## Electronic Supplementary Information

## Synthesis of one-dimensional hierarchical NiO hollow nanostructure with enhanced supercapacitive performance

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Figure S1. (A) XRD pattern, (B) FESEM image, and (C) Typical TEM image of the CNFs.



Figure S2. FTIR spectrum of CNF powder after removal of the Te nanowire core.



Figure S3. N<sub>2</sub> adsorption-desorption isotherm of the CNF@NiO nanosheet hierarchical hollow structures. The surface area of the CNF@NiO nanosheet hierarchical hollow structure is around  $136.3 \text{ m}^2 \text{ g}^{-1}$ .



**Figure S4.** TGA analysis of CNF@NiO nanosheet hierarchical hollow structures under air flow with a temperature ramp of 10 °C min<sup>-1</sup>.



**Figure S5**. Typical FESEM images of Ni foam after electrode material loading: (A) Top surface; (B) Bottom surface; (C) Enlarged view; (D) cross-section.