Supporting Information

One-dimensional $CaWO_4$ and $CaWO_4:Tb^{3+}$ Nanowires and Nanotubes: Electrospinning Preparation and Luminescent Properties

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Table S1 Spectral properties of WO_4^{2-} in $CaWO_4$ nanowires (NW, this work) and $CaWO_4$ nanoparticles (NP, from ref: C. X. Li, C. K. Lin, X. M. Liu and J. Lin, *J. Nanosci. Nanotech.* 2008, **8**, 1183)

	$CaWO_4$ (NW)	$CaWO_4$ (NP)
λ ex (nm)	245	242
λ em (nm)	416	430
Stokes shift (cm^{-1})	16778	18066

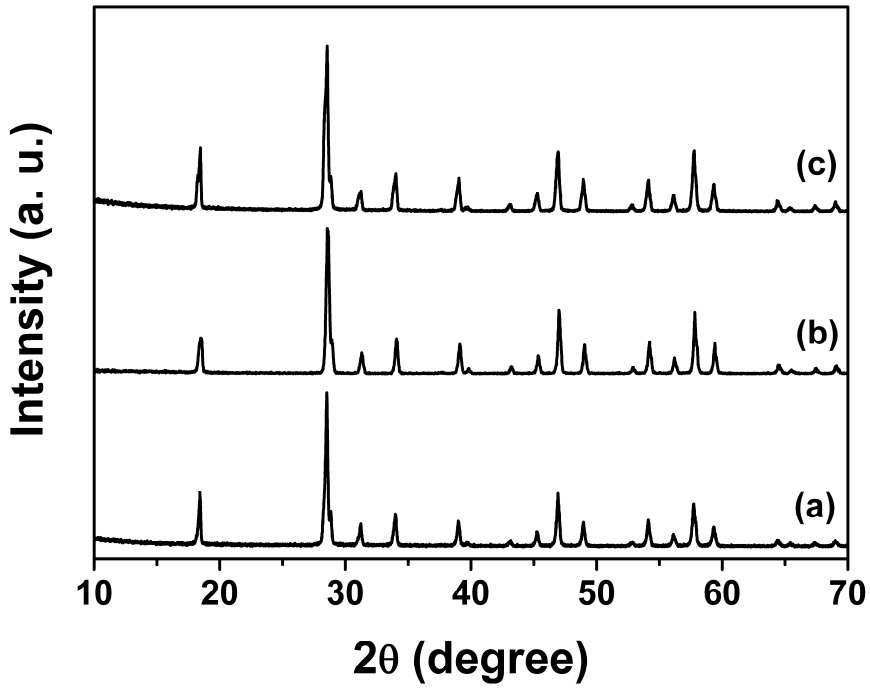

Fig. S1 X-ray diffraction patterns for $CaWO_4$: 5 mol %Tb^{3+} 1D samples after annealing at 700 °C for 4 h in air, (a) S1–5 nanowires, (b) S2–5 nanowires and (c) S3–5 nanotubes.

