Supporting information

Reduced Graphene Oxides Encaged Submicron-silicon Anode Interfacially Stabilized by Al_2O_3 Nanoparticles for Efficient Lithium-ion Batteries

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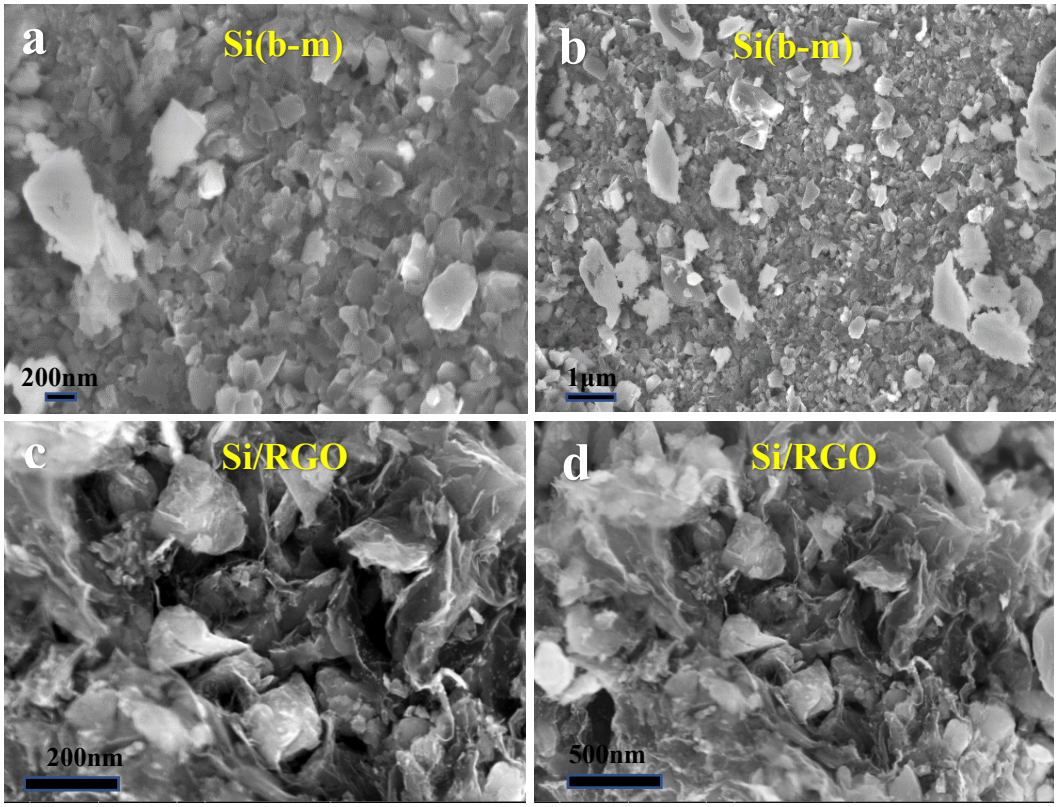

Figure S1 SEM images of ball milled Si (a, b) and Si/RGO (c, d).

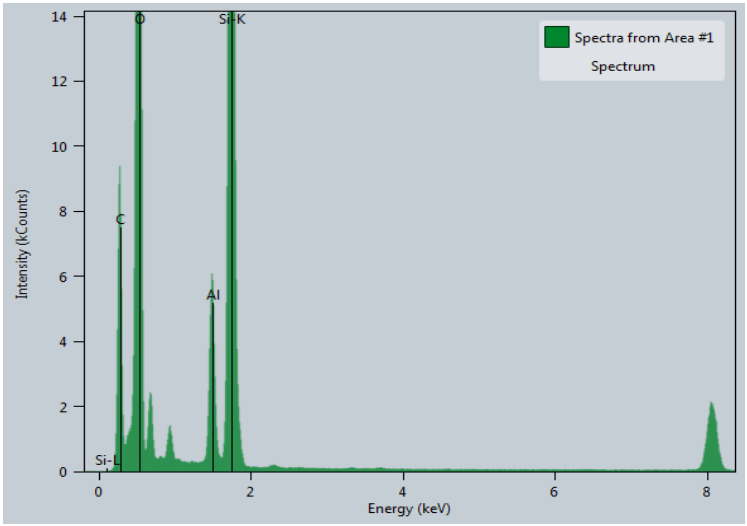

Figure S2 Energy dispersion spectrum of Si/Al_2O_3/RGO.

