

Supplementary Information

NiFe-MIL-derived Si@C nanoparticles decorated on graphene sheets for efficient lithium storage

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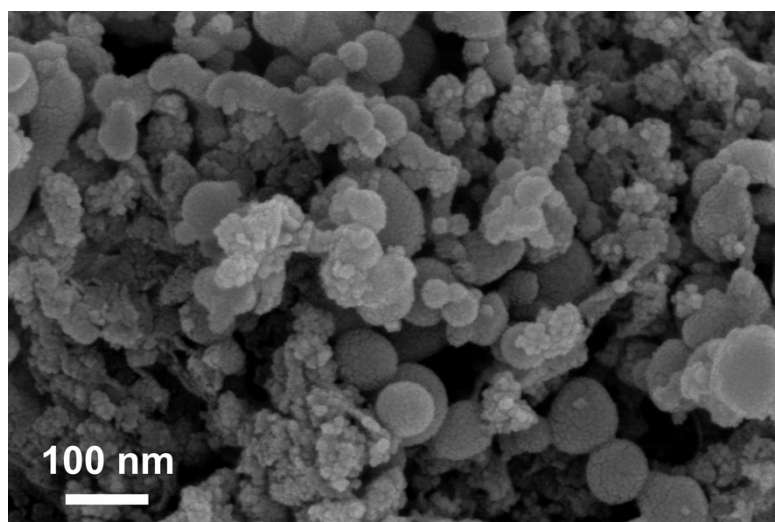


Fig. S1 SEM image of Si@NiFe-MIL@GO before carbonization.

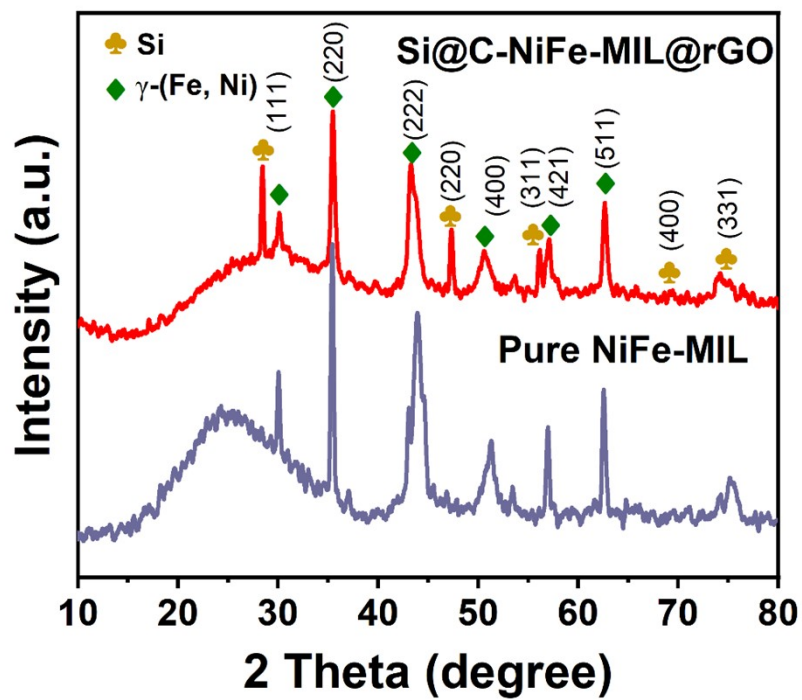


Fig. S2 XRD patterns of the Si@C-NiFe-MIL@rGO and NiFe-MIL composite.

