Electronic Supplementary Material (ESI) for RSC Advances.

Photoelectrochemical sensing of bisphenol A based on graphitic carbon nitride/bismuth oxyiodine composites

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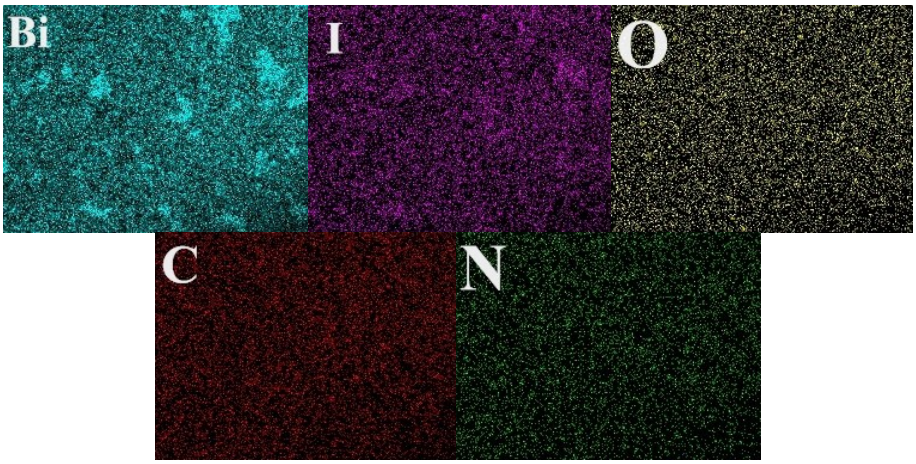

Fig. S1 Elemental maps of the g-CN/BiOI composites.

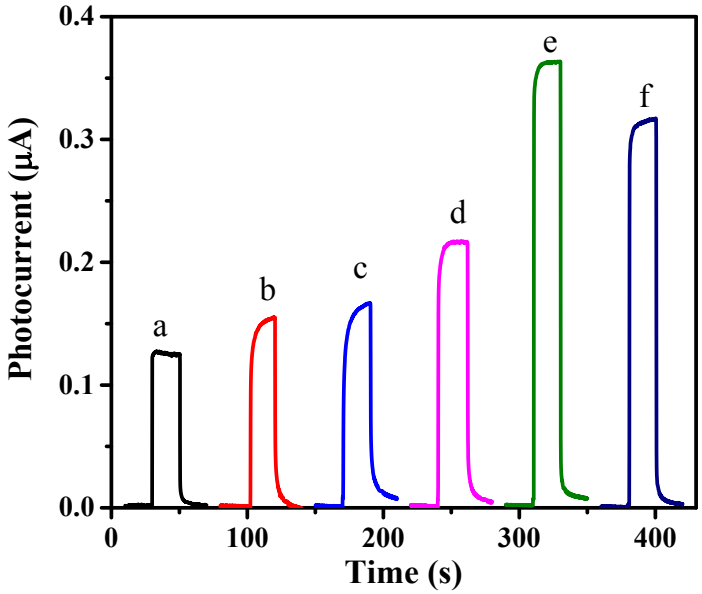

Fig. S2 Photocurrent response of the g-CN/BiOI modified ITO electrodes with different content of g-CN: (a) 0 wt%, (b) 1 wt%, (c) 3 wt%, (d) 5 wt%, (e) 7 wt%, and (f) 10 wt%.

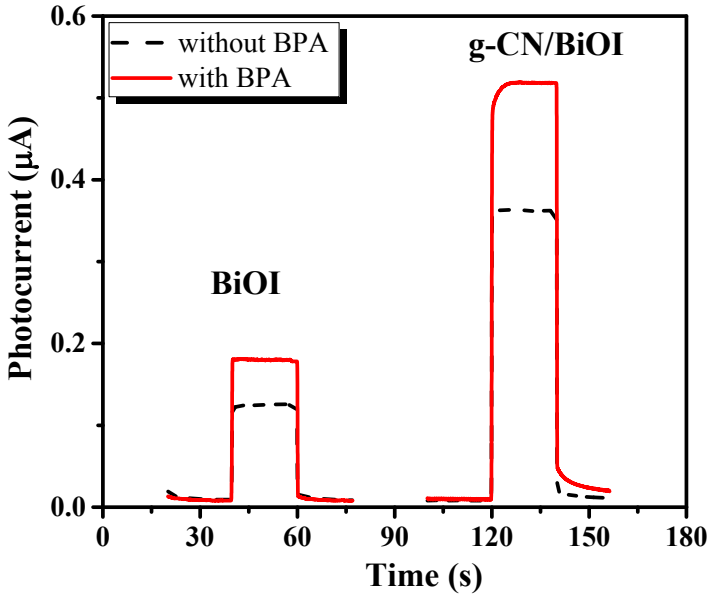

Fig. S3 Photocurrent responses of the g-CN/BiOI modified ITO and BiOI modified ITO in phosphate buffer solution (0.1 M, pH 7.0) in the absence and presence of BPA (720 ng mL^{-1}) at 0 V with light excitation.

