

# **Scalable Production of Si Nanoparticles Directly from Low Grade Sources for Lithium-ion Battery Anode**

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	Si	Fe	Ca	Al
M-Si source (content)	98.83981%	0.42141%	0.13947%	0.30793%
Ferrosilicon (content)	83.48377%	12.81587%	2.15667%	1.10781%

Table S1. XRF data of the two low grade Si source. The contents of the four major elements are listed.

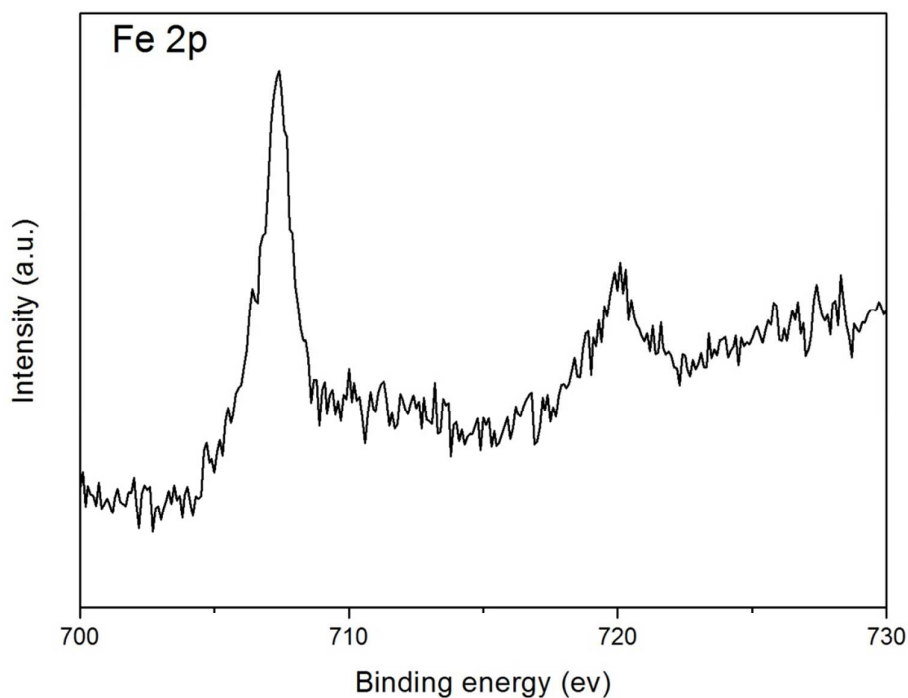


Figure S2. Fe 2p XPS spectra of ferrosilicon powders before HEMM.

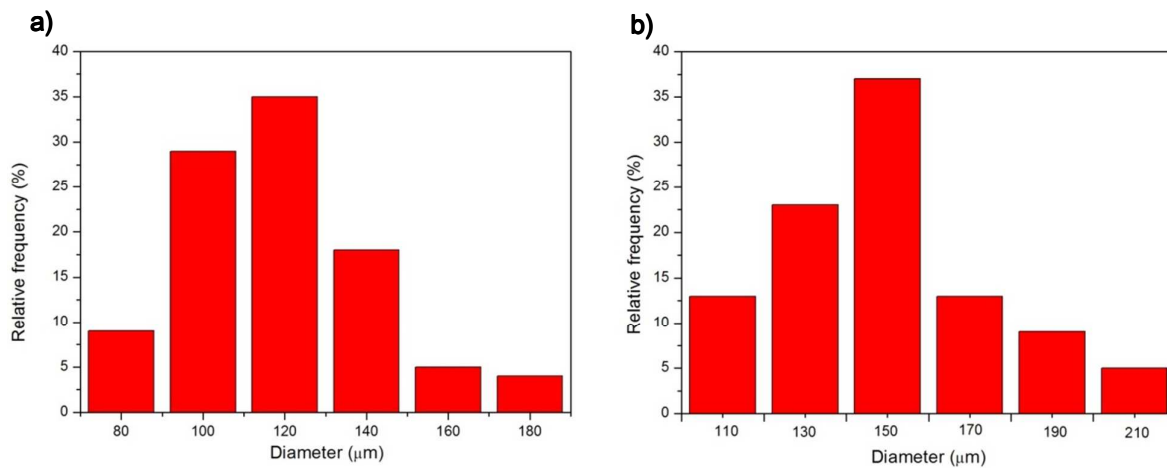


Figure S3. Statistical analysis of nano-sized M-Si a) and F-Si b).

