

Supplementary Information

A simple ultrasensitive electrochemical detection of DBP plasticizer for the risk assessment of the South Korean River water

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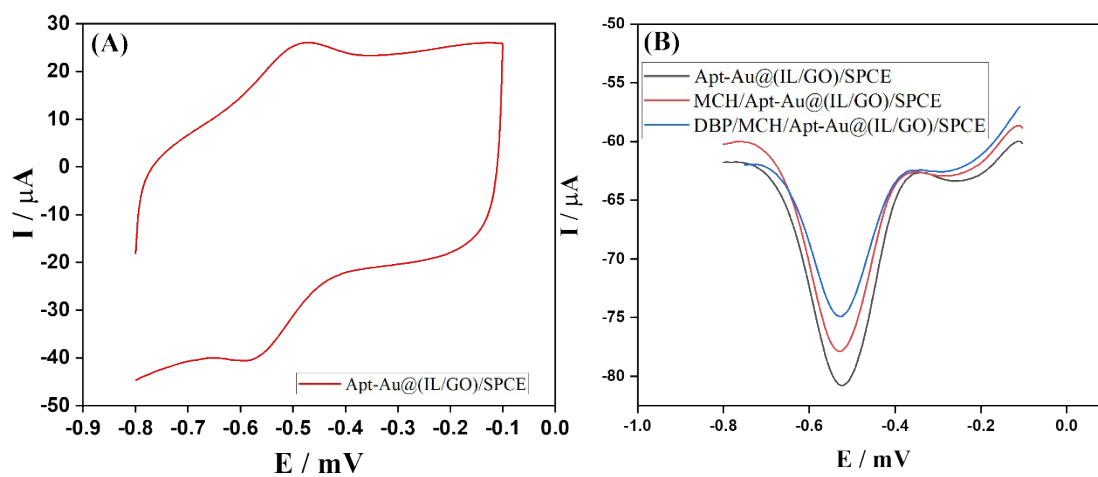


Figure S1. (A) Cyclic voltammogram showing the quasi-reversible redox peaks for the aptamer bound methylene blue, (B) differential pulse voltammetric curves showing the response for the aptamer bound sensing surface before and after the MCH treatment and the interaction with DBP.

