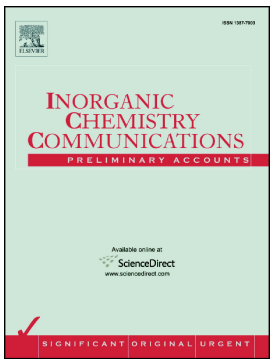

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Effects of Polyvinylidene Fluoride Content in the Synthesis of Novel Zinc-Based Metal-Organic Frameworks Polymer Composite Crystals

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Abstract

A simply method to fabricate novel Metal-Organic Frameworks (MOFs)-polymer composite crystals with different morphologies was proposed firstly in the present study which were prepared *via* polymer-aid solvothermal (PAS) method by using commercially available polyvinylidene fluoride (PVDF) powder. The as-synthesized Zeolitic Imidazolate Framework 8 (ZIF-8)-PVDF composite crystals (ZIF-8-PVDF) were investigated systematically using different PVDF contents in the reaction solution. The results showed that the composite crystal transformed gradually from dodecahedron morphology with micropores to a hexagonal plate shape with the pores ranged in