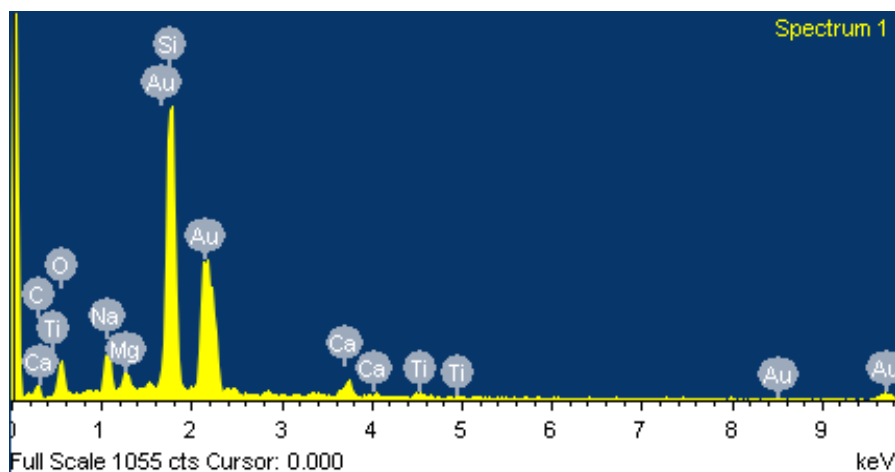


Supplementary Information

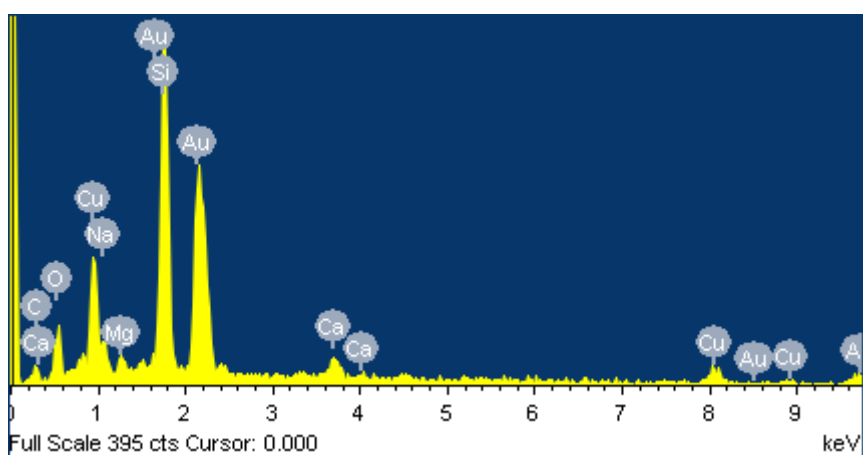
Preparation of reduced graphene oxide-Cu nanoparticle composites through electrophoretic deposition: Application for nonenzymatic glucose sensing

Qian Wang, Qi Wang, Musen Li, Sabine Szunerits and Rabah Boukherroub



Element	Weight%	Atomic%
C K	6.06	19.76
O K	10.71	26.20
Na K	4.28	7.28
Mg K	1.34	2.15
Si K	22.23	30.98
Ca K	2.60	2.54
Ti K	0.98	0.80
Au M	51.82	10.30

Figure S1: EDX results of rGO deposited by EPD technique using 0.5 mg/mL of GO in ethanol. Applied voltage: 50 V; deposition time = 2 min.



Element	Weight%	Atomic%
C K	6.07	21.40
O K	9.15	24.21
Na K	2.02	3.73
Mg K	0.99	1.72
Si K	16.49	24.85
Ca K	2.32	2.45
Cu L	17.95	11.96
Au M	45.02	9.68

Figure S2. EDX analysis of rGO/CuNPs deposited by EPD technique using 0.5 mg/mL of GO and 0.5 mg/mL of CuSO₄ in ethanol. Applied voltage: 50 V; deposition time = 2 min.

