

Electronic Supplementary Information (ESI) for

Sandwich-Structure towards Superior Cycling

Performance for Si/C Anode of Lithium Ion Batteries

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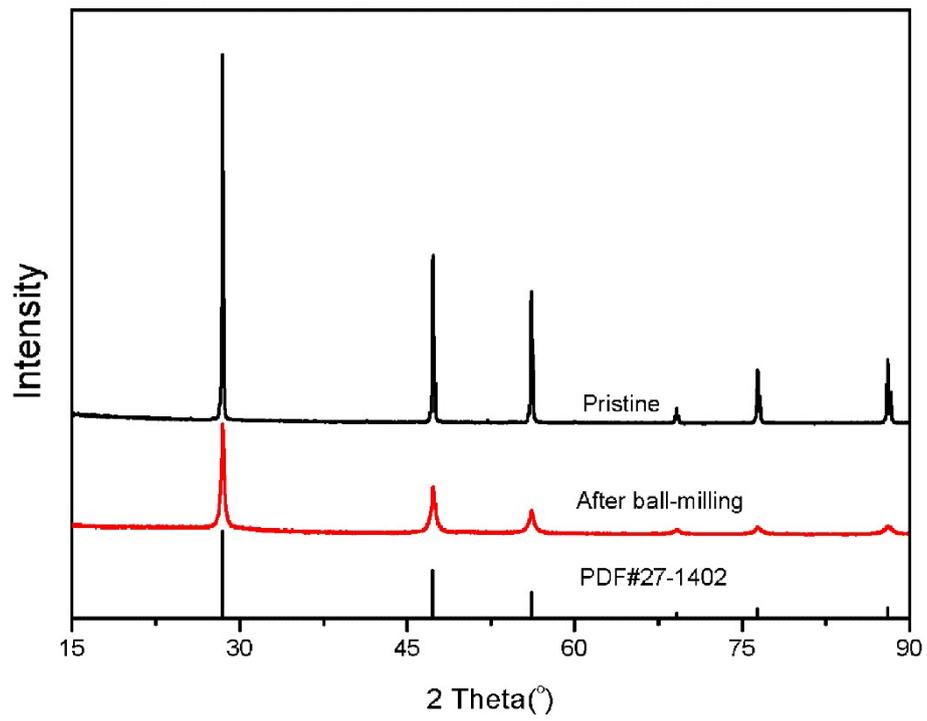


Fig S1 The XRD patterns of pristine commercial silicon and after ball-milling.

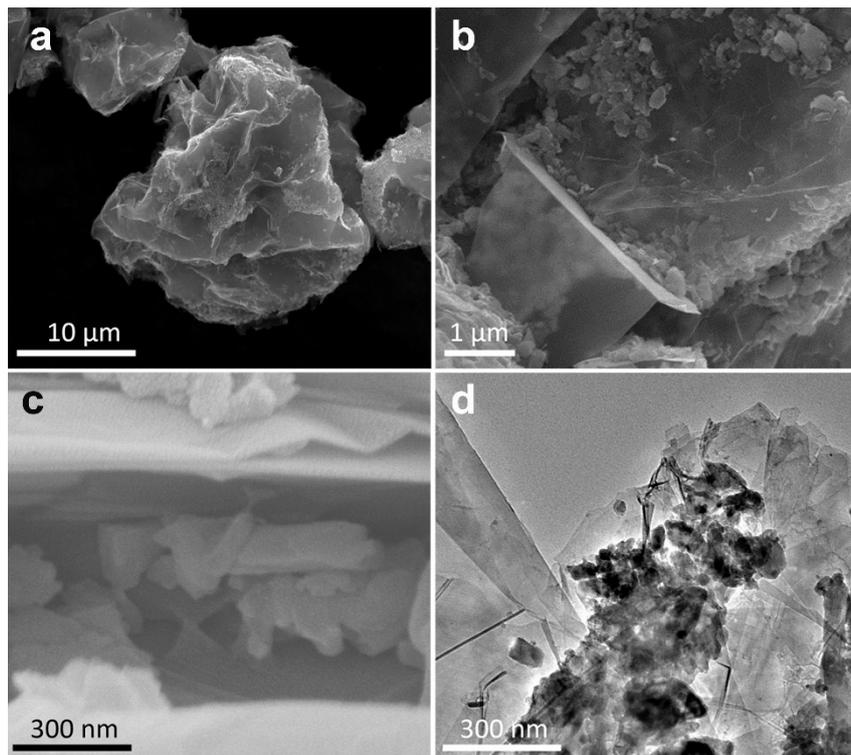


Fig S2 The morphological and structural characterization of the Si/graphene composite:

(a-c) SEM images and (d) TEM image.

