

Supplementary Information

WS₂-3D graphene nano-architecture networks for high performance anode material of lithium ion batteries

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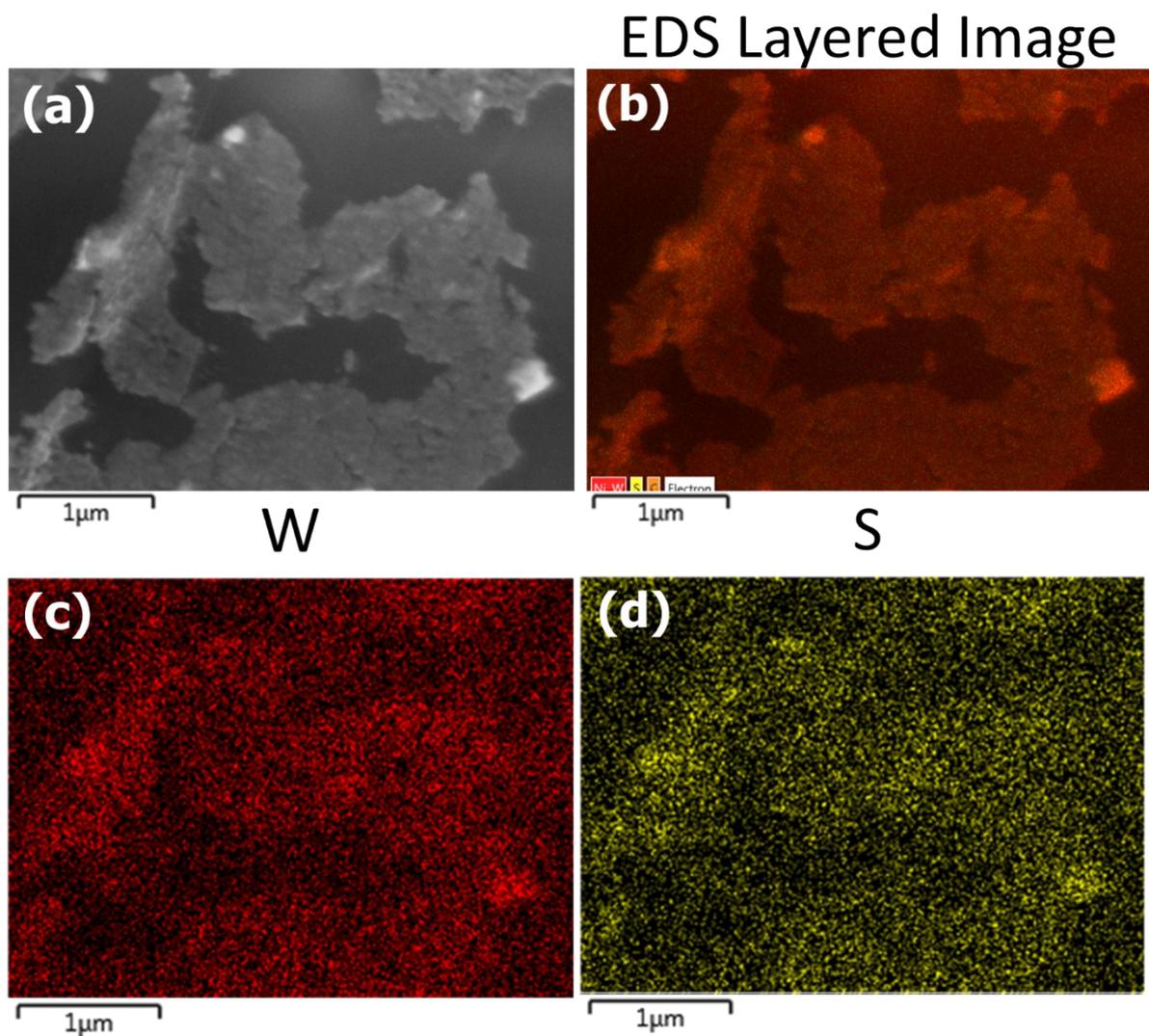


Figure S1. (a) SEM of the 60WSG-WS₂-3Dgn nanocomposites. (b), (c), (d) Energy Dispersive X-ray Spectra Mapping (EDS) of the 60WSG-WS₂-3Dgn nanocomposites of the same region.

