

## Supporting Information

### **A pair of novel Zn(II) enantiomeric coordination polymers based on chiral multicarboxylate Ligand: Synthesis, crystal structures and molecular recognizing properties**

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

**Figure S1.** PXRD patterns of **1-R** and **1-S**

**Figure S2.** TGA curves of **1-R**

**Figure S3.** TGA curves of **1-S**

**Figure S4.** The IR spectra of **1-R**

**Figure S5.** The IR spectra of **1-R**

**Figure S6.** Solid-state UV curves of **1-R** and **1-S**

Table S1: Selected Bond Lengths (Å) and Bond Angles (deg) for complexes **1-R** and **1-S**

Complex 1-R			
O(1)-Zn(4)	2.088(8)	O(16)-Zn(1)	2.062(7)
O(1)-Zn(1)	2.127(8)	O(16)-Zn(3)	2.112(7)
O(3)-Zn(1)	2.318(7)	O(17)-Zn(2)	2.195(9)
O(4)-Zn(2)	2.144(7)	O(18)-Zn(4)	2.167(9)
O(8)-Zn(3)	2.099(8)	Zn(1)-O(14)#2	2.002(8)
O(8)-Zn(2)	2.149(8)	Zn(1)-O(5)#3	2.121(7)
O(10)-Zn(3)	2.337(7)	Zn(2)-O(13)#2	1.975(6)
O(11)-Zn(4)	2.119(8)	Zn(2)-O(11)#1	2.097(6)
O(15)-Zn(3)	2.051(6)	Zn(3)-O(6)#4	2.029(8)
O(15)-Zn(4)	2.078(7)	Zn(3)-O(12)#1	2.096(6)
O(15)-Zn(1)	2.101(7)	Zn(4)-O(7)#4	1.991(7)
O(16)-Zn(2)	2.048(8)	Zn(4)-O(4)#3	2.126(6)
O(14)#2-Zn(1)-O(16)	100.4(3)	O(6)#4-Zn(3)-O(15)	100.1(3)
O(14)#2-Zn(1)-O(15)	111.3(3)	O(6)#4-Zn(3)-O(12)#1	80.4(3)
O(16)-Zn(1)-O(15)	83.4(2)	O(15)-Zn(3)-O(12)#1	179.4(3)
O(14)#2-Zn(1)-O(5)#3	79.0(3)	O(6)#4-Zn(3)-O(8)	164.5(3)
O(16)-Zn(1)-O(5)#3	175.9(3)	O(15)-Zn(3)-O(8)	94.0(3)
O(15)-Zn(1)-O(5)#3	100.6(3)	O(12)#1-Zn(3)-O(8)	85.6(3)
O(14)#2-Zn(1)-O(1)	160.5(3)	O(6)#4-Zn(3)-O(16)	109.6(3)
O(16)-Zn(1)-O(1)	97.3(3)	O(15)-Zn(3)-O(16)	83.4(2)
O(15)-Zn(1)-O(1)	78.7(3)	O(12)#1-Zn(3)-O(16)	96.1(3)
O(5)#3-Zn(1)-O(1)	82.8(3)	O(8)-Zn(3)-O(16)	78.3(3)
O(14)#2-Zn(1)-O(3)	99.3(3)	O(6)#4-Zn(3)-O(10)	100.5(3)
O(16)-Zn(1)-O(3)	91.2(3)	O(15)-Zn(3)-O(10)	98.4(3)
O(15)-Zn(1)-O(3)	149.4(3)	O(12)#1-Zn(3)-O(10)	81.9(3)
O(5)#3-Zn(1)-O(3)	84.9(3)	O(8)-Zn(3)-O(10)	70.8(3)

