

Supporting information for

**Elucidating the roles of oxygen functional group and defect
density of electrochemically exfoliated GO on the kinetic
parameters towards furazolidone detection**

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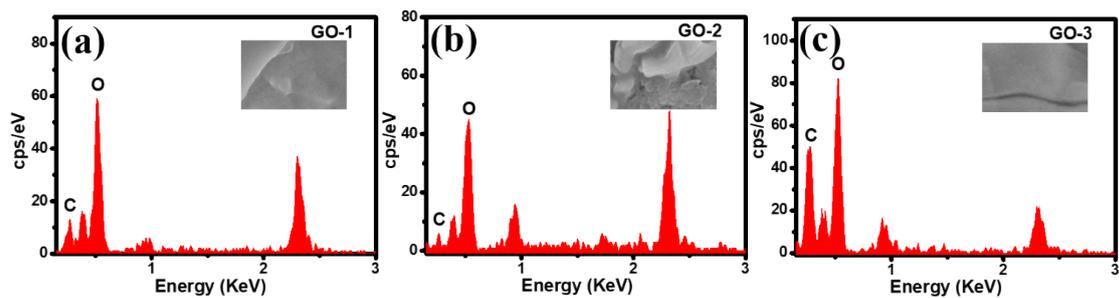


Fig. S1. EDS spectrum of the (a) GO-1, (b) GO-2, and (c) GO-3 samples deposited on Cu substrates.

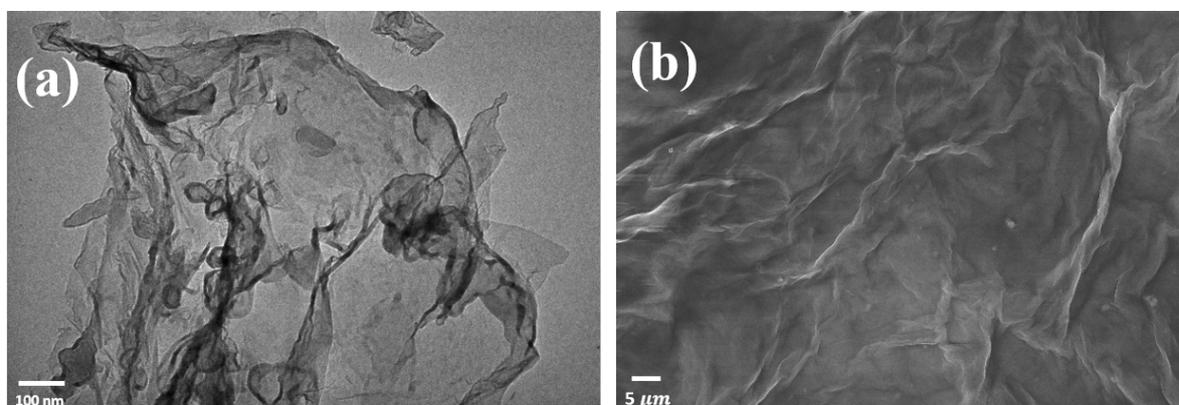


Fig. S2. (a) TEM and (b) SEM image of the GO-1 sample.

