

SUPPLEMENTARY INFORMATION

Role of Morphology in the Performance of LiFe_{0.5}Mn_{1.5}O₄ Spinel Cathodes for Lithium-Ion Batteries

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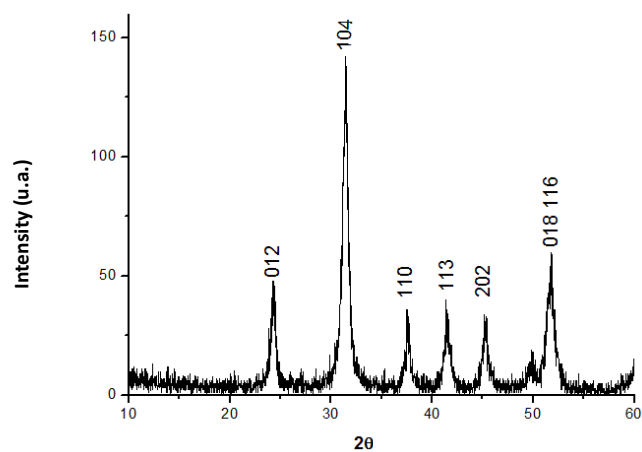


Figure S1.- XRD of MnCO_3 (JCPDS No. 83-1763).

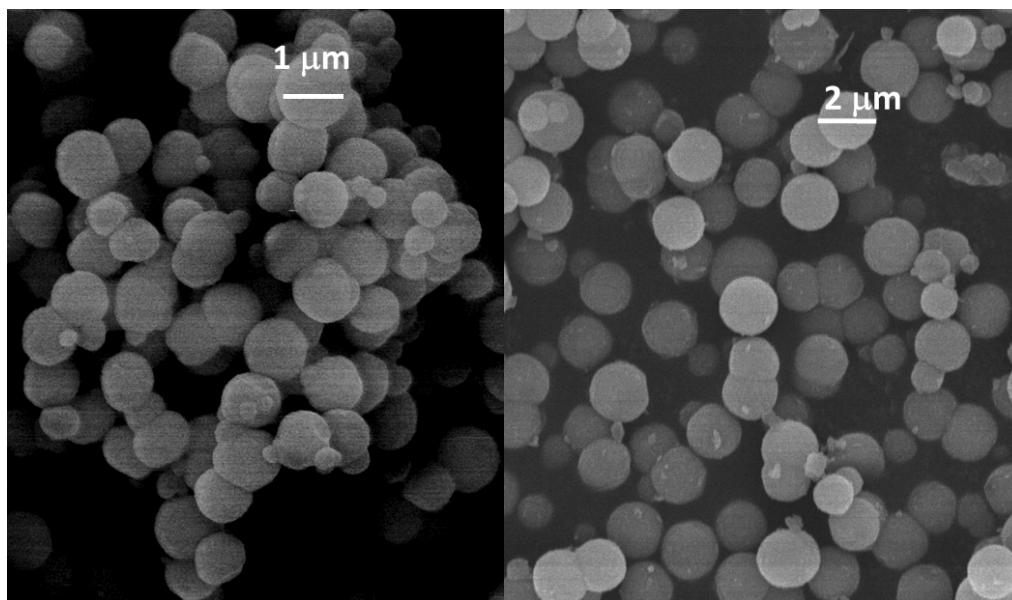


Figure S2 SEM images of MnCO_3 (a) method 1 (b) method 2 in dissolution

