Supporting Information

Color control and white upconversion luminescence of LaOF:Ln^{3+} (Ln=Yb, Er ,Tm) nanocrystals prepared by the sol-gel pechini method

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Figure S1 shows the SEM images of the $La_{0.89}Yb_{0.1}Er_{0.01}OF$ samples prepared under different temperature (500°C – 1000°C). The morphology of the samples annealed at 500°C and 600°C is nearly spherical particles with their average diameters of ~70 nm and ~120 nm, respectively. Upon increasing the prepared temperature to 700°C or higher, the as-obtained samples exhibit web-like structure and their crystallite sizes increased gradually with increasing the annealing temperature, which can be confirmed from Fig. S1. For the samples synthesized under 700, 800, 900, and 1000°C, the corresponding particle sizes are of ~150 nm, ~180 nm, ~200 nm, and ~250 nm, respectively.

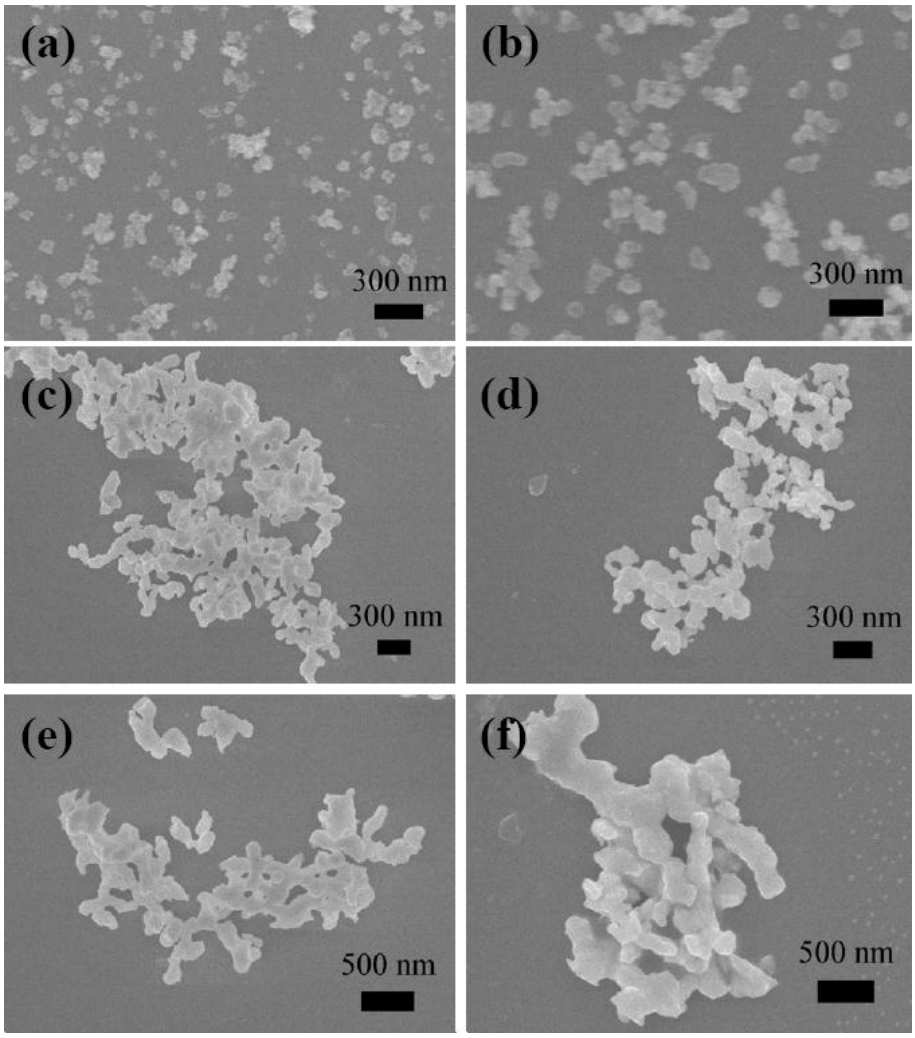

Fig. S1. SEM micrographs of the $La_{0.89}Yb_{0.1}Er_{0.01}OF$ samples synthesized under different annealing temperature (a) 500°C, (b) 600°C, (c) 700°C, (d) 800°C, (e) 900°C, and (f) 1000°C.