Electronic Supplementary Information for：

Crystal structure and magnetic properties of two manganese(II) homometallic coordination polymers

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Table S1. Selected Bond lengths (Å) and angles (deg) for **1**

Mn(1)-C(1)	2.2220(15)	Mn(1)-N(2)	2.2931(17)
C(1)-Mn(1)-C(1)#1	180.0	C(1)-Mn(1)-C(1)#2	89.30(8)
C(1)#1-Mn(1)-C(1)#2	90.70(8)	C(1)-Mn(1)-N(2)	89.08(5)
C(1)#1-Mn(1)-N(2)	90.92(5)	C(1)#4-C(1)-Mn(1)	160.07(5)
C(2)-N(2)-Mn(1)	122.87(16)	C(3)-N(2)-Mn(1)	121.25(14)

Symmetry transformations used to generate equivalent atoms: #1 -x+1/2,-y+1/2,-z+1; #2 x,y,-z+1; #3 -x+1/2,-y+1/2,z; #4 -x,y,-z+1/2; #5 -x,-y+1,-z+1. C1 and N1 are crystallographically indistinguishable and refined with 'EXYZ' and 'EADP' commands, so they have same parameters and bisected occupancy factors.

Table S2. Selected Bond lengths (Å) and angles (deg) for **2**

Mn(1)-C(6)	2.161(5)	Mn(1)-C(3)#1	2.166(6)
Mn(1)-C(5)	2.177(6)	Mn(1)-C(7)	2.243(5)
Mn(1)-N(8)#2	2.424(4)	Mn(2)-O(1)	2.224(4)
Mn(2)-N(5)	2.236(5)	Mn(2)-N(3)	2.244(5)
Mn(2)-C(1)	2.261(5)	Mn(2)-N(2)	2.282(4)
Mn(2)-N(4)	2.298(4)		
C(6)-Mn(1)-C(3)#1	117.4(2)	C(6)-Mn(1)-C(5)	132.5(2)
C(3)#1-Mn(1)-C(5)	109.3(2)	C(6)-Mn(1)-C(7)	93.01(19)
C(3)#1-Mn(1)-C(7)	93.93(19)	C(5)-Mn(1)-C(7)	92.7(2)
C(6)-Mn(1)-N(8)#2	86.08(17)	C(3)#1-Mn(1)-N(8)#2	88.83(18)
C(5)-Mn(1)-N(8)#2	86.01(17)	C(7)-Mn(1)-N(8)#2	177.21(18)
O(1)-Mn(2)-N(5)	86.71(16)	O(1)-Mn(2)-N(3)	175.06(15)
N(5)-Mn(2)-N(3)	90.49(17)	O(1)-Mn(2)-C(1)	84.36(17)
N(5)-Mn(2)-C(1)	170.28(18)	N(3)-Mn(2)-C(1)	98.68(18)
O(1)-Mn(2)-N(2)	92.04(15)	N(5)-Mn(2)-N(2)	86.27(16)
N(3)-Mn(2)-N(2)	91.84(16)	C(1)-Mn(2)-N(2)	90.22(16)
O(1)-Mn(2)-N(4)	87.86(15)	N(5)-Mn(2)-N(4)	88.87(16)
N(3)-Mn(2)-N(4)	88.02(17)	C(1)-Mn(2)-N(4)	94.61(17)
N(2)-Mn(2)-N(4)	175.13(15)	N(1)#3-C(1)-Mn(2)	174.2(6)
C(2)-O(1)-Mn(2)	126.7(5)	C(8)-N(2)-Mn(2)	120.6(3)
C(12)-N(2)-Mn(2)	123.2(3)	N(3)-C(3)-Mn(1)#4	173.8(4)
C(3)-N(3)-Mn(2)	163.7(4)	C(17)-N(4)-Mn(2)	118.4(3)
C(13)-N(4)-Mn(2)	124.5(4)	N(5)-C(5)-Mn(1)	168.7(5)
C(5)-N(5)-Mn(2)	165.9(5)	N(6)-C(6)-Mn(1)	178.4(5)
N(7)#5-C(7)-Mn(1)	176.5(6)	C(22)-N(8)-Mn(1)#6	120.4(4)
C(18)-N(8)-Mn(1)#6	124.6(3)		