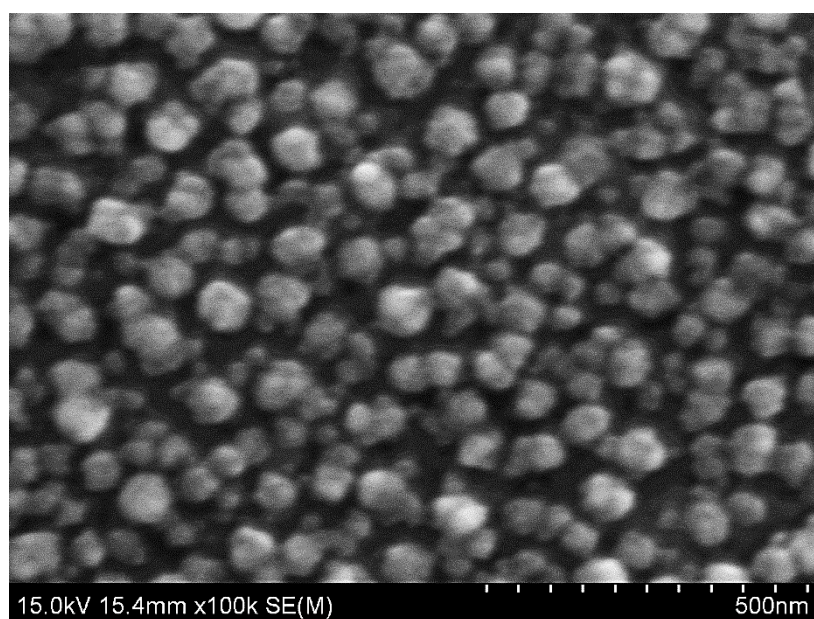
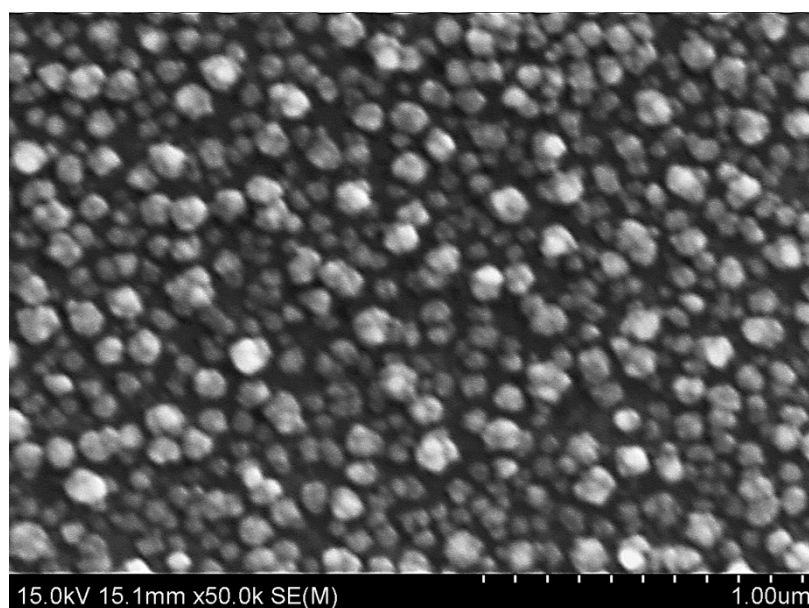
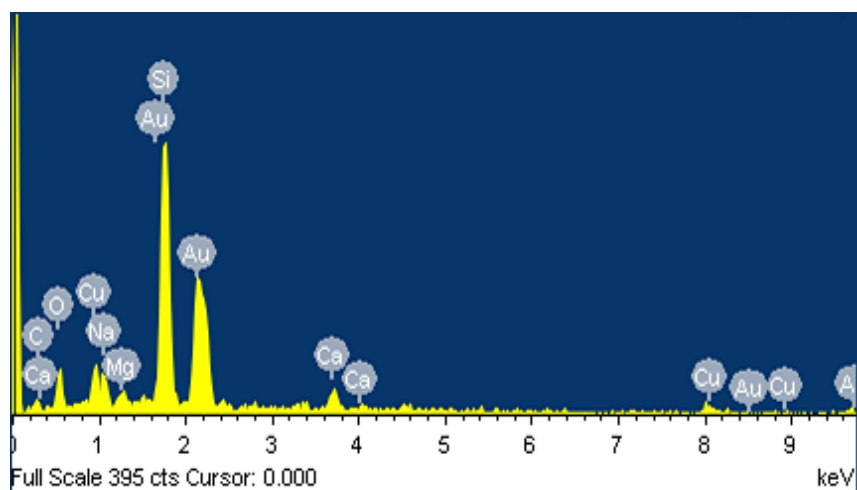


