

Supporting information for:

Chitosan supported silver nanowire as a platform for direct electrochemistry and highly sensitive electrochemical glucose biosensing

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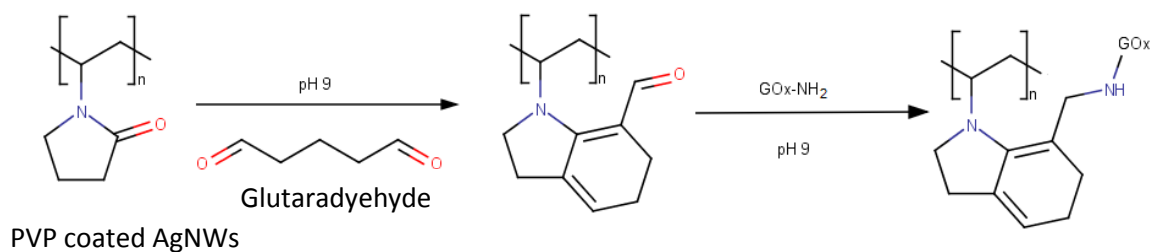


Figure S1: Surface modification and covalent anchoring of PVP coated AgNWs with the redox active cofactor (FAD) in the GOx enzyme.

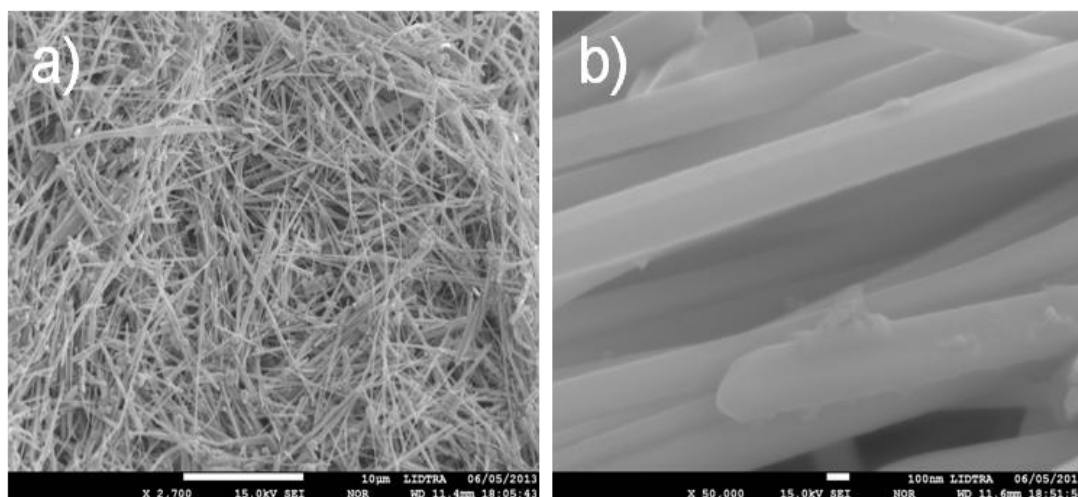


Figure S2: a) Low and b) high magnification FESEM image of as-prepared AgNWs.

