Synthesis, characterization and crystal structure determination of new coordination polymers of cadmium (II) based on pyridine hydrazide ligands

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Abstract: Two new polymeric compounds of cadmium acetate using two isomers of pyridine hydrazide ligands have been synthesized and characterized by X-ray diffraction analysis. Structural analysis shows that both compounds were crystallized in monoclinic crystal system with P21/c space group. Coordination polymer [Cd(OAc)2(L1H)]n (1) which L1H is para pyridine hydrazide, has two dimensional sheets with rectangular net and coordination polymer [Cd2(OAc)3(L2H)L2(EtOH)]n (2) which L2H is meta pyridine hydrazide, has got herringbone structure in 2D dimension.

Keywords: Coordination polymer; crystal structure; monoclinic; hydrogen bonding; cadmium.

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