

A Cd_xZn_{1-x}S/TiO₂ Nanotube Array electrode for a highly sensitive and selective nonenzymatic photoelectrochemical glucose sensor

Supporting information

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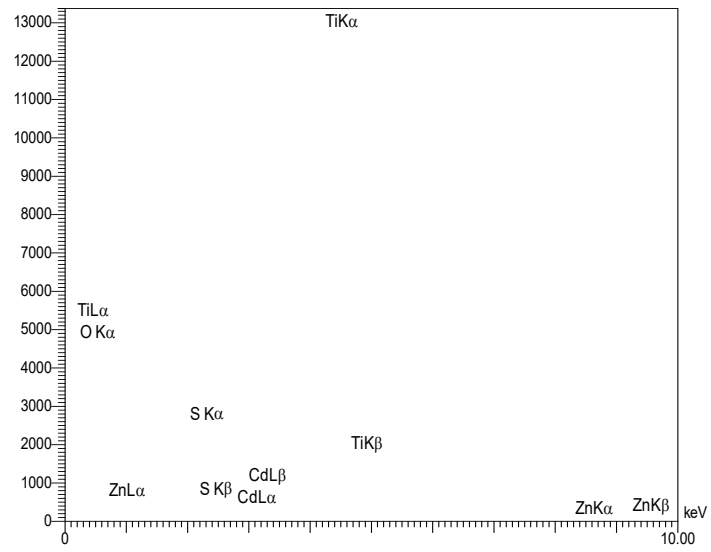


Figure 1. EDS spectrum of the synthesized $Cd_xZn_{1-x}S-5/TiO_2$ NTA.

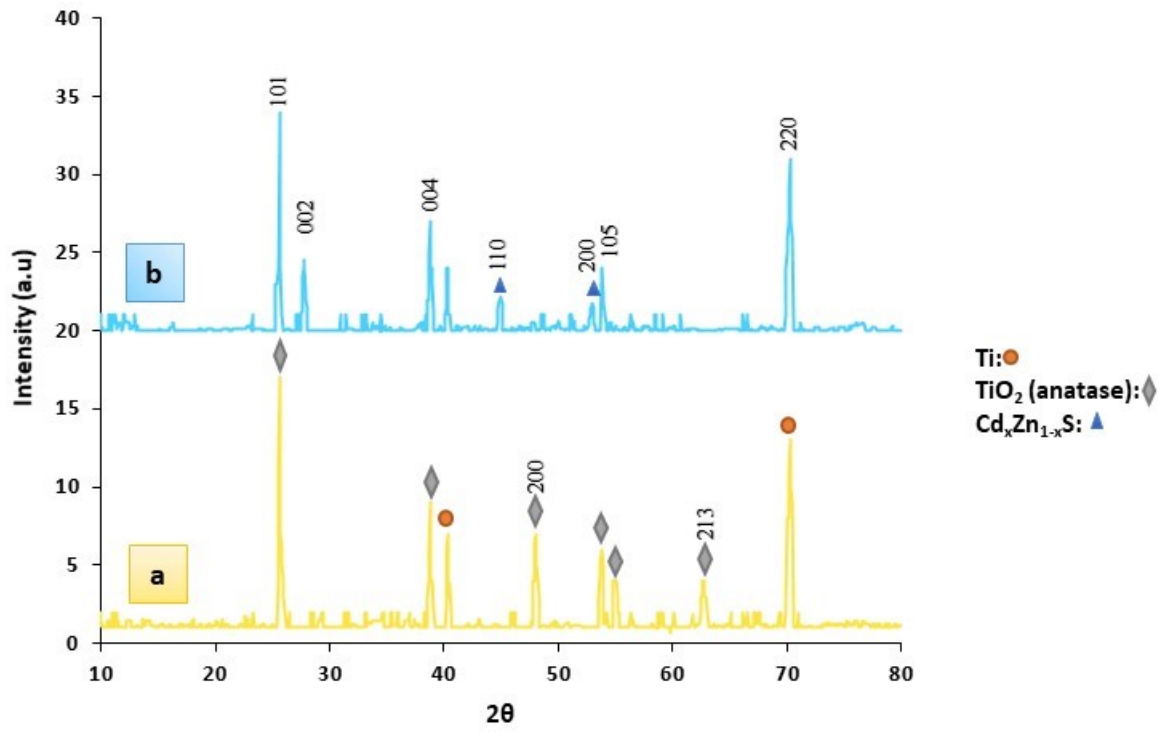


Figure 2. X-ray diffraction patterns of a) TiO_2 NTA and b) $\text{Cd}_x\text{Zn}_{1-x}\text{S}$ -5/ TiO_2 NTA.