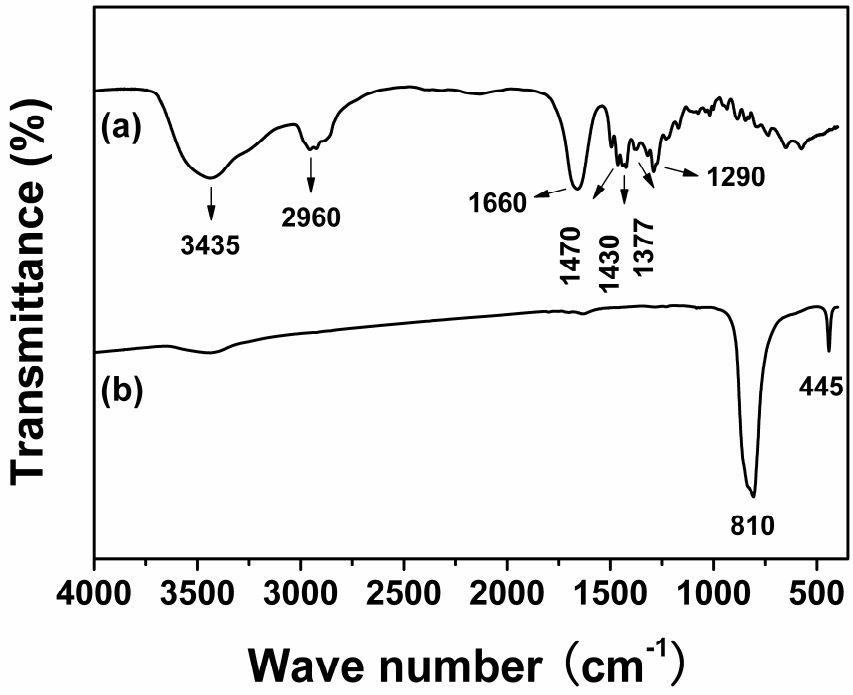

Fig. S2 FT-IR spectra of $CaWO_4$:5 mol %Tb^{3+} (S1–5). (a) as-form precursor fibers, the fibers annealed at (b) 500 °C.

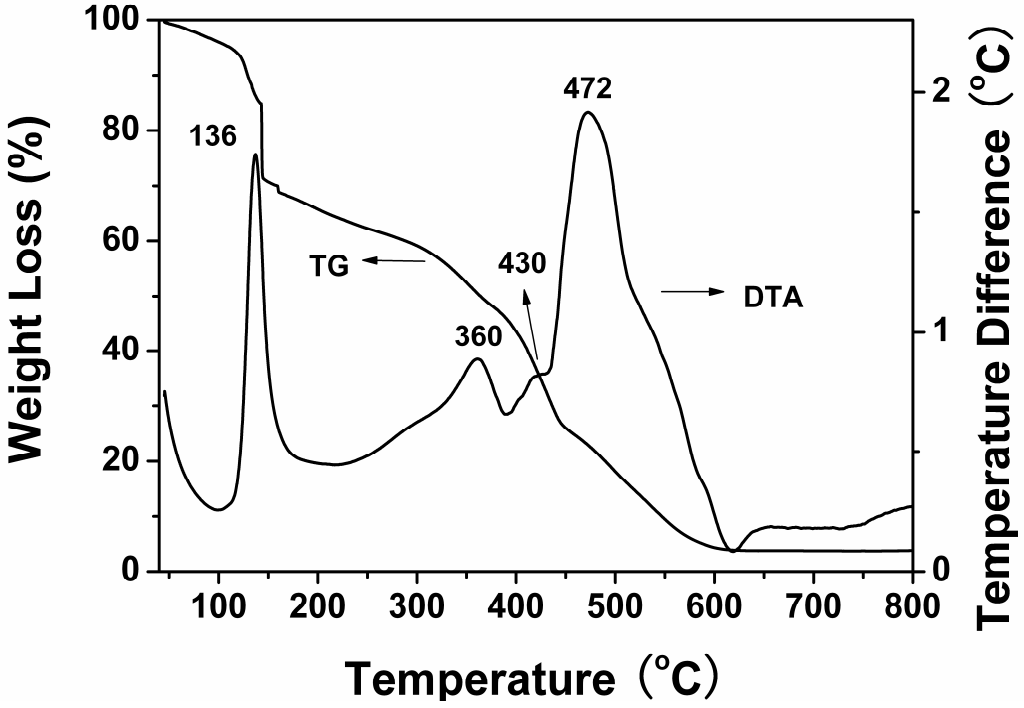

Fig. S3 TG-DTA curves of as-formed precursor for $CaWO_4$:5 mol %Tb^{3+} nanowires (S1–5).

