



Synthesis, Crystal Structure and Hirshfeld Surface Studies of 8-Hydroxyquinoline Copper(II) Complex

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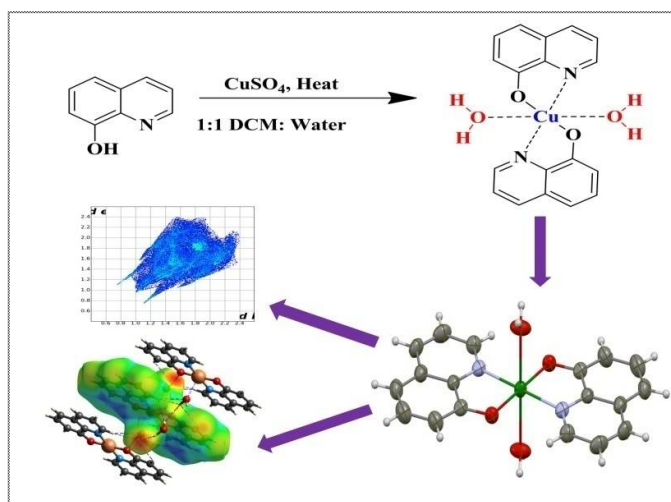
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ABSTRACT

A copper salt of 8-hydroxyquinoline $[Cu(C_9H_6NO)_2(H_2O)_2]$ has been synthesized and crystallized by slow evaporation method. The X-ray structural analysis of this copper complex revealed that, coordination environment around the central metal atom is slightly distorted octahedral geometry with trans-isomer favored structure. Further, crystal structure is stabilized by intermolecular hydrogen bond interaction of type O-H...O, which forms supramolecular R_2^2 (8) ring motif along c-axis and π - π interaction between pyridine and benzene rings of the adjacent complexes. Hirshfeld surface analysis identified H...H (43.7 %) and C...H (25 %) interactions are dominant and responsible for crystal packing and stability.

Graphical Abstract



Keywords: 8-hydroxyquinoline acid, Antimicrobial agents, Hirshfeld surface.