

Supplementary materials

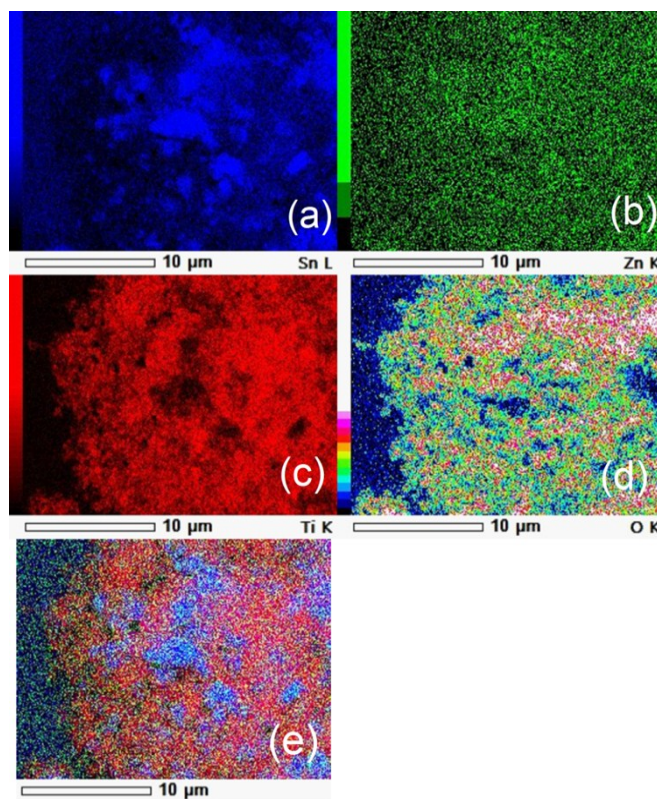


Fig. S1: SEM-EDS mapping of SnO₂·ZnO·TiO₂ nanocomposites

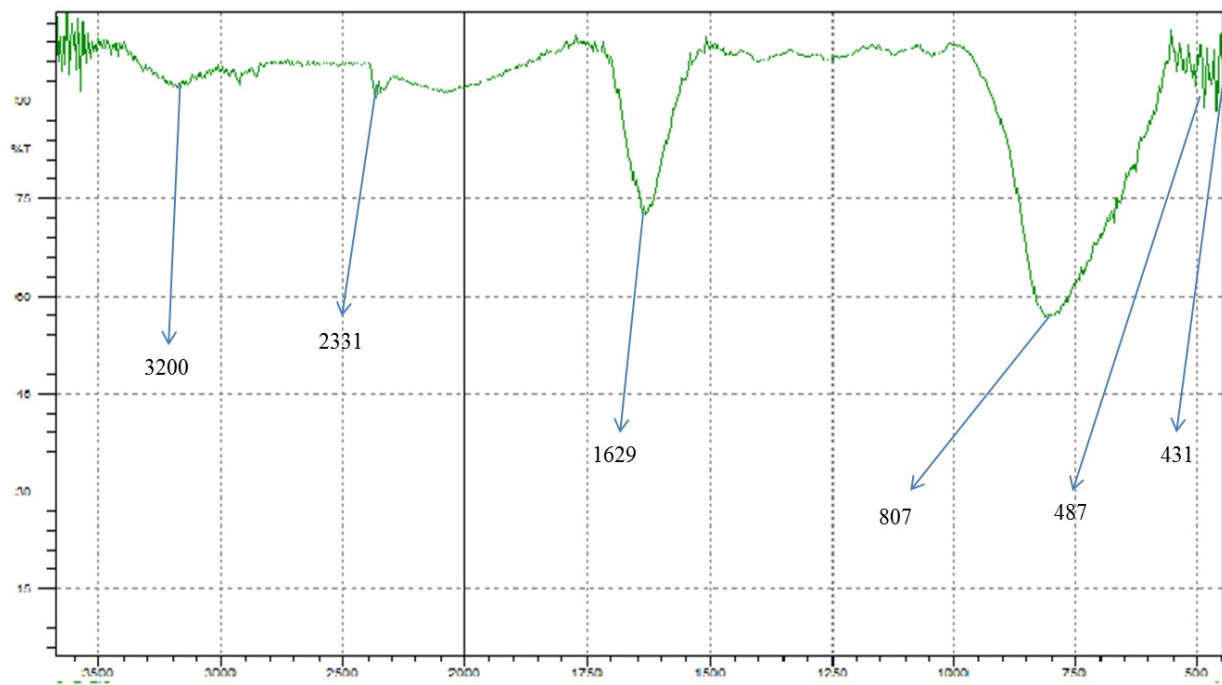


