Supporting Information

Germanium Encapsulated in Sulfur and Nitrogen Co-doped 3D

Porous Carbon as Ultra-Long-Cycle Life Anode for Lithium Ion

Batteries

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Figure S1. SEM images of (a),(b) S,N-3DPC and (c),(d) Ge@S,N-C.



Figure S2. The initial two voltage-capacity curves of (a) S,N-3DPC and (b) Ge@S,N-C at 200 mA g⁻¹.



Figure S3. TG curve of the Ge@S,N-3DPC. After calculating, percentage composition of Ge is 60%.