

## Supplementary Data

### **In-Situ Fabrication of Graphene Coated Three-Dimensional Nickel Oxide Anode for High Capacity Lithium-Ion Batteries**

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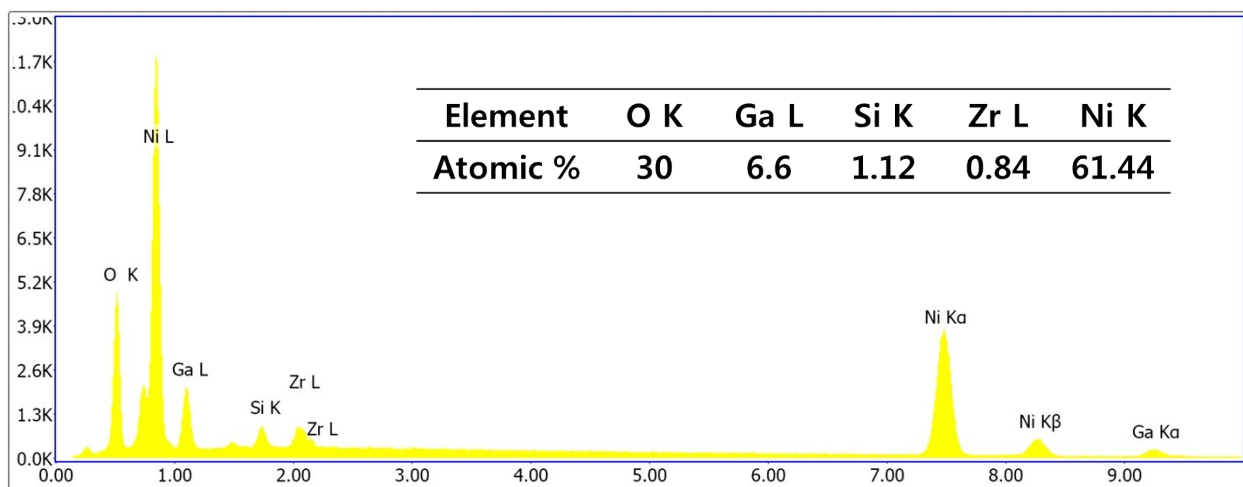


Figure S1. EDS spectra for the constituent elements of the 3D NiO-Ni. Note that the Ga peak is artifact from the FIB process.

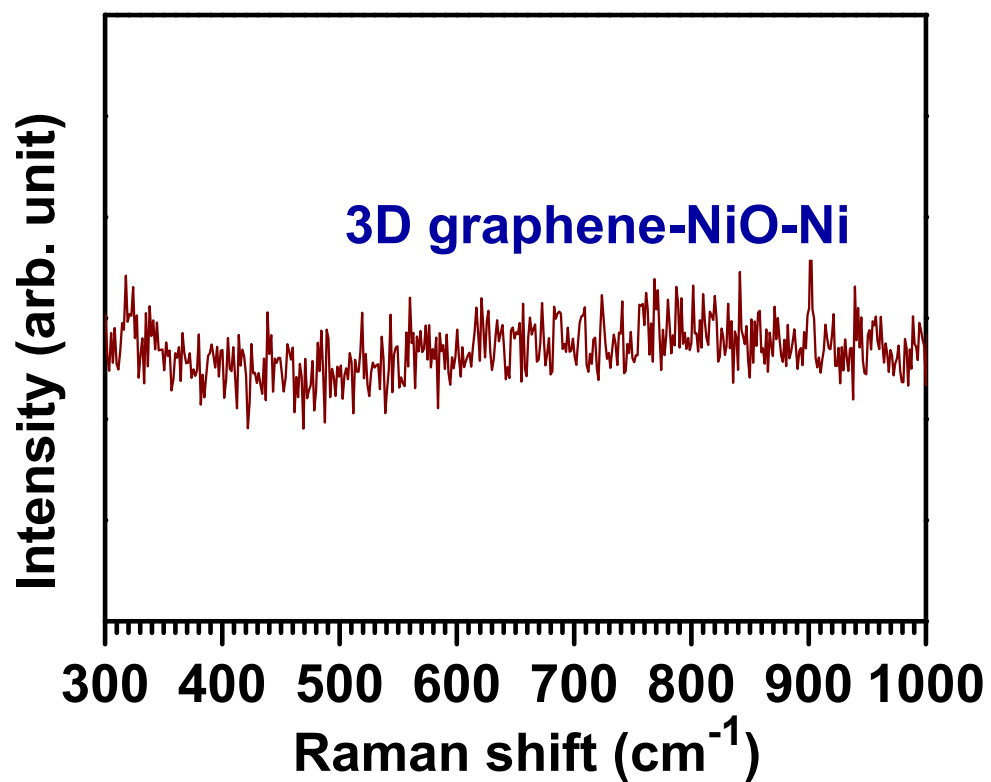


Figure S2. Raman spectra of the 3D graphene-NiO-Ni hybrid anode structure with wavenumber in the range of 300 to 1,000 cm<sup>-1</sup>.

