Supplemental Material for:

A Novel $Cu_{12}(pz)_{12}$ Loop-based Coordination Polymer Templated by Double-Keggin Anions†

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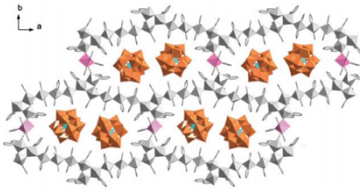
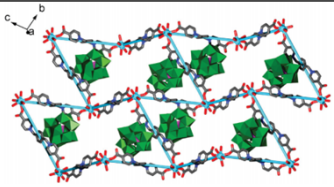
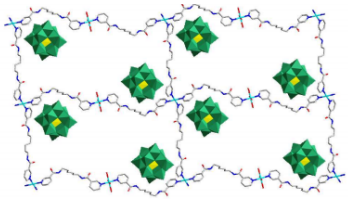
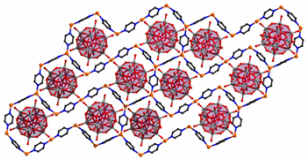
Table S1. Summarization of known coordination compounds assembled from non-coordinating double-Keggin anions as templates.

Compounds	References
 $[\{Mn(bpy)(py)(H_2O)_2\}\{Mo_{12}O_{34}(bpy)_{12}\}]$ $[PMo_{12}O_{40}]_2 \cdot 2H_2O$	*Enbo Wang et al.,* ***Chem. Commun.*** 2007, 770
 $[Ln(L)_{1.5}(H_2O)_5][PMo_{12}O_{40}] \cdot 1.5CH_3CN \cdot 2H_2O$	*Enbo Wang et al.,* ***Dalton Trans.*** 2011, 40, 5971
 $[Cu_2(L_3)_3(SiMo_{12}O_{40})(H_2O)_6] \cdot 4H_2O$ $[Cu_2(L_3)_3(SiW_{12}O_{40})(H_2O)_6] \cdot 4H_2O$	*Xiuli Wang et al.,* ***CrystEngComm***. 2012, 14, 5836
 $[Cu_5(pz)_6(H_2O)_4][PW^{VI}_{10}W^{V}_{2}O_{40}]$	This work

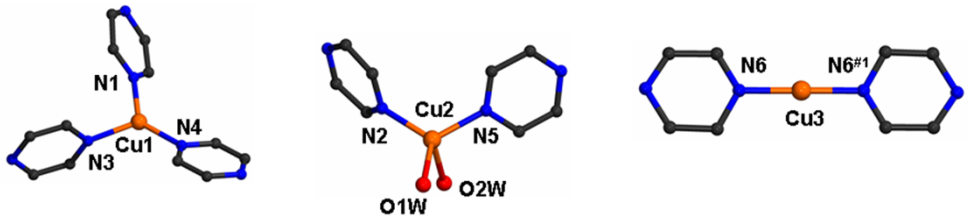


Fig. S1. The coordination modes of three crystallographically independent Cu cations.

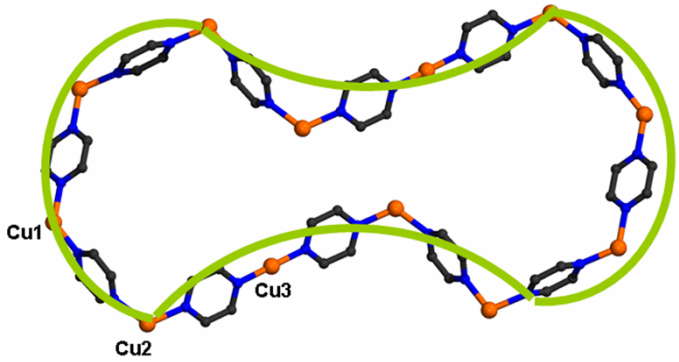


Fig. S2. The $Cu_{12}(pz)_{12}$ loop in compound **1**.

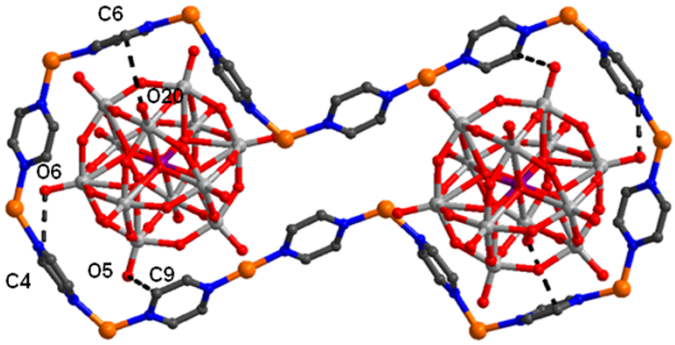


Fig. S3. The hydrogen bonding interactions between dumbbell $Cu_{12}(pz)_{12}$ loop and Keggin PW_{12} anions.

