

A New 2D Copper(II) Coordination Polymer with a Schiff Base Ligand with Weakly Coordinating Sulfonate Groups Affecting the Structure

Jia-Ming Li^{a,b}, Kun-Huan He^{a,b}, and Yi-Min Jiang^a

^a Key Laboratory of Medicinal Chemical Resources and Molecular Engineering,
College of Chemistry and Chemical Engineering, Guangxi Normal University, Guilin 541004,
P. R. China

^b College of Chemistry and Chemical Engineering, Qinzhou University, Qinzhou 535000, P. R. China

Reprint requests to Professor Yimin Jiang. E-mail: ljmmarise@163.com

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A new 2D copper(II) coordination polymer with the doubly deprotonated Schiff base ligand 2-(2-hydroxybenzylideneamino)ethanesulfonic acid (H₂Saes) has been synthesized, {[Cu(Saes)(4,4'-bpy)]₂·H₂O}_n (**1**), and characterized by single-crystal X-ray diffraction, IR spectroscopy, elemental and thermogravimetric analysis. Dinuclear copper complexes serve as secondary building blocks (SBUs) to construct an unusual coordination network with an interpenetrating CdSO₄ topology. In the crystal, the components form a stable 3D supramolecular architecture by O–H···O, C–H···O interactions and π stacking.

Key words: Schiff Base, Crystal Structure, Copper(II) Complex, Synthesis, Thermal Stability