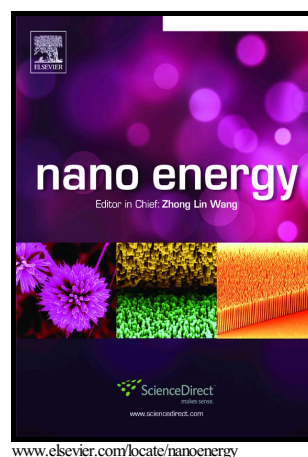


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PII: S2211-2855(16)30432-3
DOI: <http://dx.doi.org/10.1016/j.nanoen.2016.10.014>
Reference: NANOEN1539

To appear in: *Nano Energy*

Received date: 24 March 2016
Revised date: 29 September 2016
Accepted date: 7 October 2016

Cite this article as: Zhong Wang, Yanping Yin, Yang Ren, Zhenyao Wang, Min Gao, Tianyuan Ma, Weidong Zhuang, Shigang Lu, Ailing Fan, Khalil Amine and Zonghai Chen, High Performance Lithium-Manganese-Rich Cathode Material with Reduced Impurities, *Nano Energy*, <http://dx.doi.org/10.1016/j.nanoen.2016.10.014>

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High Performance Lithium-Manganese-Rich Cathode Material with Reduced Impurities

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Abstract

Lithium-manganese-rich transition metal oxides have attracted substantial R&D attention due to their potential for high energy-density lithium-ion batteries. In this work, in situ high-energy X-ray diffraction was deployed to investigate the phase evolution during the solid-state synthesis of $\text{Li}[\text{Li}_{0.2}\text{Mn}_{0.54}\text{Ni}_{0.13}\text{Co}_{0.13}]\text{O}_2$. A step-wise consumption of the starting materials was observed during the one-step heating process primarily due to the

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