

Figure S1 XRD patterns of $\text{LiYF}_4:\text{Yb}^{3+}_{0.25}/\text{Ho}^{3+}_{0.01}/\text{Tm}^{3+}_{0.01}/\text{Er}^{3+}_{0.01}$ core and $\text{LiYF}_4:\text{Yb}^{3+}_{0.25}/\text{Ho}^{3+}_{0.01}/\text{Tm}^{3+}_{0.01}/\text{Er}^{3+}_{0.01}@\text{LiYF}_4:\text{Yb}^{3+}_{0.20}$ core/shell nanoparticles.

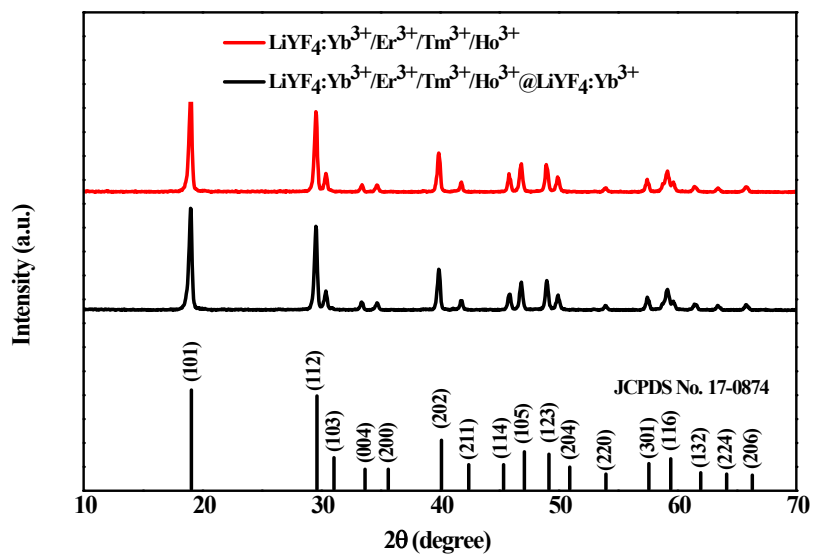


Figure S2 The size (hydrodynamic diameter) of AA-, AAm-, and TBAm-made UCNPs@MIP was determined by using dynamic light scattering (DSL) was about 2084, 1396, and 435 nm, respectively.

