

Supporting Information

Simultaneous Perforation and Doping of Si Nanoparticles for Lithium-Ion Battery Anode

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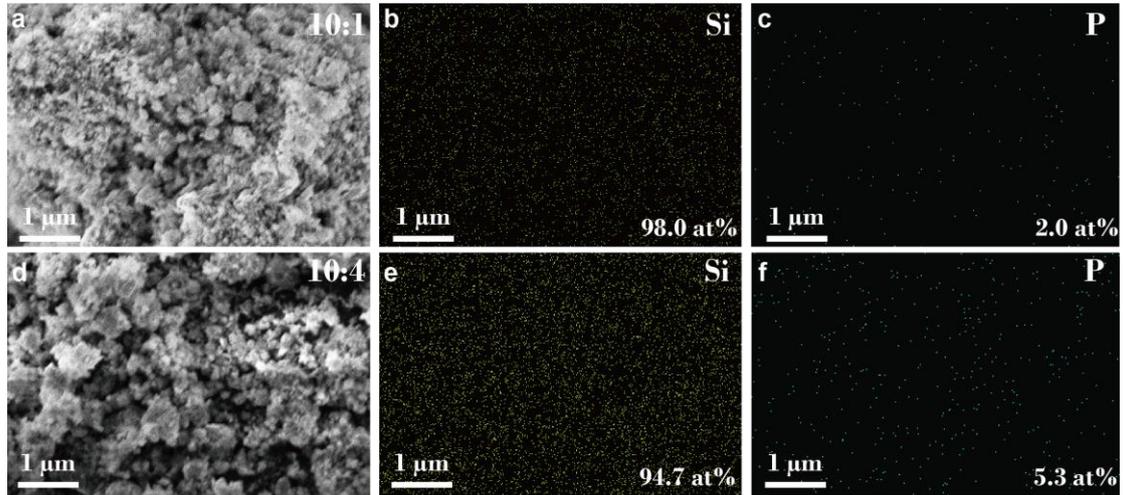


Figure S1. SEM and EDS mapping of porous nano-Si particles with P-dopant produced by different weight ratios of Si to P₂O₅ (10:1 and 10:4). (a) SEM image of nano-Si particle (weight ratio: 10:1). (b,c) EDS mapping of nano-Si particles (weight ratio: 10:1), the green and blue bright regions correspond to the element Si and P. (d) SEM image of nano-Si particle (weight ratio: 10:4). (e,f) EDS mapping of the nano-Si particles (weight ratio: 10:4), the green and blue bright regions correspond to the element Si and P.

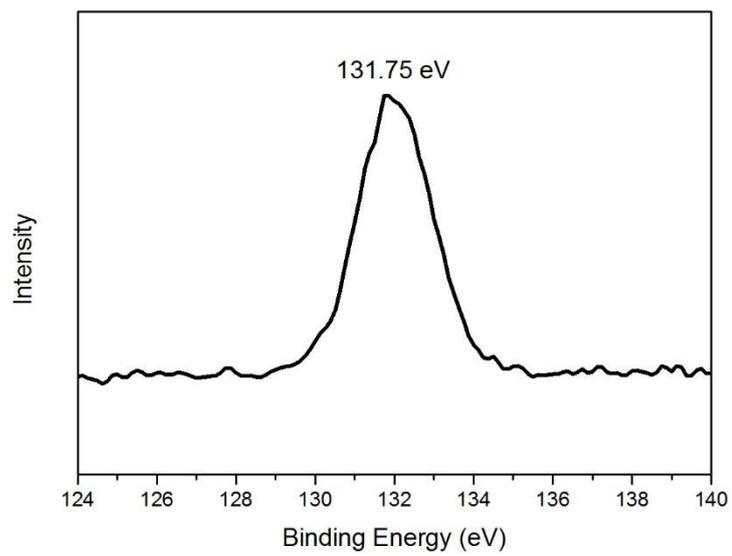


Figure S2. XPS spectra (P) of the porous nano-Si particles with P-dopant.

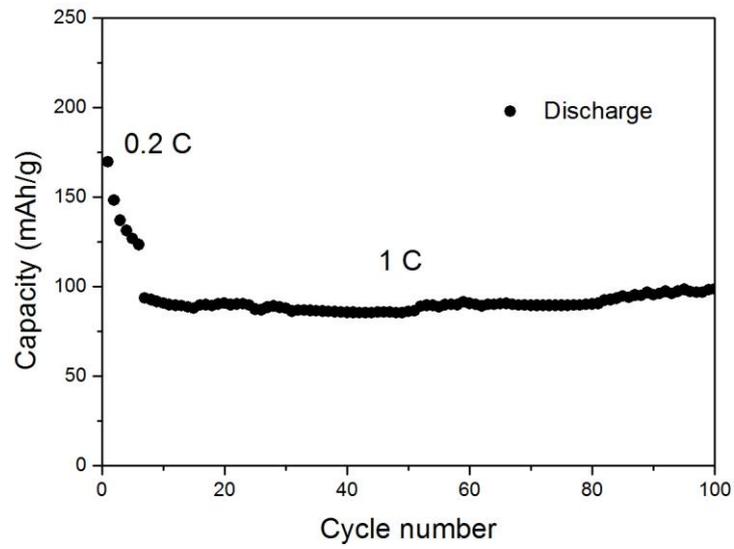


Figure S3. Cycling performance of full cell (porous nano-Si particles with P-dopant as anode and LiCoO_2 as cathode) at the current density of 0.2 C for the first 5 cycles and 1 C for the following cycles.