

Electronic supplementary information (ESI)

Improvement of Blue, White and NIR emissions in $\text{YPO}_4:\text{Dy}^{3+}$ nanoparticles on co-doping of Li^+ ions

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This paper is dedicated to Professor N. S. Gajbhiye on the occasion of his 60th birthday

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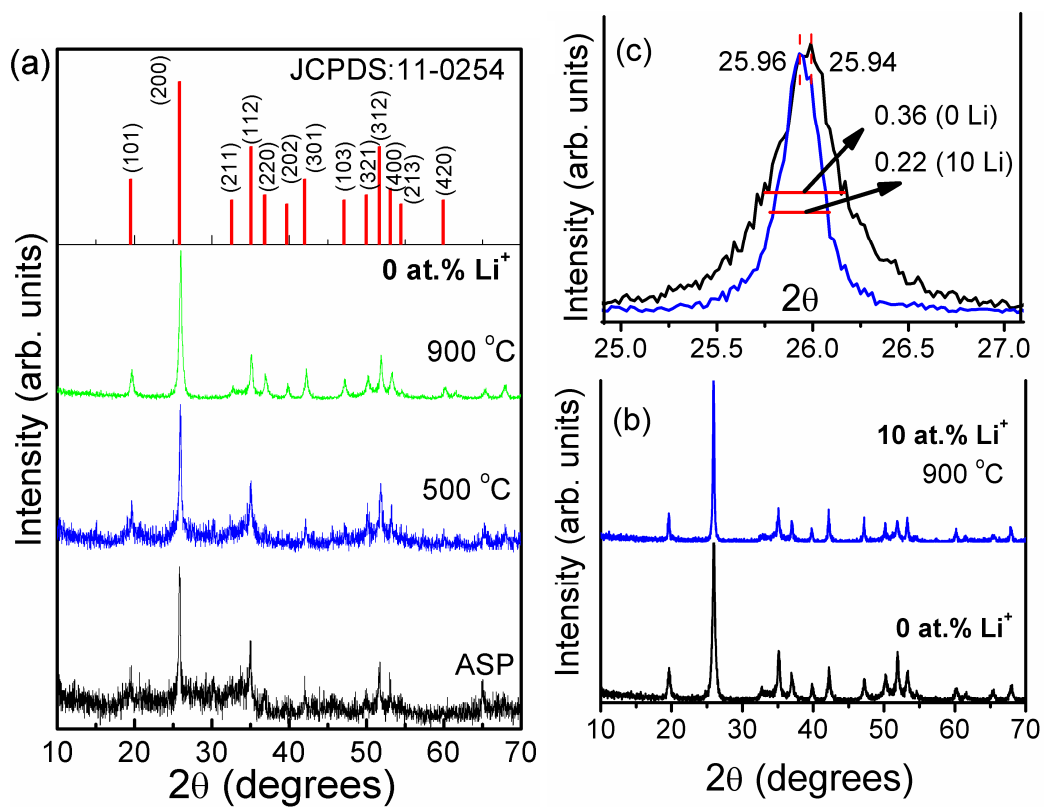


Figure S1. (a) XRD patterns of as-prepared, 500 and 900 °C annealed samples of YPO₄:2Dy; (b) 900 °C annealed samples without and with Li⁺ (10 at.%) and their comparison of (200) plane (c).

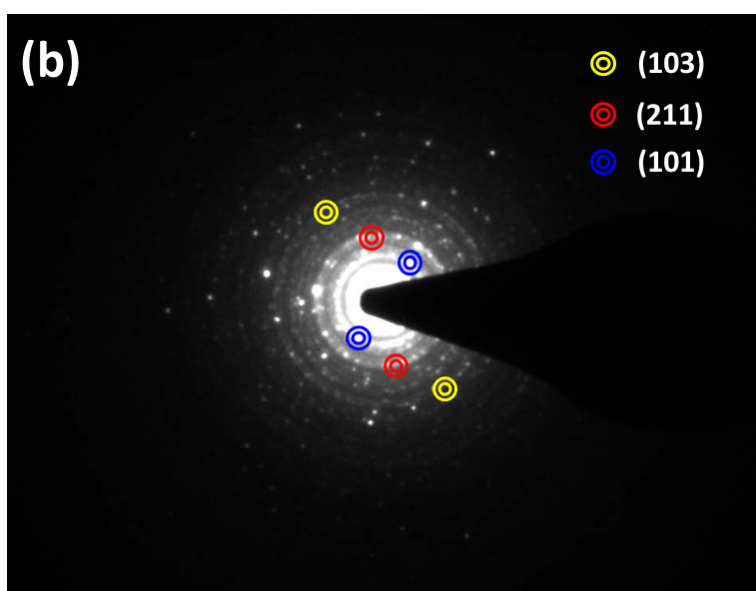
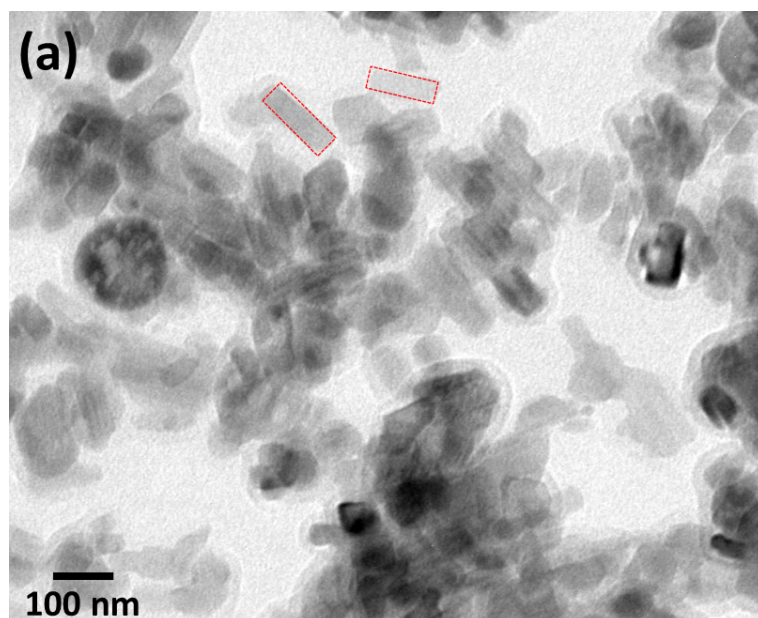


