

Supporting information

Cu and Ni co-doped porous Si nanowire networks as high-performance anode materials for lithium-ion batteries

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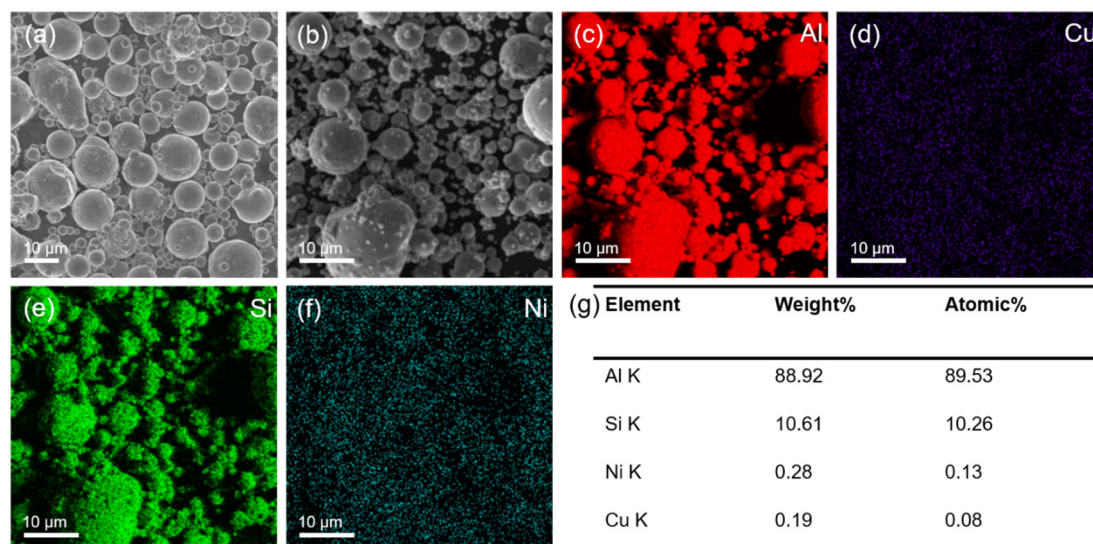


Figure S1. SEM (a) and BSEM (b) of Al-Si-Cu-Ni particles. EDS mapping (c-f) and elemental ratio (g) of Al-Si-Cu-Ni particles.

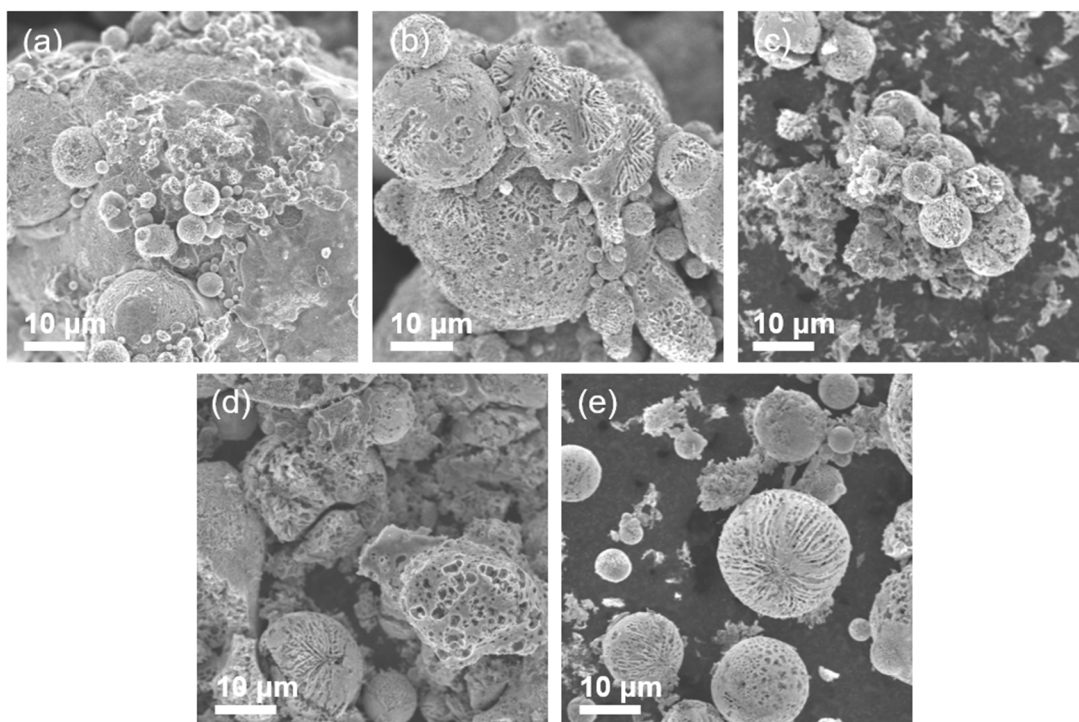


Figure S2. SEM images after the first step of dealloying. (a) Sample-1, (b) Sample-2, (c) Sample-3, (d) Sample-4 and (e) Sample-5.

