Electronic Supplementary Information

A Carbon Network Strategy to Synthesize Silicon-carbon Anodes

toward Regulated Morphologies during Molten Salt Reduction

Guanjia Zhu,^a Miaomiao Jiang,^a Yuanyuan Ma,^a Wei Luo,^a Lianjun Wang,^a Wan Jiang^{a,b} and Jianping Yang^{*a,b}

^a State Key Laboratory for Modification of Chemical Fibers and Polymer Materials,

College of Materials Science and Engineering, Donghua University, Shanghai

201620, P. R. China

^b Institute of Functional Materials, Donghua University, Shanghai 201620, China.

Corresponding Author

*E-mail: jianpingyang@dhu.edu.cn

Author Contributions

The manuscript was written through contributions of all authors. All authors have given approval to the final version of the manuscript.

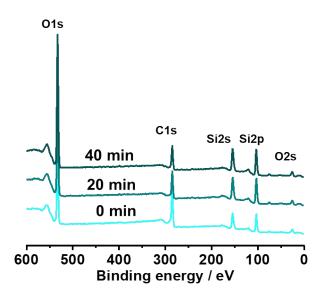


Fig. S1 XPS survey scan of TB-Al surface and after etching at 20 min intervals with Ar-ions sputtering at 1 keV.

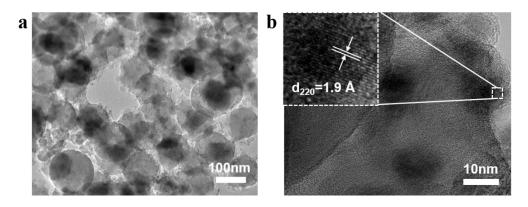


Fig. S2 (a) TEM and (b) HRTEM images of the B-Al sample which is the reduction product of B-800 prepared by using BTEB as the precursor.

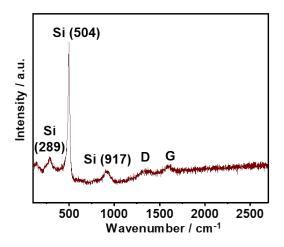


Fig. S3 Raman spectrum of the B-Al sample which is the reduction product of B-800 prepared by using BTEB as the precursor.

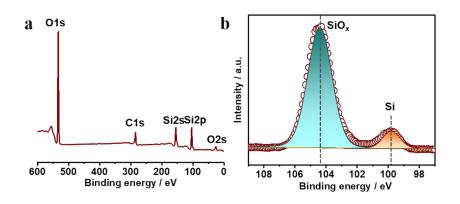


Fig. S4 (a) XPS survey scan and (b) Si 2p high resolution XPS spectrum of the B-Al sample which is the reduction product of B-800 prepared by using BTEB as the precursor.

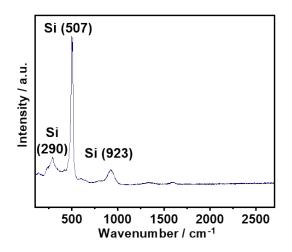


Fig. S5 Raman spectrum of the T-Al which is the reduction product of T-800 prepared by using TEOS as the precursor.

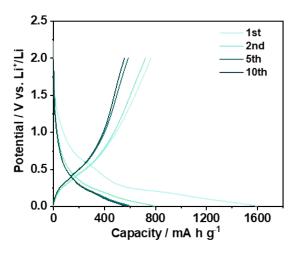


Fig. S6 Voltage profiles of the TB-Al electrode at a current density of 0.5 A g^{-1} .

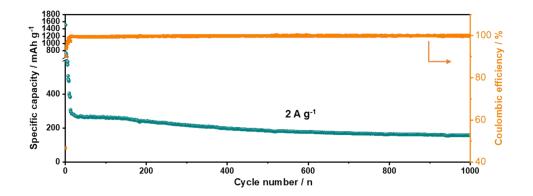


Fig. S7 Cycling performance of the TB-Al electrode at a large current density of 2 A