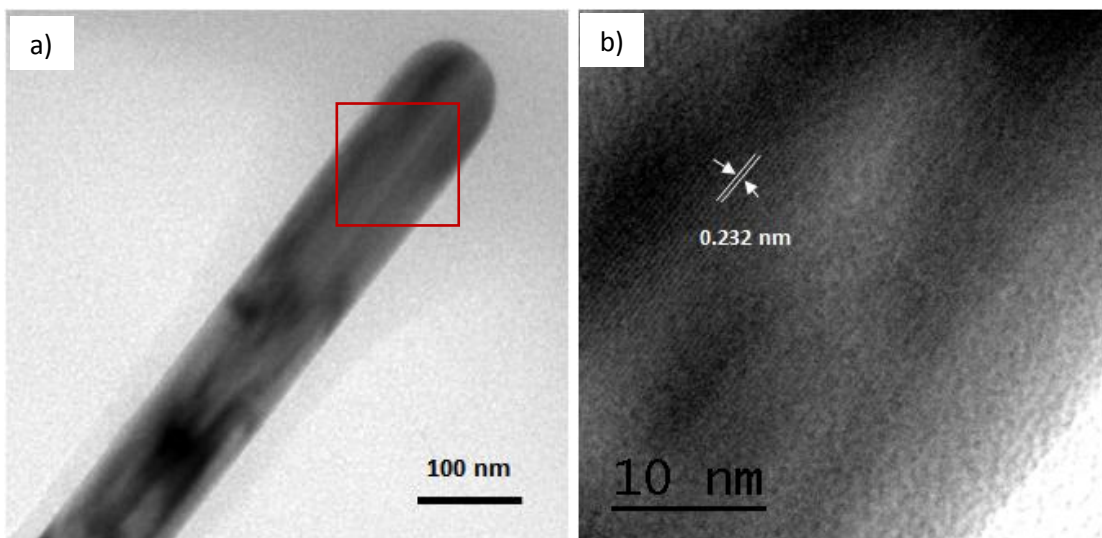


Figure S3: a) TEM image of the Single AgNWs b) HR-TEM image of portion marked in red box in Fig. a.

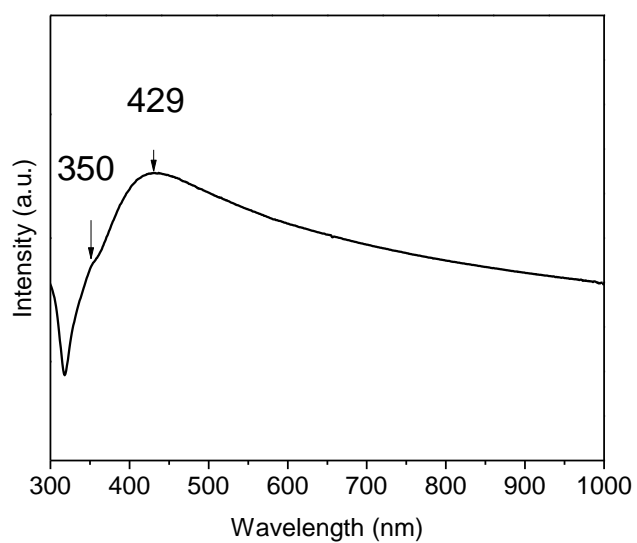


Figure S4. UV-vis spectrum of silver nanowires dispersed in deionized water.

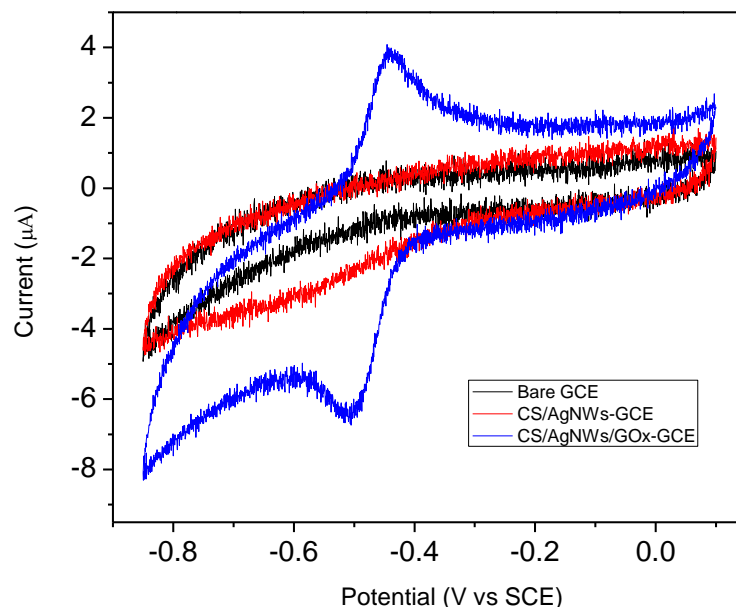


Figure S5. CVs of bare GCE, CS/AgNWs-GCE, and CS/AgNWs/GOx-GCE modified electrodes measured in 0.1 M nitrogen (N_2) saturated PBS solution (PH=7.4) at a scan rate of 50 mV S^{-1} .

