

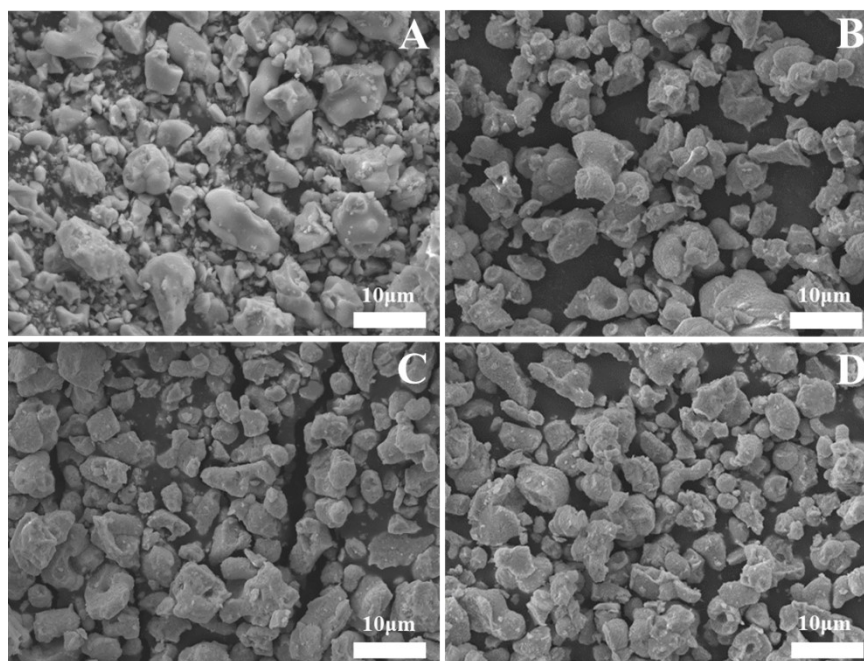
## Supporting Information

### Upconversion luminescence and temperature sensing properties of $\text{Yb}_2(\text{MoO}_4)_3:\text{Ln}^{3+}$ ( $\text{Ln} = \text{Ho}, \text{Tm}, \text{Er}$ ) phosphors based on energy transfer

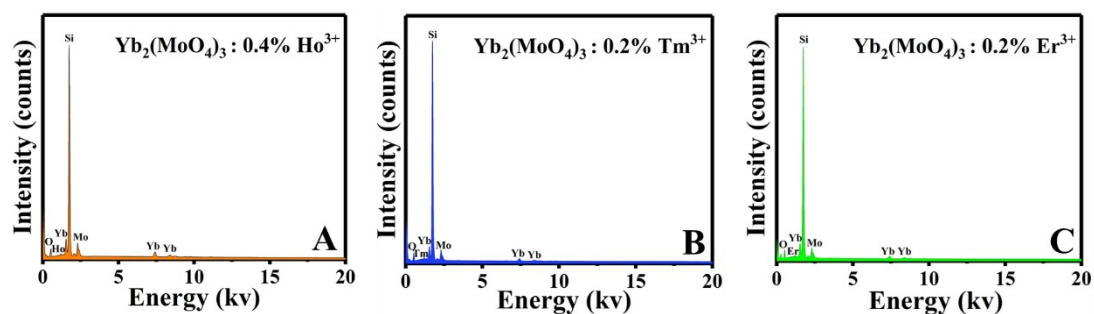
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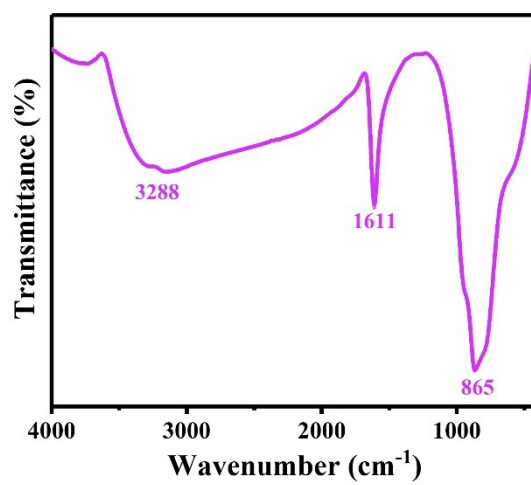


**Fig. S1** The SEM of (A) pure  $\text{Yb}_2(\text{MoO}_4)_3$  host; (B)  $\text{Yb}_2(\text{MoO}_4)_3:0.4\%\text{Ho}^{3+}$ ; (C)  $\text{Yb}_2(\text{MoO}_4)_3:0.2\%\text{Tm}^{3+}$ ; (D) SEM of  $\text{Yb}_2(\text{MoO}_4)_3:0.2\%\text{Er}^{3+}$ .



**Fig. S2** The EDS energy spectra of (A)  $\text{Yb}_2(\text{MoO}_4)_3:0.4\%\text{Ho}^{3+}$ ; (B)  $\text{Yb}_2(\text{MoO}_4)_3:0.2\%\text{Tm}^{3+}$ ;

(C)  $\text{Yb}_2(\text{MoO}_4)_3:0.2\%\text{Er}^{3+}$ .



**Fig. S3** FT-IR spectrum of  $\text{Yb}_2(\text{MoO}_4)_3$  prepared under 200 °C hydrothermal treatment.