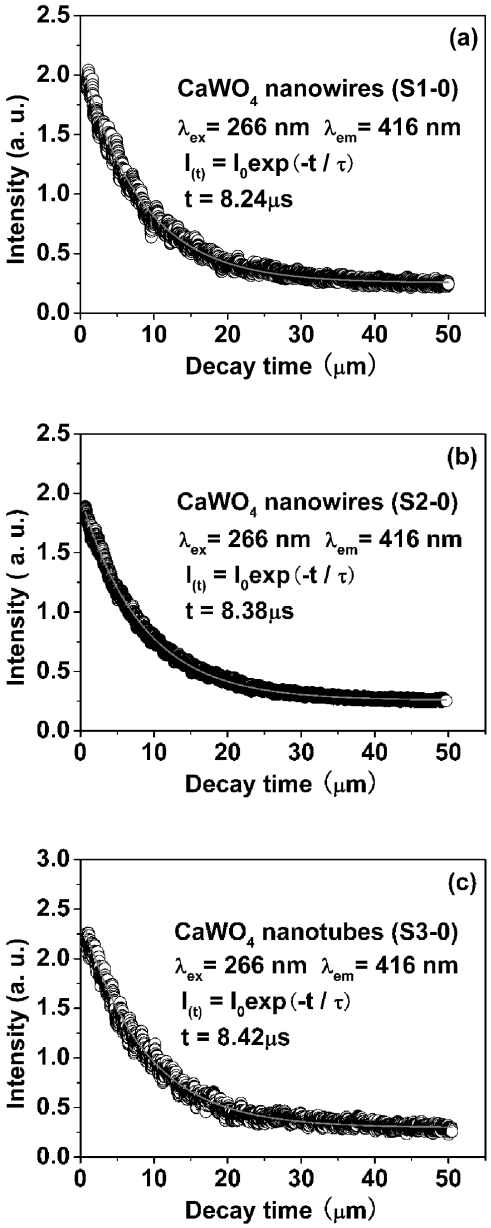

Fig. S4 The decay curves for the WO_4^{2-} (416 nm) emission in $CaWO_4$ nanowires (S1–0, part a), (S2–0, part b) and nanotubes (S3–0, part c)

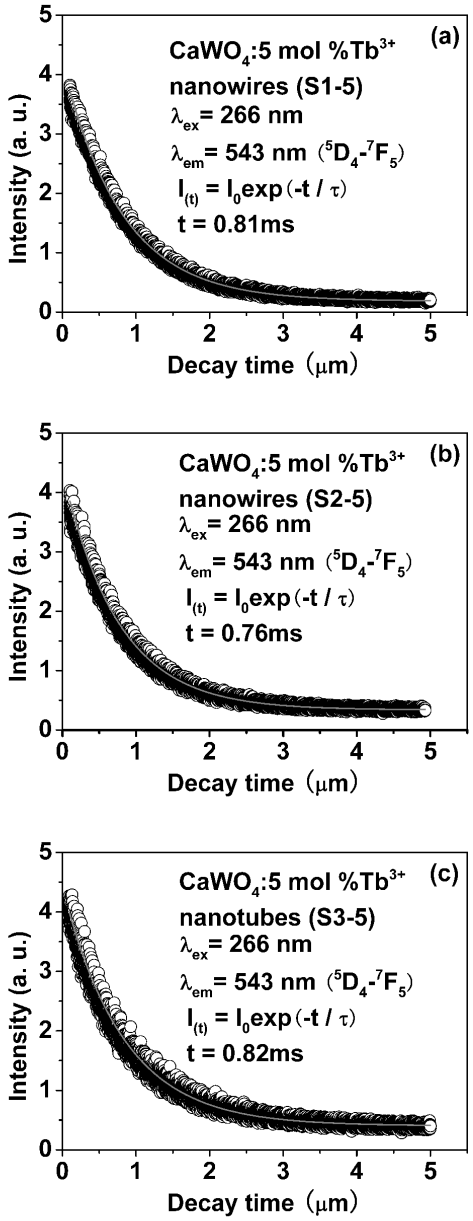

Fig. S5 The decay curves for the $^5D_4$–$^7F_5$ (543 nm) emission of Tb^{3+} in $CaWO_4$:5 mol %Tb^{3+} nanowires (S1–5, pert a), (S2–5, part b) and nanotubes (S3–5, part c).