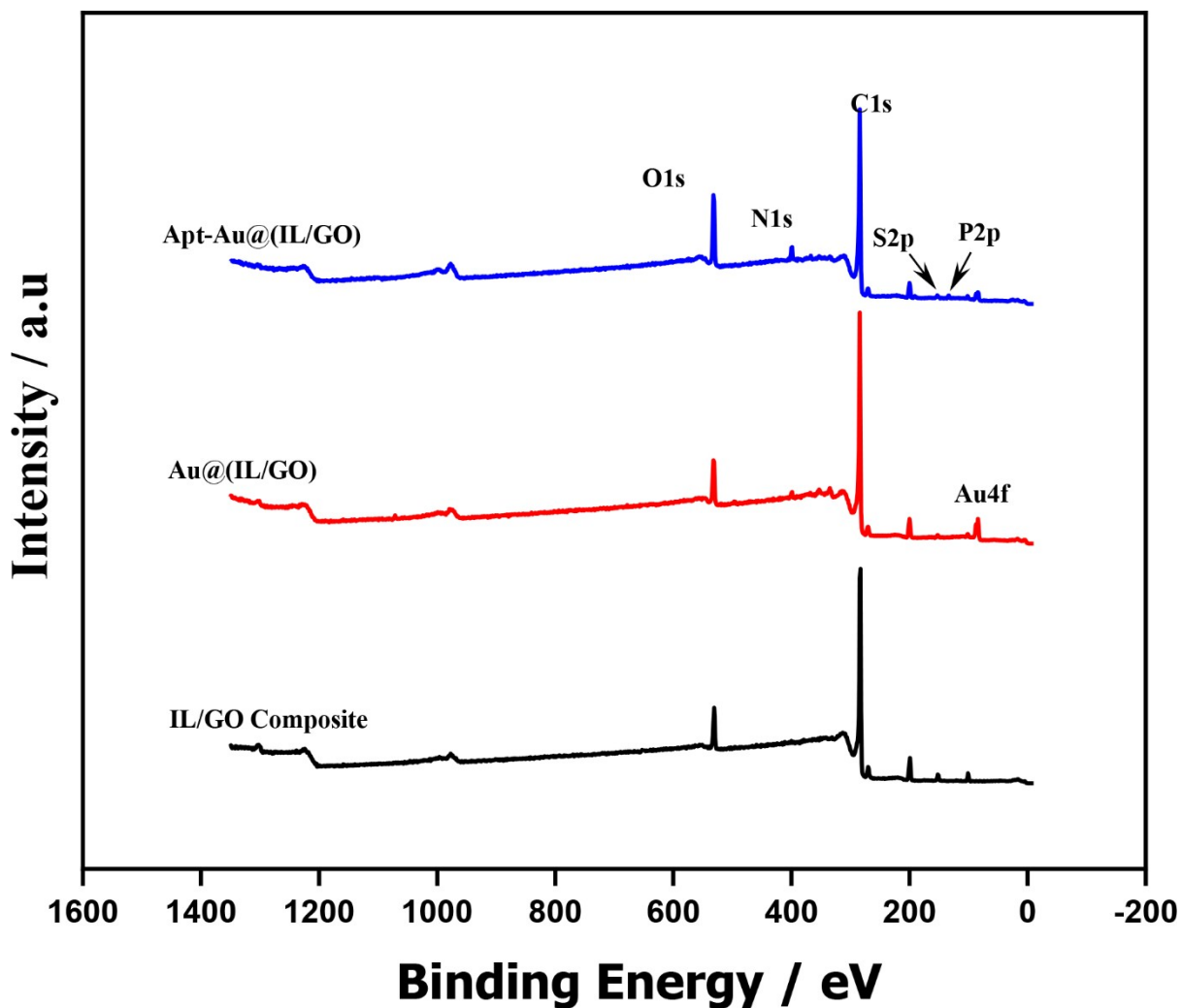


Figure S2. XPS Survey spectra for IL/GO composite material, AuNPs decorated IL/GO composite layer, and aptamer bound Au@(IL/GO) surface.

