

Two Types of Layer Framework Structures Assembled from 5-Sulfosalicylic Acid and Lanthanide Ions

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Table S1. Selected Bond Lengths (Å) and Bond Angles (deg) for compound 2, 3, 4, 5 and 7^a

Compound 2			
Sm1–O4	2.385(4)	Sm1–O2#1	2.636(5)
Sm1–O7	2.400(5)	Sm1–O2#2	2.412(5)
Sm1–O8	2.413(4)	Sm1–O3#2	2.264(5)
Sm1–O1#1	2.440(5)	Sm1–O5#3	2.407(4)
O4–Sm1–O7	136.58(14)	O7–Sm1–O8	68.64(15)
O1#1–Sm1–O4	87.45(15)	O1#1–Sm1–O2#1	50.68(15)
O2#1–Sm1–O4	72.25(14)	O3#2–Sm1–O4	77.83(16)
O2#2–Sm1–O4	98.70(15)	O4–Sm1–O5#3	75.38(14)
Compound 3			
Nd1–O6	2.412(4)	Nd1–O2#1	2.660(3)
Nd1–O7	2.423(4)	Nd1–O2#2	2.434(3)
Nd1–O8	2.440(3)	Nd1–O3#2	2.291(3)
Nd1–O1#1	2.483(3)	Nd1–O5#3	2.435(3)
O6–Nd1–O7	136.58(12)	O7–Nd1–O8	69.31(12)
O1#1–Nd1–O6	85.82(12)	O1#1–Nd1–O2#1	50.23(10)
O2#1–Nd1–O6	72.36(9)	O3#2–Nd1–O6	77.83(16)
O2#2–Nd1–O6	99.01(10)	O4#3–Nd1–O6	74.99(11)
Compound 4			
Tb1–O4	2.347(8)	Tb1–O2#1	2.623(7)
Tb1–O7	2.381(8)	Tb1–O2#2	2.394(8)
Tb1–O8	2.388(8)	Tb1–O3#2	2.248(8)
Tb1–O1#1	2.408(8)	Tb1–O6#3	2.378(8)
O4–Tb1–O7	151.5(3)	O7–Tb1–O8	68.9(3)
O1#1–Tb1–O4	86.1(3)	O1#1–Tb1–O2#1	51.3(3)
O2#1–Tb1–O4	72.1(2)	O3#2–Tb1–O4	78.0(3)
O2#2–Tb1–O4	99.2(3)	O4–Tb1–O6#3	74.9(3)
Compound 5			
Eu1–O4	2.370(6)	Eu1–O2#1	2.633(5)
Eu1–O7	2.381(5)	Eu1–O2#2	2.397(5)
Eu1–O8	2.392(6)	Eu1–O3#2	2.257(5)
Eu1–O1#1	2.428(5)	Eu1–O6#3	2.399(5)
O4–Eu1–O7	152.09(16)	O7–Eu1–O8	68.76(18)
O1#1–Eu1–O4	87.4(2)	O1#1–Eu1–O2#1	50.89(15)
O2#1–Eu1–O4	72.38(15)	O3#2–Eu1–O4	77.70(17)
O2#2–Eu1–O4	99.27(16)	O4–Eu1–O6#3	75.47(16)

Compound 7

Dy1–O4	2.341(6)	Dy1–O1#2	2.401(6)
Dy1–O7	2.366(6)	Dy1–O2#2	2.515(6)
Dy1–O8	2.358(6)	Dy1–O2#3	2.341(6)
Dy1–O5#1	2.339(6)	Dy1–O3#3	2.263(6)
O4– Dy1–O7	76.8(2)	O7– Dy1–O8	142.4(2)
O4– Dy1–O5#1	144.2(2)	O7– Dy1–O2#3	76.8(2)
O5#1– Dy1–O7	71.3(2)	O1#2– Dy1–O2#2	52.45(19)
O1#2– Dy1–O7	76.7(2)	O2#3– Dy1–O3#3	74.3(2)

^a Symmetry codes: (2) #1 $1/2+x, 1/2-y, 1-z$; #2 $1-x, -y, 1-z$; #3 $3/2-x, -1/2+y, z$. (3) #1 $-1/2+x, 3/2-y, 1-z$; #2 $2-x, 1-y, 1-z$; #3 $3/2-x, -1/2+y, z$. (4) #1 $-1/2+x, 3/2-y, -z$; #2 $2-x, 1-y, -z$; #3 $3/2-x, -1/2+y, z$. (5) #1 $-1/2+x, 3/2-y, 1-z$; #2 $1-x, 2-y, 1-z$; #3 $1/2-x, 1/2+y, z$. (7) #1 $1/2-x, 1/2+y, 1/2-z$; #2 $1-x, 2-y, -z$; #3 $-1/2+x, 3/2-y, 1/2+z$.

