Electronic Supplementary Material (ESI) for Physical Chemistry Chemical Physics.

Supporting information

Ln^{3+}-doped hydroxyapatite nanocrystals: controllable synthesis and cell imaging

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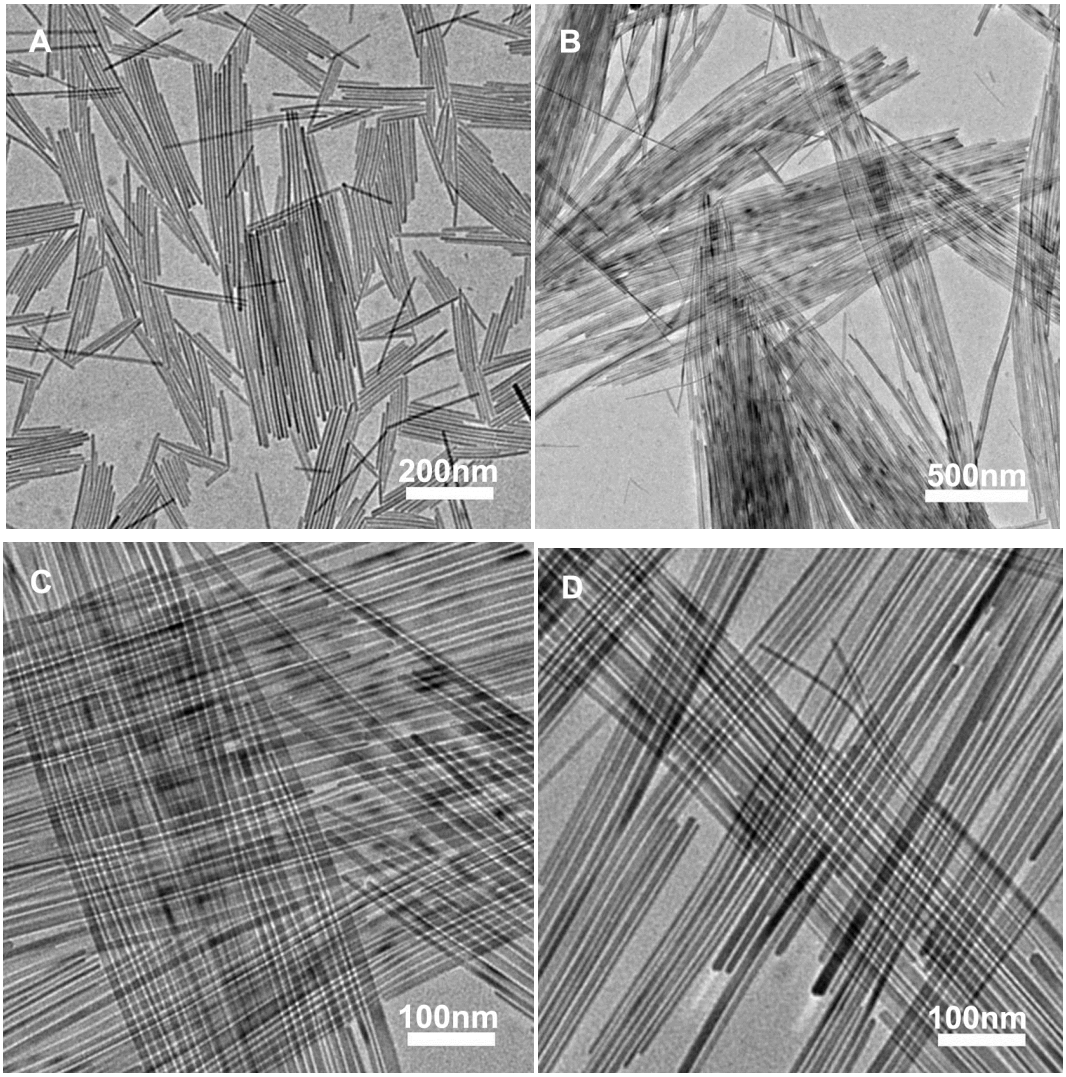

Fig. S1 TEM images of the as-prepared HAp:xTb^{3+} nanocrystals synthetized in the presence of oleylamine and oleic acid by one-step doping at 150 °C for 12h: A-D) x = 5%, 10%, 10%, 15%, respectively.

