

Electronic Supporting Information

## **Highly Sensitive Enzymeless Glucose Sensor Based on 3D Graphene-Cu Hybrid Electrodes**

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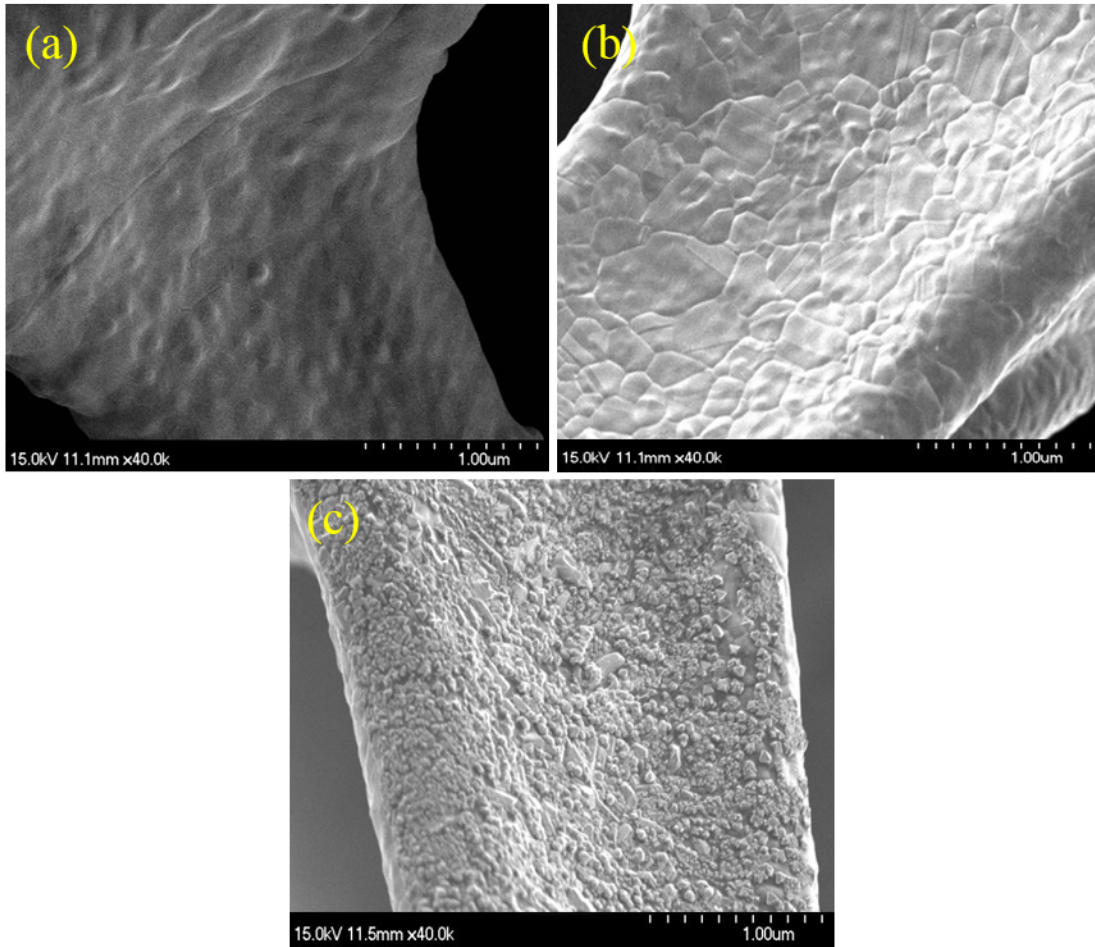


Fig. S1. Higher magnification FESEM micrographs for (a) Ni foam substrate, (b) 3D graphene/Ni foam and (c) Cu/3D graphene surface.

