POMs and transition metal coordination complexes (TMCs) have been in the POM chemistry is that a large number of hybrid compounds exhibit a variety of structures and properties that make them useful in materials with fascinating structures and desirable properties.

Currently, we are interested in exploring the applicability of Keggin-POMs and TM-N_2P_y complexes in the preparation of new hybrid compounds.

Here we report the synthesis, chemical and spectroscopic characterization, X-ray crystal structure, and magnetic properties of [Cu(bpmen)]((H_2O)][SiW_12O_40]_{(Cu(bpmen))}] chains, linked through the apical water molecule of the unsupported [Cu(bpmen)] and the axial oxygen atoms of supported [Cu(bpmen)] complex.

Compounds (1) and (2) are prepared by hydrothermal synthesis. Compound (1) can be viewed as a sequence along the [001] direction of hybrid inorganic-metalorganic corrugated layers built of [SiW_12O_{40}(Cu(bpmen))] chains, linked through the apical water molecule of the unsupported [Cu(bpmen)] and the axial oxygen atoms of supported [Cu(bpmen)] complex.

Compound (2) present a 2D arrangement formed by layers parallel to (110) plane built of POMs linked both via copper complexes coordination sphere and water molecules.

**Figure 1.** Hybrid POM [{Ni(C_4H_2N_2O_2)(H_2O)]_3[WO_3](β-SbW_9O_{33})}_{3}].

**Keywords:** polyoxometalate, hybrid, tetradentate N2Py2 ligands

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**Solid state arrangement of diruthenium tetracarbonylates and tetraamidates**

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Diruthenium complexes of the type [Ru_2Cl_2(R-OCR_2)]_4 (R = alkyl, aryl) have been intensively studied due to their interesting electronic and magnetic properties [1]. In these complexes, the ruthenium atoms are strongly bonded by four bridging carbonylate ligands, with one axial position occupied by a chloride ion. The chloride ligand of the [Ru_2Cl_2(R-OCR_2)]_4 molecule is usually also bonded to the free axial

**Keywords:** polyoxometalate, hybrid, tetradentate N2Py2 ligands