

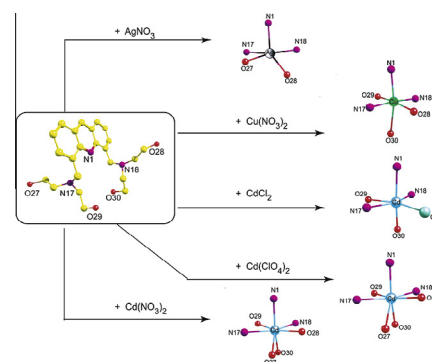
Contents

**Elena V. Solovyeva, Galina L. Starova,
Liubov A. Myund and Anna S. Denisova**

Polyhedron 106 (2016) 1

X-ray, IR and Raman study of Ag(I), Cu(II) and Cd(II) complexes with 4,5-bis(N,N-di(2-hydroxyethyl)iminomethyl)acridine

New complexes of 4,5-bis(N,N-di(2-hydroxyethyl)iminomethyl)acridine have been prepared and studied by using techniques including X-ray single crystal, IR and Raman spectroscopy. The three different coordination manners of the molecule were found depending on metal cation and anion.

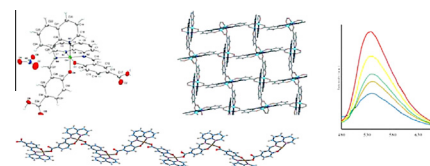


**Maryam Rad, Saeed Dehghanpour,
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Camelia Gholamrezazadeh and
Ali Mahmoudi**

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Discrete molecular complex, one and two dimensional coordination polymer from cobalt, copper, zinc and (*E*)-4-hydroxy-3-((quinolin-8-ylimino)methyl)benzoic acid: Synthesis, structures and gas sensing property

Three variable dimensional coordination polymers, [Co(HL)₂]NO₃·3DMF, **1**, {[Cu(L)-(H₂O)]·H₂O]_n, **2**, and {[ZnL]·DMF]_n, **3** have been synthesized. Compound **1** is a discrete mononuclear complex. Compound **2** consists of infinite one-dimensional zig-zag chains. Compound **3** is a two-dimensional coordination polymer. Compound **3** as a thin film on one side of double sided tap on the glass substrate show gas sensing property.



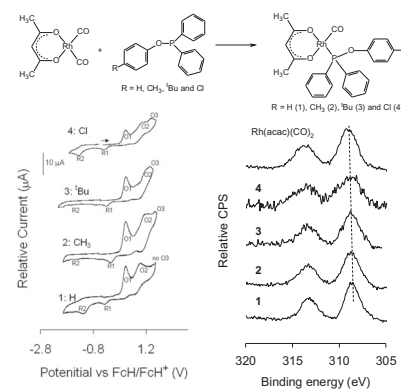
Elizabeth Erasmus

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Synthesis and electrochemistry of *p*-substituted phenyl diphenylphosphinite rhodium(I) complexes

A series of *para*-substituted phenyl diphenylphosphinite-containing rhodium(I) complexes of the form [Rh(CH₃COCHCOCH₃)CO(Ph₂POPh-*p*-R)], where R = H (**1**), CH₃ (**2**), ^tBu (**3**) and Cl (**4**) were prepared. The electrochemical data

obtained for this series, showed the oxidation of both the two electron oxidation of the Rh(I) to Rh(III) and the one electron oxidation of the phosphorus moiety are dependent on the group-electronegativity of the respective *para*-R-substituent. An unexpected reaction of the phosphinite occurred with the electrochemical internal standard ferrocene, in its ferricinium-ion form. XPS characterisation of the rhodium(I) complexes revealed a linear correlation between the binding energies of both the rhodium 3d_{5/2} and phosphorus 2p electron levels and the Gordy group electronegativity of the R-group.

