Electronic Supplementary Material (ESI) for Analytical Methods.

Supplementary Material

Membraneless self-powered immunosensing for a cardiac biomarker exploiting a PEC platform based on $CaBi_2Ta_2O_9$ combined to bismuth oxyiodides

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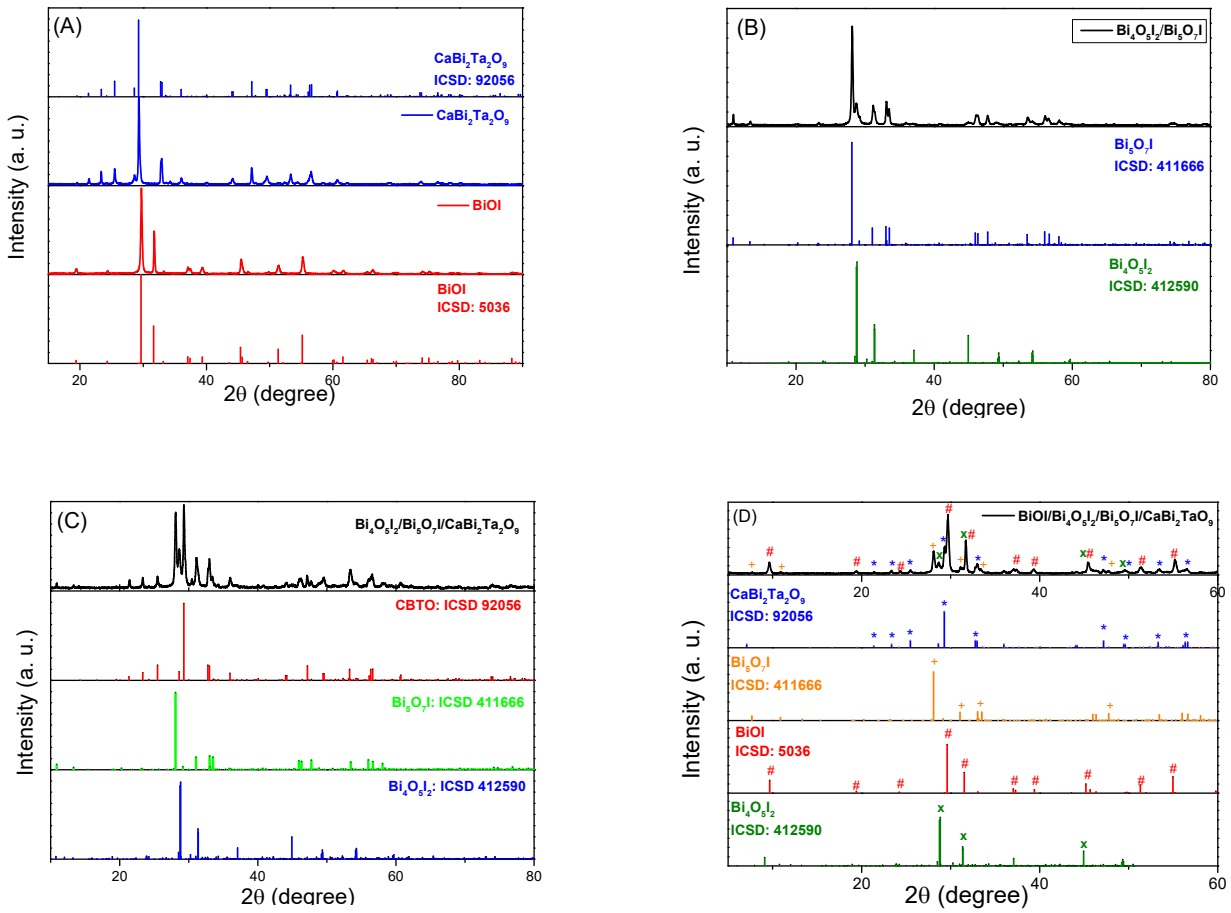

Fig. S1 XRD pattern of (A) $CaBi_2Ta_2O_9$ and BiOI, (B) Bi_4O_5I/Bi_5O_7I, (C) $Bi_4O_5I/Bi_5O_7I/CaBi_2Ta_2O_9$, and (D) $BiOI/Bi_4O_5I/Bi_5O_7I/CaBi_2Ta_2O_9$ composite.

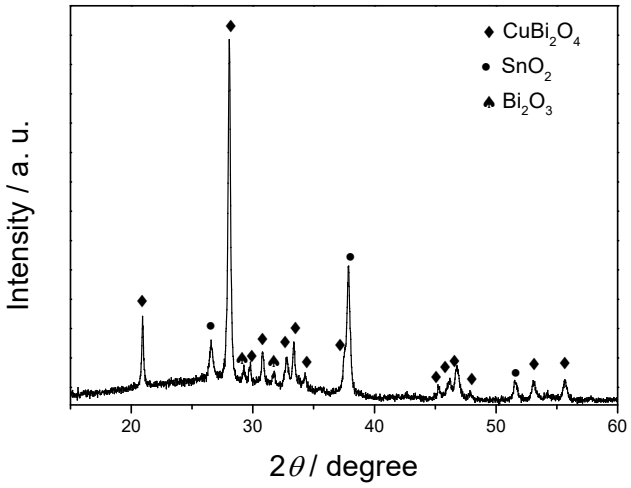

Fig. S2 DRX pattern of photocathode

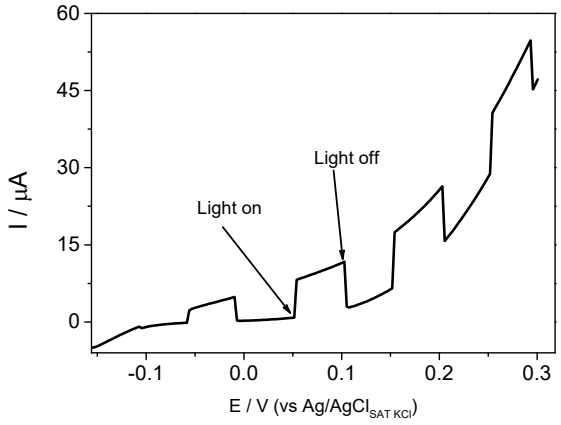

Fig. S3 Chopped light potential vs current curve shows the behavior of the $BiOI/Bi_4O_5I_2/Bi_5O_7I/CaBi_2Ta_2O_9/FTO$ platform under light and dark conditions in 10 mmol L^{-1} of tert-Butylhydroquinone (TBHQ) in 0.1 mol L^{-1} HEPES (pH 7).

Table S1. Recovery values for cTnI detection in human plasma samples using the anti-cTnI/$BiOI/Bi_4O_5I_2/Bi_5O_7I/CaBi_2Ta_2O_9$/FTO immunosensor employed as photoanode in a two-electrode electrochemical cell.

Sample	Spiked / pg mL^{-1}	Found / pg mL^{-1}	Recovery / %	RSD / % (n=3)
A	10	10.8	108	5.46
B	20000	19138	95.7	1.55
C	100000	96315	96.3	1.52