

Fig. S1 Polyhedral view of the $\text{Mn}(\text{II})$ ions in I.

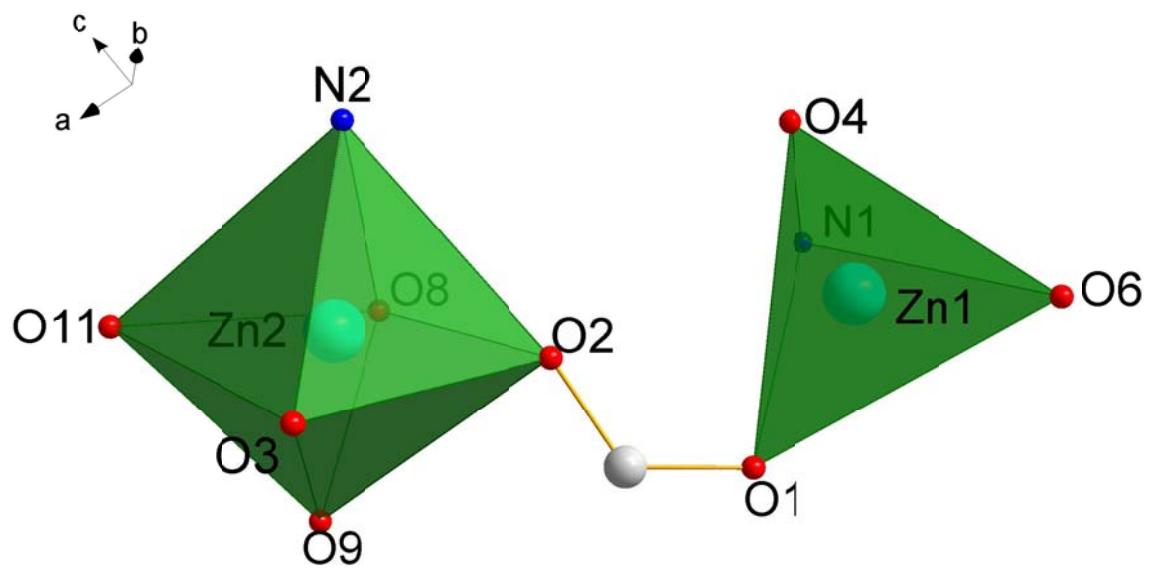


Fig. S2 Polyhedral view of the Zn(II) ions in II.

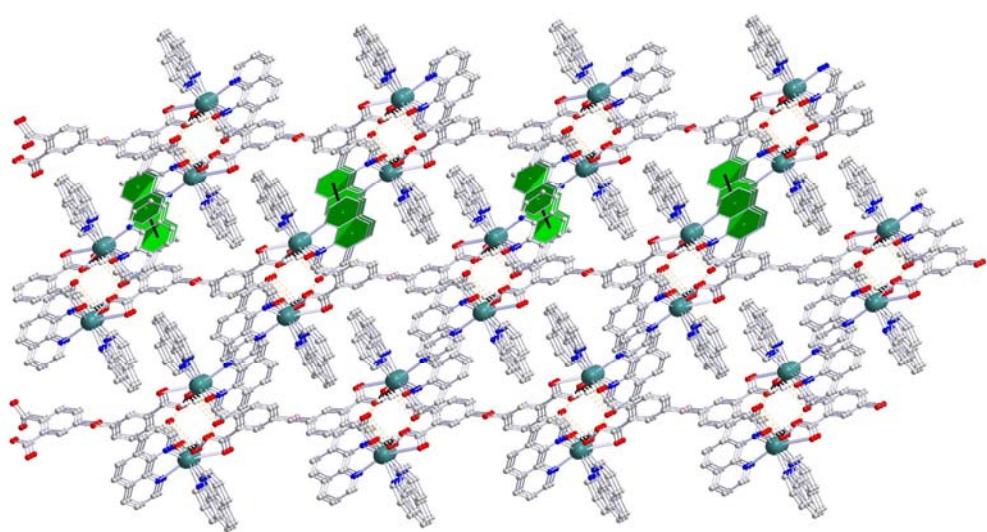


Fig. S3 3D framework assembled by $\pi-\pi$ interactions between parallel pyridine rings in phen molecules.

