Supporting materials

Syntheses, structures and properties of two zinc coordination polymers based on bis(triazole) and sulfoisophthalicate

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Table S1 Selected bond lengths (Å) and angles (°) for **1**and **2.**

		1	
Zn(1)-O(1)	1.996(3)	Zn(1)-O(2B)	2.015(3)
Zn(1)-O(3A)	1.962(3)	Zn(1)-N(3)	2.133(4)
Zn(1)-N(6)	2.123(4)	Zn(2)-O(8)	2.146(3)
Zn(2)-O(9)	2.111(3)	Zn(2)-N(9)	2.113(4)
O(1)-Zn(1)-O(2B)	133.97(14)	O(3A)-Zn(1)-O(1)	126.23(15)
O(3A)-Zn(1)-O(2B)	99.76(14)	O(1)-Zn(1)-N(3)	88.29(15)
O(2B)-Zn(1)-N(3)	91.34(15)	O(3A)-Zn(1)-N(3)	93.13(16)
O(1)-Zn(1)-N(6)	88.66(15)	O(2B)-Zn(1)-N(6)	88.92(15)
O(3A)-Zn(1)-N(6)	90.75(16)	N(6)-Zn(1)-N(3)	176.01(17)
O(8C)-Zn(2)-O(8)	180.000(1)	O(9)-Zn(2)-O(9C)	180.000(1)
N(9)-Zn(2)-N(9C)	180.0(3)	O(9)-Zn(2)-O(8)	91.53(16)
N(9)-Zn(2)-O(8)	91.30(15)	O(9)-Zn(2)-N(9)	91.77(15)
		2	
Zn(1)-O(8)	2.144(4)	Zn(1)-O(9)	2.101(4)
Zn(1)-N(3)	2.113(5)	Zn(2)-O(1)	1.952(4)
Zn(2)-O(2B)	2.033(4)	Zn(2)-O(3C)	2.036(4)
Zn(2)-O(4C)	2.342(4)	Zn(2)-N(6)	2.028(5)
O(8)-Zn(1)-O(8A)	180.0	O(9)-Zn(1)-O(9A)	180.00(12)
N(3)-Zn(1)-N(3A)	180.0(3)	O(9)-Zn(1)-O(8)	88.43(19)
N(3)-Zn(1)-O(8)	89.04(18)	O(9)-Zn(1)-N(3)	89.90(18)
O(1)-Zn(2)-O(2B)	102.07(15)	O(1)-Zn(2)-O(3C)	139.32(17)
O(1)-Zn(2)-O(4C)	87.95(15)	O(2B)-Zn(2)-O(3C)	102.35(16)
O(2B)-Zn(2)-O(4C)	92.25(16)	O(3C)-Zn(2)-O(4C)	59.09(15)
O(1)-Zn(2)-N(6)	113.35(18)	N(6)-Zn(2)-O(2B)	98.95(18)
N(6)-Zn(2)-O(3C)	94.28(18)	N(6)-Zn(2)-O(4C)	152.91(17)

Symmetry transformations used to generate equivalent atoms: A x-1, y, z; B -x+2, -y+2, -z+2; C -x+1, -y+1, -z+1 for **1**; A -x+3, -y+2, -z; B -x+1, -y, -z+1; C x+1, y, z for **2.**

Table S2 Hydrogen bonds (Å and °) for **1.**

D-H···A	d(D-H)	d(H···A)	d(D···A)	<(DHA)
O(8)-H(1W)···O(10)	0.897(19)	1.84(2)	2.739(6)	176(5)
O(8)-H(2W)···O(4)^{i}	0.890(19)	1.94(2)	2.825(5)	172(5)
O(9)-H(3W)···O(7)	0.893(19)	2.12(2)	2.992(7)	165(5)
O(9)-H(4W)···O(11)	0.891(19)	1.87(3)	2.717(11)	157(6)
O(10)-H(5W)···O(7)	0.89(2)	1.89(2)	2.751(6)	161(5)
O(10)-H(6W)···O(7)^{i}	0.89(2)	2.32(4)	3.107(7)	146(5)

Symmetry transformations used to generate equivalent atoms: i -x+2, -y+1, -z+1.

Table S3 Hydrogen bonds (Å and °) for **2.**

D-H···A	d(D-H)	d(H···A)	d(D···A)	<(DHA)
O(8)-H(1W)···O(6)^{i}	0.890(19)	1.86(2)	2.748(7)	172(5)
O(8)-H(2W)···O(5)^{ii}	0.885(19)	1.89(3)	2.769(7)	170(7)
O(9)-H(3W)···O(4)^{iii}	0.897(19)	1.88(2)	2.776(6)	176(6)
O(9)-H(4W)···O(10)^{i}	0.89(2)	1.94(3)	2.782(9)	159(6)

Symmetry transformations used to generate equivalent atoms: i -x+2, -y+1, -z+1; ii x+2, y+1, z-1 ; iii -x+1, -y+1, -z+1.