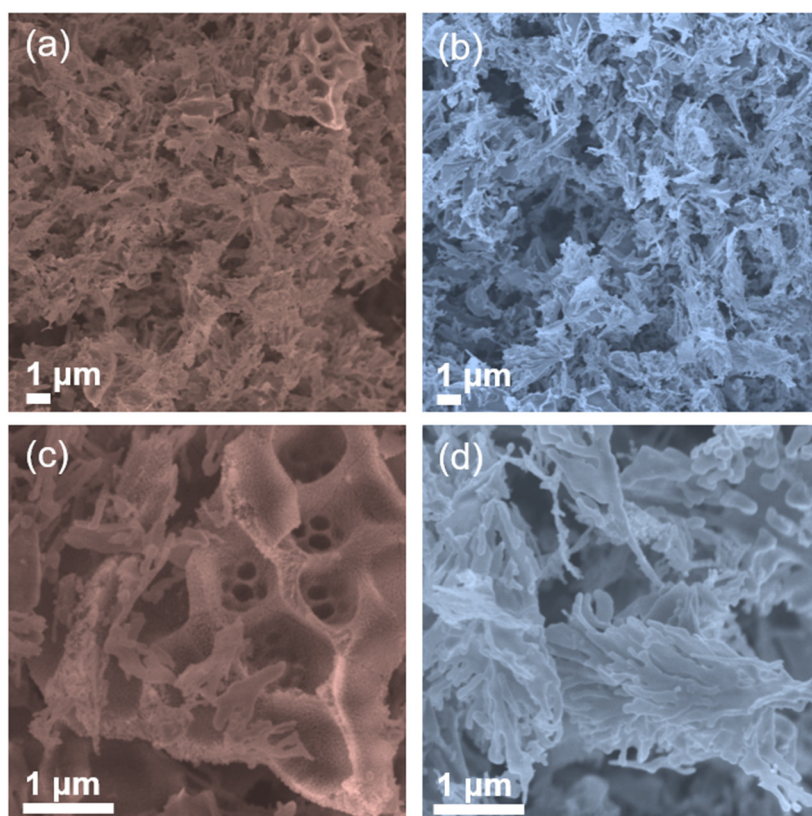


Figure S3. SEM images after the second step of dealloying. (a,c) Sample-6 and (b,d) Sample-7.

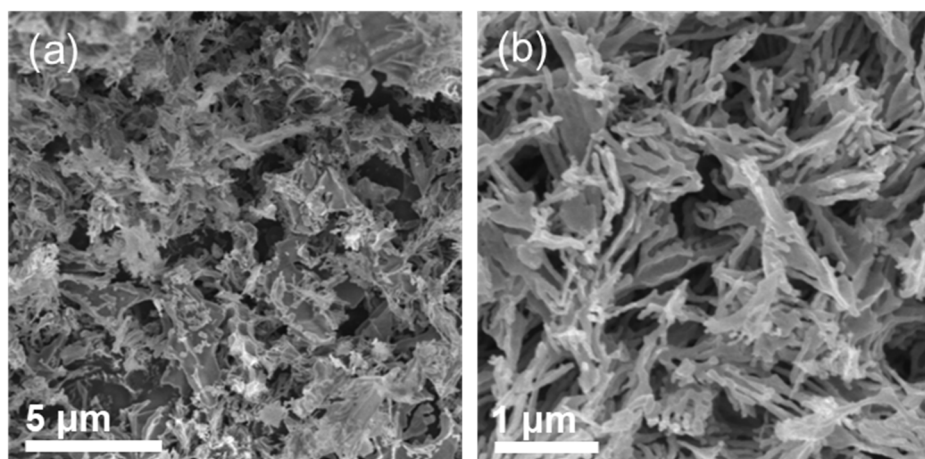


Figure S4. SEM images of (a,b) pSi.