Fig. S2: FTIR spectra of SnO·ZnO·TiO₂ tri-metallic nanoparticles heated at 650 °C

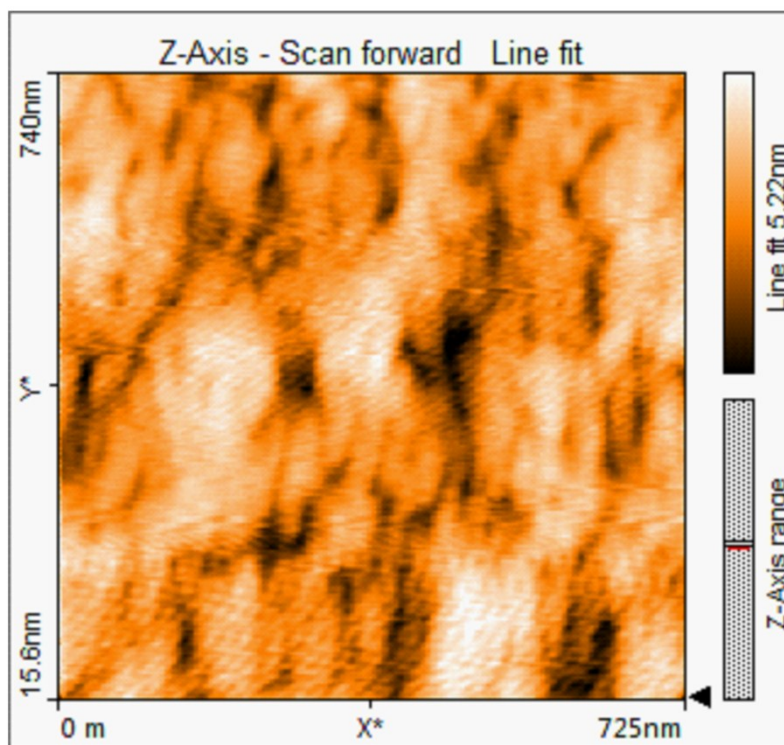


Fig. S3: 2D topological AFM image analysis of SnO·ZnO·TiO₂ nanocomposite film on glass surface

