Electronic Supplementary Material (ESI) for CrystEngComm.

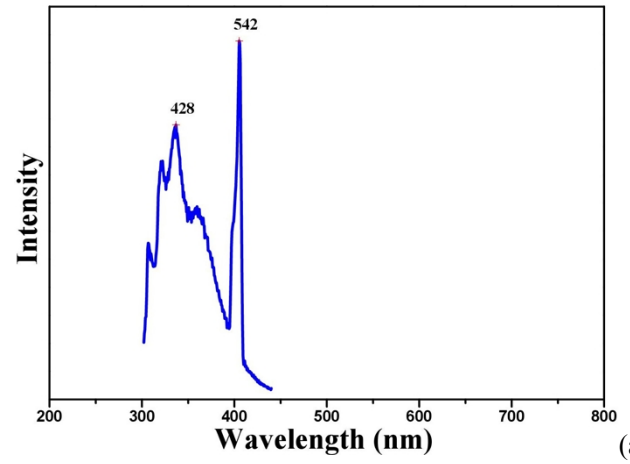
$[Mn(dien)_2]MnSnS_4$, $[Mn(1,2\text{-dap})]_2Sn_2S_6$ and $[Mn(en)_2]MnGeS_4$: From 1D Anionic and Neutral Chains to 3D Neutral Framework

Cheng-Yang Yue, Xiao-Wu Lei,* Ling Yin, Xiu-Rong Zhai, Zhong-Ren Ba, Yan-Qiang Niu, Yue-Peng Li

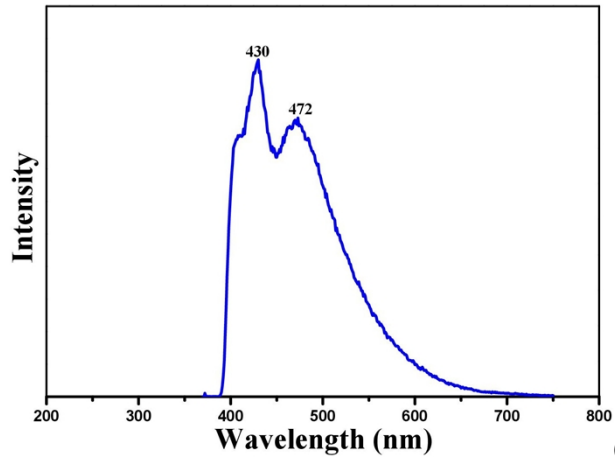
Table S1. Hydrogen bonds data for compounds **1**-**3**.

D-H···A	d(D-H)	d(H···A)	d(D···A)	<(DHA)
		1		
N(2)-H(2D)...S(1)#1	0.90	2.63	3.483(2)	159.6
		2		
N(2)-H(2C)...S(1)#2	0.91	2.66	3.523(9)	159.5
N(6)-H(6D)...S(1)#3	0.90	2.73	3.529(7)	148.9
N(5)-H(5C)...S(4)#1	0.91	2.58	3.457(6)	162.7
N(4)-H(4C)...S(2)#4	0.90	2.71	3.535(6)	153.6
N(4)-H(4D)...S(1)#2	0.90	2.83	3.564(7)	139.8
N(1)-H(1C)...S(3)#1	0.90	2.66	3.540(7)	167.5
N(3)-H(3D)...S(4)#3	0.90	2.78	3.546(7)	143.2
		3		
N(4)-H(4C)...S(2)#1	0.90	2.78	3.421(3)	128.8
N(4)-H(4D)...S(1)#1	0.90	2.65	3.546(4)	174.8
N(3)-H(3B)...S(1)#3	0.90	2.60	3.487(4)	167.6
N(3)-H(3C)...S(1)#2	0.90	2.77	3.648(4)	164.3
N(1)-H(1C)...S(2)	0.90	3.00	3.840(4)	156.8

Symmetric codes: for **1**: #1 x+1/2, y-1/2, -z+2; for **2**: #1 x, -y+2, z+1/2, #2 x-1, -y+2, z+1/2, #3 x-1/2, -y+3/2, z+1/2, #4 x-1, y, z; for **3**: #1 -x, -y, -z, #2 -x+1, -y, -z, #3 x, y, z-1.



(a)



(b)

Fig. S1. Photoluminescent emission spectra of the title compounds **1** (a) and **2** (b).