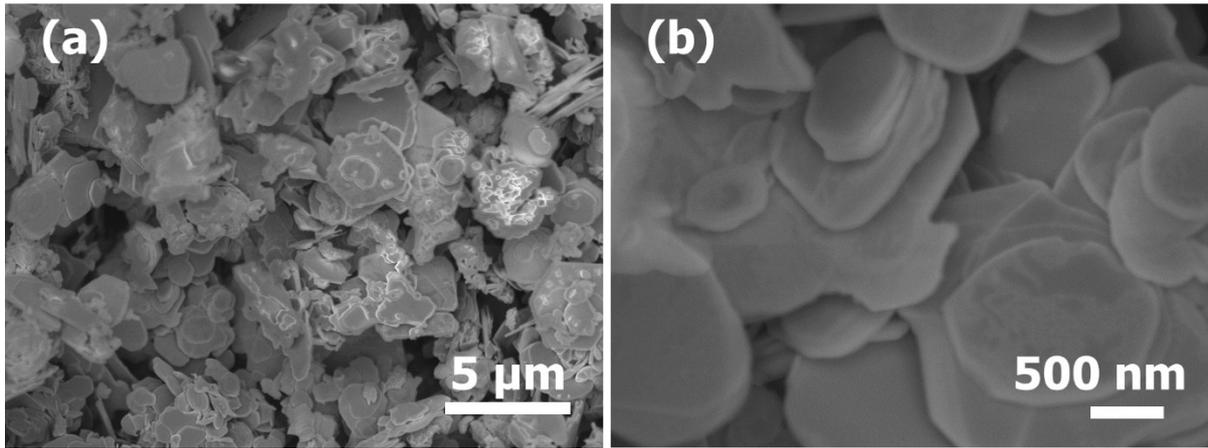


Figure S2. SEM images of the bulk WS₂ with various magnifications.

