Electronic Supplementary Material (ESI) for RSC Advances.

Supporting Information

Scalable preparation of silicon@graphite/carbon microspheres as high-performance lithium-ion battery anode materials

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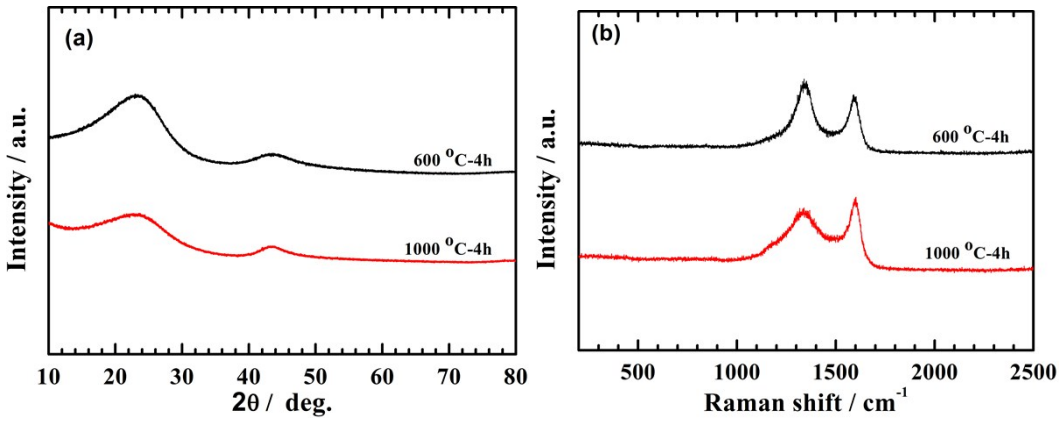

Fig. S1 (a) XRD patterns and (b) Raman spectra of the amorphous carbon obtained by carbonization of glucose in 600 °C and 1000 °C, held for 4h and Ar flow.

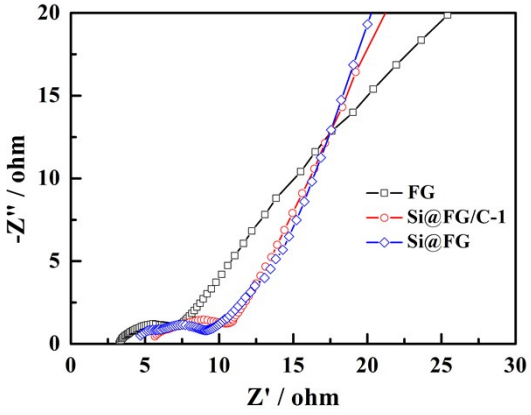

Fig. S2 EIS plots of FG, Si@FG and Si@FG/C-1 after 5 cycles at 200 mAh g^{-1} conducted on a Princeton Applied Research Versa-STAT3 electrochemistry workstation by applying an ac of 5 mV amplitude in the requency range from 0.01~100000Hz.

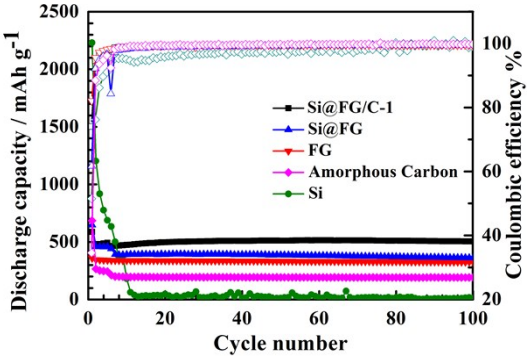

Fig. S3 Cycling stability of the Si@FG/C-1, Si@FG, FG, amorphous carbon and Si, and Si/FG has

the same ratio (Si: graphite = 1: 9, in weight) with Si@FG/C-1.

