

A simple sensing platform based on 1T@2H-MoS₂/cMWCNTs composite modified electrode for ultrasensitive detection of the illegal Sudan I dye in food samples

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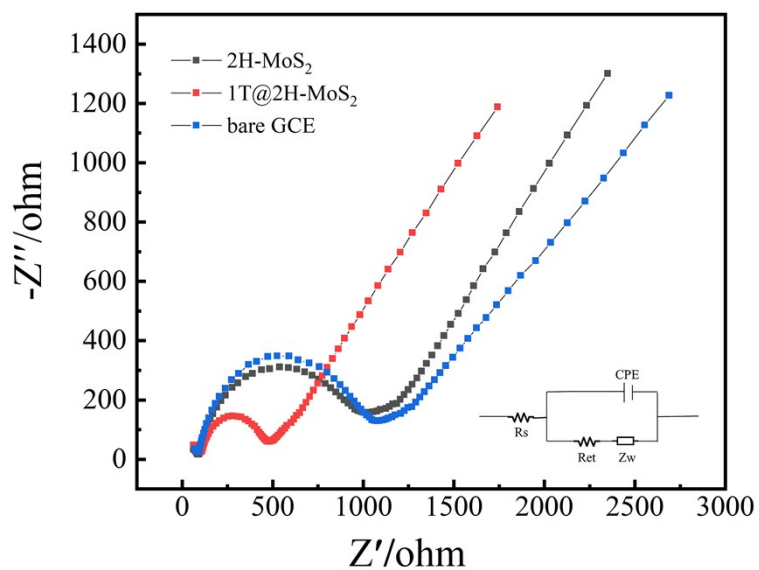


Fig. S1 Nyquist plots obtained at bare GCE (curve blue), 1T@2H-MoS₂/cMWCNTs/GCE (curve red) and 2H-MoS₂/GCE (curve black) in 0.1 M KCl solution containing 5 mM [Fe(CN)₆]^{3-/4-}. Frequency range: 0.01 Hz ~ 10 kHz, amplitude: 5 mV.

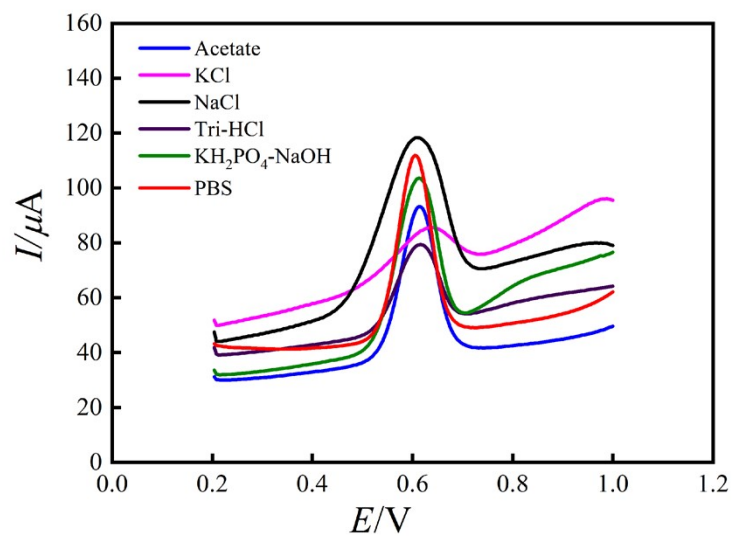


Fig. S2 SWV curves of 1T@2H-MoS₂/cMWCNTs/GCE to 50 μM Sudan I in different supporting electrolyte solution (pH 7.0, 0.1 M). enrichment time: 120 s, potential window: 0.2 V~1.0 V.

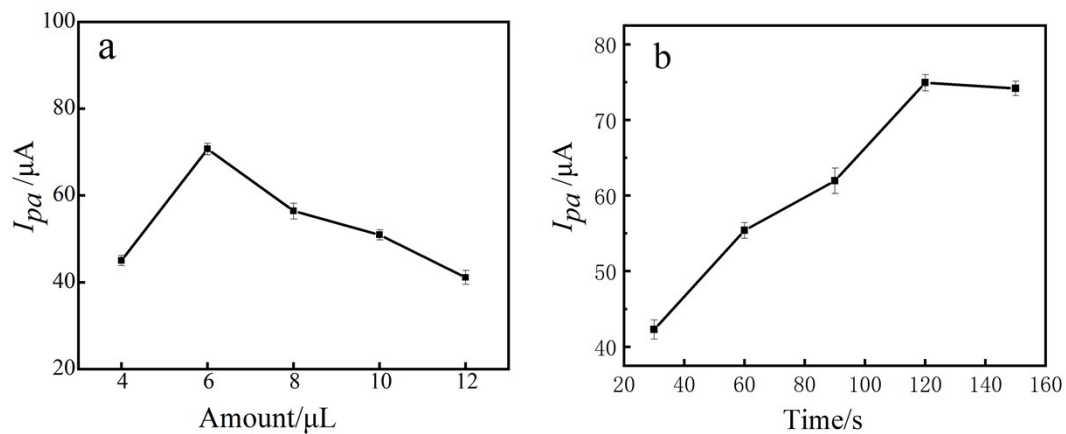


Fig. S3 (a) Effect of 1T@2H-MoS₂/cMWCNTs loading volume on peak current of Sudan I (50 μM), (b) Effect of accumulation time on peak current of Sudan I (50 μM). Supporting electrolyte solution: 0.1 M PBS (pH 7.5), Other conditions are the same as in Fig. S2.

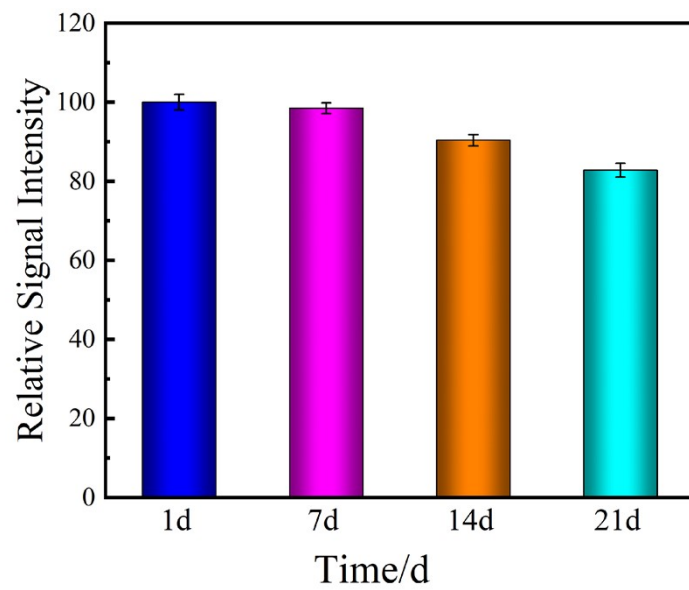


Fig. S4 Storage stability of 1T@2H-MoS₂/cMWCNTs/GCE. The experimental conditions are the same as in Fig. 8.