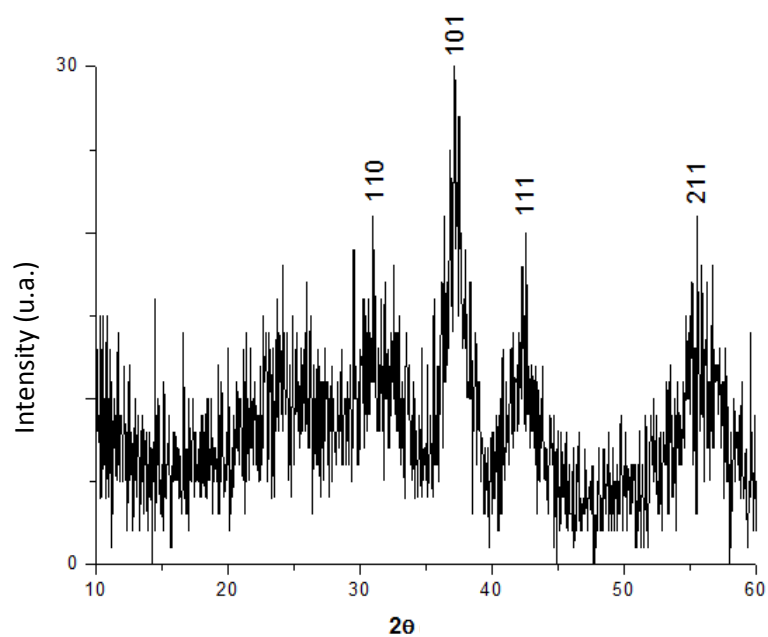


Figure S3 XRD pattern of MnO_2 rutile obtained by thermal decomposition of MnCO_3 (JCPDS No. 24-0735).

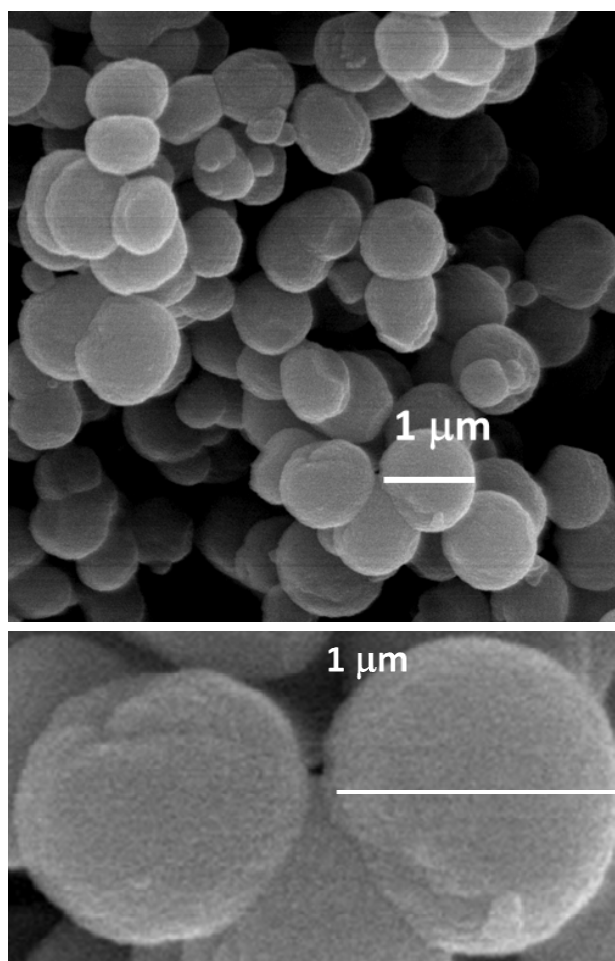


Figure S4. SEM images of MnO_2

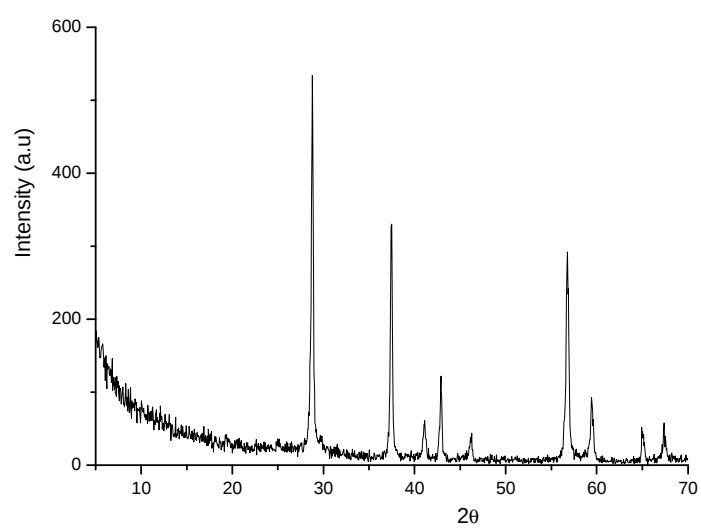


Figure S5 XRD pattern of MnO₂ obtained by hydrothermal reaction. (JCPDS No. 24-0735)