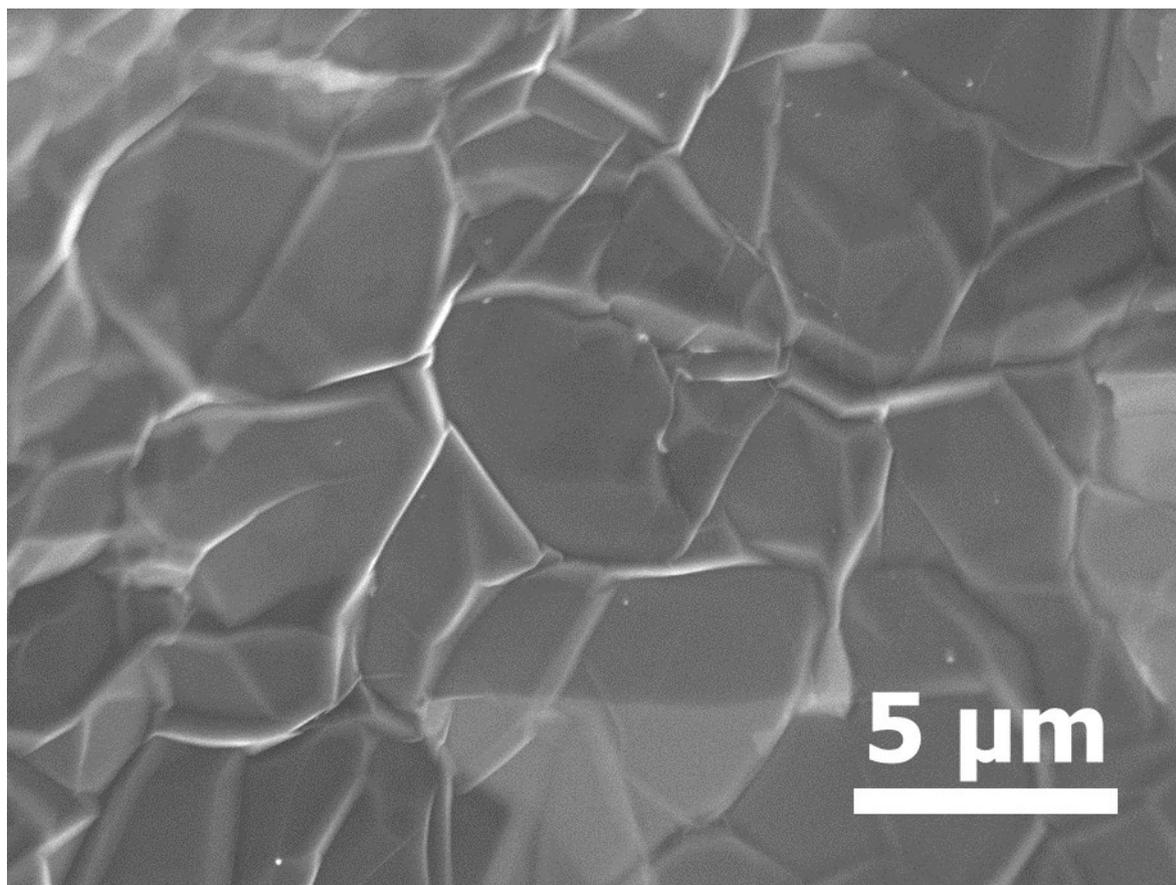


Figure S3. SEM image of the pristine 3Dgn.

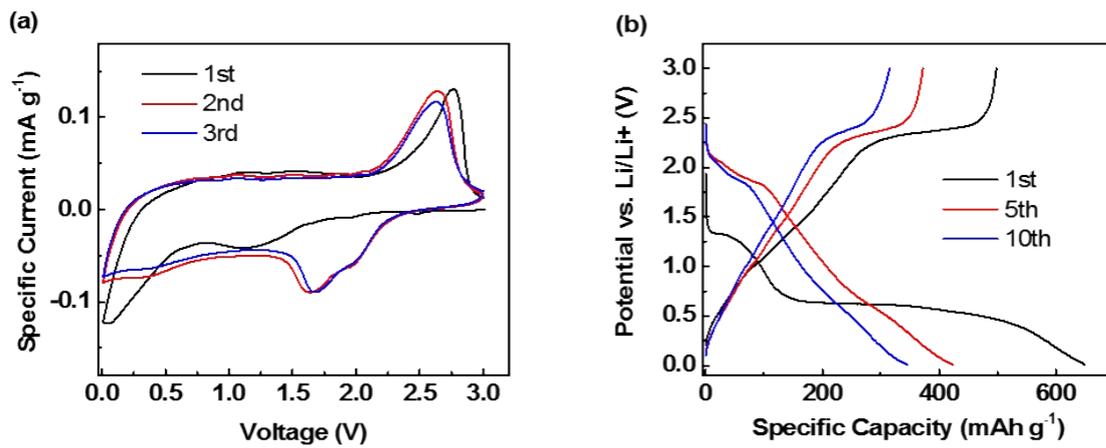


Figure S4. (a) CV of the first 3 cycles and (b) Galvanostatic charge and discharge profiles in 1st, 5th and 10th cycle of the bulk WS₂ electrodes measured at a current density of 100 mA g⁻¹.

