

In, this work, a novel hydrogen peroxide biosensor derived from maize-tassel (MT) and multiwalled carbon nanotube (MWCNT) composite was used to adsorb horseradish peroxidase (HRP) onto the surface of a glassy carbon electrode through electrostatic interactions. The morphology and structure of the products were characterized by SEM, FTIR and UV-visible spectroscopy. The electrochemical and electrocatalytic performance of the HRP/MT- MWCNT/GCE was studied using voltammetric and amperometric methods. The amperometric response of the biosensor varied linearly with concentration of H₂O₂; from 9 pM to 1 mM with detection limit of 4.0 pM ($S/N = 3$). Furthermore, the biosensor exhibited good reproducibility and stability.