



Structure and magnetic properties of binuclear $[\text{Cu}(\text{amppz})(\mu\text{-NC})\text{Fe}(\text{CN})_4\text{NO}]$ (amppz = 1,4-bis(3-aminopropyl)piperazine).

Autorzy

Zdeněk Smékal

Thierry Maris

Maria Korabik

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The heterobimetallic compound $[\text{Cu}(\text{amppz})(\mu\text{-NC})\text{Fe}(\text{CN})_4\text{NO}]$ (amppz = 1,4-bis(3-aminopropyl)piperazine) has been prepared by the reaction of $[\text{Cu}(\text{amppz})(\text{ClO}_4)]\text{ClO}_4$ and $\text{Na}_2[\text{Fe}(\text{CN})_5\text{NO}] \cdot 2\text{H}_2\text{O}$ in aqueous solution and was characterized by IR spectroscopy, magnetic measurement, and X-ray single-crystal diffraction. The neutral complex has a cyanide-bridged binuclear structure in which the iron(II) is six-coordinate by five carbons from cyano groups (one of them forms a bridge) and one nitrogen from nitrosyl in an octahedral arrangement, whereas the copper(II) is five-coordinate by four amppz-nitrogens and one cyanide-nitrogen in a distorted square-pyramidal geometry. Magnetic investigation revealed a weak antiferromagnetic intermolecular interaction between the copper(II) ions with $T_N = 6$ K.

Słowa kluczowe

Copper(II) complexes, Nitroprusside, Cyano-bridged complexes, Heterobinuclear, X-ray structure analysis

Adres publiczny

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