

Supporting Information

Interweaving of single-helical and equal double-helical chains with the same helix axis in a 3D metal-organic framework

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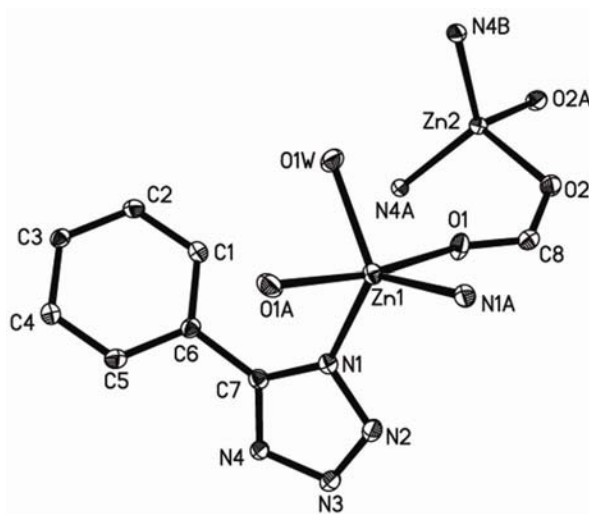


Fig S1. Molecular structure of **1** showing the geometry of the Zn^{2+} ions and the coordination mode of tzba^{2-} . Hydrogen atoms are omitted for clarity.

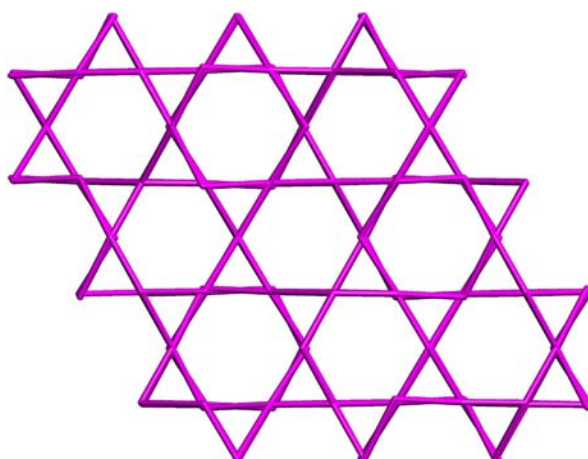


Fig S2. Schematic description of the $(4\cdot 6^3\cdot 8^2)(6^2\cdot 8^4)(4^2\cdot 6^4)$ topological net.

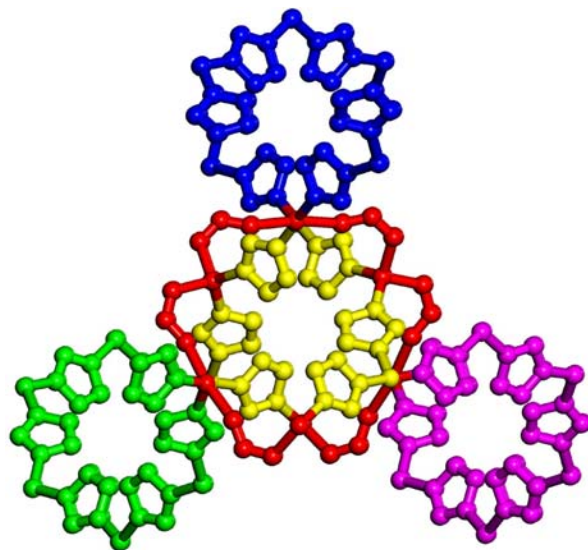


Fig S3. View of the connective mode of **A** with **BB'B₁B'₁B₂B'₂B₃B'₃** along the *c* axis.

