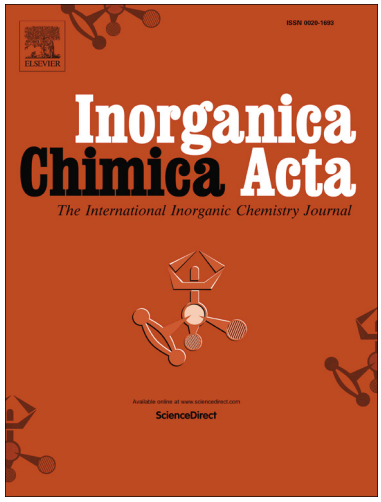

Research paper

Synthesis, structural and magnetic characterizations of a dinuclear copper(II) complex with an (N,S,O) donor ligand: catecholase and phenoxazinone synthase activities

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PII: S0020-1693(17)31838-8
DOI: https://doi.org/10.1016/j.ica.2018.02.004
Reference: ICA 18113

To appear in: *Inorganica Chimica Acta*

Received Date: 2 December 2017
Revised Date: 31 January 2018
Accepted Date: 1 February 2018

Please cite this article as: A.K. Ghosh, A. Ali, Y. Singh, C.S. Purohit, R. Ghosh, Synthesis, structural and magnetic characterizations of a dinuclear copper(II) complex with an (N,S,O) donor ligand: catecholase and phenoxazinone synthase activities, *Inorganica Chimica Acta* (2018), doi: https://doi.org/10.1016/j.ica.2018.02.004

Synthesis, structural and magnetic characterizations of a dinuclear copper(II) complex with an (N,S,O) donor ligand: catecholase and phenoxazinone synthase activities

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Abstract

A new dinuclear Cu(II) complex (**1**) was synthesized and crystallographically characterized. Each of the Cu(II) centres has penta coordination and been found to adopt square pyramidal geometry. Variable temperature magnetic measurements showed that there is weak ferromagnetic interaction between the Cu(II) centres in **1**. **1** shows catecholase as well as phenoxazinone synthase activities in different solvents. The turn over numbers for the catecholase activity were 4.02×10^3 h^{-1} (MeOH) and 9.57×10^3 h^{-1} (MeCN), and that of phenoxazinone synthase activity were 1.065×10^3 h^{-1} (MeOH), 2.13×10^2 h^{-1} (MeCN) and 2.844×10^3 h^{-1} (DCM).

Keyword: Copper, Schiff base, catecholase activity, phenoxazinone synthase activity