Electronic Supplementary Material (ESI) for RSC Advances.

Table S1 Bond lengths (Å) and Angles (deg) for compounds 1 and 2

		Compound **1**	
Zn(1)-O(3)#1	1.940(3)	O(1)#2-Zn(1)-O(2)	84.65(12)
Zn(1)-O(1)#2	2.036(3)	O(1W)-Zn(1)-O(2)	115.44(12)
Zn(1)-O(1W)	2.064(3)	O(3)#1-Zn(1)-N(1)	94.93(12)
Zn(1)-O(2)	2.089(3)	O(1)#2-Zn(1)-N(1)	158.85(11)
Zn(1)-N(1)	2.130(3)	O(1W)-Zn(1)-N(1)	89.94(13)
O(3)#1-Zn(1)-O(1)#2	106.05(12)	O(2)-Zn(1)-N(1)	77.90(12)
O(3)#1-Zn(1)-O(1W)	106.19(13)	O(3)#1-Zn(1)-O(2)	137.58(13)
		Compound **2**	
Zn(1)-O(3)#1	2.036(2)	N(1)-Zn(1)-O(2)	78.38(8)
Zn(1)-O(4)#2	2.0786(19)	O(2)#3-Zn(1)-O(2)	169.60(5)
Zn(1)-N(1)	2.105(2)	O(3)#1-Zn(1)-O(1W)	95.72(8)
Zn(1)-O(2)#3	2.1457(18)	O(4)#2-Zn(1)-O(1W)	173.94(8)
Zn(1)-O(2)	2.1528(18)	N(1)-Zn(1)-O(1W)	88.73(9)
Zn(1)-O(1W)	2.173(2)	O(2)#3-Zn(1)-O(1W)	88.44(7)
O(3)#1-Zn(1)-O(4)#2	85.65(8)	O(2)-Zn(1)-O(1W)	82.12(7)
O(3)#1-Zn(1)-N(1)	173.77(9)	N(1)-Zn(1)-O(2)#3	97.15(8)
O(4)#2-Zn(1)-N(1)	89.48(9)	O(3)#1-Zn(1)-O(2)	97.88(7)
O(3)#1-Zn(1)-O(2)#3	87.35(8)	O(4)#2-Zn(1)-O(2)	91.85(8)
O(4)#2-Zn(1)-O(2)#3	97.53(7)		

Symmetry transformations used to generate equivalent atoms: for compound 1, #1 -x, -y + 1, -z+1; #2 -x+1, y-1/2, -z+3/2; for compound 2, #1 x-y+1/3, x+2/3, -z+2/3; #2 y, -x+y, -z+1; #3 -x+y-1/3, -x+1/3, z+1/3.

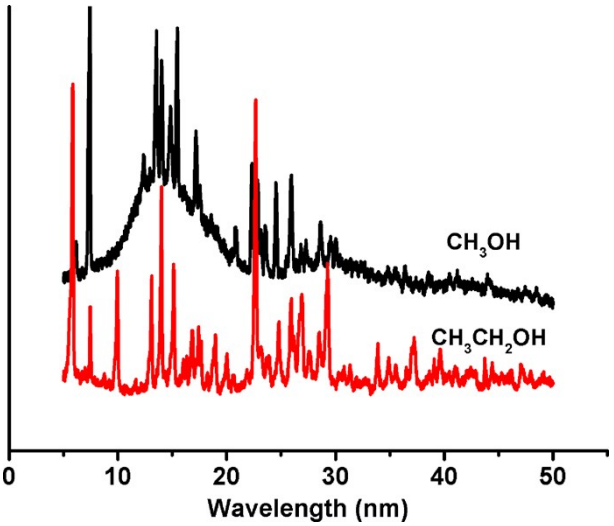

Fig.S1 the PXRD of white powders obtained from the mixed CH_3OH/H_2O and CH_3CH_2OH/H_2O, respectively.