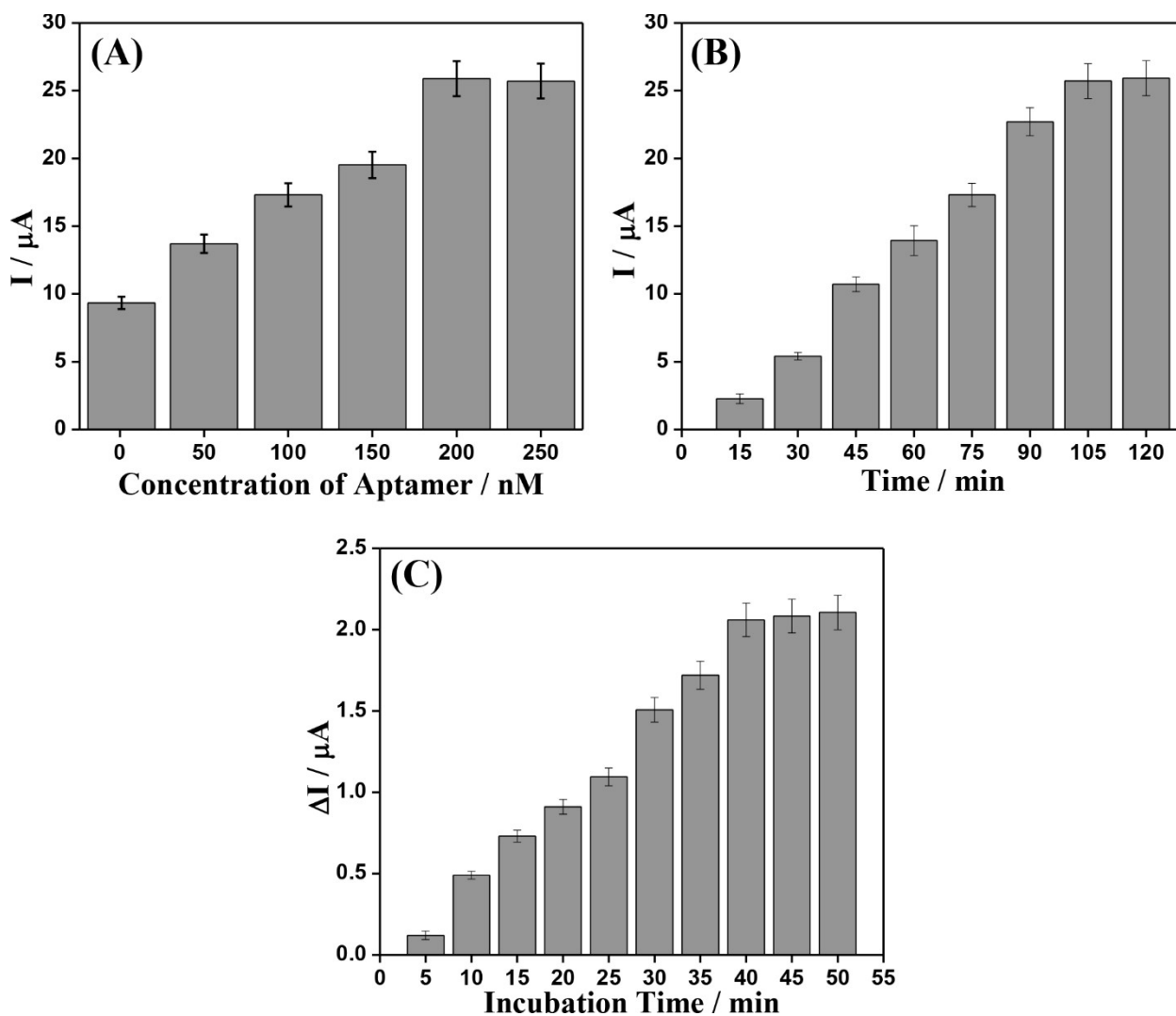


Figure S3. Bar graphs showing the optimization of (A) concentration of aptamer, (B) immobilization of the aptamer on the Au@(IL/GO) electrode surface, and (C) incubation time of the DBP analyte on the aptasensor to obtain proper interaction.