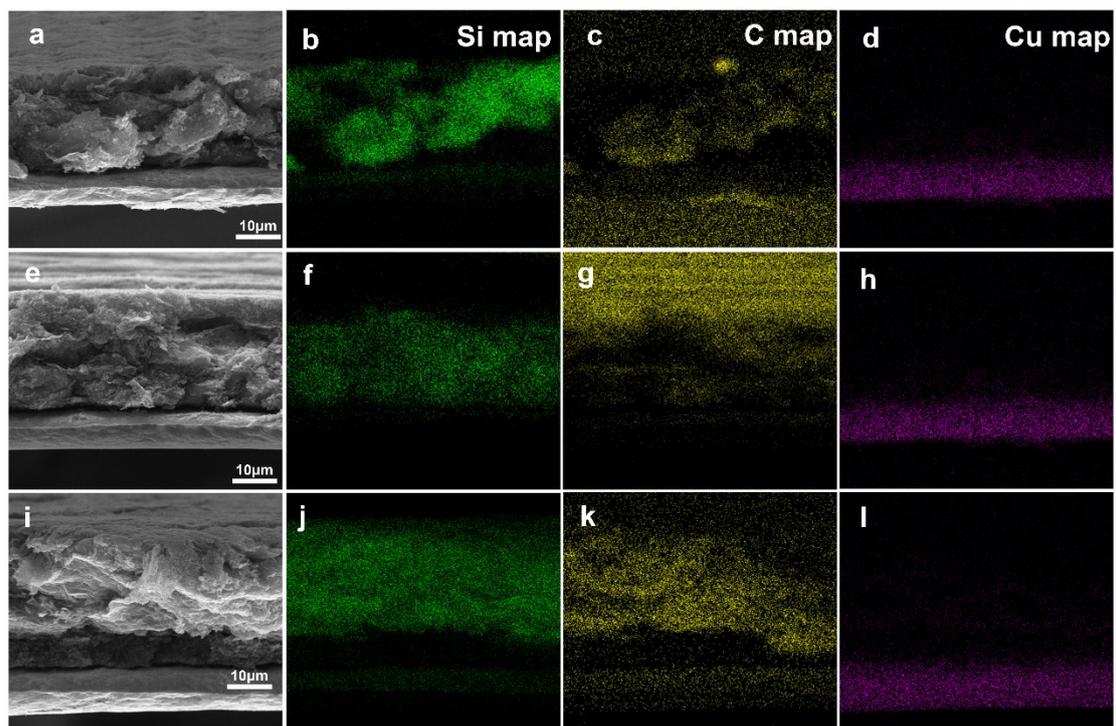


Fig S3 (a) SEM image and (d, e, f) corresponding element mapping of AM, (e) SEM image and (f, g, h) corresponding element mapping of AM/SP, (i) SEM image and (j, k, l) corresponding element mapping of SP/AM.

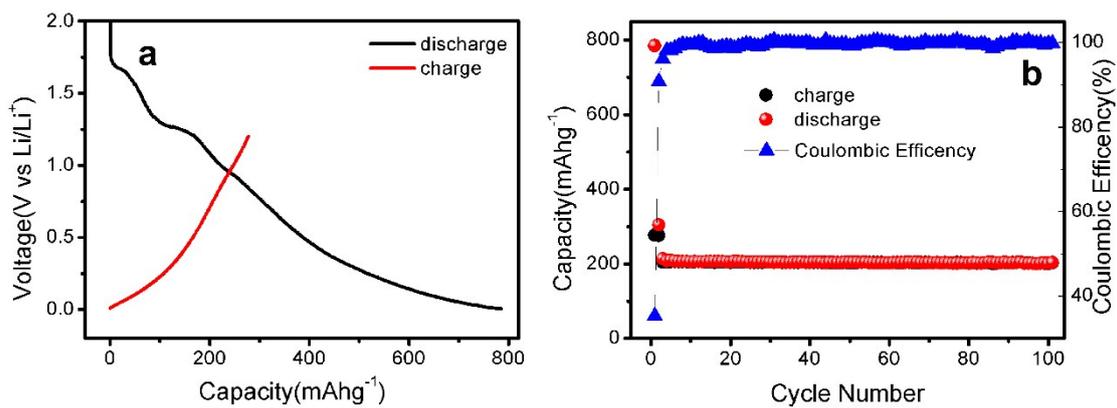


Fig S4 (a) First charge/discharge voltage profiles of SP at a current density of 75 mA g⁻¹. (b) Coulombic efficiency and cycling performance of SP at a current density of 75 mA g⁻¹ for the first two cycles as a activation process, a current density of 0.15 A g⁻¹ for the later cycles.