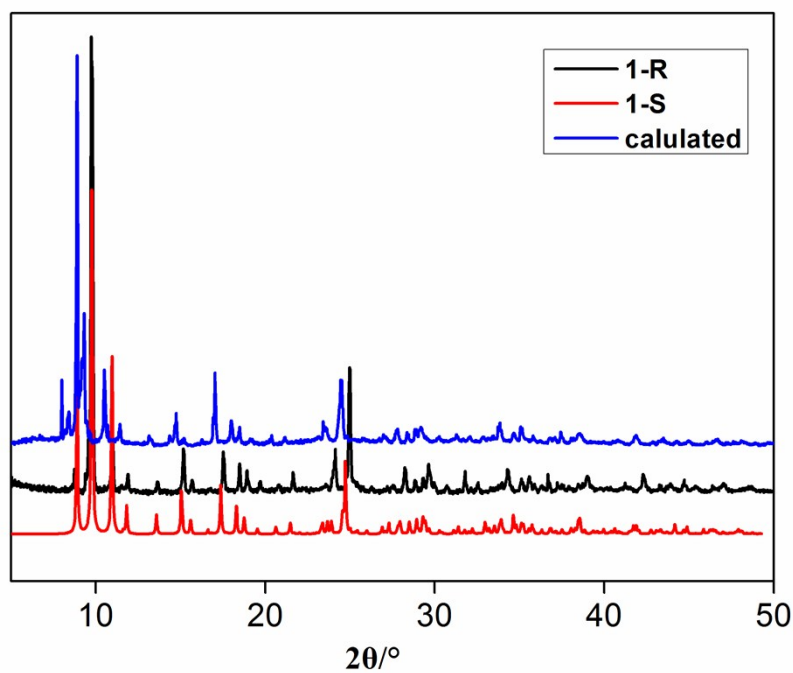
O(1)-Zn(1)-O(3)	72.1(3)	O(16)-Zn(3)-O(10)	149.2(3)
O(13)#2-Zn(2)-O(16)	101.0(3)	O(7)#4-Zn(4)-O(15)	100.7(3)
O(13)#2-Zn(2)-O(11)#1	165.0(3)	O(7)#4-Zn(4)-O(1)	93.8(3)
O(16)-Zn(2)-O(11)#1	93.2(3)	O(15)-Zn(4)-O(1)	80.1(3)
O(13)#2-Zn(2)-O(4)	92.9(3)	O(7)#4-Zn(4)-O(11)	96.2(3)
O(16)-Zn(2)-O(4)	103.4(3)	O(15)-Zn(4)-O(11)	101.2(3)
O(11)#1-Zn(2)-O(4)	78.9(3)	O(1)-Zn(4)-O(11)	169.5(3)
O(13)#2-Zn(2)-O(8)	96.4(3)	O(7)#4-Zn(4)-O(4)#3	166.9(3)
O(16)-Zn(2)-O(8)	78.6(3)	O(15)-Zn(4)-O(4)#3	92.2(3)
O(11)#1-Zn(2)-O(8)	91.2(3)	O(1)-Zn(4)-O(4)#3	90.7(3)
O(4)-Zn(2)-O(8)	169.9(2)	O(11)-Zn(4)-O(4)#3	78.8(3)
O(13)#2-Zn(2)-O(17)	84.6(3)	O(7)#4-Zn(4)-O(18)	86.3(3)
O(16)-Zn(2)-O(17)	168.9(3)	O(15)-Zn(4)-O(18)	169.0(3)
O(11)#1-Zn(2)-O(17)	82.2(3)	O(1)-Zn(4)-O(18)	91.0(3)
O(4)-Zn(2)-O(17)	85.7(3)	O(11)-Zn(4)-O(18)	86.3(3)
O(8)-Zn(2)-O(17)	91.3(3)	O(4)#3-Zn(4)-O(18)	81.3(3)
Symmetry codes: (I) -1+x, y, z; (II) -1+x, y, -1+z; (III) 1+x, y, z; (IV) 1+x, y, 1+z			

Complex 1-S			
O(1)-Zn(4)	2.147(6)	O(16)-Zn(4)	2.059(6)
O(5)-Zn(1)	2.315(6)	O(16)-Zn(3)	2.121(6)
O(6)-Zn(2)	2.084(6)	O(17)-Zn(4)	2.180(7)
O(6)-Zn(1)	2.126(6)	O(18)-Zn(2)	2.163(7)
O(8)-Zn(2)	2.134(6)	Zn(1)-O(10)#2	2.008(6)
O(12)-Zn(3)	2.357(6)	Zn(1)-O(2)#3	2.119(5)
O(13)-Zn(3)	2.106(7)	Zn(2)-O(4)#4	1.984(5)
O(13)-Zn(4)	2.149(6)	Zn(2)-O(1)#3	2.119(5)
O(15)-Zn(3)	2.044(6)	Zn(3)-O(3)#4	2.030(6)
O(15)-Zn(2)	2.077(7)	Zn(3)-O(9)#1	2.087(6)

