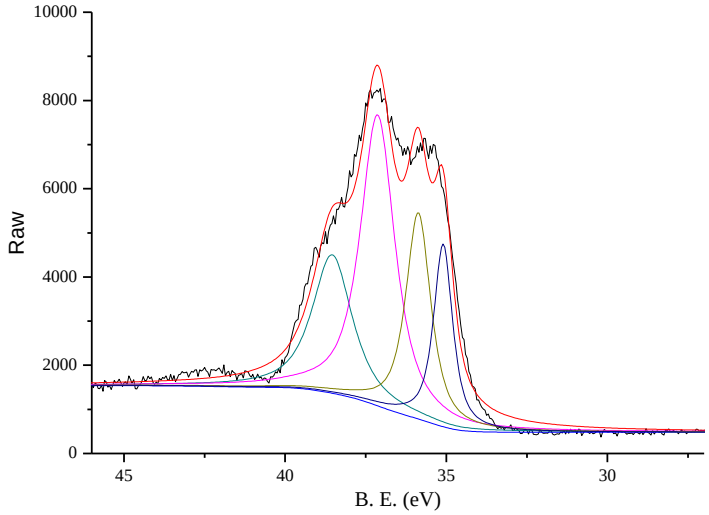


Fig. s1. The XPS spectrum for the compound **1**. XPS measurements were performed on single crystals with ESCALAB MARK II apparatus, using the Mg Kα(1253.6eV) achromatic X-ray radiation source.

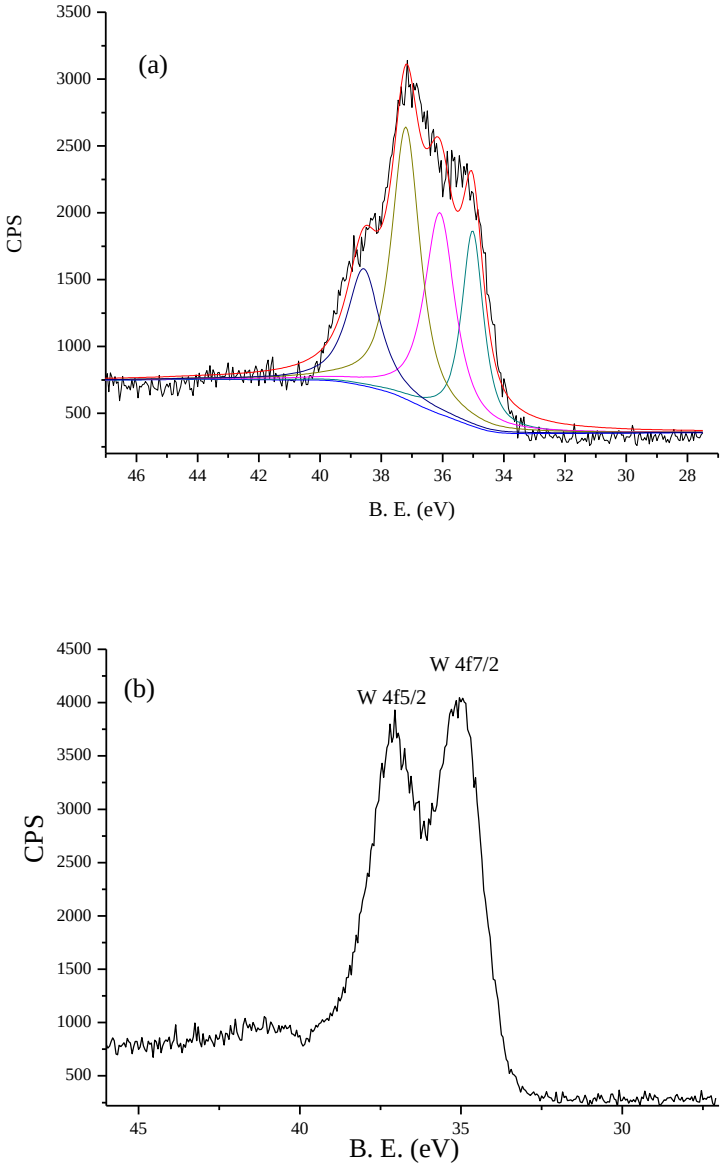


Fig.s2. (a) The XPS spectrum for compound **2**. (b) The XPS spectrum for compound **3**.

