Host–Guest Chemistry of Helical Copper(I) Coordination Polymers

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Streszczenie

In this paper, we present a series of one-dimensional coordination polymers built of achiral components: relatively small and rigid halogenated triazole Schiff base and copper(I) salts. The coordination polymer exhibits quite rare helicity, in which the metal ions are arranged in a helical pattern. Self-recognition of the neighboring polymeric chains leads to the formation of one-dimensional channels occupied by solvent molecules, which can be easily removed by thermal treatment, resulting in the formation of a porous material that reveals its ability to capture CO_2 and small organic particles. The anion, situated at the corners of the channels, exerts a negligible influence on the structure. However, it has an impact on the physicochemical properties, including sorption and spectroscopic properties. Unusually for copper(I) compounds, the title polymers exhibit emission in the deep-red region.

Słowa kluczowe

Anions, Coordination polymers, Ligands, Molecules, Solvents

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