

Electronic Supporting Informations

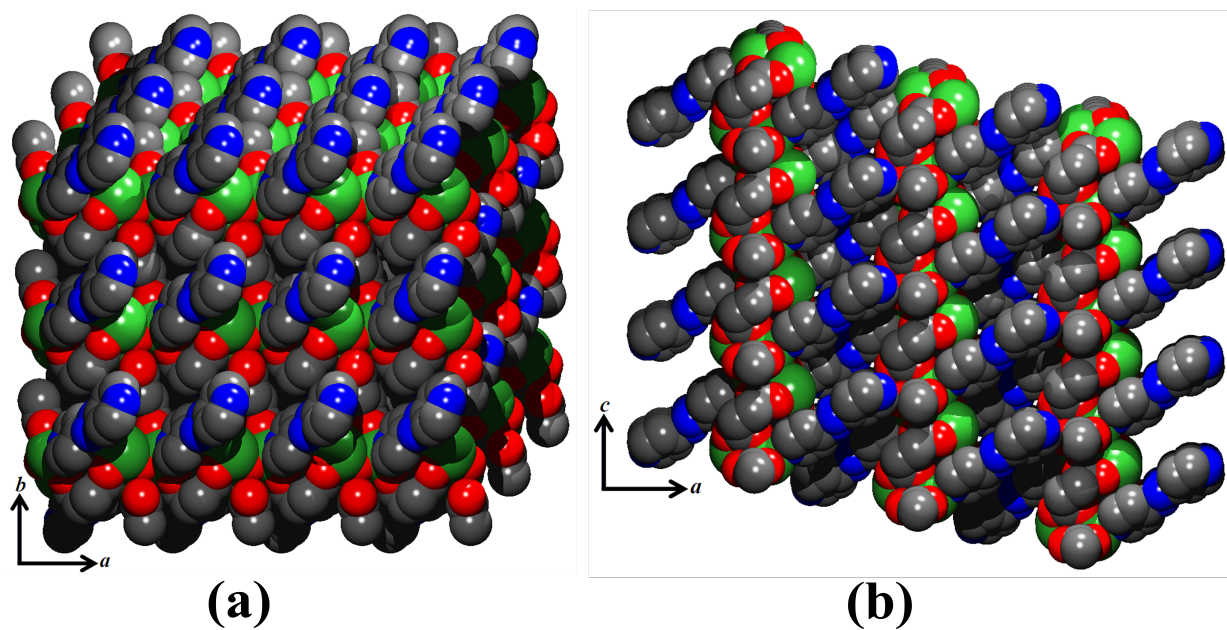


Fig. S1 Space filling model of **1** viewed along crystallographic *b*-axis and *a*-axis.

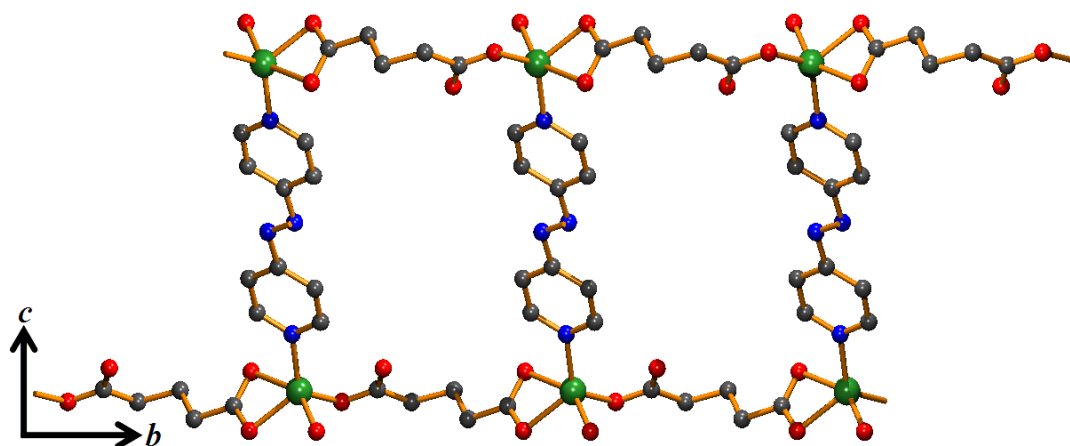


Fig. S2 View of extended 1D ladder structure of compound **3** in the crystallographic *bc* plane. Guest water molecules and hydrogen atoms are omitted for clarity.