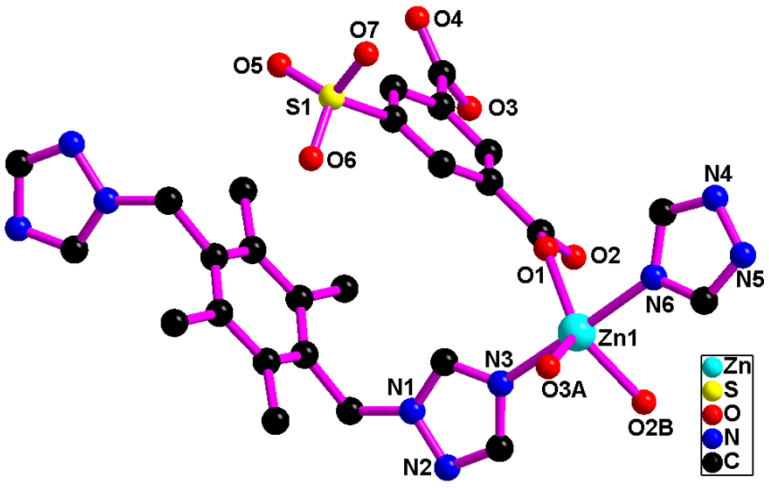

Fig. S1 The coordination environment of the Zn(II) atom in the first motif $[Zn_2(tmtz)_2(sip)_2]_n$ of **1**.

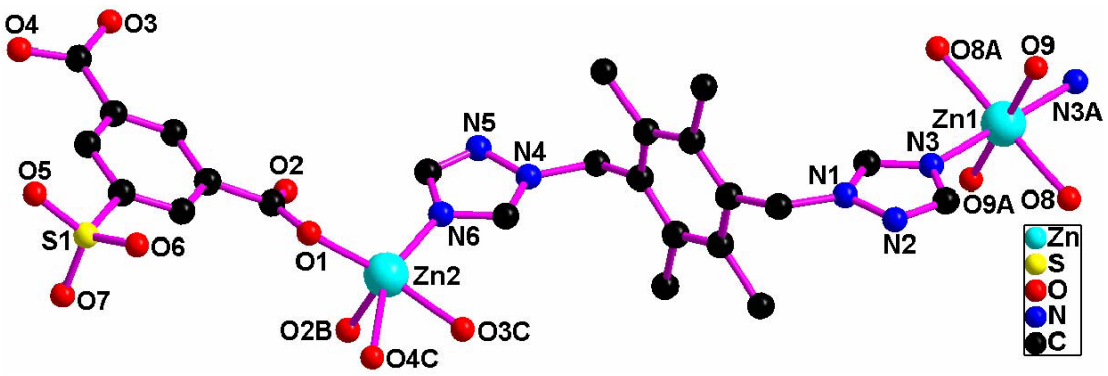

Fig. S2 The coordination environment of the Zn(II) atoms of **2**.

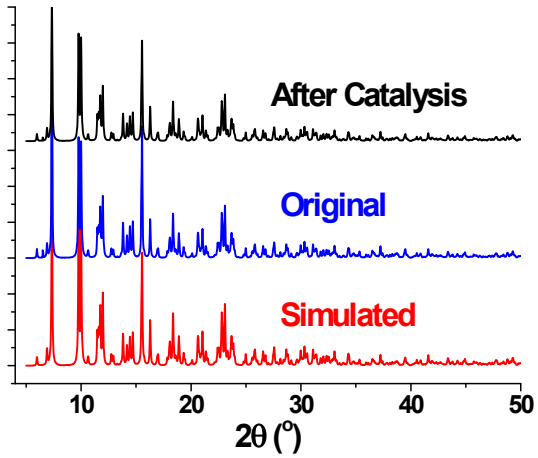

Fig. S3 PXRD patterns of the simulated diagram from single crystal data of compound **1** (red), **1** (blue) and **1** after catalysis process (black).

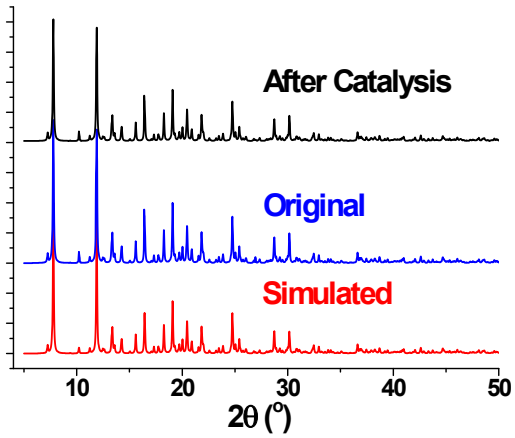

Fig. S4 PXRD patterns of the simulated diagram from single crystal data of compound **2** (red), **2** (blue) and **2** after catalysis process (black).

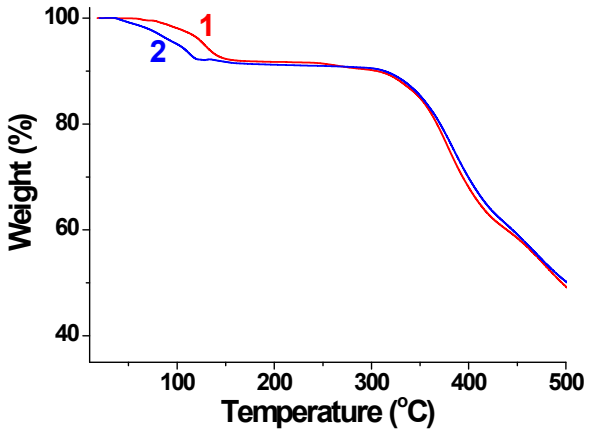

Fig. S5 The TG curves of compounds **1** and **2**.