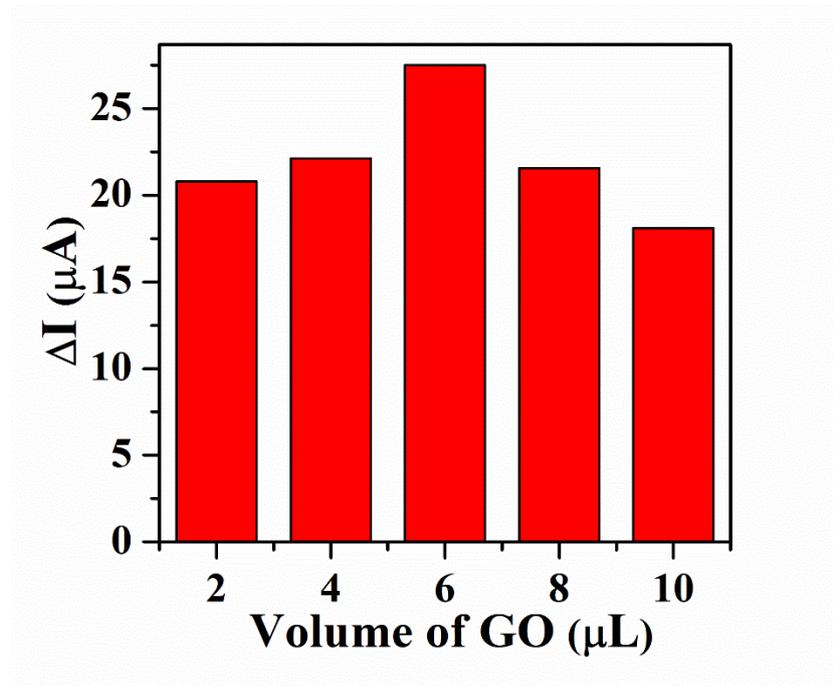


Fig. S3. Effect of modifier amount on the FZD reduction response.

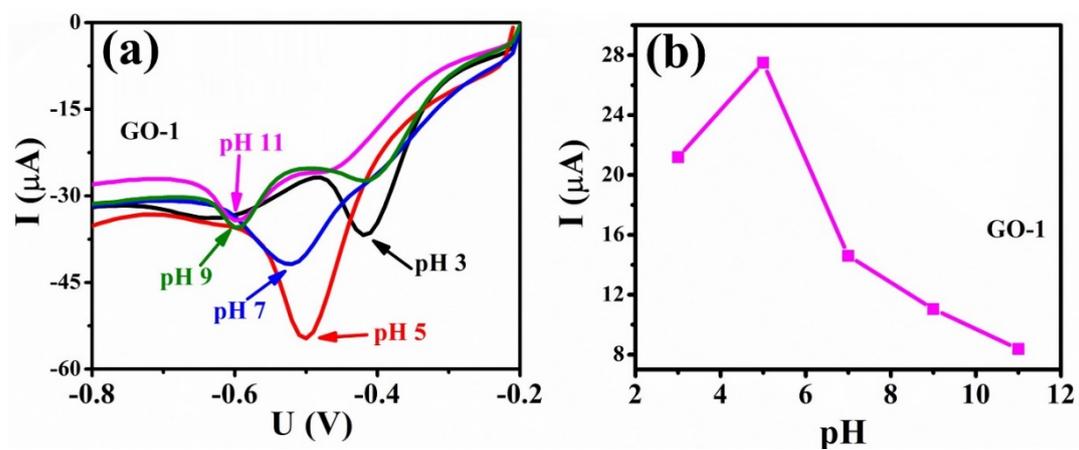


Fig. S4. (a) LSV curves of GO-1/SPE in 100 μM FZD at various pH values, (b) corresponding to the plots of peak current vs. pH with error bars, respectively. Scan rate of 50 mV s^{-1} .

