

Electronic supplementary information (ESI)

An excellent cryogenic magnetic cooler: magnetic and magnetocaloric study of inorganic frame material

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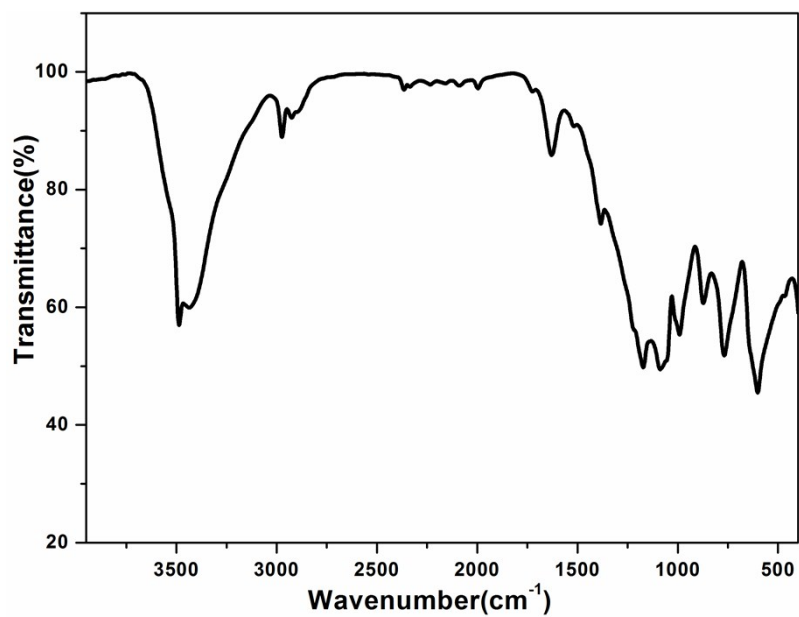


Fig. S1 IR plot of 1.

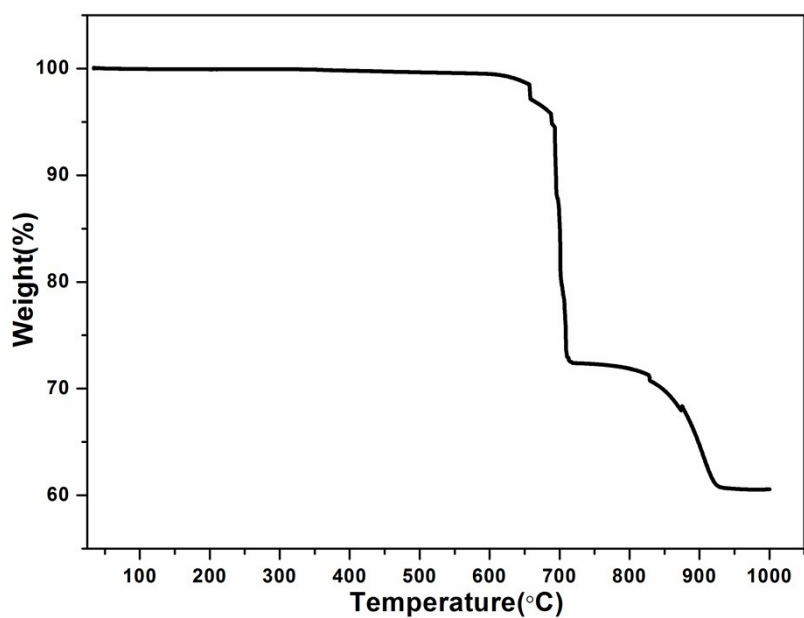


Fig. S2 TG plot of 1.

