Electronic supplementary information

Facile synthesis of highly uniform octahedral $LuVO_4$ microcrystals by a facile chemical conversion method

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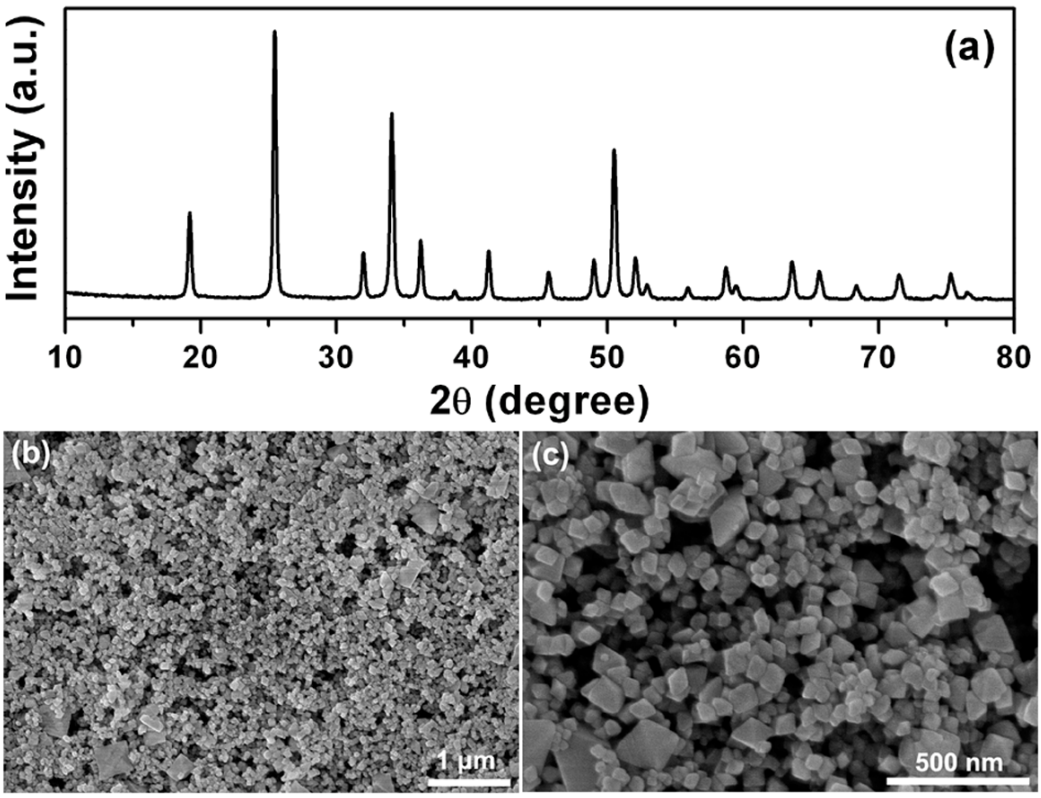

Figure S1 (a) XRD pattern and (b, c) SEM images of the sample prepared by directly using $Lu(NO_3)_3$ and $Na_3VO_4 \cdot 12H_2O$ as reacting agent in one step (220 ^oC, 24 h).