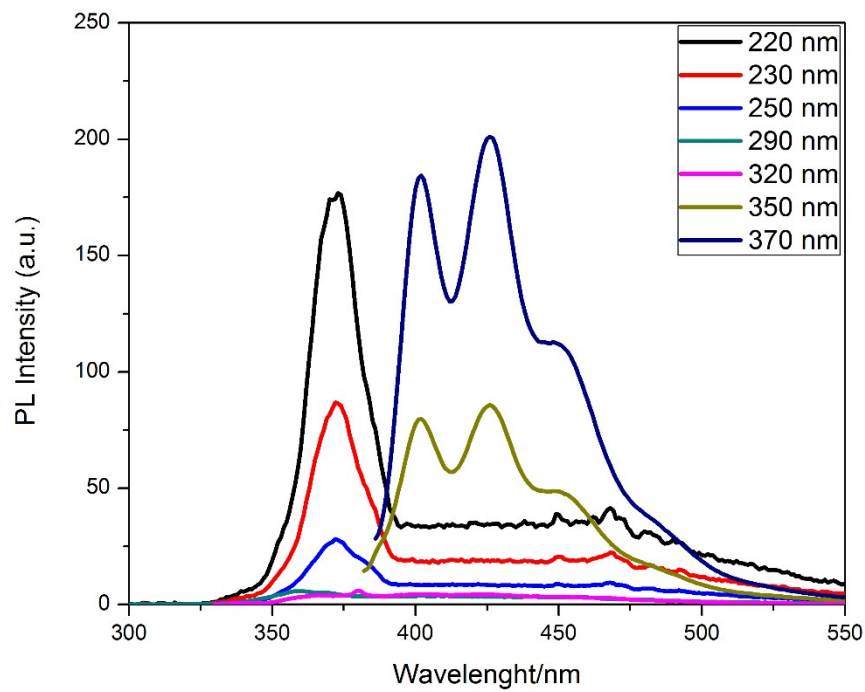


Fig. S4: PL spectra of SnO·ZnO·TiO₂ nanocomposites

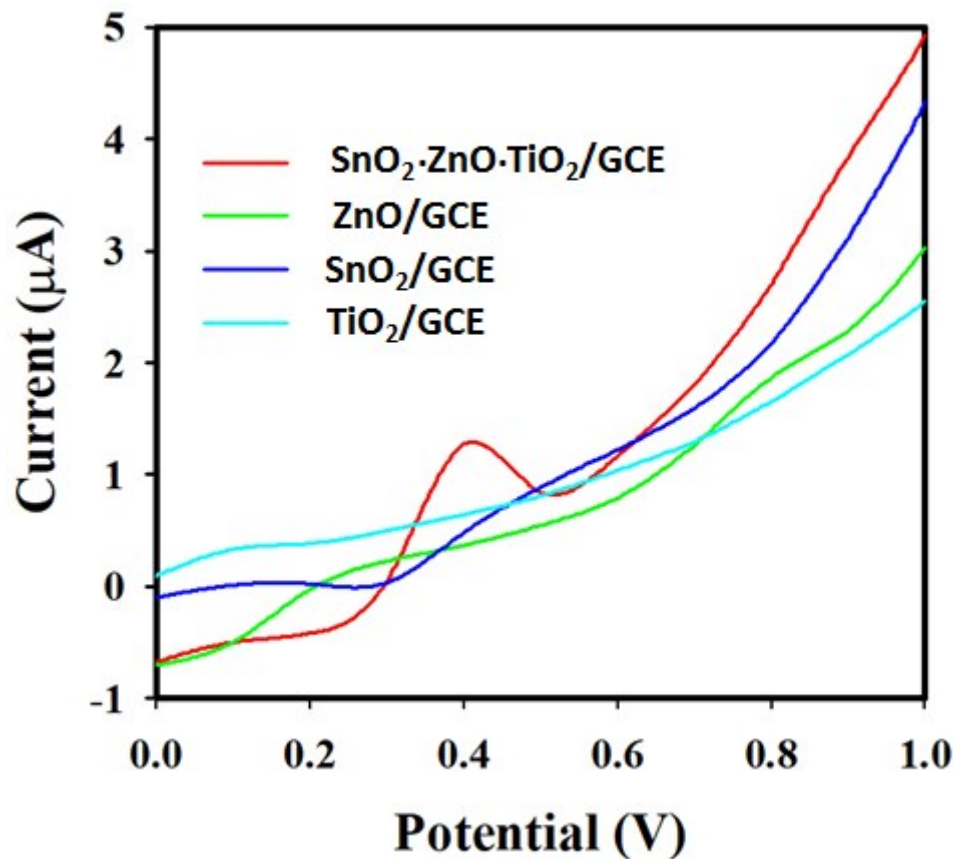


Fig. S5. Control experiment: Comparative study of single oxides with the $\text{SnO}_2 \cdot \text{ZnO} \cdot \text{TiO}_2$ nanocomposites/Nafion/GCE fabricated electrodes under identical conditions.

Table S1: EDS data of $\text{SnO}_2 \cdot \text{ZnO} \cdot \text{TiO}_2$ nanocomposite

Element	(keV)	Mass%	Atom%
O K	0.525	33.38	69.16
Ti K	4.508	29.1	20.13
Zn K	8.63	1	0.51
Sn L	3.442	36.52	10.2
Total		100	100