

**RSC Advances**

**Electronic Supplementary Information**

**Fast and Selective determination of phenazopyridine at a novel multi-walled carbon nanotubes modified**

**ZnCrFeO<sub>4</sub> magnetic nanoparticles paste electrode**

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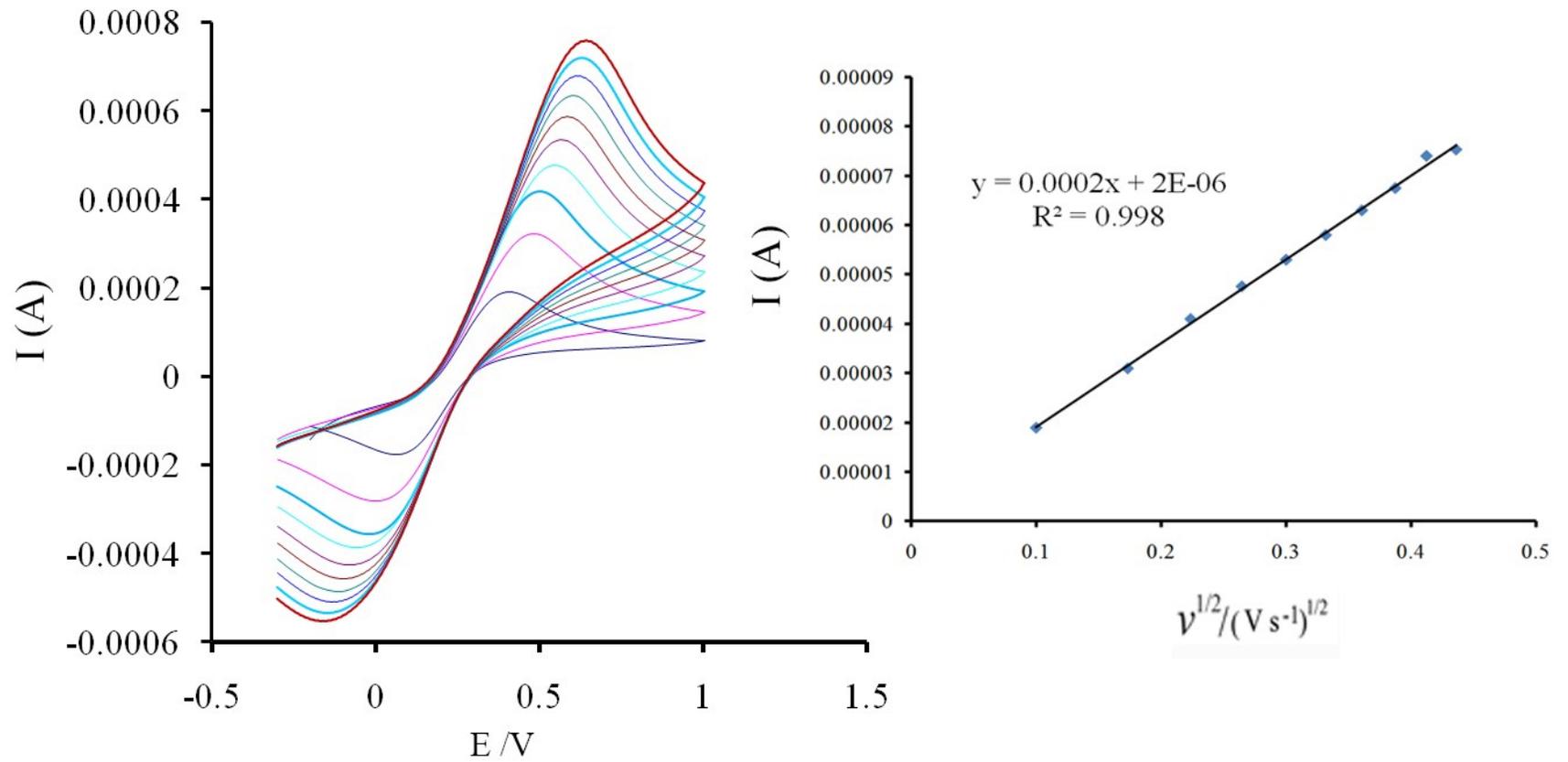


Figure S1: Cyclic voltammograms of  $1 \text{ mmol L}^{-1} \text{ K}_3\text{Fe}(\text{CN})_6$  as a probe at different scan rates (10, 30, 50, 70, 90, 110, 130, 150, 170, and  $190 \text{ mV s}^{-1}$ ).

