Electronic Supplementary Material (ESI) for Journal of Materials Chemistry C.

Supporting Information

$(K,Na)NbO_3$ ferroelectrics: A new class of solid-state photochromic materials with reversible luminescence switching behavior

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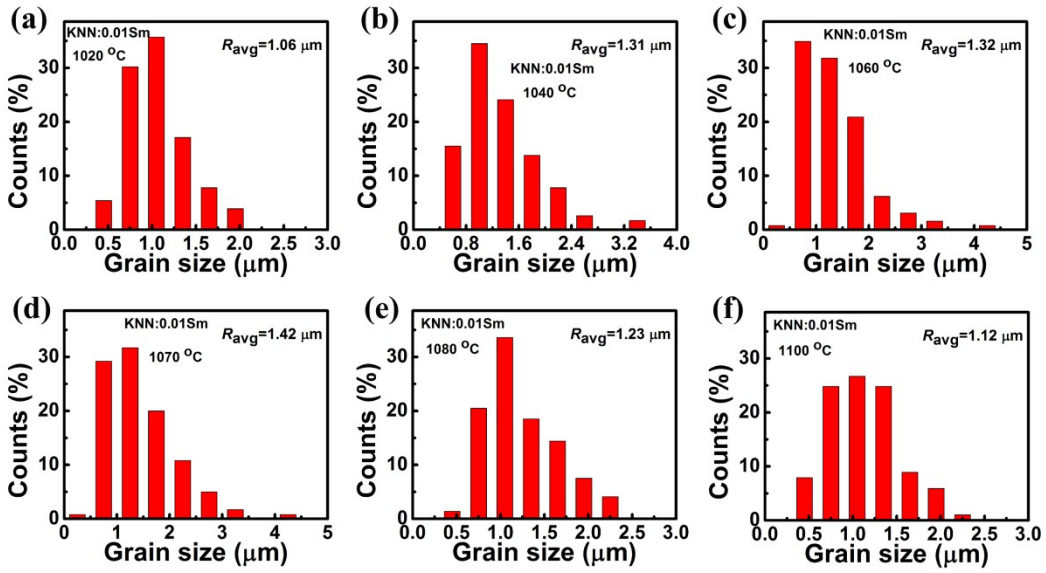

Fig. S1 Grain size distribution of KNN:0.01Sm samples sintered at different temperatures: (a) 1020 °C, (b) 1040 °C, (c) 1060 °C, (d) 1070 °C, (e) 1080 °C, and (f) 1100 °C.

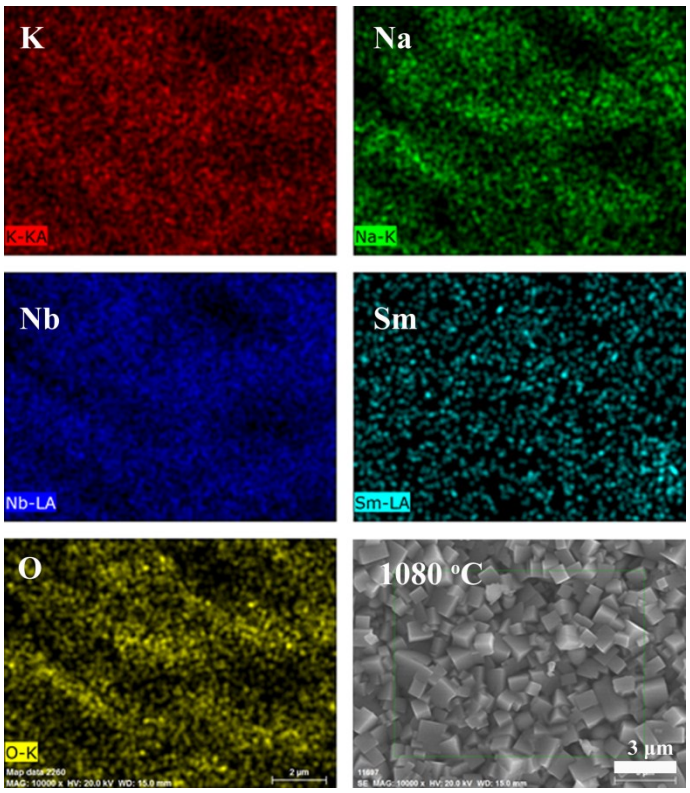

Fig. S2 Elemental mapping of K, Na, Nb, O, and Sm for KNN:0.01Sm ceramics sintered at 1080 °C

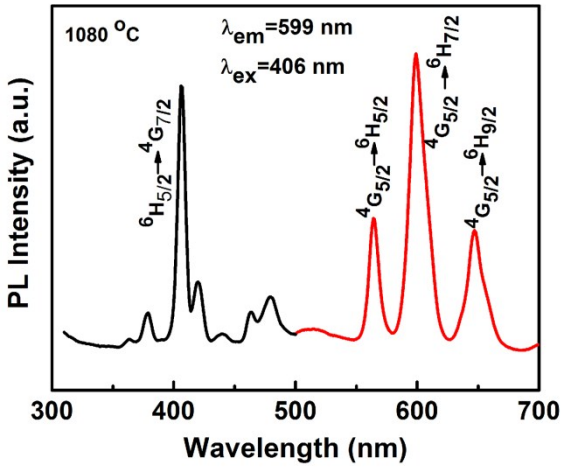

Fig. S3 Excitation (λ_{em}=599 nm) and emission spectra (λ_{ex}=406 nm) for KNN:0.01Sm ceramics sintered at 1080 °C.

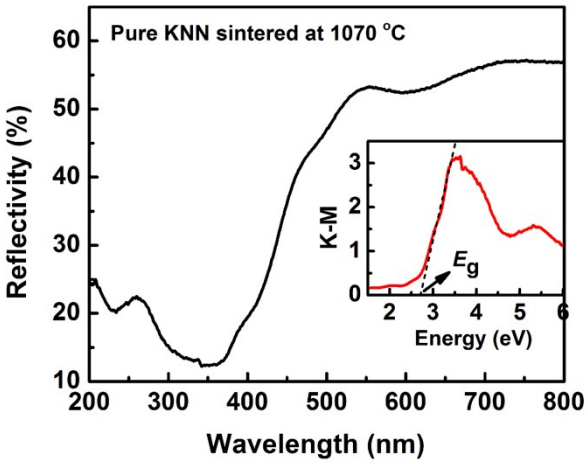

Fig. S4 Reflective spectrum of pure KNN sintered at 1070 °C for 2 h. The inset is the absorption spectrum converted by a K-M function, the dotted line to the horizontal axis indicates a band gap (E_g)

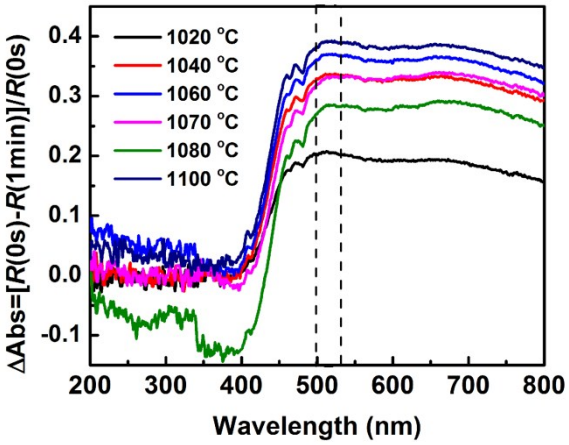

Fig. S5 The absorption changes (ΔAbs) for KNN:0.01Sm ceramics sintered at various sintering temperatures.