Supplementary Material

Microscale Self-assembly of Upconversion Nanoparticles Driven by Block Copolymer

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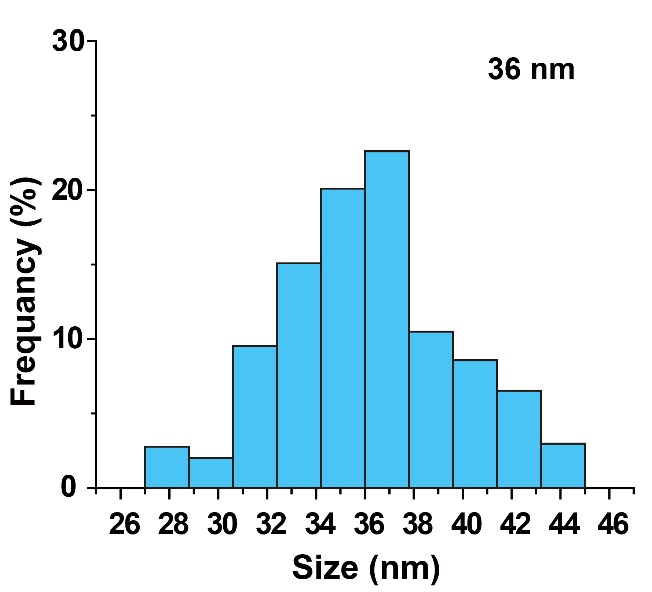
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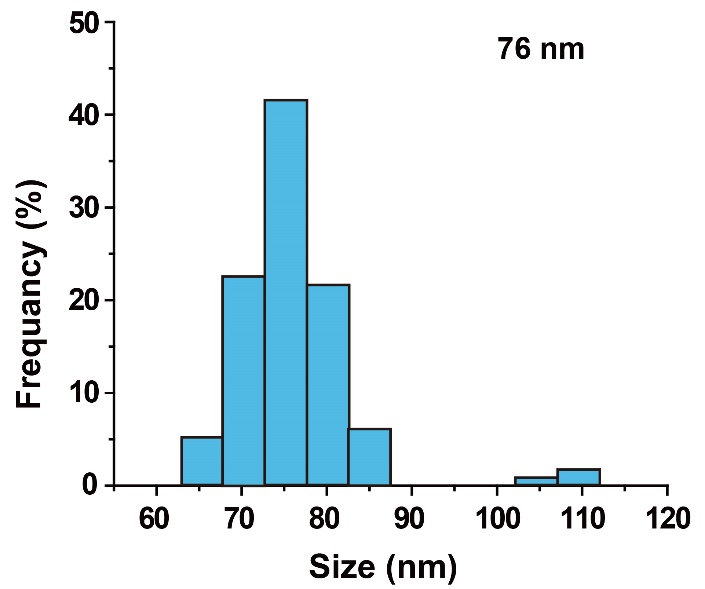
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#These authors contributed equally.

