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

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A new 2D copper(II) coordination polymer with the doubly deprotonated Schiff base ligand 2-(2-hydroxybenzylideneamino)ethanesulfonic acid (H\textsubscript{2}Saes) has been synthesized, \[ \{[\text{Cu(Saes)}(4,4^\prime\text{-bpy})]\textsubscript{2} \cdot H\textsubscript{2}O\}_n \] (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 CdSO\textsubscript{4} topology. In the crystal, the components form a stable 3D supramolecular architecture by O–H⋯O, C–H⋯O interactions and π stacking.

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