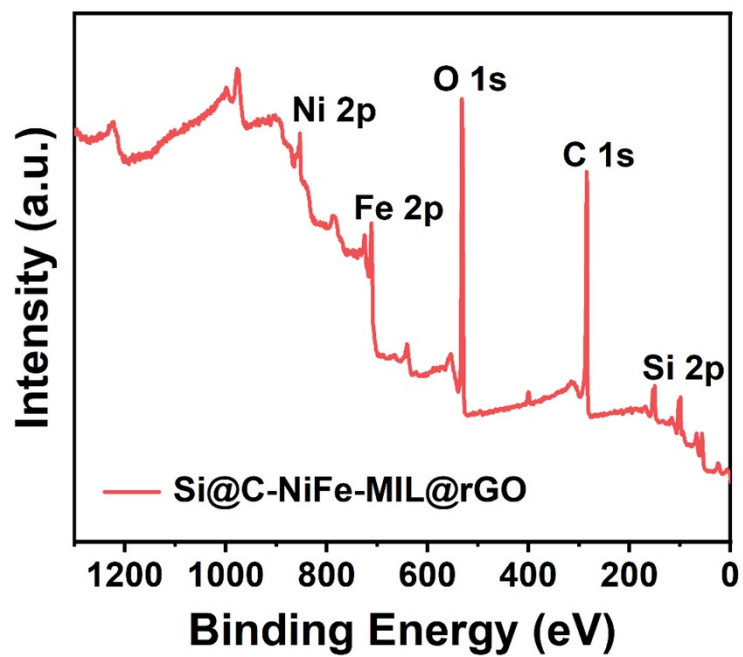


Fig. S3 XPS survey spectra of the Si@C-NiFe-MIL@rGO composite.

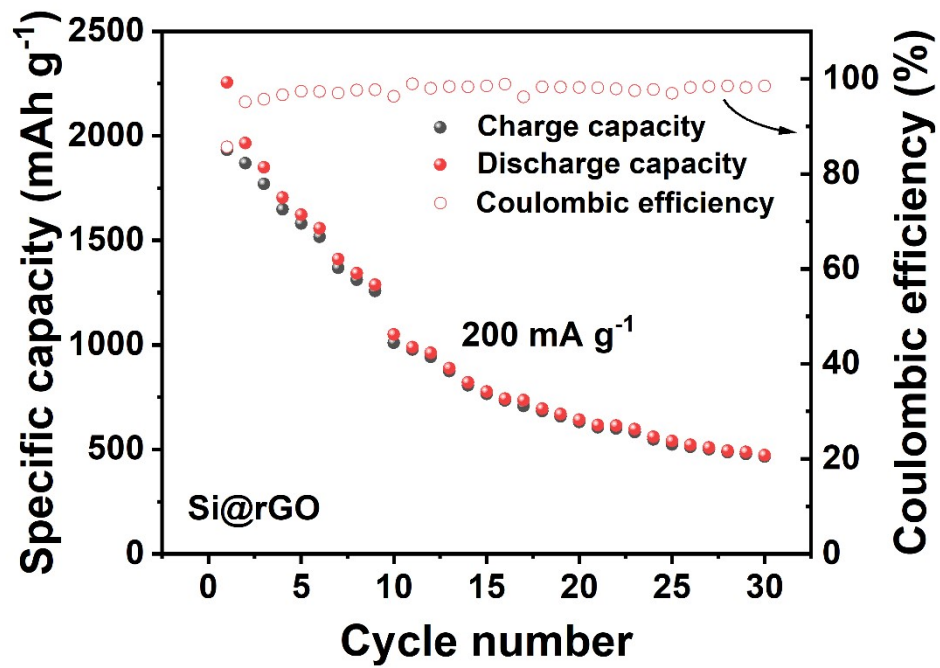


Fig. S4 The cycling performance of the Si@rGO electrode at a current density of 200 mA g⁻¹.

