Supplementary Information for

Hierarchical silicon nanowires-carbon textiles matrix as a binder-free anode for high-performance advanced lithium-ion batteries

Bin Liu[1], Xianfu Wang[1], Haitian Chen[3], Zhuoran Wang[1], Di Chen[1], Yi-Bing Cheng[2], Chongwu Zhou[3]* & Guozhen Shen[1,4]*

[1] Wuhan National Laboratory for Optoelectronics (WNLO) and College of Optical and Electronic Information, Huazhong University of Science and Technology (HUST), Wuhan 430074, P. R. China.

[2] Faculty of Engineering, Monash University, VIC 3800, Australia.

[3] Department of Electric Engineering, University of Southern California, Los Angeles, California 90089, United States.

[4] State Key Laboratory for Superlattices and Microstructures, Institute of Semiconductors, Chinese Academy of Sciences, Beijing 100083, P. R. China.

Correspondence and requests for materials should be addressed to G.Z.S. (gzshen@semi.ac.cn) & C.W.Z. (chongwuz@usc.edu)
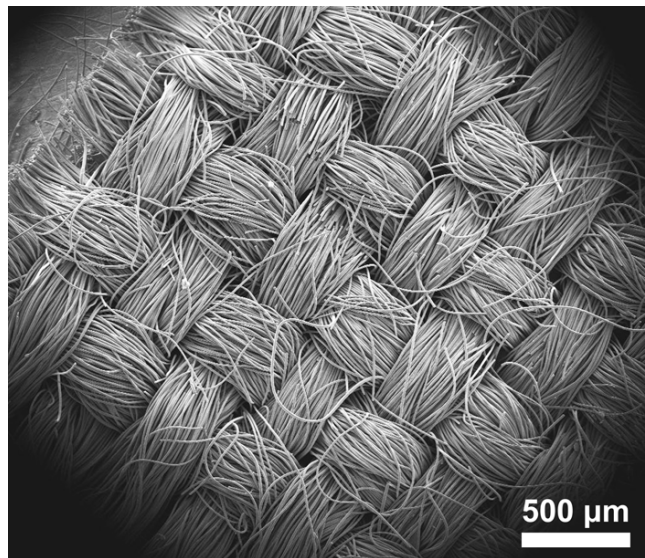
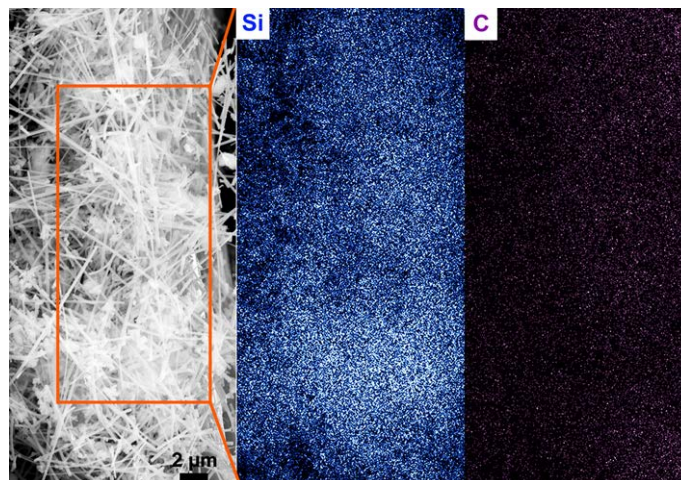**Figure S1.** Typical SEM image of carbon textiles

Figure S2. The mapping of silicon and carbon elements from selected SEM image.
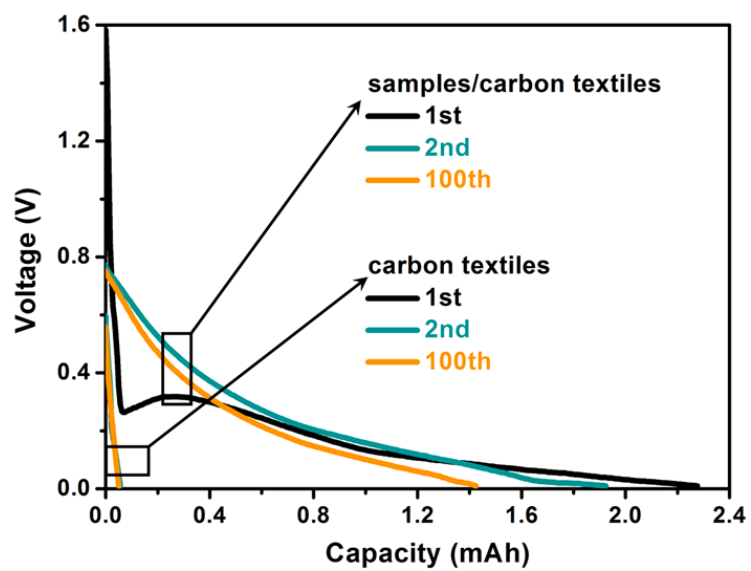
Figure S3. Galvanostatic discharge curves of samples/carbon textiles and carbon textiles.