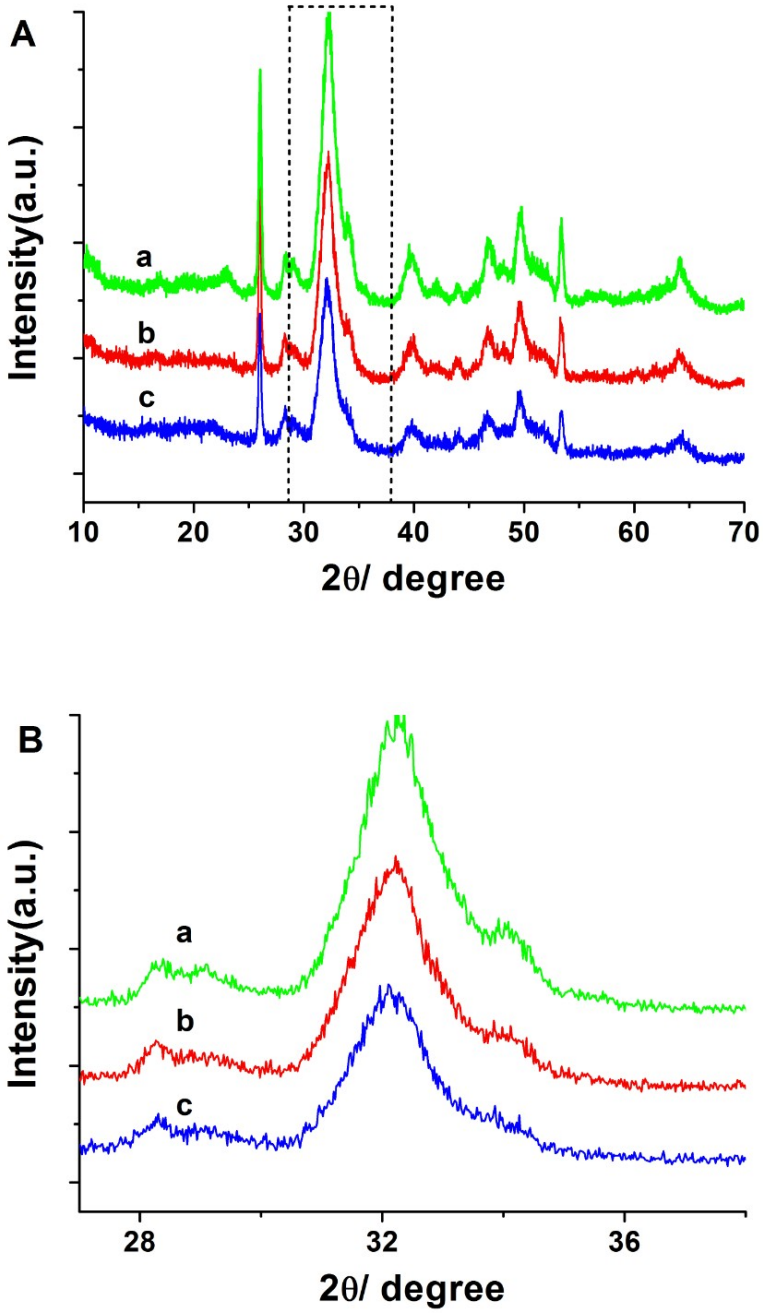

Fig. S2 XRD patterns: A, taken from HAp:xEu^{3+} nanorods (x= 0% (a), 5% (b), x=20% (c)) prepared by two-step process; B, enlarged graphic demonstration for part of the dotted line in the A map.

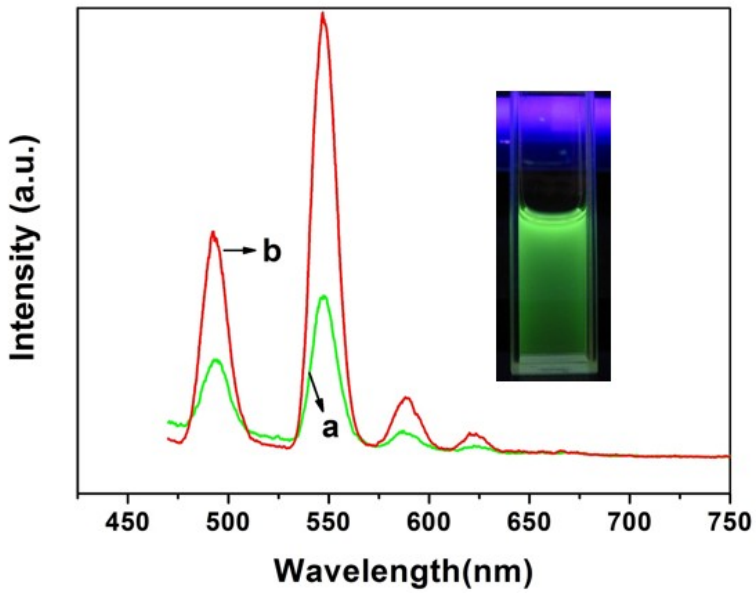

Fig. S3 Luminescent spectrum of HAp:xTb^{3+} nanorods (x= 5% (a), 15% (b)) prepared by two-step process. Inset shows photographs of HAp:15%Tb^{3+} nanorods in cyclohexane under excitation at 254 nm.

Fig. S4 Dispersibility of F127 modified HAp:15% Tb^{3+} (A) and HAp:15% Eu^{3+} (B) nanorods in pure water. solution.

