

Supplementary materials

Chemical replacement route to Cu_{2-x}Se -coated CuO nanotube array anode for enhanced performance in lithium ion battery

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Figure Captions (Supplementary materials)

Fig. S1 XRD pattern of Cu_{2-x}Se nanotube arrays on copper substrate.

Fig. S2 X-ray photoelectron spectra (XPS) of the Cu_{2-x}Se -coated CuO nanotube array sample:

(a) survey spectra, (b) C1s and (c) Cu LMM.

Fig. S3 TEM image and line-scanning elemental mapping showing the Cu, Se and O
elemental profiles across the Cu_{2-x}Se -coated CuO nanotube.

Fig. S4 FESEM images of the bare Cu_{2-x}Se nanotube arrays: (a) low-magnification and (b)
high-magnification.

Fig. S5 (a) Charge-discharge profiles and (b) Cycling performance of bare Cu_{2-x}Se nanotube
arrays at 0.05-3.0 V at a current density of $0.08 \text{ mA} \cdot \text{cm}^{-2}$.

Fig. S6 The coulombic efficiency of the Cu_{2-x}Se -coated CuO electrode for 2-100 cycles.

Fig. S1

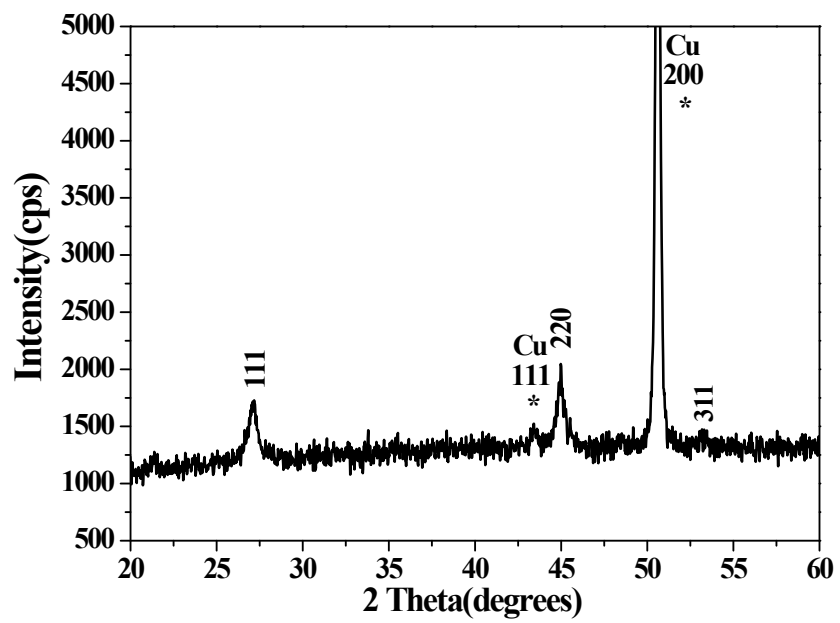


Fig. S2

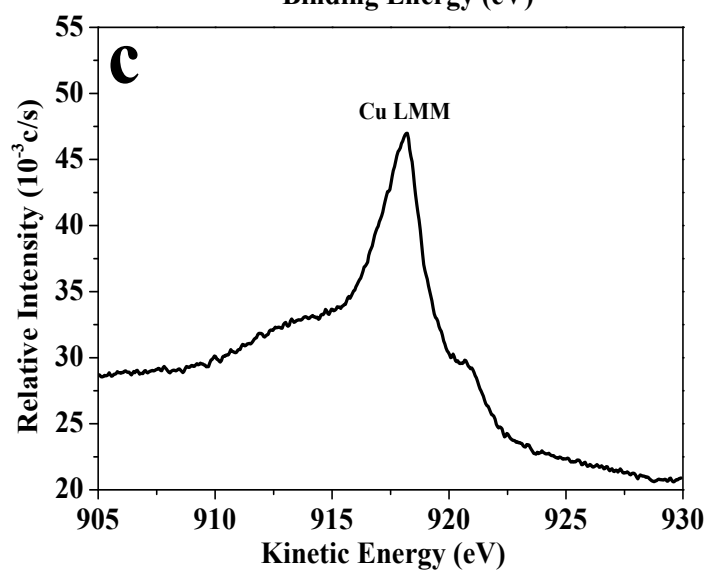
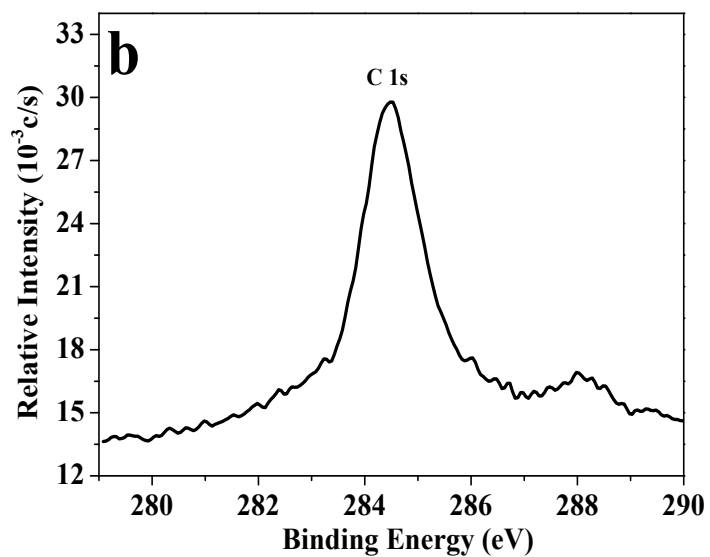
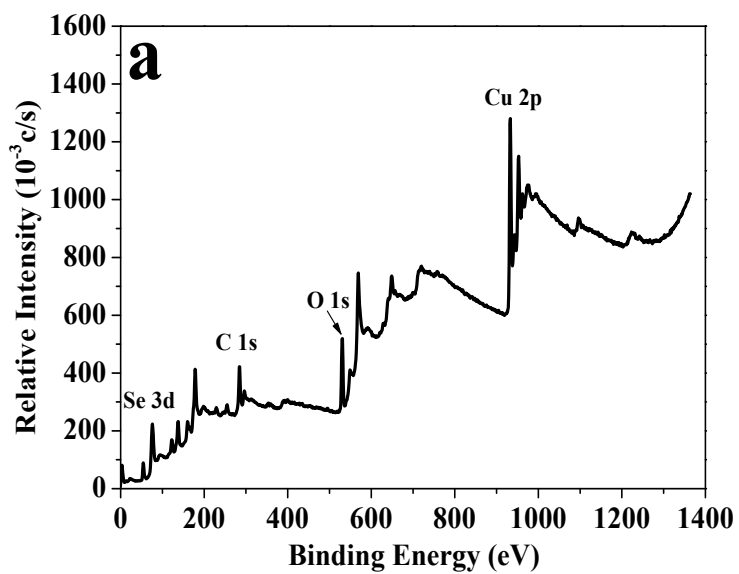