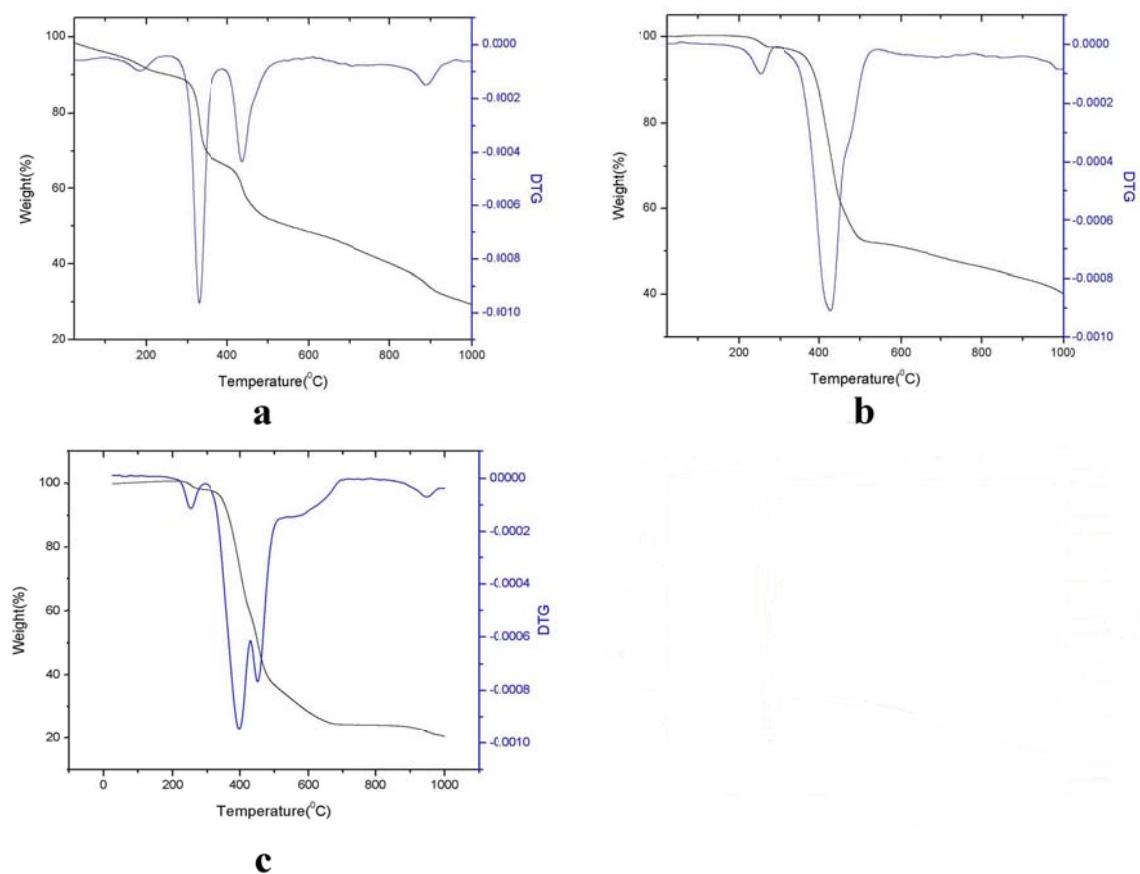


Fig. S4 (a) TG-DTG curves of I; (b) TG-DTG curves of II; (c) TG-DTG curves of III.

