

Supporting Information

NaYF₄ nanocrystals with TOPO ligands: synthesis-dependent structural and luminescent properties

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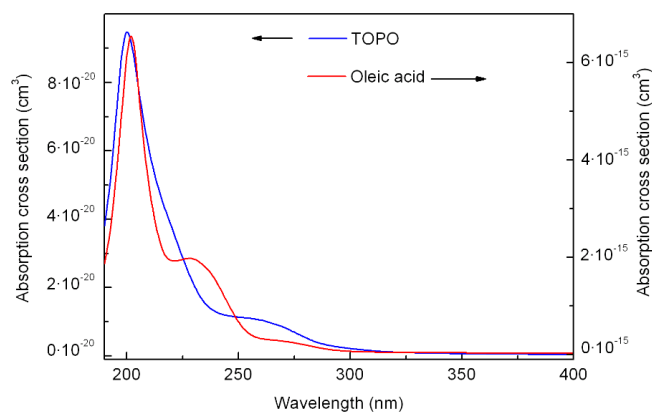


Fig. S1 Absorption cross section spectra of ligands molecules TOPO and oleic acid.

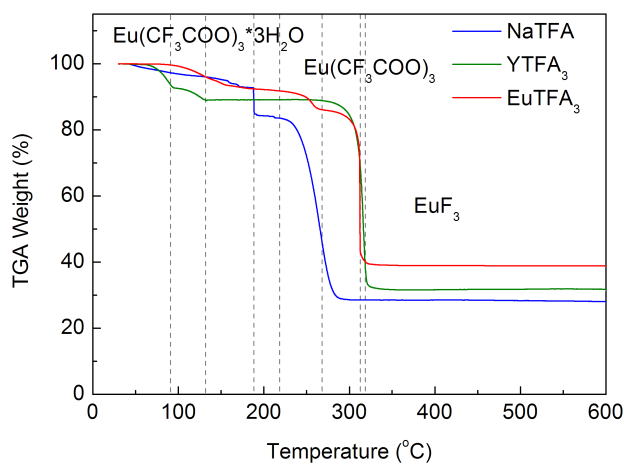


Fig. S2 TGA curves of Na, Y and Eu TFA salts used as a precursors in NaYF₄ nanocrystal synthesis. The products of thermal decompositions determined on TGA curves are indicated in the figure.

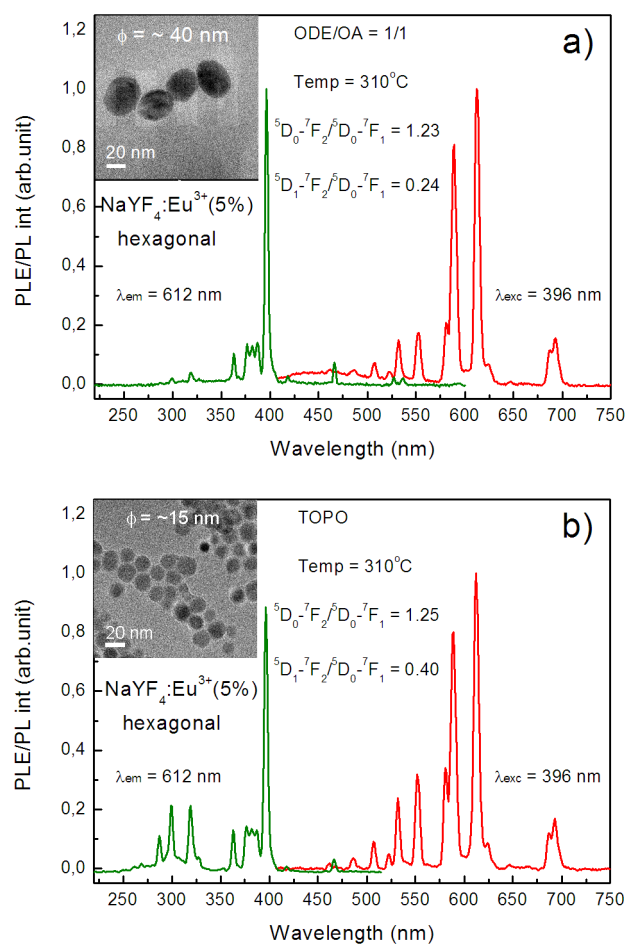


Fig. S3 PLE and PL spectra of NaYF₄:Eu³⁺ NCs synthesized in a) OA/ODE mixture and b) TOPO. Insets show the TEM images of NCs.

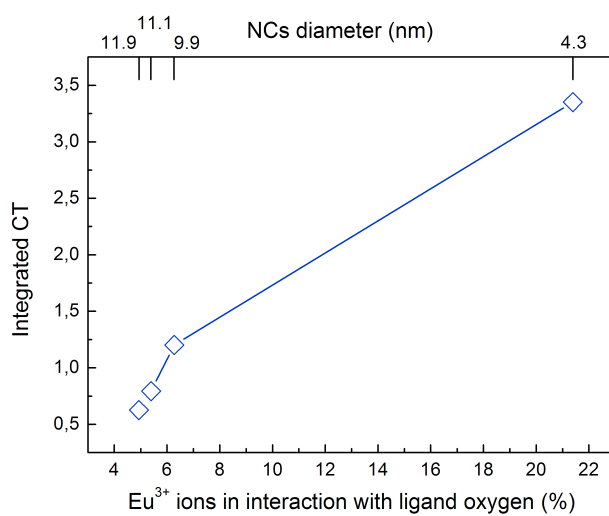


Fig. S4 The relation between the integrated intensity of CT absorption band and percentage of Eu^{3+} bound to oxygen from the surface ligands.

Table S1 NaTFA and YTFA₃ precursors composition ratio in set of NaYF₄ NCs.

Na^+	Y^{3+}	Eu^{3+}	$\text{Na}^+/\text{Y}^{3+}$	Y^{3+}	F^-/Y^{3+}
[mmol]	[mmol]	[mmol]		% of total cation	
0.50	0.475	0.025	1.00	50	4.00
0.75	0.475	0.025	1.50	40	4.50
1.00	0.475	0.025	2.00	33	5.00
1.25	0.475	0.025	2.50	28	5.50