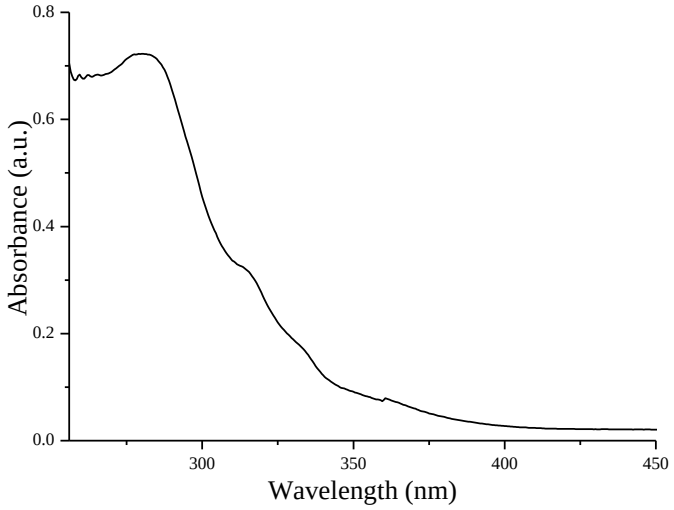


fig. s3. The UV-Vis spectrum for the compound **1**. The UV-Vis spectra were recorded on a Shimadzu UV3100 spectrophotometer.

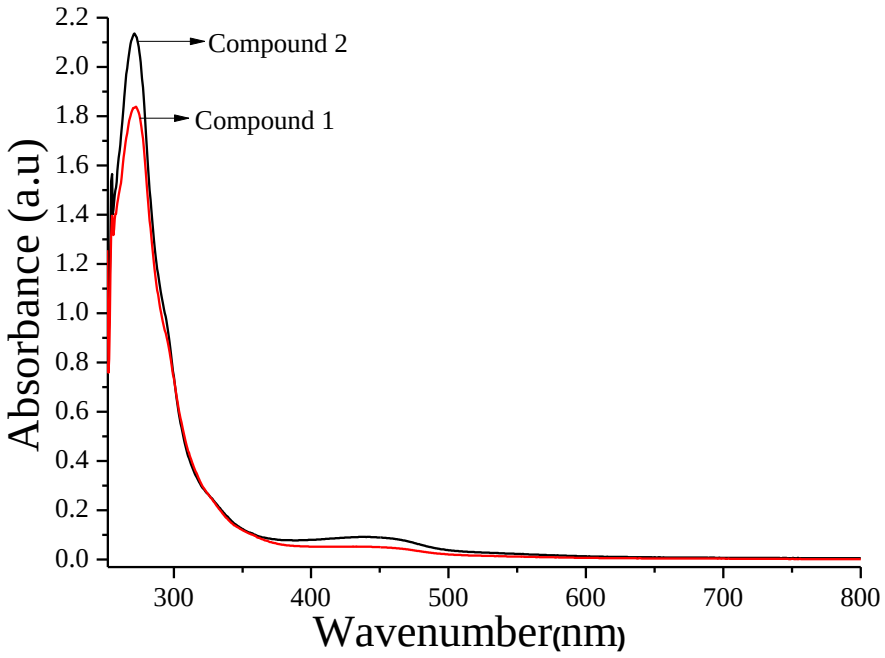


Fig.s4. The UV-Vis spectra for compound**1** and **2**. Compound**1** and **2** were analysized as saturated N,N-dimethyl formamide solutions.

