

Supporting information

Facile strategy of NCA cation mixing regulation and its effect on electrochemical performance

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XPS spectra of the Ni 2p for NCA powders has been carried out to determine the oxidation states of Ni in these materials. The peak fitting procedure reveals two binding energies for Ni (2p_{3/2}): 854.6 and 855.4 eV [7]. The lower BE confirm the presence of Ni²⁺ in the compound, and the higher BE coincides with that of Ni²⁺. There is a small amount of Ni²⁺ on the surface of the materials which could be concluded by the peak area. Obviously, most of the nickel ions are trivalence.

[7] J.K. Ngala, N.A. Chernova, M. Ma, et, al., J. Mater. Chem., 14 (2004), 214–220.

