

## **Electronic Supplementary Information (ESI)**

### **Novel synthetic route towards monodisperse LaOF:Ln<sup>3+</sup> (Ln = Eu, Tb) hollow spheres with multicolor luminescence properties**

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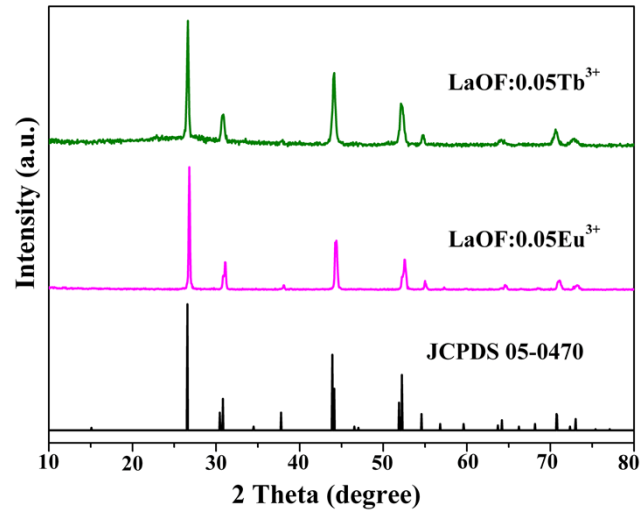
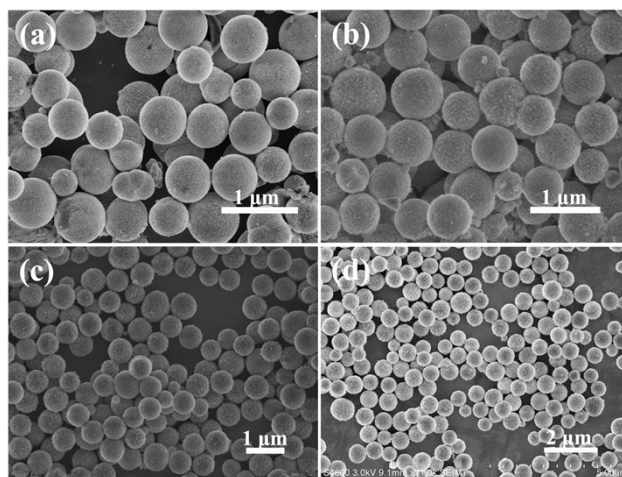


Fig S1 XRD patterns of Eu<sup>3+</sup> and Tb<sup>3+</sup> doped samples, and the standard data of LaOF.



**Fig. S2** SEM images of  $\text{LaCO}_3\text{F}$  spheres at different reaction time: (a) 30 min, (b) 1 h, (c) 2 h, and (d) 3 h.