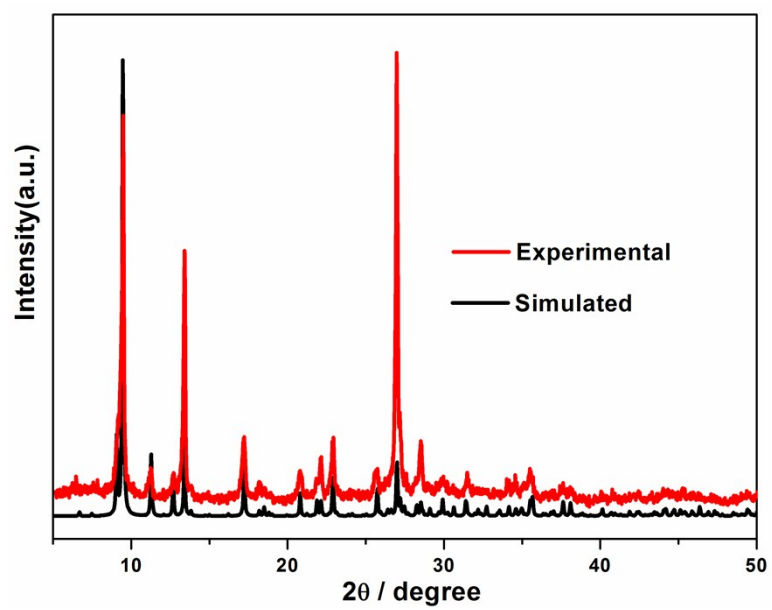


Fig. S3 PXR D patterns of 1.

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

Gd(1)-O(1)	2.335(7)	Gd(1)-O(3)#4	2.480(6)
Gd(1)-O(5)#1	2.380(6)	Gd(1)-O(3)#5	2.481(6)
Gd(1)-O(5)	2.397(6)	Gd(1)-O(2)#6	2.565(7)
Gd(1)-O(4)#2	2.440(6)	Gd(1)-O(2)#7	2.771(6)
Gd(1)-O(5)#3	2.479(6)		
O(1)-Gd(1)-O(5)#1	87.4(2)	O(4)#2-Gd(1)-O(3)#5	70.2(2)
O(1)-Gd(1)-O(5)	134.58(19)	O(5)#3-Gd(1)-O(3)#5	89.5(2)
O(5)#1-Gd(1)-O(5)	73.0(2)	O(3)#4-Gd(1)-O(3)#5	64.8(2)
O(1)-Gd(1)-O(4)#2	65.8(2)	O(1)-Gd(1)-O(2)#6	134.2(2)
O(5)#1-Gd(1)-O(4)#2	70.8(2)	O(5)#1-Gd(1)-O(2)#6	132.9(2)
O(5)-Gd(1)-O(4)#2	137.0(2)	O(5)-Gd(1)-O(2)#6	62.1(2)
O(1)-Gd(1)-O(5)#3	76.4(2)	O(4)#2-Gd(1)-O(2)#6	138.23(19)
O(5)#1-Gd(1)-O(5)#3	129.5(2)	O(5)#3-Gd(1)-O(2)#6	61.6(2)
O(5)-Gd(1)-O(5)#3	85.1(2)	O(3)#4-Gd(1)-O(2)#6	73.3(2)
O(4)#2-Gd(1)-O(5)#3	136.6(2)	O(3)#5-Gd(1)-O(2)#6	73.66(19)
O(1)-Gd(1)-O(3)#4	136.8(2)	O(1)-Gd(1)-O(2)#7	75.6(2)
O(5)#1-Gd(1)-O(3)#4	90.5(2)	O(5)#1-Gd(1)-O(2)#7	71.61(19)
O(5)-Gd(1)-O(3)#4	85.09(19)	O(5)-Gd(1)-O(2)#7	59.5(2)
O(4)#2-Gd(1)-O(3)#4	72.8(2)	O(4)#2-Gd(1)-O(2)#7	126.3(2)
O(5)#3-Gd(1)-O(3)#4	133.1(2)	O(5)#3-Gd(1)-O(2)#7	58.1(2)
O(1)-Gd(1)-O(3)#5	89.30(19)	O(3)#4-Gd(1)-O(2)#7	143.4(2)
O(5)#1-Gd(1)-O(3)#5	138.5(2)	O(3)#5-Gd(1)-O(2)#7	146.4(2)
O(5)-Gd(1)-O(3)#5	132.15(19)	O(2)#6-Gd(1)-O(2)#7	95.43(18)

Symmetry codes: #1: -x+1, -y+2, -z+1; #2: x-1/2, -y+3/2, z+1/2; #3: -x+2, -y+2, -z+1; #4: -x+3/2, y+1/2, -z+3/2; #5: x+1/2, -y+3/2, z+1/2; #6: -x+5/2, y+1/2, -z+3/2; #7: x-1/2, -y+3/2, z-1/2.