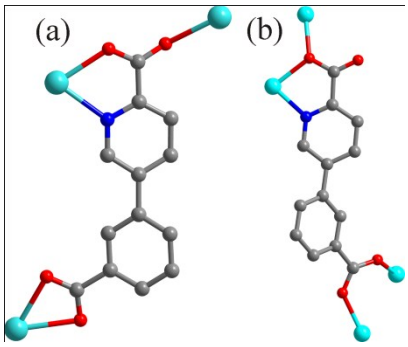

Fig.S2 the coordination modes of $cppca^{2-}$ **(a) for compound 1, (b) for compound 2**

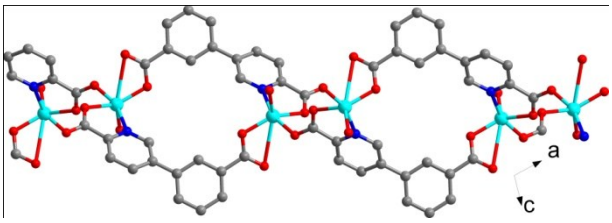

Fig.S3 The 2D layer with 1D channel along *b* axis in compound **1**

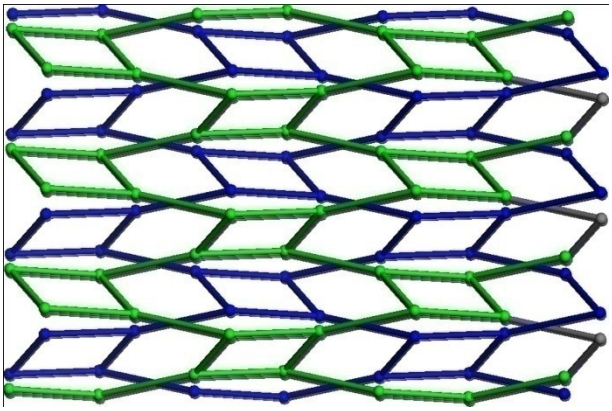

Fig.S4 The 3D supramolecular network in compound **1**.

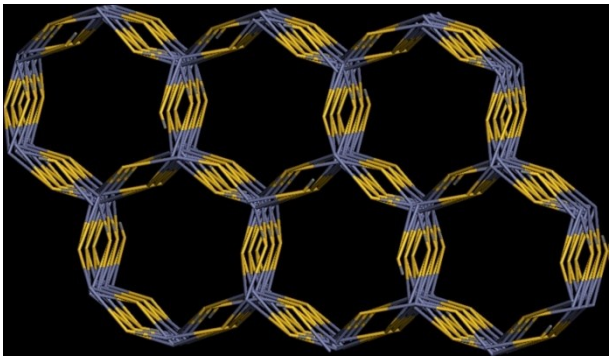

Fig.S5 The topology structure of compound 2

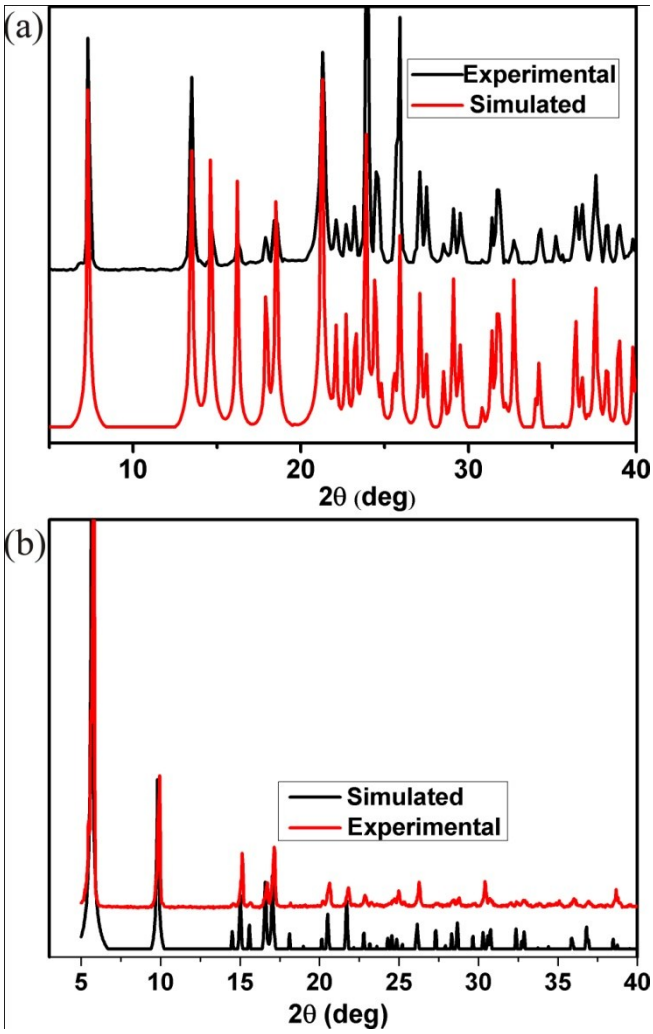

Fig S6. The experimental and simulated X-ray diffraction patterns (a) for compound **1**, (b) for compound **2**