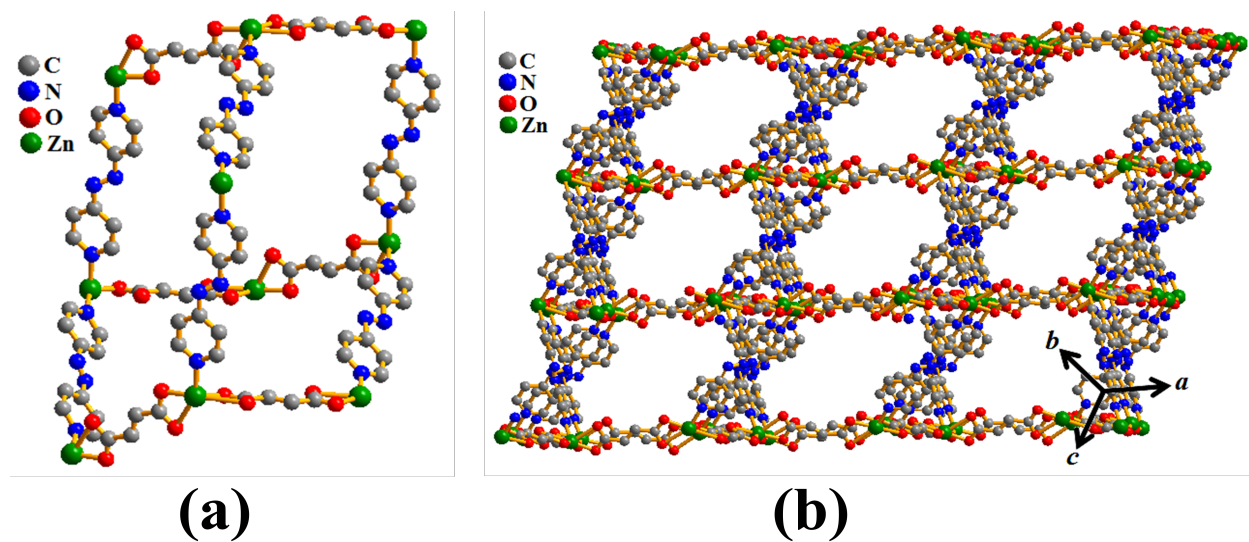


Fig. S3 (a) View of a single diamondoid cage of **2** with *fum* and *azbpy* connections between Zn(II) ions. (b) View of a single 3D diamondoid network showing large cavities.

