Supplementary Information

Synthesis of Mn-bearing Layered Perovskite-type Niobate and Its Delaminated Nanosheet

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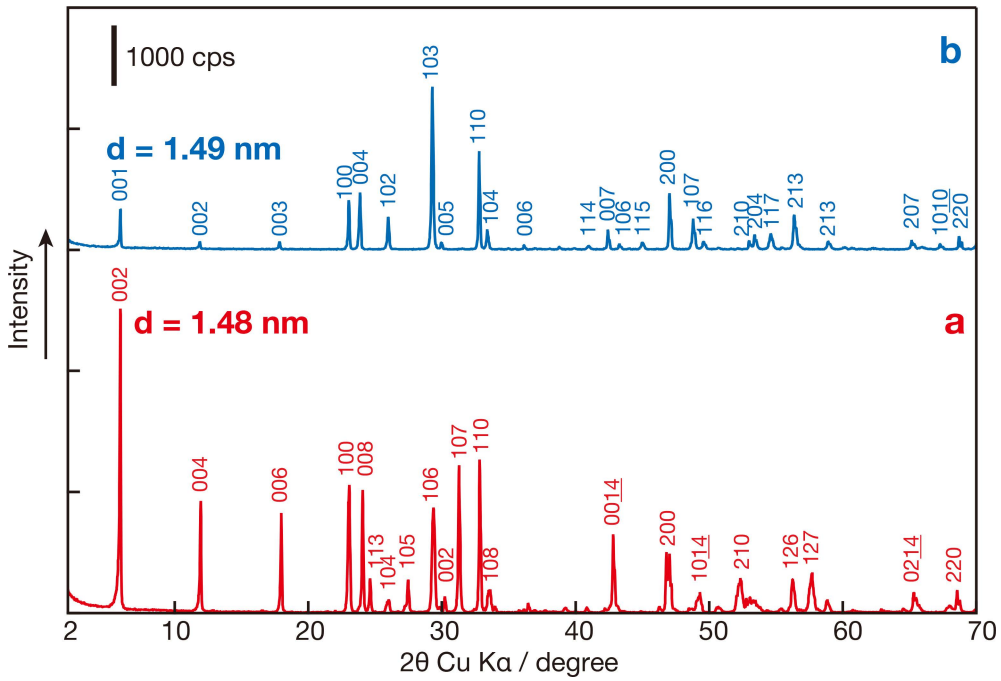

Fig. S1 Powder XRD data of (a) $KCa_2Nb_3O_{10}$ and (b) $RbCa_2Nb_3O_{10}$.

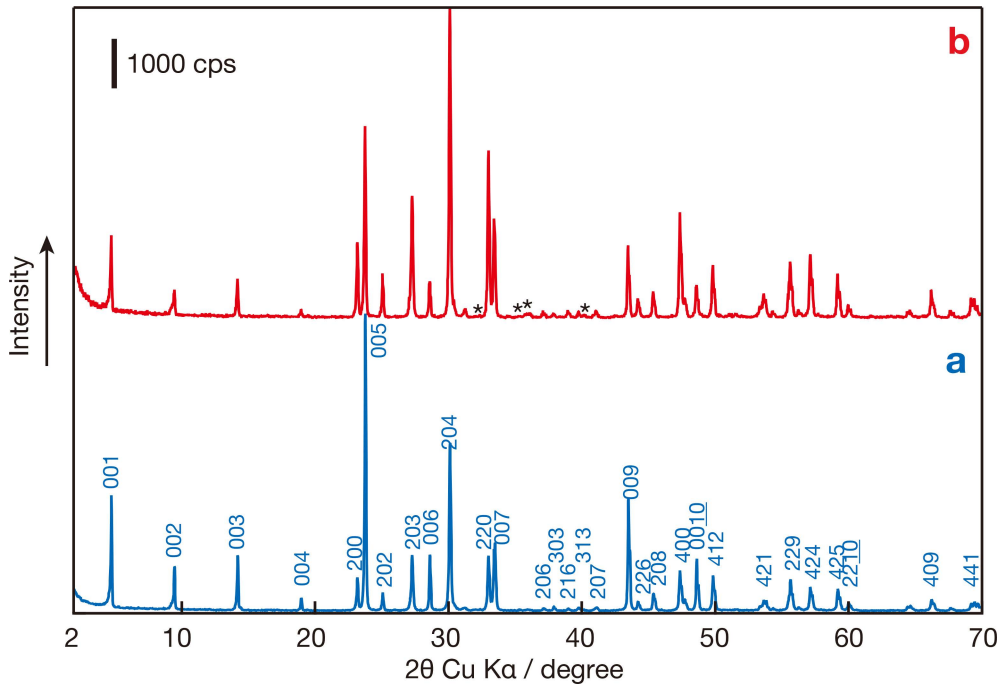

Fig. S2 XRD patterns of products obtained from different starting materials. (a) $RbCa_2Nb_3O_{10}$ + $MnTiO_3$, (b) Rb_2CO_3 + $CaCO_3$ + Nb_2O_5 + TiO_2 + MnO.

