Supporting Information

Percolation limited emission intensity from up-converting NaYF₄:Yb³⁺, Er³⁺ nanocrystals –
– a single nanocrystal optical study

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Figure S1. TEM images, size distributions, and mean particle diameters of core NaYF$_4$:Yb(X%), Er(2%) nanocrystals with different Yb$^{3+}$ concentrations.
Figure S2. TEM images, size distributions, and mean particle diameters of core-shell NaYF₄:Yb(X%), Er(2%) nanocrystals with different Yb³⁺ concentrations.
Figure S3. Luminescence decay curves of core and core-shell NaYF$_4$:Yb$^{3+}$(X%), Er$^{3+}$(2%) nanocrystals with different Yb$^{3+}$ concentrations; emissions at (a) 545 and (b) 650 nm; excitation at 978 nm, 20 Hz, 7 ns pulse.