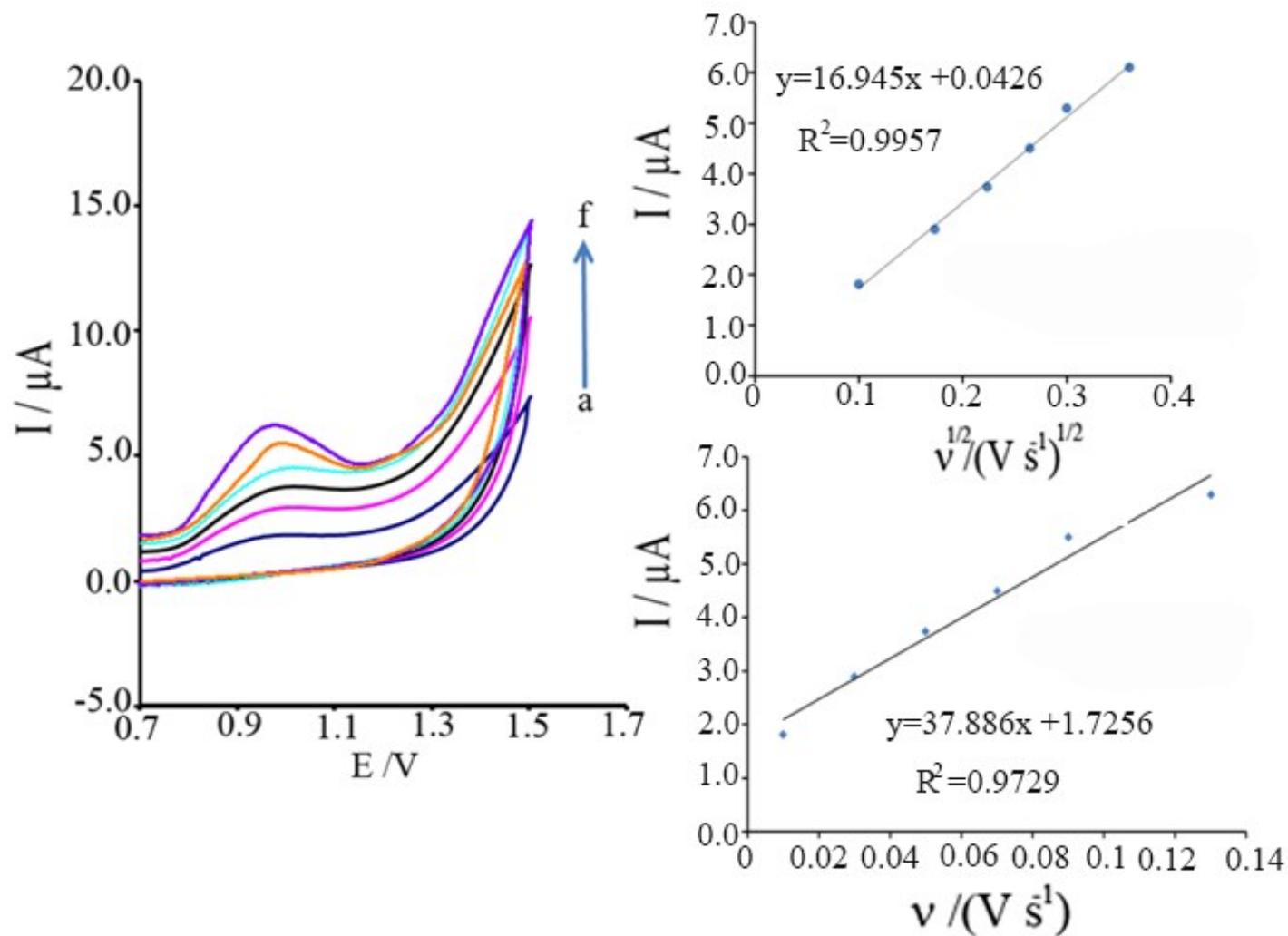


Figure S2: Cyclic voltammograms of  $200 \mu\text{mol L}^{-1}$  phenazopyridine at MWCNTs/ZnCrFeO<sub>4</sub>/CPE with various scan rates as: a) 10; b) 30; c) 50; d) 70; e) 90.0; , and f)  $130 \text{ mV s}^{-1}$ .