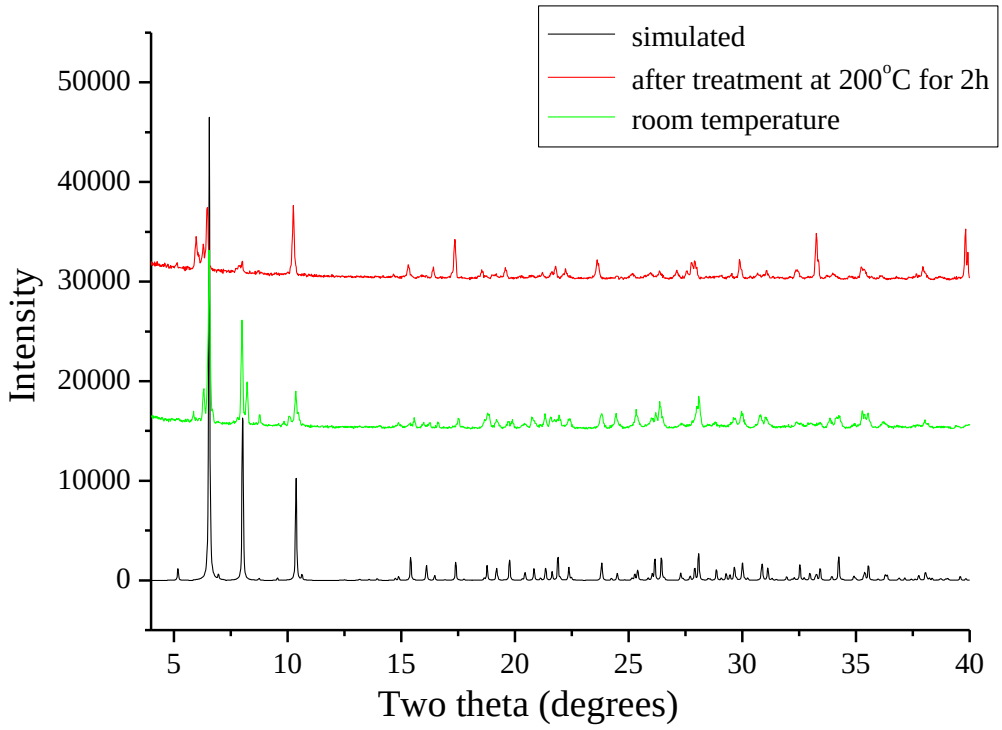


Fig. s5. The XRD pattern for compound **1**. The X-ray powder diffraction pattern was obtained with a Scintag X1 powder diffractometer system using Kα radiation with a variable divergent slit and a solid-state detector.

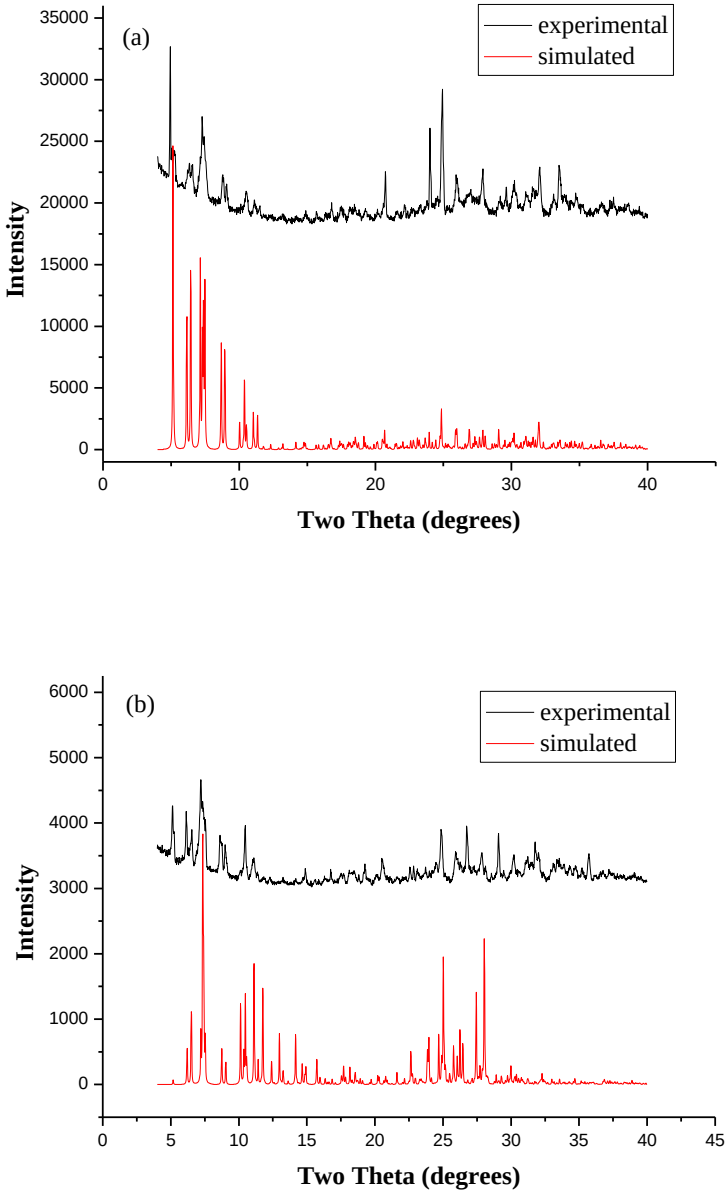
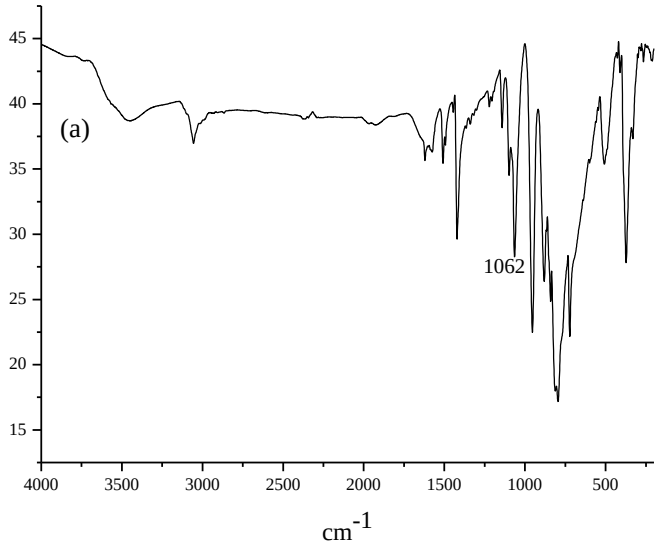