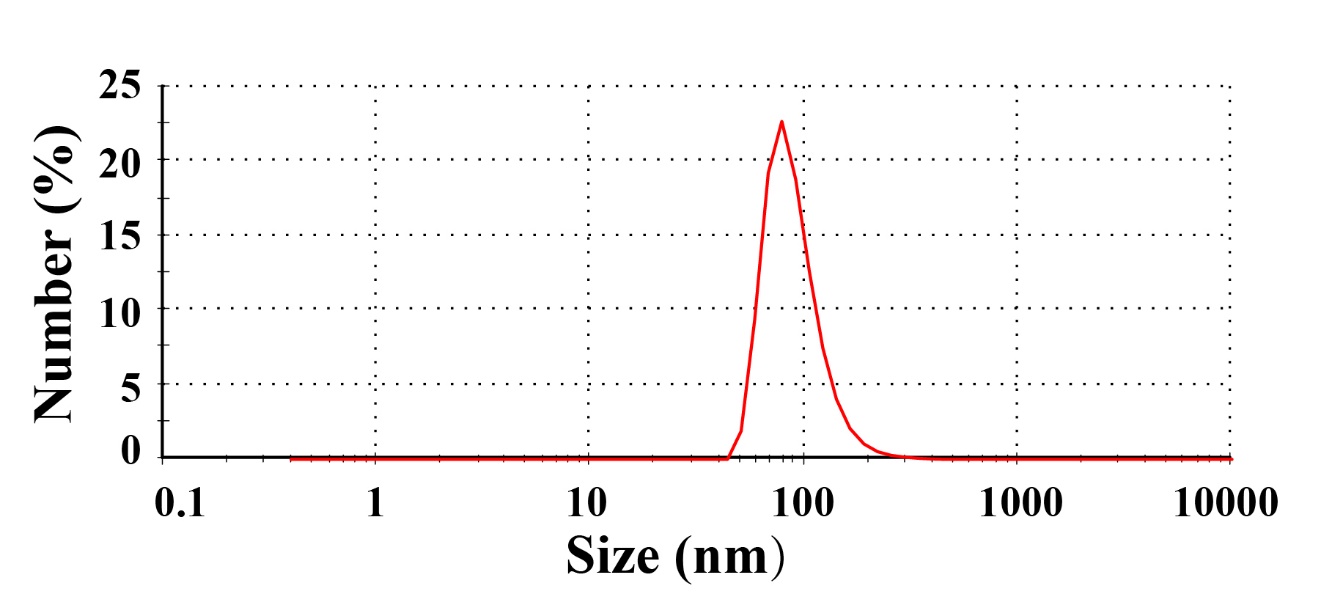
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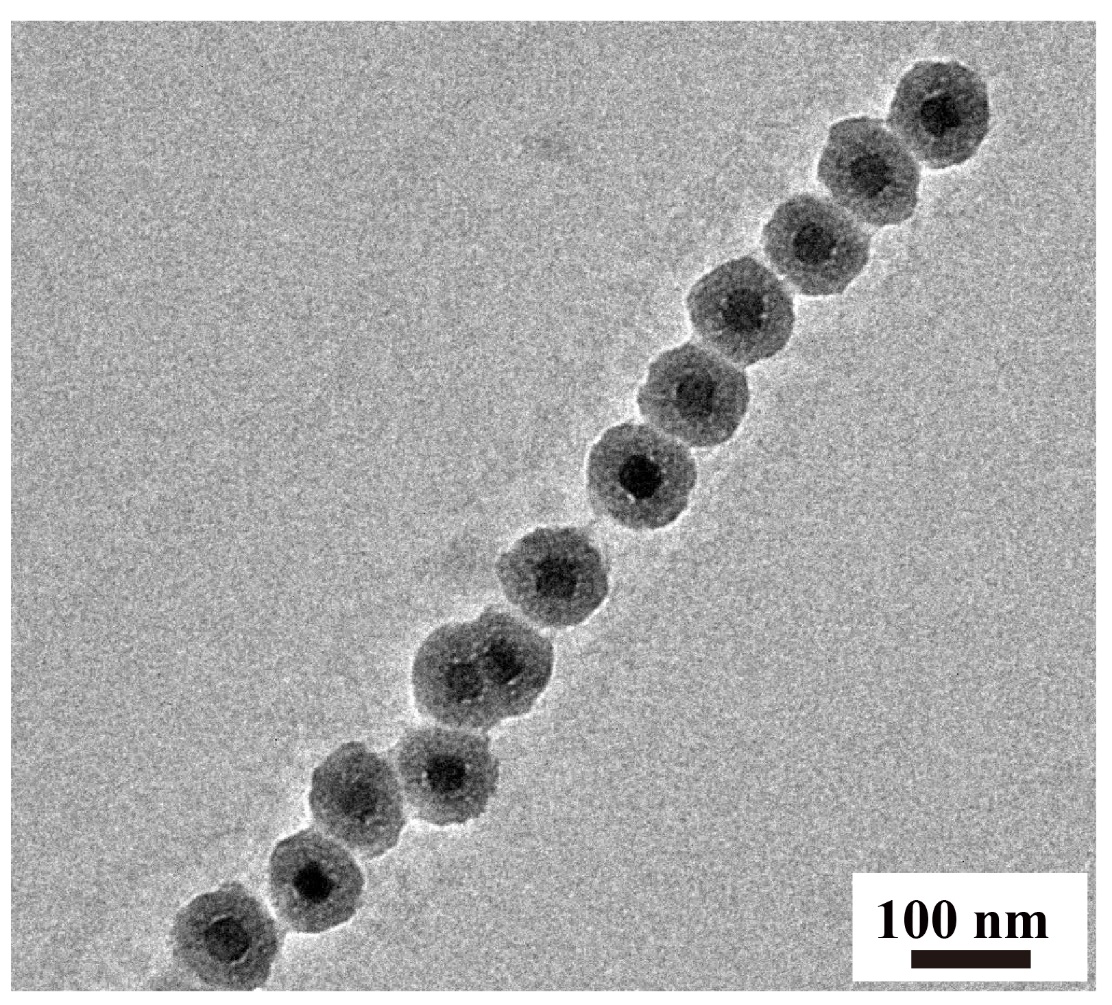
**Figure S1.** Size distribution of NaYF4:Yb,Tm@NaYF4 nanoparticles.