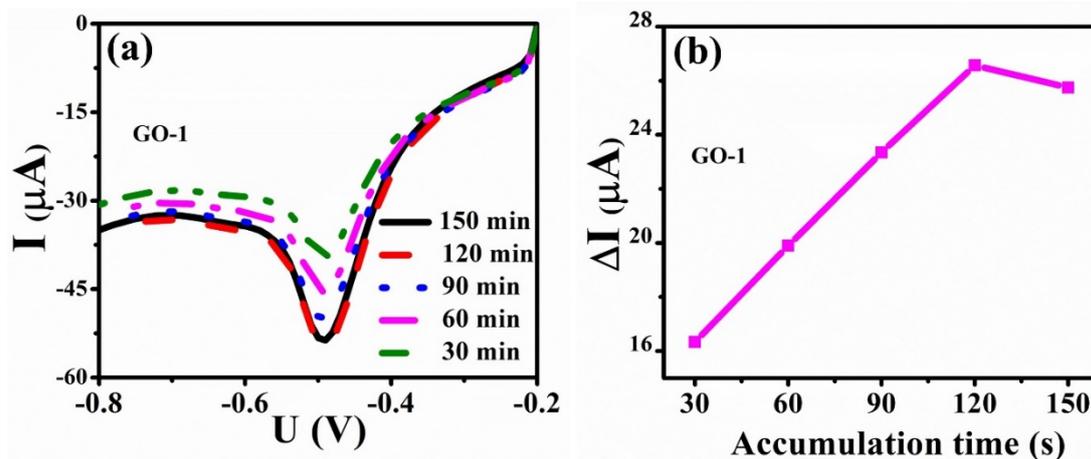


Fig. S5. (a) LSVs recorded on GO-1/SPE with various reaction time using in 0.1M PBS (pH 5) containing 100 μM FZD and (b) the plots of peak current vs. reaction time with error bars.

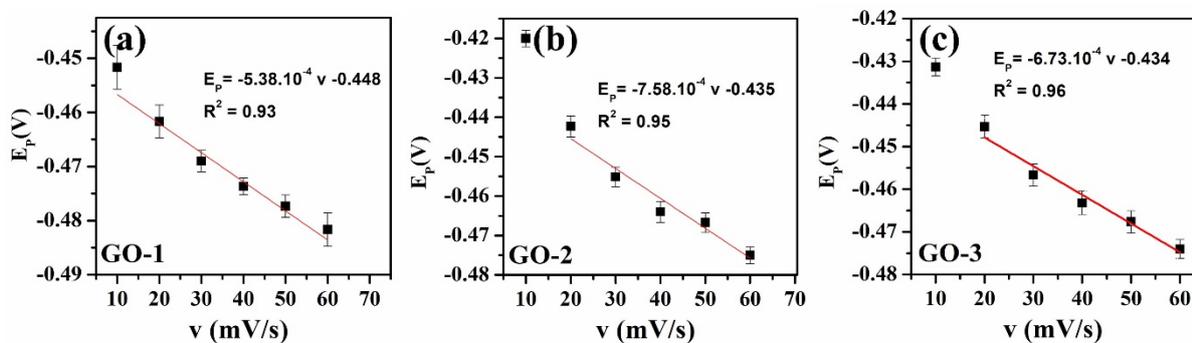


Fig. S6. The calibration plots of cathodic peak potential vs. scan rate with error bar for of GO-1/SPE (a), GO-2/SPE (b), and GO-3/SPE (c).

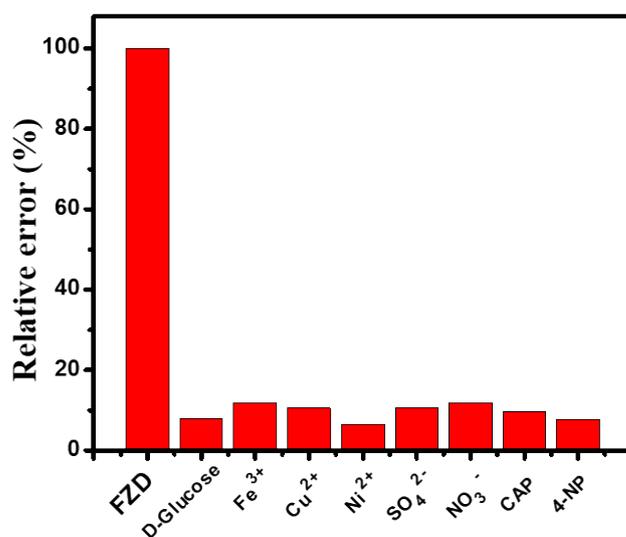


Fig. S7. Interference investigation of GO-1/SPE in 0.1 M PBS (pH 5) containing 50 μM FZD with 4-fold concentration of interference substances.

