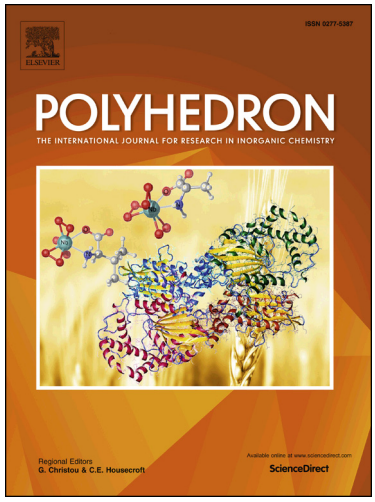

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Synthesis and Single Crystal X–Ray Diffraction Studies of Coumarin-based Zn(II) and Mn(II) Complexes, involving Supramolecular Interactions

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Abstract

In this work we describe the synthesis and characterization of two supramolecular coordination complexes, namely $[Zn(Cuma)_2(MeOH)_2]$ **2** and $[Mn(Cuma)_2(MeOH)_2]$ **3**, obtained from the self-assembly of Zn(II) and Mn(II) acceptors with the 3-benzoyl–4–hydroxycoumarin ligand donor **(1)** possessing the β,β'-diketonate moiety. The coordination mode of the ligand, incorporating intra- and intermolecular hydrogen bonds with the metal atoms, was established by single crystal X-ray diffraction. The Zn(II) and Mn(II) complexes each show a 1D structural motif which is further assembled into 3D supramolecular architecture by hydrogen bonds and π-stacking interactions.

Keywords
Coumarin; Mn(II) complex; Cu(II) complex; X-ray structure; β,β'-dicarbonyl compound