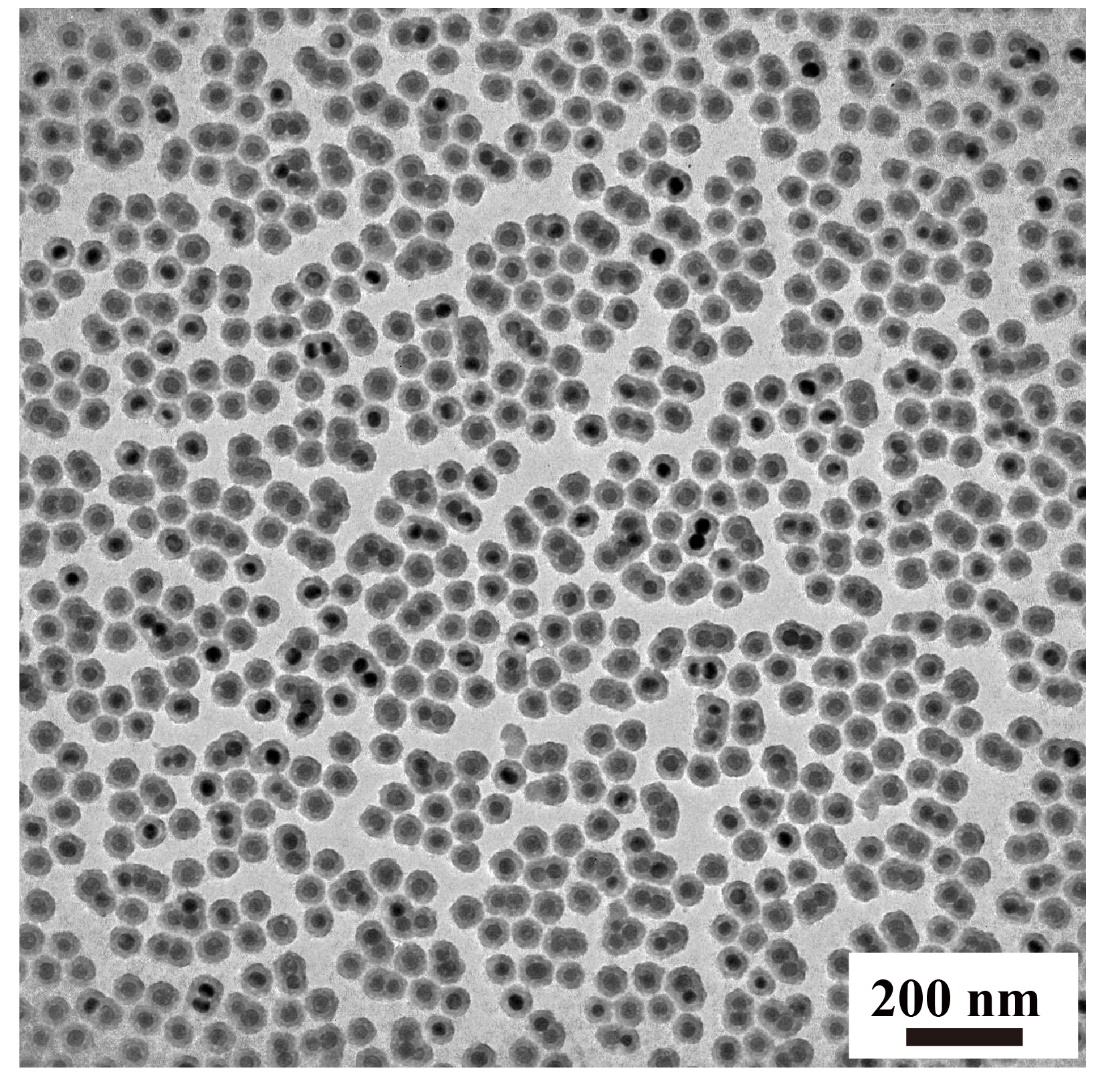
**Figure S2.** Size distribution of NaYF4:Yb,Tm@NaYF4@SiO2 (UCNPTm@SiO2) nanoparticles.