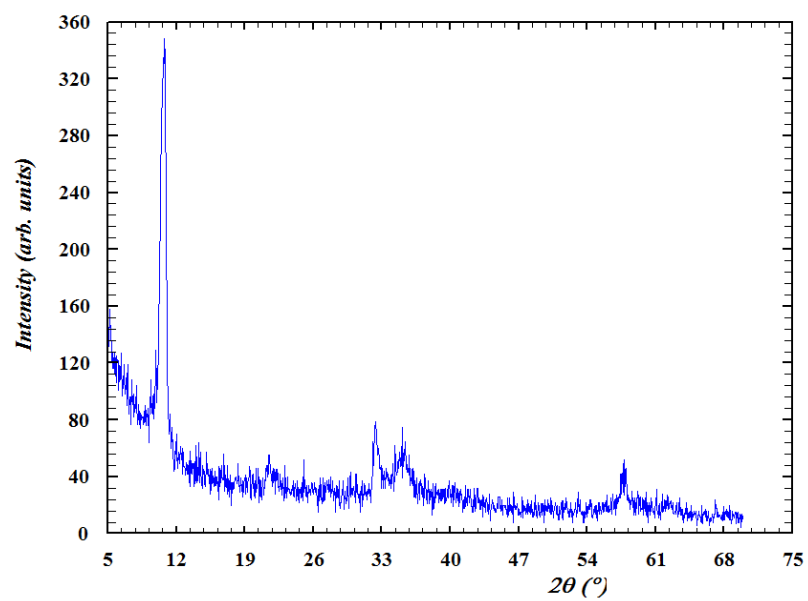


Figure S6 XRD pattern of Mn-EG and Fe-EG obtained by hydrothermal reaction.