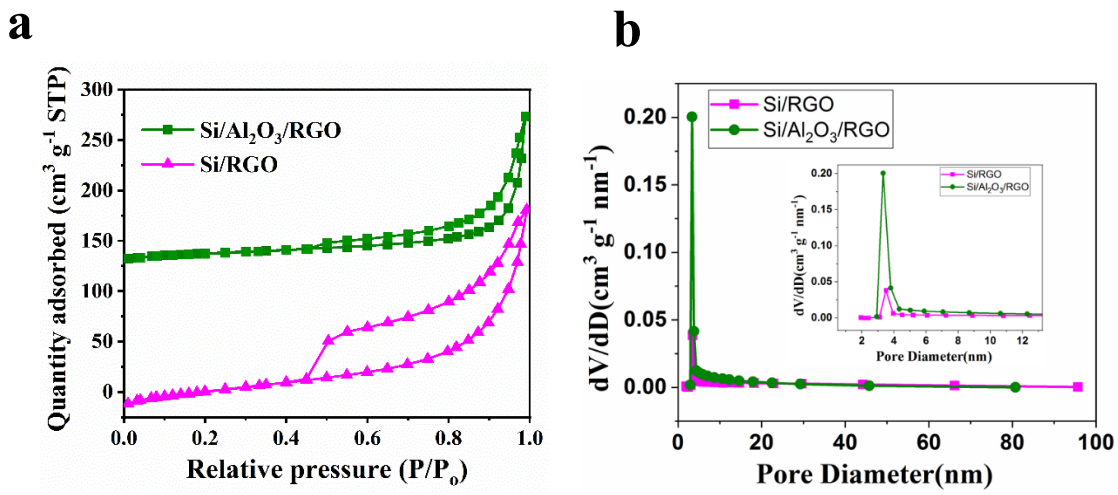

Figure S3 N_2 adsorption/desorption isotherms at 77 K (a) and the relevant BJH pore-size distribution of Si/RGO and Si/Al_2O_3/RGO composites.

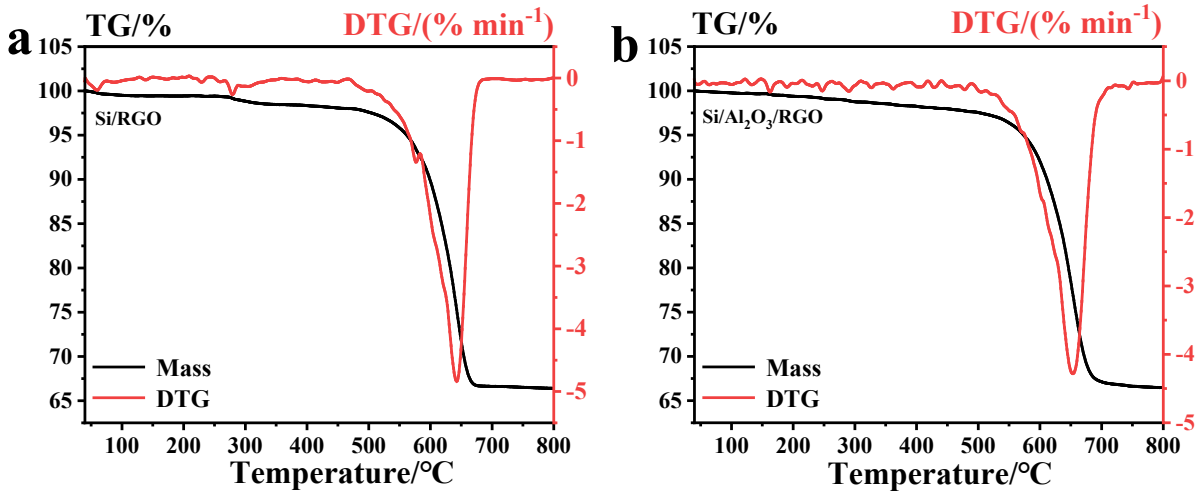

Figure S4 TGA curves of Si/RGO (a) and Si/Al_2O_3/RGO (b).