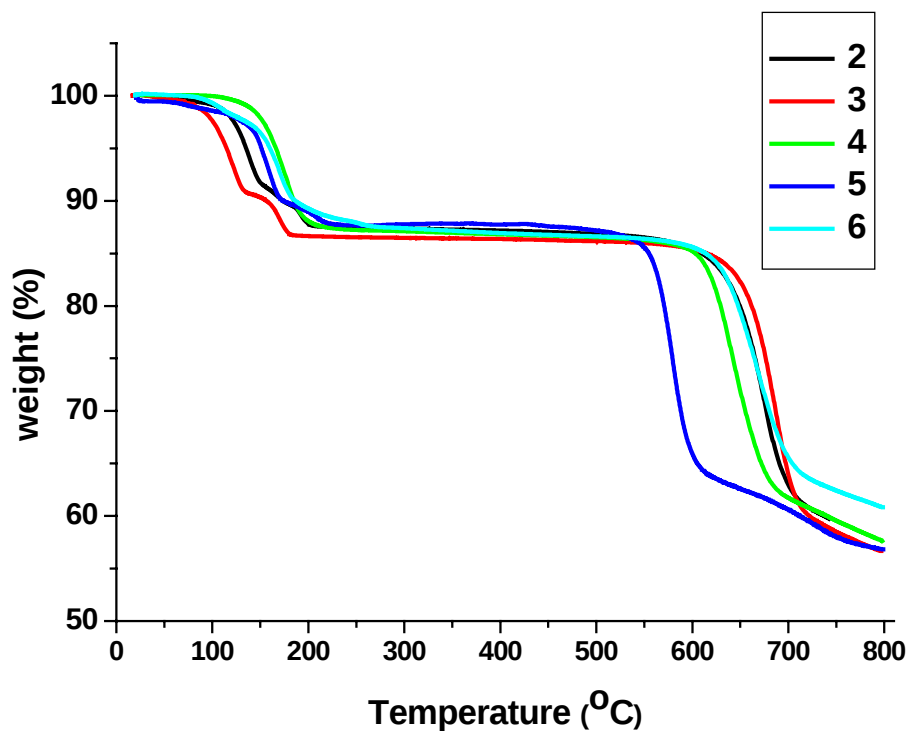


Fig. S1 TG curves of 2-6

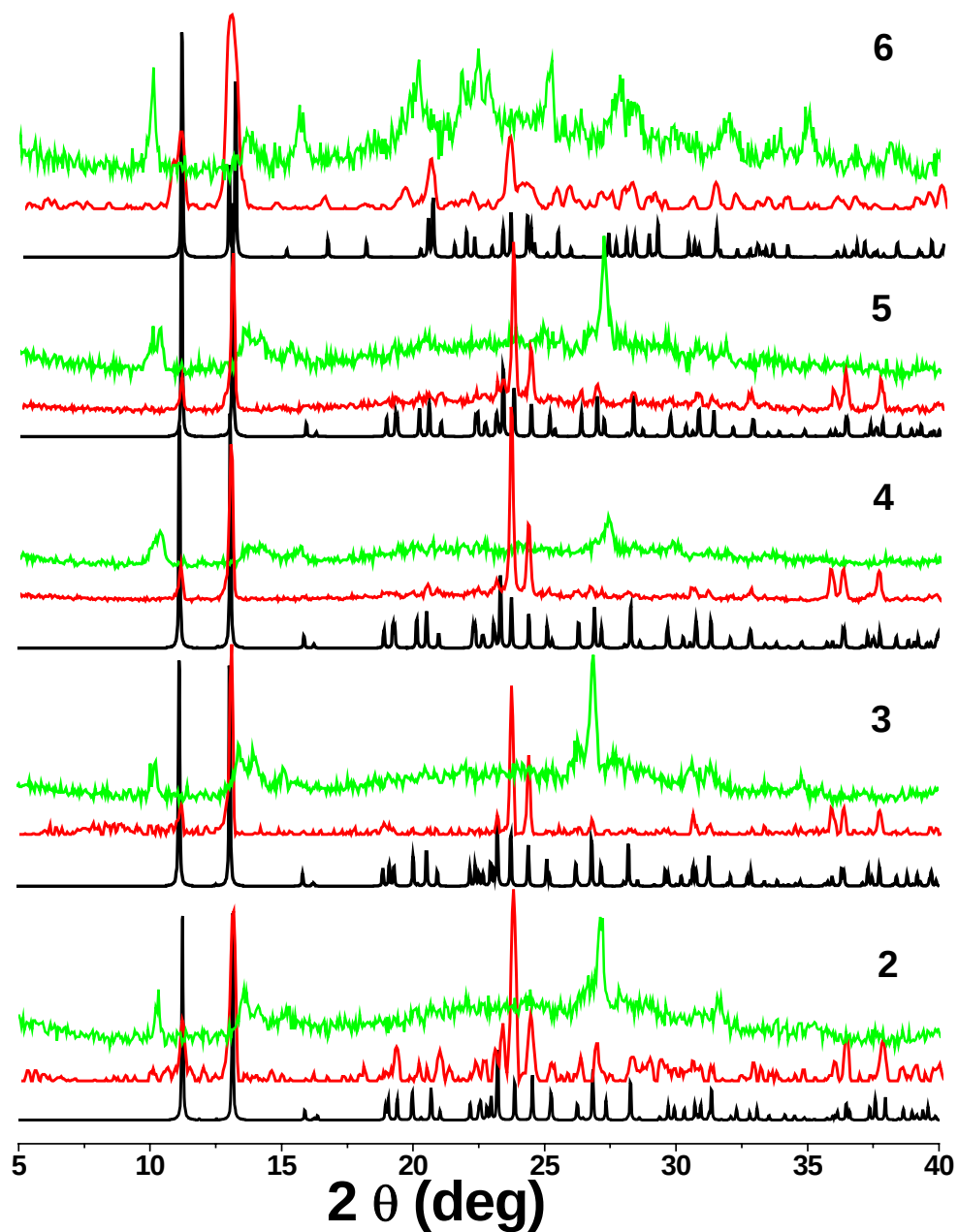


Fig. S2 XRD spectra for 2-6, black: Simulated; red: taken at room temperature; green: after heating to 400 °C for 1h

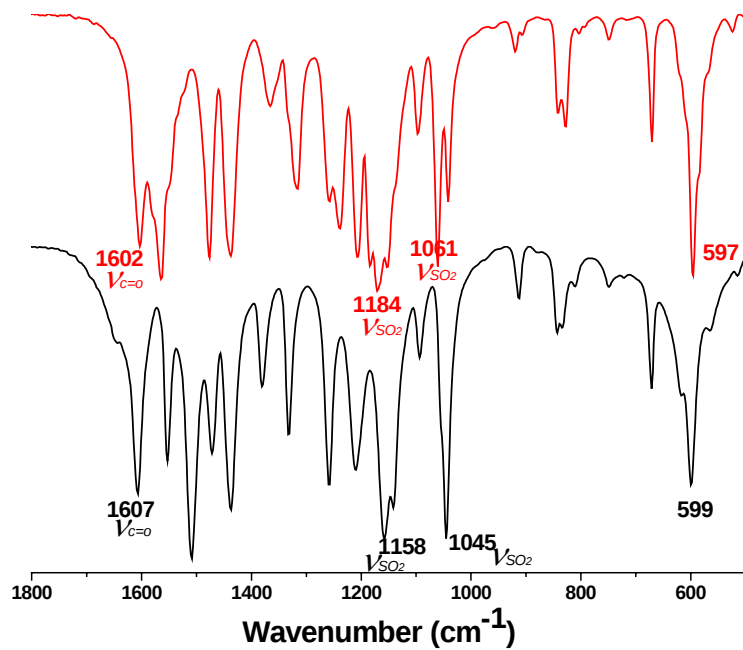