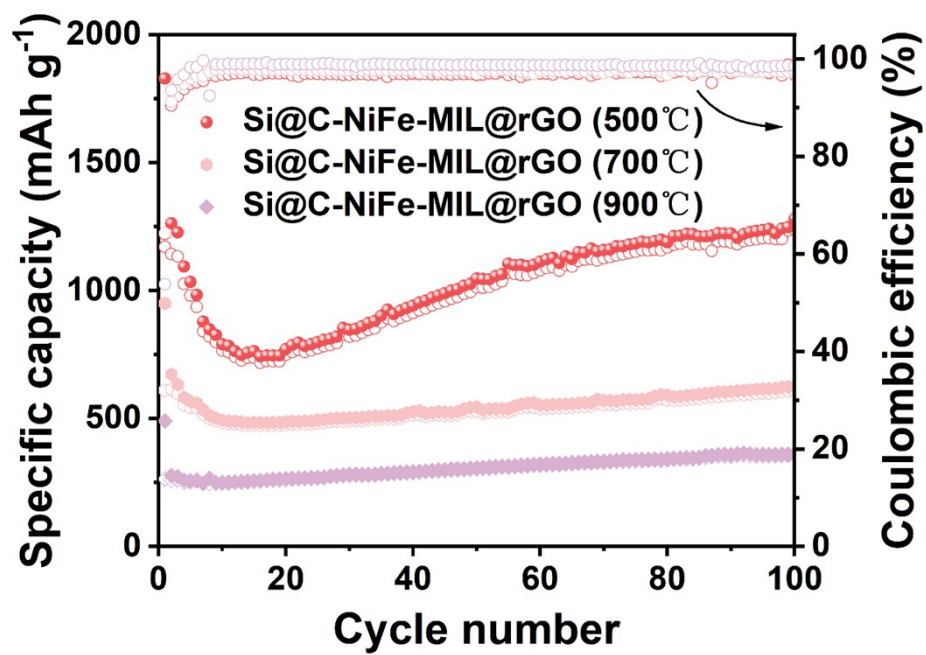


Fig. S5 The cycling performance of the Si@C-NiFe-MIL@rGO electrode under different carbonization temperatures at a current density of 200 mA g⁻¹.

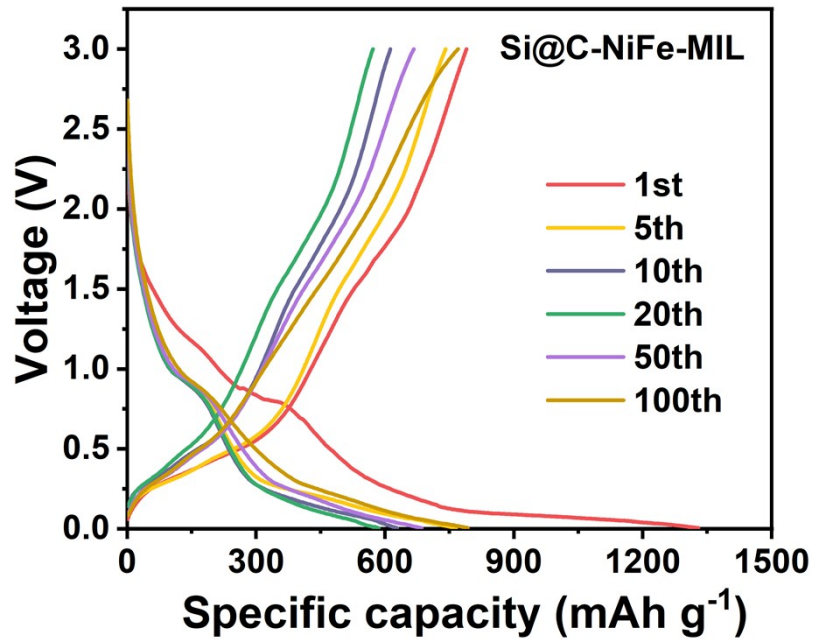


Fig. S6 Corresponding capacity-voltage curves of the Si@C-NiFe-MIL electrode at various cycles at 200 mA g⁻¹.

