Supplementary data

Fabrication of SnO$_2$–graphene nanocomposite based electrode for sensitive monitoring of anti–Tuberculosis in human fluids

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Fig. S1

![Fig. S1 XPS of SnO$_2$ Nps (A) survey spectrum, high resolution core level spectrum of C1s (B), O1s (C) and Sn3d (D)](image)

Fig. S1 XPS of SnO$_2$ Nps (A) survey spectrum, high resolution core level spectrum of C1s (B), O1s (C) and Sn3d (D)
The X-ray photoelectron survey spectrum of SnO$_2$ Nps (Fig. S1A) shows the Sn, O and C elements presence and the C comes from the atmosphere, the core level spectrum of C1s (Fig. S1B) shows three deconvoluted peaks at 285.1eV, 285.9eV and 289.3eV are corresponds to the different environment of C atom, Fig. S1C shows the core level spectrum of O1s which has two curves at the binding energy value of 531.3eV and 532.5eV are responsible for Sn=O and C–O respectively. The core level spectrum of Sn 3d (Fig. S1D) exhibited two peaks at the binding energy value of 487.5eV and 496.0 eV these are Sn 3d5/2 and Sn 3d3/2 energy levels which clears the Sn was presented in +4 oxidation state in the SnO$_2$ Nps

Fig. S2

Fig. S2 FESEM image of (A) graphene oxide, (B) SnO$_2$–Gr nanocomposite
Fig. S3 DRS–UV absorption spectra of (a–e) 1mM SnO$_2$–Gr to 5mM SnO$_2$–Gr nanocomposite
Fig. S4 Raman spectra of (a–e) 1mM SnO$_2$–Gr to 5mM SnO$_2$–Gr nanocomposite
Fig. S5 EIS of (a–e) 1mM SnO\(_2\)-Gr to 5mM SnO\(_2\)-Gr/GC electrode in 10mM [Fe(CN)\(_6\)]\(^{3-/4-}\) containing 0.1 M KCl
Fig. S6 Plot of log scan rate vs $E_{pa}$

$R^2 = 0.992$
Fig. S7 The electrochemical oxidation mechanism of INH over the SnO$_2$-Gr/GC electrode
Fig. S8 i–t response of SnO$_2$–Gr/GC electrode in interfering Species while detection of INH