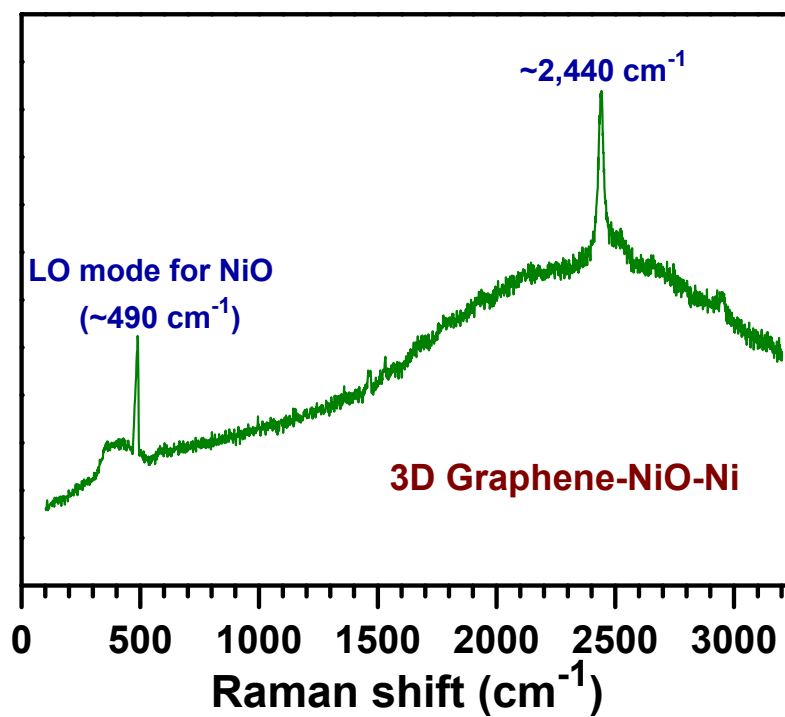


Figure S3. Raman data of the 3D graphene-NiO-Ni anode structure with wavenumber in the range of 100 to 3,200 cm<sup>-1</sup>. Note that the 2D band peak for graphene is shifted from 2,700 to ~2,440 cm<sup>-1</sup>, which is mainly due to the C-O bonding derived from 3D NiO-Ni substrate effect.

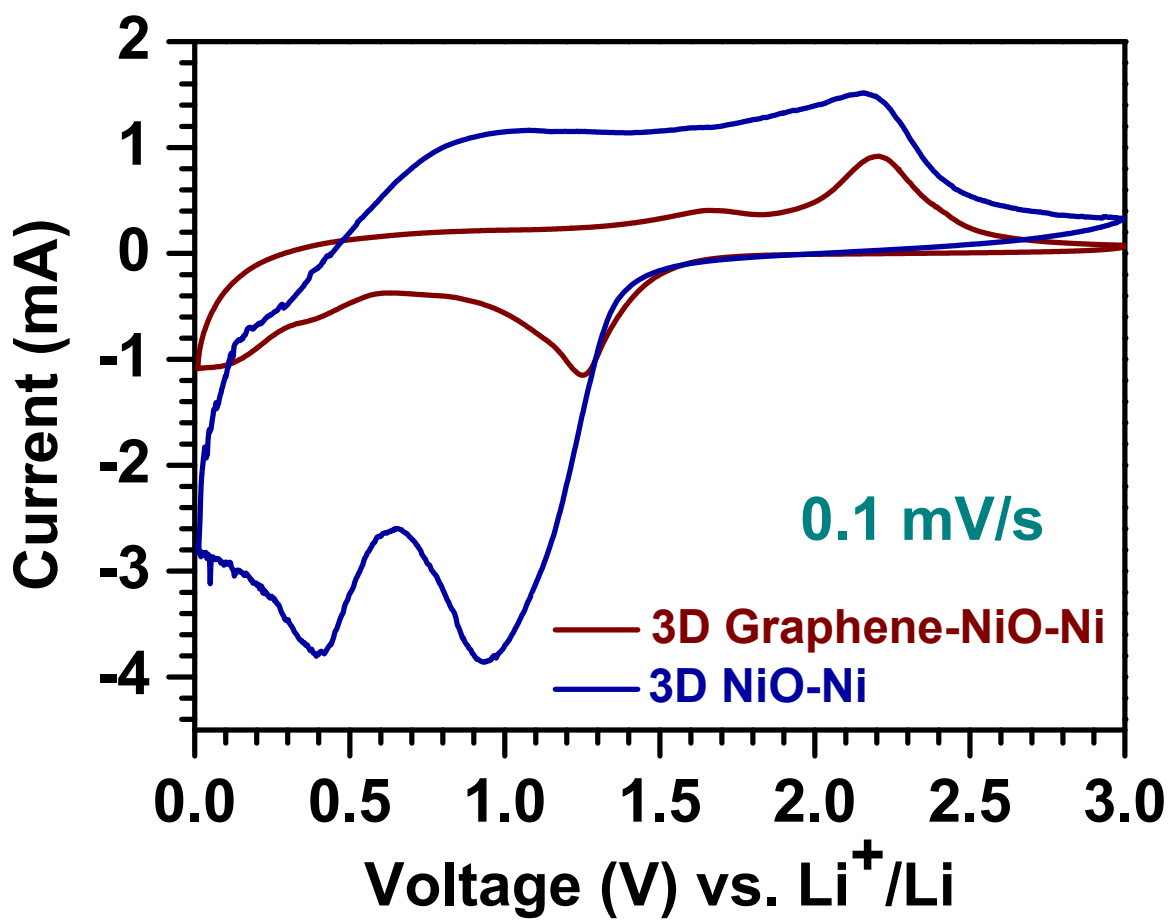


Figure S4. CVs of the 3D graphene-NiO-Ni and 3D NiO-Ni anode samples in the voltage range of 0.01 to 3V at a scan rate of  $0.1 \text{ mV s}^{-1}$  for the third cycle.