Symmetry transformations used to generate equivalent atoms: #1 x-1,y,z; #2 x-1,y+1,z; #3 -x+1,-y+2,-z+1; #4 x+1,y,z; #5 -x,-y+2,-z; #6 x+1,y-1,z; #7 -x,-y+3,-z+1; #8 -x+1,-y+1,-z+1. C1 and N1 as well as C7 and N7 are crystallographically indistinguishable and refined with 'EXYZ' and 'EADP' commands, so they have same parameters and bisected occupancy factors.

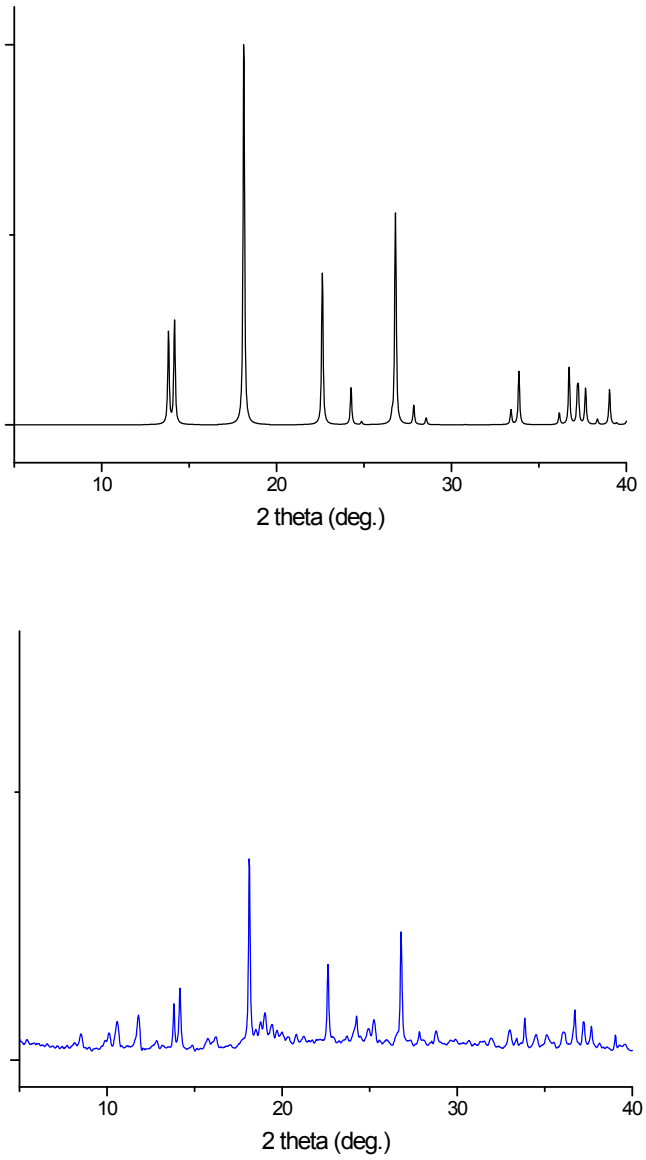

Fig. S1. The simulated (black) and experimental (blue) PXRD patterns of complex **1**.