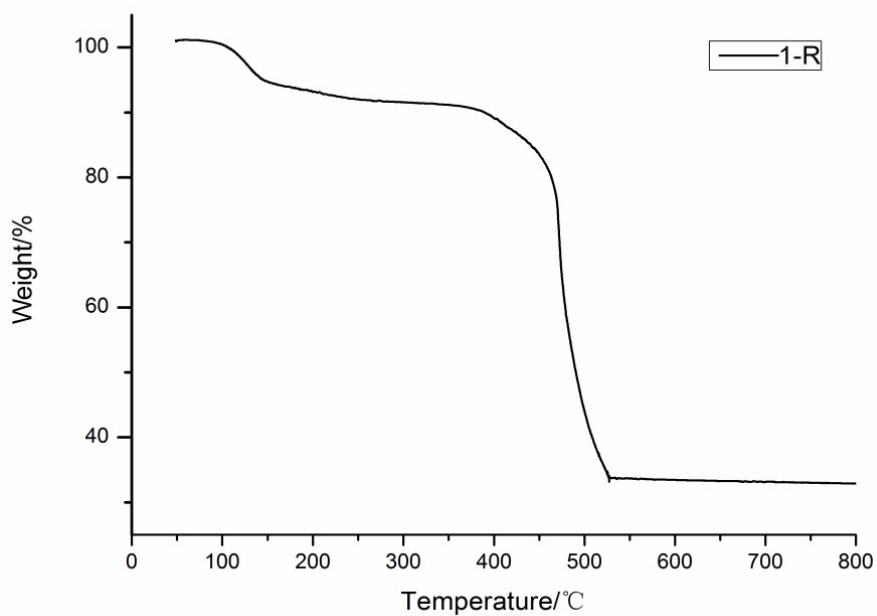
O(15)-Zn(1)	2.098(6)	Zn(4)-O(11)#2	1.978(5)
O(16)-Zn(1)	2.054(6)	Zn(4)-O(8)#1	2.096(5)
O(10)#2-Zn(1)-O(16)	100.8(2)	O(3)#4-Zn(3)-O(15)	99.3(2)
O(10)#2-Zn(1)-O(15)	112.0(3)	O(3)#4-Zn(3)-O(9)#1	80.5(2)
O(16)-Zn(1)-O(15)	83.4(2)	O(15)-Zn(3)-O(9)#1	179.8(3)
O(10)#2-Zn(1)-O(2)#3	78.6(2)	O(3)#4-Zn(3)-O(13)	164.6(2)
O(16)-Zn(1)-O(2)#3	176.3(3)	O(15)-Zn(3)-O(13)	94.8(2)
O(15)-Zn(1)-O(2)#3	100.2(2)	O(9)#1-Zn(3)-O(13)	85.4(2)
O(10)#2-Zn(1)-O(6)	160.5(2)	O(3)#4-Zn(3)-O(16)	109.1(3)
O(16)-Zn(1)-O(6)	97.0(2)	O(15)-Zn(3)-O(16)	83.1(2)
O(15)-Zn(1)-O(6)	78.0(2)	O(9)#1-Zn(3)-O(16)	97.0(2)
O(2)#3-Zn(1)-O(6)	83.2(2)	O(13)-Zn(3)-O(16)	78.7(2)
O(10)#2-Zn(1)-O(5)	99.4(2)	O(3)#4-Zn(3)-O(12)	100.6(2)
O(16)-Zn(1)-O(5)	91.9(2)	O(15)-Zn(3)-O(12)	98.2(2)
O(15)-Zn(1)-O(5)	148.6(2)	O(9)#1-Zn(3)-O(12)	81.8(2)
O(2)#3-Zn(1)-O(5)	84.7(2)	O(13)-Zn(3)-O(12)	71.1(2)
O(6)-Zn(1)-O(5)	71.7(2)	O(16)-Zn(3)-O(12)	149.7(2)
O(4)#4-Zn(2)-O(15)	100.7(2)	O(11)#2-Zn(4)-O(16)	100.8(2)
O(4)#4-Zn(2)-O(6)	94.5(3)	O(11)#2-Zn(4)-O(8)#1	166.1(3)
O(15)-Zn(2)-O(6)	79.4(2)	O(16)-Zn(4)-O(8)#1	92.4(2)
O(4)#4-Zn(2)-O(1)#3	166.5(3)	O(11)#2-Zn(4)-O(1)	93.4(2)
O(15)-Zn(2)-O(1)#3	92.5(2)	O(16)-Zn(4)-O(1)	102.3(3)
O(6)-Zn(2)-O(1)#3	90.8(2)	O(8)#1-Zn(4)-O(1)	79.3(2)
O(4)#4-Zn(2)-O(8)	95.2(2)	O(11)#2-Zn(4)-O(13)	96.0(2)
O(15)-Zn(2)-O(8)	101.7(3)	O(16)-Zn(4)-O(13)	79.1(3)
O(6)-Zn(2)-O(8)	169.8(2)	O(8)#1-Zn(4)-O(13)	90.9(2)
O(1)#3-Zn(2)-O(8)	79.1(2)	O(1)-Zn(4)-O(13)	170.1(2)
O(4)#4-Zn(2)-O(18)	86.0(3)	O(11)#2-Zn(4)-O(17)	85.7(3)

