

Supporting Information for

## **The effect of Conformation of Flexible Carboxylate Ligands on the Structures of Metal-Organic Supramolecules**

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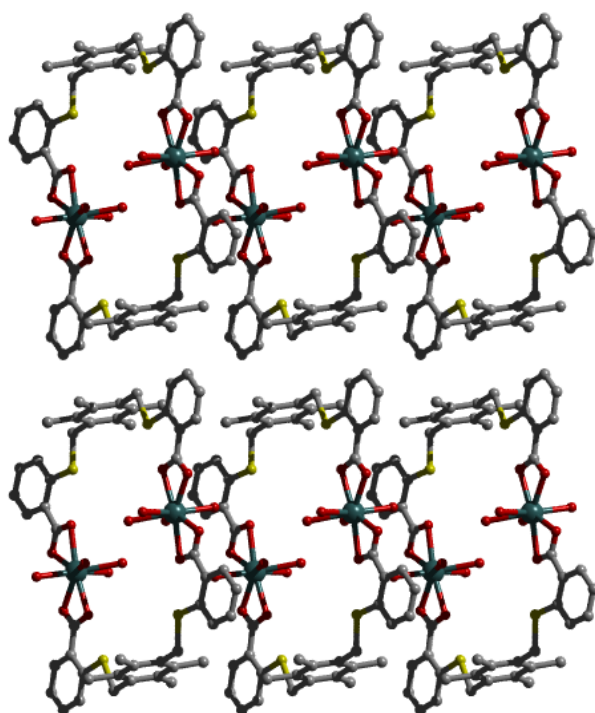


Figure S1. The 3D packing structure of **1** along *a* axis.

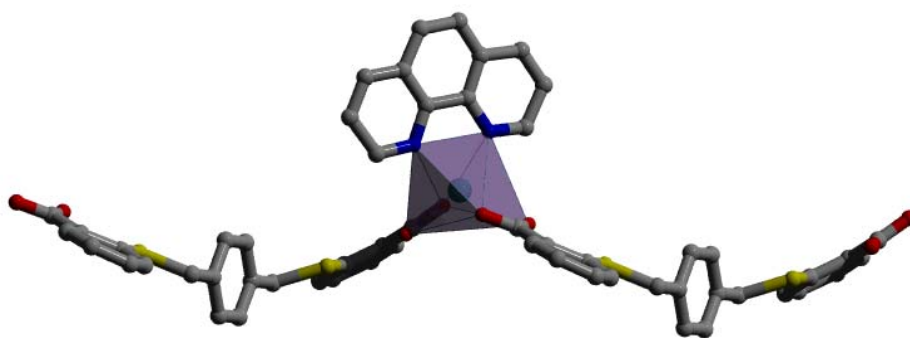


Figure S2. The coordination environment of Zinc ion in **2**.

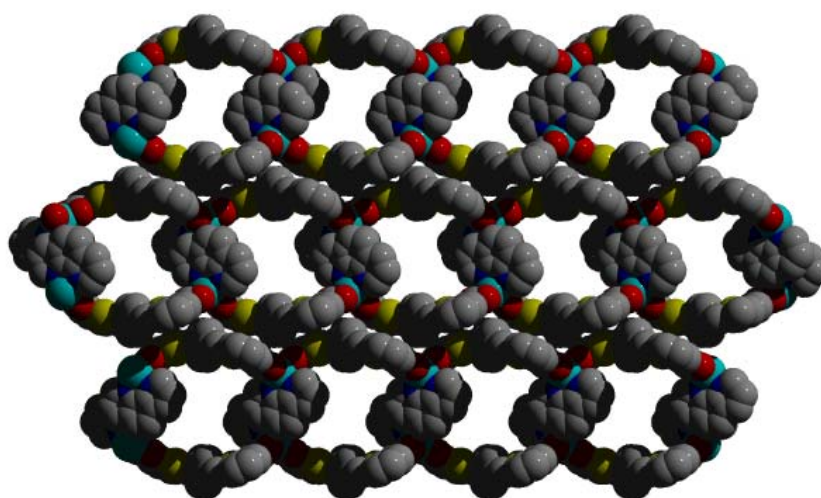


Figure S3. the "rainbow" chain of complex 2.

