

Electronic Supplementary Information (ESI)

**Growth of Idiomorphic LiMnPO₄ Crystals in Molten NaCl-KCl and
LiF-NaCl-KCl fluxes**

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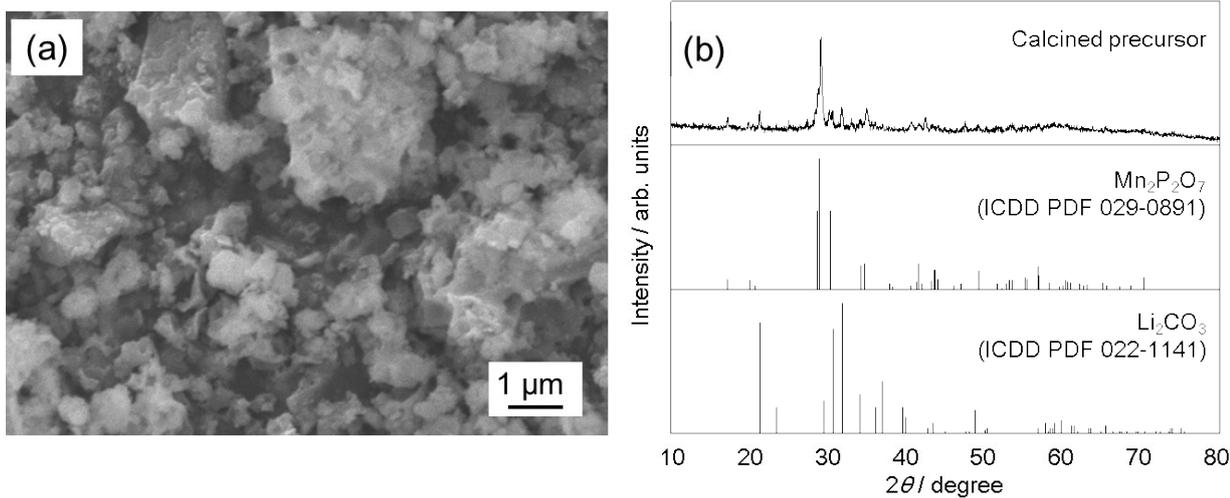


Figure S1. (a) SEM image and (b) XRD profile of pulverized precursor calcined at 400 °C for 3 h. XRD profiles of $\text{Mn}_2\text{P}_2\text{O}_7$ (ICDD PDF 029-0891) and Li_2CO_3 (ICDD PDF 022-1141) are also shown for reference

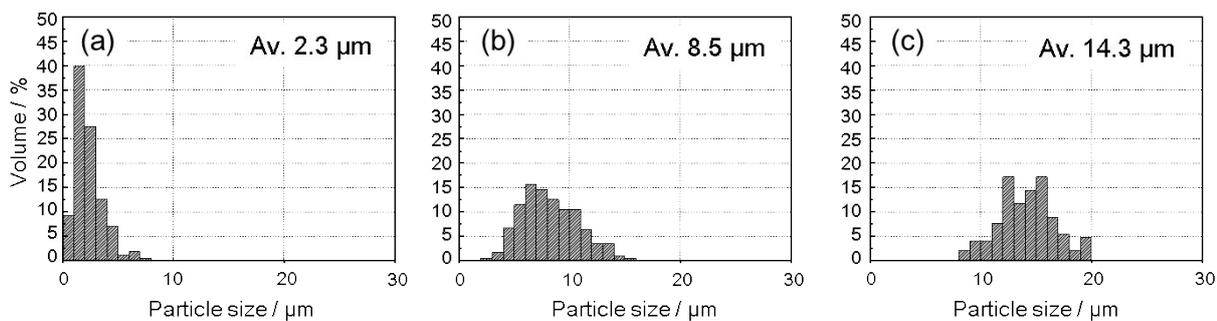


Figure S2. Particle size distribution of LiMnPO_4 crystals grown from NaCl-KCl mixed flux with solute concentrations of: (a) 50 (Run no.2), (b) 10 (Run no.3), and (c) 5 mol% (Run no.4).

