

Construction of two zinc and copper(II) coordination complexes containing pyridine-2,6-dicarboxylic acid *N*-oxide based on mixed-ligand synthetic strategy

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The design and construction of coordination compounds with unique structural motifs and desirable properties has attracted extensive interest in supramolecular and materials chemistry. A major part of the research and its success are due to the vital role of the concept of mixed organic ligands in the design. Pyridinedicarboxylic acid derivatives and neutral multidentate N-donor ligands are excellent candidates for the formation of novel mixed-ligand architectures with beneficial properties.¹ As continuation of our efforts to develop systems containing pyridinedicarboxylic acids,² we decided to oxygenate nitrogen of pyridine ring of pyridine-2,6-dicarboxylic acid as *N*-oxide to investigate synthesis, coordination modes, and structure types of these compounds in view of crystal engineering concepts. In this work, we have prepared two Zn and Cu coordination compounds by employing pyridine-2,6-dicarboxylic acid *N*-oxide (pydco) and 1,10-phenanthroline (phen) ligands, ([Cu(pydco)(phen)(H₂O)].2H₂O) (**1**) and [Zn(pydco)(phen)(H₂O)₂] (**2**) (see Figure 1). These compounds have been characterized by melting point, elemental analysis, infrared spectroscopy (IR), and thermogravimetric (TGA) analysis.

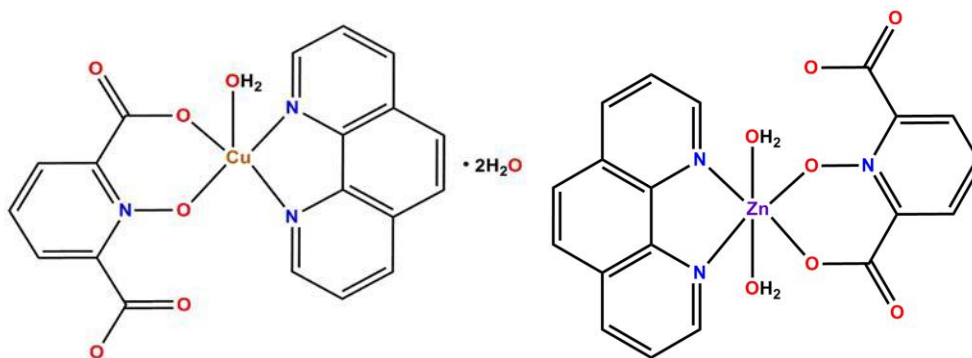


Fig.1 The molecular structures of **1** and **2**.

References

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