

Electronic supplementary materials

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Synthesis and characterization of three new solid polyoxometalates based on Wells-Dawson-derived sandwich-type polyanions $[\text{Co}_4(\text{H}_2\text{O})_2(\text{P}_2\text{W}_{15}\text{O}_{56})_2]^{16-}$

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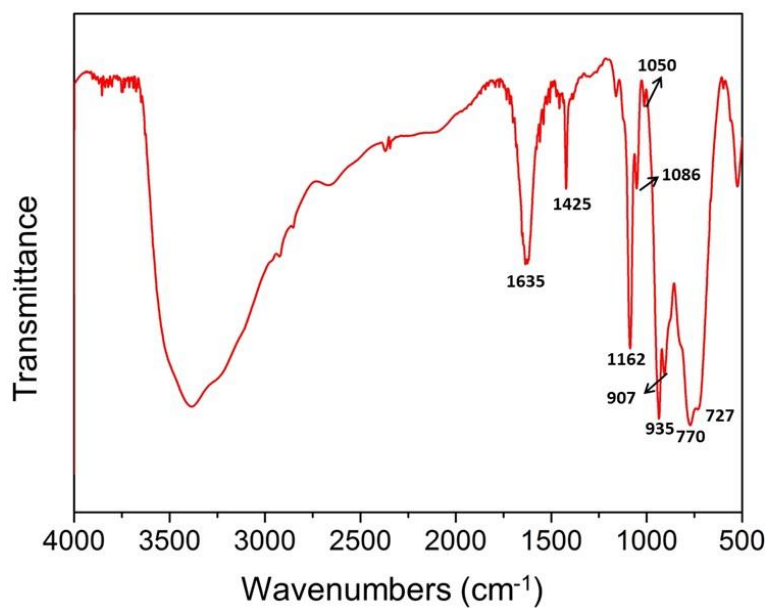


