

Behavior of Solid Electrolyte in Li-Polymer Battery with NMC Cathode via *in-situ* Scanning Electron Microscopy

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SUPPORTING INFORMATION

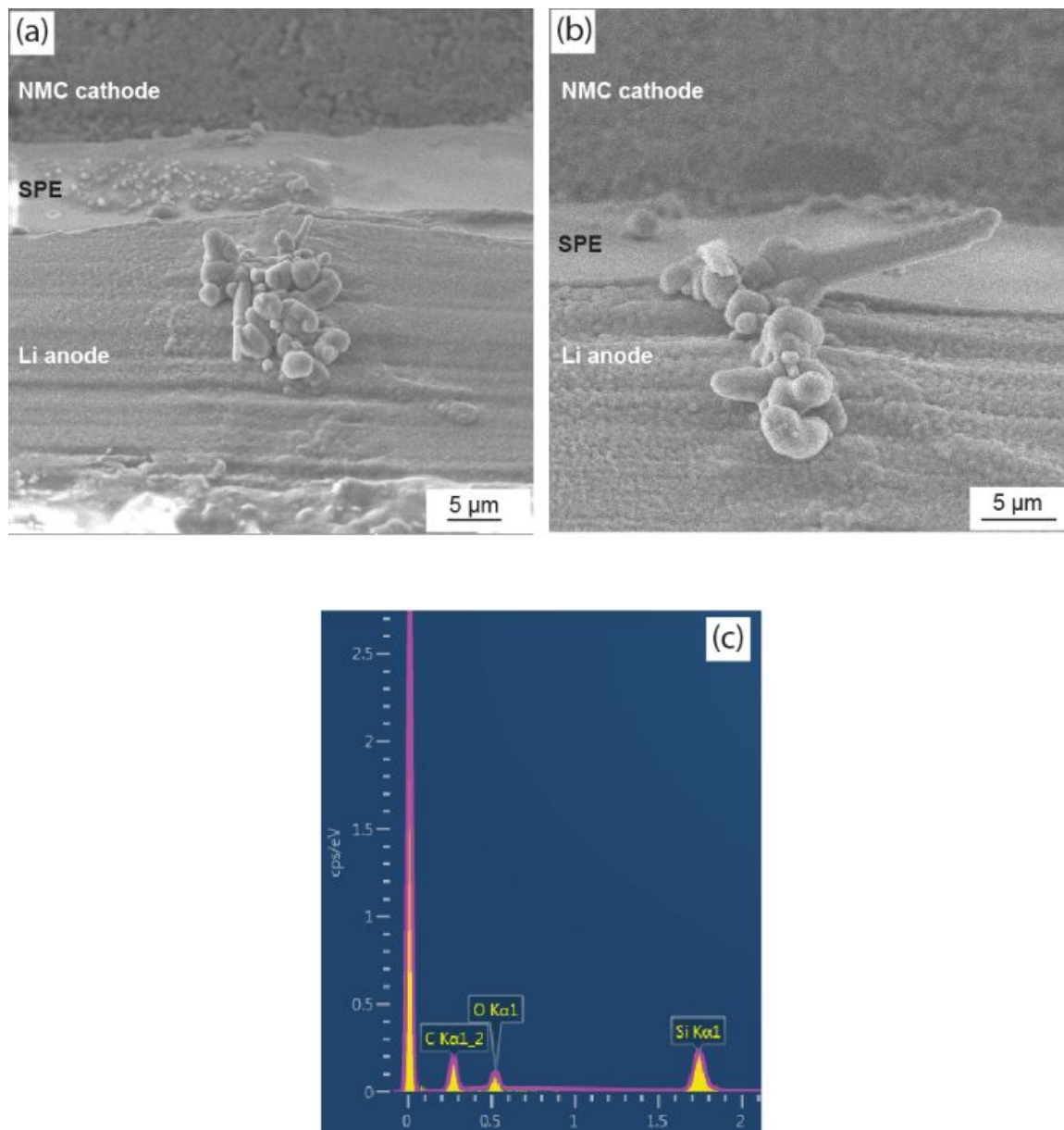


Figure S1. (a) and (b) More examples of dendrites forming in the Li anode during cycling with (c) the corresponding energy dispersive spectroscopy (EDS) analysis showing Li, C and O. The Si peak is due to the resin in the sample assembly.