Figure S3. SEM images of rGO/Cu NPs deposited by EPD technique using 0.5 mg/mL of GO and 0.5 mg/mL of CuSO₄ in ethanol. Applied voltage: 50 V; deposition time = 1 min.



Element	Weight%	Atomic%
C K	6.01	19.84
O K	10.90	27.02
Na K	2.49	4.29
Mg K	1.2	1.96
Si K	20.30	28.66
Ca K	3.12	3.09
Cu L	9.17	5.72
Au M	46.81	9.42

Figure S4. EDX results of rGO/Cu NPs deposited by EPD technique using 0.5 mg/mL of GO and 0.5 mg/mL of CuSO₄ in ethanol. Applied voltage: 50 V; deposition time = 1 min.

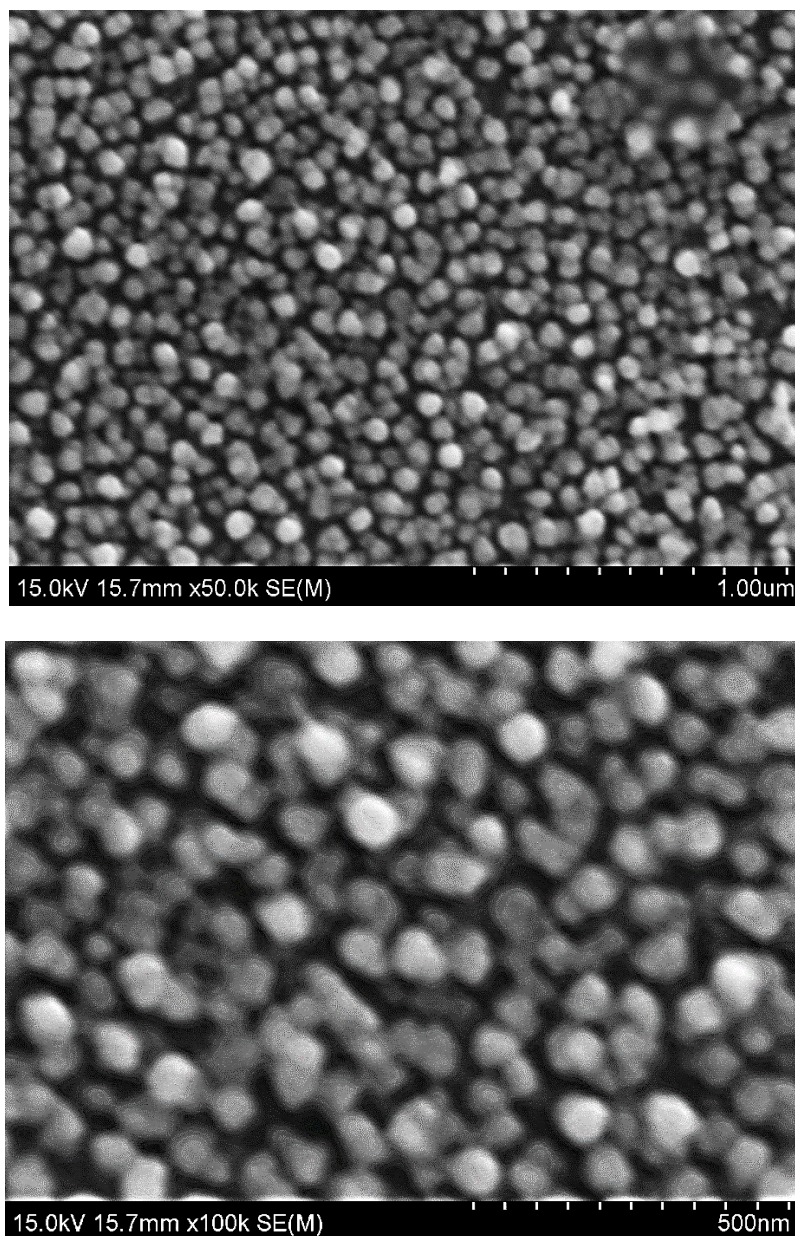
