Electronic Supplementary Information

Morphology- and concentration-dependent temperature sensing and optical heating in Er\(^{3+}\) single-doped and Er\(^{3+}/\)Yb\(^{3+}\) co-doped NaY(WO\(_4\))\(_2\) particles derived from microwave assisted hydrothermal reaction

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Figure. S1 FE-SEM images of samples with different morphologies. The ratio of $\text{Cit}^+/\text{Y}^{3+}$ is (a) 0.5, (b) (c) (d) 1, (e) (f) (g) 1.5 and (h) (i) 2.
Figure. S2 FE-SEM images of Er$^{3+}$ single-doped and Er$^{3+}$/Yb$^{3+}$ co-doped NaY(WO$_4$)$_2$ samples: (a), (b) NaY(WO$_4$)$_2$: 2.5%Er$^{3+}$, (c), (d) NaY(WO$_4$)$_2$: 10%Er$^{3+}$, (e), (f) NaY(WO$_4$)$_2$:1%Er$^{3+}$/2.5%Yb$^{3+}$, (g), (h) 1%Er$^{3+}$/10%Yb$^{3+}$ NaY(WO$_4$)$_2$:1%Er$^{3+}$/10%Yb$^{3+}$