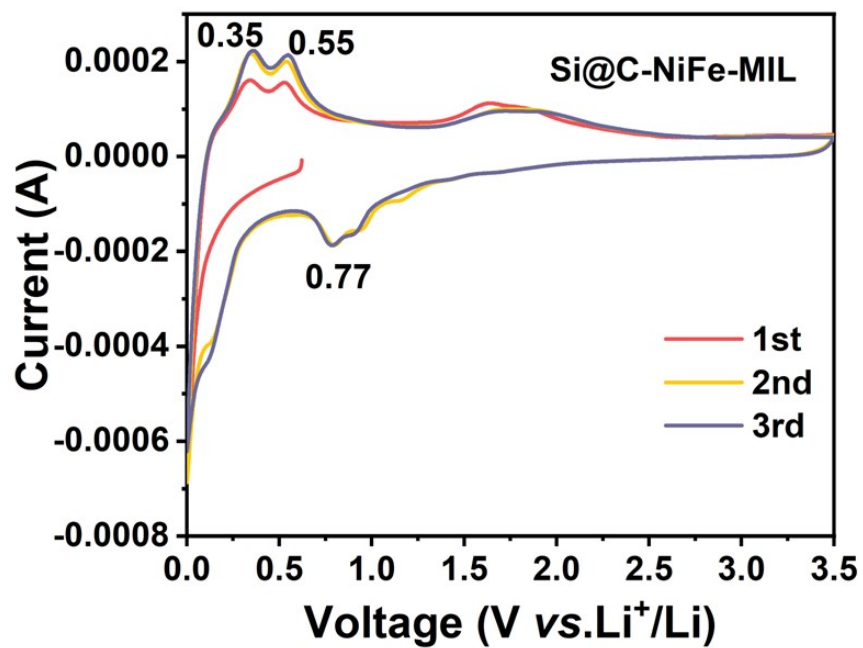


Fig. S7 The initial three CV curves of the Si@C-NiFe-MIL electrode, scanned at a rate of 0.1 mV s⁻¹ from 0.01 to 3.0 V.

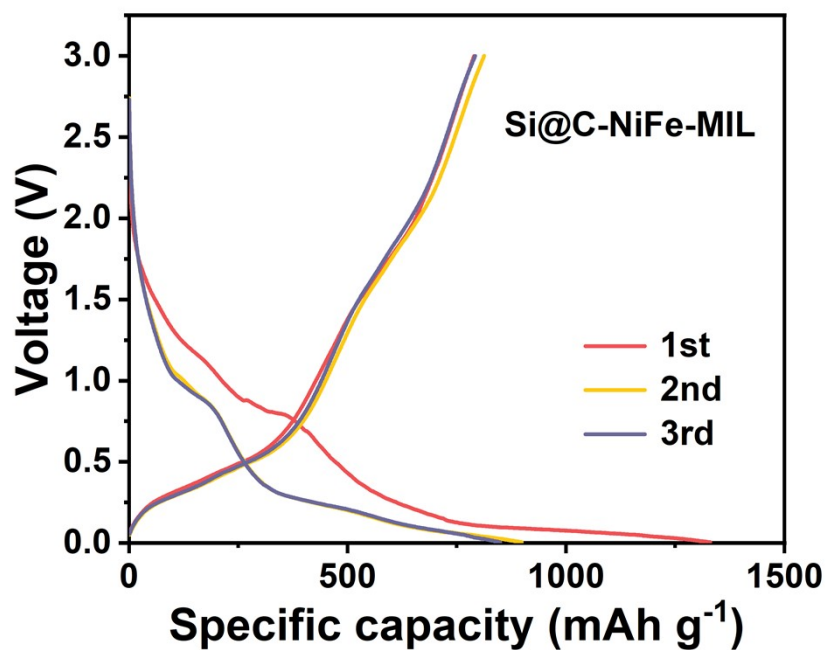


Fig. S8 Charge/discharge profiles of the Si@C-NiFe-MIL electrode at initial three cycles at 200 mA g⁻¹.