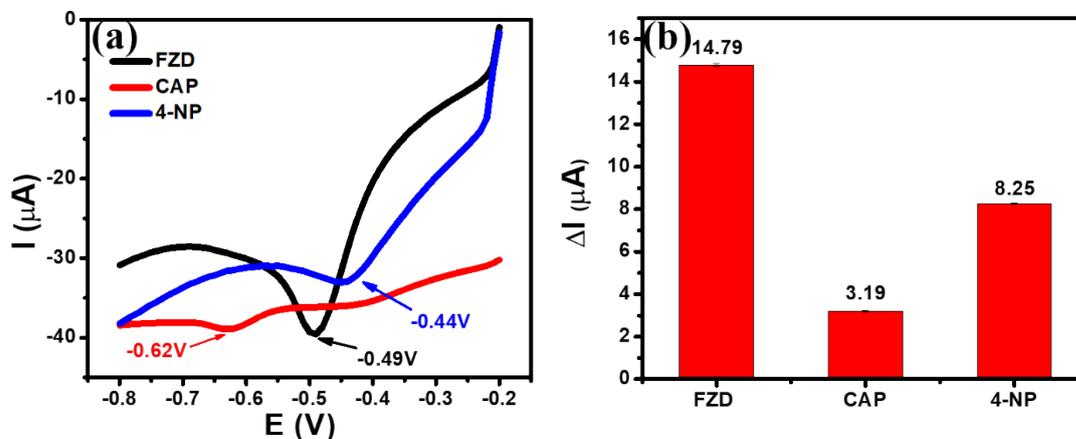


Fig. S8. (a) LSV recorded on GO-1/SPE using in 0.1 M PBS (pH 5) containing 50 μM FZD, CAP, and 4-NP. (b) Insert bar chart diagram of irreversible reduction peak current responses.

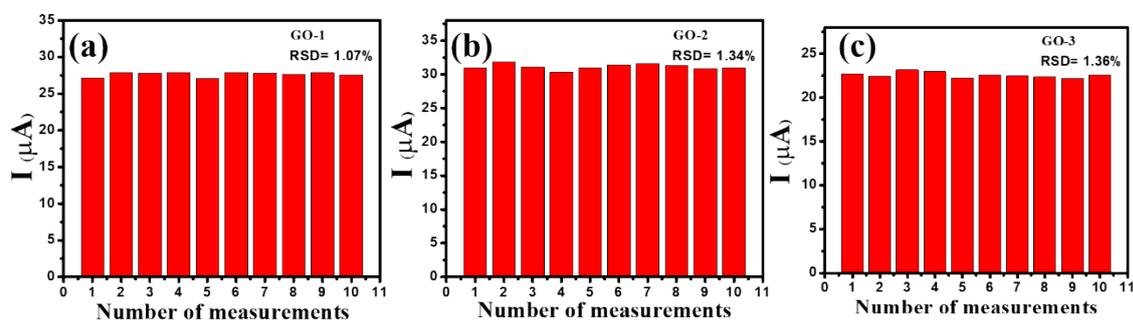


Fig. S9. LSV recorded repeatability of (a) GO-1/SPE ;(b) GO- 2/SPE; (c) GO-3/SPE in 100 μM FZD.

Table S1: Composition of the percentage ratio of C and O atoms in GO-1, GO-2, and GO-3 samples.

Elements	$A_t^* \%$		
	GO-1	GO-2	GO-3
C	27.82	39.13	40.22
O	72.18	60.87	59.78

*Average value

Table S2: Determination results of FZD in pork samples (n=3).

Electrode	Amount added (μM)	Amount found (μM)	Recovery (%)	RSD (%)
GO-1	50	45.86	91.73	1.93
	25	22.41	89.64	1.06
	10	9.5	95.00	1.53
GO-2	50	47.39	94.78	0.97
	25	23.50	94.00	0.80
	10	9.67	96.72	1.10
GO-3	50	48.07	96.50	0.72
	25	24.25	97.10	1.17
	10	9.45	94.56	1.56