Synthesis of new Co-MOFs with bithiazole ligands

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To design and make new MOFs with desired structure and consequently spatial properties, there need to choose both metal ion as a node and ligands as their linkers. MOFs are a new category of porous materials that have been extensively used in various applications due to their unique properties such as crystallinity, high surface area, designability, favorable thermal and chemical stability, and so on. Here, a new MOF with molecular formula [Co (btz)(X)n]. Compound is based on a Co (II) unit complexed by bridging bidentate ligand, 4, 4'-bithiazole. This MOF was obtained by the reaction of zinc (II) nitrate with 4, 4'-bithiazole as the linker and the N-donor ligand. The thermal stability of compound has been studied by thermal gravimetric (TG) and differential thermal (DTA) analyses. The structure was determined by single-crystal X-ray diffraction and Fourier-transform infrared spectroscopy (FT-IR).

Keywords: MOF, Synthesis, Co, bithiazole.

References

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