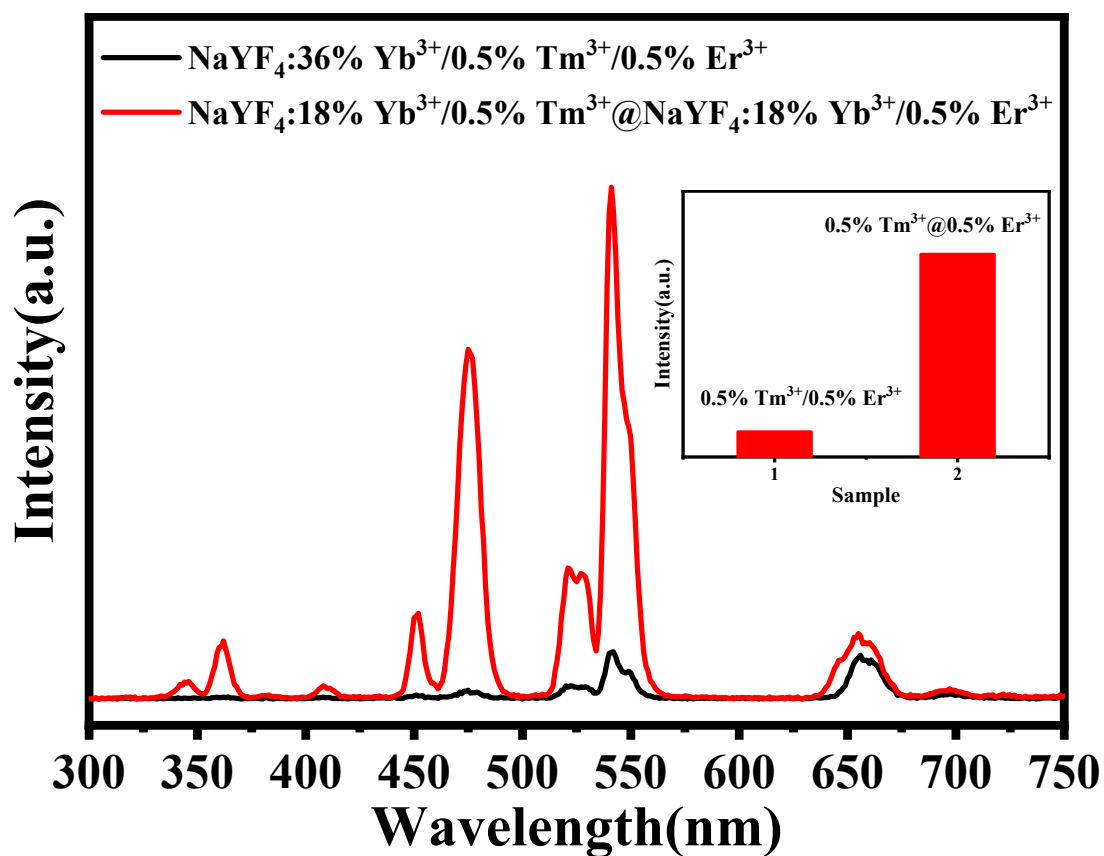


Supplementary Material 3



Fluorescence spectra of bare core structured NaYF₄:36% Yb³⁺/0.5% Tm³⁺/0.5Er³⁺ nanoparticles versus core-shell structured NaYF₄:18% Yb³⁺/0.5% Tm³⁺@NaYF₄:18% Yb³⁺/0.5% Er³⁺ nanoparticles, inset is a histogram of the fluorescence integral intensity.