nanomaterials

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Supporting information

Low-Temperature-Induced Controllable Transversal Shell Growth of $NaLnF_4$ Nanocrystals

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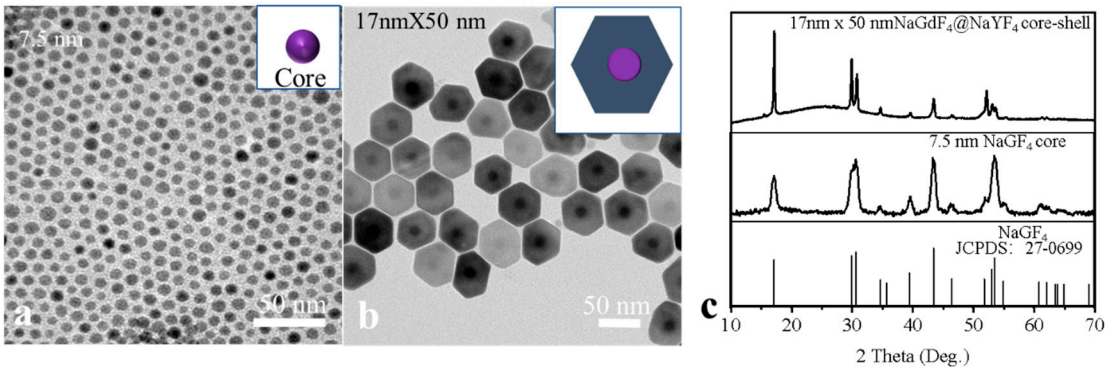

Figure S1. TEM images of 7.5 nm $NaGdF_4$ cores (**a**) and 17 × 50 nm $NaGdF_4$@$NaYF_4$ core-shell nanocrystals (**b**), scale bars are 50 nm. XRD diffractograms of 7.5nm β-$NaGdF_4$ cores and 17 × 50 nm β-$NaGdF_4$@$NaYF_4$ core-shell nanocrystals (**c**).

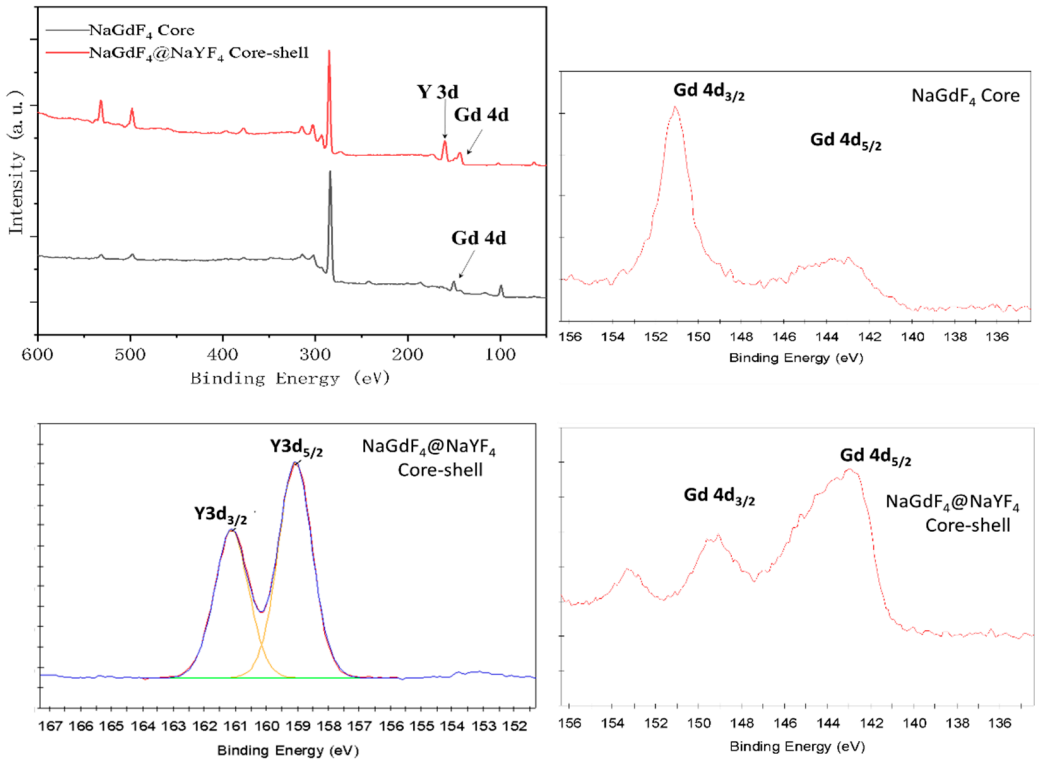

Figure S2. XPS spectra of 7.5 nm $NaGdF_4$ cores and 17 × 50 nm $NaGdF_4$@$NaYF_4$ core-shell nanocrystals.

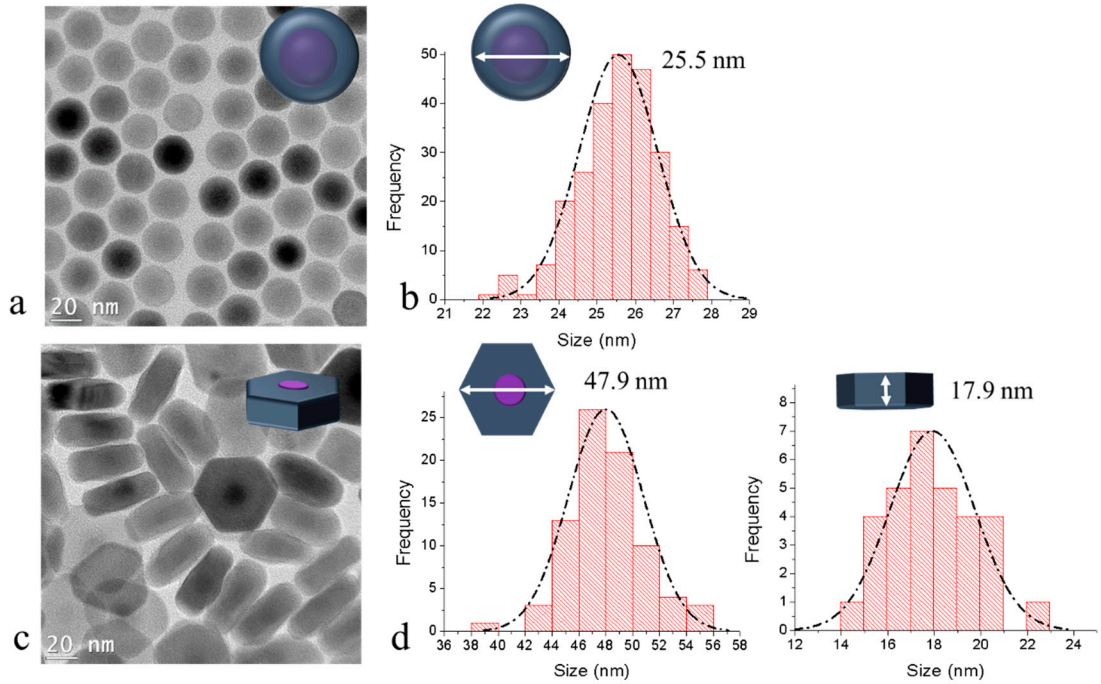

Figure S3. TEM images of $NaGdF_4$@$NaYF_4$ as cores before (**a**) and after (**c**) transversal shell growth with $NaYF_4$ shell and their size distributions (**b and d**). Scale bar is 20 nm.