature of $[\text{MnR}_4\text{TPP}][\text{TCNE}]$ for $\text{R} = \text{OC}_{10}\text{H}_{21}$, $\text{OC}_{14}\text{H}_{29}$, and F (TPP, tetraphenylporphyrin; TCNE, tetracyanoethylene)

The dependence of the Curie temperature T_c on hydrostatic pressure was determined to 6 kbar for the quasi-1D molecular magnets $[\text{MnR}_4\text{TPP}][\text{TCNE}]$ for $\text{R} = \text{OC}_{10}\text{H}_{21}$, $\text{OC}_{14}\text{H}_{29}$ and F . In all three T_c decreases initially with pressure but passes through a sharp minimum near 2 kbar (see figure) indicative of a pressure-induced lattice distortion.

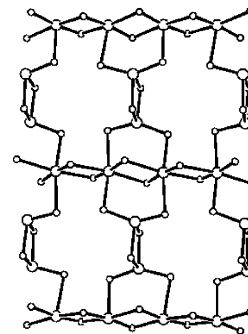


David G. Morris, Kenneth W. Muir, Cindy Ong Woei Chii

Polyhedron 22 (2003) 3345

Silver(I) and mercury(II) complexes of $\text{Me}_3\text{N}(+)\text{-N}(-)\text{X}$ ylides: synthesis and structure

The ligating abilities of nitrogen ylides, $\text{L} = \text{Me}_3\text{N}(+)\text{-N}(-)\text{X}$, are displayed in the coordination polymer LAgNO_3 , the discrete complex L_2AgNO_3 and the *catena*- $[\text{LHgCl}_2]$ ylide adduct. In the salt $[\text{LH}][\text{Hg}_2\text{Cl}_5]$ protonated ylide cations are anchored by hydrogen bonds to a novel $[\text{Hg}_2\text{Cl}_5]_\infty$ sheet structure built from both octahedrally and tetrahedrally coordinated $\text{Hg}(\text{II})$ cations.

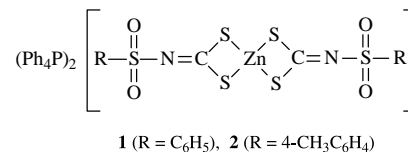


Genivaldo J. Perpétuo, Marcelo R.L. Oliveira, Jan Janczak, Heulla P. Vieira, Fabiana F. Amaral, Vito M. De Bellis

Polyhedron 22 (2003) 3355

Syntheses, crystal structure and spectroscopic characterization of novel *N*-*R*-sulfonyldithiocarbamate zinc(II) complexes

Two new *N*-*R*-sulfonyldithiocarbamate zinc(II) complexes with the formula of $(\text{Ph}_4\text{P})_2[\text{Zn}(\text{RSO}_2\text{NCS}_2)_2]$, where $\text{R} = \text{C}_6\text{H}_5$ (**1**) and $4\text{-CH}_3\text{C}_6\text{H}_4$ (**2**) have been obtained in crystalline form by the reaction of the appropriate potassium *N*-*R*-sulfonyldithiocarbamate salt and zinc(II) acetate. The compounds are characterized by single crystal X-ray diffraction technique and by IR and NMR spectroscopy.

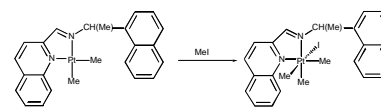


Margarita Crespo, Emilia Evangelio, Mercè Font-Bardía, Sonia Pérez, Xavier Solans

Polyhedron 22 (2003) 3363

Oxidative addition of methyl iodide to dimethylplatinum (II) compounds containing bulky and/or chiral ligands. Crystal structure of compound $[\text{PtMe}_3\text{I}\{1\text{-}(\text{Me}_2\text{NCH}_2\text{CH}_2\text{NCH})\text{C}_{10}\text{H}_7\}]$

Oxidative addition of methyl iodide to dimethylplatinum (II) compounds containing bulky ligands gave platinum (IV) compounds for which isomers such as rotamers, *E*-*Z* conformers, or diastereomers have been detected.

