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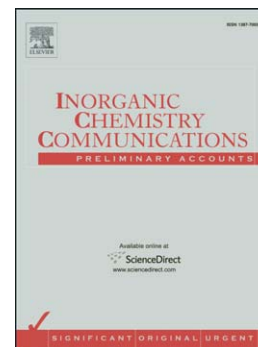
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# One unprecedented 3-D strontium-organic framework constructed from 2-(3,4-methylenedioxyphenyl)-imidazole dicarboxylate and water ligands

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## ABSTRACT

Hydrothermal reaction of Sr(II) salt with the promising multifunctional organic ligand, 2-(3,4-methylenedioxyphenyl)-1*H*-imidazole-4,5-dicarboxylic acid (MDPhH<sub>3</sub>IDC), leads to one new Sr(II) polymer, namely [Sr(MDPhH<sub>2</sub>IDC)<sub>2</sub>(H<sub>2</sub>O)<sub>3</sub>]<sub>n</sub> (**1**), which has been structurally characterized by elemental analysis, IR spectrum, and single crystal X-ray diffraction analysis. In polymer **1**, the Sr(II) atoms are linked by water ligands to develop many 1-D chains. These chains are further joined by the MDPhH<sub>2</sub>IDC<sup>−</sup> ligands to build up a fascinating 3-D structure. Interestingly, the polymer contains many dinuclear Sr(II) clusters as secondary building blocks. The thermal and photoluminescence properties of the polymer have been investigated as well.

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**Keywords:** Imidazole dicarboxylate; Strontium; Polymer; Crystal structure

## INTRODUCTION

The metal-organic frameworks (MOFs) [1-2] are attracting the extensive attention for their intriguing structures and extraordinary topologies, as well as potential applications. Although multiple researches of MOFs have been performed over the past decades, the preparations of desired MOFs continue to be a hot topic. Based on the great number of previous investigations, people found that the selection of a multidentate organic ligand as a linker

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