Supporting Information

Controlled Synthesis of Y$_2$O$_3$ Nanoplates with Improved Performance

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**Fig. S1.** TEM images of corresponding Y$_2$O$_3$ precursor

**Fig. S2.** SEM images of commercial Y$_2$O$_3$
**Fig. S3.** SEM images of Y$_2$O$_3$:Eu$^{3+}$ calcined at 900 °C. The corresponding precursors were synthesized under hydrothermal condition for (a) 12 h, (b) 16 h, (c) 24 h, (d) 36 h, all of the reaction temperature are 180 °C.