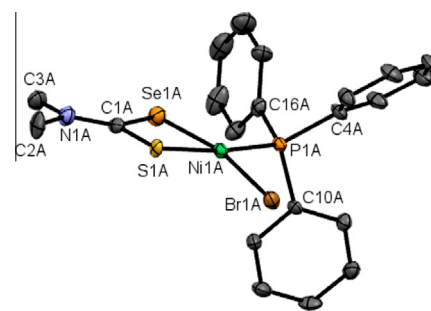


**Mohammad El-khateeb, Helmar Görls,
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Synthesis and characterization of nickel(II) selenothiocarbamate complex

Treatment of the *in situ* generated $\text{Me}_2\text{NCSSeNa}$ with $(\text{PPh}_3)_2\text{NiBr}_2$ in degassed MeCN or THF gave a violet complex $(\text{PPh}_3)\text{Ni}(\text{Br})(\kappa^2\text{S,Se-SSeCNMe}_2)$ (**1**). Attempts to crystallize the salt $\text{Me}_2\text{NCSSeNa}$ produced the dimeric compound $(\text{Me}_2\text{NCSSe})_2$ (**2**). Complex **1** was characterized by ^1H , $^{13}\text{C}\{^1\text{H}\}$, $^{31}\text{P}\{^1\text{H}\}$ and ^{77}Se NMR spectroscopy as well as mass spectrometry, elemental analysis and X-ray crystallography.

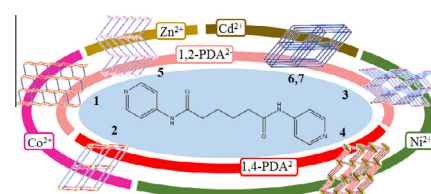


**Han-Yun Chang, Xiang-Kai Yang,
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Structure-directing roles of phenylenediacetate ligands in the formation of *N,N'*-di(3-pyridyl)-adipoamide-based coordination networks

The pda^{2-} ligands in complexes **1**, **2** and **5** adopt the μ_3 bonding mode to afford the 2D layer structures, while those in the other complexes show the μ_4 and/or μ_2 bonding modes to build the 3D frameworks.

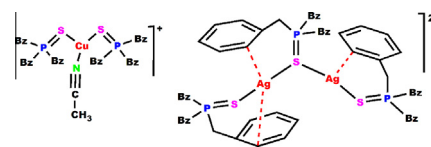


**Eric W. Ainscough, Andrew M. Brodie,
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Structural studies on tribenzylphosphane sulfide complexes of copper(I) and silver(I)

The bulky tertiary phosphane sulfide, SPBn_3 , reacts with $\text{Cu}(\text{I})$ to form 3-coordinate $[\text{Cu}(\text{CH}_3\text{CN})(\text{SPBn}_3)_2]\text{PF}_6$ whereas with $\text{Ag}(\text{I})$ it forms dinuclear $[\text{Ag}_2(\text{SPBn}_3)_3](\text{PF}_6)_2$ which contains both 3- and 4-coordinated Ag. The Ag atoms are linked by a bridging sulfur and a carbon from the aromatic ring of the same SPBn_3 .

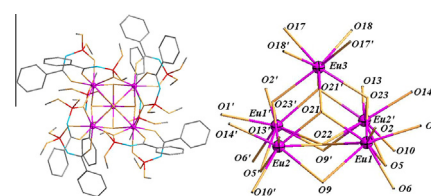


**Natalia S. Kariaka, Julia A. Rusanova,
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Tatiana Yu Sliva and
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First examples of carbacylamidophosphate pentanuclear hydroxo-complexes: Synthesis, structure, luminescence and magnetic properties

The three novel pentanuclear Eu^{III} , Gd^{III} and Tb^{III} carbacylamidophosphate based complexes were synthesized. The crystal structures of $\text{Eu}_5\text{L}_{10}(\text{OH})_5$ was solved. Temperature dependencies of magnetic susceptibility of the named compounds were investigated. Phosphorescence, emission and excitation spectra at 298 K and 77 K for the complexes were measured, as well as luminescence decay times were determined. Thermal stability of the europium complex was investigated.



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