

Supporting Information of High proton conductivity of $\text{NaMg}_{1-x}\text{Li}_x\text{H}_x(\text{PO}_3)_3 \cdot y\text{H}_2\text{O}$ with the three-dimensional open framework in the intermediate temperature

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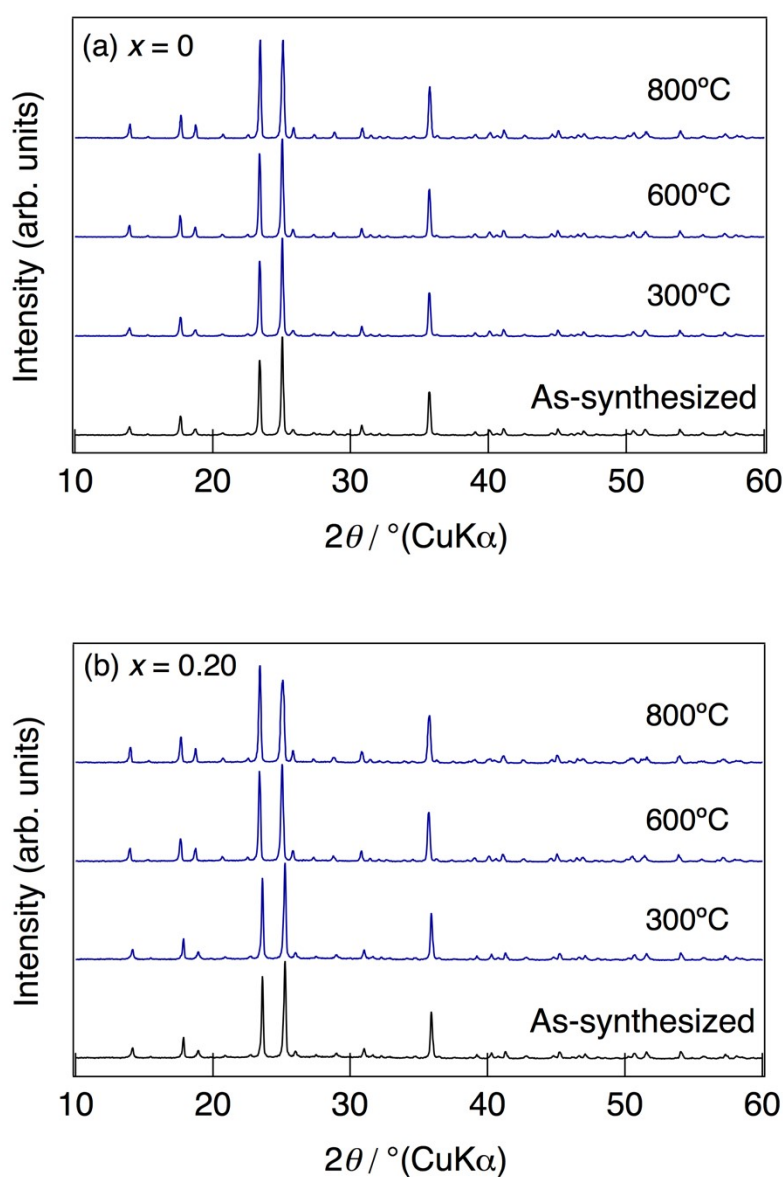


Fig. S1 (a) and (b). XRD patterns for $\text{NaMg}_{1-x}\text{Li}_x\text{H}_x(\text{PO}_3)_3 \cdot y\text{H}_2\text{O}$ ($x = 0$ and 0.20) measured after holding at different temperatures for 6 h

Table S1. Averaged bond length and bond angles of $\text{NaMg}_{1-x}\text{Li}_x\text{H}_x(\text{PO}_3)_3 \cdot y\text{H}_2\text{O}$.

Composition, x	0	0.10	0.20
Bond length / Å			
Average P1-O (x 4)	1.50	1.55	1.60
Average P2-O (x 4)	1.60	1.50	1.54
Average P3-O (x 4)	1.55	1.56	1.59
Average P4-O (x 4)	1.52	1.56	1.54
Average P5-O (x 4)	1.54	1.47	1.62
Average P6-O (x 4)	1.56	1.59	1.62
Average Na1-O (x 6)	2.43	2.43	2.33
Average Na2-O (x 6)	2.41	2.41	2.53
Average Na3-O (x 6)	2.46	2.47	2.43
Average Mg1-O (x 6)	2.09	2.06	2.06
Average Mg2-O (x 6)	2.05	2.08	2.01
Bond angle / °			
Average O-P1-O (x 6)	109.2	109.0	112.6
Average O-P2-O (x 6)	108.7	109.3	109.1
Average O-P3-O (x 6)	108.9	109.2	109.0
Average O-P4-O (x 6)	109.6	108.8	108.9
Average O-P5-O (x 6)	104.9	109.2	109.3
Average O-P6-O (x 6)	108.3	107.5	107.7