Supporting information

Alcohol-Guided Growth of Two-Dimensional Narrow-Band Red-Emitting K₂TiF₆:Mn⁴⁺ for White Light-Emitting Diodes

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Figure S1 Emission spectra of KTFM crystals acquired at different temperatures.



Figure S2. Emission spectra of KTFM crystals synthesized with different volumes of HF.



Figure S3. XRD patterns of KTFM MSs fabricated with different volume percentages of 1-propanol in reaction

solution: (a) 0, (b) 14.6%, (c) 30%, and (d) 46.2%.

Figure S4. Polarized optical picture of $K_2 TiF_6$: Mn^{4+} micro-sheets.



Figure S5. Raman spectra of fluorides.



Figure S6. SEM images of KTFM MSs fabricated with different alcohols as capping agents: (a) methanol, (b)

1-butanol, (c) tert-butanol, and (d) 1-pentanol.



Figure S7. XRD patterns of KTFM MSs fabricated with different alcohols as capping agents.