

Supporting Information

Ni/CdS/TiO₂ nanotube array heterostructures for high performance photoelectrochemical biosensing

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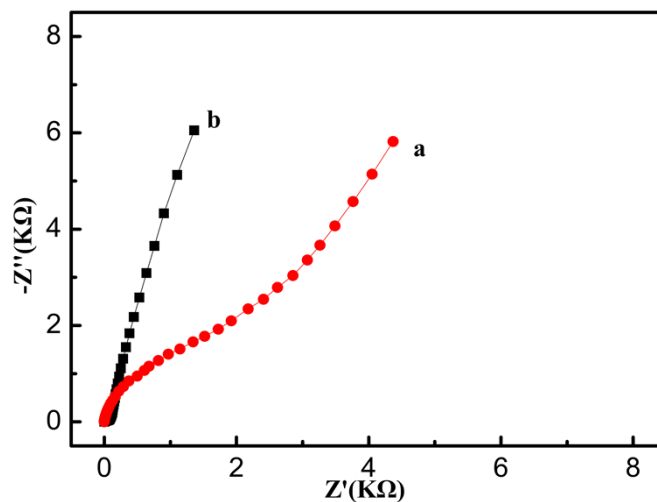


Fig. S1 Nyquist plots of electrochemical impedance spectroscopy (EIS) in the frequency range 0.01 to 100 kHz of the (a) CdS/TiO₂ NTAs electrode and the (b) Ni/CdS/TiO₂ NTAs electrode.

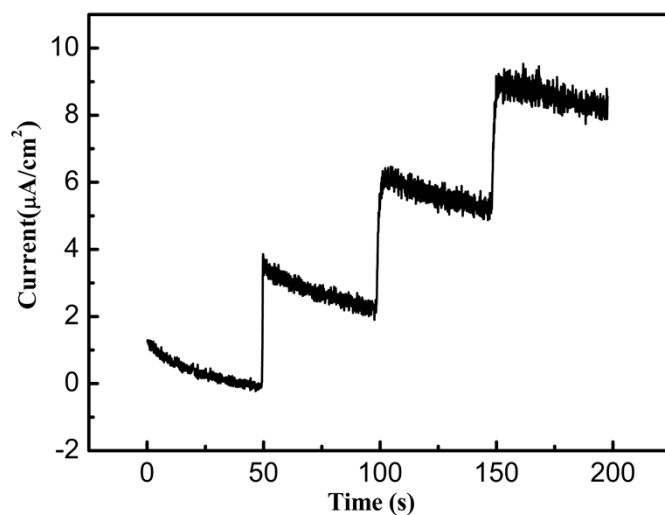


Fig. S2 Amperometric response of Ni/CdS/TiO₂ NTAs electrode at 0.3 V in 1.0 M KOH electrolyte with successive additions of 2.0 mM glucose.

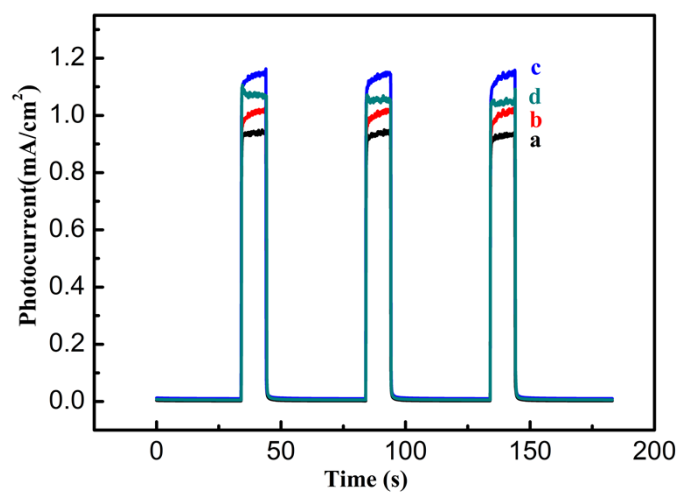


Fig. S3 Photocurrent responses of CdS/TiO₂ NTAs electrode (a) and Ni/CdS/TiO₂ NTAs electrode with different deposition electric quantity of Ni 0.03 C (b), 0.05 C (c), and 0.1 C (d) in 1.0 M KOH at a bias voltage of 0.3 V under a simulated sunlight illumination.

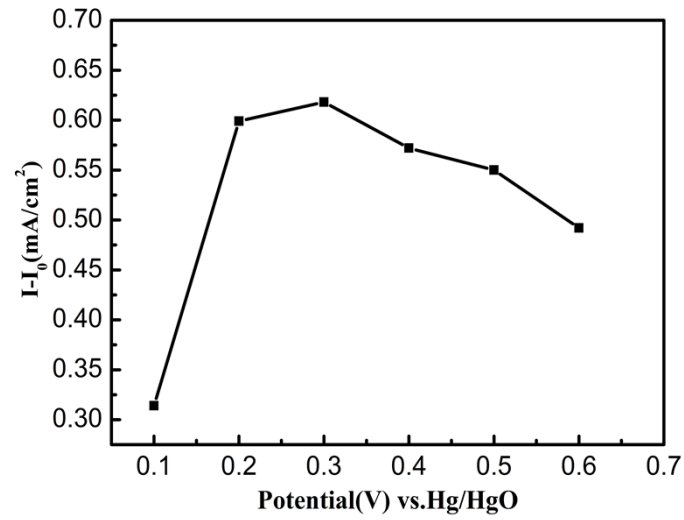


Fig. S4 Effects of applied potentials on photocurrent responses of Ni/CdS/TiO₂ NTAs electrode in 1.0 M KOH in the absence and presence of 1 mM glucose (I_0 and I are the photocurrents of the Ni/CdS/TiO₂ NTAs electrode before and after addition of glucose).