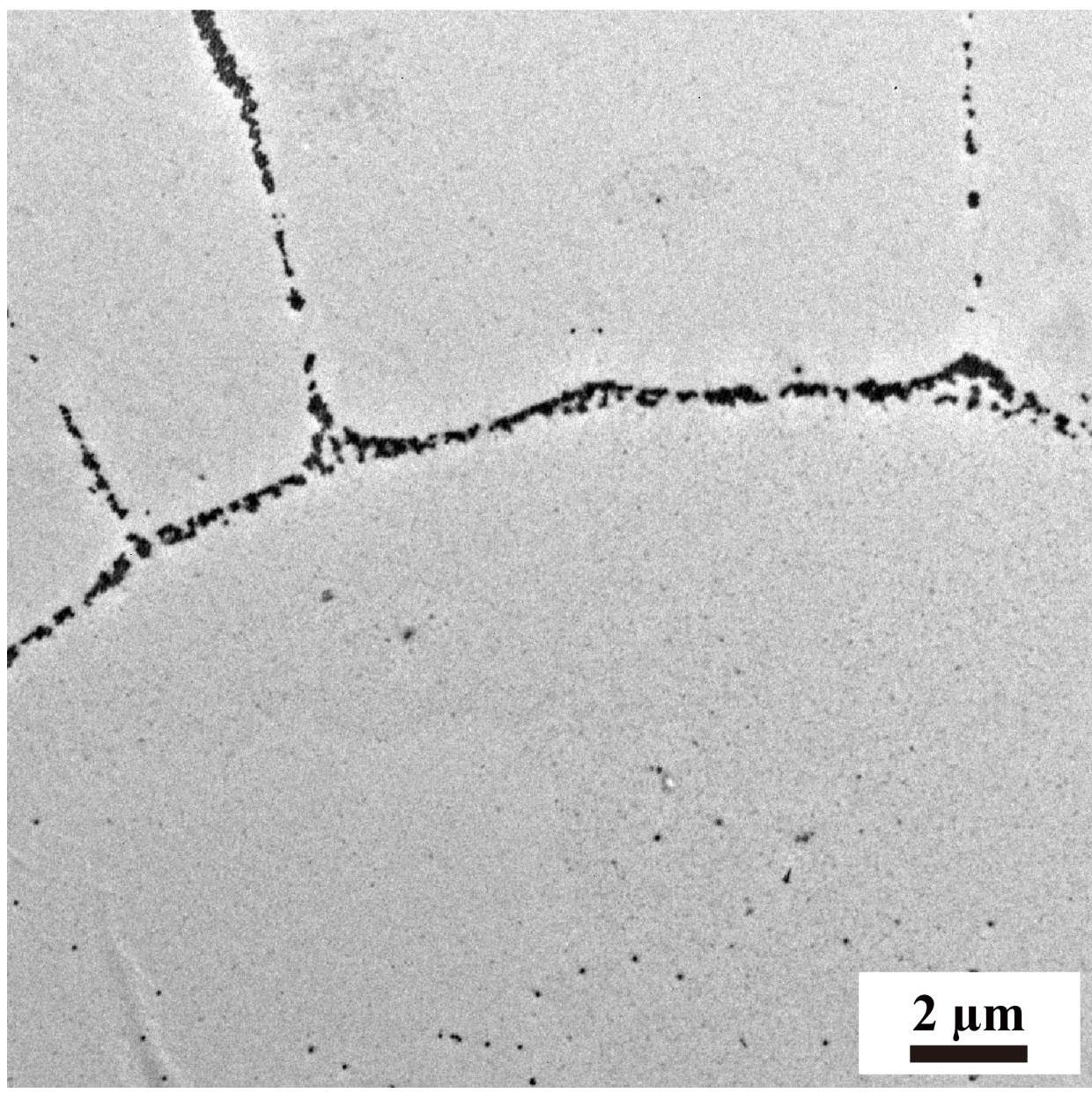
**Figure S3.** Dynamic light scattering (DLS) of UCNPTm@SiO2 nanoparticles in water.



**Figure S4.** TEM images of the as-prepared UCNPTm@SiO2 nanoparticle chain mediated by F127 for 12 hours.

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**Figure S5.** TEM images of the as-prepared UCNPTm@SiO2 nanoparticles incubated in water without F127.

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**Figure S6.** TEM demonstrated the existence of Y-junctions of UCNPTm@SiO2 assemblies incubated with F127 mediation for 24 hours.