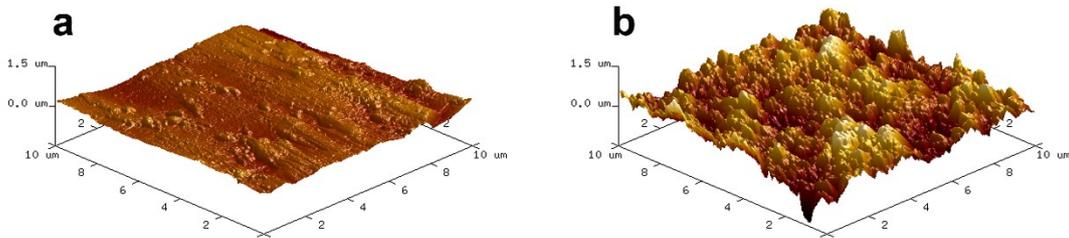


Fig S5 Scanning Probe Microscopy SPM images of the surface (a) Cu foil, (b) SP.

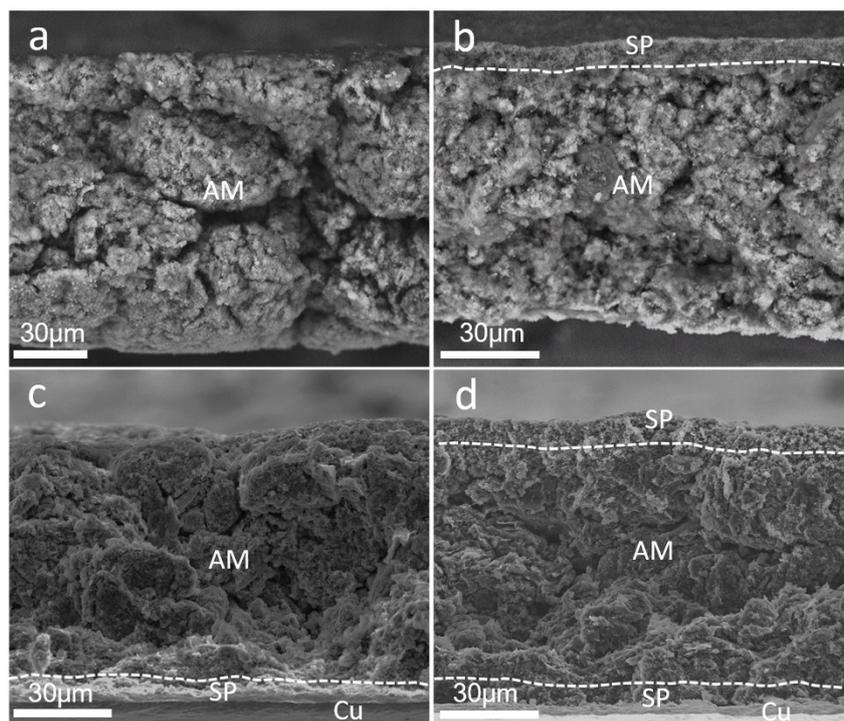


Fig S6 The cross-sectional SEM images of electrodes at full discharged state: (a) AM, (b) AM/SP, (c) SP/AM, (d) SP/AM/SP.

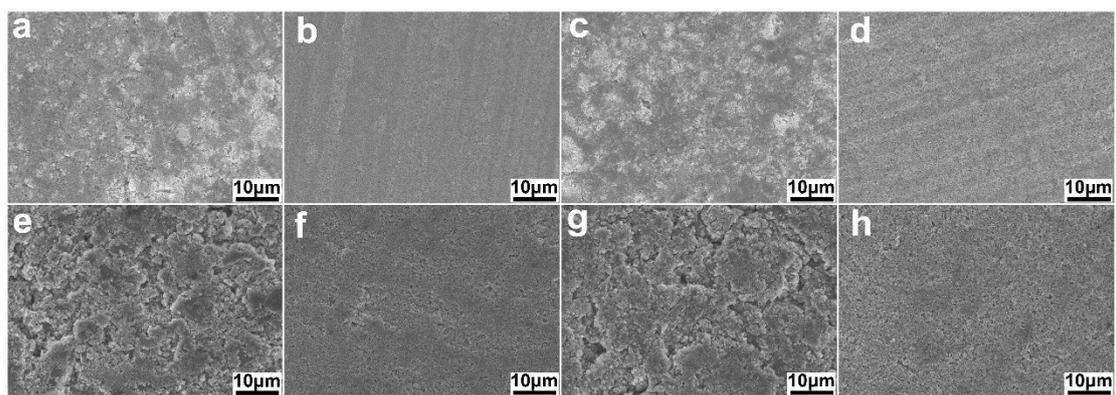


Fig S7 SEM of surface morphology of the electrodes with different configurations: before cycling (a) AM, (b) AM/SP, (c) SP/AM, (d) SP/AM/SP, and after cycling (e) AM, (f) AM/SP, (g) SP/AM, (h) SP/AM/SP.