nanomaterials

MDPI

Supporting Information

Coaxial Electrospinning Construction Si@C Core–Shell Nanofibers for Advanced Flexible Lithium-Ion Batteries

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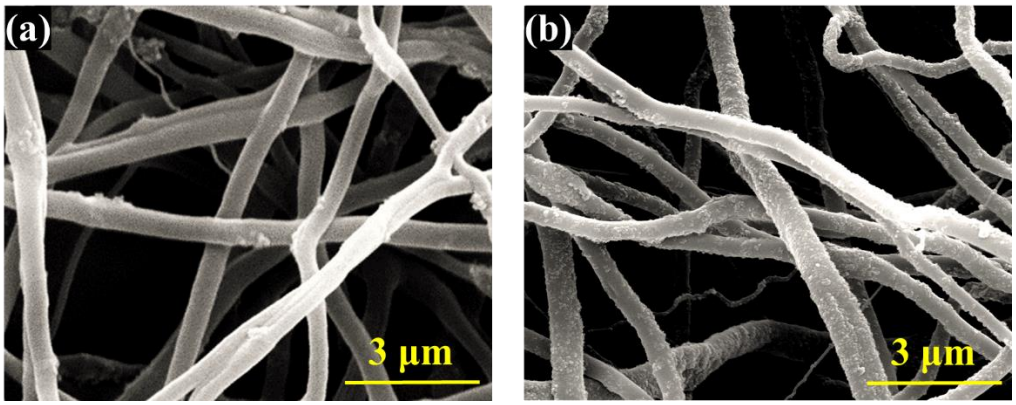

Figure S1. The SEM images of (**a**) Si@C NFs and (**b**) Si/C NFs.

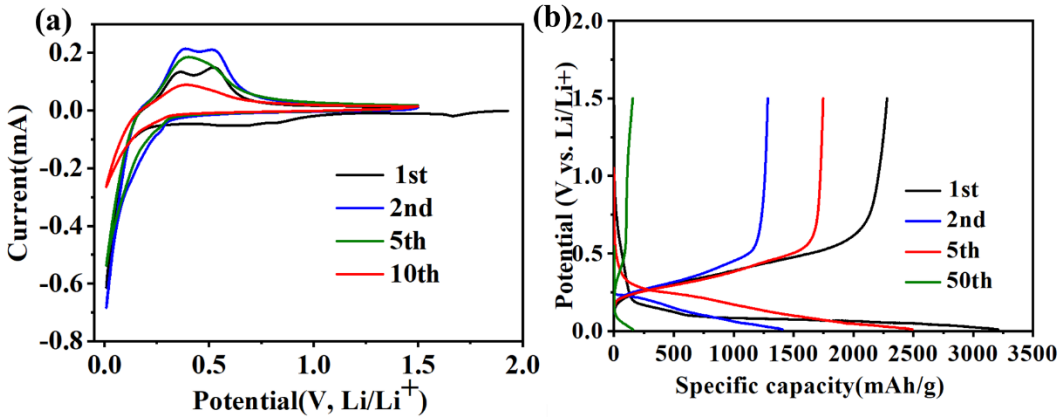

Figure S2. The cyclic voltammograms curves (**a**) and galvanostatic charge/discharge profiles (**b**) of different cycles of the pure Si electrode.

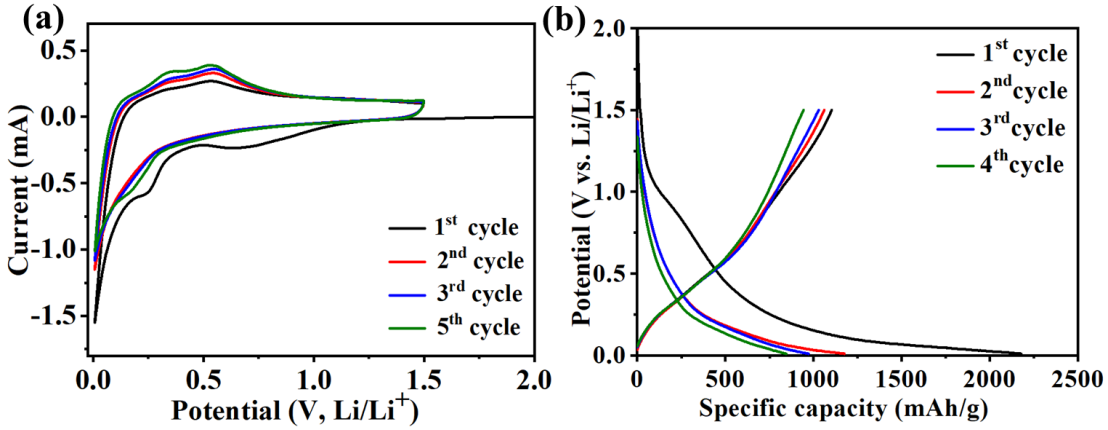

Figure S3. (**a**) CV curves at a scan rate of 0.1 mV/s and (**b**) charge/discharge curves at a current density of 0.1 A/g of flexible battery.

Table S1. Values of equivalent resistance used for fitting the experimental date.

Component	Fitted values		
	R_e/Ω	R_{ct}/Ω	R_{total}/Ω
Pure Si NPs	11.21	279.9	291.11
Si/C NFs	7.93	106	113.93
Si@C NFs	1.88	15.48	17.36

Table S2. Parameters compare with previous literatures.

	Capacity	Cycle Performance	Flexibility
Ref.30	936 mAh/g @0.1 A/g	~80.5% after 100 cycle @0.1A/g	No
Ref.31	1821 mAh/g @0.2 C	~56.9% after1000 cycles @2C	Yes
Ref.32	1381 mAh/g @0.14 A/g	~100% after 100 cycle @0.24A/g	No
Ref.33	1488 mAh/g @0.2 A/g	~69.1% after 100 cycle @0.5A/g	No
This work	1162.8 mAh/g @0.2 A/g	~50.8% after 100 cycle @0.1A/g	Yes