Electronic Supplementary Material (ESI) for New Journal of Chemistry.

Smart Electrochemical Sensing Platform for the Simultaneous Determination of Psychotic Disorders Drugs Isopropamide Iodide and Trifluoperazine Hydrochloride

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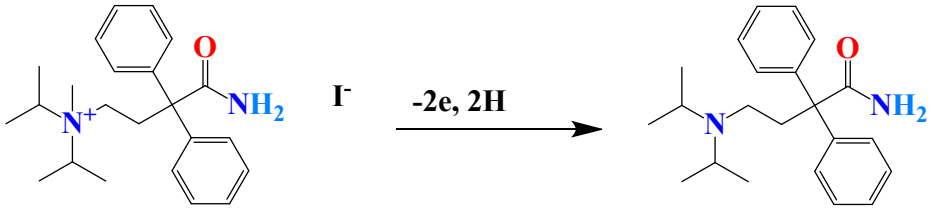
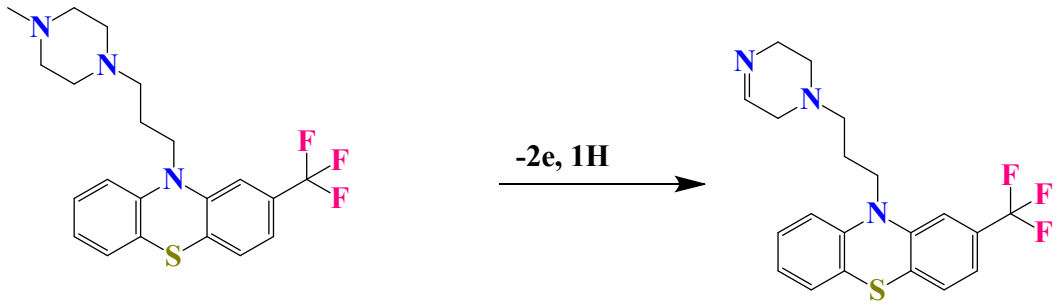


ISP



TFP

Scheme S1. Suggested electrochemical oxidation of ISP and TFP

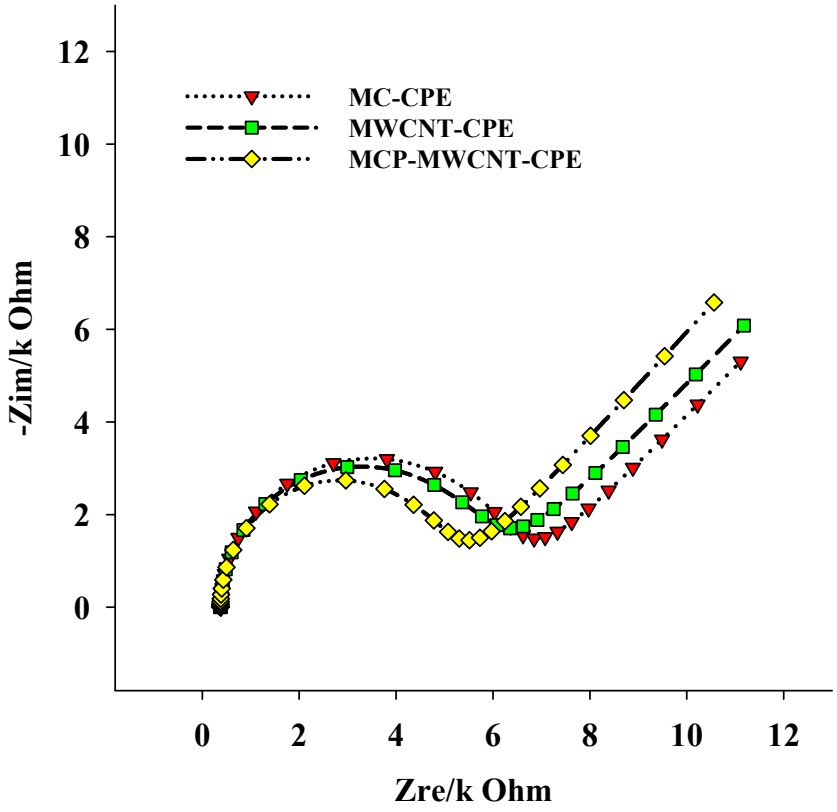


Figure S1. Nyquist plots for MC-CPE, MWCNT/CPE, and MC-MWCNT-CPE using the redox probe 5.0 mmol L^{-1} $K_3Fe(CN)_6$ (1:1) solution.