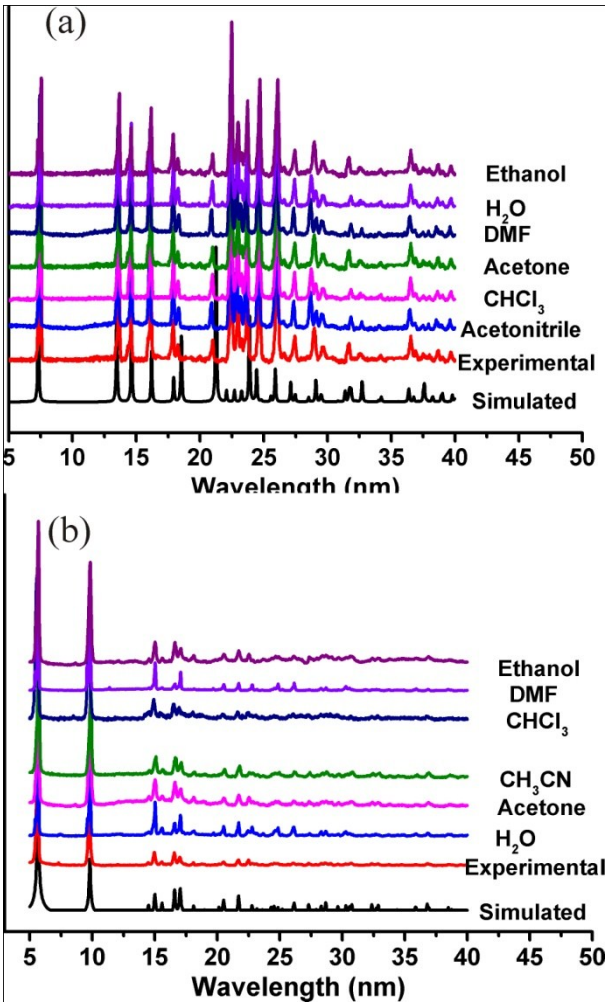

Fig.S7 The Power XRD patterns immersed in different solvents after ultrasonication 30 minutes at room temperature (a) for compound **1**, (b) for compound **2**

