

Supporting Information

Stabilization of Silicon Nanoparticles in Graphene Aerogel Framework for Lithium Ion Storage

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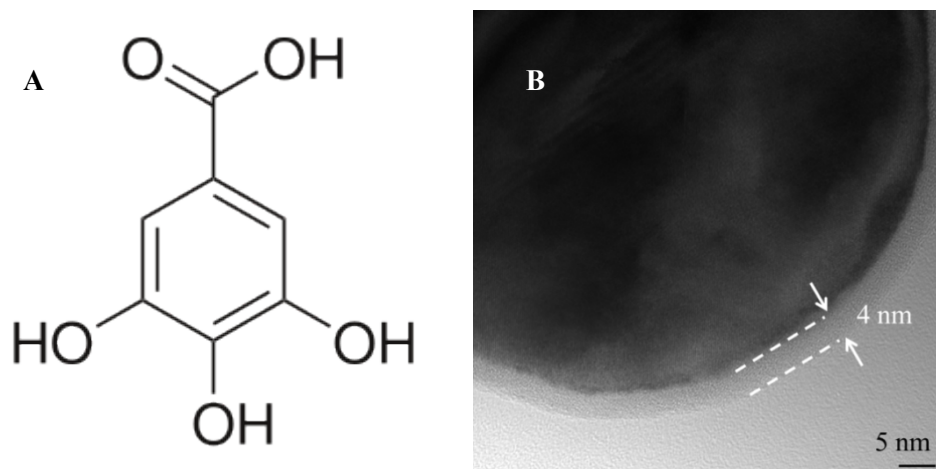


Figure S1. (A) Structure of GA; (B) HRTEM image of SiNPs used in this work.

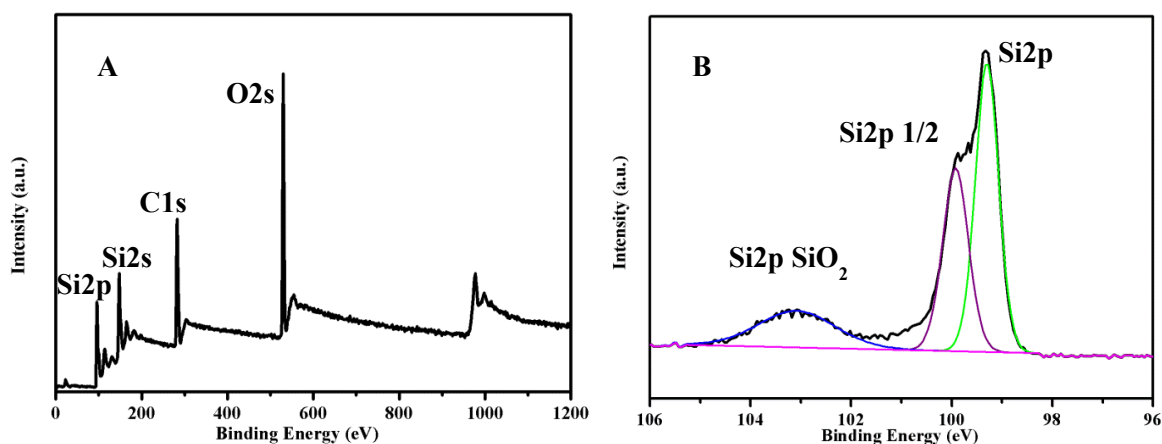


Figure S2. XPS survey (A) and Si 2p spectrum of SiNPs (B).