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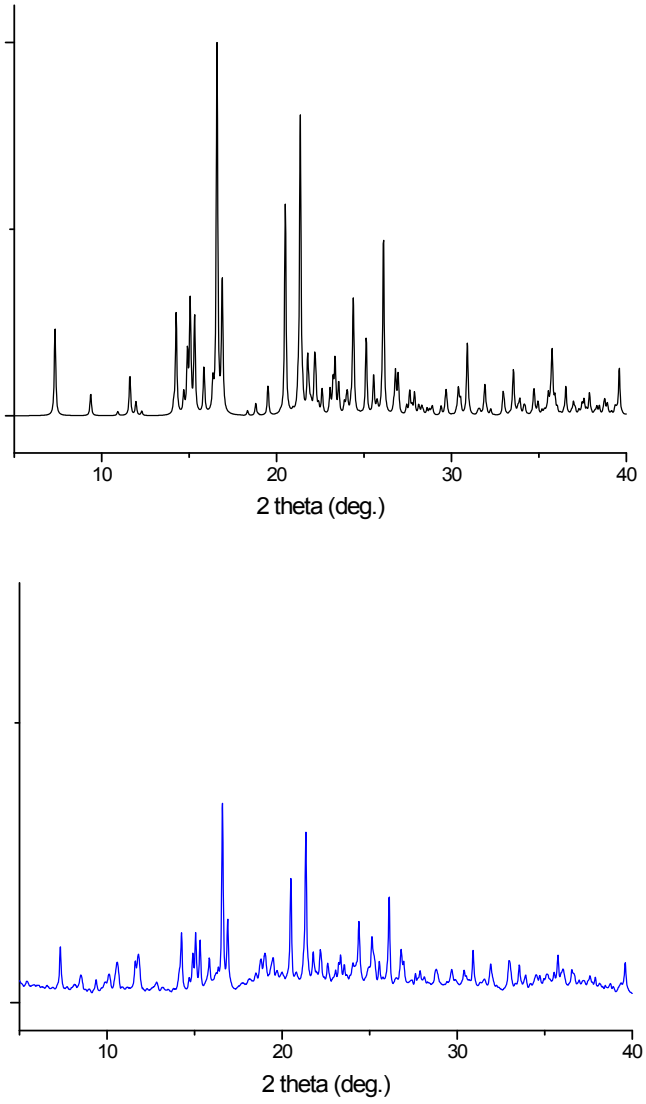

Fig. S2. The simulated (black) and experimental (blue) PXRD patterns of complex **2**.