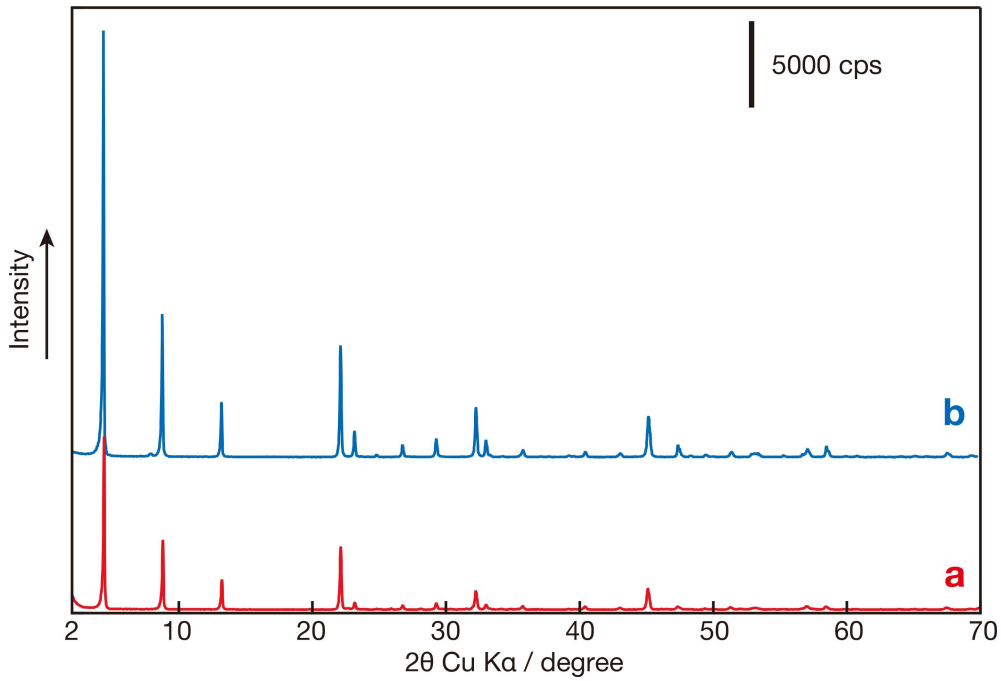

Fig. S3 Powder XRD data of $HCa_2MnNb_3TiO_{13}{\cdot}1.5H_2O$ (a) from K-form and (b) from Rb-form.

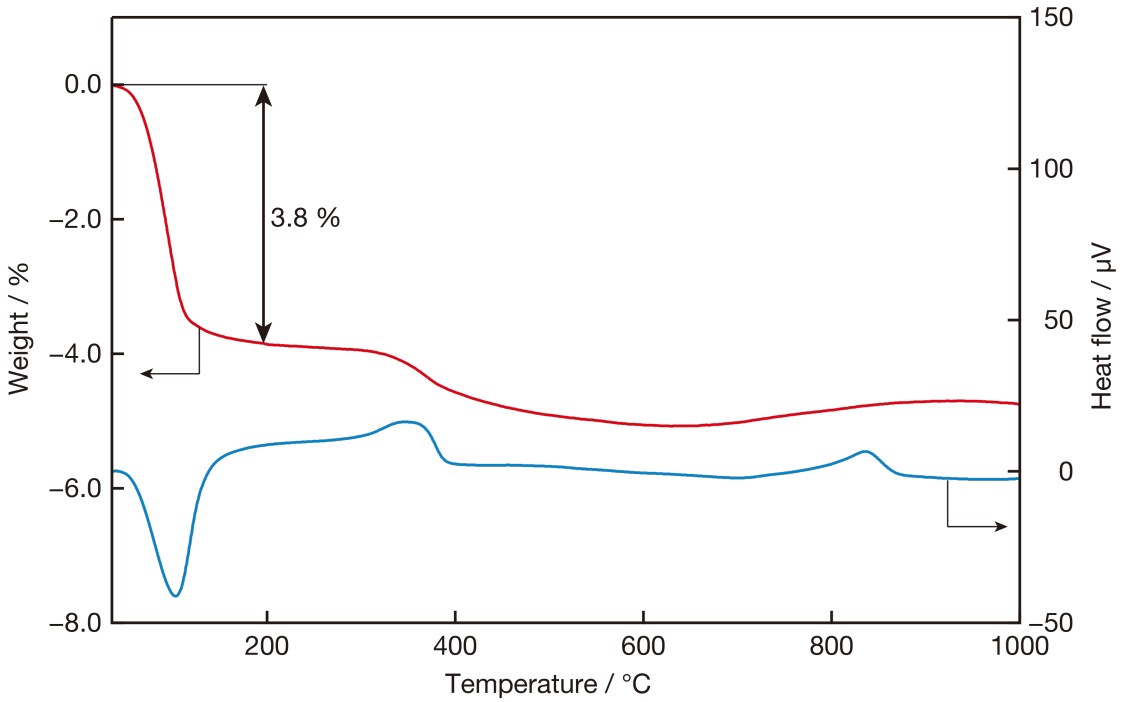

Fig. S4 TG-DTA curve of $HCa_2MnNb_3TiO_{13}\cdot 1.5H_2O$ from Rb-form.