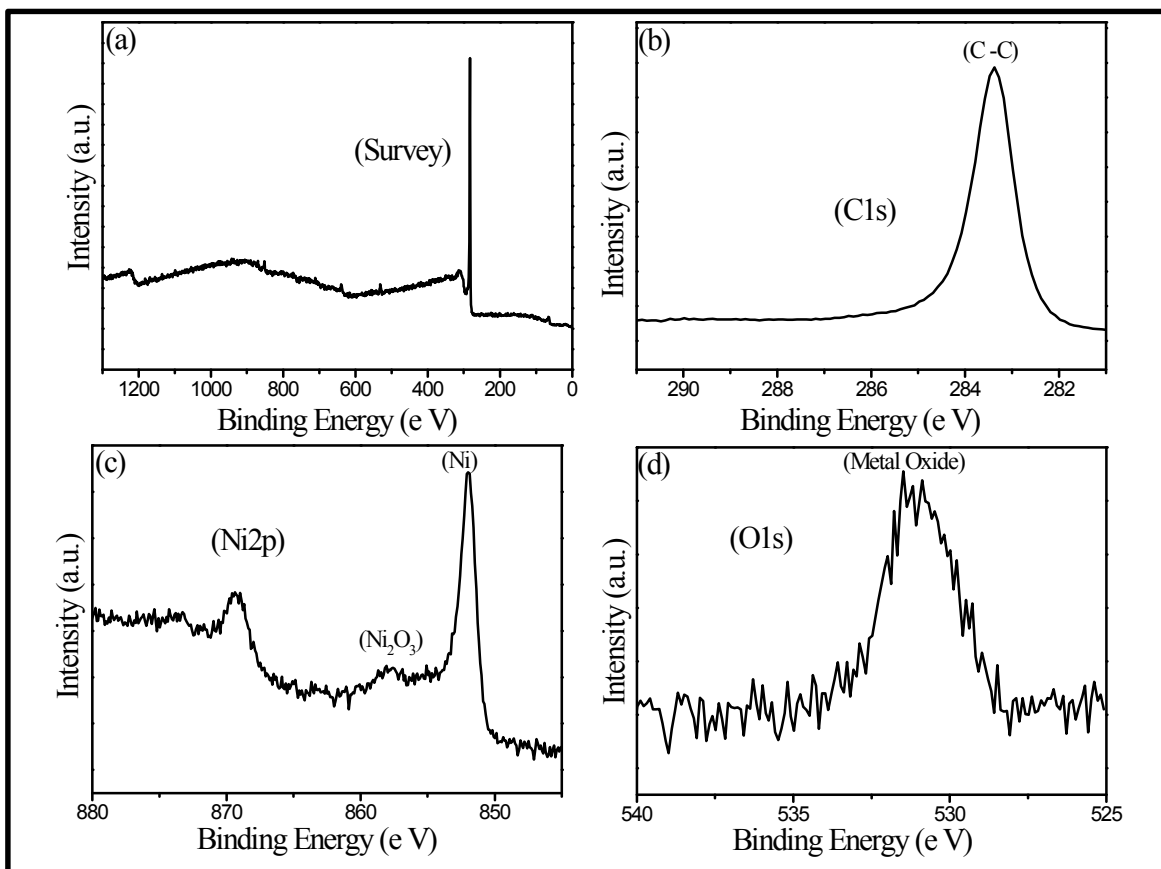


Fig. S2. XPS of CVD prepared graphene on Ni Foam (a) complete survey. (b) High-resolution XPS scan for the C1s core level peak. (c) XPS peak for Ni<sub>2p</sub> peak from the substrate. (d) High-resolution XPS scan for the O1s core level peak.

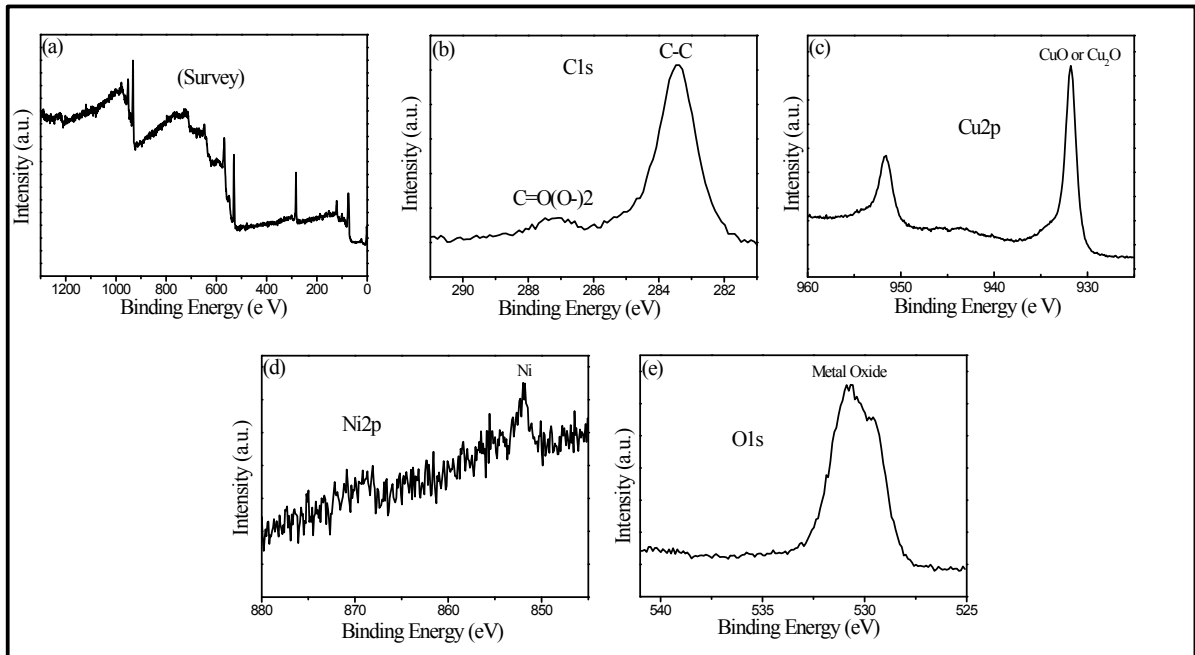


Fig. S3. XPS for Cu/3D graphene/Ni foam (a) General survey. (b) High-resolution XPS scan for the C 1s core level peak of Cu/3D graphene/Ni. (c) High-resolution XPS scan for Cu 2p core level peak which is originated from the Cu layer. (d) XPS Ni<sub>2p</sub> core level peak originated from substrate. (e) XPS scan for the O 1s core level peak.

