

عنوان مقاله:

Novel barium coordination polymer based on 1,3,5- benzenetricarboxylic acid ligand

محل انتشار:

بیستمین سمینار شیمی معدنی ایران (سال: 1397)

تعداد صفحات اصل مقاله: 1

نویسندگان:

Ensieh Khajeali - Department of Chemistry, University of Sistan and Baluchestan, P. O. Box 98135-674, Zahedan, Iran

Ali Reza Rezvani - Department of Chemistry, University of Sistan and Baluchestan, P. O. Box 98135-674, Zahedan, Iran

Sania Saheli - Department of Chemistry, University of Sistan and Baluchestan, P. O. Box 98135-674, Zahedan, Iran

خلاصه مقاله:

The design and synthesis of metal-organic frameworks (MOFs) are of great interest not only for their potential applications in sorption, photochemical areas, magnetism and catalysis but also for their intriguing variety of architectures and fascinating new topologies [1,2]. So far, a large number of mixed-ligand MOFs with 1D, 2D, and 3D structures have been rationally designed and physically characterized [3]. In this paper, a new Ba(II) 3D metal-organic framework namely $[Ba_3(H_2btc)_6(H_2O)_{11} \cdot 3H_2O]$ (1) has been synthesized with reaction between barium nitrate and 1,3,5-benzenetricarboxylic acid. The complex has been characterized by IR spectroscopy and X-ray diffraction. The complex (1) is crystallized in the orthorhombic crystal system with P21 21 21 space group. Crystal data for complex (1): $a = 13.4436(4)$, $b = 21.8558(6)$, $c = 22.3824(7)$, $\alpha = \beta = \gamma = 90^\circ$, $Z = 4$.

کلمات کلیدی:

Coordination polymer, Crystal structure, Metal-Organic framework, Barium complex, 1,3,5-benzenetricarboxylic acid

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