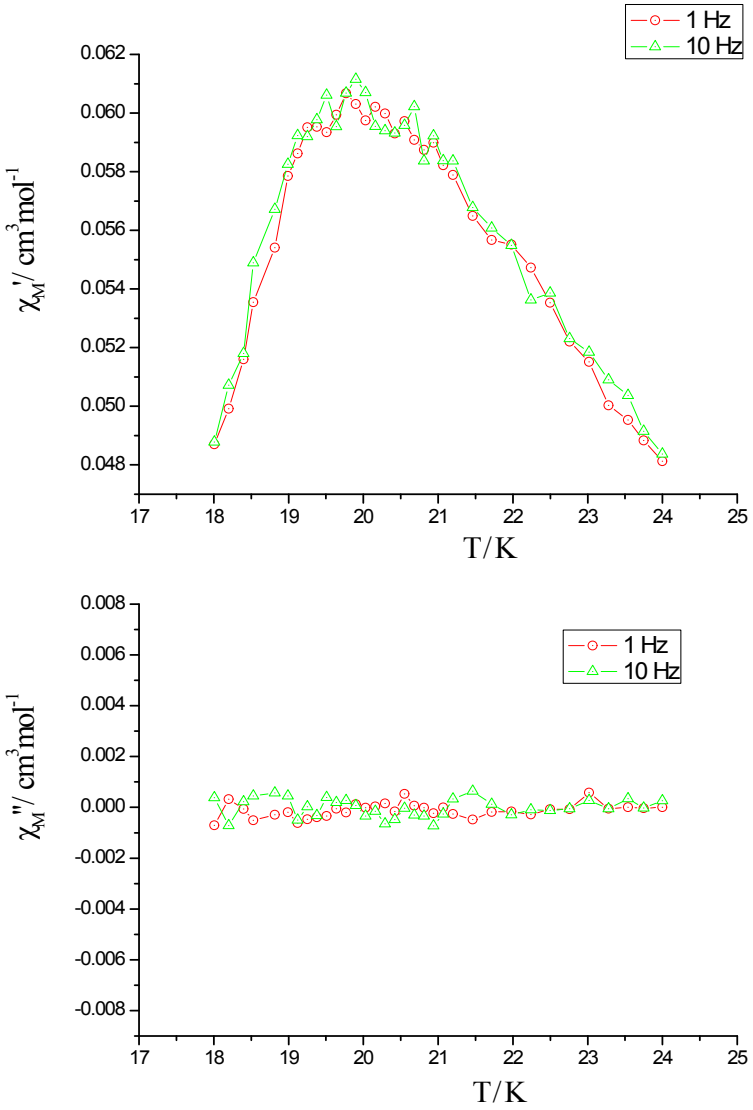

Fig. S3. Zero-field ac in-phase (top) and out-of-phase (bottom) susceptibility versus temperature at various frequencies for complex **1**.

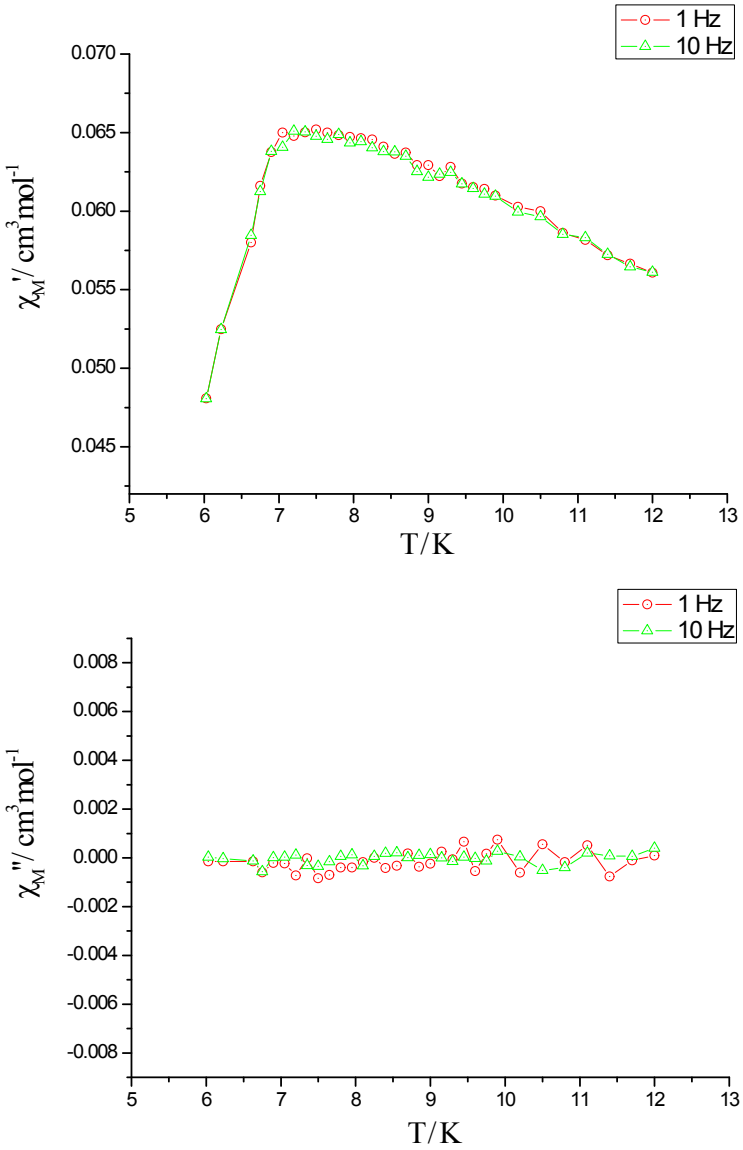

Fig. S4. Zero-field ac in-phase (top) and out-of-phase (bottom) susceptibility versus temperature at various frequencies for complex **2**.