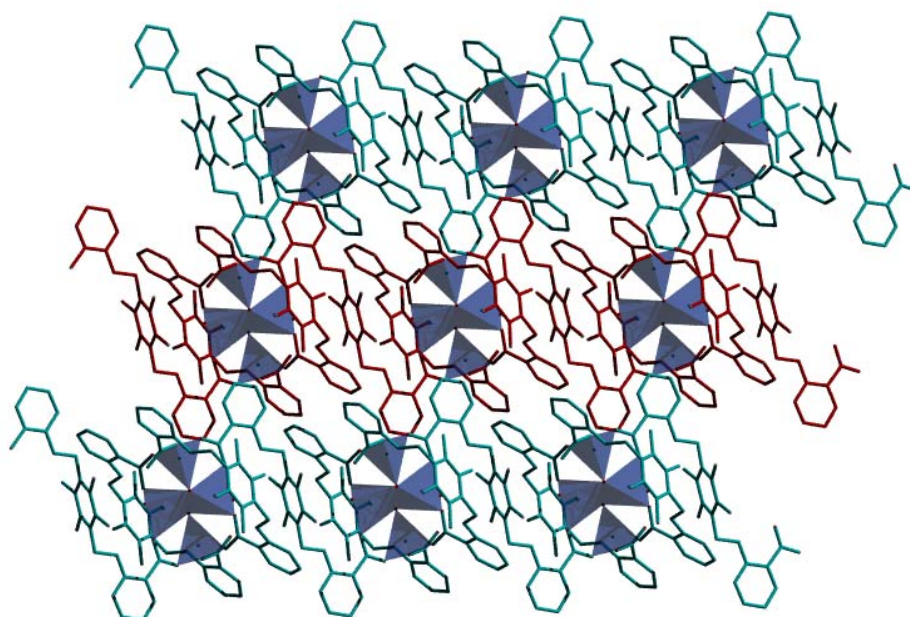


Figure S4. The 3D packing structure of 3..

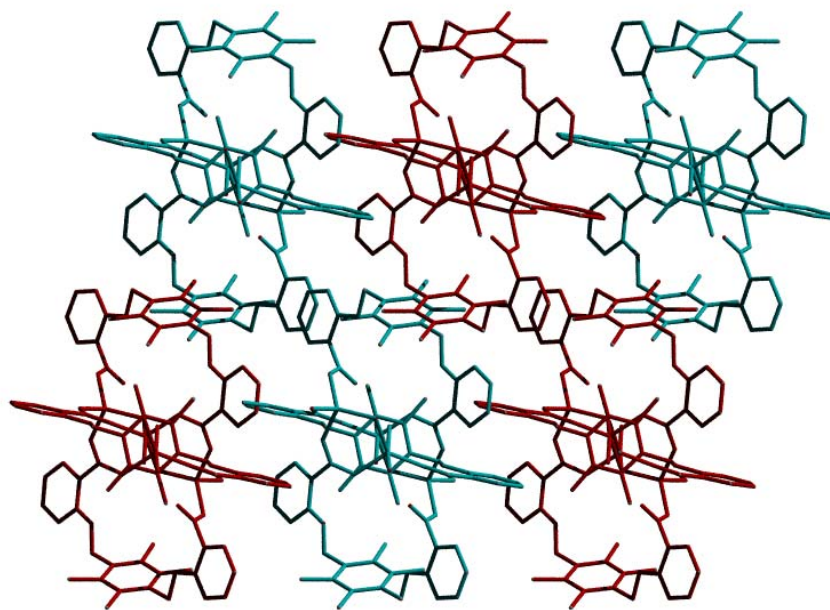


Figure S5. The 3D packing structure of 3. The different layers were shown in different colors.

