

Supplementary Materials

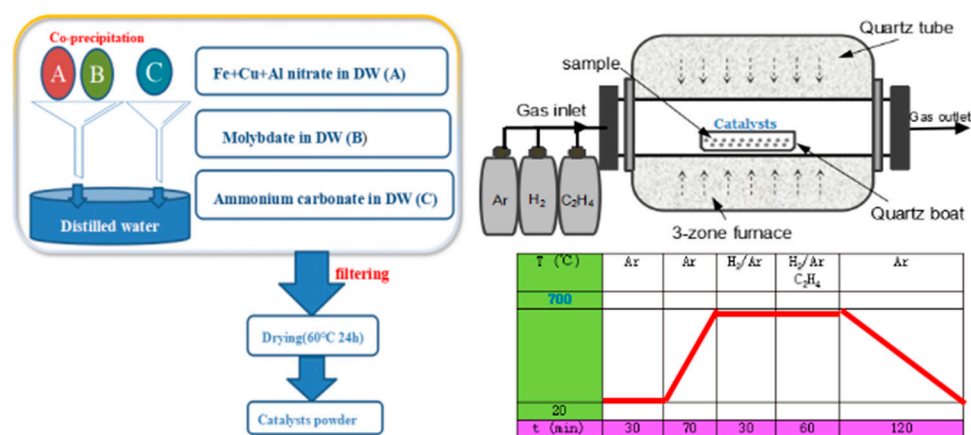
# Synthesis and Electrochemical Performance of Electrostatic Self-Assembled Nano-Silicon@N-Doped Reduced Graphene Oxide/Carbon Nanofibers Composite as Anode Material for Lithium-Ion Batteries

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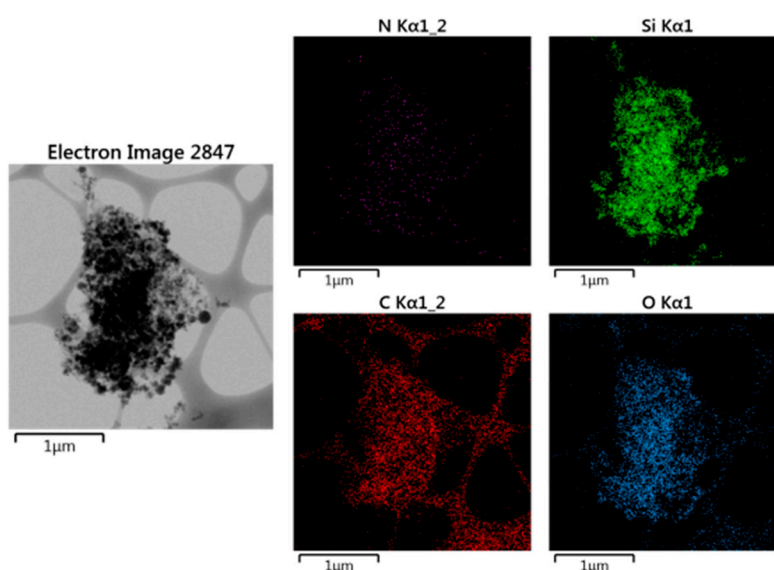
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**Figure S1.** Process for preparing the catalysts and the synthesis of carbon nanofibers.



**Figure S2.** The EDS mapping of the Si, N, C, O elements on the surface of the Si@N-doped rGO/CNF composite.

**Table S1.** Raman spectroscopy results of the GO, rGO, CNFs, Si/rGO, and Si/CNF/rGO samples (see Figure 4(b)).

Sample	I <sub>D</sub> /I <sub>G</sub>
GO	1.05
rGO	0.96
CNF	0.99
Si@APTES/N-doped GO	1.03
Si/rGO	1.02
Si@N-doped rGO	1.00
Si@N-doped rGO/CNF	1.00

**Table S2.** Discharge capacity, coulomb efficiency, and capacity retention rate of the Si/CNF/rGO, Si@N-doped rGO and Si@N-doped rGO/CNF composite electrodes.

Samples	Max. Discharge Capacity (mAh/g)	Discharge Capacity (mAh/g)		Coulomb Efficiency (%)		Capacity Retention Rate (%)	
		After 37 Cycle	After 100 Cycle	First Cycle	100 Cycle	After 37 Cycle	After 100 Cycle
Si/CNF/rGO	3434.9	1054.2	964.7	51.7	99.9	30.7	26.5
Si@N-doped rGO	3138.8	1140.2	1091.8	66.1	99.5	36.3	34.8
Si@N-doped rGO/CNF	2192.3	1418.8	1276.8	71.5	99.9	64.7	58.2