Fig. S3 IR spectrum of compound **1**: black: taken at room temperature; red: after heating to 400 °C for 1h

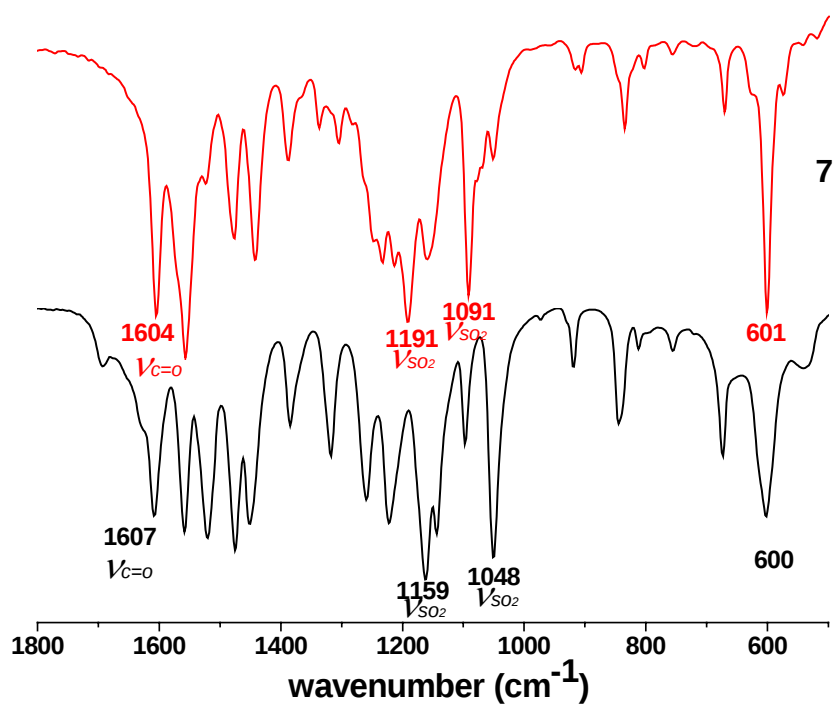


Fig. S4 IR spectrum of compound **7**: black: taken at room temperature; red: after heating to 400 °C for 1h