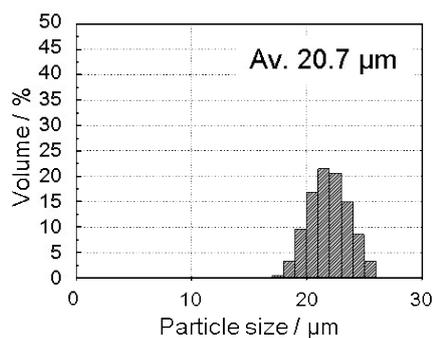


Figure S3. Particle size distribution of LiMnPO_4 crystal grown from LiF-NaCl-KCl mixed flux with solute concentration of 50 mol% (Run no.5).

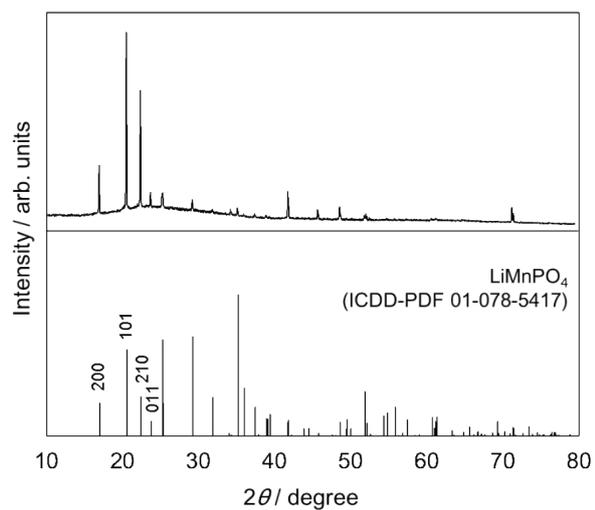


Figure S4. XRD patterns of non-pulverized LiMnPO_4 crystal grown from LiF-NaCl-KCl mixed flux with a solute concentration of 50 mol% (Run no.5).

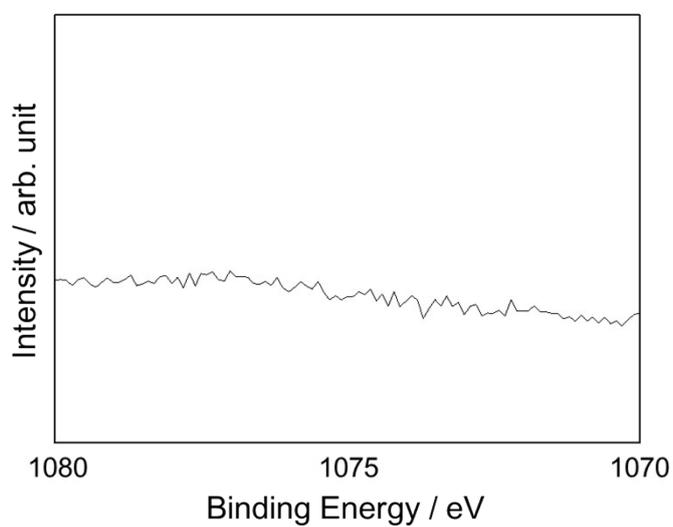


Figure S5. XPS spectra of Na 1s for LiMnPO_4 crystal grown from LiF-NaCl-KCl mixed flux with solute concentration of 50 mol% (Run no.5).