Fig. S1 IR spectrum of compound 1

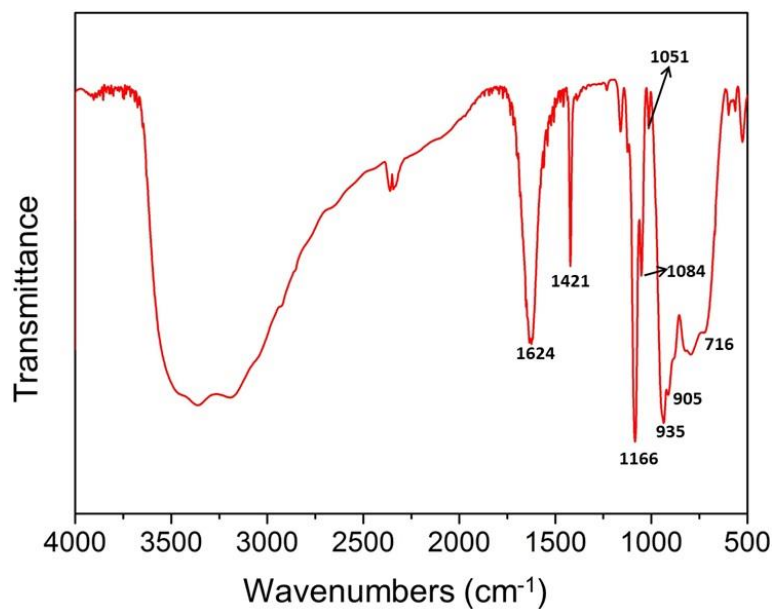


Fig. S2 IR spectrum of compound 2

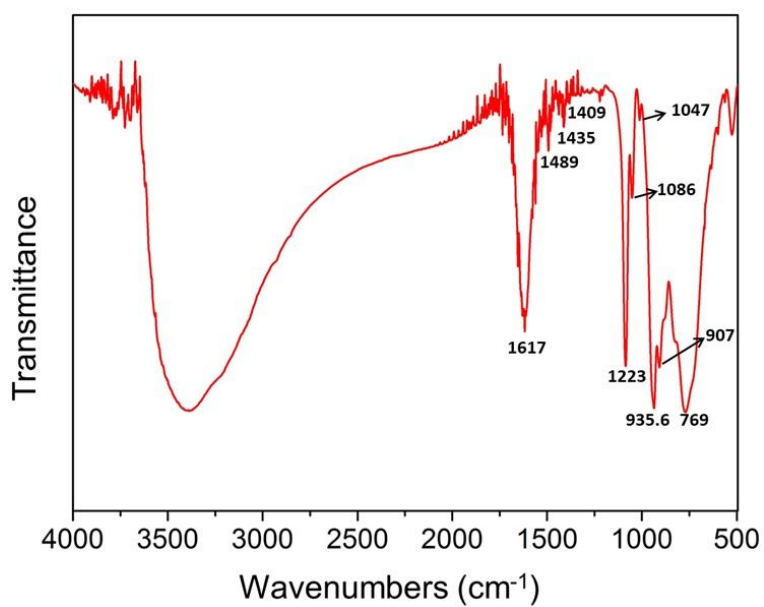


Fig. S3 IR spectrum of compound 3

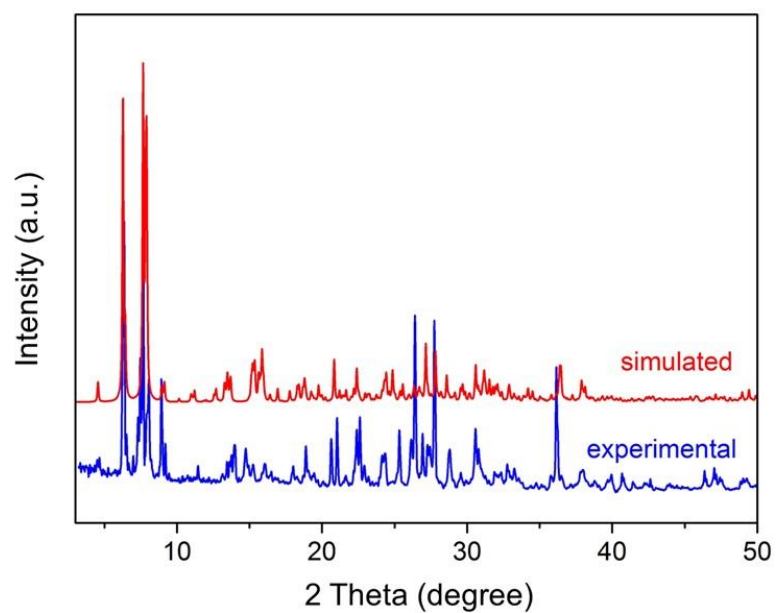


Fig. S4 Powder X-ray diffraction patterns for compound **1**

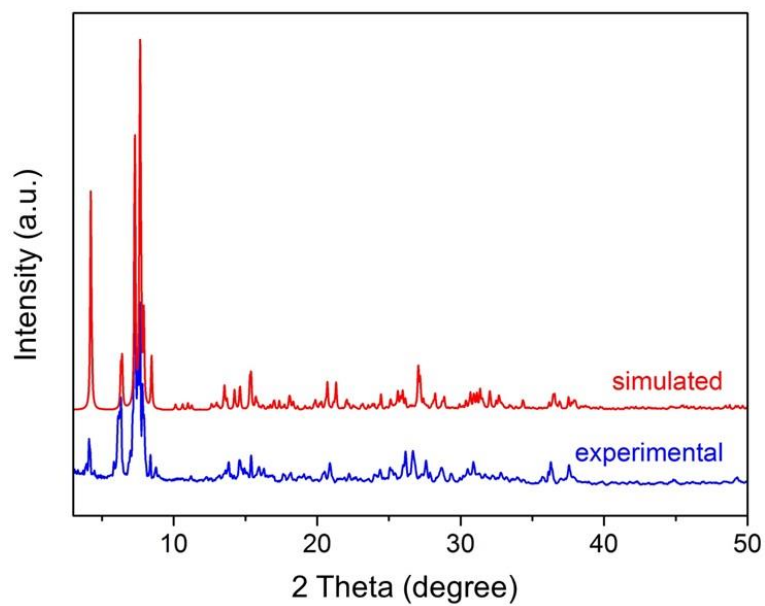


Fig. S5 Powder X-ray diffraction patterns for compound **2**

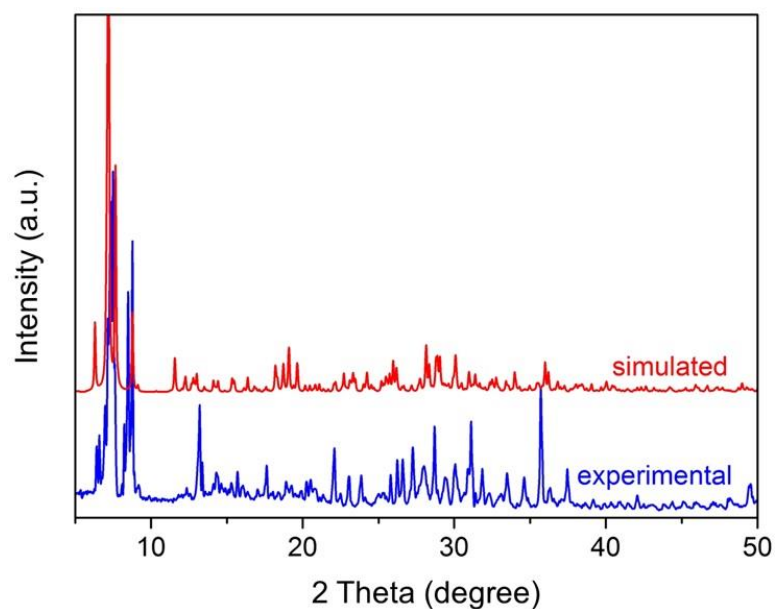