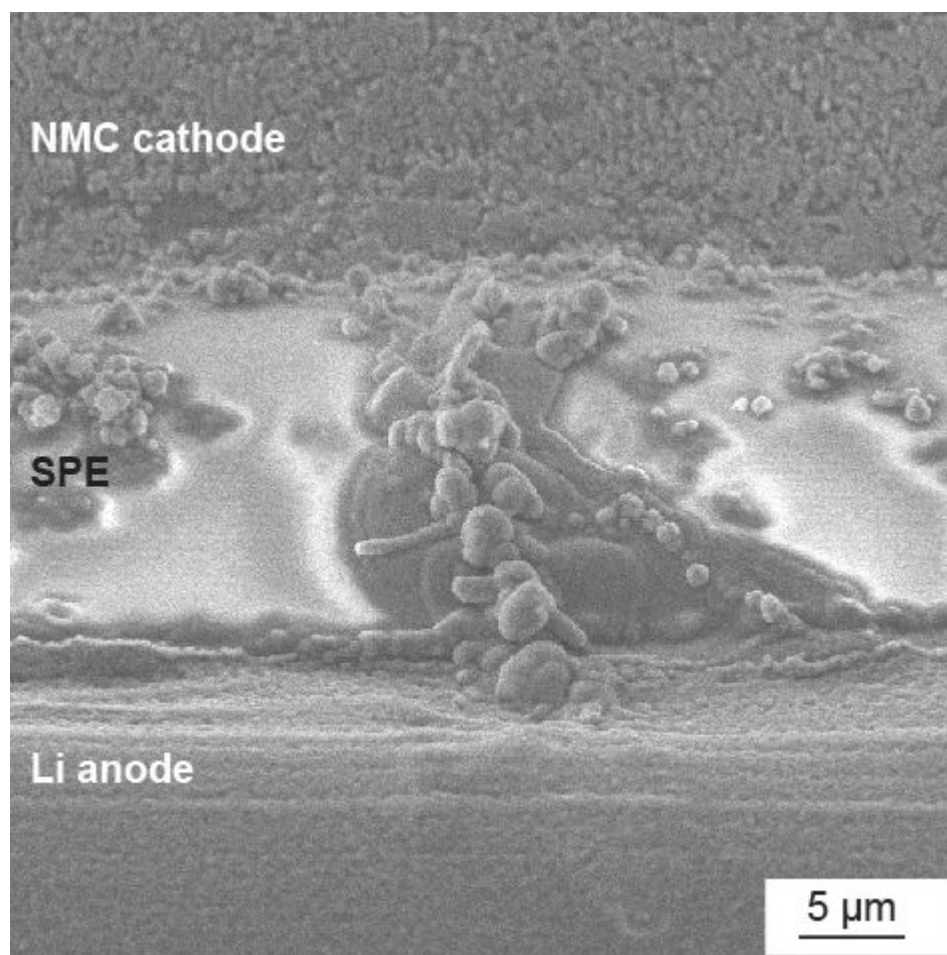


Figure S2. The path of Li dendrites connecting Li anode to the NMC cathode, leading to a short circuit of the cell.

