

SUPPORTING INFORMATION

Novel Aminosilane (APTES)-Grafted Polyaniline@Graphene Oxide (PANI-GO) Nanocomposite for Electrochemical Sensor

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Table S1: Electrical resistivity

PANI%	Electrical resistivity (Ω Cm)	Electrical conductivity (σ)
1	56.008	0.0178 S/cm
2	31.54	0.0317 S/cm
3	13.65	0.0732 S/cm

S2 Electrochemical Impedance Spectroscopy

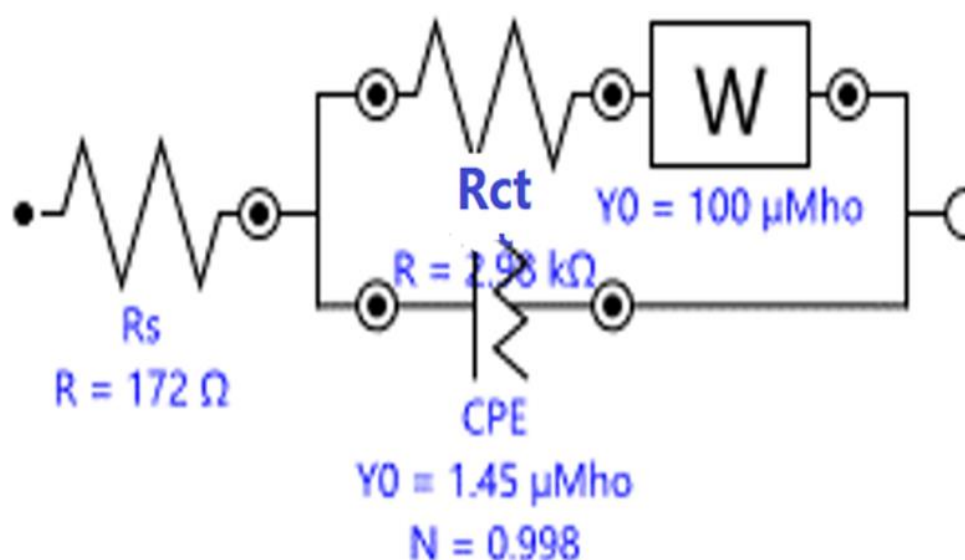


Figure S1. EIS spectrum for PANI-MWCNT-APTES modified GCE. Where R_{ct} denotes charge transfer resistance; R_s denotes solution resistance; CPE denotes constant phase element, W denotes Warburg impedance and C denotes capacitance.

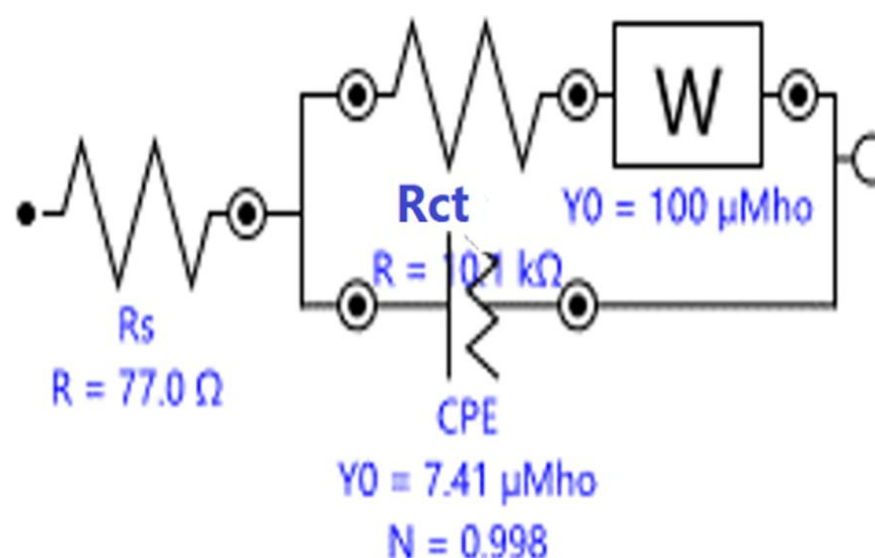


Figure S2. EIS spectrum for bare GCE.

Parameter S1. Analytical performance parameters

Limit of Detection (LOD)

This was calculated using the equation;

$$\text{LOD} = 3 \times \text{Sd}/b$$

where Sd is the standard deviation of the blank response and b is the calibration plot's slope.

Limit of Quantification (LOQ)

This was determined using the equation;

$$\text{LOQ} = 10 \times \text{Sd}/b$$

Sensitivity

This was calculated using the formula:

Sensitivity = slope of the calibration/ GCE surface area

Parameter S2. Real sample analysis

Method used: Standard addition

$$\text{Recovery (\%)} = C_f/C_s \times 100$$

Where C_f is the found concentration of analyte, C_s is the concentration of the spiked Pb (II).