

Nano-SiOx/C Composite Anode Material for Lithium-ion Battery

Nano-SiOx/C Composite Technology Using Carbothermal Shock

- Low Manufacturing Cost through Carbothermal Shock
- Development of $\leq 100\text{nm}$ Grade Si Particles on Carbon Surface
- Mitigating the Volume Expansion of Si Particles during the Charging-discharging Process

Process

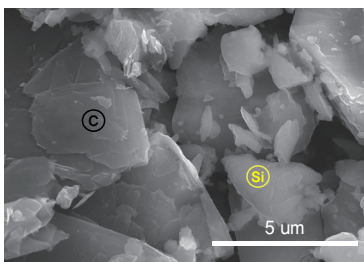


Performance

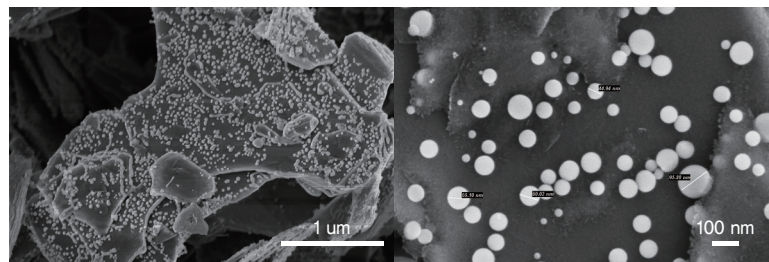
SiOx Particle Size (nm)	≤ 100
SiOx Content(%)	10~15
Capacity(1 st , mAh/g)	450 ~ 550
Efficiency(1 st , %)	≥ 85
Capacity Retention(% , cycle)	$\geq 90(300\text{cycle})$



Morphology(SEM Images)



Before Carbothermal Shock



After Carbothermal Shock

Applications

- As a Low-cost, High-performance Nano-SiOx/C Composite Anode Material
- Applied to Battery Anode Materials for Electric Vehicles(EV), Energy Storage System(ESS)