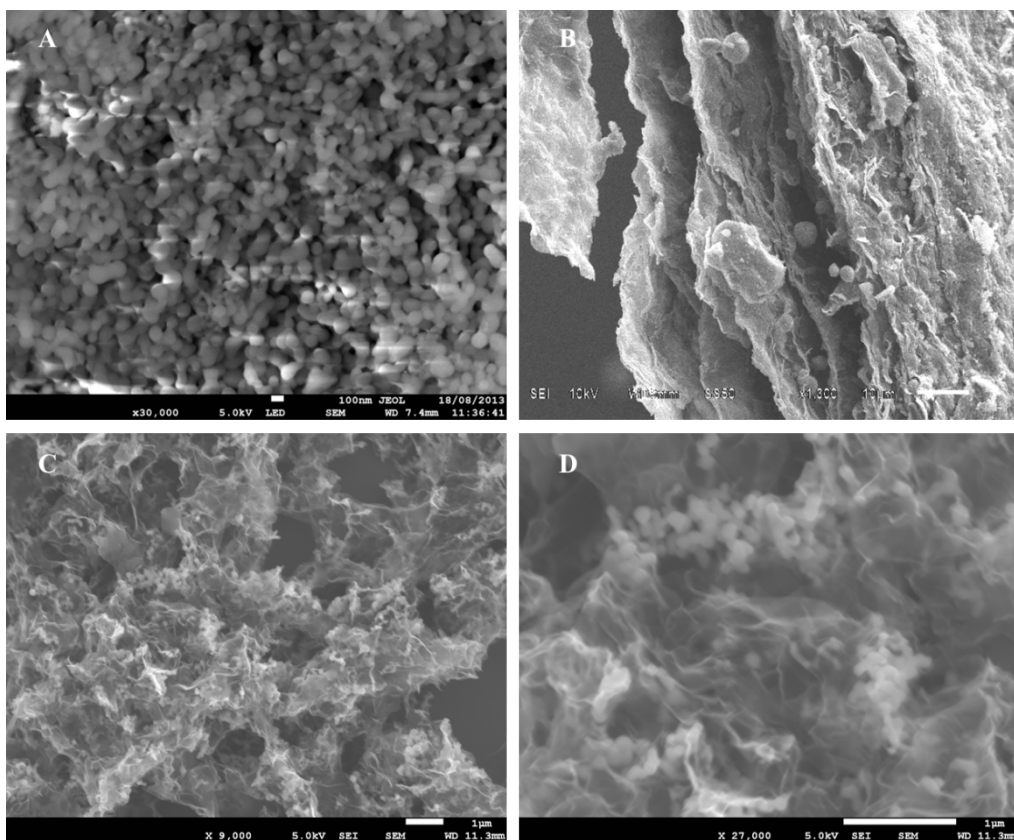


Figure S3. SEM images of SiNPs (A) sample Si/RGO (B), which was prepared by using physical mixing method and sample Si/RGO-SWAG (C, D), which was prepared by single RGO wrapping.

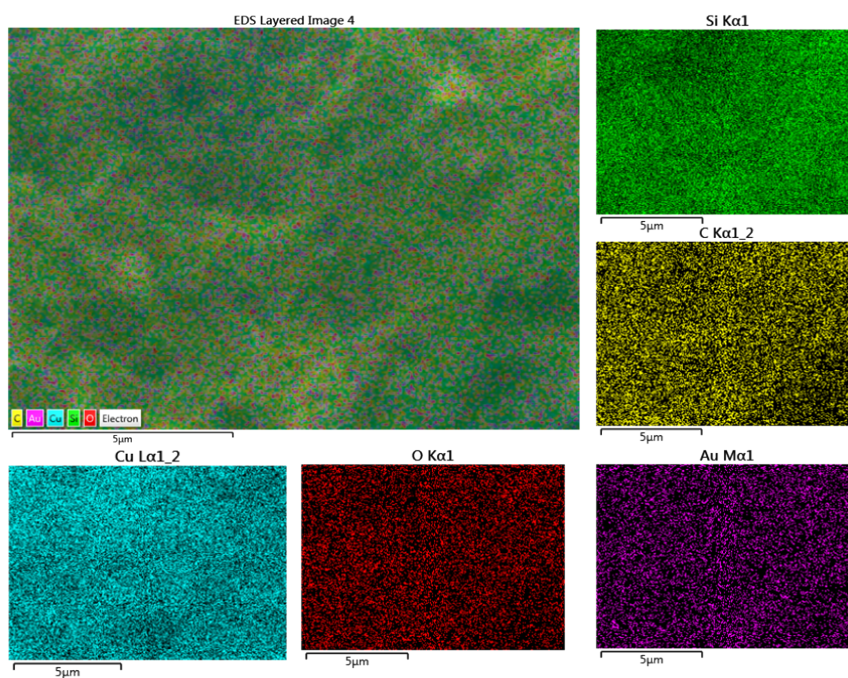


Figure S4. EDS mapping of Si/RGO-AG.

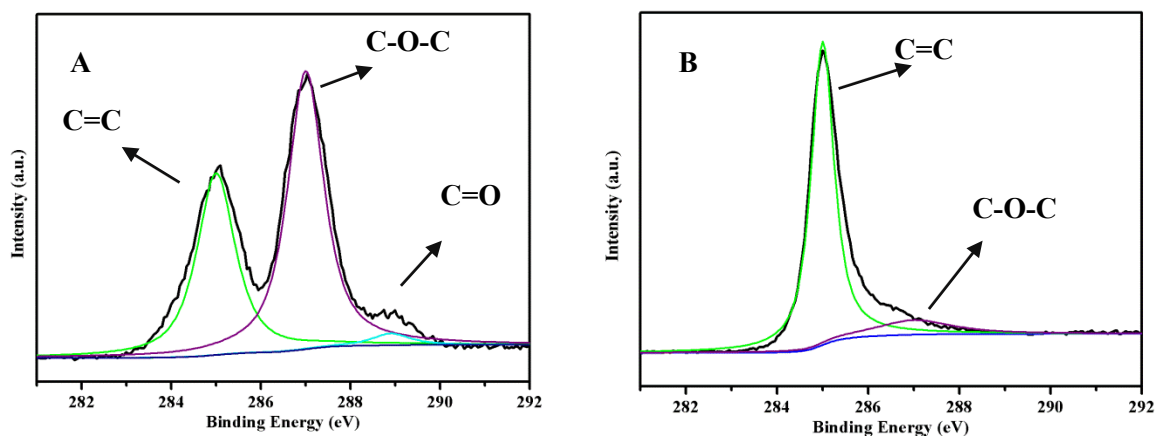


Figure S5. C 1s XPS spectra of GO (A) and Si/RGO-AG (B).