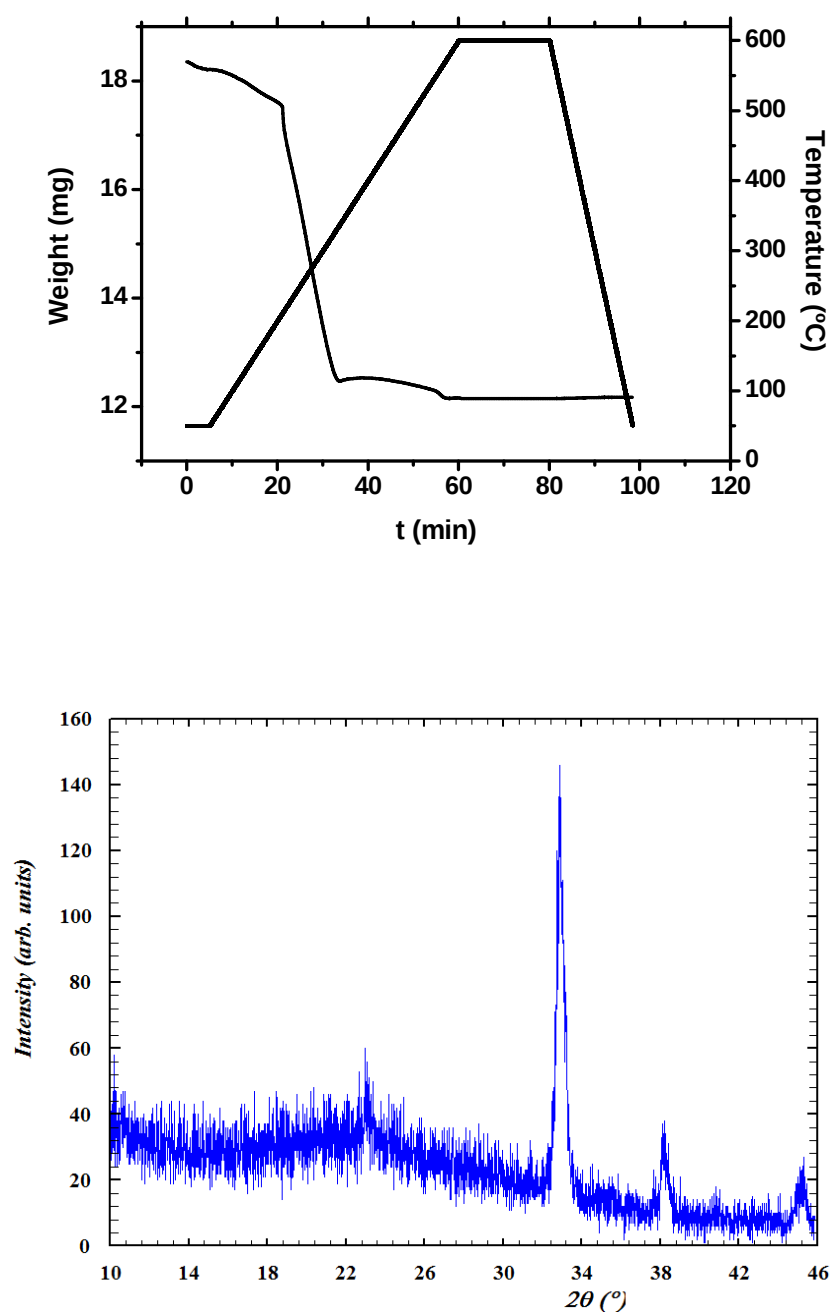


Figure S7 a) Thermogravimetric analysis of Mn-EG and Fe-EG b) XRD pattern of residue obtained by thermal decomposition. $\text{Mn}_{2-x}\text{Fe}_x\text{O}_3$ phase have been identified (JCPDS nº 24-507)

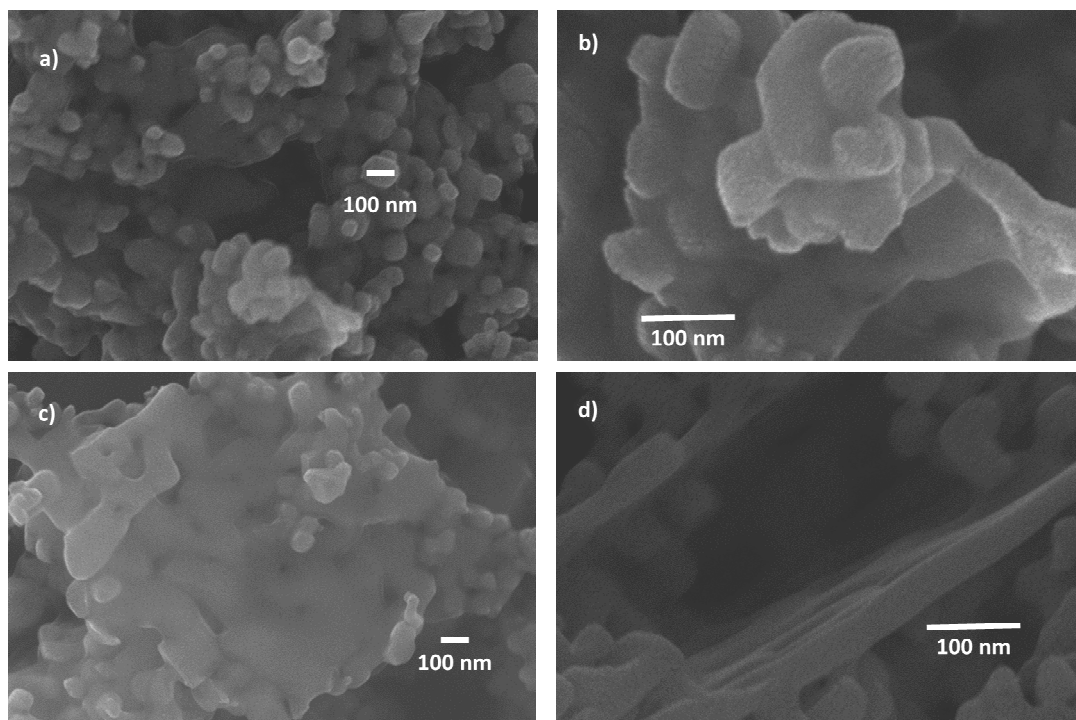


Figure S8 SEM image of $\text{Mn}_{2-x}\text{Fe}_x\text{O}_3$ at various magnifications.