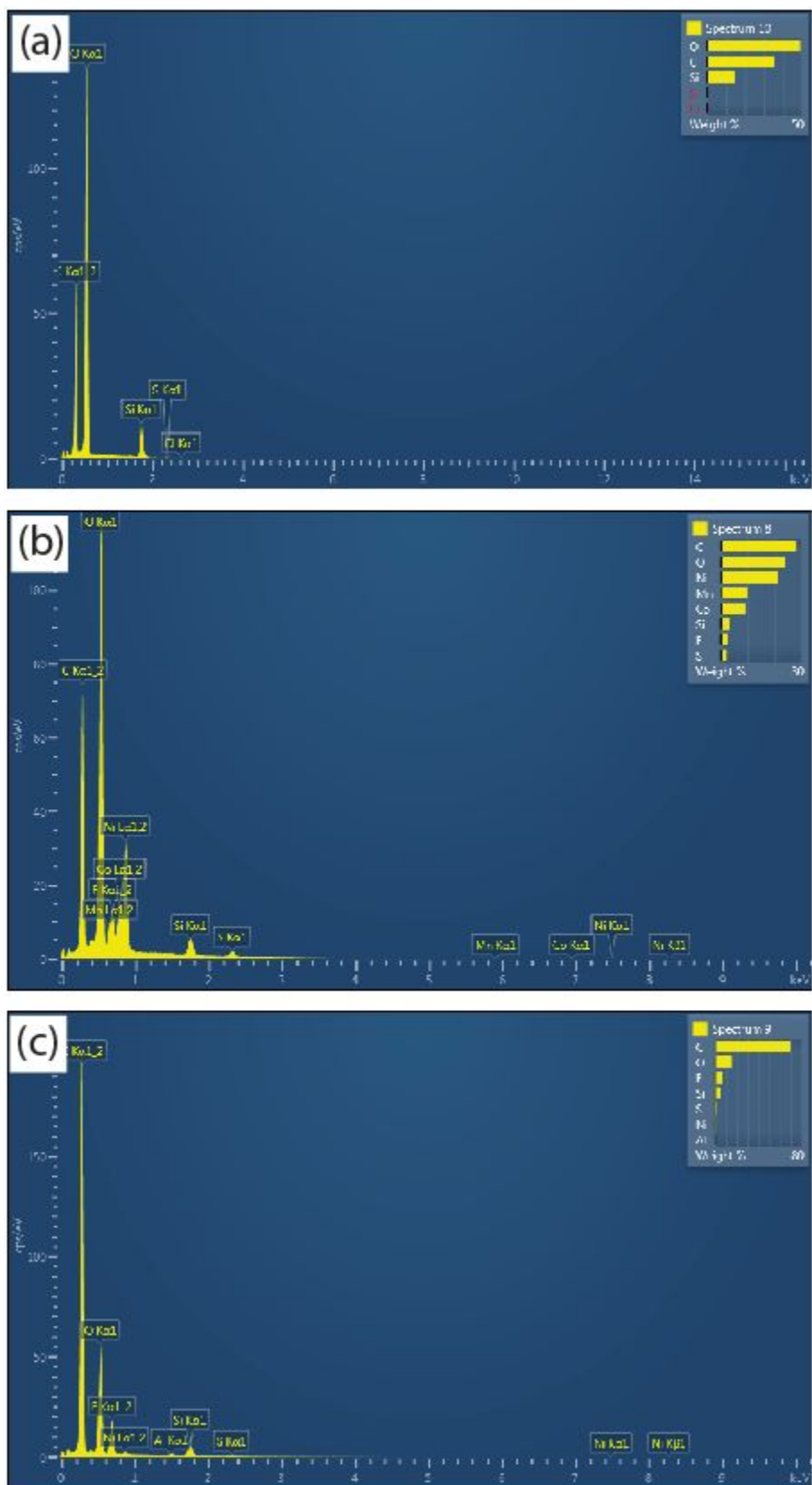


Figure S3. The energy dispersive spectroscopy (EDS) analysis of cell components after cycling from (a) Li anode, (b) SPE and (c) NMC cathode.

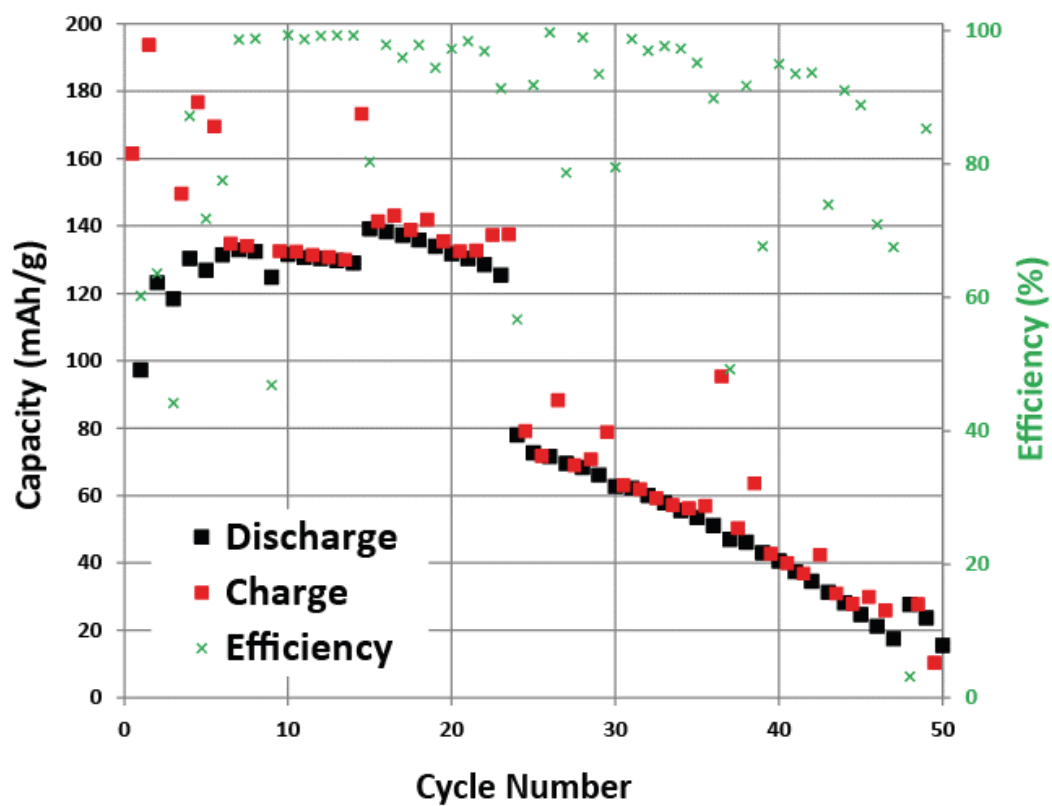


Figure S4. Plot of capacity and efficiency as a function of cycle number for the *in-situ* test shown in **Figure 2a** in the manuscript.