



Supplementary Materials

An Efficient Voltammetric Sensor Based on Graphene Oxide-Decorated Binary Transition Metal Oxides Bi₂O₃/MnO₂ for Trace Determination of Lead Ions

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Table S1. Interference of selected ions on determination of Pb²⁺ with Bi₂O₃/MnO₂/GO/GCE.

Interferences	Concentration(μM)	Contribution (%)
Na ⁺	100	−1.83
K ⁺	100	−1.56
Ca ²⁺	100	+2.72
Mg ²⁺	100	+3.06
Zn ²⁺	100	+4.89
Fe ²⁺	100	+3.76
Co ²⁺	100	+4.82
Cu ²⁺	100	+3.35
Cd ²⁺	100	+4.07
Al ³⁺	100	−2.08
Cl [−]	100	−0.86
NO ₃ [−]	100	+1.76
SO ₄ ^{2−}	100	+2.48
PO ₄ ^{3−}	100	+2.21

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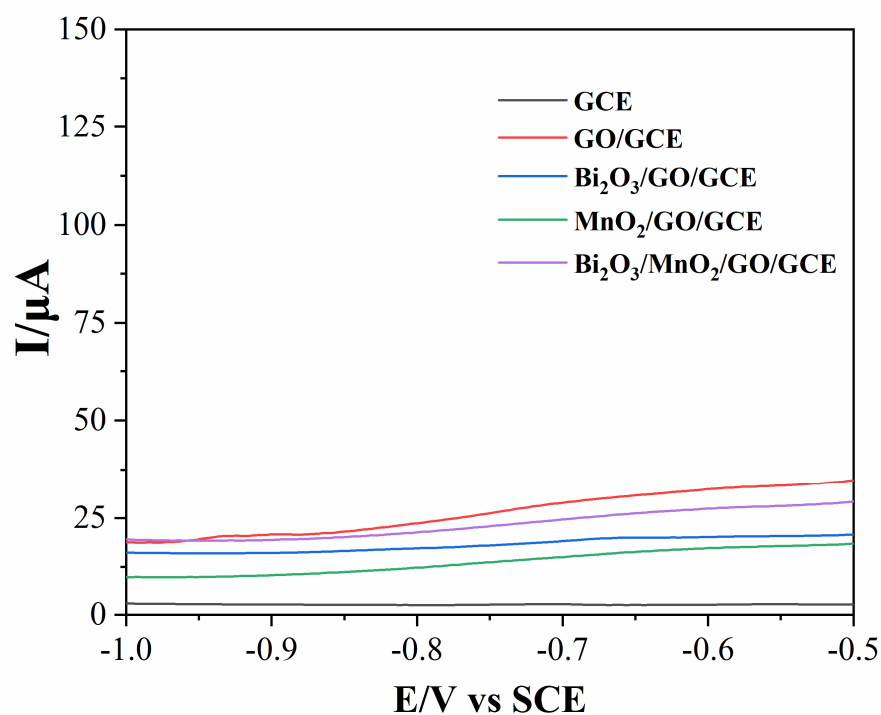


Figure S1. SWASV curves for the $\text{Bi}_2\text{O}_3/\text{MnO}_2/\text{GO}/\text{GCE}$ recorded in the absence of Pb^{2+} (0.1 M HAc-NaAc buffer, pH=5.5).

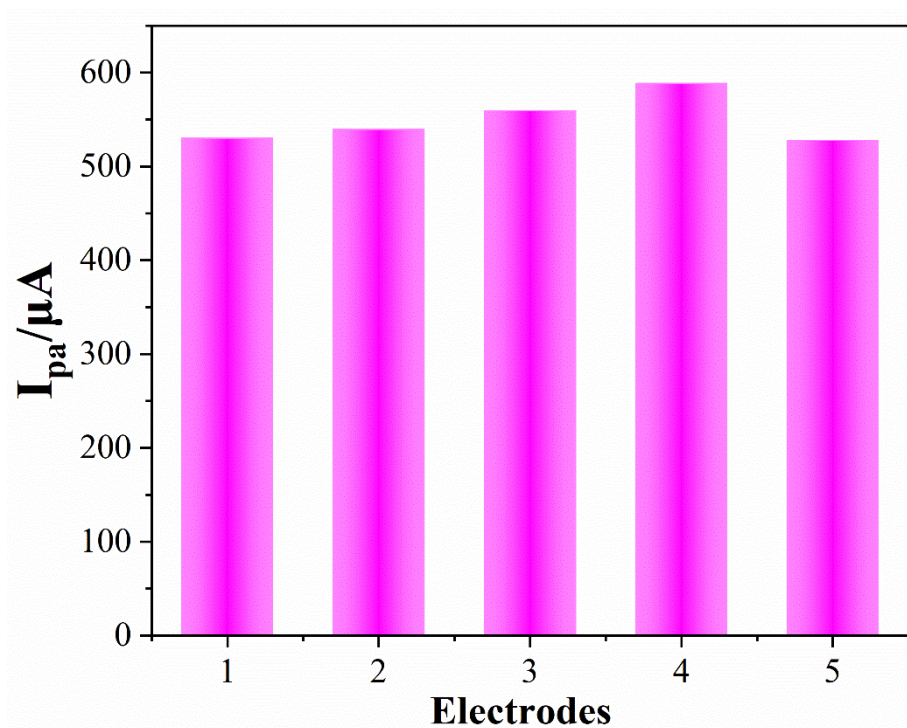


Figure S2. Stripping peak current for parallel detections of $10\ \mu\text{M}$ Pb^{2+} using five independent $\text{Bi}_2\text{O}_3/\text{MnO}_2/\text{GO}/\text{GCE}$ s.