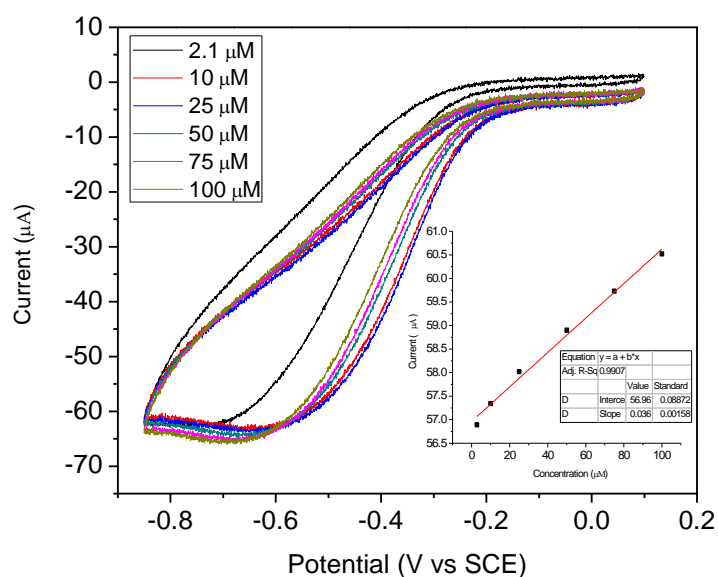


Figure S6. CVs of CS/AgNWs/GOx-GCE modified electrodes measured in 0.1 M nitrogen (O_2) saturated PBS solution (PH=7.4) at a scan rate of 50 mV S^{-1} by successive addition of 2.1, 10, 25, 50, 75 and 100 μM glucose. Inset: the calibration plot with different concentrations of glucose exhibiting a linear fitting ($R^2 = 0.9907$).

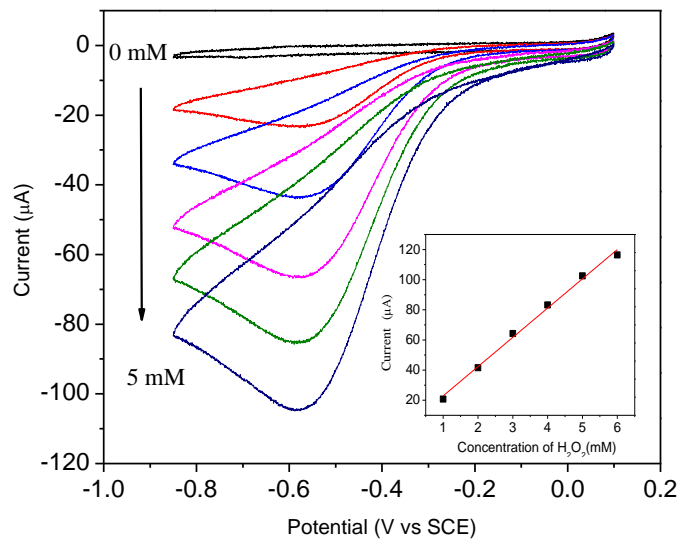


Figure S7. Amperometric response corresponding to the successive addition of hydrogen peroxide (H₂O₂) in a N₂-saturated 0.1 M PBS (pH 7.4) at a scan rate of 50 mV s⁻¹. Inset: the corresponding calibration plot for current as a function of H₂O₂ concentration ($R^2 = 0.98$). The CVs of CS/AgNWs-GCE show that the nanowires can effectively detect H₂O₂.