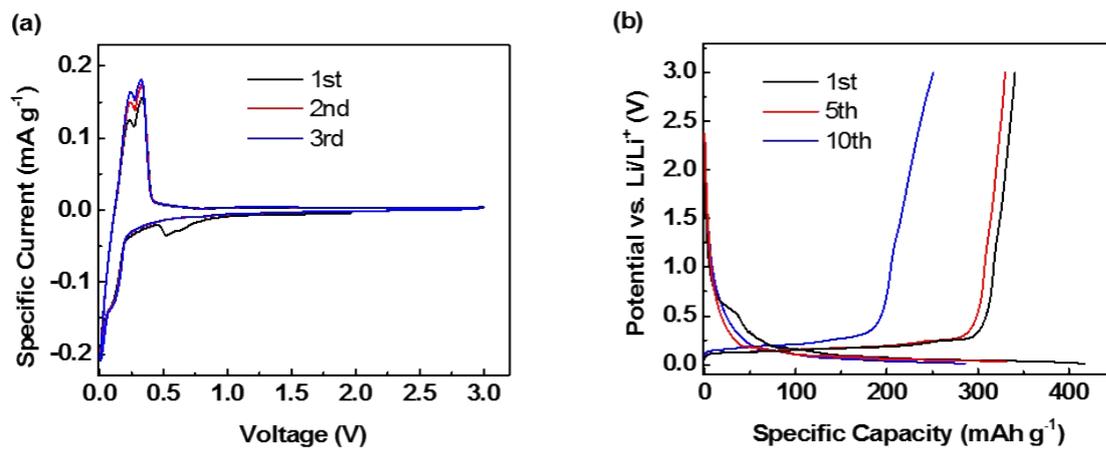


Figure S5. (a) CV of the first 3 cycles and (b) Galvanostatic charge and discharge profiles in the 1st, 5th and 10th cycle of the 3Dgn electrodes measured at a current density of 100 mA g⁻¹.

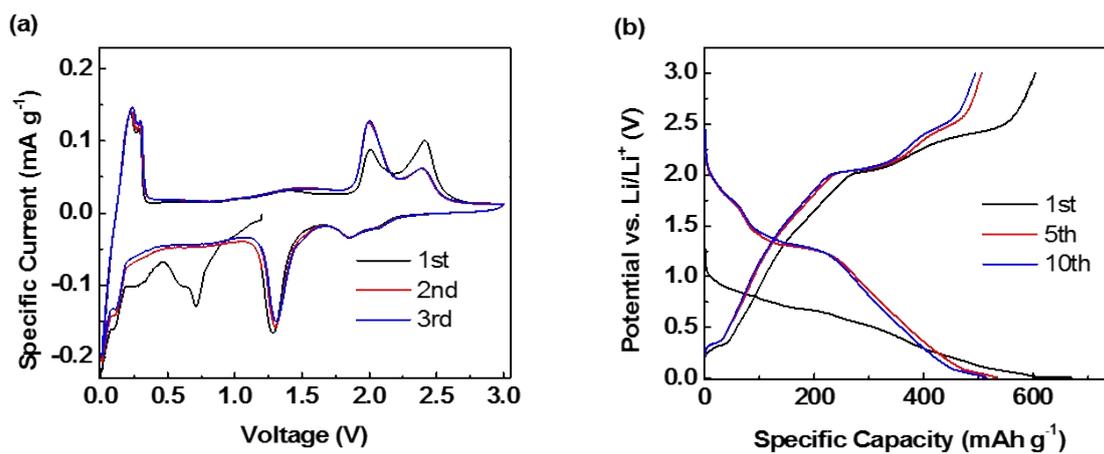


Figure S6. (a) CV of the first 3 cycles and (b) Galvanostatic charge and discharge profiles in 1st, 5th and 10th cycle of the 30WSG WS₂-3Dgn nanocomposites measured at a current density of 100 mA g⁻¹.