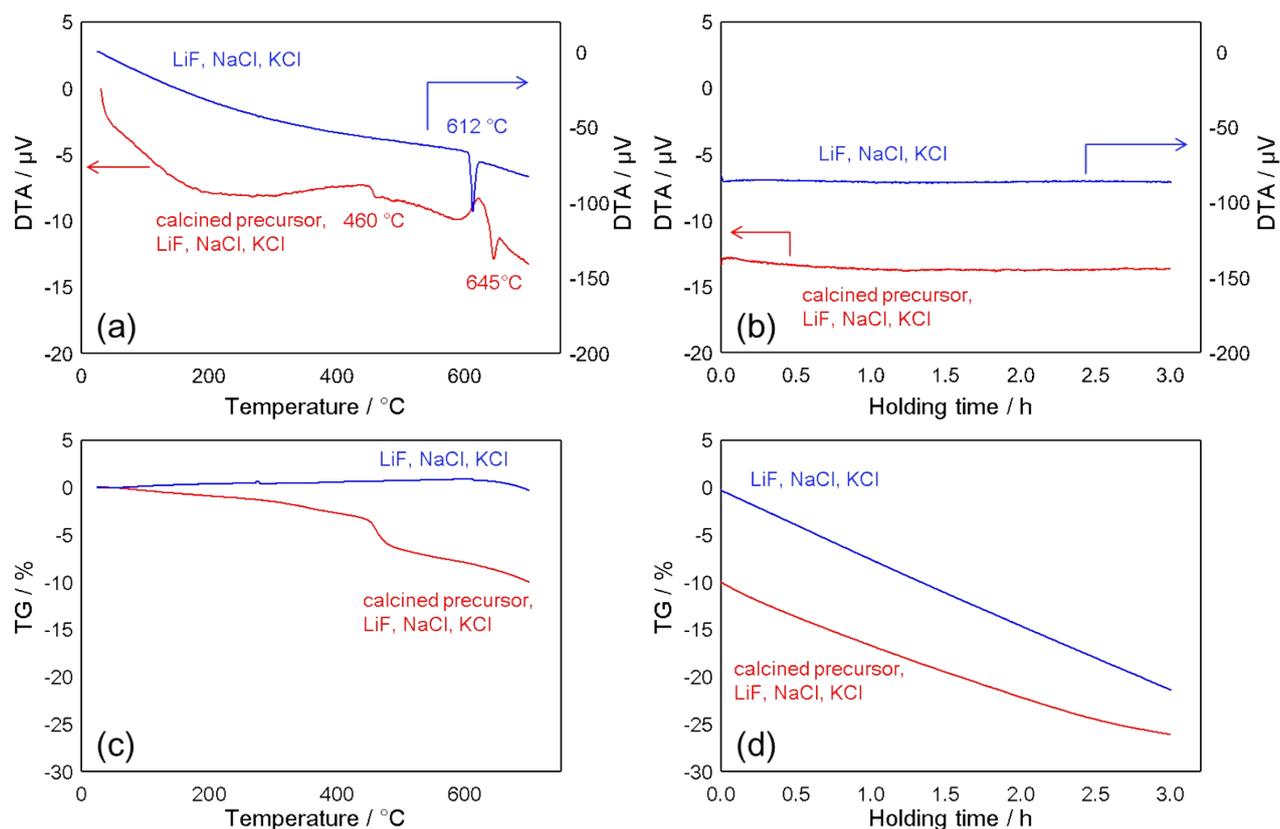


Figure S6. (a)(b)DTA and (c)(d)TG plots of a calcined precursor with LiF-NaCl-KCl flux at a solute concentration of 50 mol% and authentic LiF-NaCl-KCl flux during heating and holding at 700 $^{\circ}\text{C}$. The molar ratio of each sample was referred to the condition in Run no. 5.

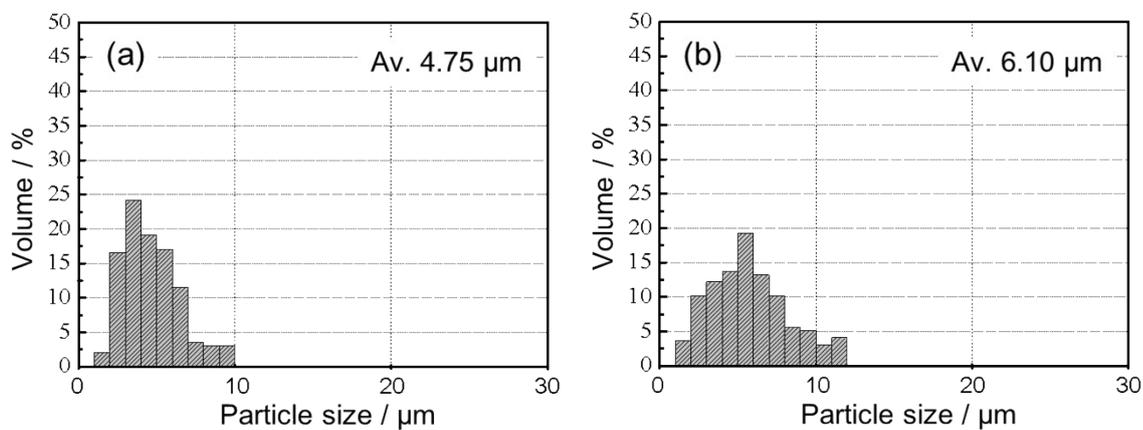


Figure S7. Particle distribution of LiMnPO_4 crystal grown from LiF-NaCl-KCl mixed flux with solute concentrations of 50 mol% for (a) 0 h (Run no.7) and (b) 1 h (Run no.8).