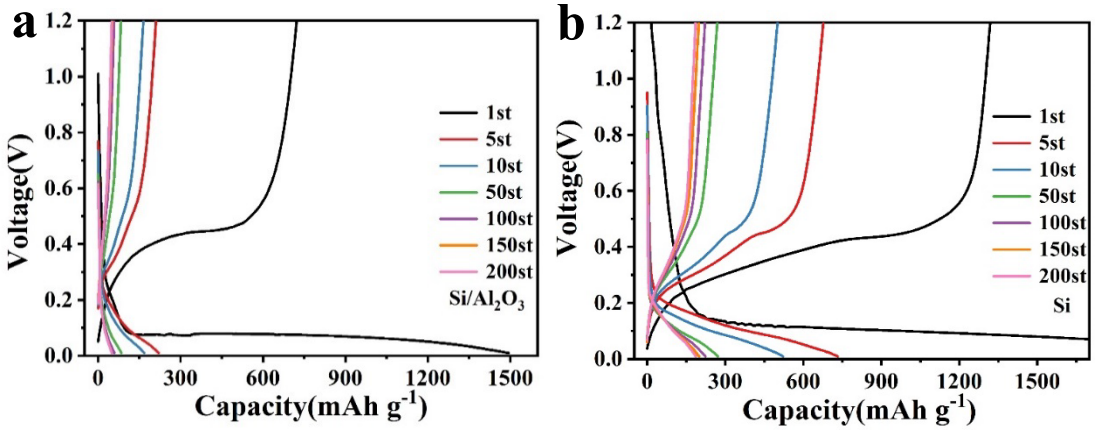

Figure S5 Galvanostatic voltage-capacity curves of Si/Al_2O_3 (a) and pure silicon (b) electrode materials at different cycle (1st, 5th, 10th, 50th, 100th, 150th and 200th cycles).

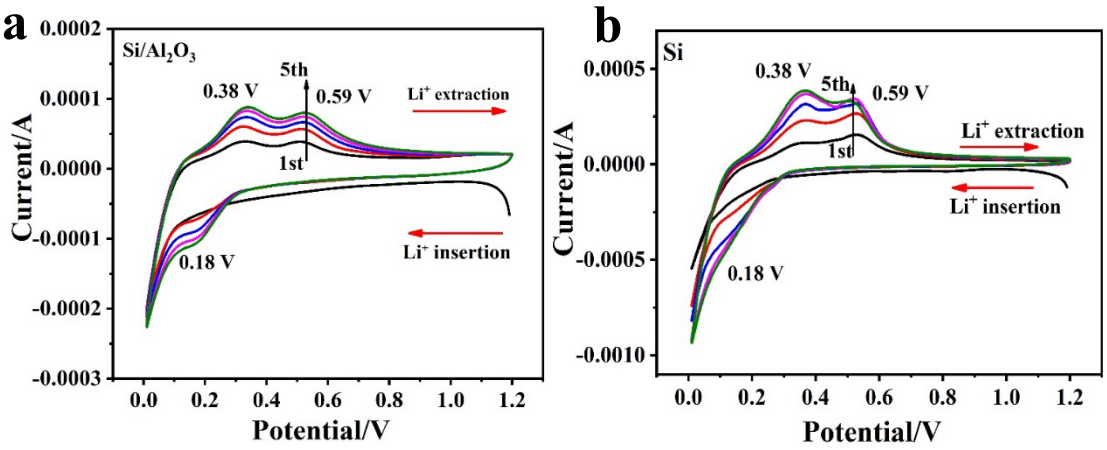

Figure S6 Cyclic voltammograms of the Si/Al_2O_3 electrode (a) and pure Si electrode (b).