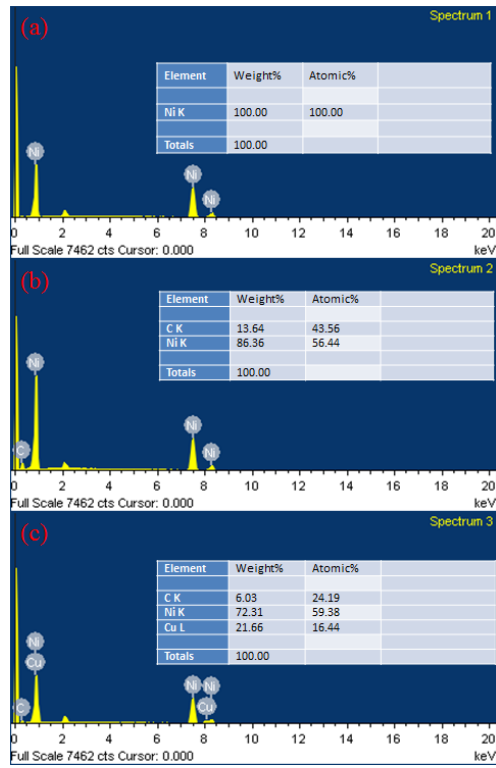


Fig. S4. EDX analysis spectra for (a) Ni foam substrate (b) 3D Graphene deposited Ni foam and (c) Cu/3D graphene surface.

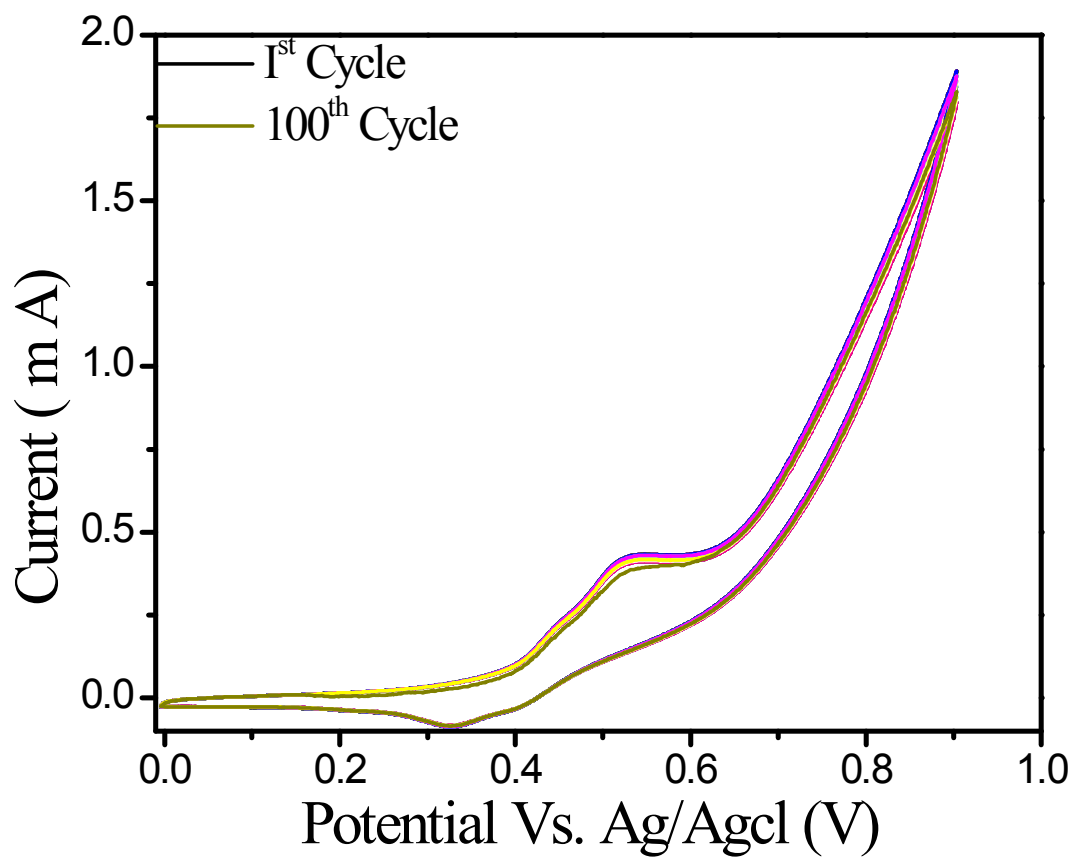


Fig. S5. Multiple cycle CV curves for Cu/3D graphene/NF hybrid.