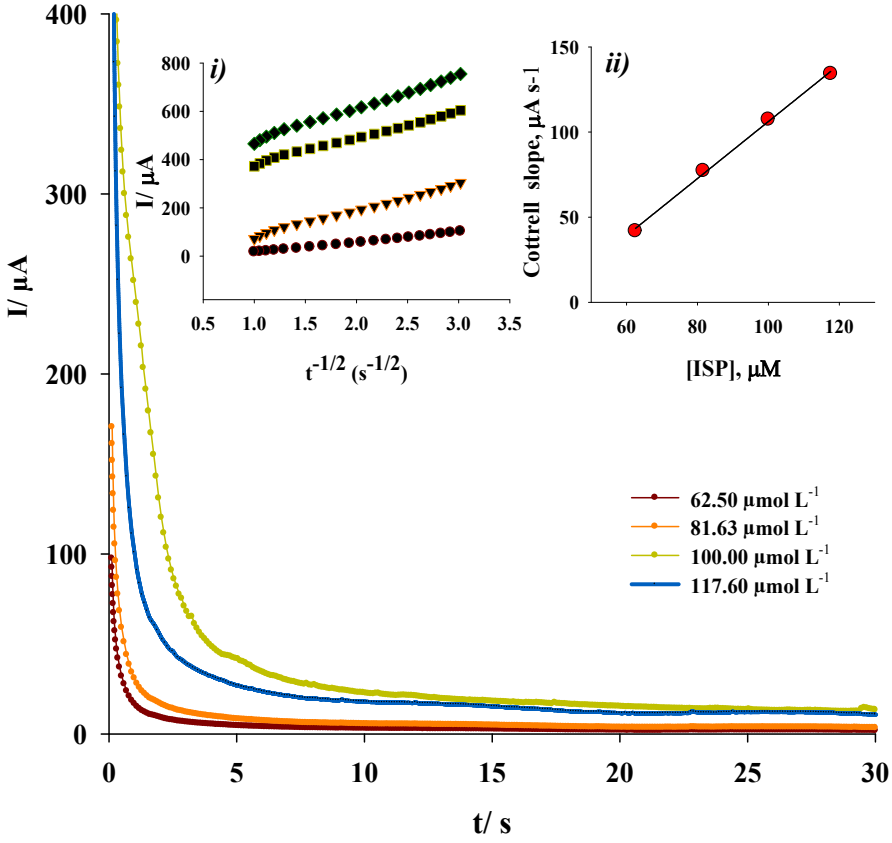


Figure S2. Chronoamperograms for the oxidation of different concentrations ISP at MCP-MWCNT/CPE in B−R buffer (pH 4.0), for a potential step of +0.51 V vs. Ag/AgCl. The numbers 1 to 4 in Cottrell's plot (inset *i*) correspond to 62.50, 100.00, 117.60, and 134.60 µmol L^{-1} of ISP, respectively. Inset *ii* shows the variation of chronoamperometric currents at t = 30 s vs. ISP concentration.

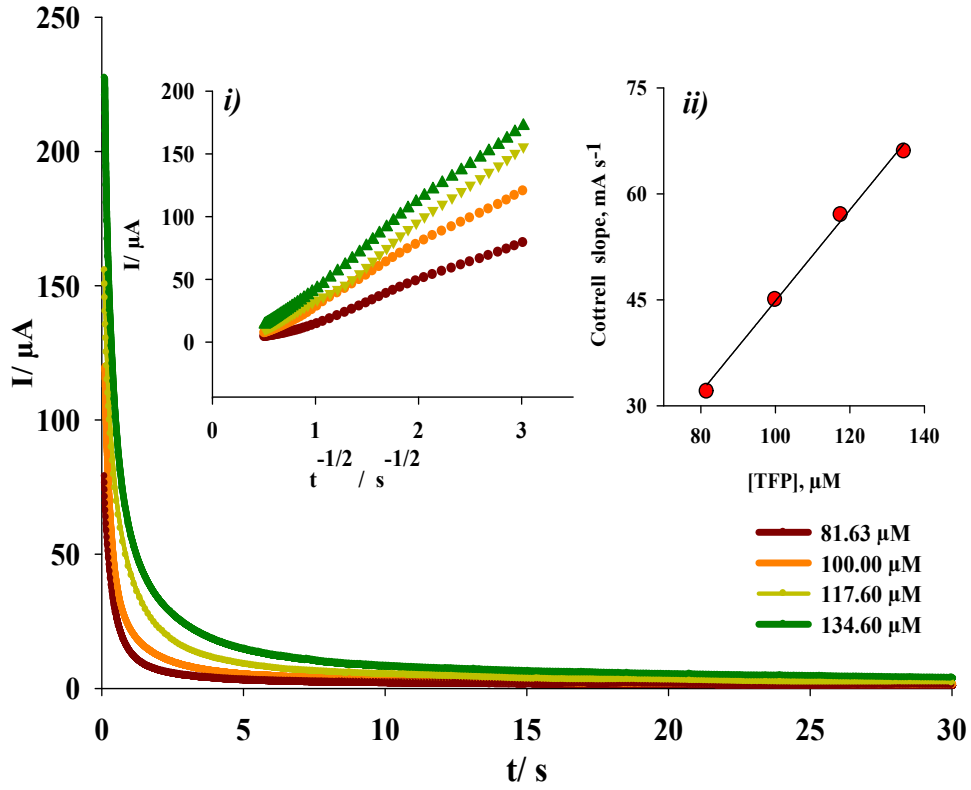


Figure S3. Chronoamperograms for the oxidation of different concentrations TFP at MCP-MWCNT/CPE in B−R buffer (pH 4.0), for a potential step of +0.794 V vs. Ag/AgCl. The numbers 1 to 4 in Cottrell's plot (inset *i*) correspond to 81.63, 100.00, 117.60, and 134.60 µmol L^{-1} of TFP, respectively. Inset *ii* shows the variation of chronoamperometric currents at t = 30 s vs. TFP concentration.

Table S1. Determination of ISP and TFP in human plasma sample using the new proposed sensing protocol.

Parameters	Conc. Added (µmol L^{-1})	Conc. found (µmol L^{-1})	%Recovery*
ISP	12.50	12.36	98.90
	15.50	15.75	101.61
	20.90	20.72	99.13
	23.40	23.47	100.32
%Mean±%RSD			99.99±1.24
TFP	62.24	63.30	101.75
	77.50	75.80	97.75
	105.00	105.80	100.73
	117.00	116.90	99.90
%Mean±%RSD			100.03±1.70

*Average of three determinations.