

Supplementary Materials

# Feather-Like Gold Nanostructures Anchored onto 3D-Mesoporous Laser-Scribed Graphene: A Highly Sensitive Platform for Enzymeless Glucose Electrochemical Detection in Neutral Media

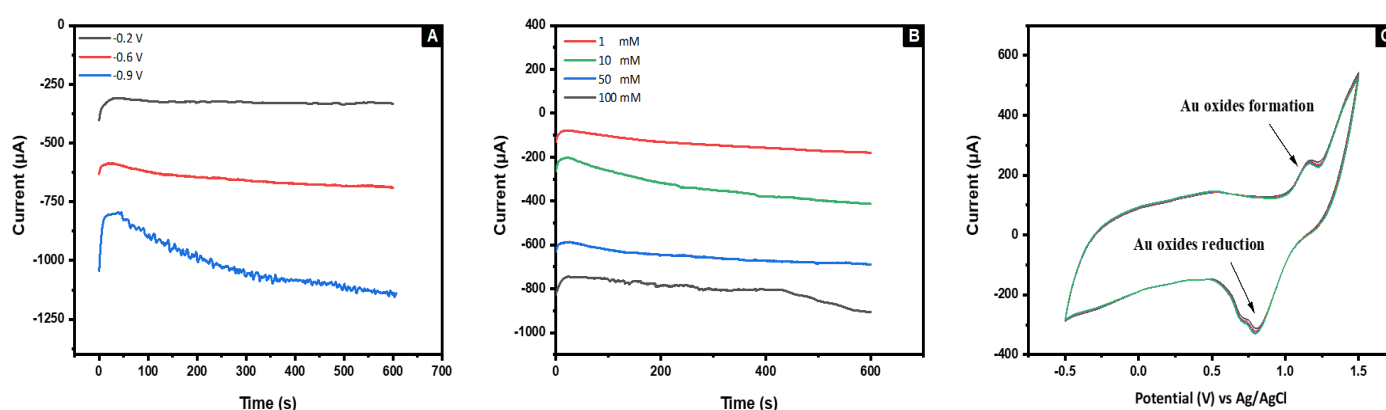
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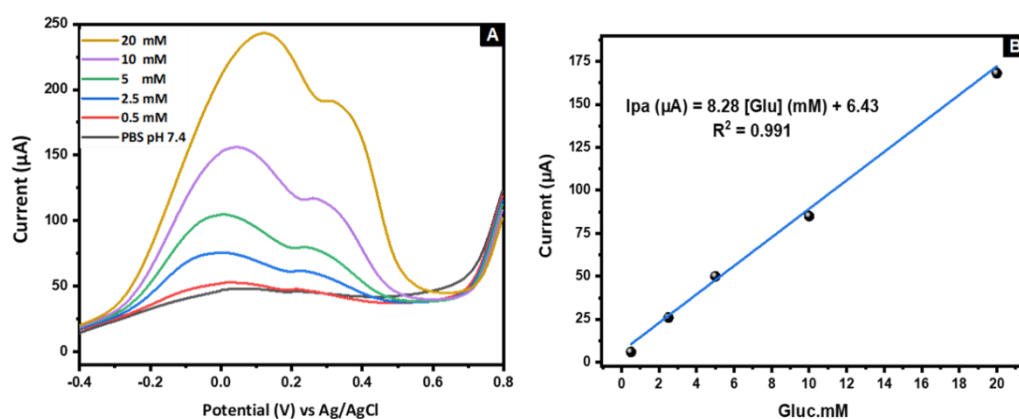
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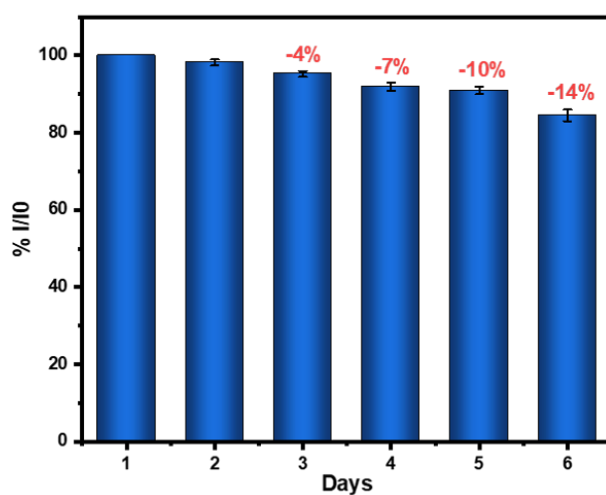
**Keywords:** Non-enzymatic Detection; Laser-scribed Graphene; Gold Nanostructures; Neutral medium; Disposable sensor; Glucose sensor.



**Figure S1.** electrodeposition chronoamperograms of AuNs (A) at different potentials -0.2, -0.6, -0.9V vs. Ag/AgCl (3M KCl) for 600 s in a 0.5M H<sub>2</sub>SO<sub>4</sub>, (B) at different gold precursor concentration 1, 10, 50 and 100mM (B) five successive scans, related to the polarization of AuNs-LSGE performed by CVs in 0.5 M H<sub>2</sub>SO<sub>4</sub> solution, scan rate 100 mV s<sup>-1</sup>.



**Figure S2.** (A) LSV of glucose with different concentrations (0.5, 2.5, 5, 10, 20) at AuNs-LSGE in 0.1M PBS pH 7.4, scan rate; 50mV.s<sup>-1</sup> (B) The corresponding calibration curve.



**Figure S3.** Current response % of 5mM glucose over days recorded from I vs time (s)