

Structure and Magnetic Properties of an Oxalic Acid Bridged Dinuclear Copper(II) Complex

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[LCu{ μ -(OH)₂(C₂O₂)}CuL](ClO₄)₂, (HL = N,N-dimethyl N-propylsalicylald-imine) was synthesised and its crystal structure was determined. C₂₆H₃₆Cl₂Cu₂N₄O₁₄, triclinic space group P $\bar{1}$ with $a = 9.288(9)$, $b = 10.016(11)$, $c = 10.09(2)$ Å and $\alpha = 101.05(11)$, $\beta = 108.22(10)$, $\gamma = 110.22(10)^\circ$, $V = 787(2)$ Å³, $Z = 2$. Two copper(II) ions in a distorted square-planar coordination are bridged by an oxalic acid molecule to form dinuclear units. The copper(II) centres are separated by 5.2 Å and antiferromagnetically coupled ($J = -478$ cm⁻¹), which follows from temperature-dependent magnetic susceptibility measurements in the range 12 to 300 K.

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