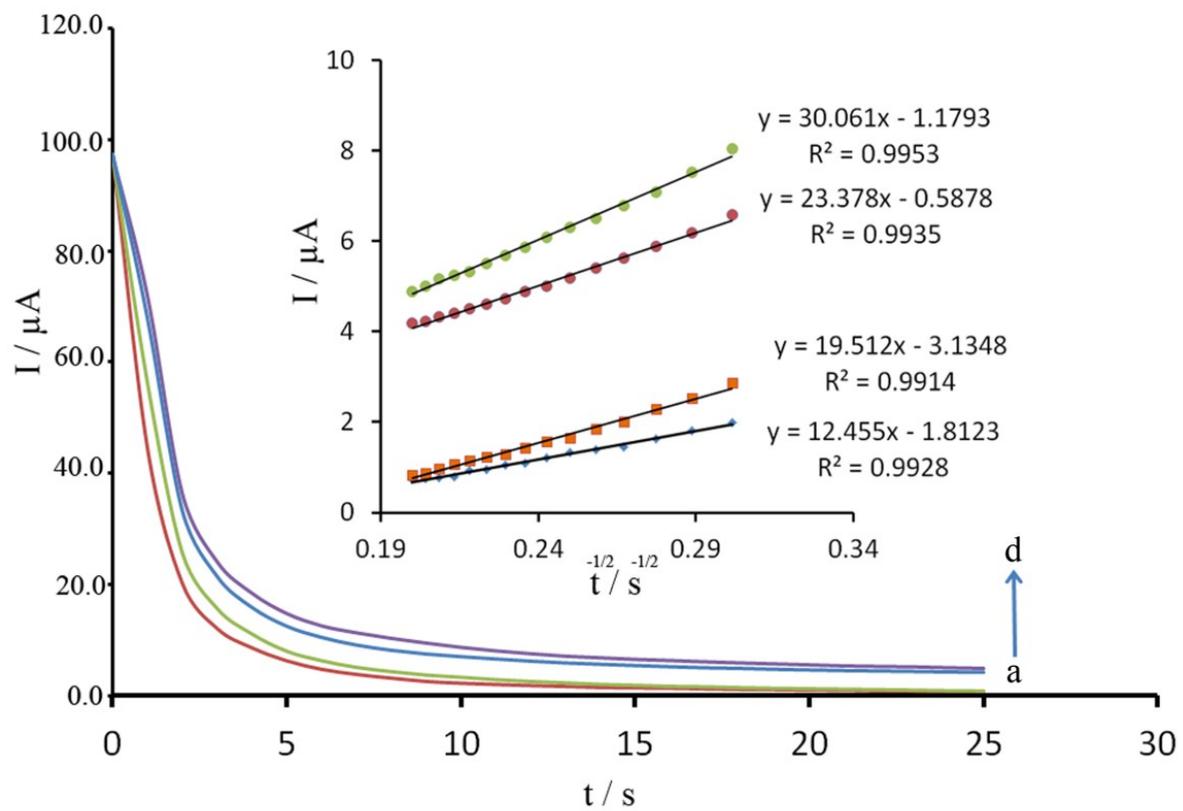


Figure S3: Chonoamperometric studies of a) 0.0; b) 500; c) 1000; and d) 1200  $\mu\text{mol L}^{-1}$  phenazopyridine in pH 2.0 at MWCNTs/ZnCrFeO<sub>4</sub>/CPE

