Electronic Supplementary Information

Strategic engineering of $CoS_2/ZnIn_2S_4$ heterostructures incorporating Ar plasma-induced sulfur vacancies for potentiating electrocatalytic activity in furazolidone determination

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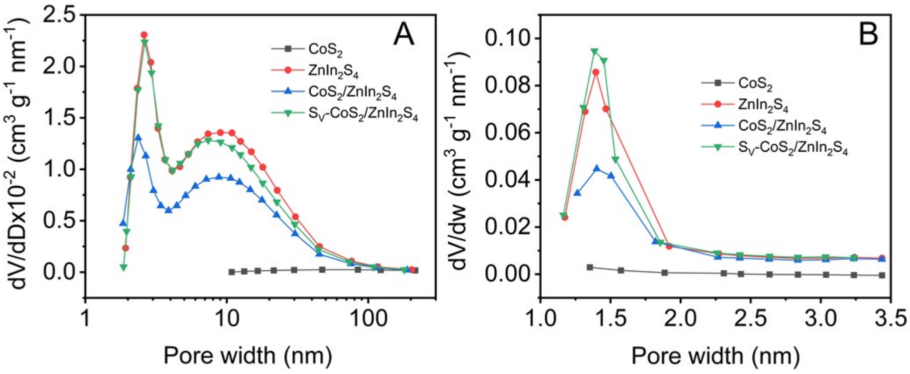

Fig. S1 (A) Mesopore and (B) Micropore size distributions derived from the corresponding N_2 adsorption-desorption isotherms of CoS_2, $ZnIn_2S_4$, $CoS_2/ZnIn_2S_4$, and S_V-$CoS_2/ZnIn_2S_4$.

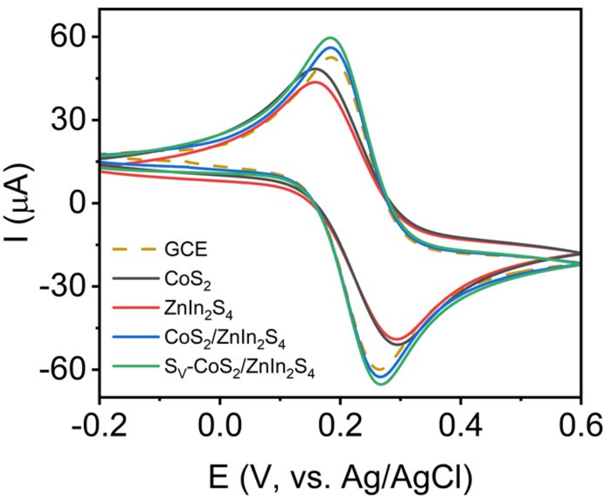

Fig. S2 CV curves of bare GCE, and CoS_2, $ZnIn_2S_4$, $CoS_2/ZnIn_2S_4$, and S_V-$CoS_2/ZnIn_2S_4$-modified GCEs.

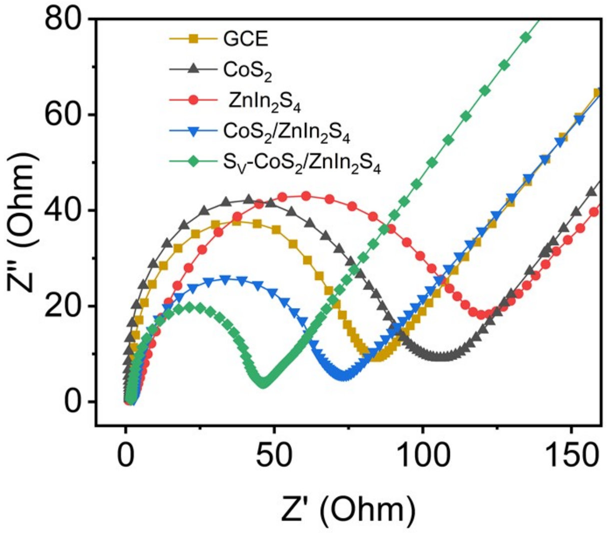

Fig. S3 EIS spectra of bare GCE, and CoS_2, $ZnIn_2S_4$, $CoS_2/ZnIn_2S_4$, and S_V-$CoS_2/ZnIn_2S_4$-modified GCEs.

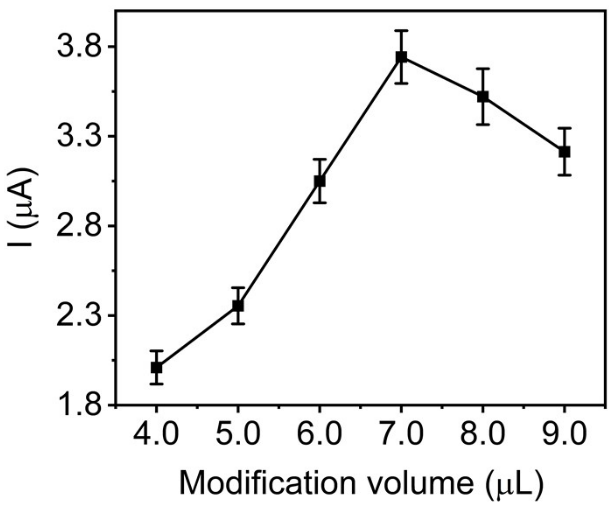

Fig. S4 The optimization of modification volume of S_V-$CoS_2/ZnIn_2S_4$ in terms of peak current response.

Table S1. Comparison of the as-proposed electrochemical sensor with other reported ones.

Technique	Linear range μM	LOD μM	Ref.
Electrochemistry	0.049-1257.8	0.007	1
Fluorescence	0.2-1, 1-10	0.01637	2
Electrochemistry	0.01-135	0.01	3
Fluorescence	0-40	0.19	4
Electrochemistry	0.05-40	0.7	5
Electrochemistry	1-674 0.02-0.14, 0.14-400	0.64 0.0126	6
Electrochemistry	0.2-117.7	0.028	7
Electrochemiluminescence	10-100	0.73	8
Electrochemiluminescence	0.01-10	0.0066	9
Electrochemistry	0.005-40	0.0012	This work

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