# Accepted Manuscript


Boosting the electrochemical performance of $MoO_3$ anode for long-life lithium ion batteries: Dominated by an ultrathin $TiO_2$ passivation layer

Xiaopeng Cheng, Yonghe Li, Lijun Sang, Jinyao Ma, Huifeng Shi, Xianqiang Liu, Junxia Lu, Yuefei Zhang

PII: S0013-4686(18)30497-3

DOI: 10.1016/j.electacta.2018.03.009

Reference: EA 31375

To appear in: *Electrochimica Acta*

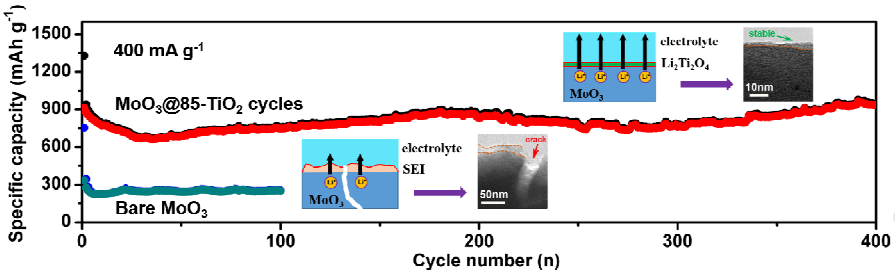
Received Date: 18 January 2018

Revised Date: 1 March 2018

Accepted Date: 2 March 2018

Please cite this article as: X. Cheng, Y. Li, L. Sang, J. Ma, H. Shi, X. Liu, J. Lu, Y. Zhang, Boosting the electrochemical performance of $MoO_3$ anode for long-life lithium ion batteries: Dominated by an ultrathin $TiO_2$ passivation layer, *Electrochimica Acta* (2018), doi: 10.1016/j.electacta.2018.03.009.

## TOC




In this work, amorphous $TiO_2$ layer with different thickness (sub 10 nm) is homogenously coated $MoO_3$ nanobelts by atomic layer deposition method. As a anode for LIBs, compared to the bare $MoO_3$ nanobelts, the $MoO_3$@85 cycles $TiO_2$ nanobelts show a remarkable boosted capacitance and long-life stability, which is attributed to the high interfacial $Li^+$ transport paths and mechanical integrity regulated by the ultrathin layer.