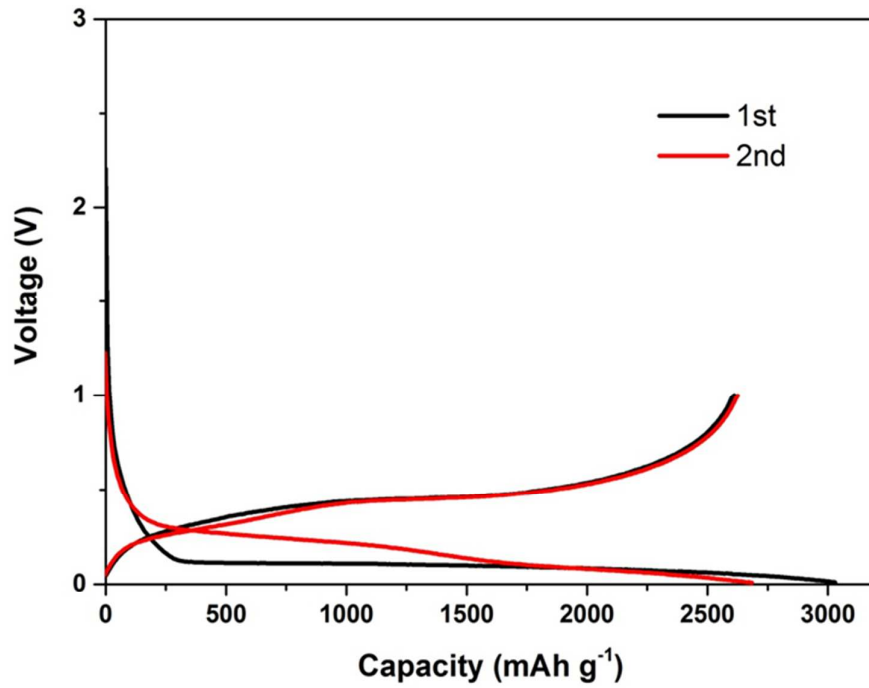


Figure S4. The galvanostatic charge/discharge curves of the first two cycles for M-Si with carbon coating.

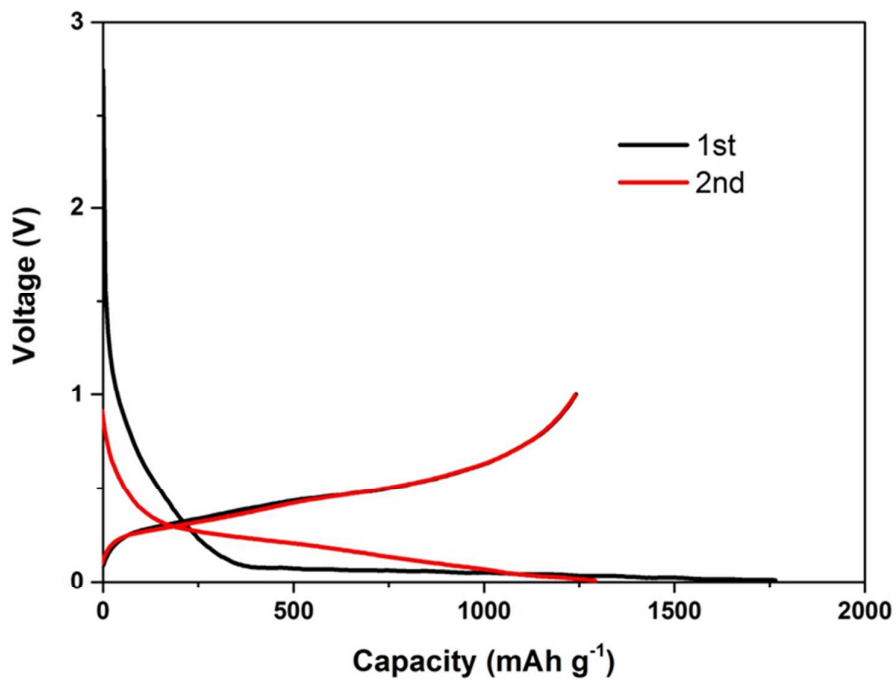


Figure S5. The galvanostatic charge/discharge curves of the first two cycles for F-Si with carbon coating.