

Electronic Supplementary Information

A novel red phosphor of seven-coordinated Mn^{4+} ions doped

tridecafluorodizirconate $\text{Na}_5\text{Zr}_2\text{F}_{13}$ for warm WLEDs

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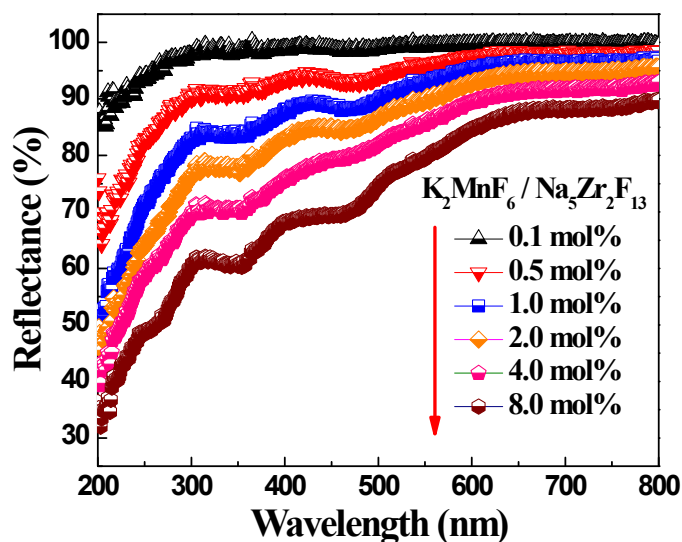


Figure S1 Diffuse reflectance spectra of red phosphors $\text{Na}_5\text{Zr}_2\text{F}_{13}:\text{Mn}^{4+}$ prepared with various concentrations of K_2MnF_6 .

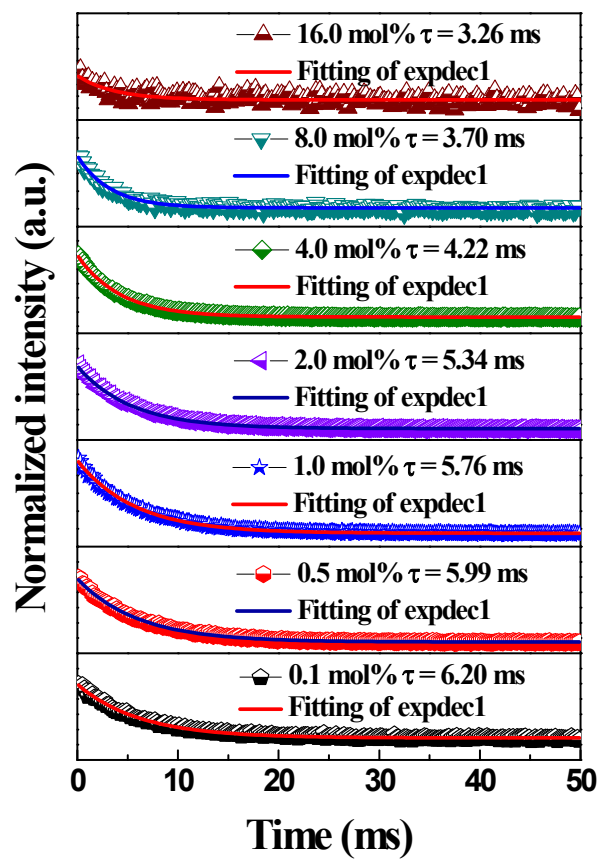


Figure S2 Decay curves of 616 nm emission of red phosphors $\text{Na}_5\text{Zr}_2\text{F}_{13}:\text{Mn}^{4+}$ (excited at 467 nm) changing with the concentration of K_2MnF_6 measured by using a Shimadzu UV-3600 spectrometer.

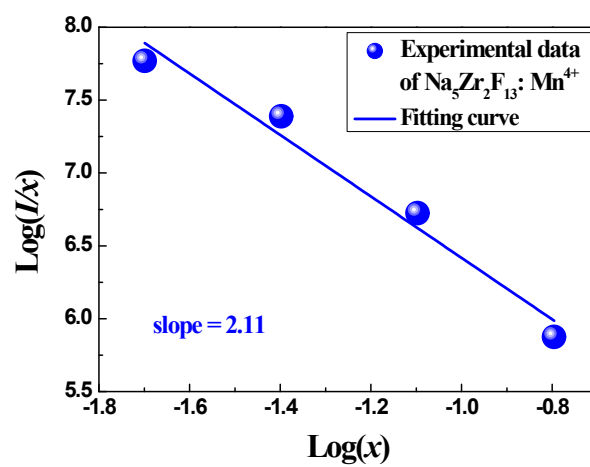


Figure S3 The relationship between $\log (x)$ versus $\log (I/x)$ in the phosphors $\text{Na}_5\text{Zr}_2\text{F}_{13}:\text{Mn}^{4+}$. (Note: x is molecular of $\text{K}_2\text{MnF}_6 \backslash \text{Na}_5\text{Zr}_2\text{F}_{13}$.)