Heterobimetallic Cu(II)-Hg(II) polynuclear complexes containing $Hg(SCN)_4^{2-}$ unit - synthesis, spectroscopic investigations, X-ray studies and magnetic properties.

Autorzy

Barbara Machura

Anna Świtlicka

Jerzy Mroziński

Rafał Kruszyński

Joachim Kusz

Rok wydania

2010

Czasopismo

Polyhedron

Numer woluminu

29

Strony

2023-2032

DOI

10.1016/j.poly.2010.03.016

Kolekcja

Naukowa

Język

Angielski

Typ publikacji

Artykuł

Streszczenie

Three novel heterobimetallic polymers with $Hg(SCN)_4^{2-}$ as a linker have been synthesised and characterized by means of IR, EPR, magnetic measurements and single crystal X-ray. All the obtained compounds $[Cu(bpzm)Hg(SCN)_4]_n$ (**1**), $[Cu(bdmpzm)Hg(SCN)_4]_n$ (**2**) and $[Cu(dpa)Hg(SCN)_4]_n$ (**3**) form supramolecular framework structures. The **1** creates a three-dimensional coordination polymer, and **2** and **3** form two-dimensional nets extending along crystallographic (0 1 0) plane. Each octahedrally coordinated Cu(II) atom of **1** connects to four mercury ions through four thiocyanate bridges, and each Hg(II) ion is bridged with four copper ions *via* four thiocyanate bridges. The Cu(II) ions of **2** and **3** display a pyramidal coordination geometry, and they are connected to three mercury ions through three thiocyanate bridges, one thiocyanate ion is nonbridging group.

Słowa kluczowe

Heterobimetallic coordination polymer, Copper Mercury, Thiocyanate bridge, X-ray, magnetic measurements

Adres publiczny

https://doi.org/10.1016/j.poly.2010.03.016

Strona internetowa wydawcy

http://www.elsevier.com