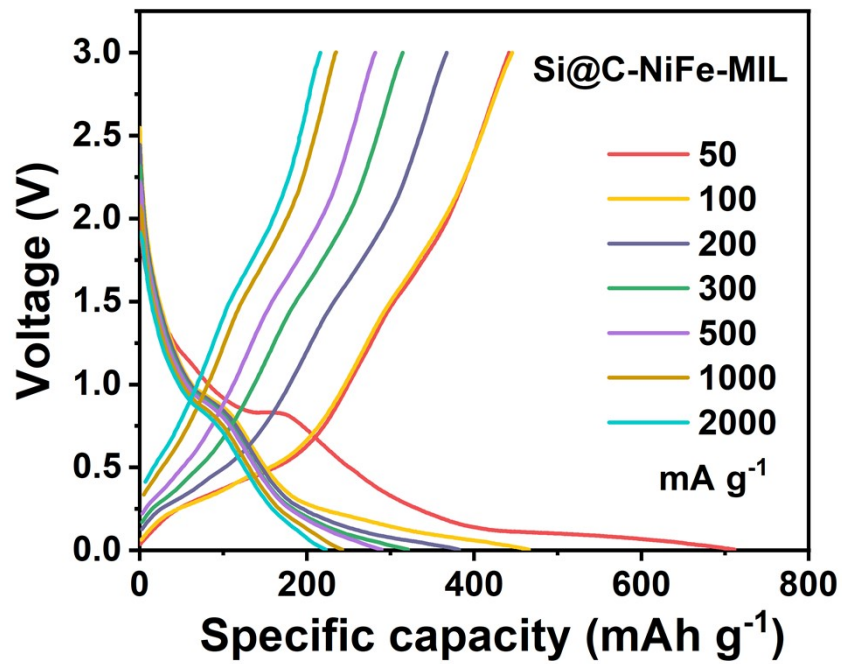


Fig. S9 Corresponding capacity-voltage curves of the Si@C-NiFe-MIL electrode at different current densities.

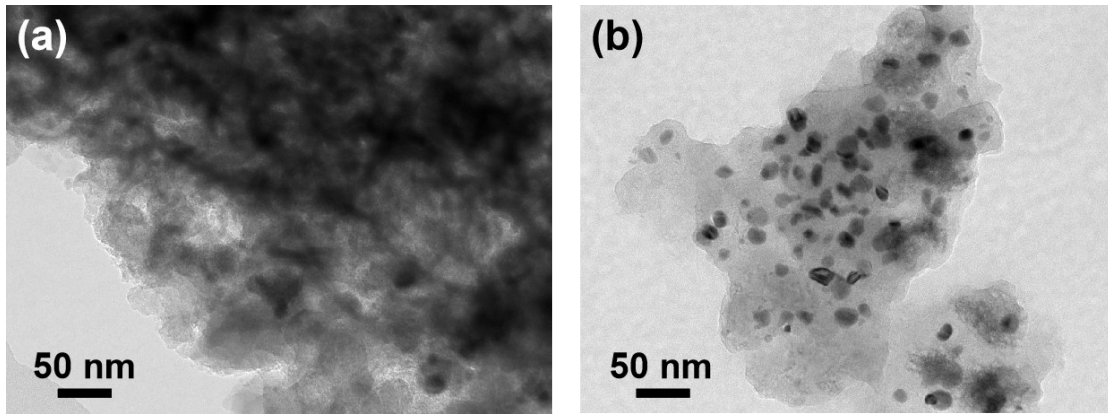


Fig. S10 TEM of (a) Si@C-NiFe-MIL@rGO and (b) Si@C-NiFe-MIL electrode after 50 cycles.

Table S1. Element contents measured by EDS for Si@C-NiFe-MIL@rGO composite.

Si@C-NiFe-MIL@rGO	C	O	Si	Ni	Fe
At %	39.32	18.81	25.27	6.65	9.96
Wt %	19.44	12.39	29.22	16.06	22.89