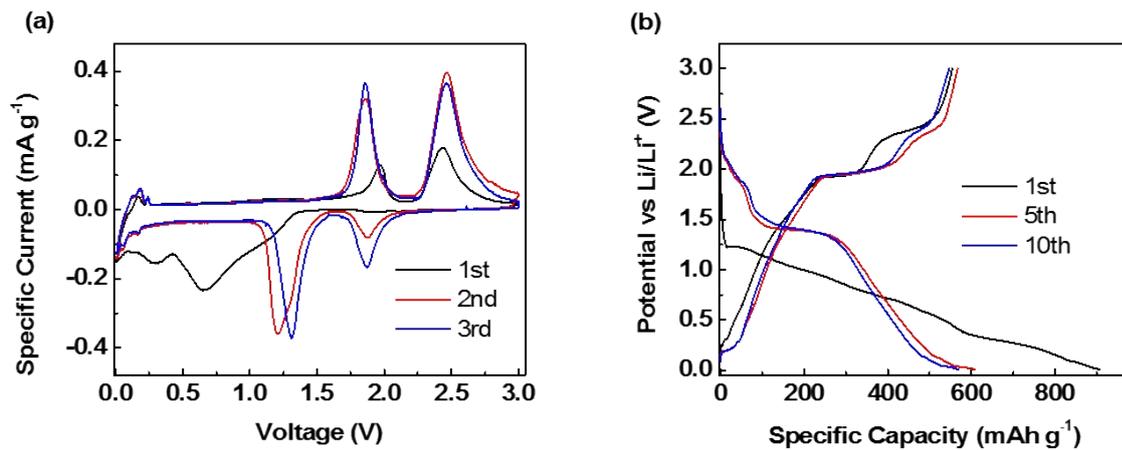


Figure S7. (a) CV of the first 3 cycles and (b) Galvanostatic charge and discharge profiles in 1st, 5th and 10th cycle of the 90WSG WS₂-3Dgn nanocomposites measured at a current density of 100 mA g⁻¹.

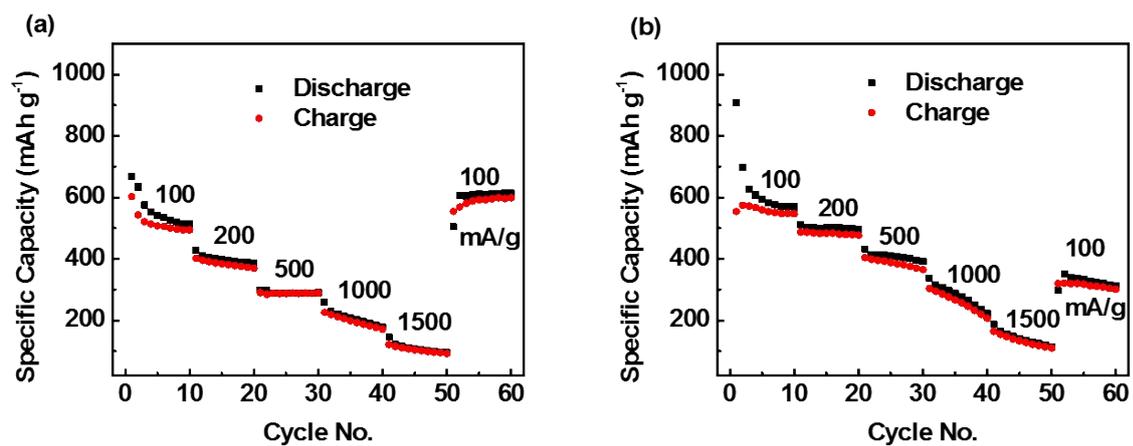


Figure S8. Rate capability of (a) 30WSG and (b) 90WSG WS₂-3Dgn nanocomposites at various current densities.

