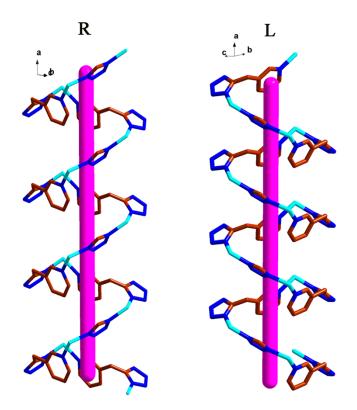
Electronic Supplementary Material (ESI) for CrystEngComm. This journal is © The Royal Society of Chemistry 2014

## **Supporting Information**

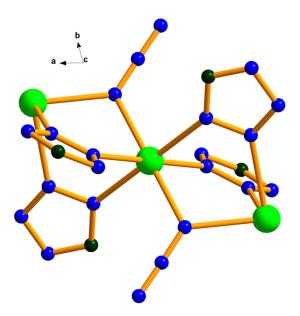
((1-H-tetrazol-5-yl)methyl)pyridine -based Metal Coordination

Complexes: In Situ Syntheses, Crystal Structures, Luminescent

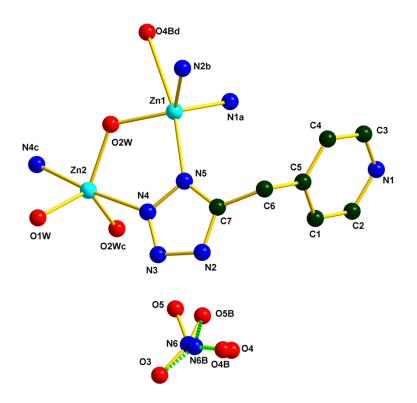
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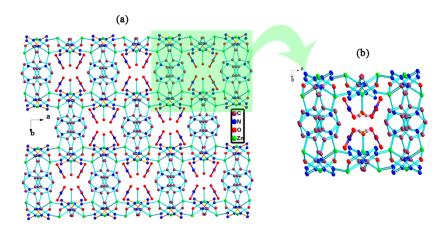
**Figure S1**<sub>1</sub>. The R & L helical chains in complex 2. right: the R helical chain; left: the L helical chain.



**Figure S1<sub>2</sub>.** The trinuclear  $[Cd_3(N_3)_2]$  building unit of complex 3, C atoms were omited for clear.



**Figure S1<sub>3</sub>.** View of the disordered units of complex **4**. Complex **4** exhibits 1:1 disorder of the free  $NO_3$ - anions existing in the channels of complex **4**. The disorder is created by the presence of a crystallographic mirror plane or a two-fold axis.



**Figure S1**<sub>4</sub>. (a) View of 3D MOF with free  $NO_3$ - anions situated in channels along the *c*-axis of complex **4**; (b) hydrongen bond between free  $NO_3$ - anions and O1W.

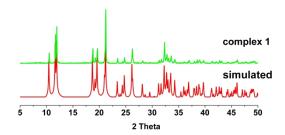


Figure S2<sub>1</sub>. Powder XRD: Patterns of simulated and as-prepared of 1.

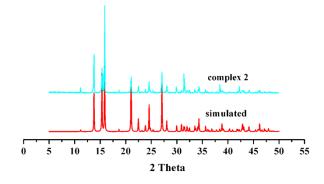


Figure S2<sub>2</sub>. Powder XRD: Patterns of simulated and as-prepared of 2.

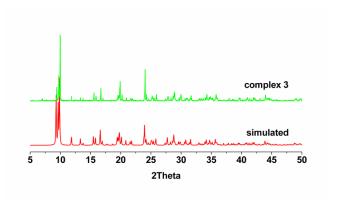


Figure S2<sub>3</sub>. Powder XRD: Patterns of simulated and as-prepared of 3.

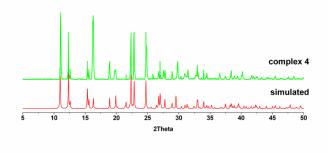


Figure \$24. Powder XRD: Patterns of simulated and as-prepared of 4.