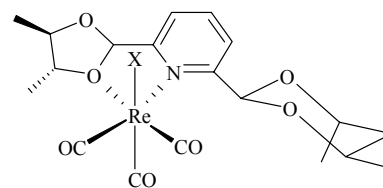


**Peter J. Heard, Paul M. King,
Phunrawie Sroisuwat, Nikolas Kaltsoyannis**

Polyhedron 22 (2003) 3371

Tricarbonylrhenium(I) halide complexes of chiral non-racemic 2-(dioxolanyl)-6-(dioxanyl)pyridine ligands: synthesis, NMR and DFT calculations

DFT calculations on the $[\text{ReX}(\text{CO})_3]$ complexes of chiral non-racemic 2-(dioxolanyl)-6-(dioxanyl)pyridines, in which the ligands coordinate in a bidentate N/O fashion, indicate that binding of the five-membered dioxolanyl ring is strongly favoured over that of the six-membered dioxanyl ring. In solution 3 of the 8 possible diastereoisomers are observed, two of which undergo exchange above ambient temperature.

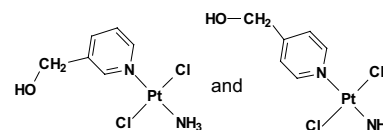


F.J. Ramos-Lima, A.G. Quiroga, Jose M. Pérez, Carmen Navarro-Ranninger

Polyhedron 22 (2003) 3379

Preparation, characterization and cytotoxic activity of new compounds *trans*- $[\text{PtCl}_2\text{NH}_3(3\text{-(hydroxymethyl)-pyridine})]$ and *trans*- $[\text{PtCl}_2\text{NH}_3(4\text{-(hydroxymethyl)-pyridine})]$

We report the synthesis, characterization and cytotoxic assays of new *trans*-platinum compounds, *trans*- $[\text{PtCl}_2\text{NH}_3(3\text{-(hydroxymethyl)-pyridine})]$ and *trans*- $[\text{PtCl}_2\text{NH}_3(4\text{-(hydroxymethyl)-pyridine})]$.

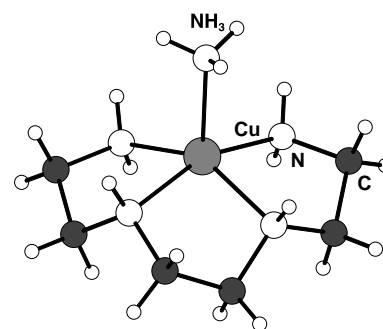


**Konstantin A. Brylev, Nikolai G. Naumov,
Gabriel Peris, Rosa Llusar,
Vladimir E. Fedorov**

Polyhedron 22 (2003) 3383

Novel inorganic ionic compounds based on Re_6 chalcocyanide cluster complexes: synthesis and crystal structures of $[\text{CuNH}_3(\text{trien})_2][\text{Re}_6\text{S}_8(\text{CN})_6] \cdot 7\text{H}_2\text{O}$, $[\text{CuNH}_3(\text{trien})_2][\text{Re}_6\text{Se}_8(\text{CN})_6]$ and $[\text{CuNH}_3(\text{trien})_2][\text{Re}_6\text{Te}_8(\text{CN})_6] \cdot \text{H}_2\text{O}$

Three new octahedral rhenium chalcocyanide cluster compounds $[\text{CuNH}_3(\text{trien})_2][\text{Re}_6\text{Q}_8(\text{CN})_6] \cdot n\text{H}_2\text{O}$ ($\text{Q} = \text{S}, \text{Se}$ and Te) exhibiting ionic structures have been obtained. The compounds have been characterized by single-crystal X-ray diffraction. All three compounds contain a cationic complex $[\text{CuNH}_3(\text{trien})]^{2+}$ which was not described previously.

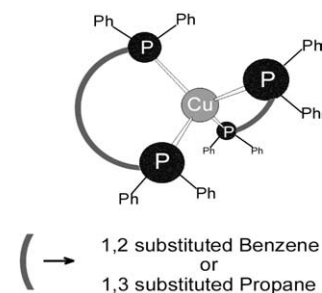


**Edward Szlyk, Robert Kucharek,
Iwona Szymańska, Leszek Pazderski**

Polyhedron 22 (2003) 3389

Synthesis and characterization of Cu(I) chelate complexes with 1,3-bis(diphenylphosphino)propane, 1,2-bis(diphenylphosphino)benzene and perfluorinated carboxylates

Cu(I) complexes with 1,3-bis(diphenylphosphino)propane, 1,2-bis(diphenylphosphino)benzene and perfluorinated carboxylates consist of distinct bis-chelated $[\text{Cu}(\text{diphosphine})_2]^+$ cations and uncoordinated carboxylates.