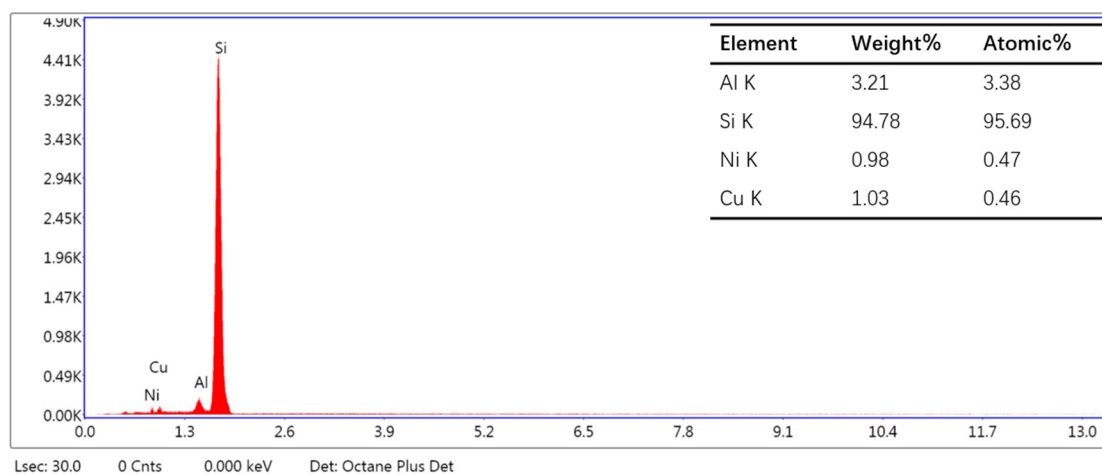


Figure S5. EDS analysis of CuNi-pSi.

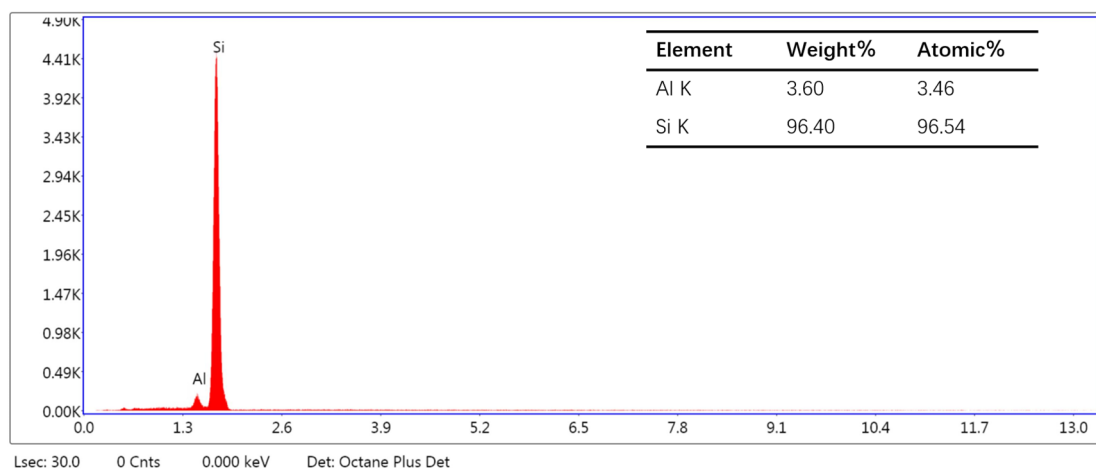


Figure S6. EDS analysis of pSi.