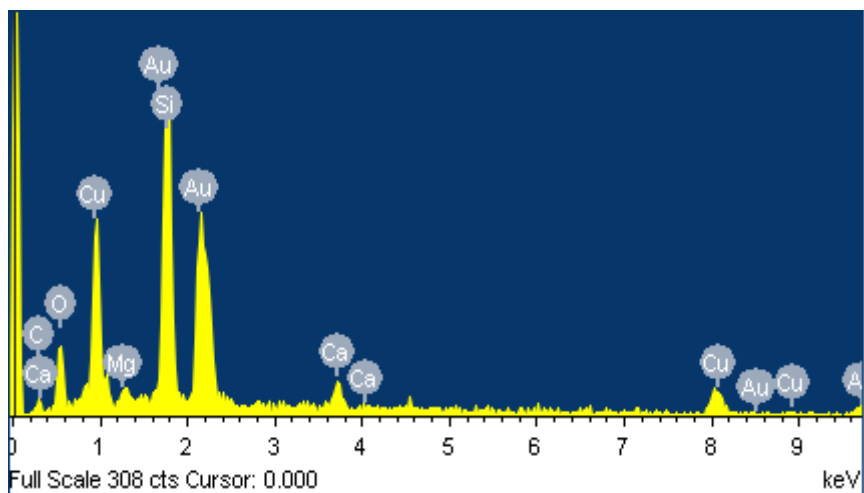


Figure S5. SEM images of rGO/Cu NPs deposited by EPD technique using 0.5 mg/mL of GO and 0.5 mg/mL of CuSO₄ in ethanol. Applied voltage: 50 V; deposition time = 3 min.



Element	Weight%	Atomic%
C K	5.03	18.05
O K	9.94	26.80
Mg K	0.94	1.67
Si K	16.66	25.60
Ca K	2.36	2.54
Cu L	24.08	16.35
Au M	40.99	8.98

Figure S6. EDX results of rGO/Cu NPs deposited by EPD technique using 0.5 mg/mL of GO and 0.5 mg/mL of CuSO₄ in ethanol. Applied voltage: 50 V; deposition time = 3 min.