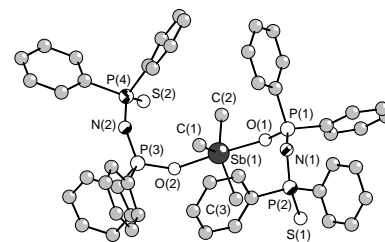


**Ioan Ghesner, Albert Soran,
Cristian Silvestru, John E. Drake**

Polyhedron 22 (2003) 3395

Trimethylantimony(V) tetraphenyldichalcog-enoimidodiphosphinates: crystal structure of $\text{Me}_3\text{Sb}[\text{O}-\text{PPh}_2=\text{N}-\text{PPh}_2=\text{S}]_2$, a compound containing true *O*-monometallic mono-connective phosphorus ligands with XPNPY skeleton

$\text{Me}-\text{S}-\text{PPh}_2=\text{N}-\text{PPh}_2=\text{S}$ (**1**) was obtained from Me_3SbCl_2 and $\text{K}[(\text{SPPH}_2)_2\text{N}]$ as a result of the migration of a methyl group from antimony to sulfur. Reaction of Me_3SbCl_2 and $\text{K}[(\text{OPPh}_2)(\text{SPPH}_2)\text{N}]$ gave $\text{Me}_3\text{Sb}[\text{O}-\text{PPh}_2=\text{N}-\text{PPh}_2=\text{S}]_2$ (**2**) which exhibits a trigonal bipyramidal coordination around antimony, with two *O*-monometallic monoconnective phosphorus ligands and a planar SbC_3 system.

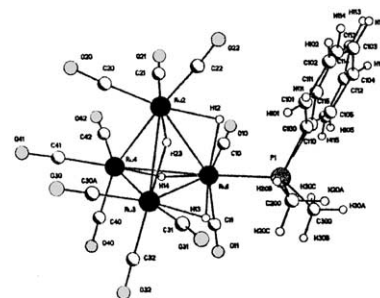


**M. Gabriela Ballinas-López,
Efrén V. García-Báez, María J. Rosales-Hoz**

Polyhedron 22 (2003) 3403

Solid state structure and fluxionality in solution of $[\text{H}_4\text{Ru}_4(\text{CO})_{11}\text{L}]$ ($\text{L} = \text{P}(\text{C}_6\text{F}_5)_3$, PMe_2Ph , $\text{P}(\text{OMe})_3$ and $\text{P}(\text{OEt})_3$): two different structures

The spectroscopy and structure of compounds $[\text{H}_4\text{Ru}_4(\text{CO})_{11}\text{L}]$ ($\text{L} = \text{P}(\text{C}_6\text{F}_5)_3$, PMe_2Ph , $\text{P}(\text{OMe})_3$ and $\text{P}(\text{OEt})_3$) were obtained including multinuclear VT NMR studies. The effect of the substituents in the phosphorus ligand, in the structure and dynamical behaviour of the compounds, was analysed. The phosphite and $\text{P}(\text{C}_6\text{F}_5)_3$ derivatives showed the same *D2d* structure in the solid state but in the compound containing PMe_2Ph , a geometry with *Cs* symmetry can be appreciated. Both types of structures are proposed to participate in the dynamical equilibria shown by all four compounds.

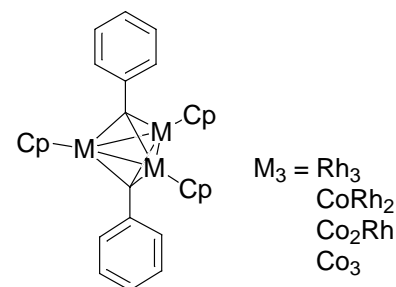


**Masahiro Ebihara, Masami Iiba,
Satohisa Higashi, Naoki Tsuzuki,
Takashi Kawamura, Tsunenori Morioka,
Shinji Ozawa, Tokio Yamabe,
Hideki Masuda**

Polyhedron 22 (2003) 3413

Benzylidyne-capped group 9 trinuclear clusters: synthesis, structure and properties of trirhodium and cobalt-rhodium mixed-metal clusters $[\text{Co}_{3-n}\text{Rh}_n\text{Cp}_3(\mu_3\text{-CPh})_2]$ ($n = 1; 2; 3$)

A series of benzylidyne-capped clusters $[\text{M}_3\text{Cp}_3(\mu_3\text{-CPh})_2]$ ($\text{M}_3 = \text{Rh}_3$, CoRh_2 and Co_2Rh) were synthesized and characterized (X-ray structure analyses, cyclic voltammetry, UV-Vis, ESR of their anionic radicals), and their electronic structures were examined by DFT calculations of their model complexes.



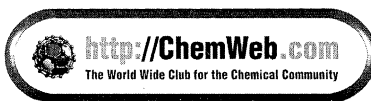
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