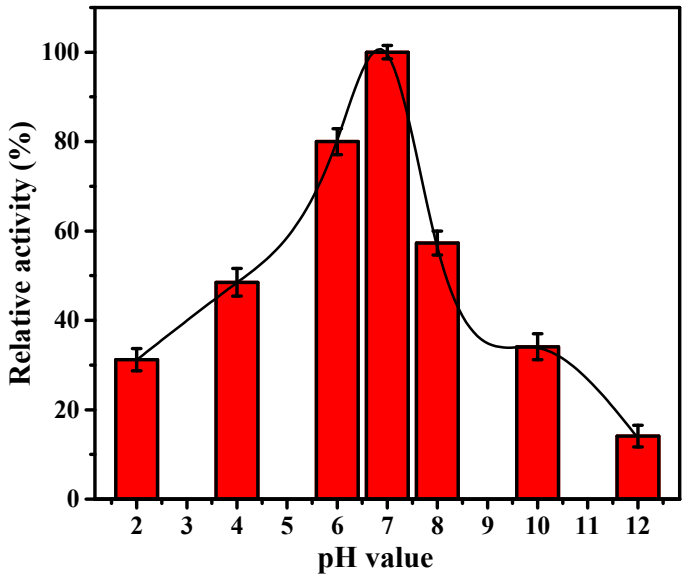

Fig. S4 Effect of pH on the photocurrent response of the g-CN/BiOI modified ITO.

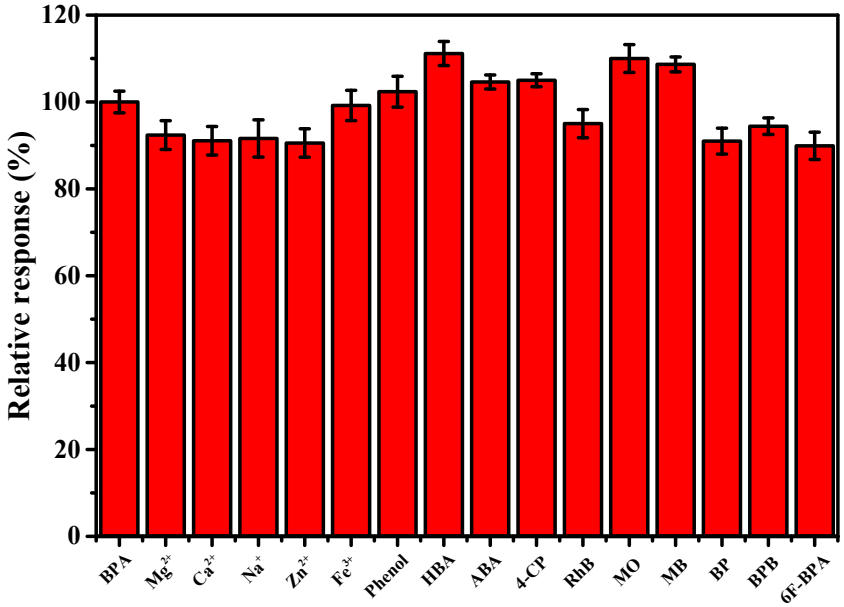

Fig. S5 Influence of the interfering substances on the responses of the PEC sensor for BPA (80 ng mL^{-1}). The concentrations of all other substances are 100-fold to BPA.

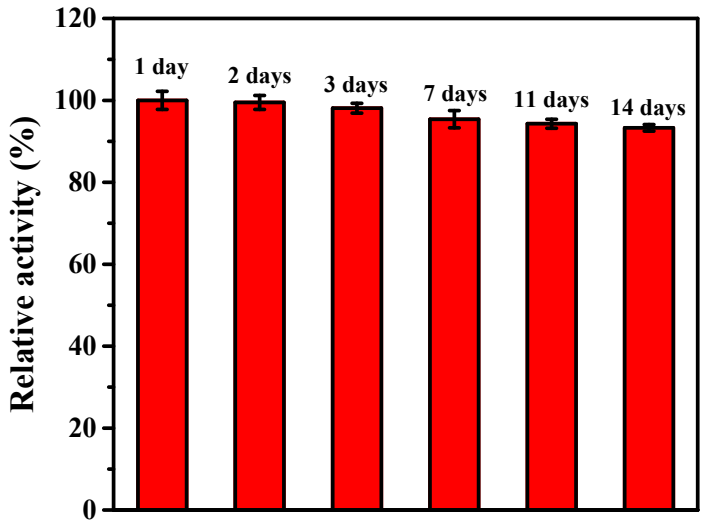

Fig. S6 The stability of the PEC sensor for BPA (1200 ng mL^{-1}).

Table S1 Comparison of the analytical characteristics obtained using different sensors for BPA determination.

Sensor	Methods	Linear range (ng mL^{-1})	LOD (ng mL^{-1})	Ref.
Thionine-tyrosinase CPE	CV	34.2-10273	34.2	1
MMIPs NPs/CTAB/CPE	CV	136.9-22829	22.8	2
CYP2C9-PAM/GCE	It	285.4-2282.9	132.4	3
TYR-Chi/GCE	CV	91.3-570.7	30.13	4
$[Ru(bpy)_3]^{2+}$/ITO electrode	DPV	114-27390	66.2	5
the g-CN/BiOI modified ITO electrode	PEC	80-3200	26	This Work

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Table S2 PEC Detection of BPA in water from Yangtze River by the Proposed PEC sensor

	BPA concentration (ng mL^{-1})			
sample	added	found	recovery	RSD
1	100.0	104.2	104.2%	3.2%
2	200.0	212.1	106.1%	2.6%
3	400.0	392.5	98.1%	4.7%
4	800.0	769.4	96.2%	3.8%