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SOLVOTHERMAL SYNTHESIS, CRYSTAL STRUCTURE AND PHOTOLUMINISCENCE OF Cd(II) COORDINATION POLYMER DERIVED FROM A 1,2,3-TRIAZOLE-BASED TRICARBOXYLATE LIGAND

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Abstract. A new polymeric complex of cadmium(II) was synthesized under solvothermal conditions by the reaction of 5-(4-carboxy-5-methyl-1*H*-1,2,3-triazol-1-yl) isophthalic acid (H_3L) with cadmium nitrate tetrahydrate in a mixture of *N*,*N*-dimethylacetamide and water. The obtained compound was investigated using single crystal X-ray diffraction, thermogravimetry, infrared and photoluminescence spectroscopies. The polymeric complex obtained is an infinite 2D coordination polymer with the general formula $\{[Cd_3L_2(H_2O)_6]\cdot 2H_2O\}_n$ (**1**). The intense photoluminescence emission of cadmium (II) complex was observed in the blue-violet region of the spectrum.

Keywords: coordination polymer, 1,2,3-triazole, thermogravimetry, photoluminescence.

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