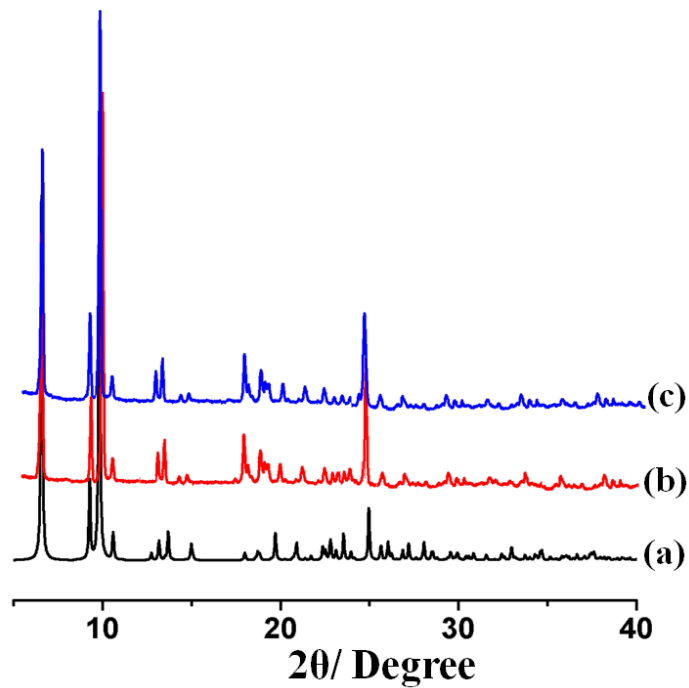


Fig. S4 PXRD patterns of **1** in different states. (a) Simulated from X-ray single crystal data; (b) bulk as-synthesized compound; (c) at 120°C.

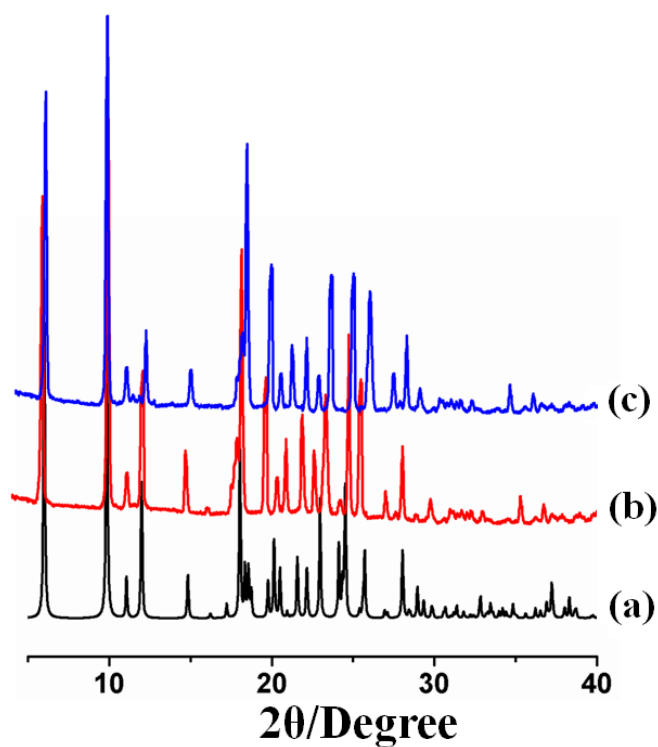


Fig. S5 PXRD patterns of **2** in different states. (a) Simulated from X-ray single crystal data; (b) bulk as-synthesized compound; (c) at 120°C.

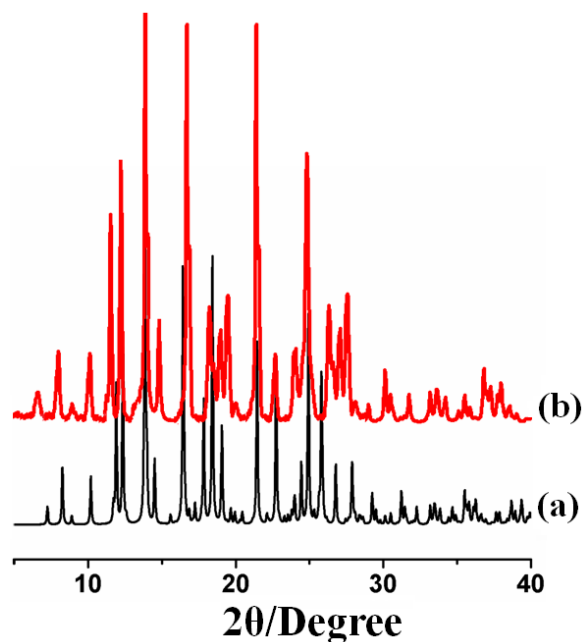


Fig. S6 PXRD patterns of **3** in different states. (a) Simulated from X-ray single crystal data; (b) bulk as-synthesized compound.