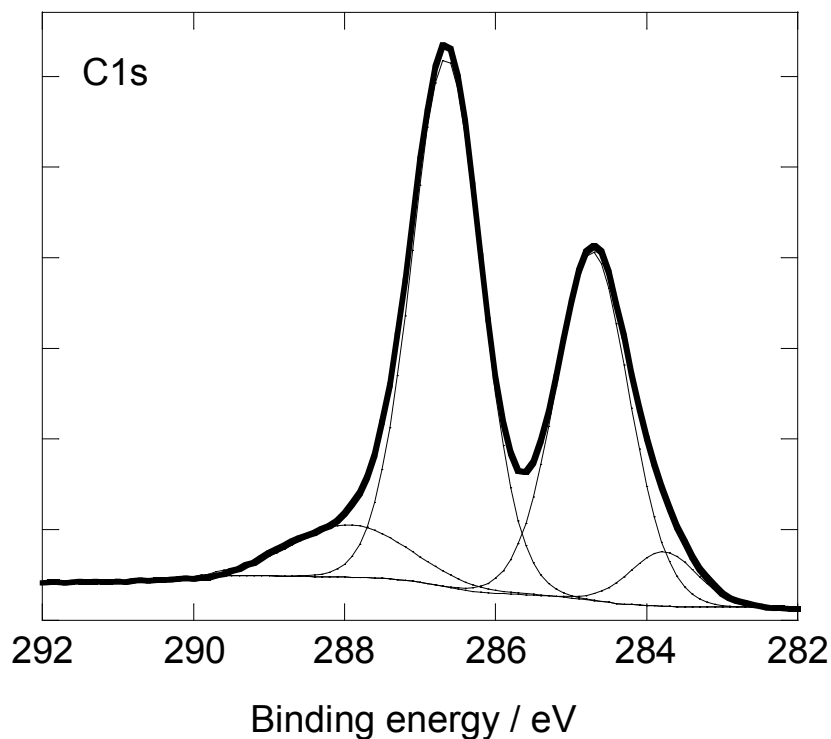


Figure S7. C1s high resolution X-ray photoelectron spectroscopy (XPS) of graphene oxide (GO).

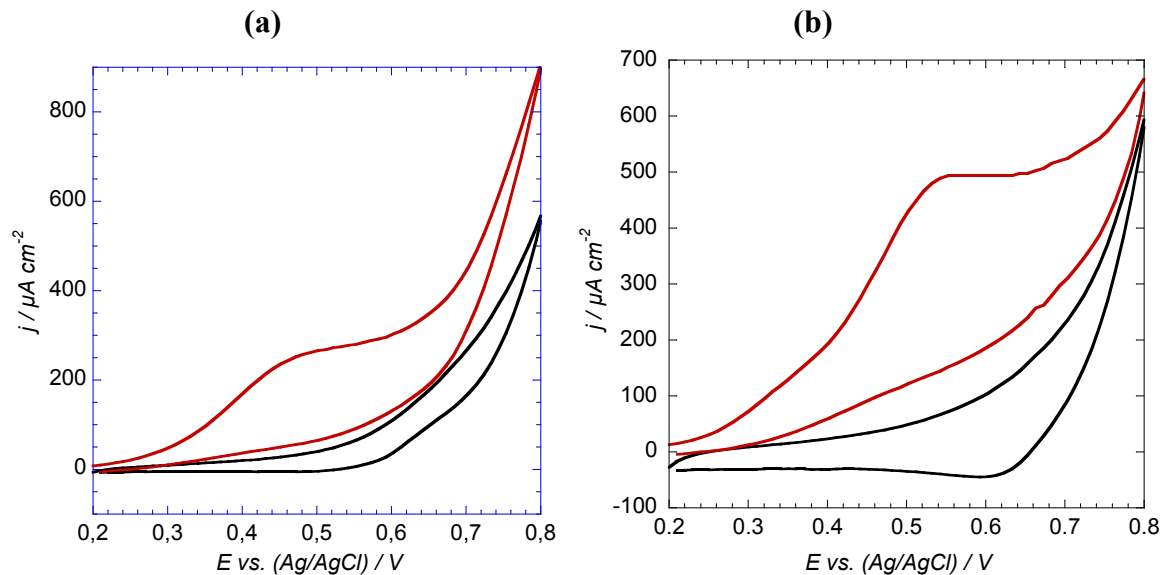


Figure S8: Cyclic voltammograms of (A) Cu NPs modified gold electrodes and (B) rGO/Cu NPs modified electrodes in 0.1 M NaOH before (black) and after addition of 1 mM glucose (red), scan rate: 50 mV s^{-1} . EDP using 0.5 mg mL^{-1} of CuSO_4 (a) and 0.5 mg mL^{-1} of GO/ 0.5 mg mL^{-1} of CuSO_4 in ethanol (b). Applied voltage: 50 V; deposition time = 2 min.