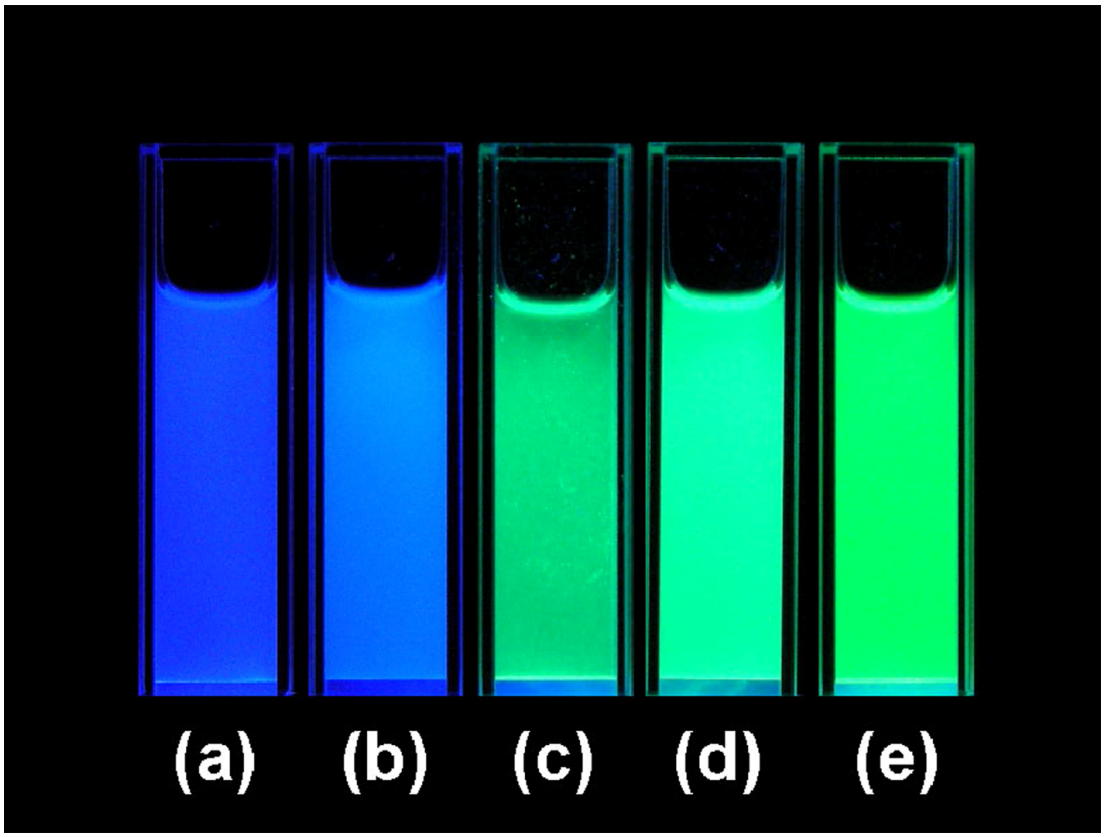

Fig. S6 Luminescence photographs of $CaWO_4$: x mol %Tb^{3+} nanofibers dispersed in the ethanol solutions, (a) x = 0, (b) x = 0.5, (c) x = 1, (d) x = 5, (e) x = 10.

