

## Liquid phase high shear exfoliated few-layered graphene for highly sensitive Ascorbic Acid electrochemical sensors

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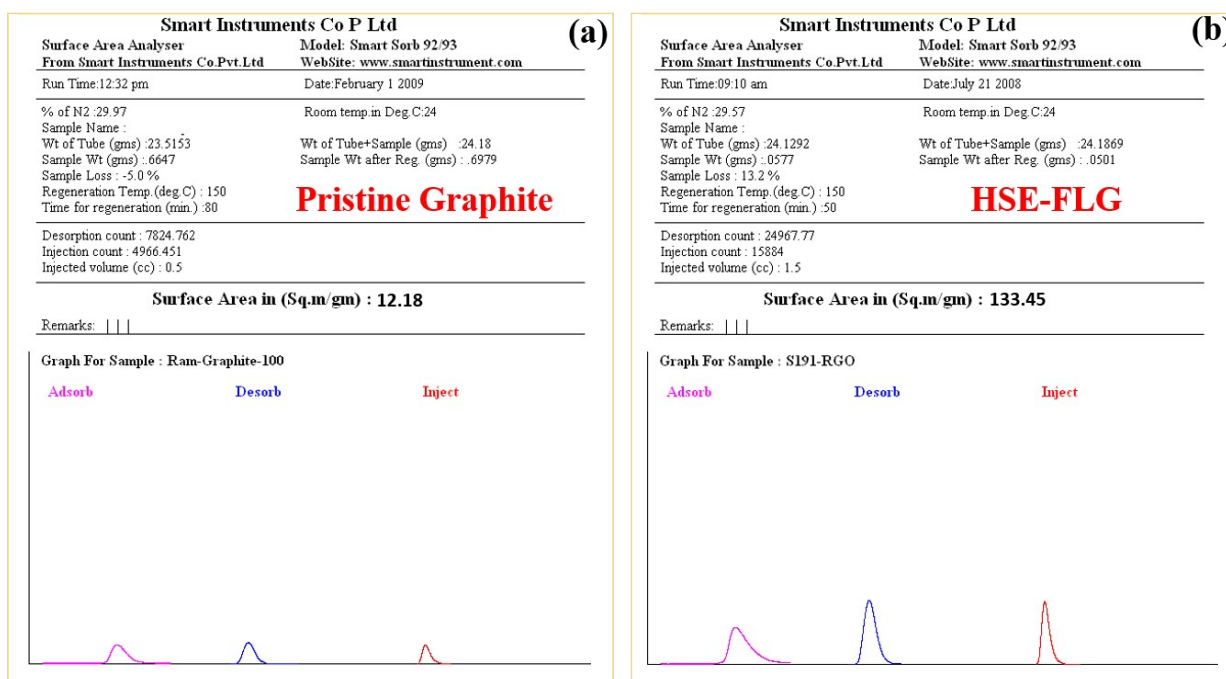
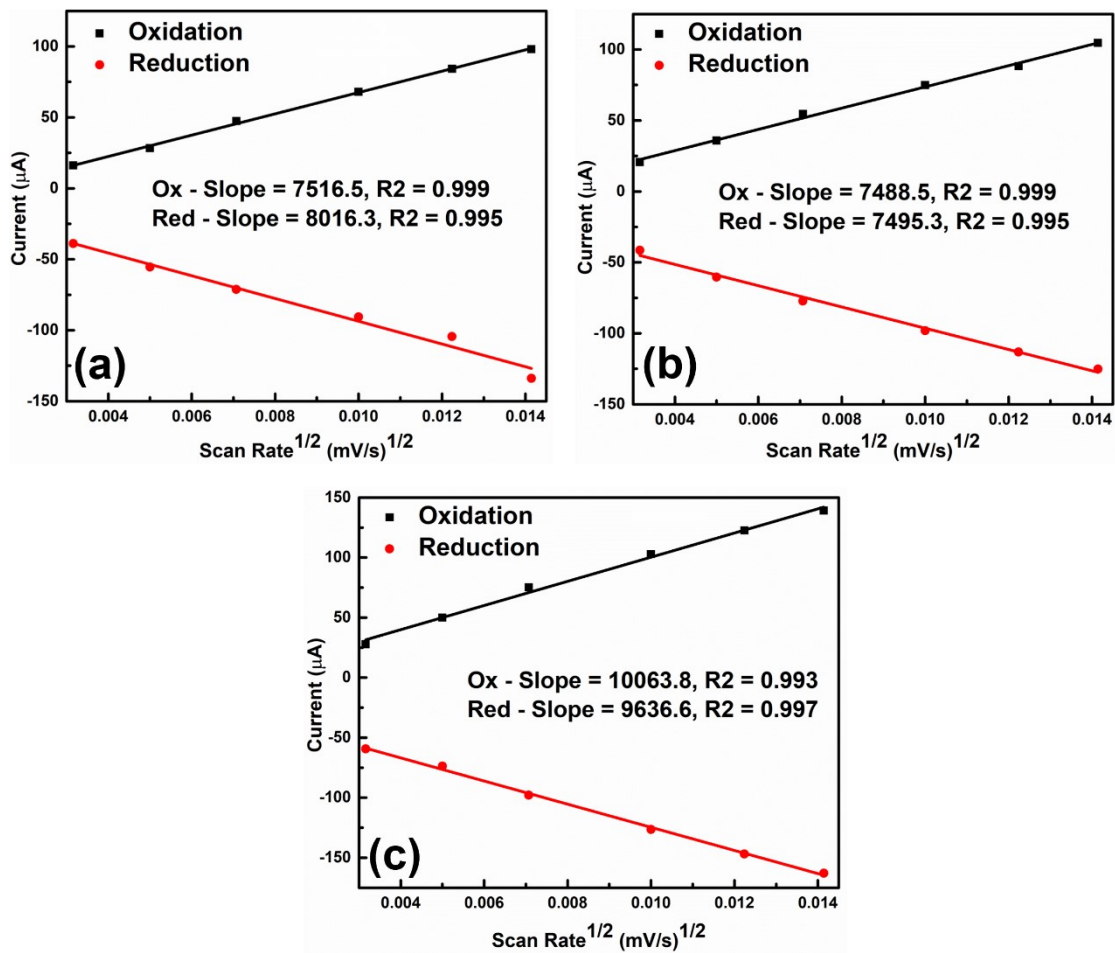