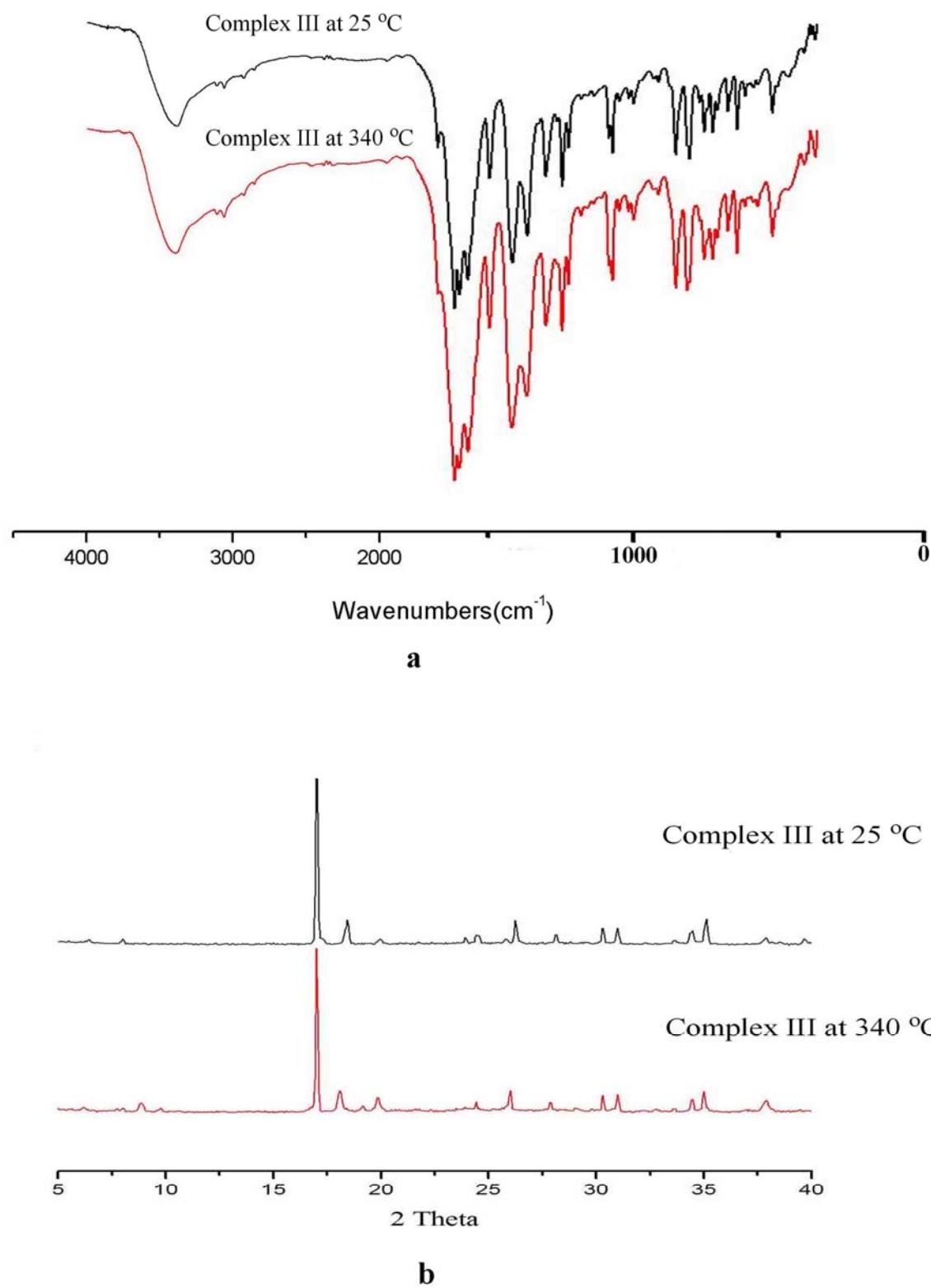


Fig. S5 IR spectrum and XRPD patterns for III: (a) IR spectrum for III taken at room temperature and after the guest-bpy molecules being removed; (b) XRPD patterns for III simulated, at room temperature and after the guest-bpy molecules being removed.