

Supporting Information for

**Synthesis of Free-standing Sub-10nm Y₂O₃:Eu Particles on Silica
Nanowire Matrix and Amplified Luminescent Performance**

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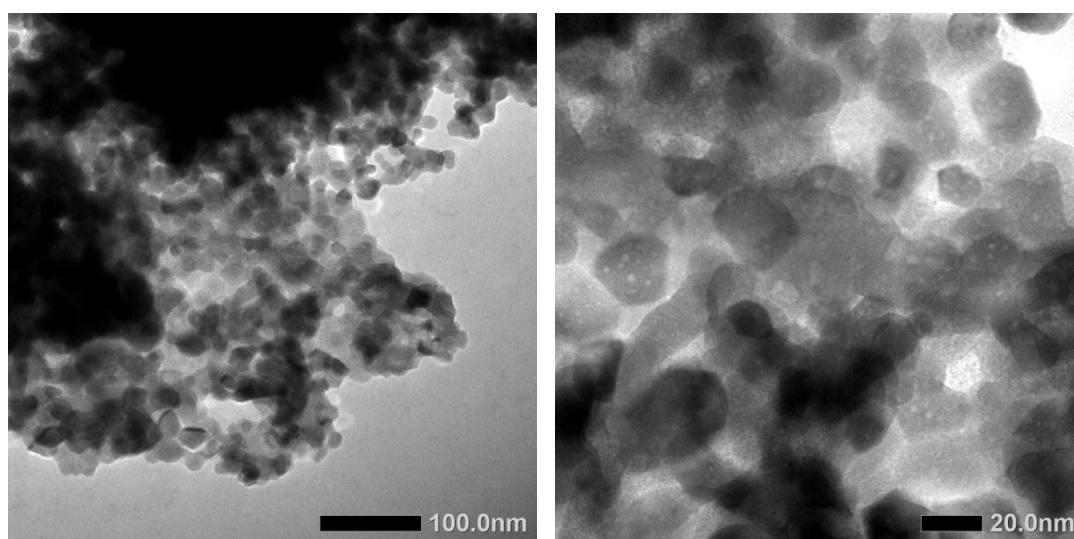


Figure S1. TEM images (left) and corresponding magnified TEM images (right) of $\text{Y}_2\text{O}_3\text{:Eu}$ synthesized without PEI@ SiO_2 as matrix

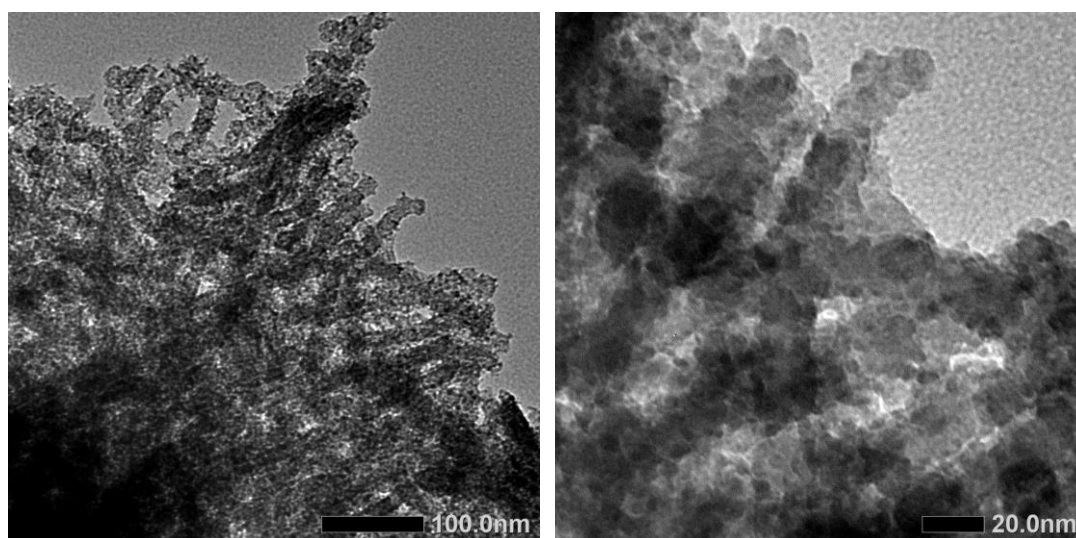


Figure S2. TEM images (left) and corresponding magnified TEM images (right) of $\text{Y}_2\text{O}_3\text{:Tb@SNW}$ (the synthesis conditions were similar to that of $\text{Y}_2\text{O}_3\text{:Eu@SNW}$ by replacing $\text{Eu}(\text{OAc})_3$ with $\text{Tb}(\text{OAc})_3$)

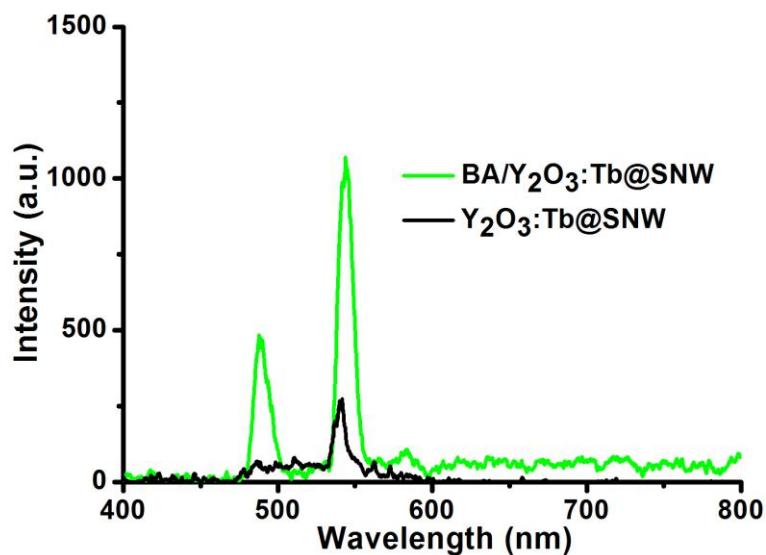


Figure S3. Emission spectra of (excited by 270nm) Y₂O₃:Tb@SNW (black line) and BA/ Y₂O₃:Tb@SNW (green line)

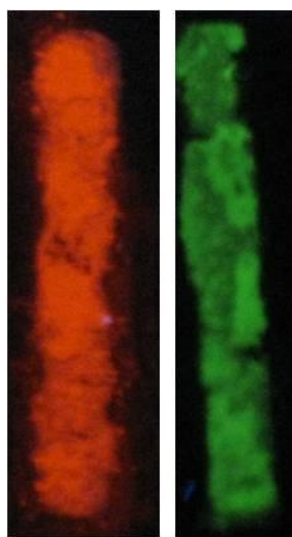


Figure S4. Snapshot images of the lined powders of BA/Y₂O₃:Eu@SNW (left) and BA/Y₂O₃:Tb@SNW (right) irradiated by UV light (254nm).