O(15)-Zn(2)-O(18)	169.3(3)	O(16)-Zn(4)-O(17)	168.9(3)
O(6)-Zn(2)-O(18)	91.8(3)	O(8)#1-Zn(4)-O(17)	82.1(3)
O(1)#3-Zn(2)-O(18)	81.3(2)	O(1)-Zn(4)-O(17)	86.1(3)
O(8)-Zn(2)-O(18)	85.8(3)	O(13)-Zn(4)-O(17)	91.4(3)

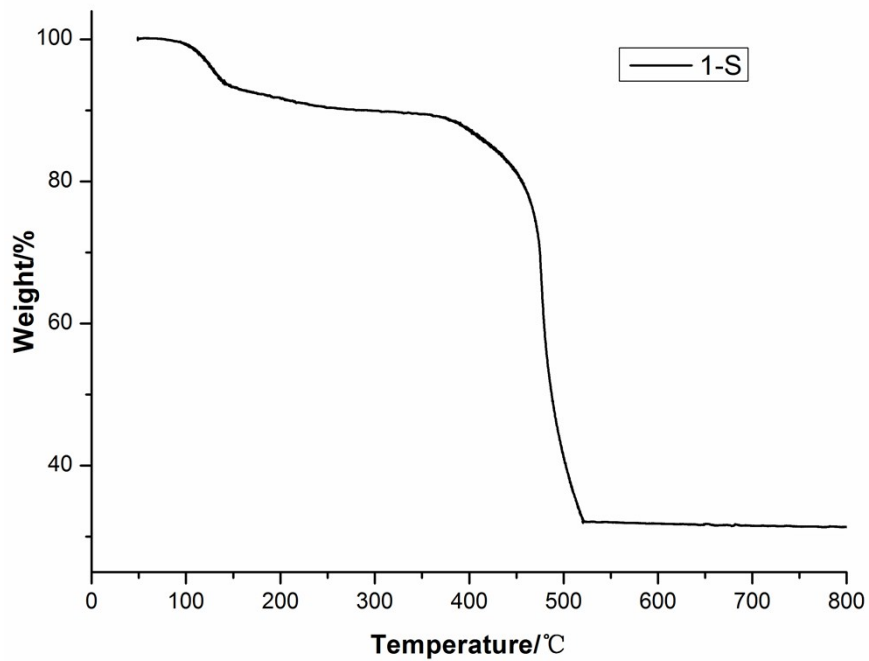
Symmetry codes:(I) 1+x, y, z; (II) 1+x, y, 1+z; (III) -1+x, y, z; (IV) -1+x, y, -1+z



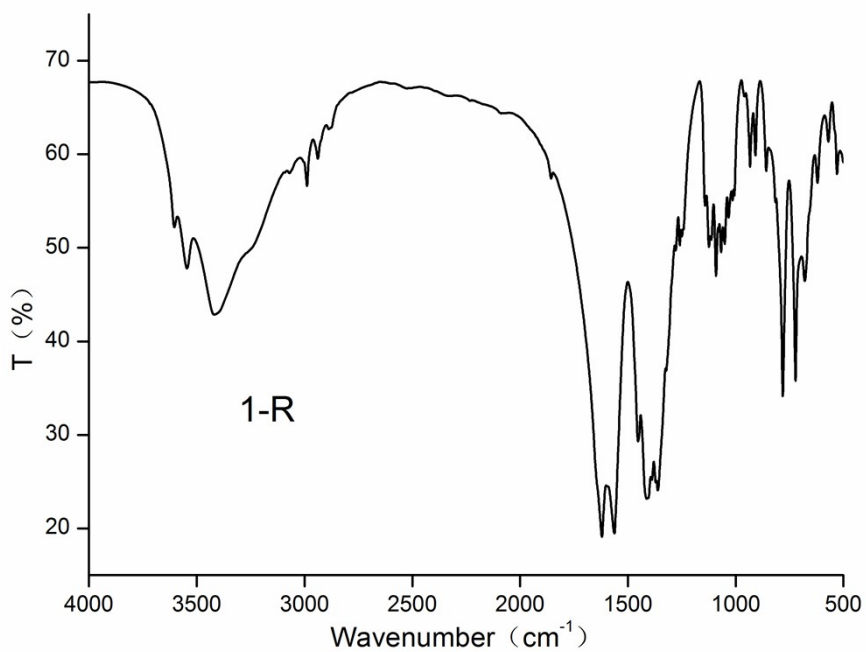
**Figure S1.** PXRD patterns of 1-R and 2-S



