Electronic Supplementary Information (ESI)

Glucosamine-Derived Encapsulation of Silicon Nanoparticles for High-Performance Lithium Ion Batteries

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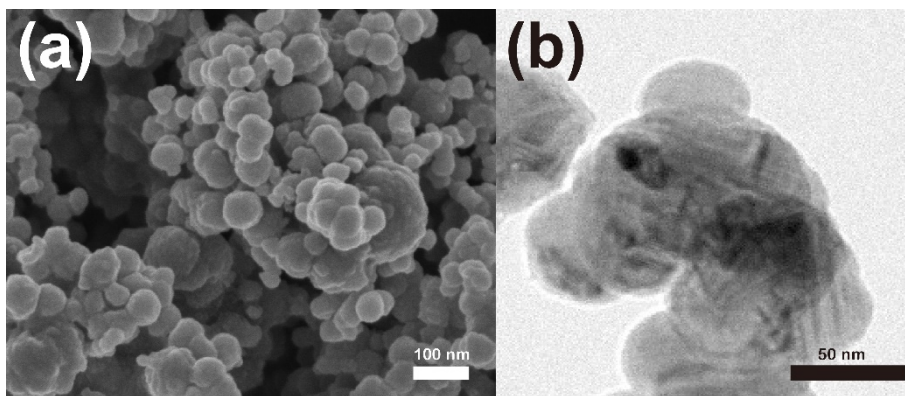
‡ These authors contributed equally to this work.

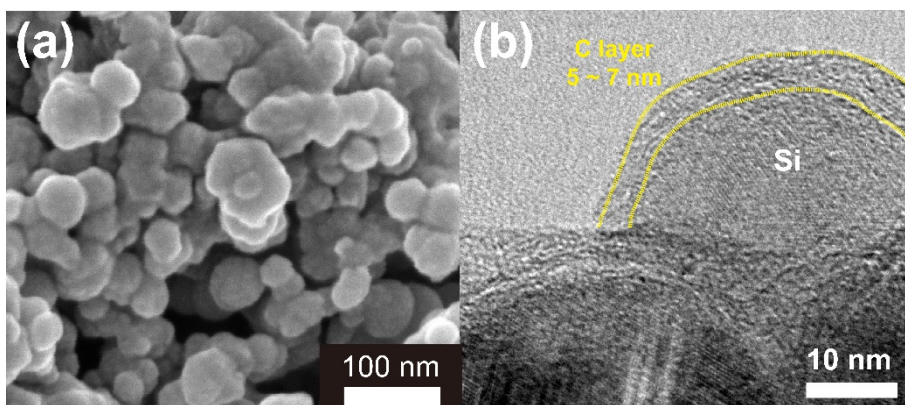**Figure S1.** Images of the bare SiNPs (a) SEM, and (b) TEM

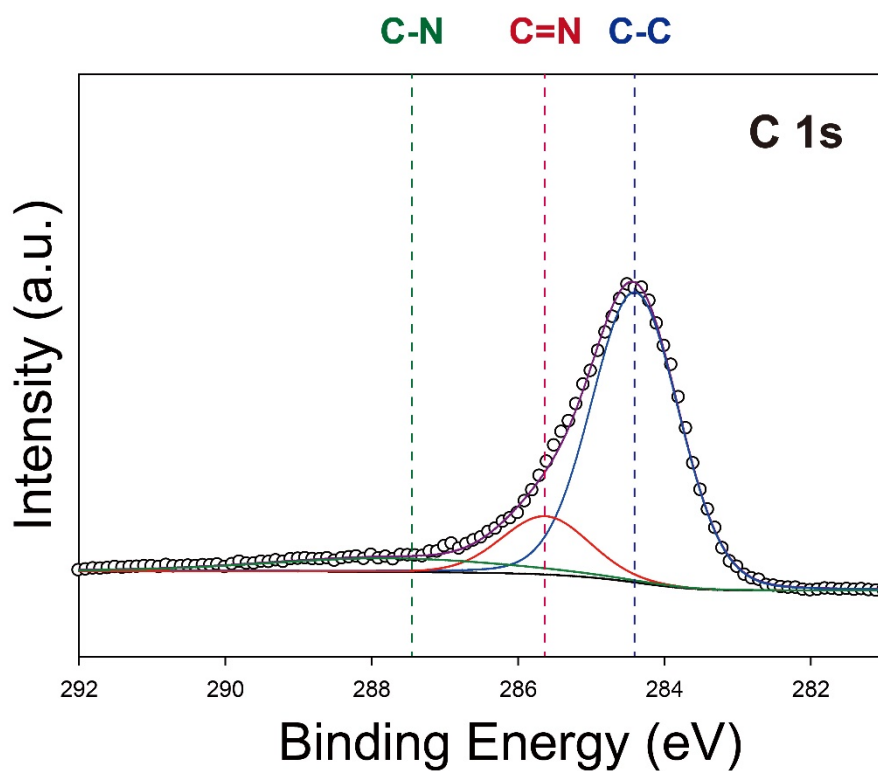**Figure S2.** Images of the prepared C-Si (a) SEM, and (b) HRTEM

Figure S3. C 1s XPS spectrum of NC-Si.

