

Enhanced photoluminescence of HF free novel NIR phosphor of $K_2ZnF_4:Cr^{3+}$ by lithium ions doping

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Figures

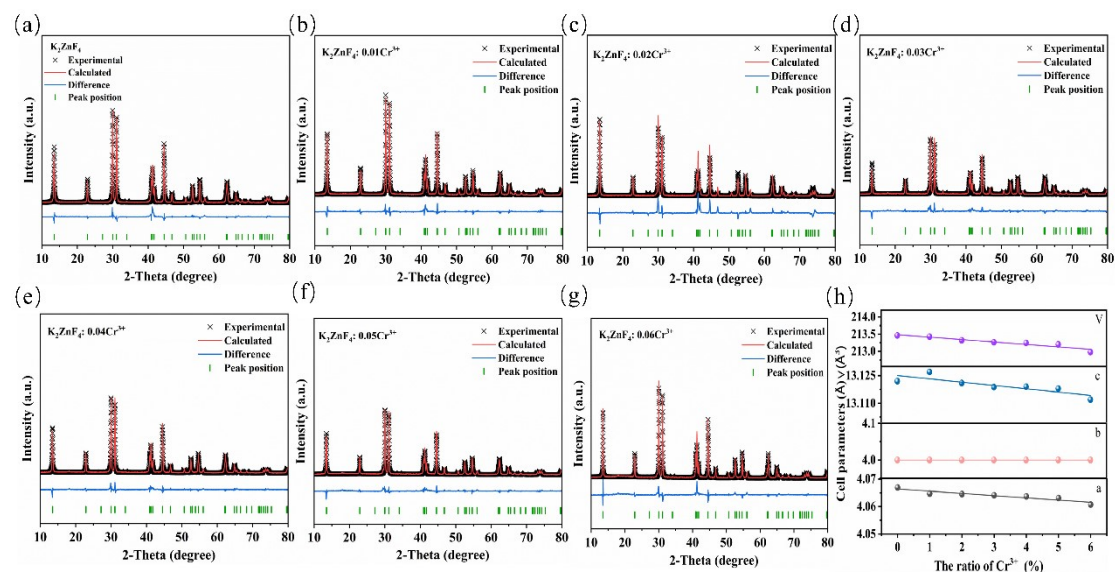


Figure S1: (a)-(g) XRD Rietveld refinement of $K_2ZnF_4:xCr^{3+}$ ($x = 0.01, 0.02, 0.03, 0.04, 0.05, 0.06$). (h) The cell parameters and volume change of $K_2ZnF_4:xCr^{3+}$ ($x = 0.01, 0.02, 0.03, 0.04, 0.05, 0.06$).

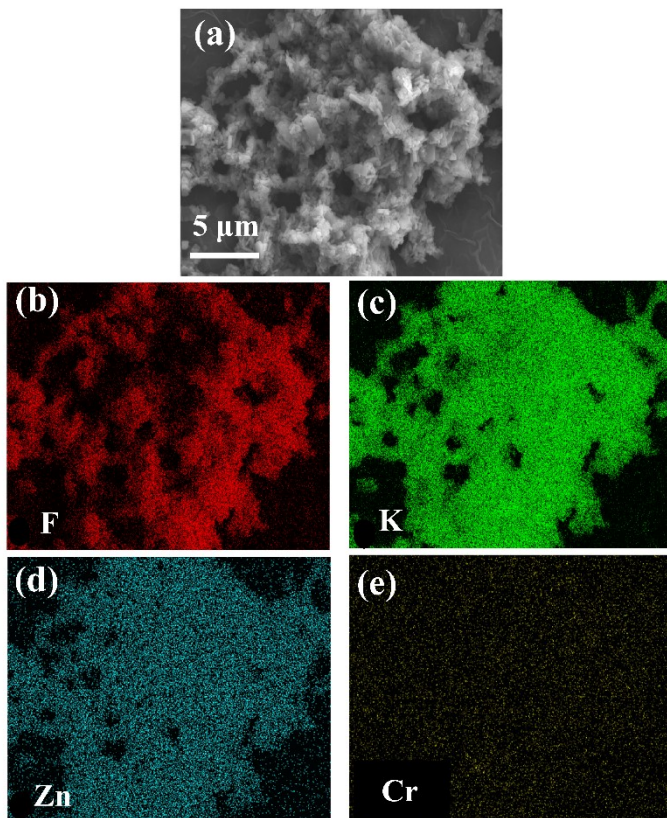


Figure S2: (a) SEM images of $\text{K}_2\text{ZnF}_4:0.04\text{Cr}^{3+},0.04\text{Li}^+$ particles. (b)-(e) The corresponding element mapping of F, K, Zn and Cr.

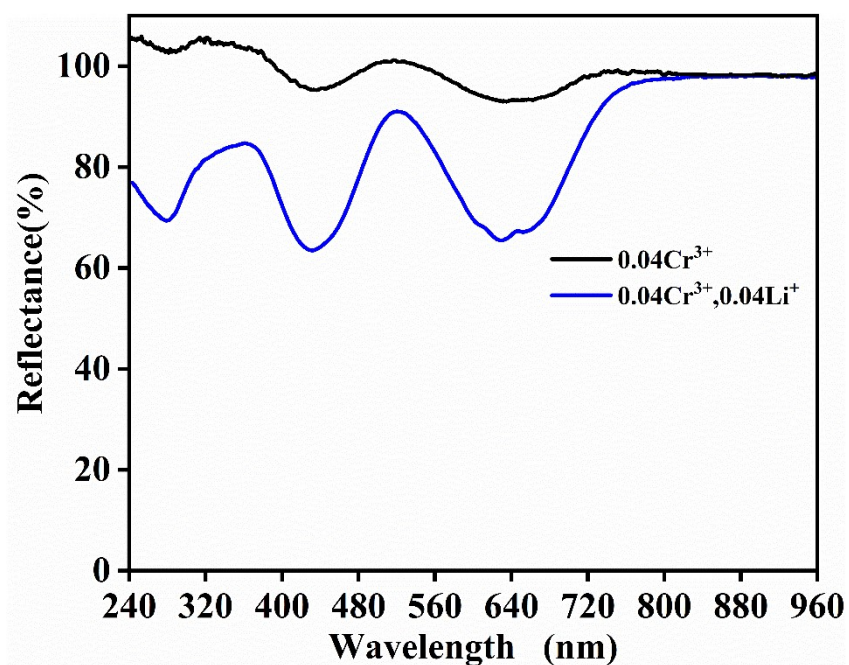


Figure S3: Diffuse reflectance spectra of $\text{K}_2\text{ZnF}_4:0.04\text{Cr}^{3+}$ and $\text{K}_2\text{ZnF}_4:0.04\text{Cr}^{3+},0.04\text{Li}^+$.