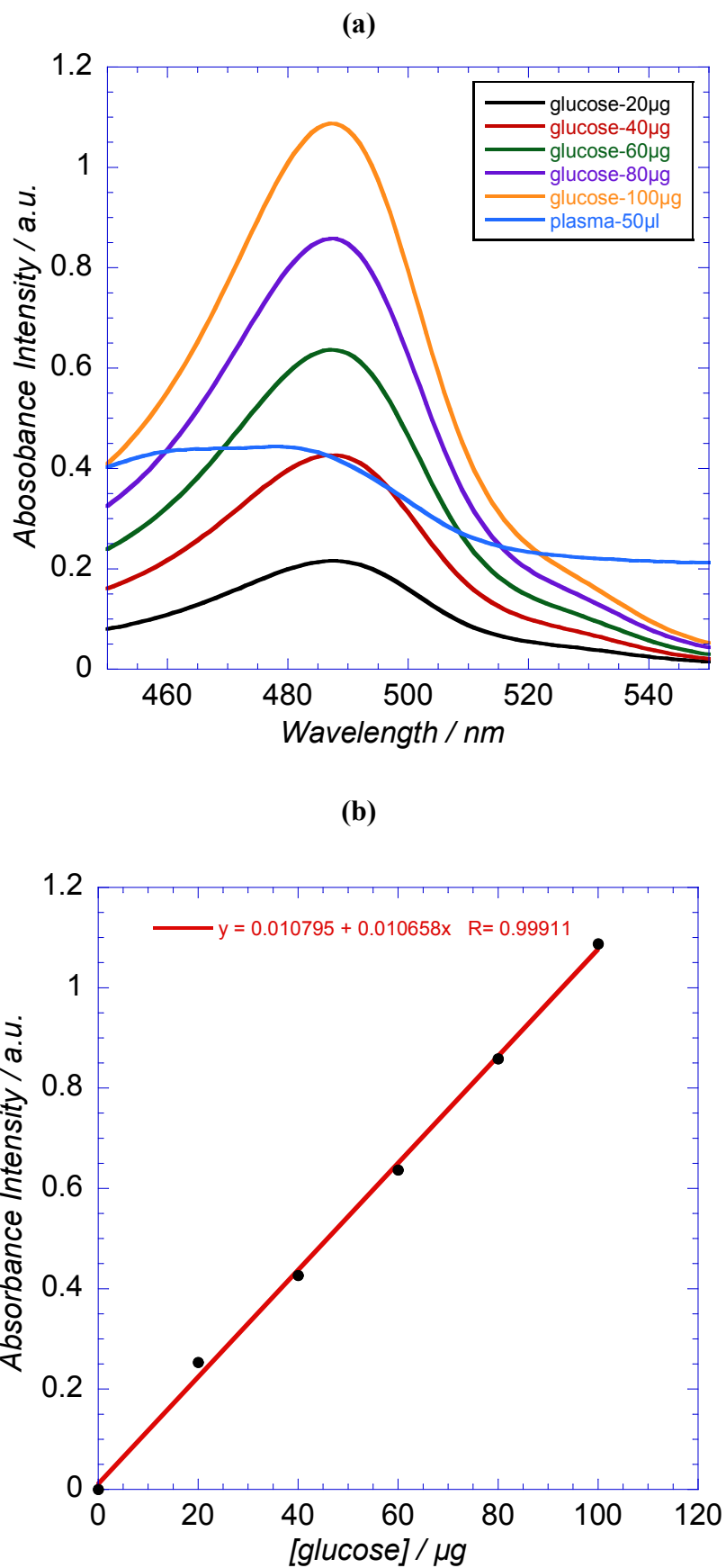


Figure S9: Determination of glucose using the well-established phenol-sulphuric acid colorimetric method.