Fig. S6 Powder X-ray diffraction patterns for compound **3**. The low angle diffraction peaks for the experimental PXRD are identical to those for the simulated, while the difference at the high angle might be resulted from the impurity of compound **3**

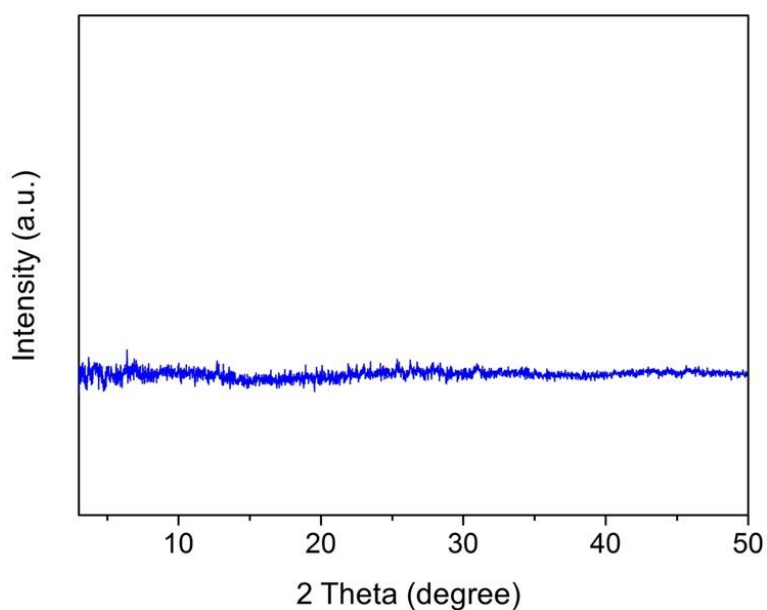


Fig. S7 Powder X-ray diffraction pattern for the product that was obtained according to the synthesis procedure of compound **3** in the absence of 4,4'-bpy

