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Structural behavior of delithiated $\text{Li}_x\text{Ni}_{0,8}\text{Co}_{0,15}\text{Al}_{0,05}\text{O}_2$ ($0 < x < 1$) battery cathodes

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In the current contribution, a systematic ex-situ neutron powder diffraction study on differently electrochemical delithiated NCA cathode materials is presented. A set of structural parameters was obtained by using full-profile Rietveld refinement. Lithium occupations have been found linearly reflecting the increasing state-of-charge. In contrast, the refined occupations of transition metals do not change on the state-of-charge, indicating the absence of antisite defects in the NCA material.

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