Supplementary Information

Uniform Eu^{3+}-doped YF_3 Microcrystals: Inorganic Salt-Controlled Synthesis and Their Luminescent Properties

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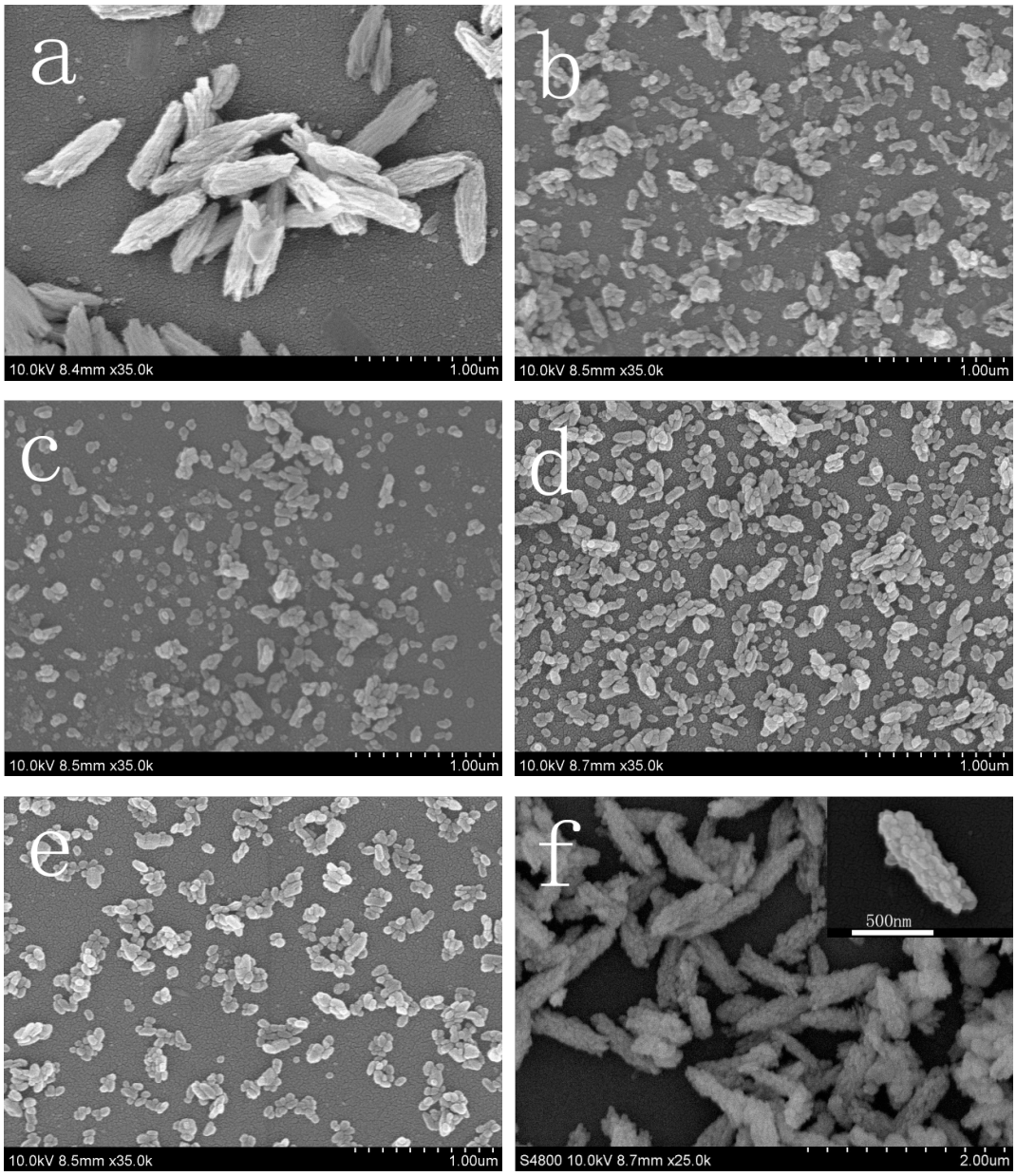

Figure S1 FE-SEM images of **S2** synthesized at 180°C with different hydrothermal reaction times: (a) 0 h; (b) 2 h; (c) 4 h; (d) 10 h; (e) 12 h; (f) 24 h.

