

Supporting Information

Sb-coated SiC Nanoparticles as Stable and High Capacity

Anode Materials for Li-ion Batteries

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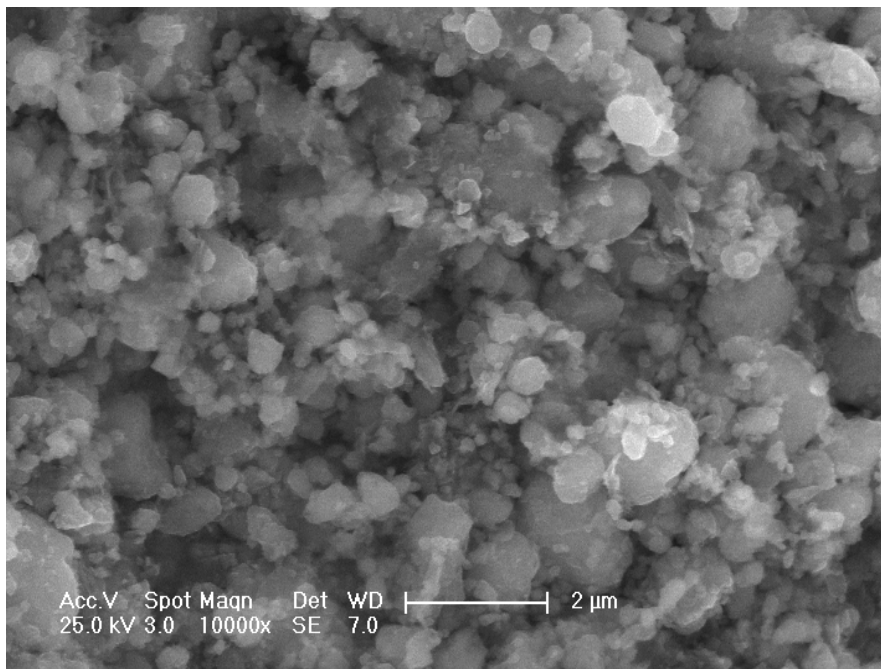


Figure S1. SEM image of the as prepared SiC-Sb-C nanocomposite.

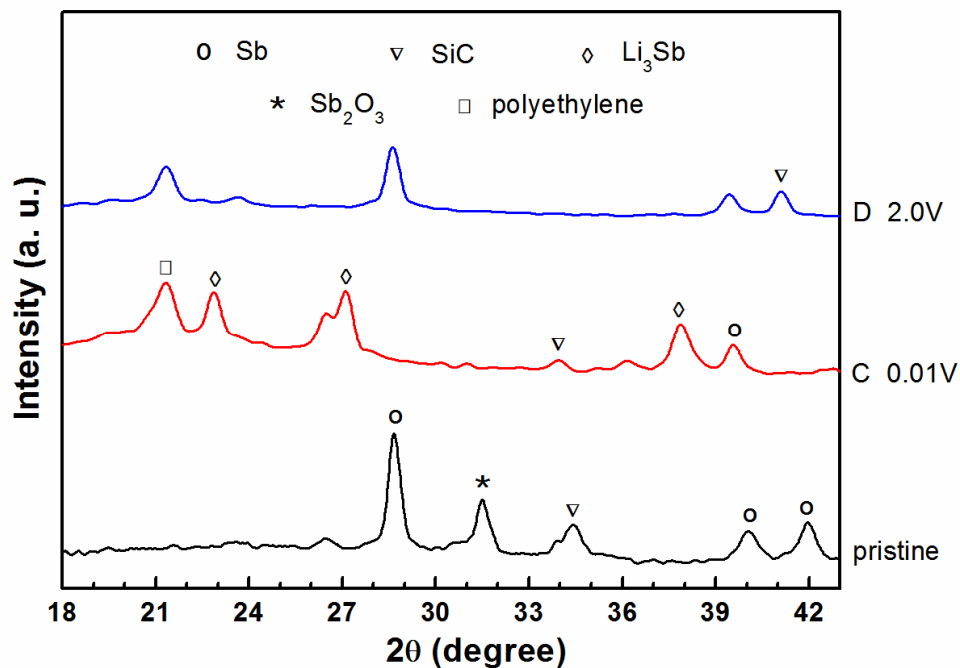


Figure S2. *Ex situ* XRD patterns of the anode at various depths of charge-discharge state

After first charge at 0.01V, most of the diffraction peaks of the Sb-phase disappeared and correspondingly several XRD peaks emerged, characterizing the formation of Li_3Sb alloy phase. After a reversed discharge at 2.0V, the XRD signals of elemental Sb phase reappeared, suggesting a superduper electrochemical reversibility of this SiC-Sb-C composite.