

Crystal structures, spectroscopic and magnetic behaviour of dimeric copper(II) 2-methylthionicotinate adducts with dimethylformamide and dimethylsulfoxide.

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Streszczenie

The structural, spectroscopic and magnetic properties of two dimeric complexes, $[\text{Cu}_2(2\text{-MeSnic})_4(\text{DMSO})_2]$ (**I**) and $[\text{Cu}_2(2\text{-MeSnic})_4(\text{DMF})_2]$ (**II**) (where 2-MeSnic = 2-methylthionicotinate, DMF = dimethylformamide and DMSO = dimethylsulfoxide), are reported. The characterization is based on elemental analysis, infrared, electronic and EPR spectra, and magnetic susceptibility measurements over a temperature range of 1.9 — 300 K. Both complexes adopt dimeric paddle-wheel cage structures as revealed by X-ray structure analysis. The dimeric molecule of **I** is centrosymmetric and centred at the inversion center of the space group $P 2_1/c$ ($Z = 2$), while the structure of **II** contains a crystallographically independent molecule **IIa**, and a centrosymmetrical molecule **IIb** which is centred at the inversion centre of the space group $P 2_1/n$ ($Z = 6$).

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