Fig. s6. (a) The XRD spectrum for compound **1**. (b) The XRD spectrum for compound **2**.



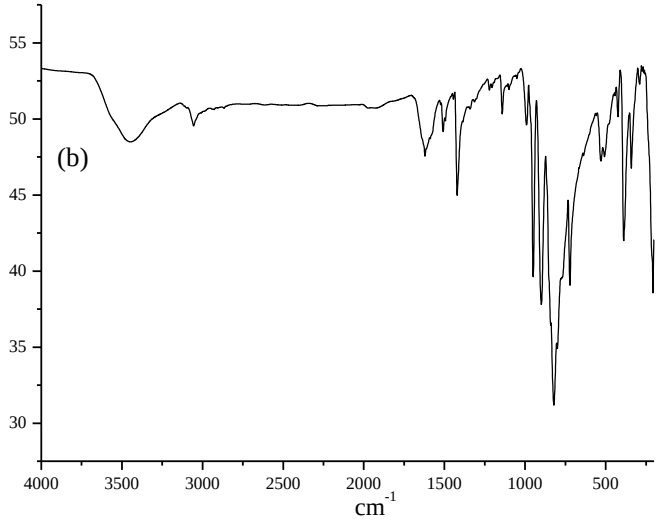


Fig. s7. (a) The IR spectrum for the compound **1**. The strong band at 1062cm^{-1} is associated with the P centre of the POM in **1**. (b) The IR spectrum for the compound **2**.

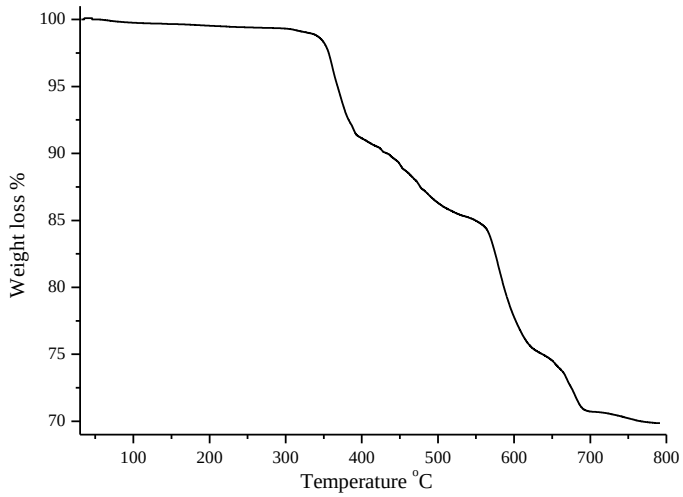


Fig. s8. The TG curve for the compound **1**. Thermogravimetric analysis (TG) data were recorded with a thermal analysis instrument (SDT 2960, TA Instruments, New Castle, DE) with the heating rate of 10˚C min^{-1} in an air flow.