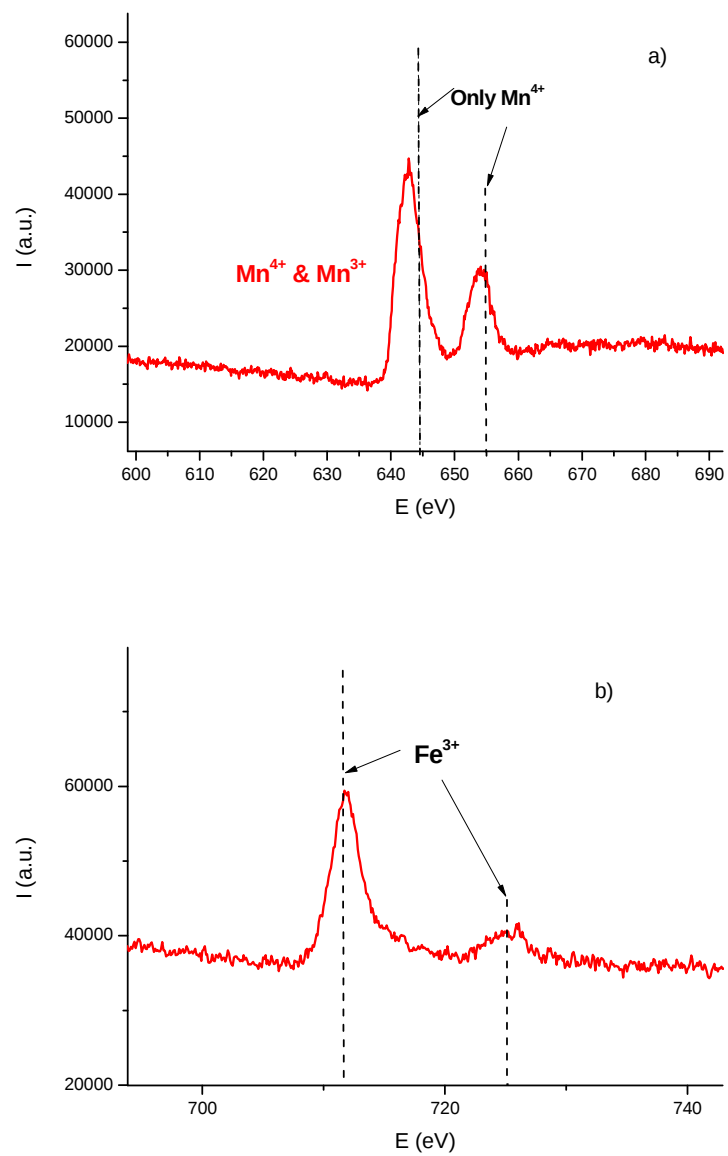


Figure S9. EELS spectra for the SG sample: a) Mn $L_{2,3}$ and b) Fe $L_{2,3}$ edges

