Electronic Supplementary Material (ESI) for RSC Advances.

Supporting information

Engineering exposed vertical nano TiO_2 (001) facets/BiOI nanosheet heterojunction film for constructing a satisfied PEC glucose oxidase biosensor

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Experimental steps for photo deposition of MnO_2

(All reagents were of analytical grade without subsequent processing.) First, 20 mL of deionized water was added to the beaker, 2 mL of 1 mg/mL $MnSO_4$ solution was added, and the solution was stirred evenly. Next, 0.2 g of $NaIO_3$ was added, and the solution was mixed and stirred until uniform. The prepared TiO_2 NSs were placed at the bottom of the beaker and illuminated under a xenon lamp for 20 min. The samples were taken out, rinsed with deionized water, and dried at room temperature.

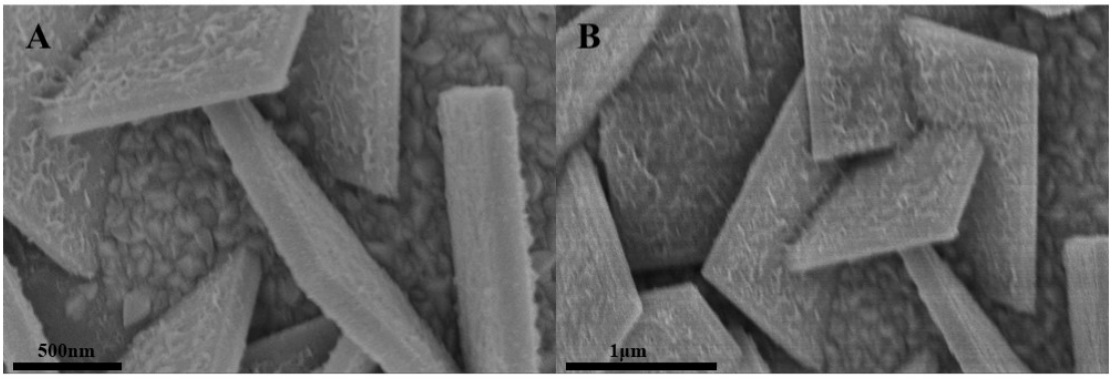

Fig. S1 SEM images of TiO_2 NSs after photo deposition of MnO_2

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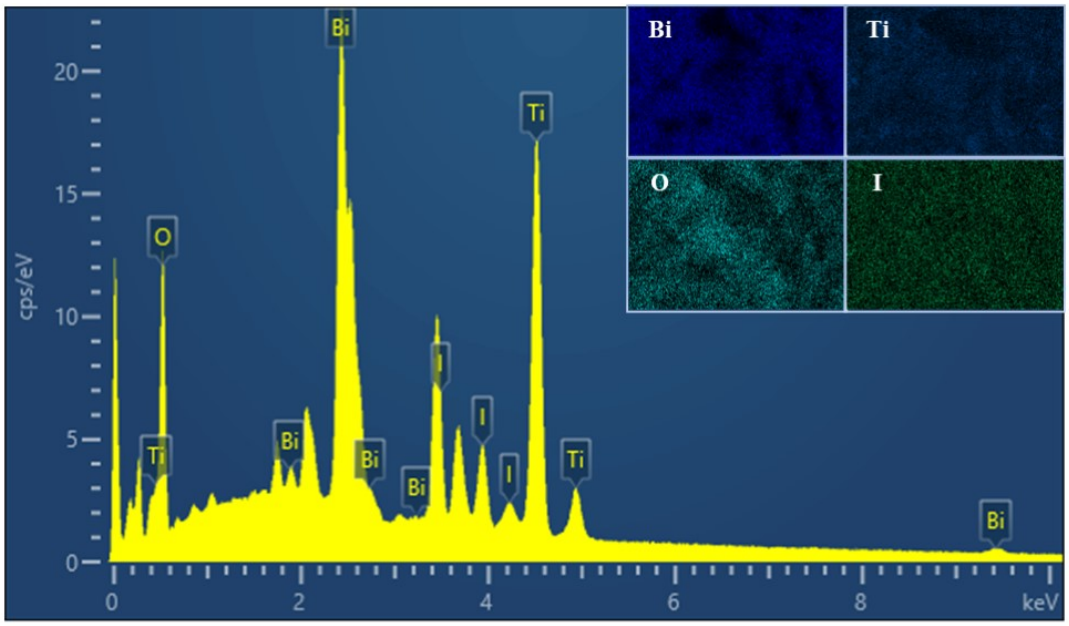

Fig. S2 EDS spectra of TiO_2 NSs/BiOI NSs and EDX mapping images of TiO_2 NSs/BiOI NSs

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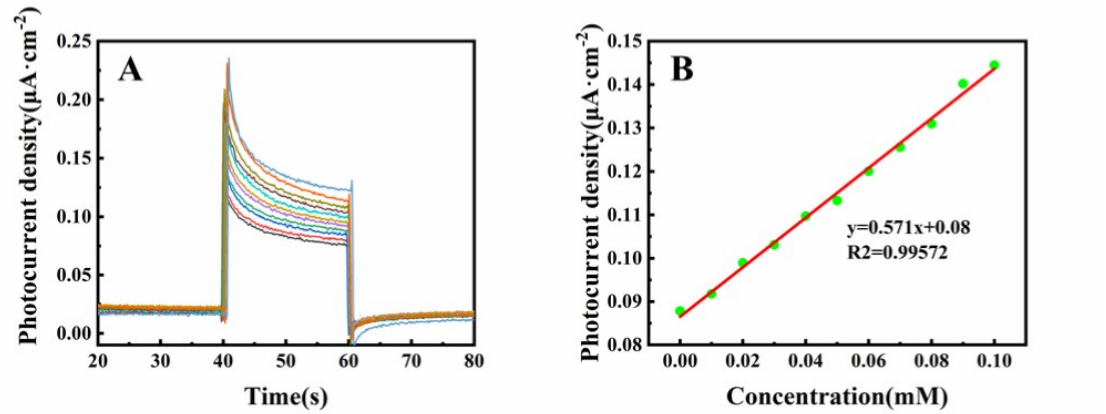

Fig. S3 (A) Photocurrent responses of TiO_2 NS/BiOI NS/GOx biosensors toward different concentrations of glucose from 0 to 0.1 mM in 0.1 M PBS (pH 7.4) electrolyte, under visible light irradiation (B) Linear calibration between glucose concentration versus photocurrent density