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## **Electronic Supplementary Information**

## Improving the Electrochemical Performance of LiNi<sub>0.5</sub>Mn<sub>1.5</sub>O<sub>4</sub> Spinel by Polypyrrole Coating as Cathode Material for the Lithium-ion Battery

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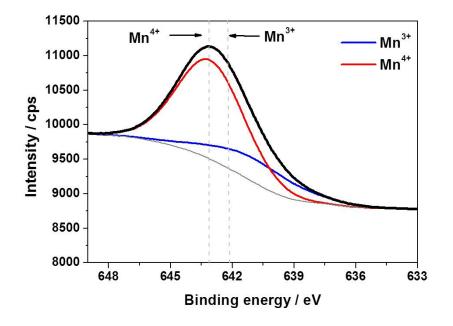


Figure S1. Mn  $2p_{3/2}$  XPS spectrum of the bare LNMO spinel. The major peak with binding energy of 643.5 eV corresponds to Mn<sup>4+</sup> and the other peak located at 642.1 eV belongs to Mn<sup>3+</sup>.

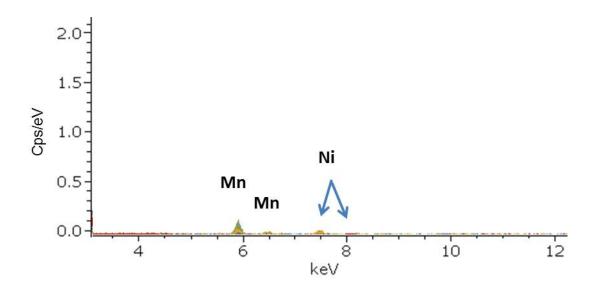


Figure S2. EDS spectrum obtained from the sample region of the lithium anode in the coin cell for the LNMO-5 wt.% PPy sample after 100 cycles at 55  $^{\circ}$ C.