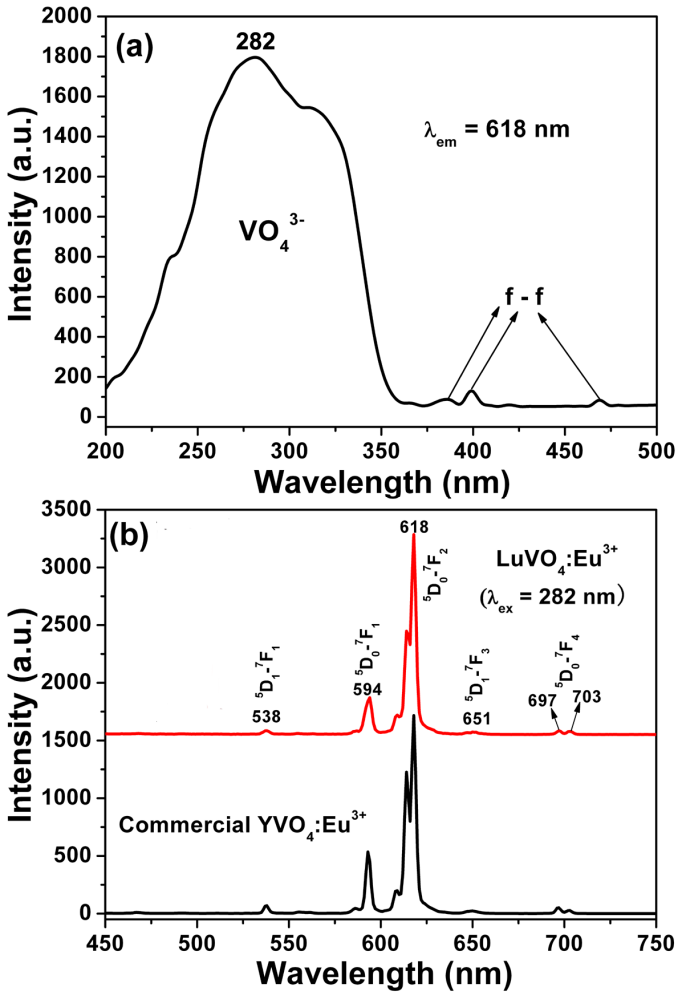

Figure S2 (a) Excitation spectra and (b) emission spectra of the as-prepared $LuVO_4:Eu^{3+}$ sample (red line) and the commercial $YVO_4:Eu^{3+}$ phosphor (black line).

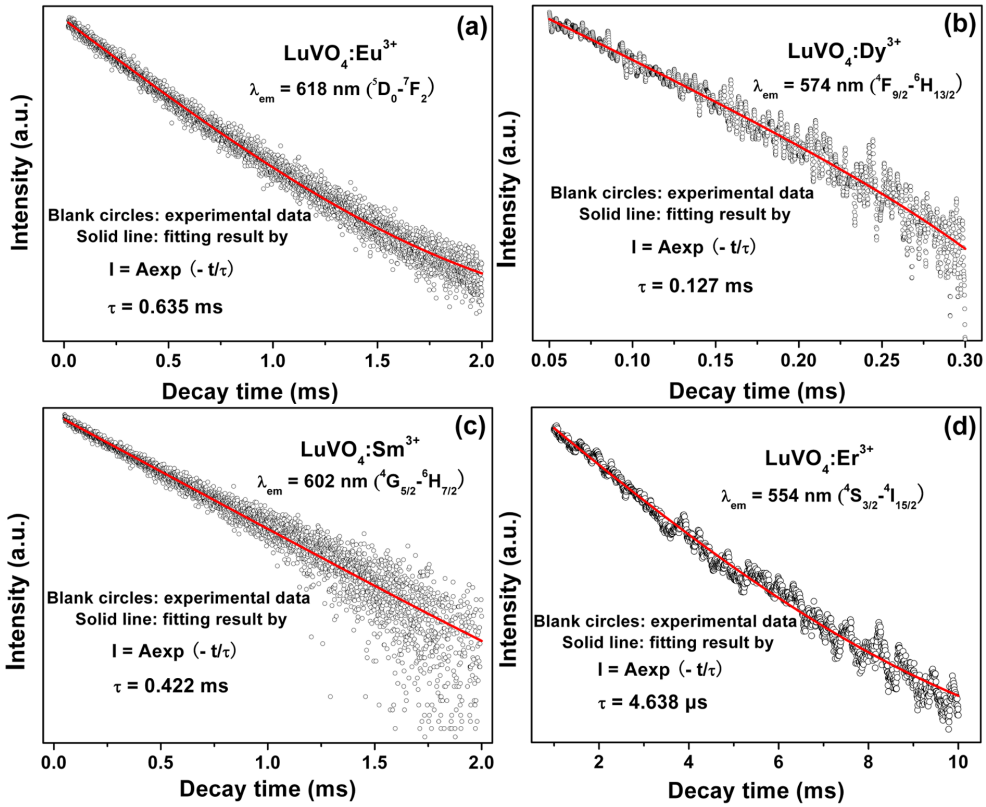

Figure S3 Decay curves for the as-prepared samples: (a) $LuVO_4:Eu^{3+}$, (b) $LuVO_4:Dy^{3+}$, (c) $LuVO_4:Sm^{3+}$, (d) $LuVO_4:Er^{3+}$.