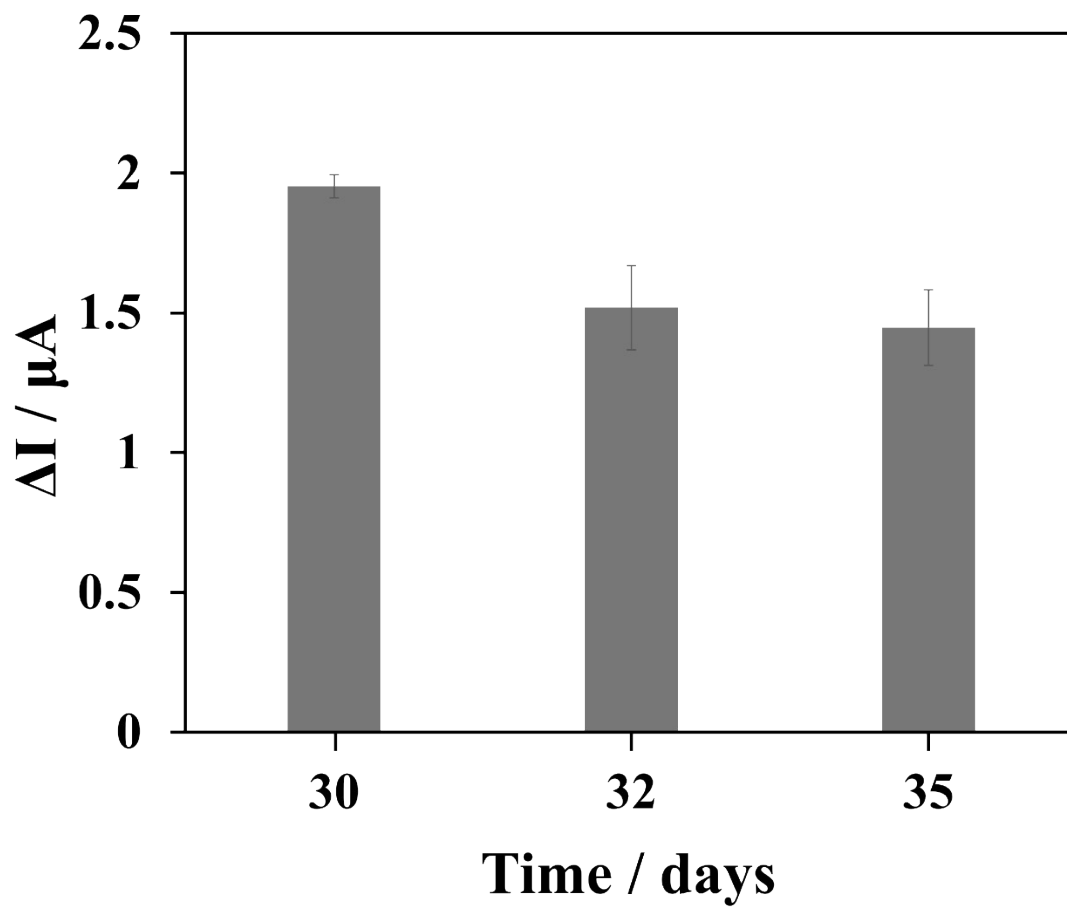


Figure S4. Bar graph showing the decline in the reduction of the aptasensor response signal after 31 days of storage.

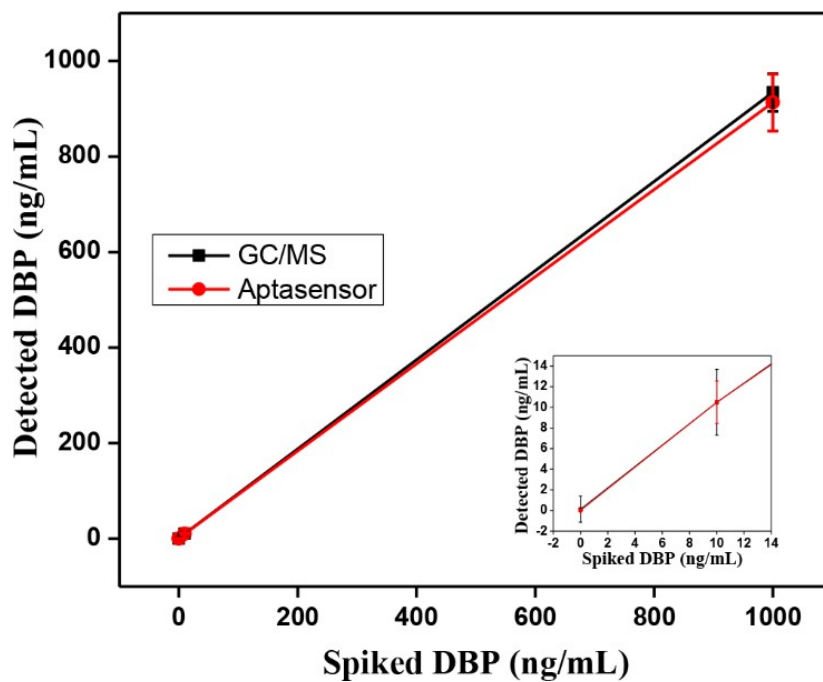


Figure S5. Comparison of data obtained by serially spiking the DBP using GC/MS and electrochemical methods.