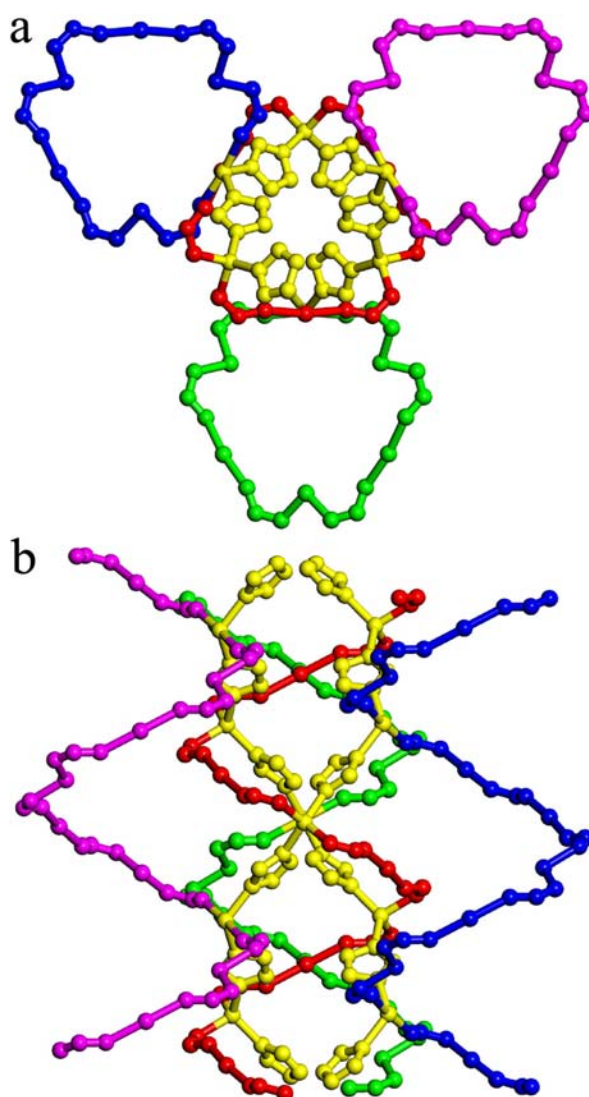


Fig S4. View of the connective mode of **BB'** with **AA₁A₂A₃** along the *c* axis (a) and *b* axis (b).

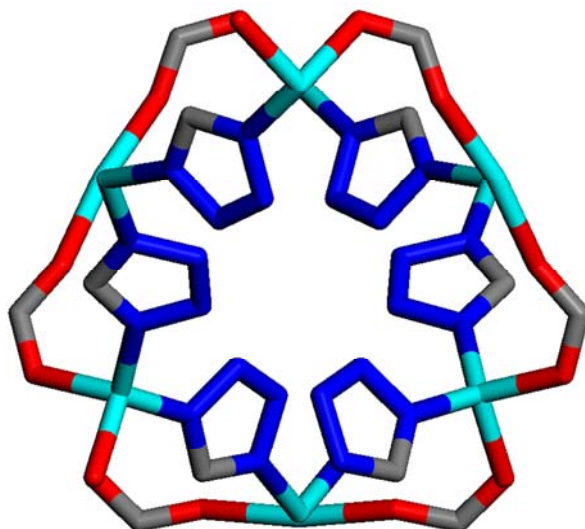


Fig S5. View of the tubular unit **T1** along the *c* axis.

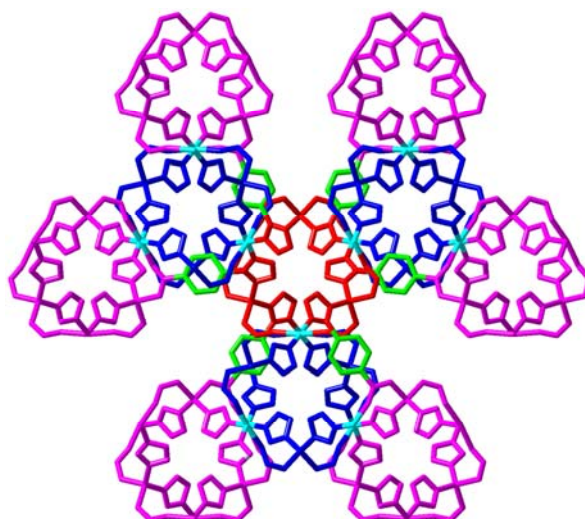


Fig S6. View of the connectivity of **T1** with other nine units.