	Nitrogen	Carbon	Oxygen
NC layer	7.8%	90.7%	1.5%
C layer	-	99.2%	0.8%

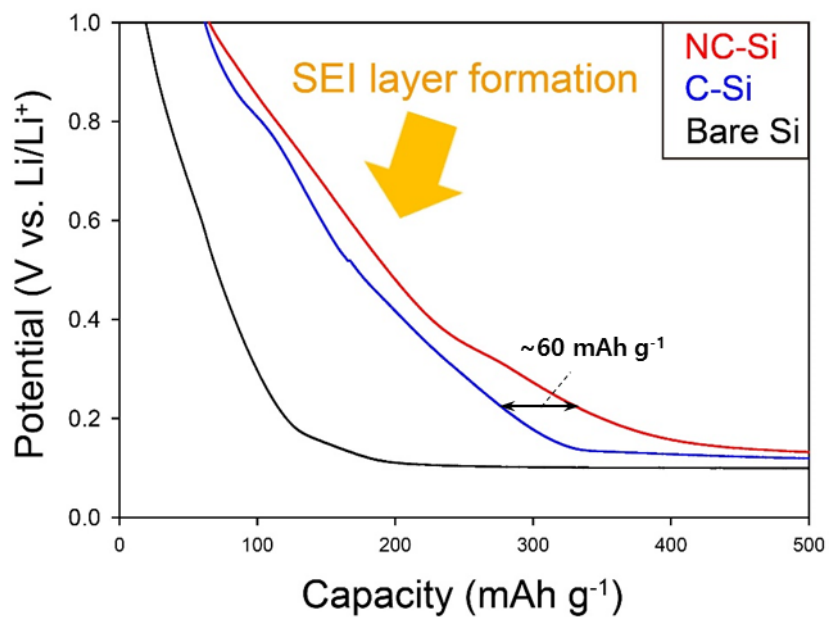**Figure S4.** Elemental analysis of NC (for NC-Si) and C (for C-Si) layers of samples

Figure S5. Profiles of potential in early stage, first lithiation (0.3 A g^{-1} at) for electrodes based on Si NPs, C-Si NPs, and NC-Si NPs. (This is a magnified image of **Figure 2a.**)
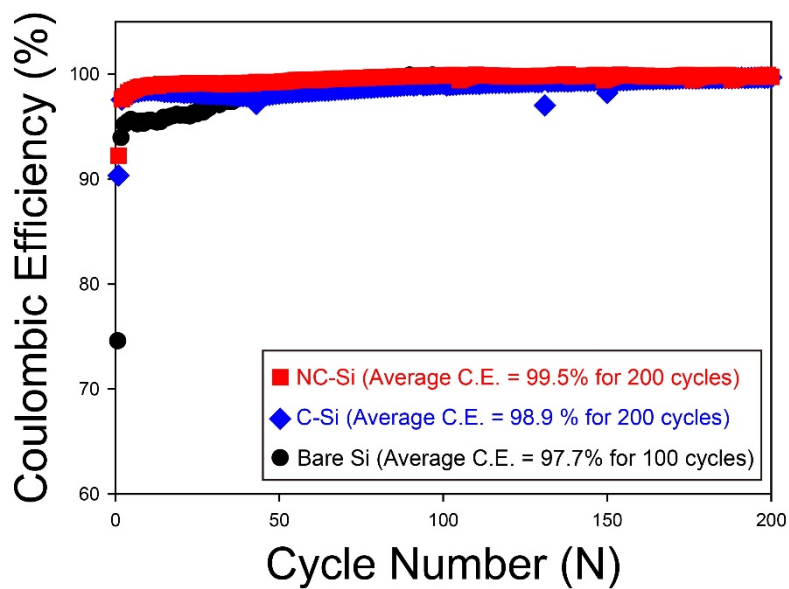

Figure S6. Coulombic efficiencies of unit cells fabricated using Si NPs, C-Si NPs, and NC-Si NPs, measured at 2A g^{-1}