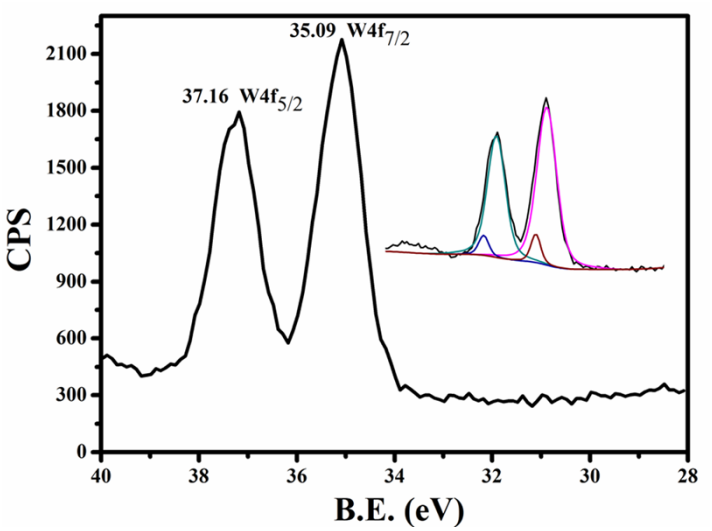


Fig. S4. The XPS spectrum of compound **1**.

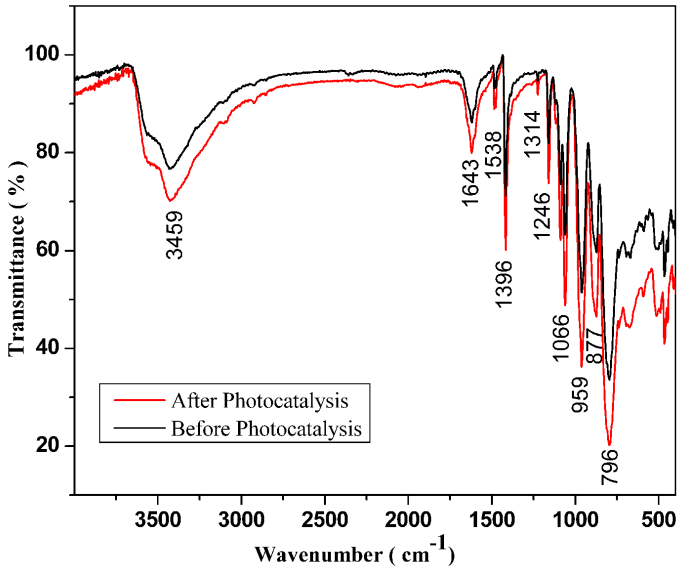


Fig. S5. The IR spectra of compound 1 (black) and the sample after the third run of the RhB degradation test (red).

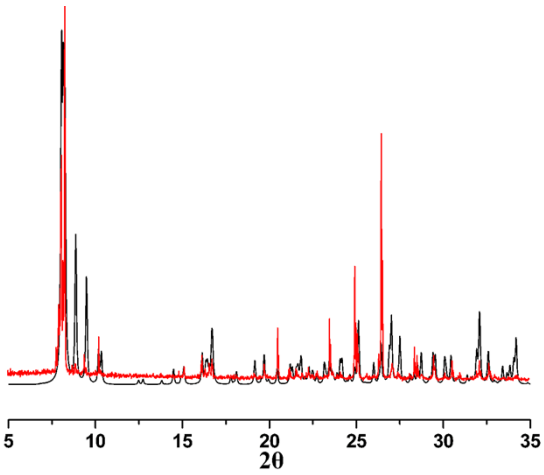


Fig. S6. The simulative (black) and experimental (red) powder X-ray diffraction patterns for compound **1**.

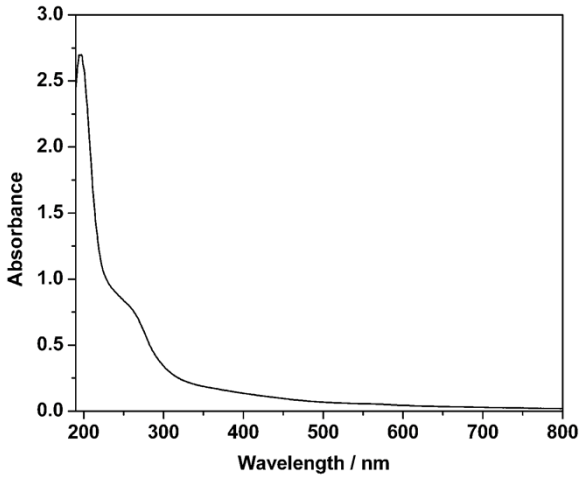


Fig. S7. The UV-vis absorption spectrum of compound **1** in aqueous solution.

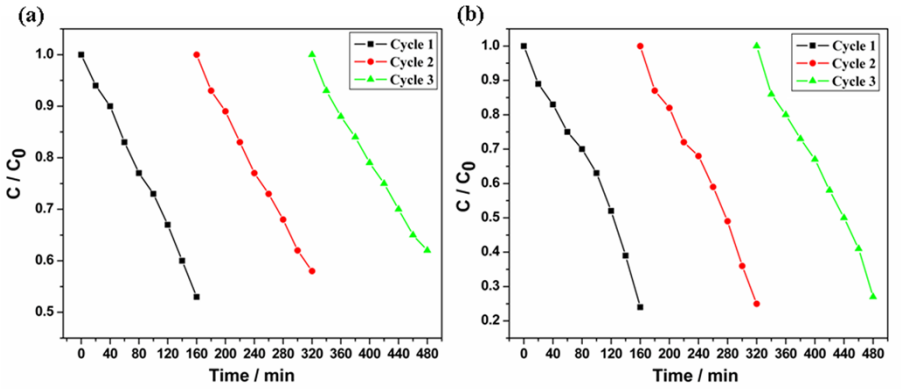


Fig. S8. Three time of the RhB degradation test by (a) $NBu_4)_3[PW_{12}O_{40}]$, and (b) compound **1**.