

Supplementary Information

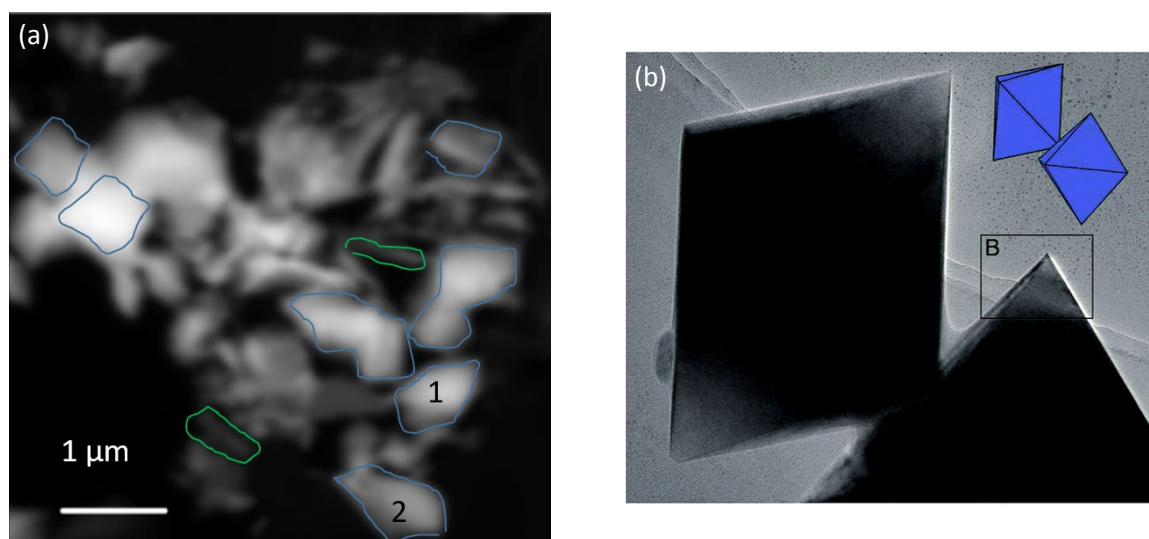
Unexpected phase separation in $\text{Li}_{1-x}\text{Ni}_{0.5}\text{Mn}_{1.5}\text{O}_4$ within a porous composite electrode

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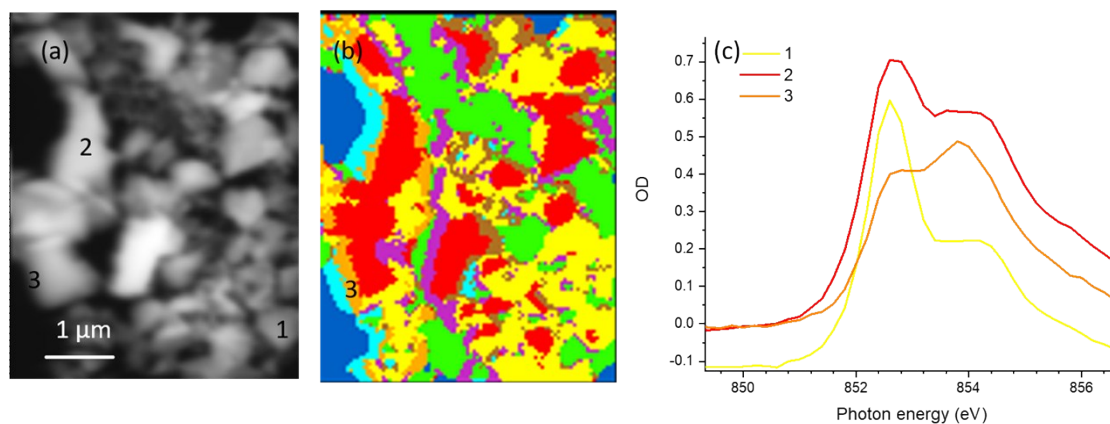
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Support Fig. S1 (a) octahedral shaped particles are highlighted by blue boxes and plate-like particles are highlighted by green boxes (left panel). (b) TEM image of octahedral shaped LNMO (right panel), cited from J. Mater. Chem. A, 2014, 2, 11987.



Support Fig. S2 (a) Morphology mapping of the self-discharged 60% delithiated LNMO thin-section, (b) PCA mapping of Ni oxidation state in this region, and (c) representative Ni L-edge XANES of major components in (b).