Electronic Supplementary Material (ESI) for RSC Advances.

One-step synthesis and upconversion luminescence property of hierarchical In_2O_3:Yb^{3+}, Er^{3+} nanorod flowers

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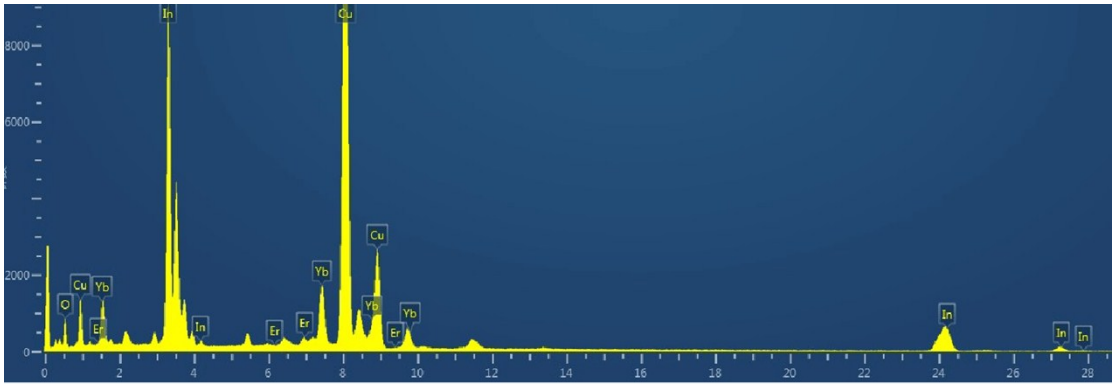

Fig. S1 Energy Dispersive X-ray spectra of as-prepared In_2O_3: (10 mol%)Yb^{3+}, (2 mol%) Er^{3+} NRFs.

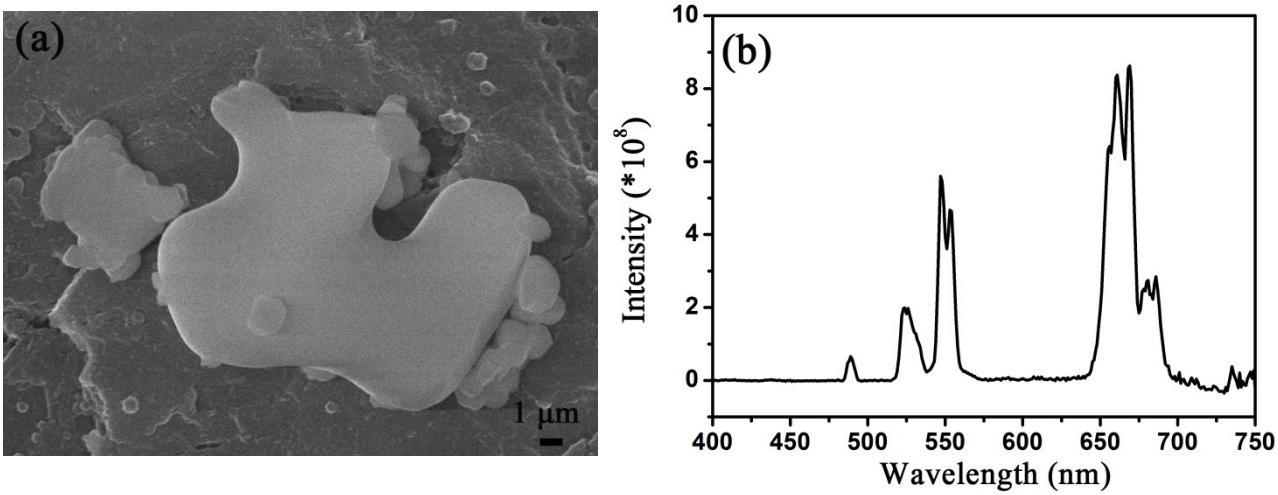

Fig. S2 (a) The SEM image of the In_2O_3: Yb^{3+}, Er^{3+} power; (b) the UCL spectra of In_2O_3: Yb^{3+}, Er^{3+} power.

For preparing co-doped In_2O_3 powder, $In(NO_3)_3 \cdot 4.5H_2O$, $Yb(NO_3)_3 \cdot 6H_2O$ and $Er(NO_3)_3 \cdot 6H_2O$ were used as starting materials. The In_2O_3: (10 mol%)Yb^{3+}, (1 mol%) Er^{3+} power was prepared by the sol-gel method. In the preparation of the In_2O_3:Yb^{3+}, Er^{3+} precursor sol, stoichiometric amounts of $In(NO_3)_3 \cdot 4.5H_2O$, $Yb(NO_3)_3 \cdot 6H_2O$, $Er(NO_3)_3 \cdot 6H_2O$ were dissolved in 10 ml water solution. The mixture was stirred for 3 hours, forming a transparent solution. The sample was sealed in crucibles and loaded into a laboratory box furnace. The furnace was heated to 500 °C for 3 h and then cooled to room temperature naturally.