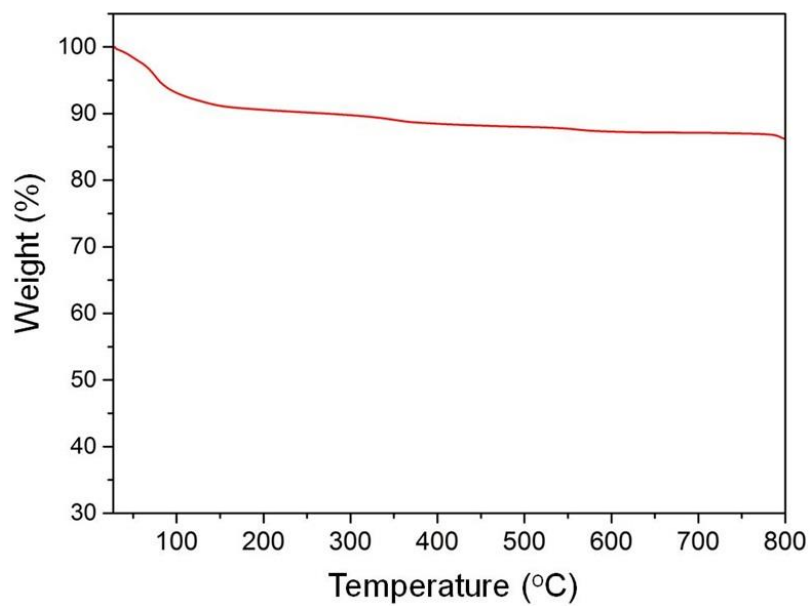


Fig. S8 TGA curve of compound 1

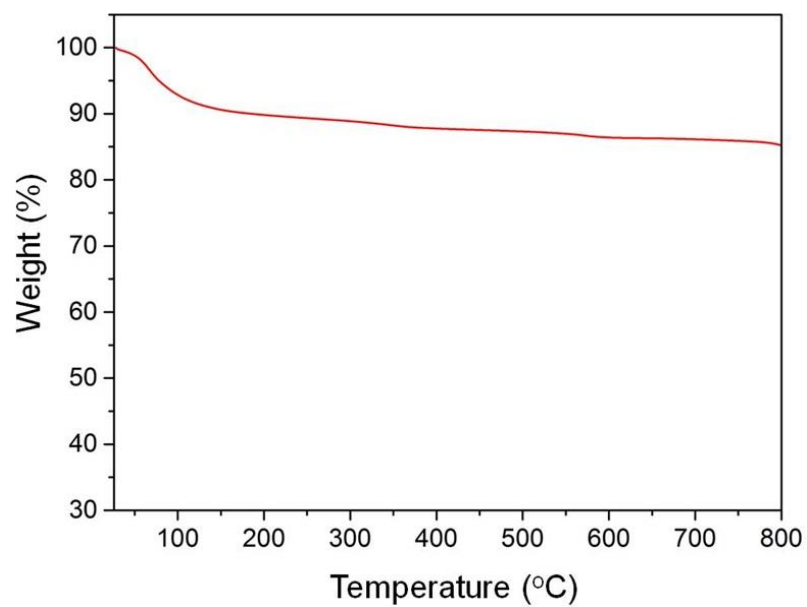


Fig. S9 TGA curve of compound 2

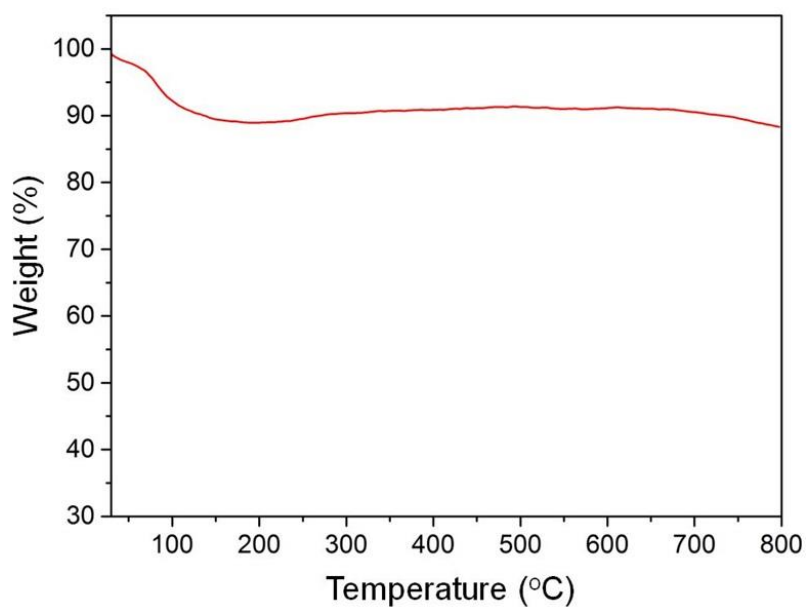


Fig. S10 TGA curve of compound **3**

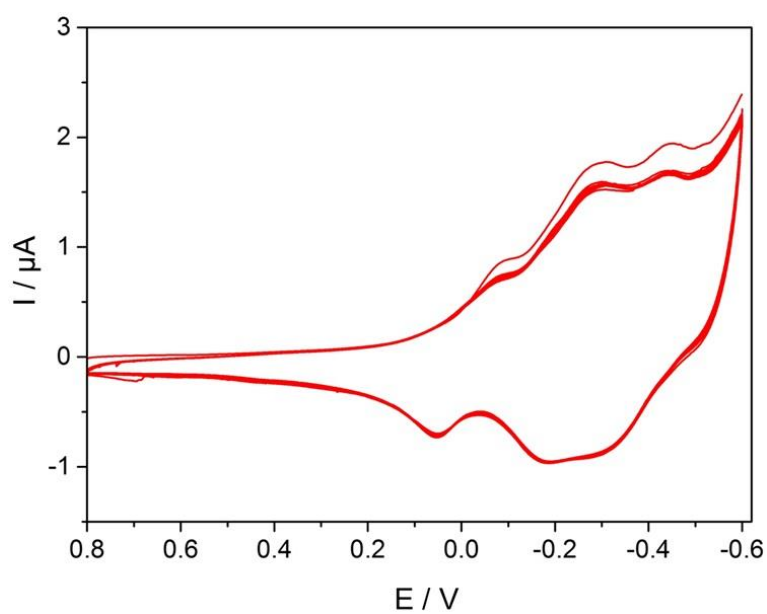


Fig. S11 Cyclic voltammograms of **1-CPE** in 1 M H₂SO₄ aqueous solution at the scan rate of 80 mV s⁻¹ for twenty cycles