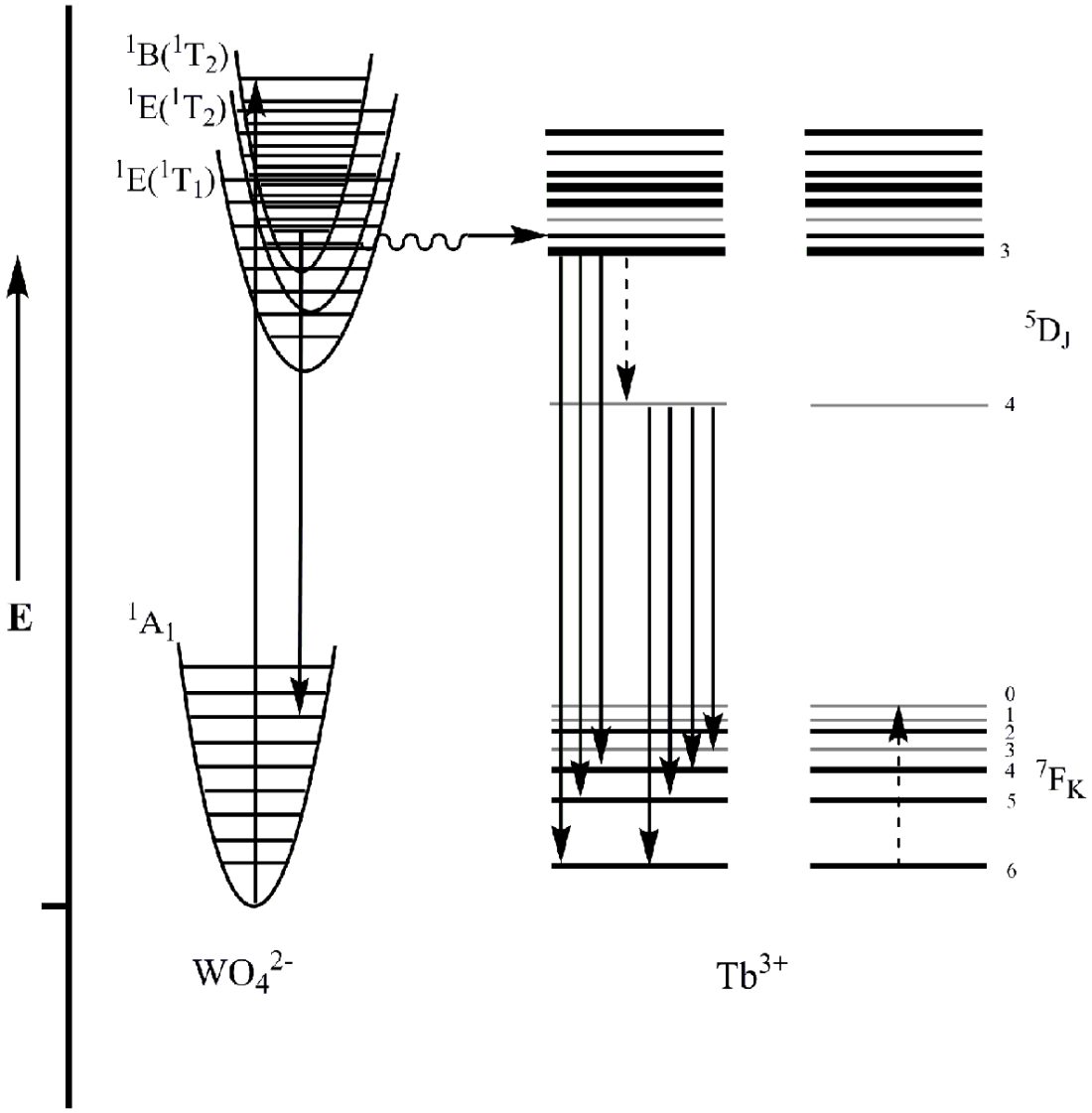

Fig. S7 The scheme for WO_4^{2-} – Tb^{3+} energy transfer and Tb^{3+} emission process.