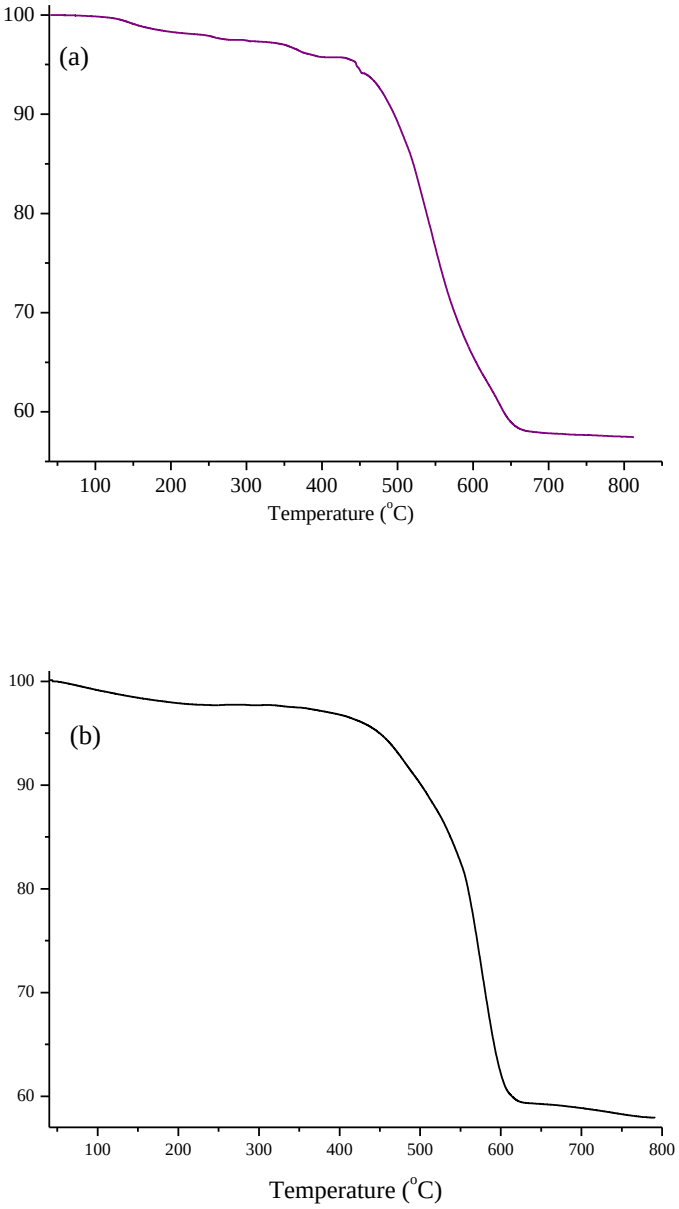


Fig. s9. (a) The TG spectrum for compound **2**. (b) The TG spectrum for compound **3**.

Table s1. The hydrogen bonds in compound **2**.

D-H···A	D-H[Å]	H···A[Å]	D···A[Å]	D-H···A[°]	symop-for-A
C27A-H27A···O9	0.93	2.39	3.18(2)	144	1-x,1-y,-z
C38A-H38A···O15	0.93	2.49	3.15(2)	128	-x, 1-y, 1-z
C63A-H63A···O17	0.93	2.44	3.12(2)	129	x, -1+y, 1+z
C13A-H13A···Ow2	0.93	2.46	3.16(3)	131	1-x, 1-y, 1-z
O17···Ow1			2.76(4)		
OW1···Ow2A			2.80(5)		2-x, -y, 1-z
O17···Ow2			2.96(4)		