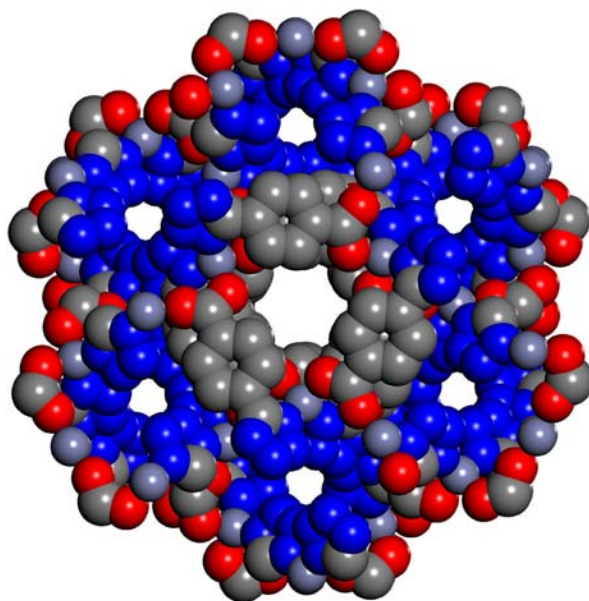


Fig S7. Space-filling view of the super-tubular unit **T2** along the *c* axis.

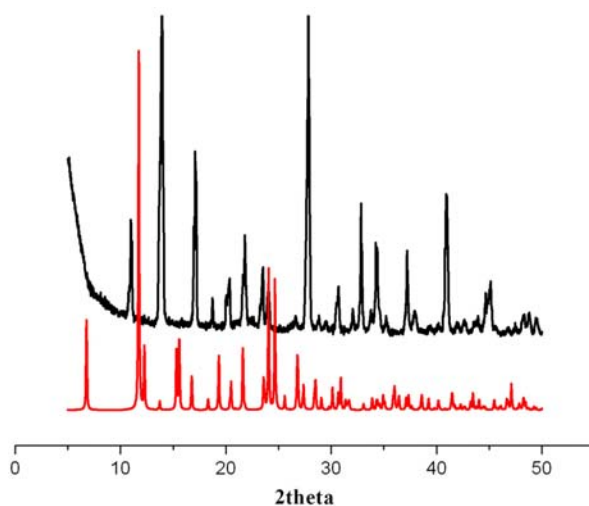


Fig S8. The simulated (red) and experimental (black) XRPD patterns for **1**.

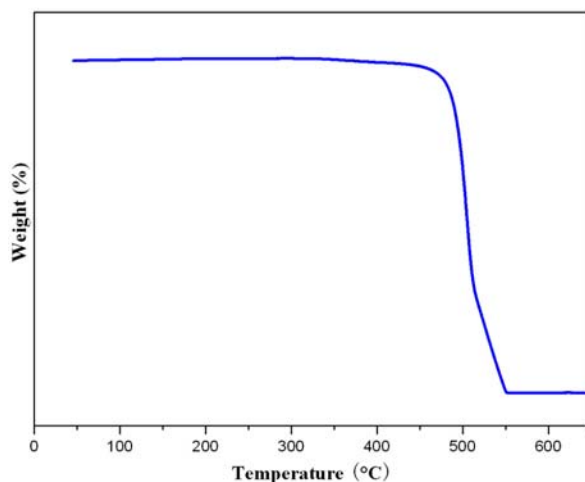


Fig S9. TGA of compound **1**.

Table S1. Selected bond distances (Å) and angles (°) for **1**.

Zn(1)-N(1)	2.0338(17)
Zn(1)-O(1)	2.1087(15)
Zn(2)-O(2)	1.9494(14)
Zn(2)-N(4)	2.0062(17)
O(1W)-Zn(1)-N(1)	119.10(5)
N(1)#1-Zn(1)-N(1)	121.80(10)
O(1W)-Zn(1)-O(1)	85.78(4)
N(1)#1-Zn(1)-O(1)	91.66(6)
N(1)-Zn(1)-O(1)	92.44(7)
O(1)-Zn(1)-O(1)#1	171.55(8)
O(2)-Zn(2)-O(2)#2	100.74(9)
O(2)-Zn(2)-N(4)#3	110.75(6)
O(2)-Zn(2)-N(4)#4	105.31(7)
N(4)#3-Zn(2)-N(4)#4	122.02(10)

Symmetry transformations used to generate equivalent atoms:

#1 $x-y+2/3$, $-y+4/3$, $-z-1/6$; #2 $-x+4/3$, $-x+y+2/3$, $-z+1/6$; #3 $-x+5/3$, $-y+4/3$, $-z+1/3$; #4 $x-1/3$, $x-y+1/3$, $z-1/6$.