

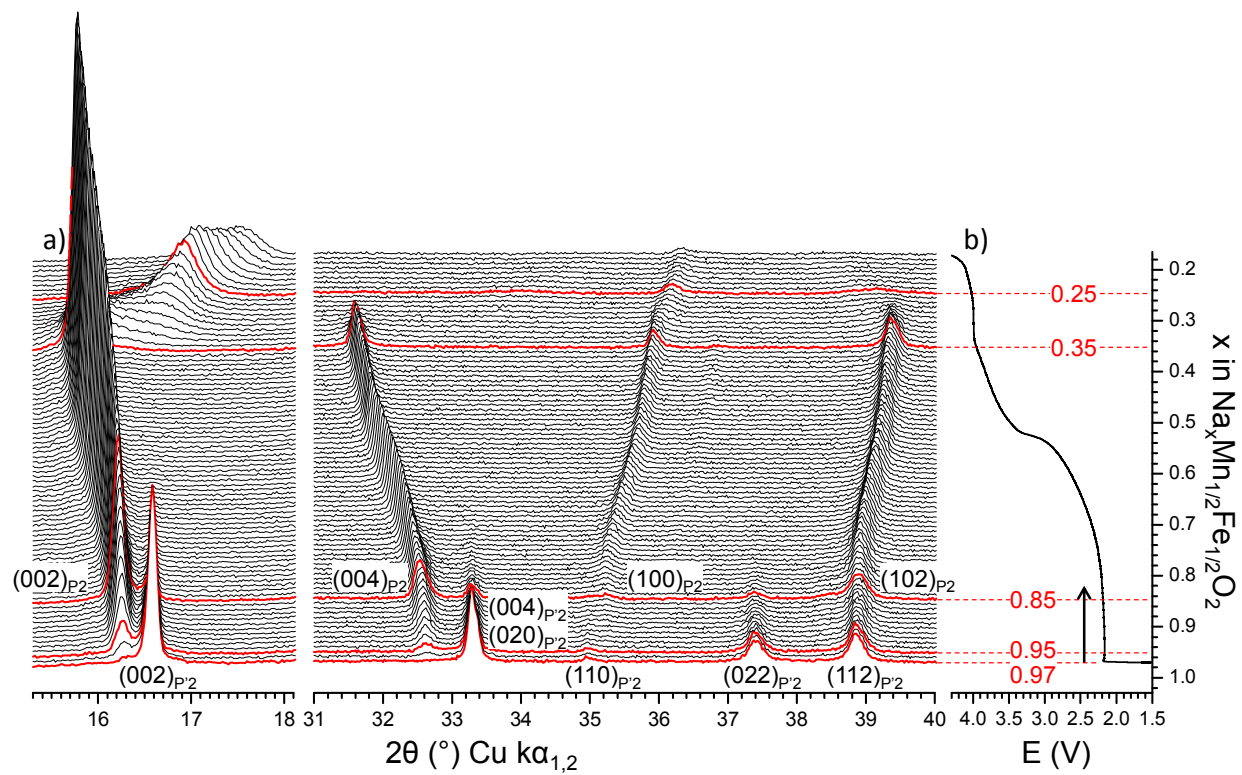
## Supporting Information

### **P2-Na<sub>x</sub>Mn<sub>1/2</sub>Fe<sub>1/2</sub>O<sub>2</sub> phase used as positive electrode in Na-batteries: structural changes induced by the electrochemical (de)intercalation process.**

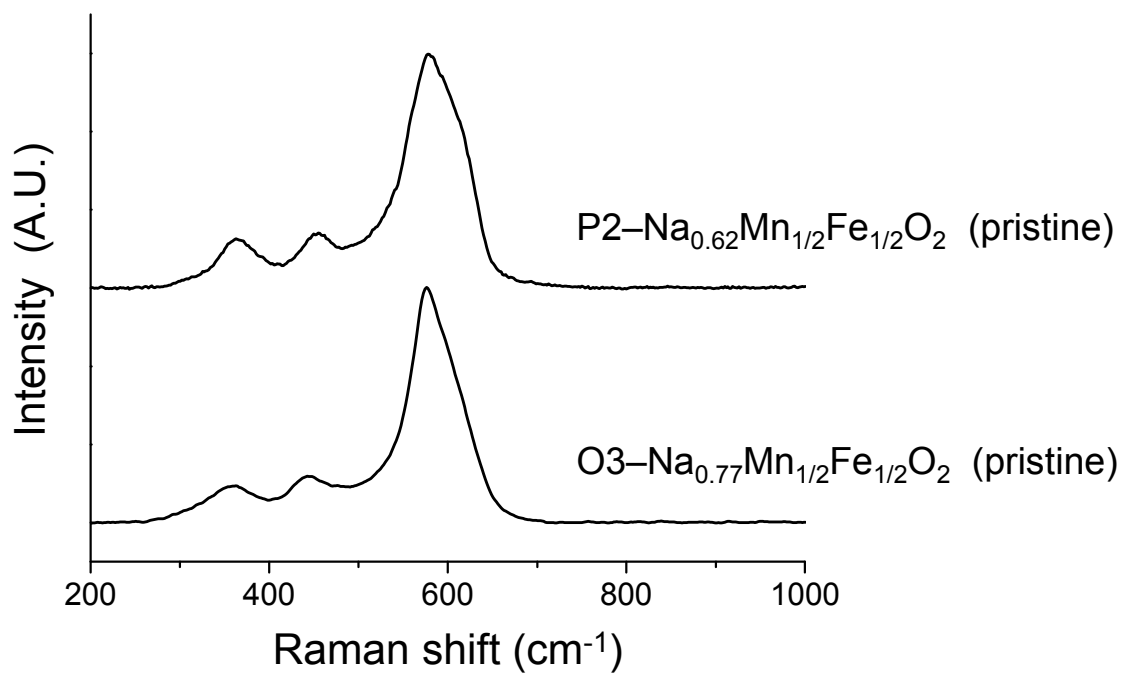
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**Figure S1.** Inversed representation of the *operando in situ* XRPD experiment presented in Figure 5.



**Figure S2.** Raman spectra of P2 and O3 type Na<sub>x</sub>Mn<sub>1/2</sub>Fe<sub>1/2</sub>O<sub>2</sub> phases. The local symmetries around the M and O ions are the same for the two structures.