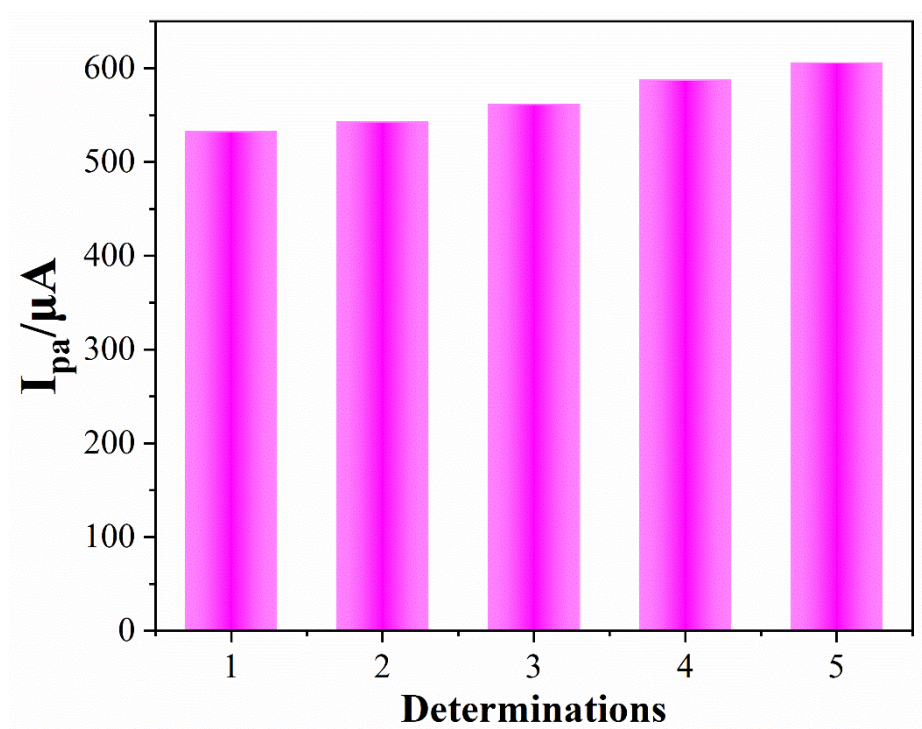


Figure S3. Stripping peak current for five consecutive detections of $10 \mu M Pb^{2+}$ using the same $Bi_2O_3/MnO_2/GO/GCE$.

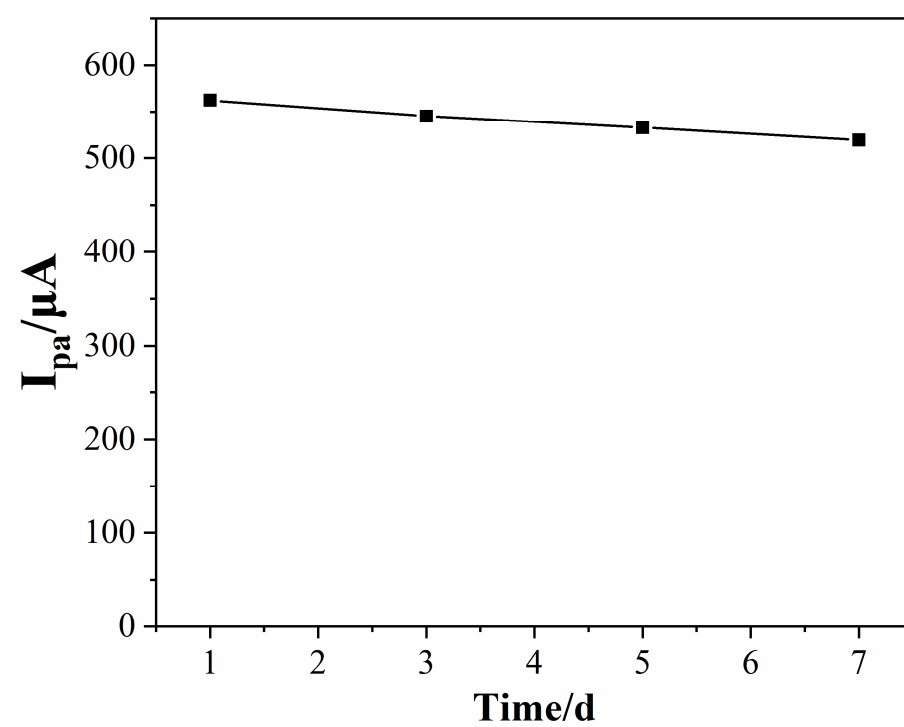


Figure S4. Change in the stripping peak current of $10 \mu M Pb^{2+}$ within a week.