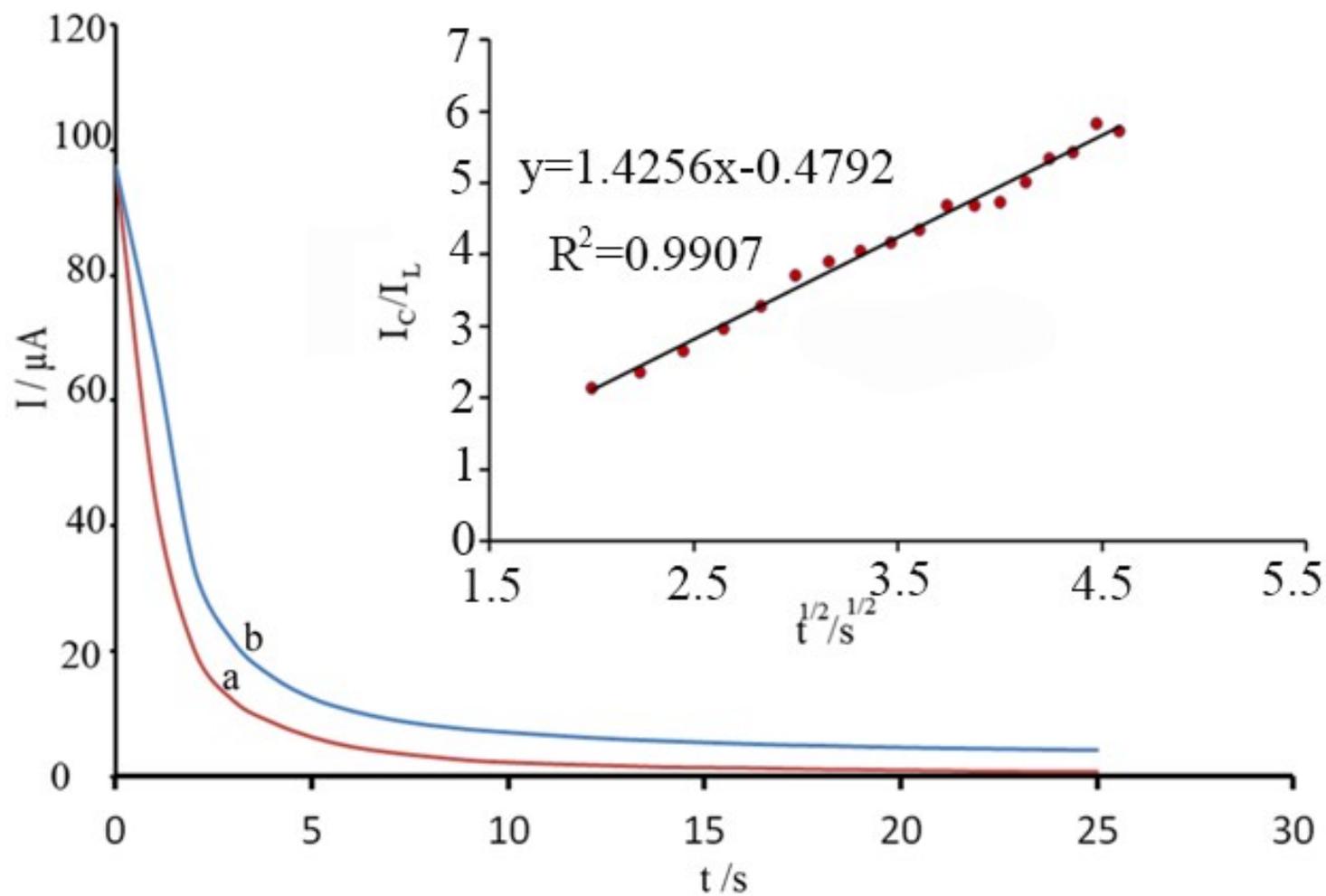
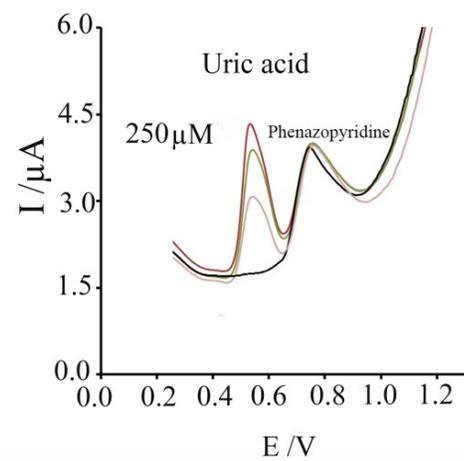
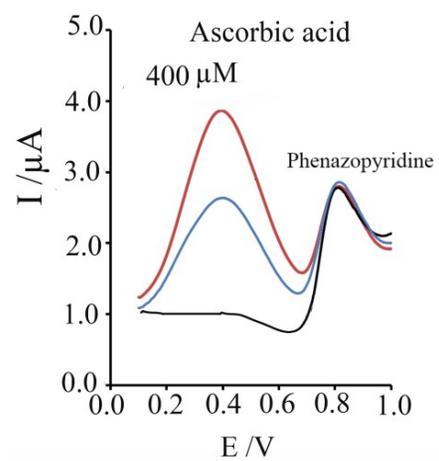
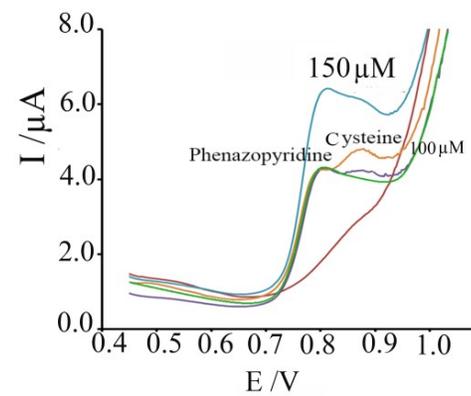
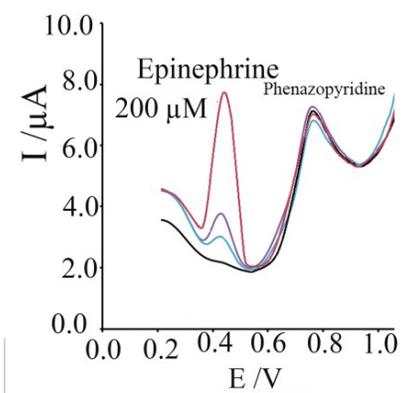


Figure S4: Dependence of  $I_c/I_L$  on the  $t^{1/2}$  driven from the chronoamperograms: (a) MWCNTs/ZnCrFeO<sub>4</sub>/CPE; (b) MWCNTs/ZnCrFeO<sub>4</sub>/CPE in the presence of 1.0 mmol L<sup>-1</sup> phenazopyridine in pH 2.0.



**Figure S5: Interference study some foreign species for the determination of 50.0  $\mu\text{mol L}^{-1}$  phenazopyridine under the optimized conditions.**