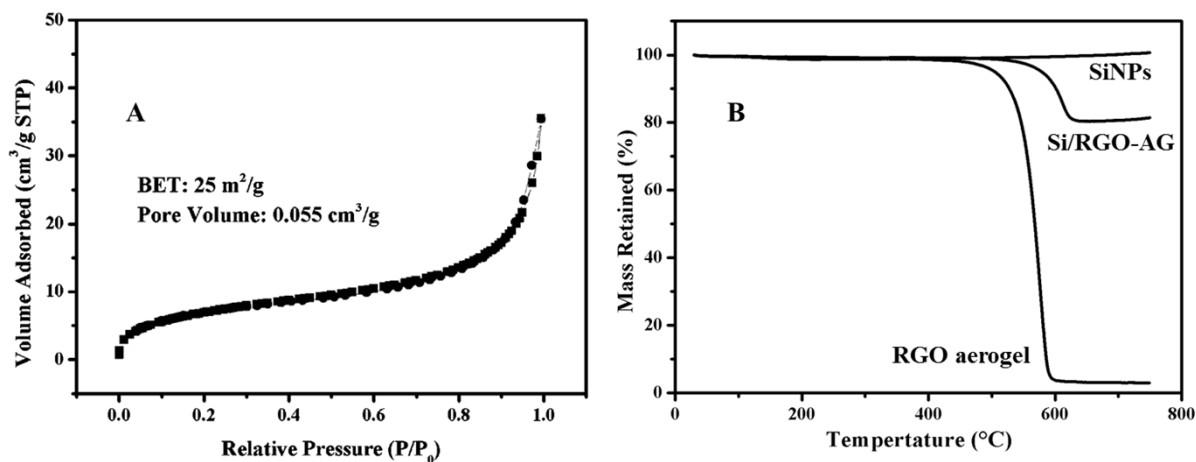


Figure S6. N₂ adsorption/desorption isotherm of SiNPs (A); TGA curves for SiNPs, RGO aerogel and Si/RGO-AG conducted in air (B).

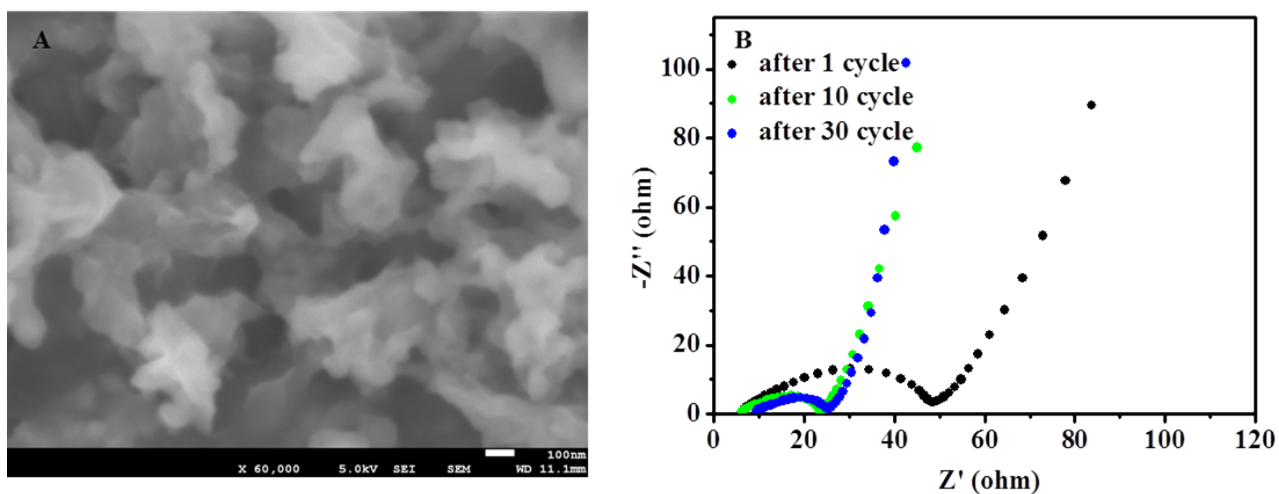


Figure S7. SEM image of Si/RGO-AG after 40 cycles (A); Electrochemical impedance spectroscopy (EIS) plots of Si/RGO-AG (B).