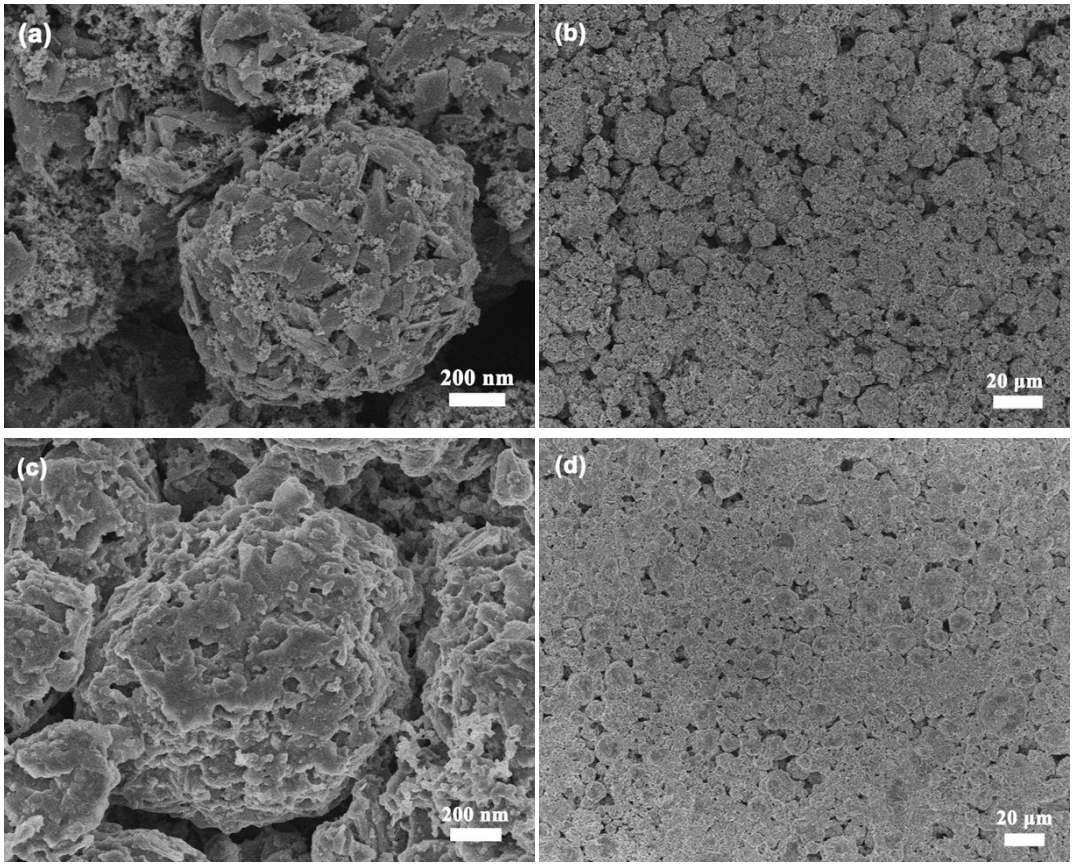

Fig. S4 The top-view SEM images of the electrodes of Si@FG/C-1 before (a, b) and after (c, d) 5 discharge-charge cycles at 200 mAh g^{-1}.

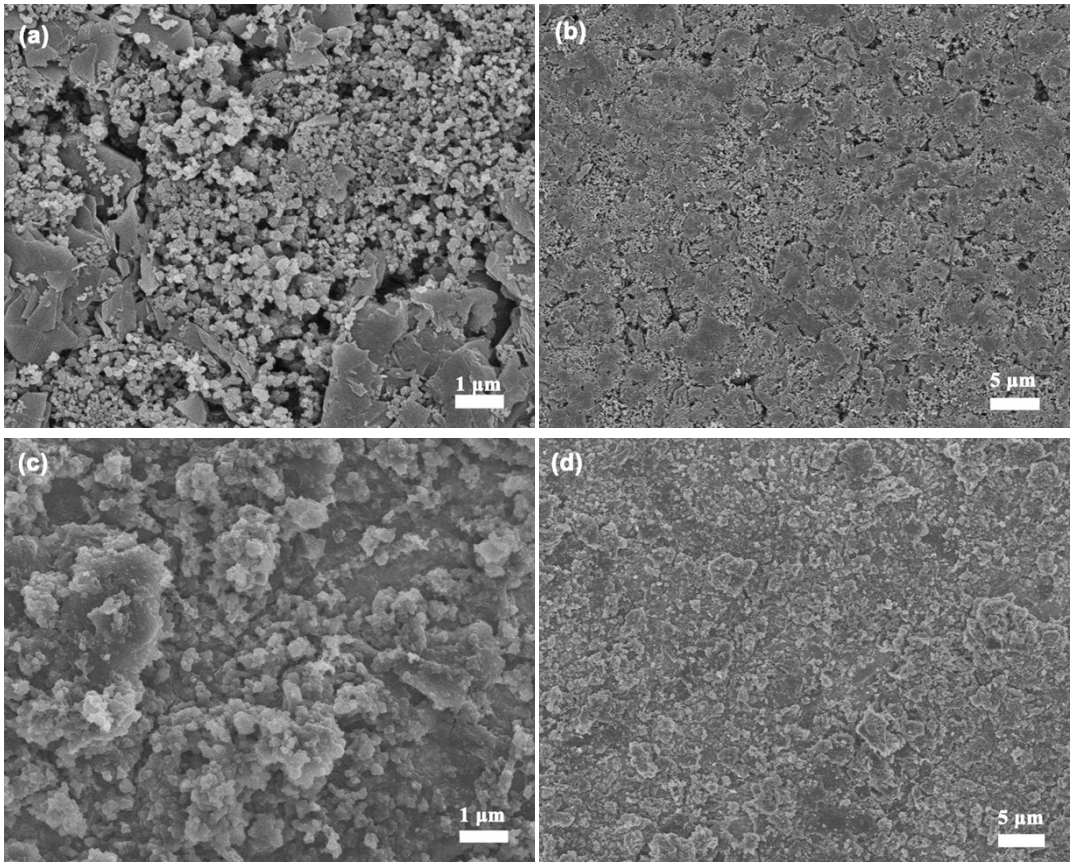

Fig. S5 The top-view SEM images of the electrodes of Si@FG before (a, b) and after (c, d) 5 discharge-charge cycles at 200 mAh g^{-1}.