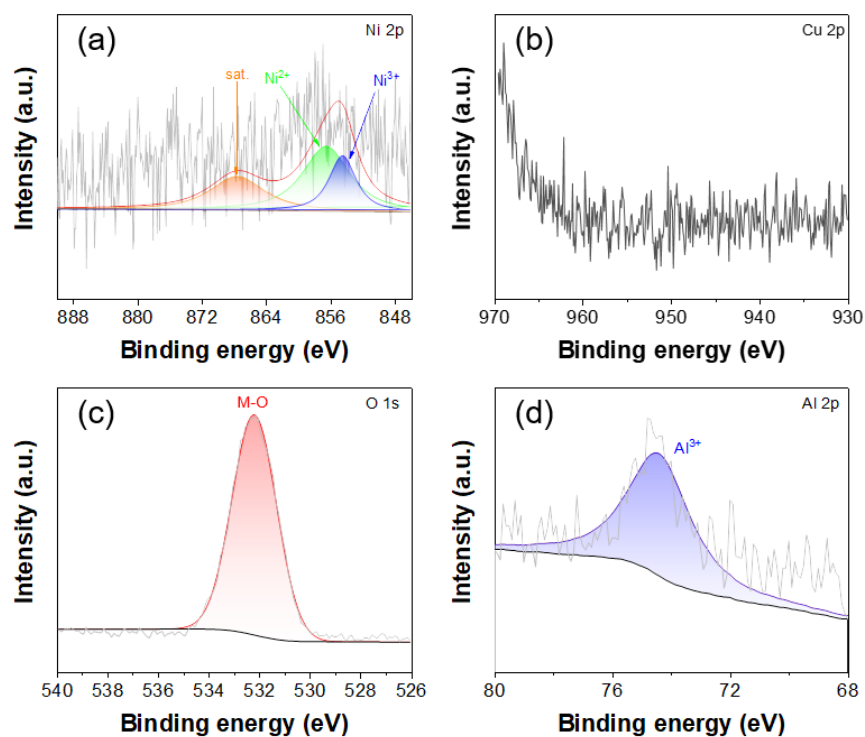


Figure S7. XPS spectra of CuNi-pSi. High-resolution core-level spectra of (a) Ni 2p , (b) Cu 2p, (c) O 1s and (d) Al 2p.

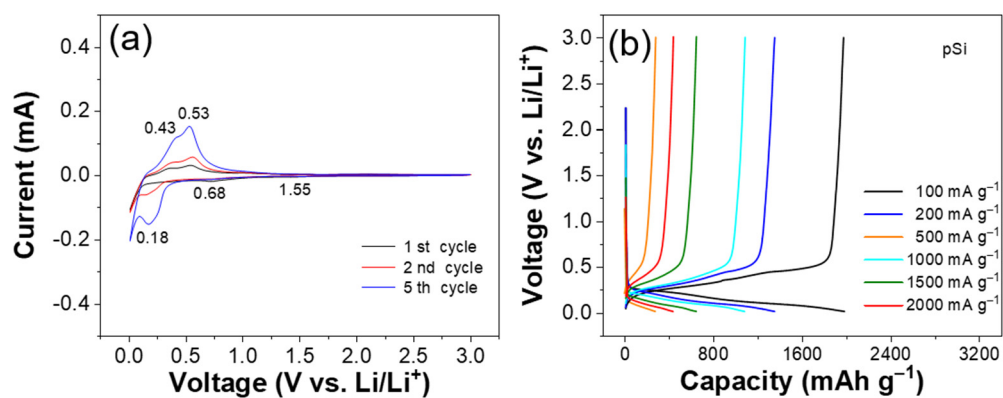


Figure S8. (a) CV curves of the pSi at 0.1 mV s⁻¹. (b) Charge-discharge profiles of the pSi anode at various current densities.

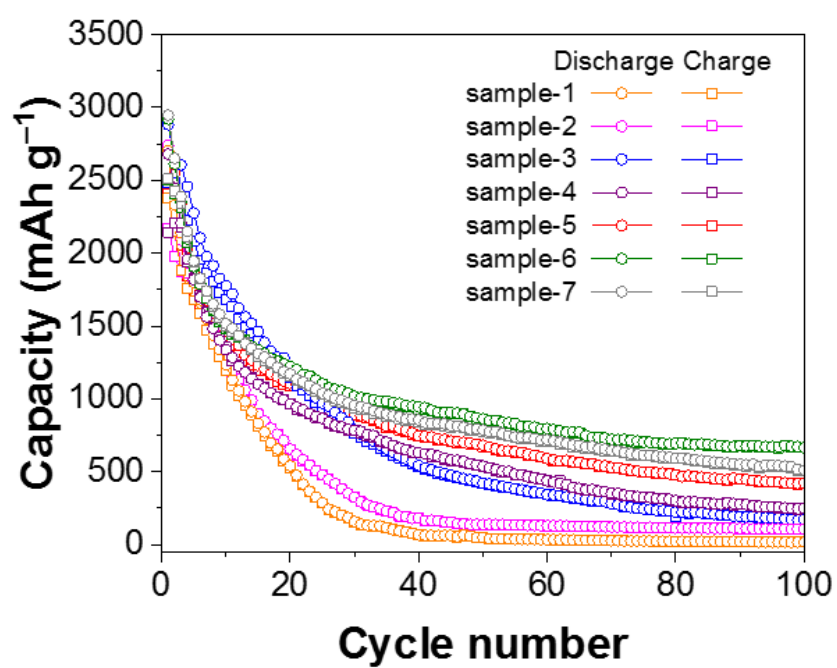


Figure S9. Cycling performance of contrast materials at a current density of 100 mA g⁻¹.

Table S1. Bader charge for pSi, Cu-pSi, Ni-pSi and CuNi-pSi.

Material Element Charge	pSi	Cu-pSi	Ni-pSi	CuNi-pSi
Li	0.8653	0.8696	0.8748	0.8821
Cu		0.0746		0.1606
Ni			0.3817	0.5257