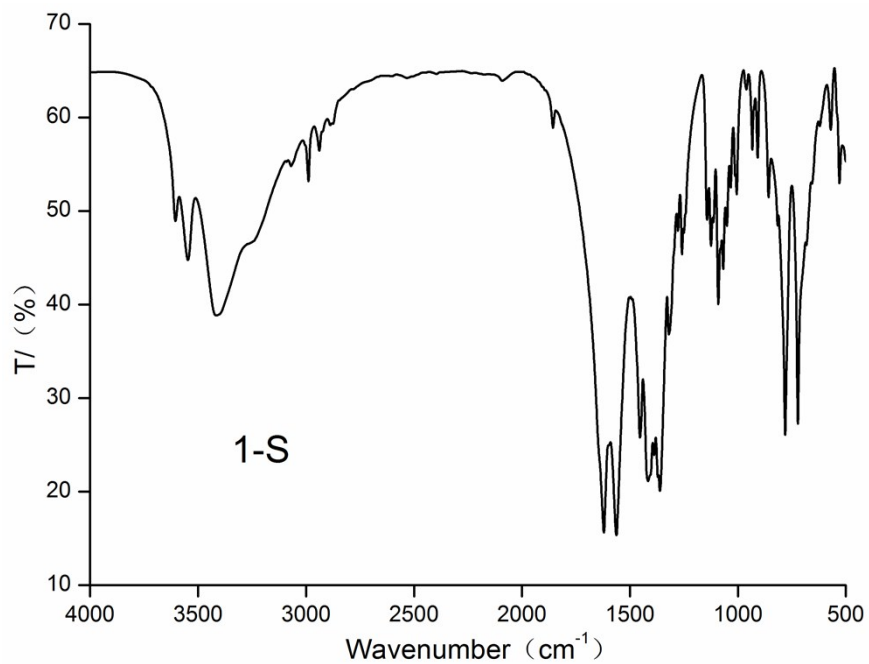
**Figure S2.** TGA curves of 1-R



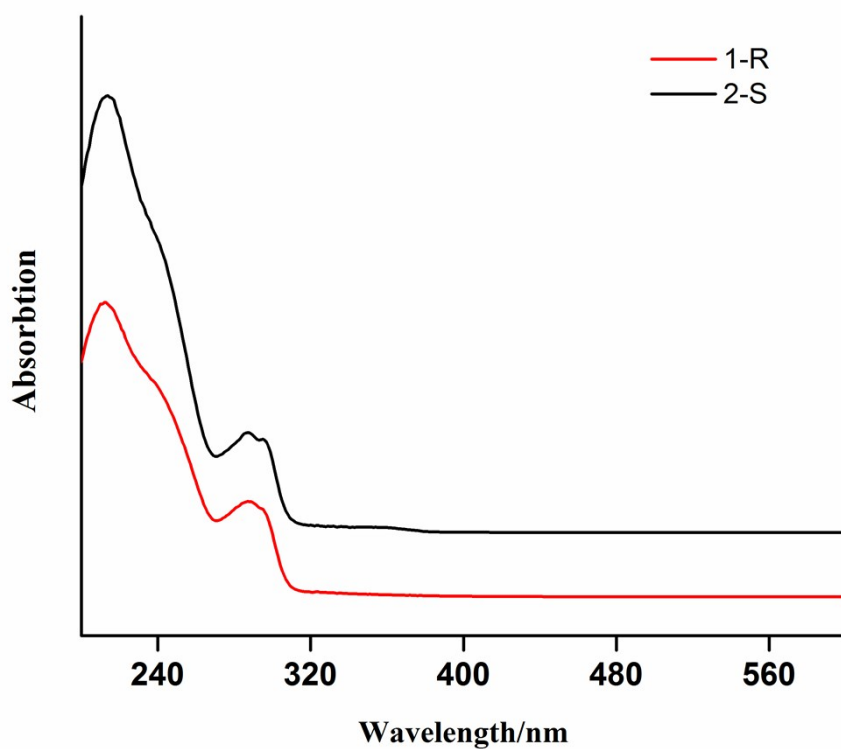
**Figure S3.** TGA curves of 1-S



**Figure S4.** The IR spectra of 1-R



**Figure S5.** The IR spectra of **1-S**



**Figure S6.** Solid-state UV curves of **1-R** and **1-S**