

Synthesis and Structural Characterization of Two-dimensional Metal-organic Framework by Using BTZ Ligands

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Metal-Organic Frameworks are a new category of porous materials that have been extensively used in various applications such as gas separation process, gas storage and catalysis due to their unique properties such as high porosity, crystallinity, high surface area, designability, favorable thermal, chemical stability, adjustable pore properties and so on. In this work, new two dimensional Zn metal-organic framework was designed and synthesized by applying new BTZ ligands with different functional groups. The structures which were characterized by single crystal X-ray crystallography, XRD, and FT-IR spectroscopy. The thermal stability of compound has been studied by thermal gravimetric (TG) and differential thermal (DTA) analyses. This study is a new report of increasing Metal-Organic Frameworks by a simple method.

Keywords: Synthesis, Characterization, Metal-organic Framework, BTZ

References

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