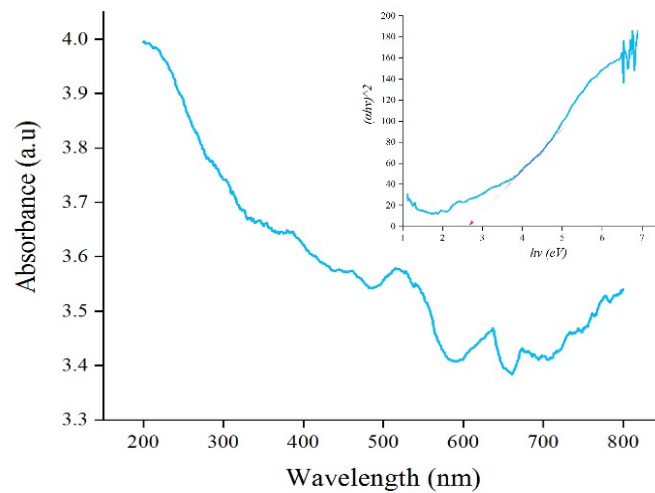


Figure 3. UV-vis diffuse reflectance spectra for Cd_xZn_{1-x}S/TiO₂ NTA. Inset: plots of $(\alpha h\nu)^2$ versus photon energy ($h\nu$).

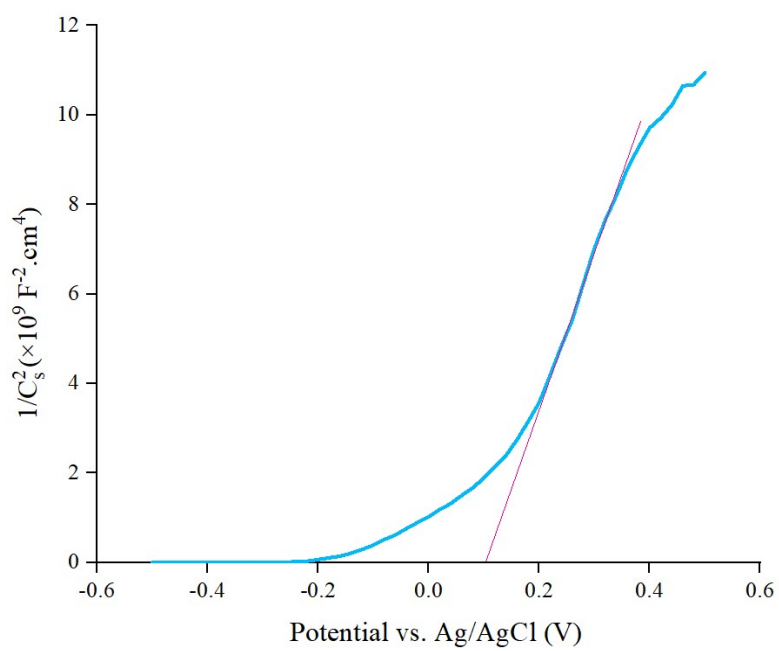
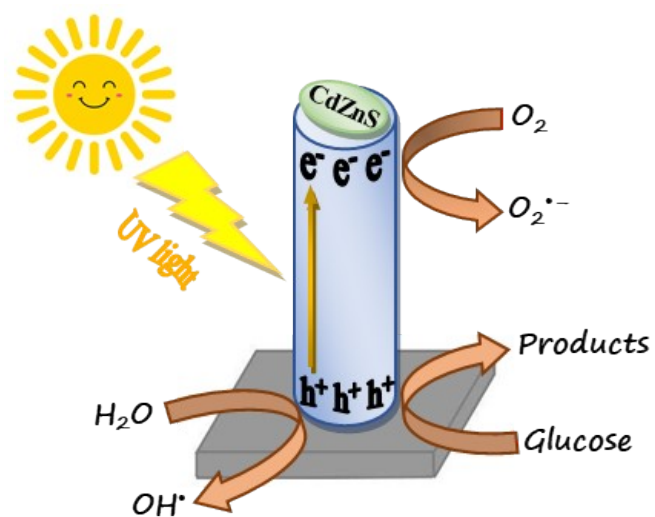


Figure 4. Mott-Schottky analysis of $\text{Cd}_x\text{Zn}_{1-x}\text{S}/\text{TiO}_2$ NTA in a constant frequency of 1000 Hz in 0.1 M NaNO_3 solution.



Scheme 1. Schematic illustration of the photoelectrochemical process for the oxidation of glucose by the $Cd_xZn_{1-x}S-5/TiO_2$ NTAs electrode.