

عنوان مقاله:

1D Copper(I) Coordination Polymer $[Cu_2(\mu-L)(\mu-I)_2]_n$: Synthesis, Crystal Structure, Spectral and Thermal Study

محل انتشار:

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خلاصه مقاله:

A new 1D copper(I) coordination polymer $[Cu_2(\mu-L)(\mu-I)_2]_n$ (1), where L is N,N'-bis(4-nitrobenzylidene)butane-1,4-diamine, was synthesized and characterized by CHN, FT-IR, 1H NMR, and single-crystal X-ray analyses. Based on X-ray results, this new compound crystallizes in a monoclinic system with space group $P2_1/c$. The asymmetric unit consists of one copper and one iodine atoms and half of the Schiff base ligand (L). The flexible Schiff base compound is coordinated to copper(I) ion as a bis-monodentate ligand. The coordination geometry around the copper(I) ions is distorted trigonal planar. The thermal behavior of 1 was studied using thermogravimetry analysis. Moreover, the nanoparticles of 1 were prepared via the ultrasonic-assisted method and characterized by XRD and SEM analyses.

کلمات کلیدی:

1D copper(I) coordination polymer, Thermogravimetry, crystal structure, Nanoparticles, Ultrasonic bath

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