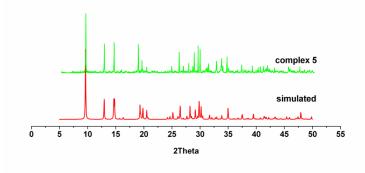


Figure S2<sub>5</sub>. Powder XRD: Patterns of simulated and as-prepared of 5.

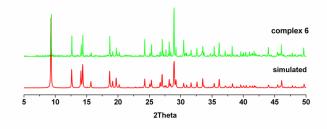


Figure S2<sub>6</sub>. Powder XRD: Patterns of simulated and as-prepared of 6.

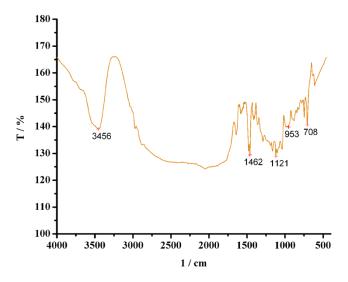


Figure  $S3_1$ . IR spectra of complex 1

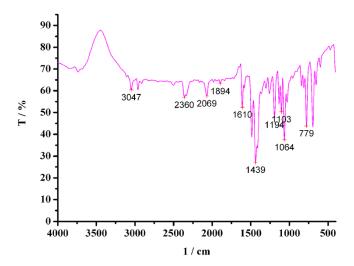
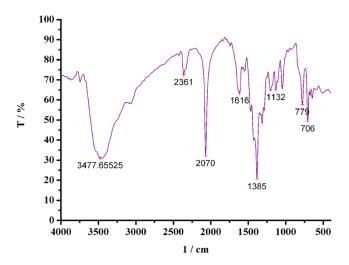


Figure  $S3_2$ . IR spectra of complex 2



 $Figure \ S3_{3.} \quad \text{IR spectra of complex 3}$ 

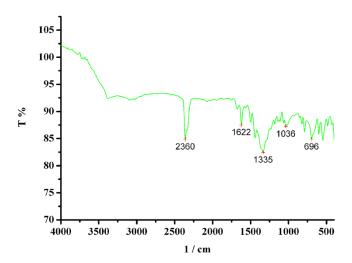


Figure S3<sub>4.</sub> IR spectra of complex 4

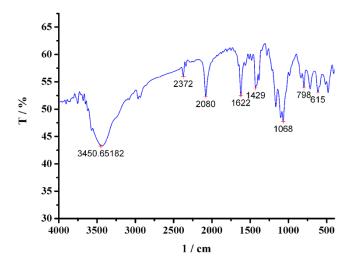
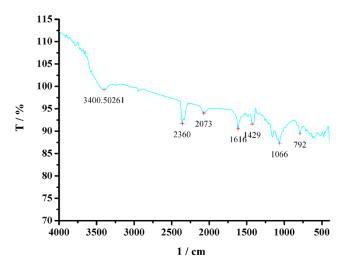


Figure  $S3_{5.}$  IR spectra of complex 5



 $Figure \ S3_{6.} \ \text{IR spectra of complex } 6$ 

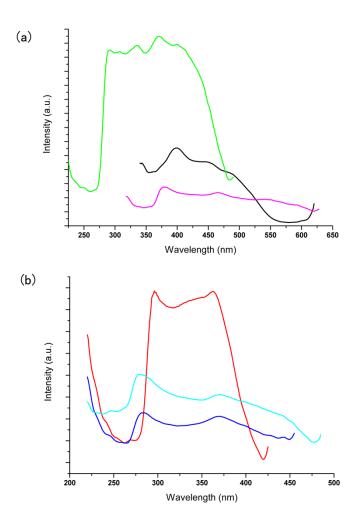


Figure S4. (a) Solid-state excitation spectra of complexes 1, 3 and 6. 1: black; 3: green; 6: pink. (b) Solid-state excitation spectra of complexes 2, 4 and 5. 2: red; 4: blue; 5: cyan.