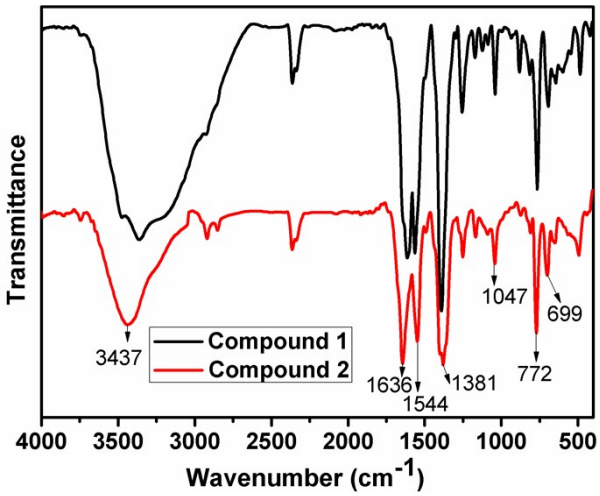

Fig.S8 The IR spectra of compounds **1** and **2**

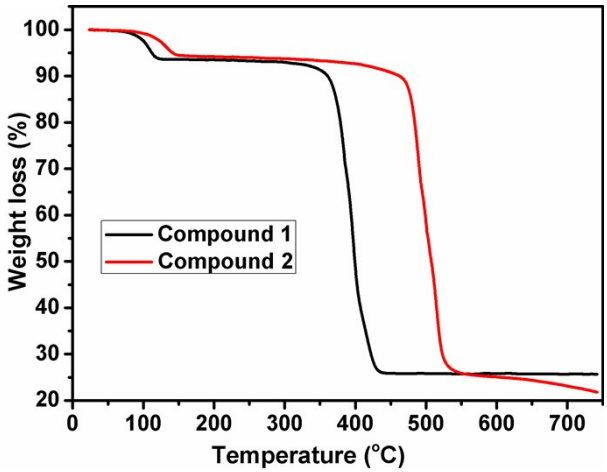

Fig.S9 The TGA curves of compounds **1** and **2**

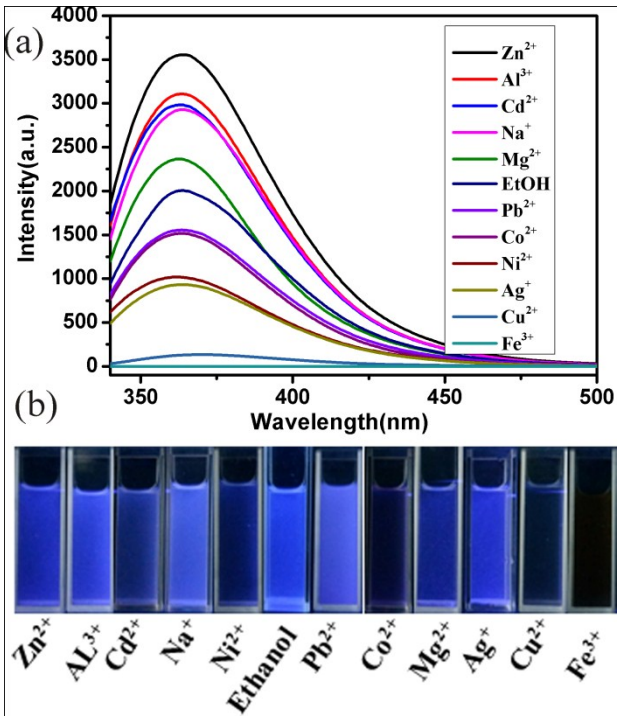

Fig.S10 (a) Emission spectra of compound **2** in ethanol emulsion containing different metal ions, (b) the luminescence photographs of compound 2 in ethanol emulsion containing different metal ions under UV light.

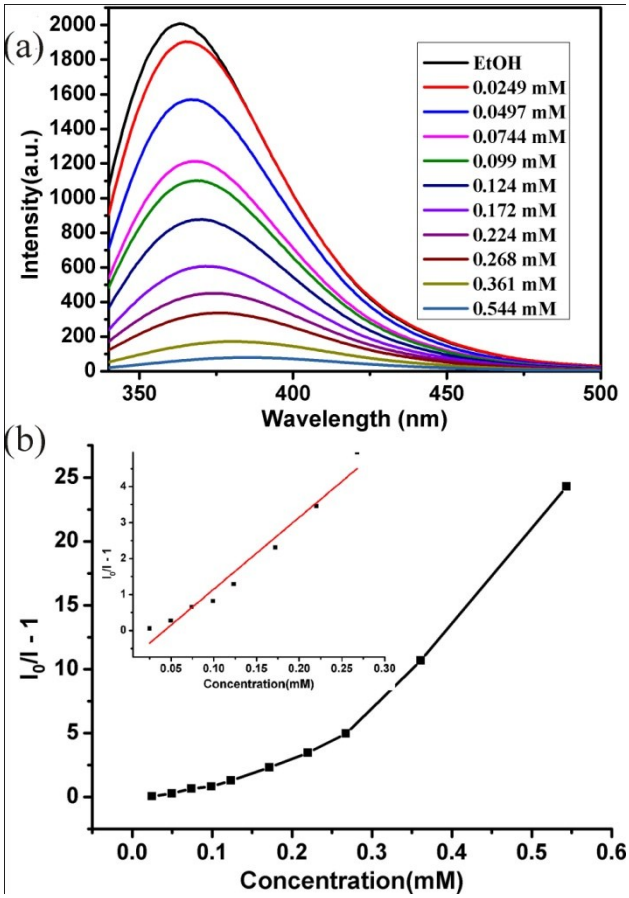

Fig.S11 (a) fluorescence titration of **2** dispersed in ethanol with the addition of different concentrations of Fe^{3+} (excited at 320 nm), (b) the curve of (I_0/I-1) vs Fe^{3+} concentration in compound **2**. Inset is the linear plot at low concentration.

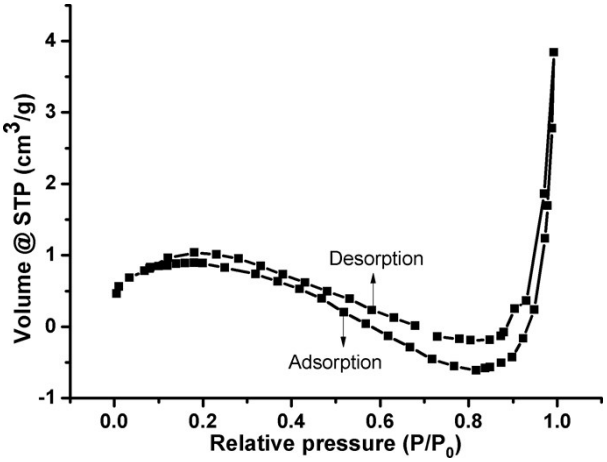

Fig.S12 N_2 adsorption isotherm of compound 2 at 77 K and 1 atm