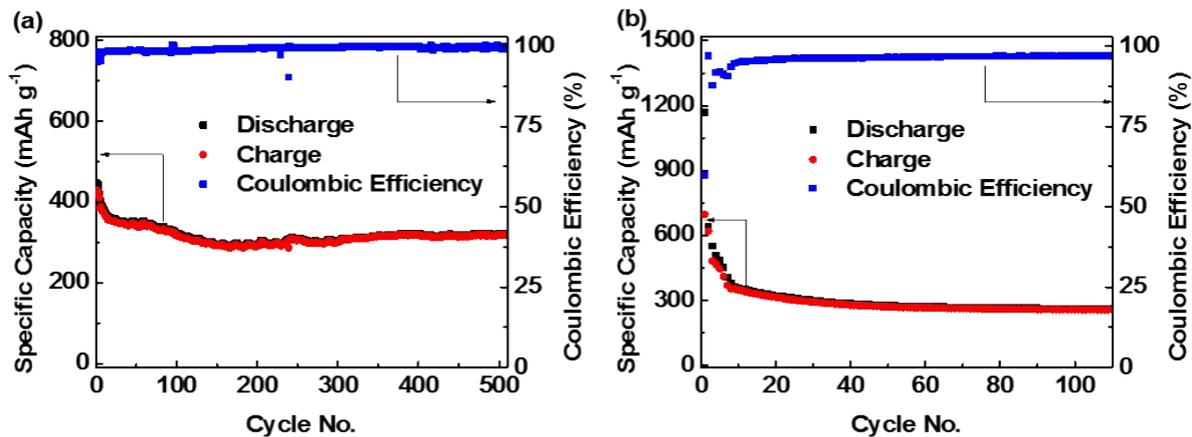


Figure S9. Cycling performance of the (a) 30WSG. (b) 90WSG WS₂-3Dgn nanocomposites electrodes at a current density of 200 mA g⁻¹ and their respective Coulombic Efficiencies.

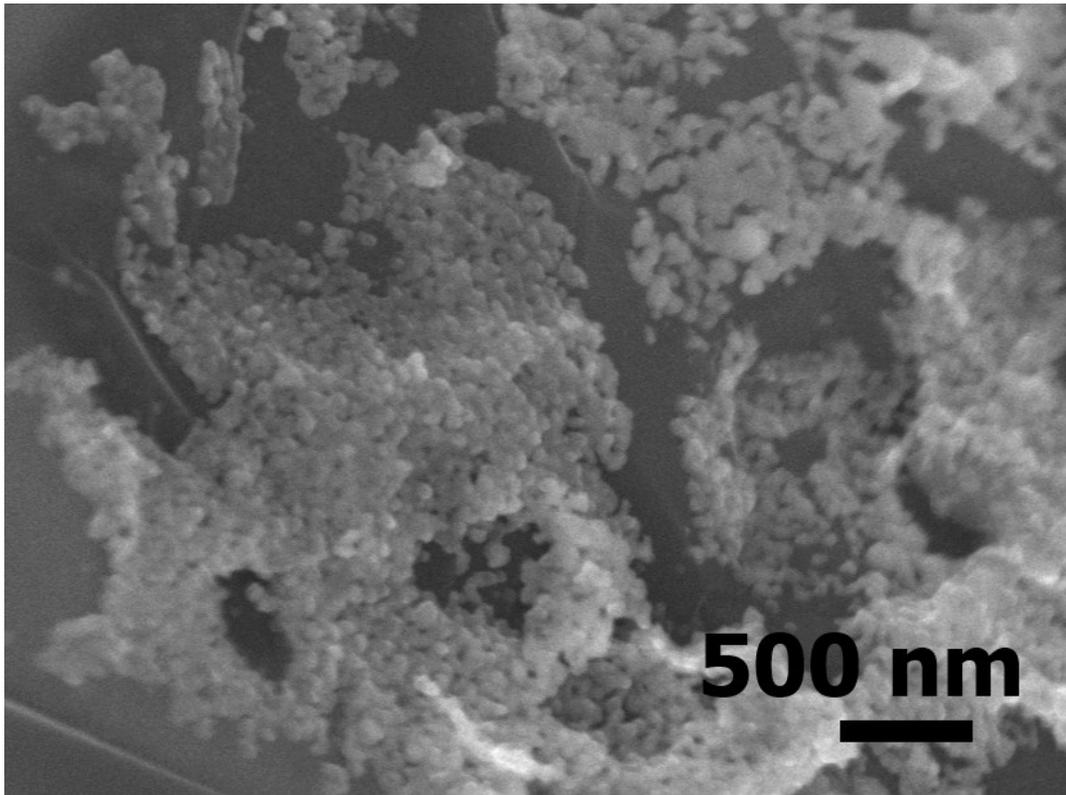


Figure S10. SEM image of the 60WSG-WS₂-3Dgn nanocomposites after 500 cycles