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

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(Received: 14/2/2018, in revised form: 8/5/2018)

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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