Fig. S3

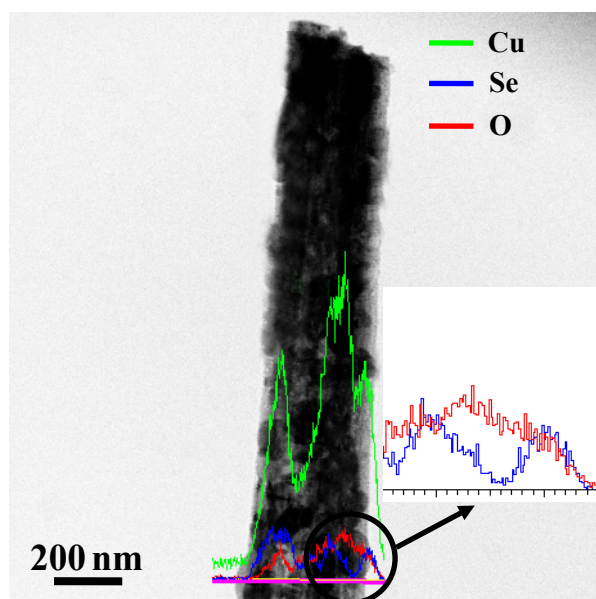


Fig. S4

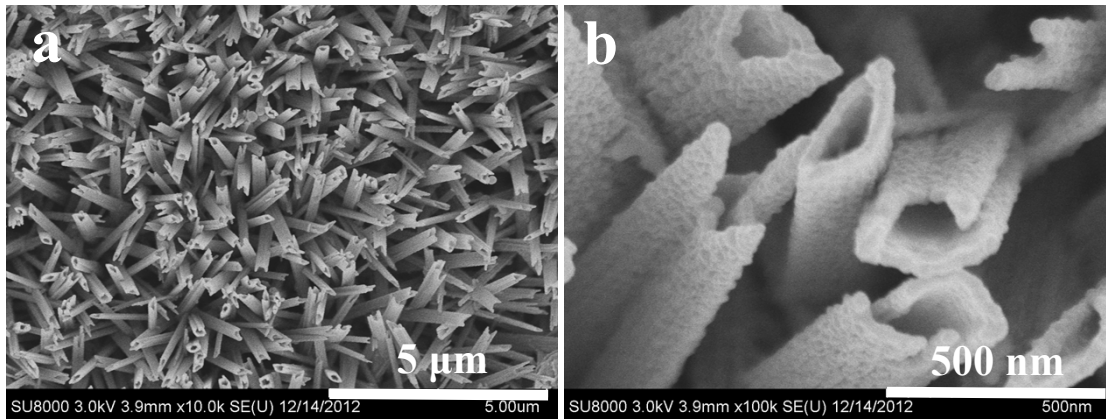


Fig. S5

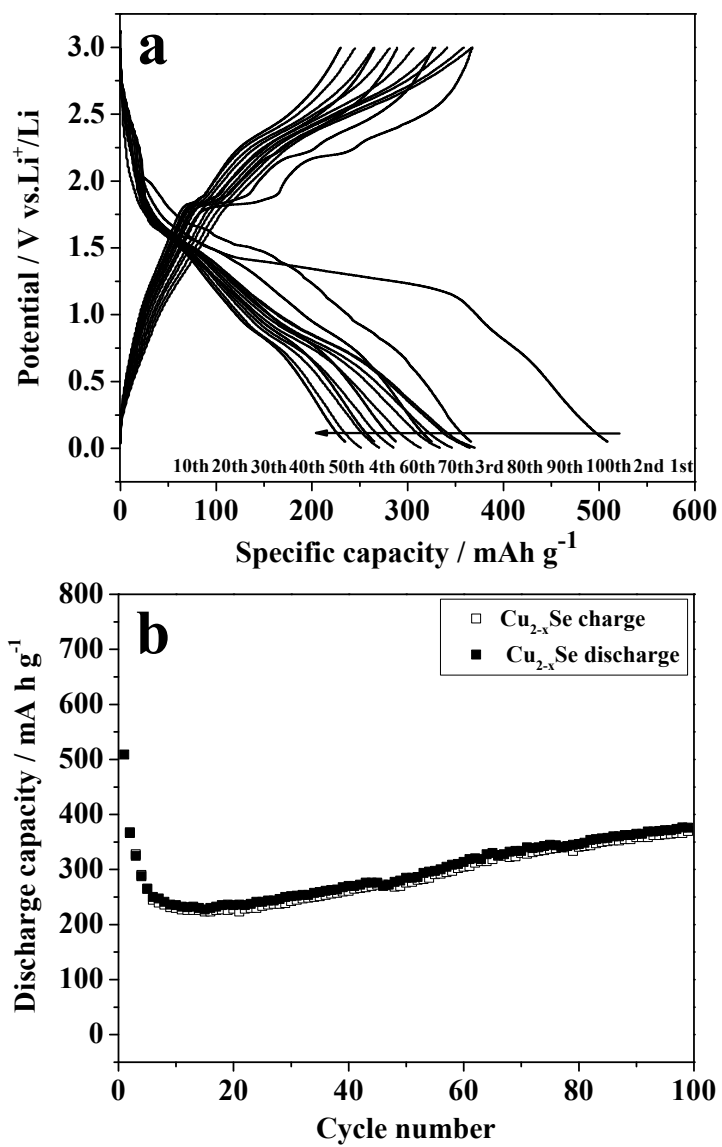


Fig. S6