Figure S 1: - BET Specific surface area of pristine graphite and exfoliated graphene.



**Figure S 2:** - Square root of scan rate vs current linearity graphs for, (a) Blank GCE, (b) Pristine Graphite, and (c) HSE-FLG.

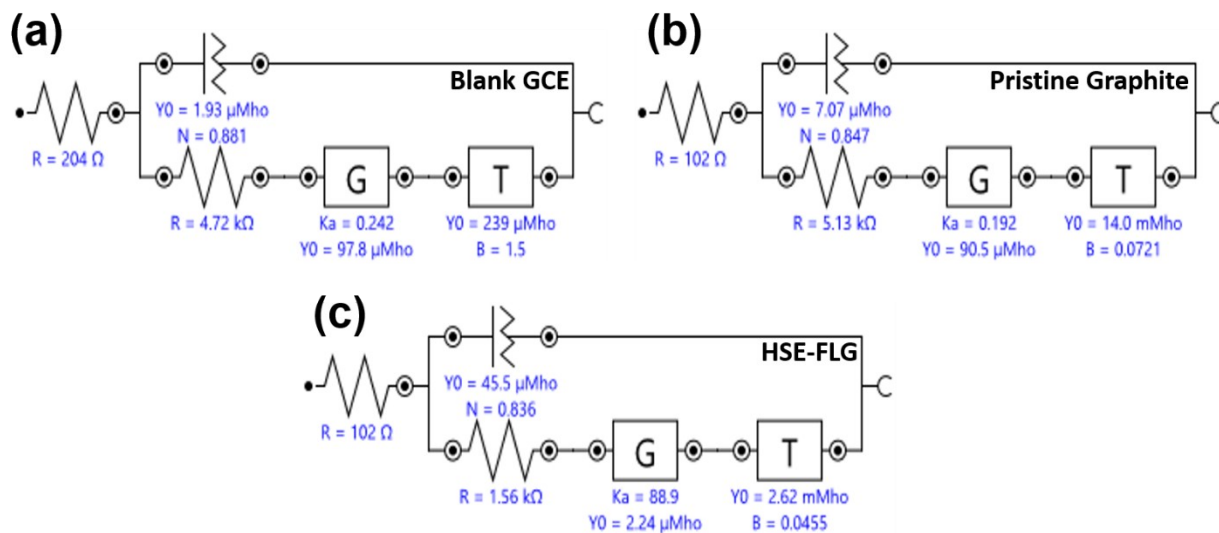


Figure S 3: - Equivalent circuits for the simulated EIS plots of modified GCEs.

