Electronic supplementary information (ESI)

Hydrothermal derived NaLuF₄: Yb³⁺, Ln³⁺ (Ln³⁺ = Er³⁺, Tm³⁺ and Ho³⁺) microstructures with controllable synthesis, morphology evolution and multicolor luminescence properties

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**Fig. S1.** The elemental compositions of the (A) β-NaLuF₄:40 mol % Yb³⁺, 2 mol % Er³⁺, and (B) β-NaLuF₄:40 mol % Yb³⁺, 2 mol % Tm³⁺ microstructures prepared with 0.85 g Na₃Cit at a pH value of 10 at 180 °C for 24 h.
**Fig. S2.** XRD patterns of the samples obtained at different reaction times with 0.85 g Na$_3$Cit at a pH value of 10 (A: 45 min; B: 1.5 h; C: 12 h; D 24 h).