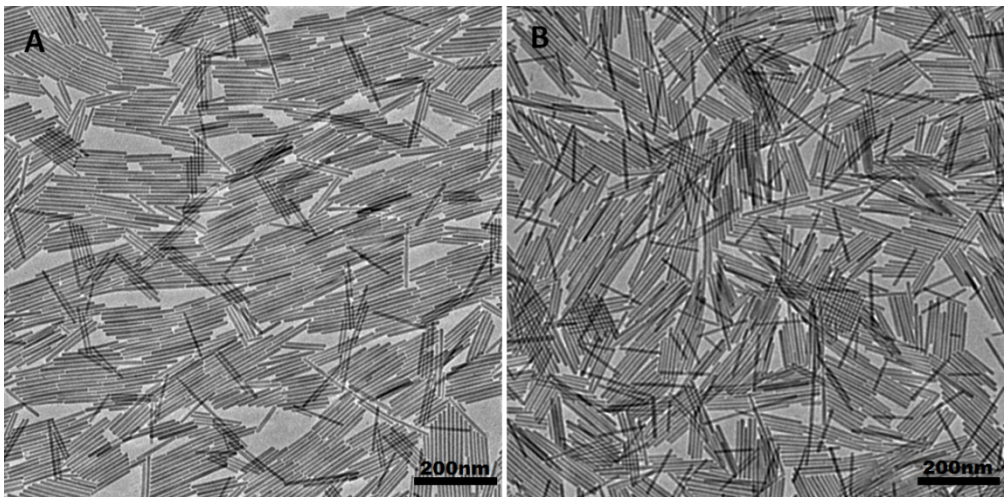

Fig. S5 TEM images of HAp:10%Tb nanorods: (A) the hydrophobic nanorods, (B) the hydrophilic nanorods with surfactant Pluronic F127.

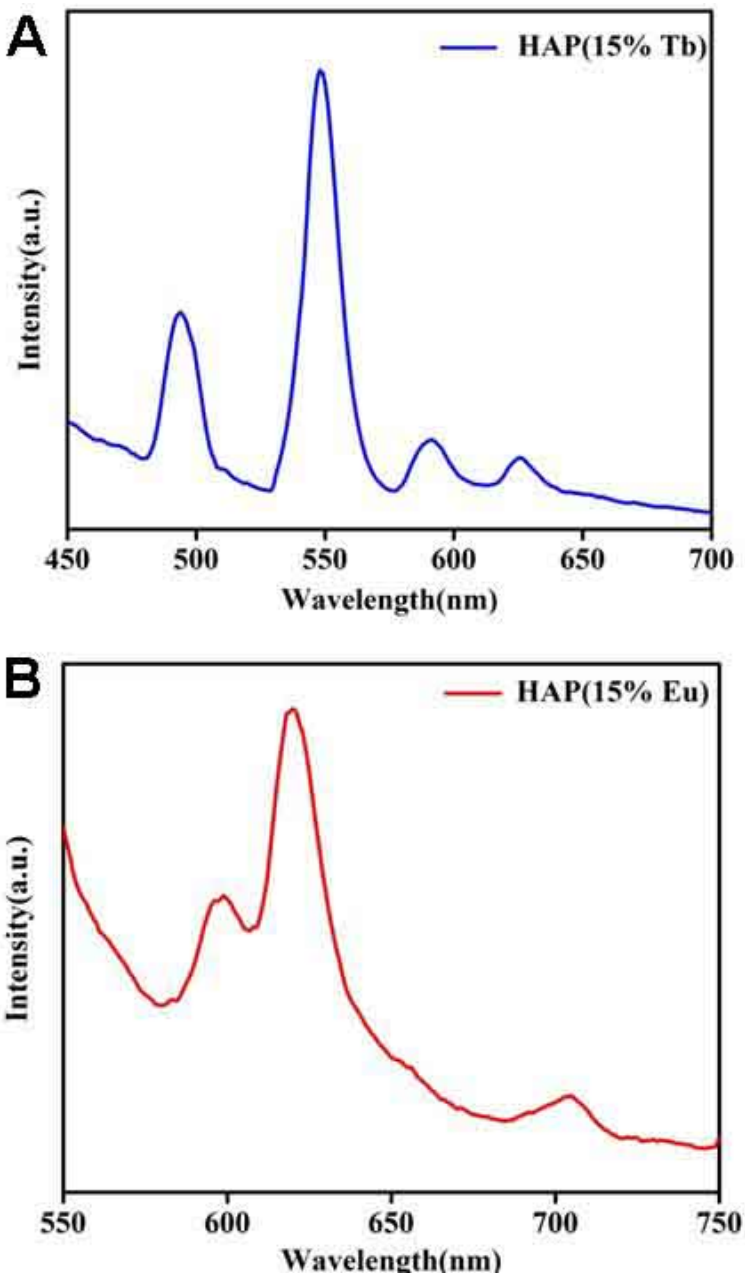

Fig. S6 Luminescent spectra of F127 modified HAp:15% Tb^{3+} (A) and HAp:15% Eu^{3+} (B) nanorods in pure water solution.