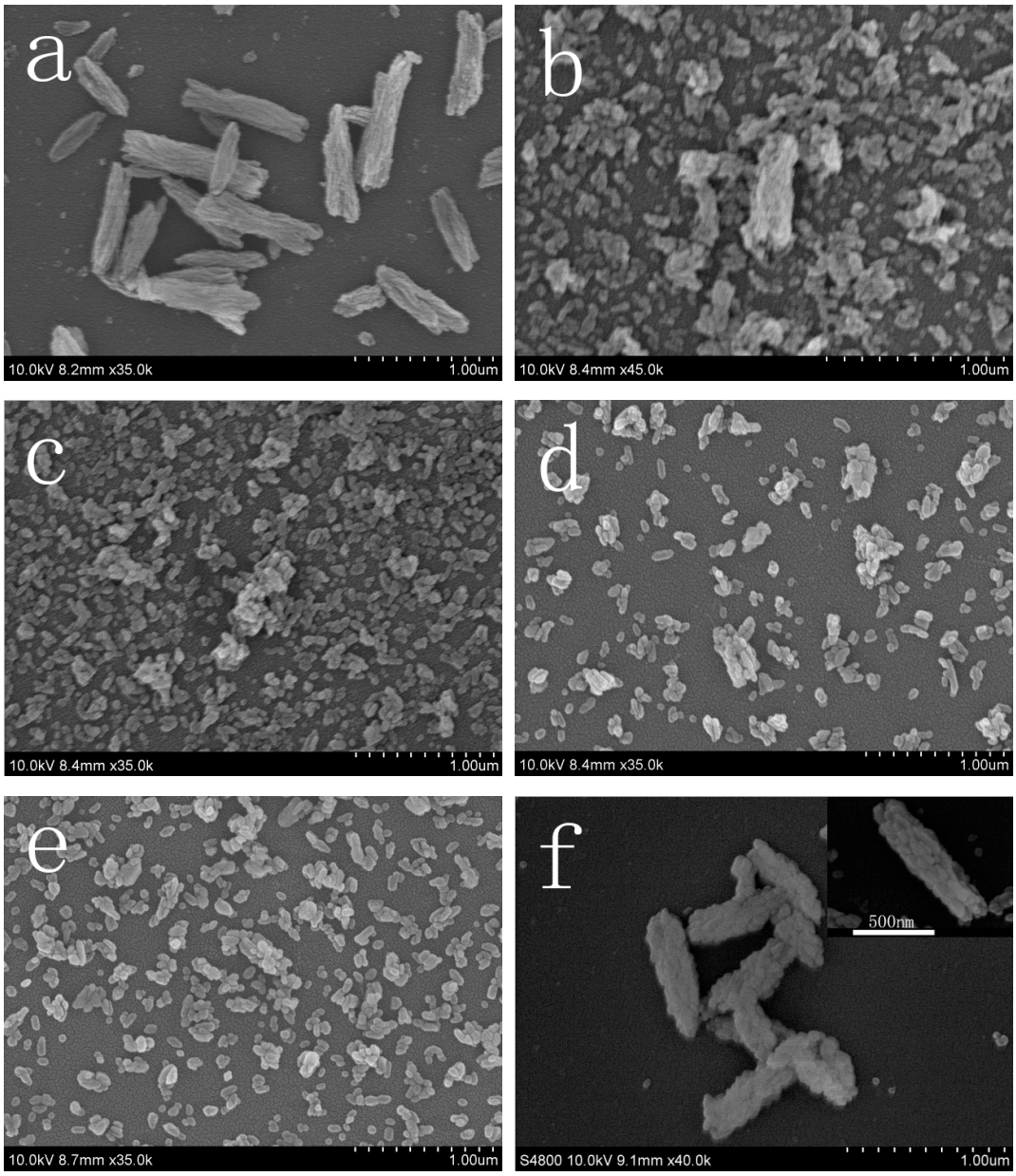

Figure S2 FE-SEM images of **S3** synthesized at 180°C with different hydrothermal reaction times: (a) 0 h; (b) 2 h; (c) 4 h; (d) 10 h; (e) 12 h; (f) 24 h.

Figures S1(a-f) show the FE-SEM images of **S2** sample synthesized at180^{o}C with a reaction time of 0 h, 2 h, 4 h, 10 h, 12 h and 24 h. Before the hydrothermal reaction, uniform bundle-like crystals and some small particles were formed after the precipitate stirred for 1h. The bundle-like crystals were composed of many small wires crystals (Figure S1a). After 2h of the reaction, uniform bundle-like crystals were dissolved into smaller accumulated particles (Figure S1b). Figure S1c showed the morphology of the products synthesized at 180^{o}C for 4h under the hydrothermal conditions. We got some more scatter crystals .Upon continuing reaction, many small particles began to collect (Figure S1d and S1e). Finally, after 24h of the reaction, uniform bundle-like microcrystals self-assembled were finally synthesized, as shown in Figure S1f.

Figures S2(a-f) show the SEM images of **S3** sample synthesized at180^{o}C with a reaction time of 0 h, 2 h, 4 h, 10 h, 12 h and 24 h. Before the hydrothermal reaction, uniform bundle-like crystals and some small particles were formed after the precipitate stirred for 1h. The bundle-like crystals were composed of many small wires crystals (Figure S2a). After 2h of the reaction, uniform bundle-like crystals were dissolved into smaller accumulated particles (Figure S2b). Figure S2c showed the morphology of the products synthesized at 180^{o}C for 4h under the hydrothermal conditions. We got some smaller crystals .Upon continuing reaction, many small particles began to collect (Figure S2d and S2e). Finally, after 24h of the reaction, uniform bundle-like microcrystals self-assembled were finally synthesized, as shown in Figure S2f.