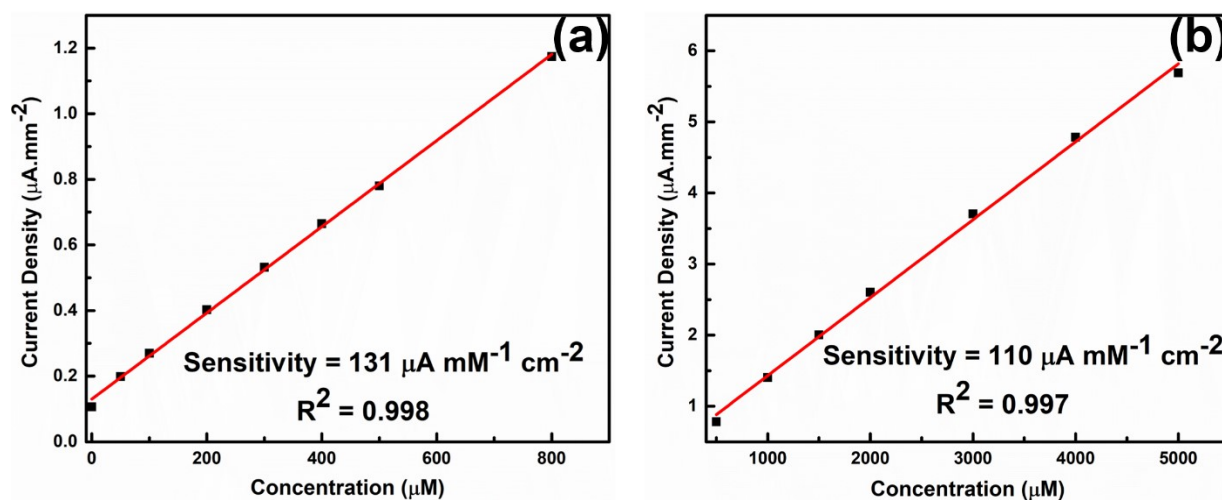


Figure S 4: - Calibration plots of LSVs for HSE-FLG based AA sensor at higher concentrations of AA.

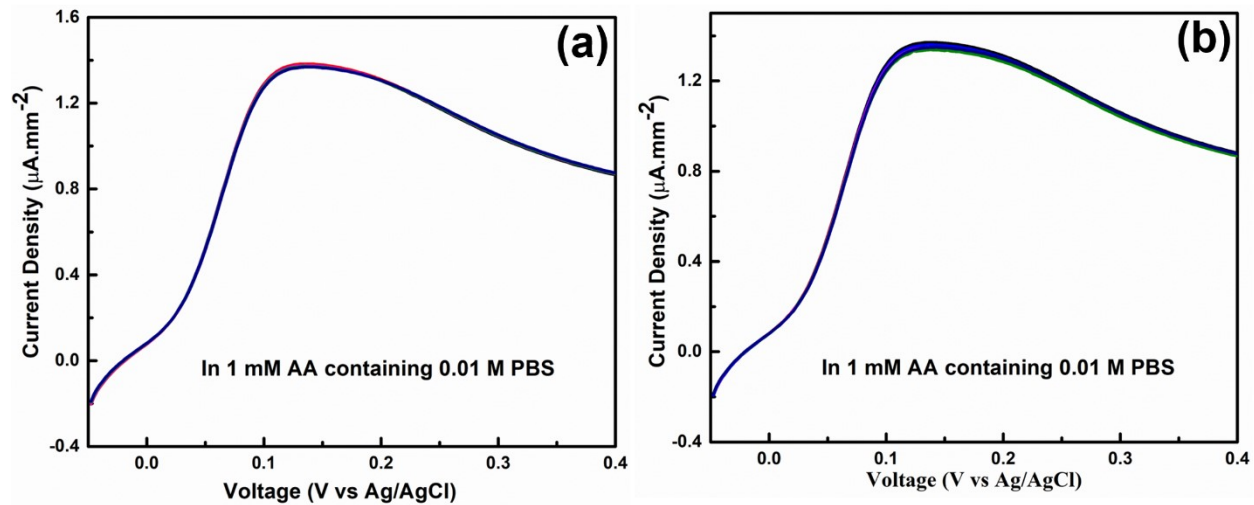


Figure S 5: - LSV plots for (a) repeatability and (b) reproducibility results.

Table S 1: - Real samples analysis of HSE-FLG based AA sensor for Vitamin C supplement.

Concentration of AA ( $\mu\text{M}$ )	Output Current Density in PBS ( $\mu\text{A}\cdot\text{mm}^{-2}$ )	Output Current Density in Vitamin C Supplement ( $\mu\text{A}\cdot\text{mm}^{-2}$ )	Percentage of recovery (%)	% RCD
20	0.0965	0.1036	107.3	7.1
30	0.3161	0.3061	96.8	3.3
50	0.5931	0.5579	94.1	5.8