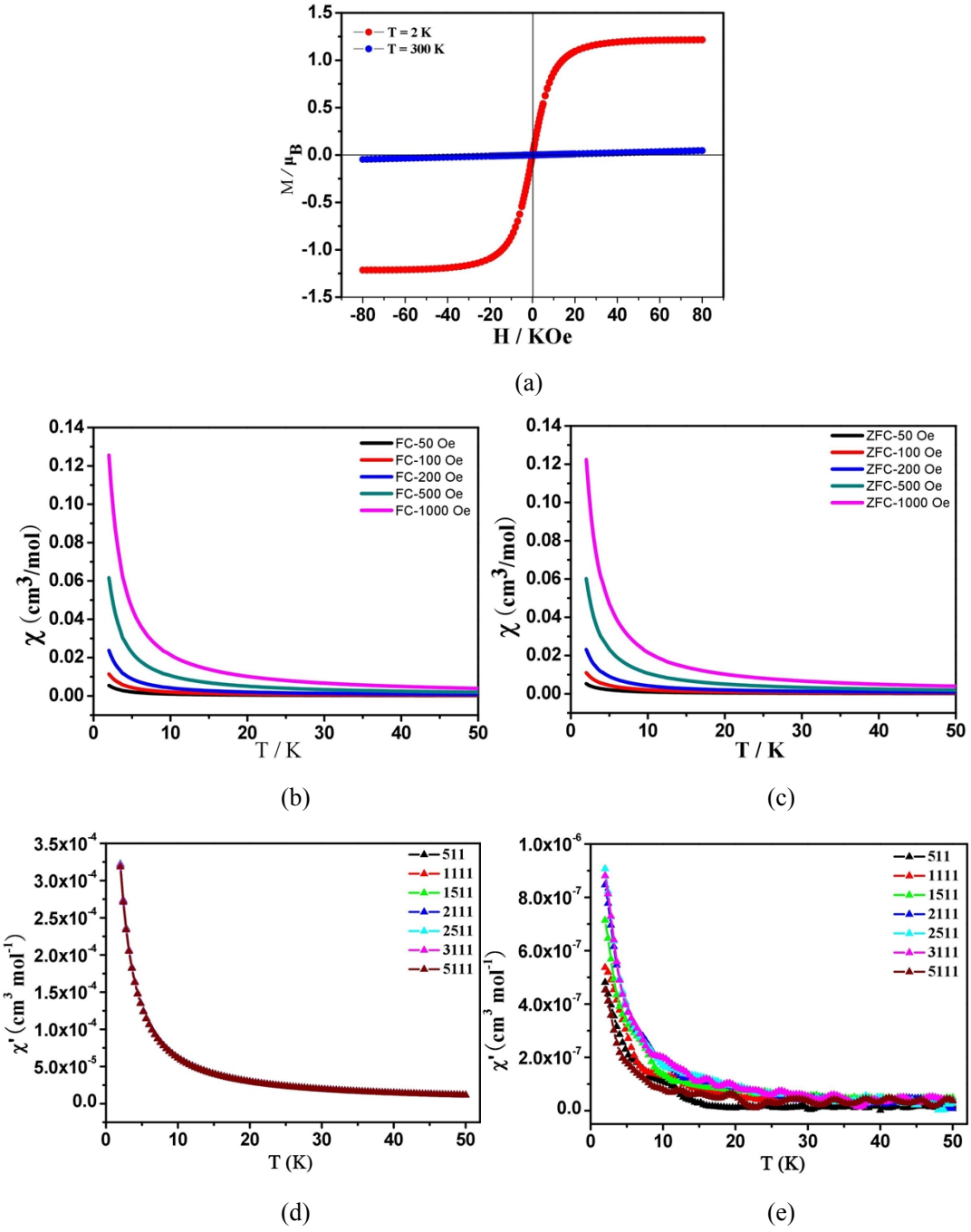


Fig S2. M vs H plot at 2K (a), the zero-field-cooled (ZFC) and field-cooled (FC) molar magnetic susceptibility (b-c), the temperature dependence of the out-of phase (χ_{m}"□□) ac and in-phase (χ_{m}'□) dc magnetic susceptibilities (d-e), for compound **3**.

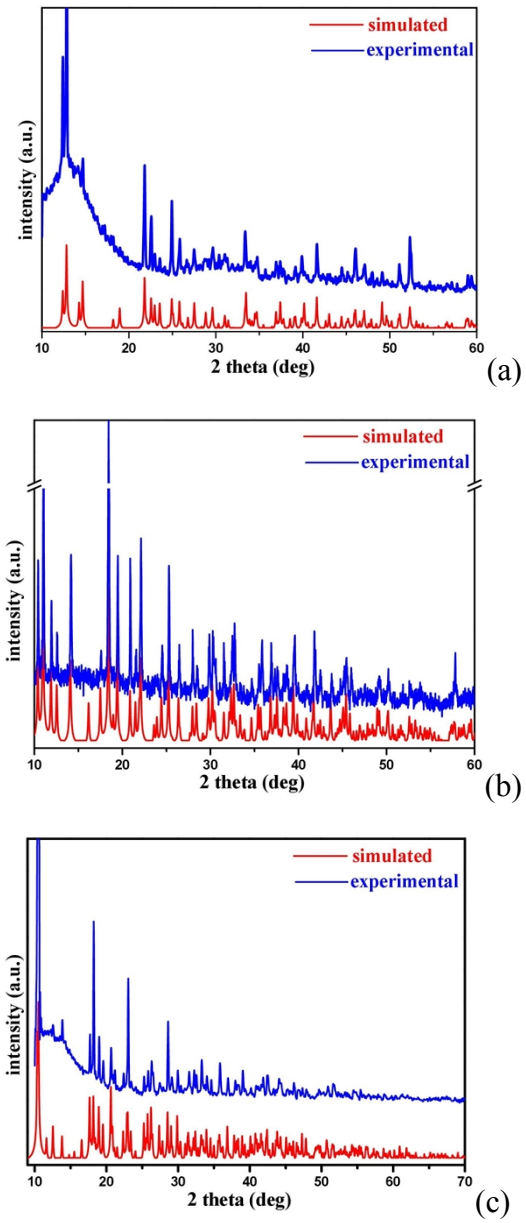


Fig S3. Experimental and simulated XRD powder pattern for compounds **1** (a), **2** (b) and **3** (c).