

SUPPORTING INFORMATION

Coordination polymers based on hetero-hexanuclear rare earth complexes : Towards independent luminescence brightness and color tuning.

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Table S1. Selected intermetallic distances between Y atoms belonging to the same hexanuclear entity in $\{[Y_6O(OH)_8](NO_3)_2(bdc)(Hbdc)_2.2NO_3.H_2bdc\}_\infty$.

Atom1	Atom2	Symmetry	Distance (Å)
Y1	Y2	x, y, z	2.981
Y1	Y3	x, y, z	2.976
Y1	Y2	2-x, 1-y, 1-z	2.992
Y1	Y3	2-x, 1-y, 1-z	3.007
Y1	Y1	2-x, 1-y, 1-z	4.225
Y2	Y3	2-x, 1-y, 1-z	3.005
Y2	Y3	x, y, z	2.975
Y2	Y2	2-x, 1-y, 1-z	4.222
Y3	Y3	2-x, 1-y, 1-z	4.236

Table S2. Selected inter-metallic distances ($<10\text{\AA}$) between atoms belonging to adjacent hexanuclear entities in $\{[Y_6O(OH)_8](NO_3)_2(bdc)(Hbdc)_2.2NO_3.H_2bdc\}_\infty$.

Atom1	Atom2	Symmetry	Distance (Å)
Y3	Y2	x, y, -1+z	9.454
Y2	Y2	2-x, 1-y, 2-z	9.636
Y2	Y3	x, y, 1+z	9.454
Y2	Y1	3-x, 1-y, 2-z	9.533
Y2	Y2	3-x, 1-y, 2-z	9.622
Y1	Y2	3-x, 1-y, 2-z	9.533
Y1	Y1	3-x, -y, 1-z	9.860
Y3	Y1	x, 1+y, z	9.639
Y2	Y1	x, 1+y, z	9.443
Y1	Y3	x, -1+y, z	9.639
Y2	Y3	2-x, 2-y, 1-z	8.864
Y2	Y2	2-x, 2-y, 1-z	9.144
Y1	Y2	x, -1+y, z	9.443
Y3	Y2	2-x, 2-y, 1-z	8.864
Y3	Y3	2-x, 2-y, 1-z	9.552
Y3	Y2	3-x, 1-y, 1-z	8.950
Y1	Y2	3-x, 1-y, 1-z	9.621
Y3	Y1	3-x, 1-y, 1-z	7.574
Y2	Y1	-1+x, y, z	9.813
Y2	Y1	3-x, 1-y, 1-z	9.621
Y2	Y3	-1+x, y, z	9.151
Y3	Y3	3-x, 1-y, 1-z	7.331
Y1	Y3	3-x, 1-y, 1-z	7.574
Y2	Y3	3-x, 1-y, 1-z	8.950
Y3	Y2	1+x, y, z	9.151
Y1	Y2	1+x, y, z	9.813
Y1	Y1	3-x, 1-y, 1-z	8.872

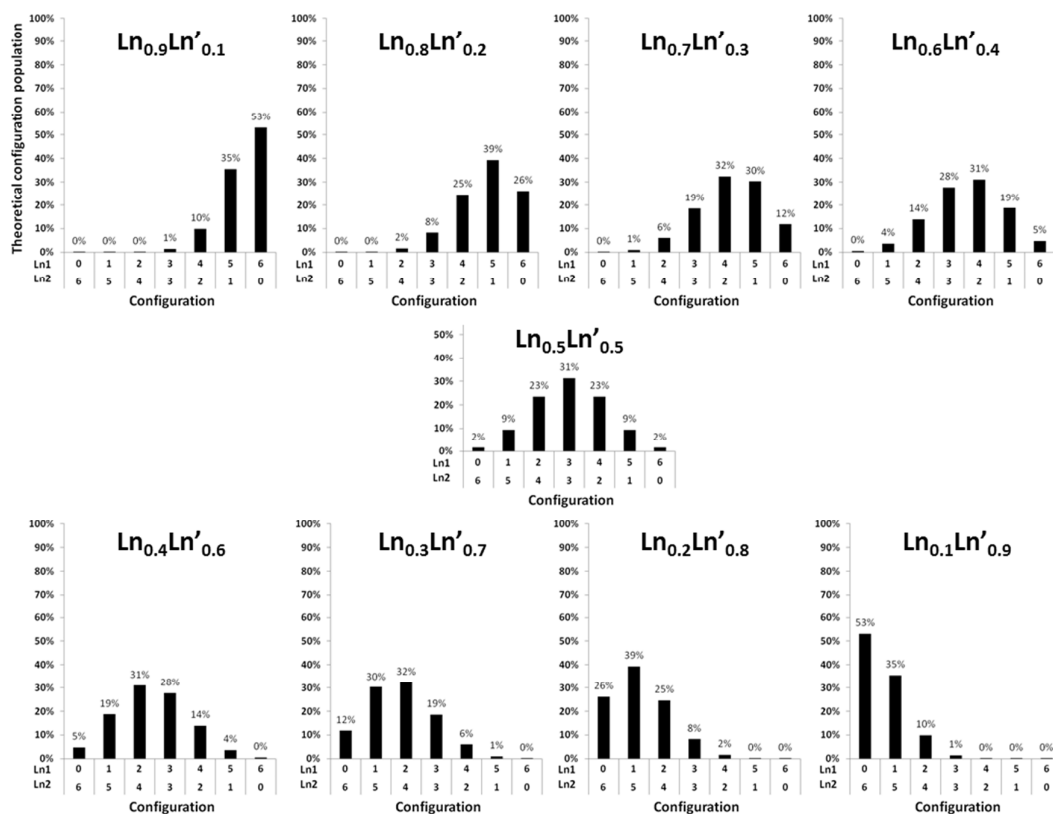


Figure S1. Relative abundance of the different hexa-nuclear complexes obtained from mixtures of Ln and Ln' ions ($n = 10^{20}$).

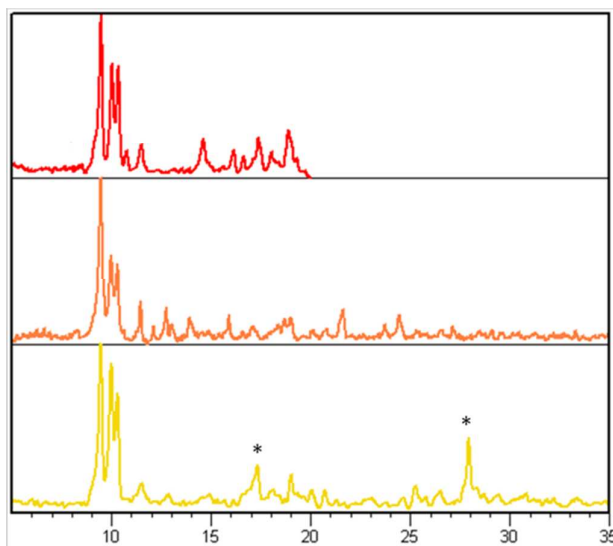


Figure S2. Powder X-ray diffraction diagrams of $\{\text{Eu}_6\}_\infty + \{\text{Tb}_6\}_\infty$ (Top), $\{\text{Eu}_3\text{Tb}_3\}_\infty$ (Middle), and $\{[\text{Eu}_6]_{1/2}[\text{Tb}_6]_{1/2}\}_\infty$ (Bottom). Stared peaks have been attributed to H_2bdc impurities.