

FIG.S1 XRD patterns of the self-supporting LTO-AT/RGO aerogel with different time of the water washing.

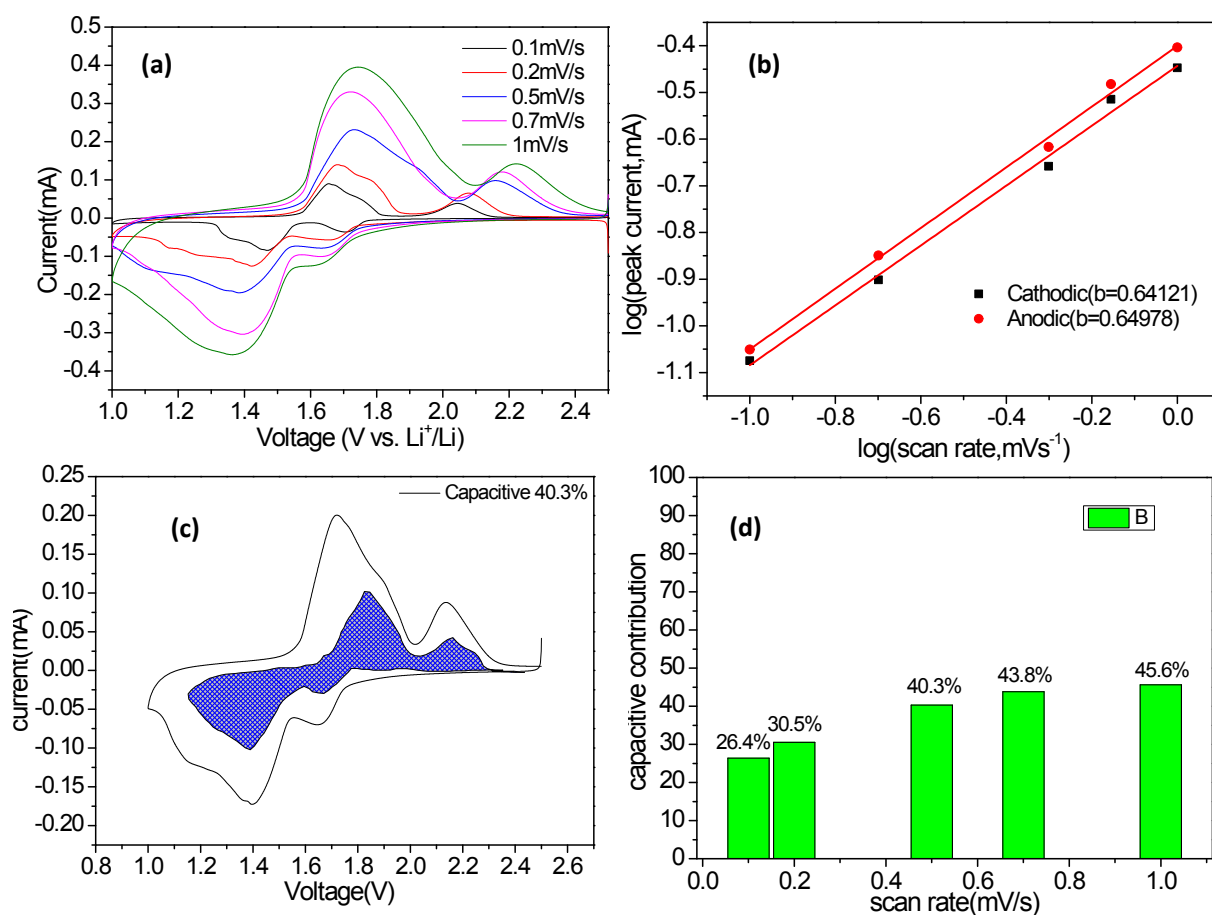


FIG.S2 (a) CV curves at various scan rates of self-supporting LTO-AT/RGO electrode for SIBs; (b) calculating the b-value according to $\text{Log}(i)$ - $\text{Log}(v)$ plots; (c) Typical CV curve with the contribution from capacitive effect shown by the highlighted region at 0.5 mV s^{-1} ; (d) Comparison of the capacitive charge contributions at different scan rates.

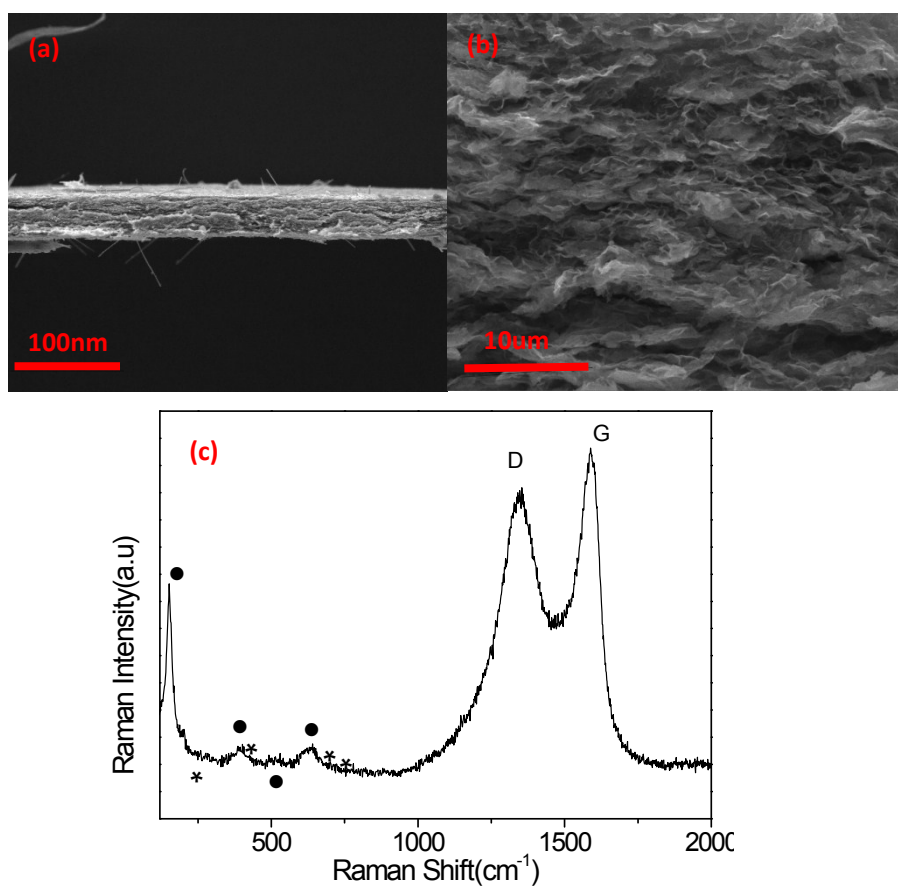


FIG.S3 (a) and (b) SEM image of the as-cycled self-supporting LTO-AT/RGO electrode as lithium ion battery; (c) Raman scattering spectra acquired from the self-supporting LTO-AT/RGO electrode after 1000 cycles.