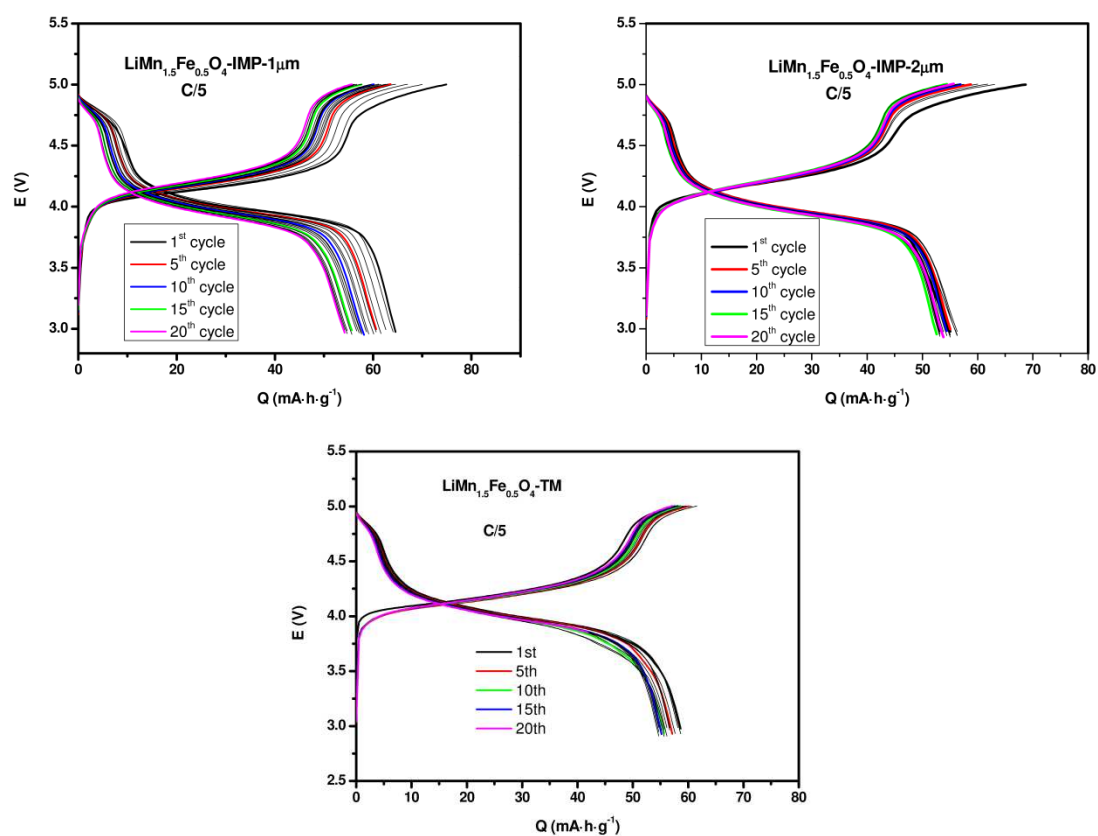


Figure S10 Charge/discharge curves at a rate C/5 for $\text{LiMn}_{1.5}\text{Fe}_{0.5}\text{O}_4$ prepared by different methods

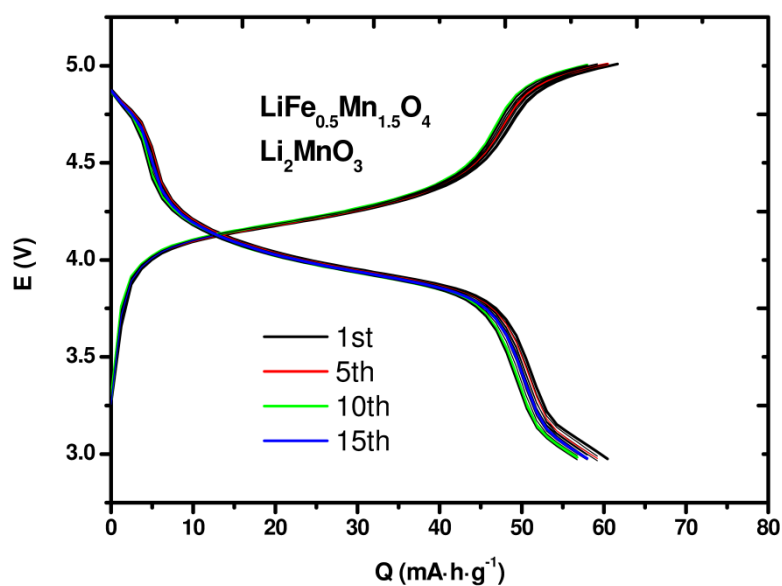


Figure S11 Charge/discharge curves at a rate C/5 for $\text{LiMn}_{1.5}\text{Fe}_{0.5}\text{O}_4/\text{Li}_2\text{MnO}_3$ composite cathode.