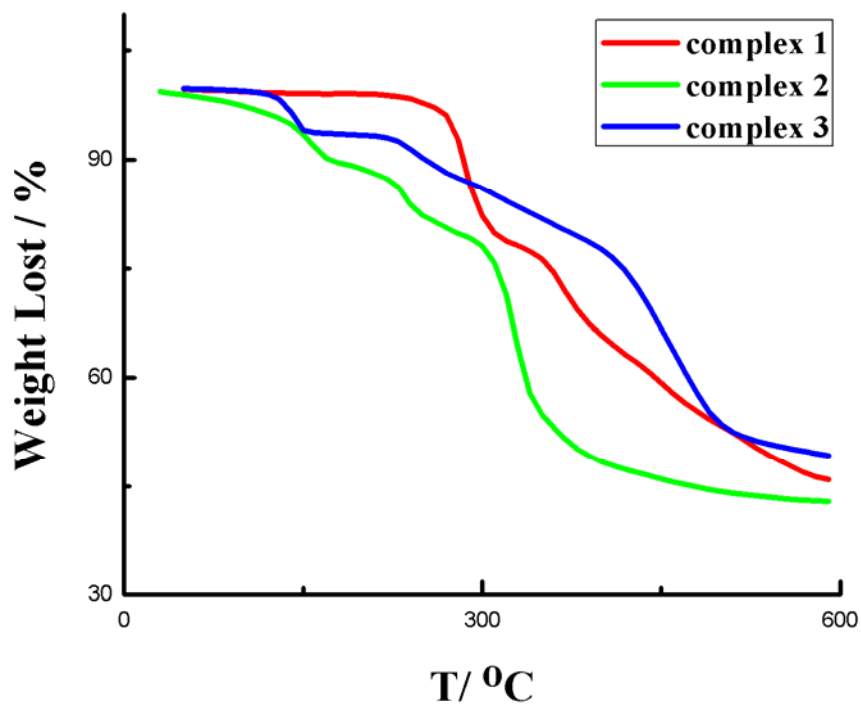


Figure S6. TGA for complexes 1-3.

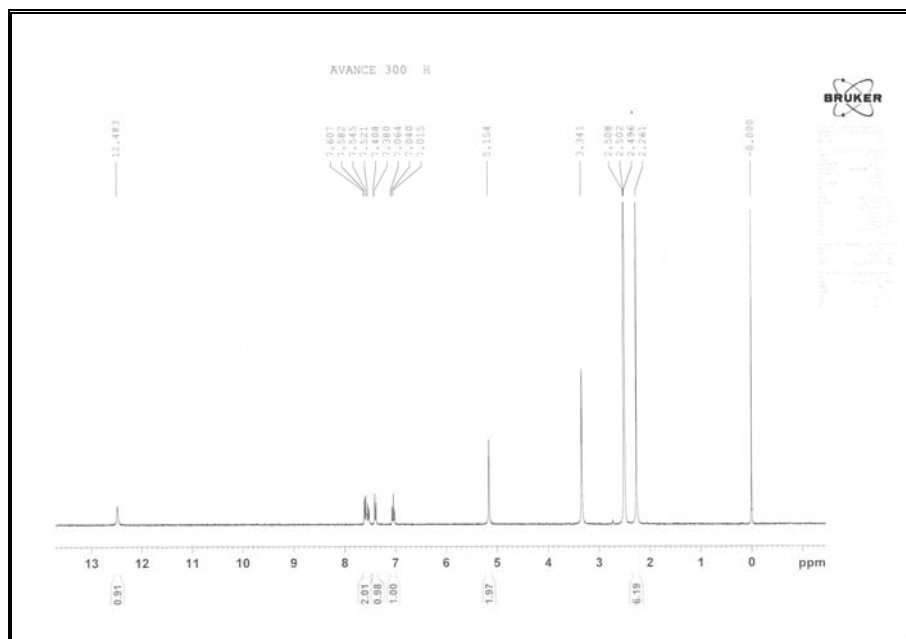


Figure S7. <sup>1</sup>H NMR spectroscopy for ligand **H<sub>2</sub>L<sup>1</sup>**.

