

Supporting information: In Situ SEM Observation of Structured Si/C Anodes Reactions in an Ionic-Liquid-Based Lithium-Ion Battery

Huifeng Shi ¹, Xianqiang Liu ¹, Rui Wu ¹, Yijing Zheng ², Yonghe Li ¹, Xiaopeng Cheng ¹,

Wilhelm Pfleging ^{2,3,*} and Yuefei Zhang ^{1,*}

¹ Institute of Microstructure and Property of Advanced Materials, Beijing University of Technology, Beijing 100124, China; shihuifeng@emails.bjut.edu.cn (H.S.); xqliu@bjut.edu.cn (X.L.); R.Wu@emails.bjut.edu.cn (R.W.); yongheli2013@gmail.com (Y.L.); xpcheng@emails.bjut.edu.cn (X.C.)

² Institute for Applied Materials (IAM-AWP) Karlsruhe Institute of Technology, Karlsruhe, Germany; Yijing.zheng@kit.edu (Y.Z.)

³ Karlsruhe Nano Micro Facility (KNMF), Karlsruhe, Germany

* Correspondence: yfzhang@bjut.edu.cn (Yuefei Z.); wilhelm.pfleging@kit.edu (W.P.); Tel.: +86-10-6739-2635 (Yuefei Z.)

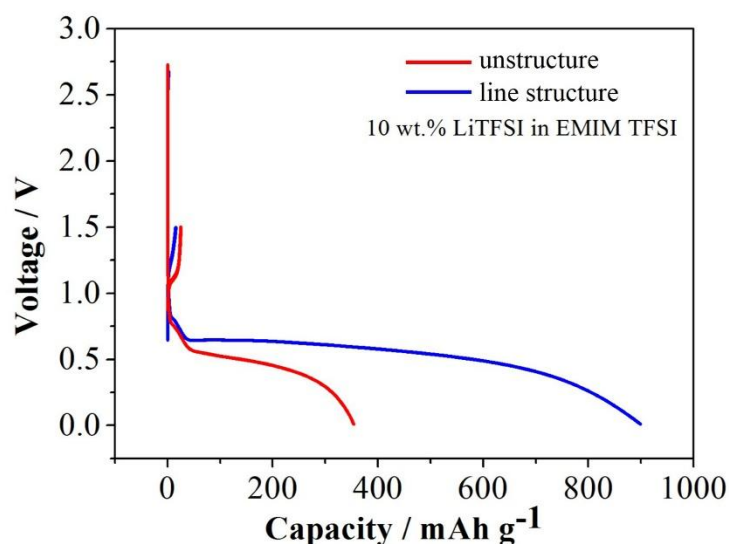


Figure S1. Charge–discharge curves of the un-/line structured Si/C composites at the rate 100 mA/g.

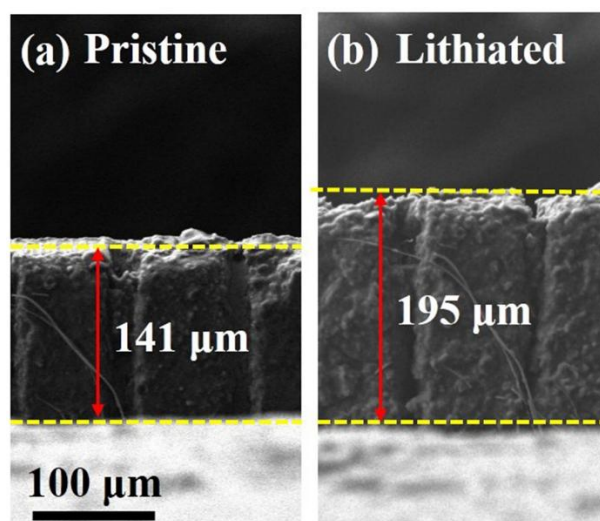


Figure S2. SEM images of (a) pristine and (b) lithiated Si/C composites.

The calculation of expansion in length: $(195 - 141) / 8000 * 2 = 1.35\%$ (The length of total Si/C anode is 8 mm).