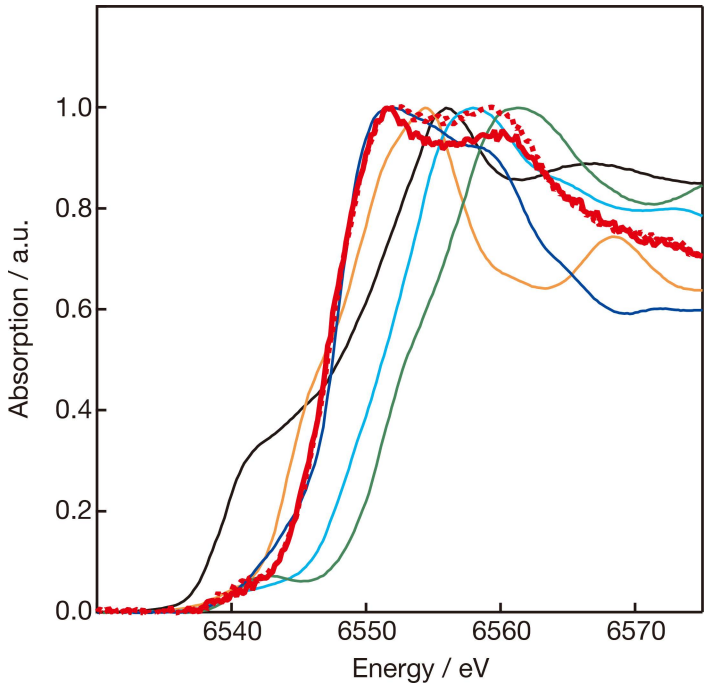

Fig. S5 XANES spectra. Red (solid line): $KCa_2MnNb_3TiO_{13}$, red (dashed line): $HCa_2MnNb_3TiO_{13}$, black: Mn, orange: MnO, cyan: Mn_2O_3, green: MnO_2, blue: $MnTiO_3$.

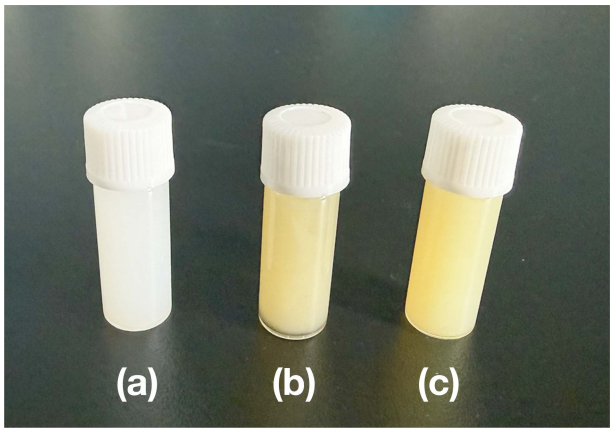

Fig. S6 Photographs of colloidal suspension of nanosheets. (a) $Ca_2Nb_3O_{10}$ nanosheet, (b) $Ca_2MnNb_3TiO_{13}$ nanosheet from K-form, and (c) $Ca_2MnNb_3TiO_{13}$ nanosheet from Rb-form.

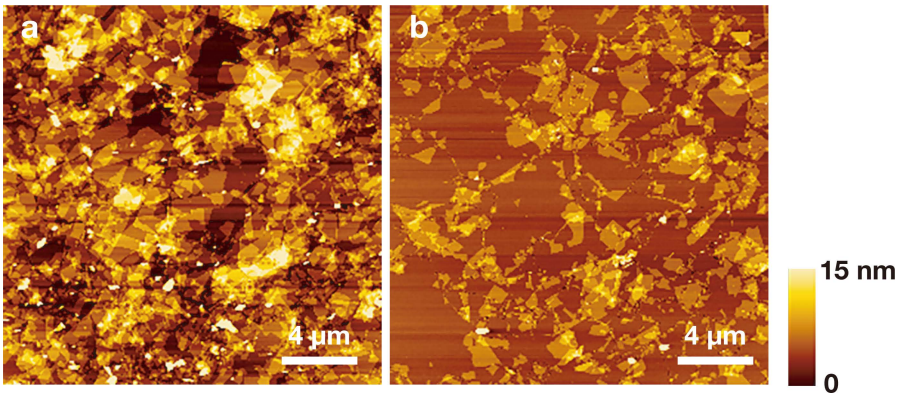

Fig. S7 AFM images of $Ca_2MnNb_3TiO_{13}$ nanosheet films used for XPS measurements. (a) from K-form, (b) from Rb-form.