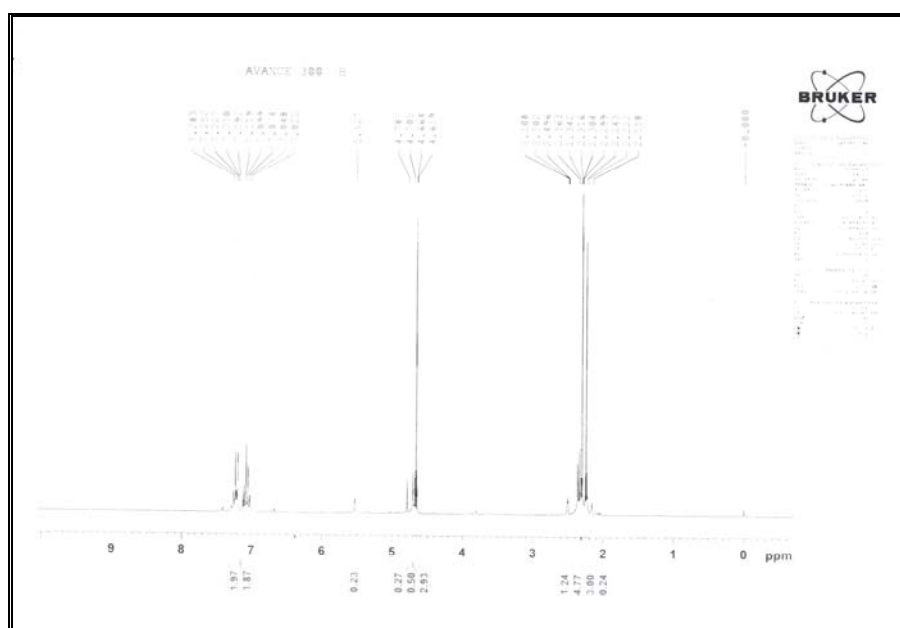


Figure S8. <sup>1</sup>H NMR spectroscopy for ligands **H<sub>2</sub>L<sup>9</sup>**.

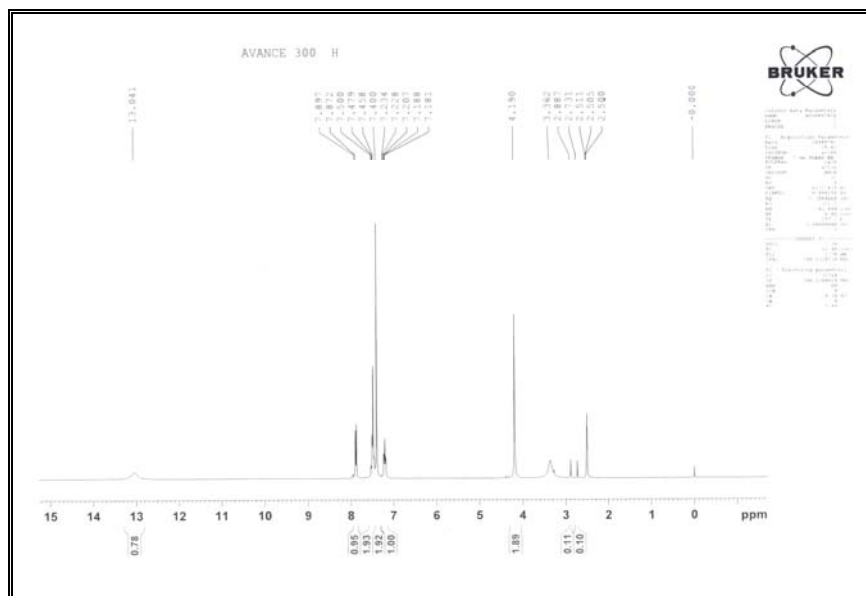


Figure S9.  $^1\text{H}$  NMR spectroscopy for ligands  $\text{H}_2\text{L}^{10}$ .