Figure S2. (a) TEM image having average particle size 40 nm in width and 110 nm in length and (b) SAED pattern of YPO₄:2Dy.

Stark splitting in visible and NIR regions

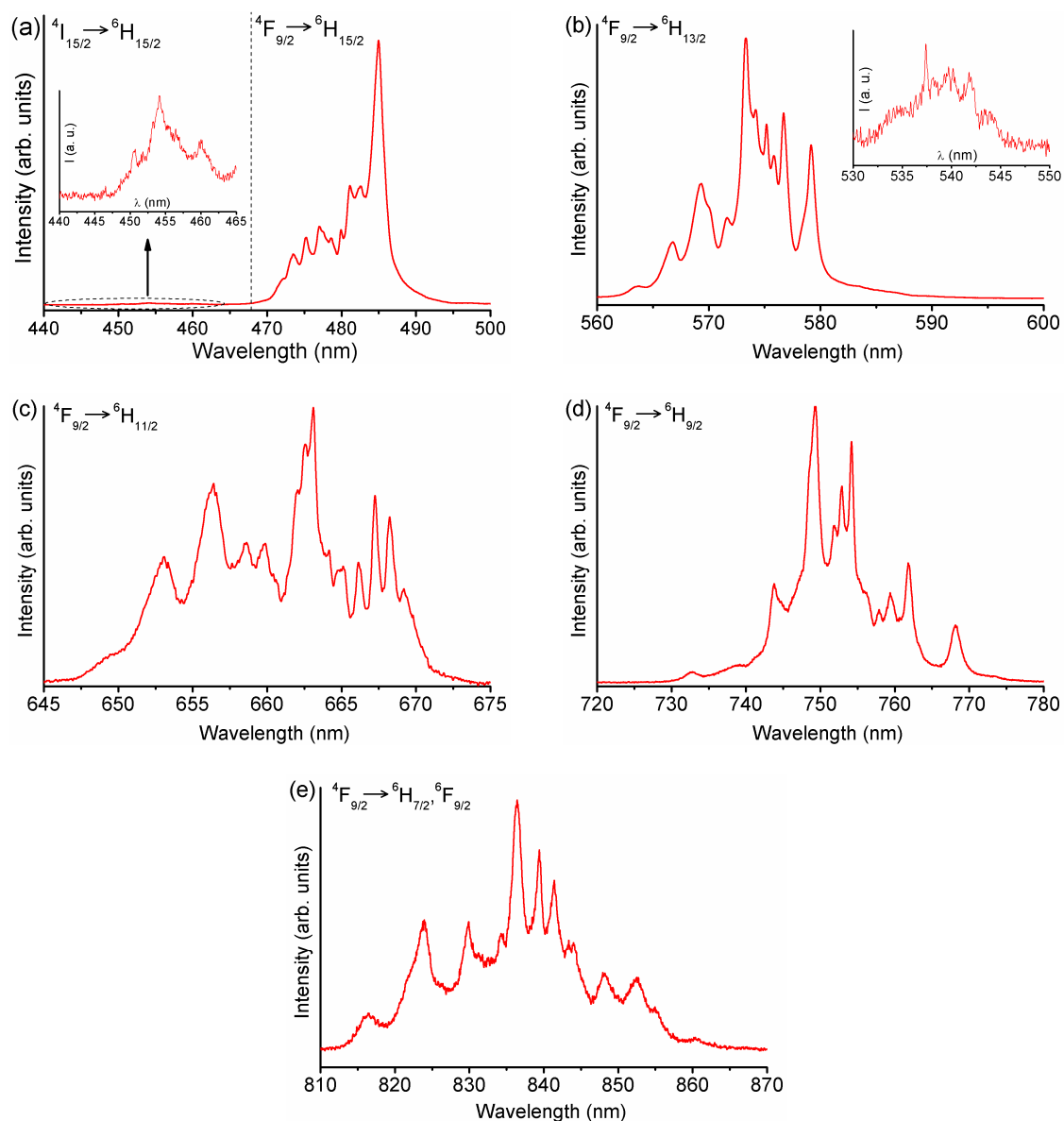


Figure S3. (a-e) Expanded photoluminescence emission spectrum from the 900 °C annealed 7 at.% Li⁺ co-doped YPO₄:2Dy nanoparticles under 355 nm laser excitation. The peaks show clear Stark splitting of Dy³⁺ transitions.