Supplementary Materials

Bi_2WO_6@g-C_3N_4 Heterostructure for Cathodic Photoelectrochemical Dopamine Sensor

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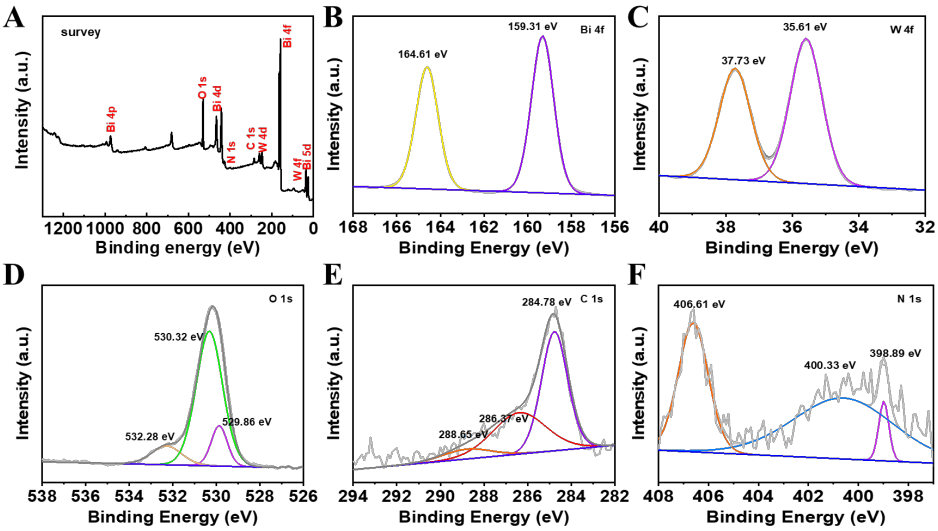

Figure S1. The XPS spectra of the BWO-0.05CN (A) Full scan, (B) Bi 4f, (C) W 4f, (D) O 1s, (E) C 1s, (F) N 1s.

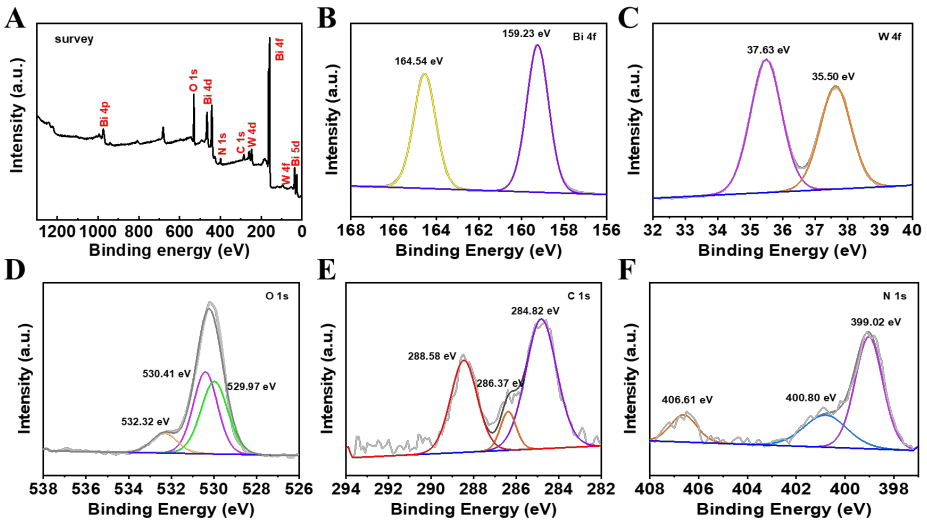

Figure S2. The XPS spectra of the BWO-0.15CN (A) Full scan, (B) Bi 4f, (C) W 4f, (D) O 1s, (E) C 1s, (F) N 1s.

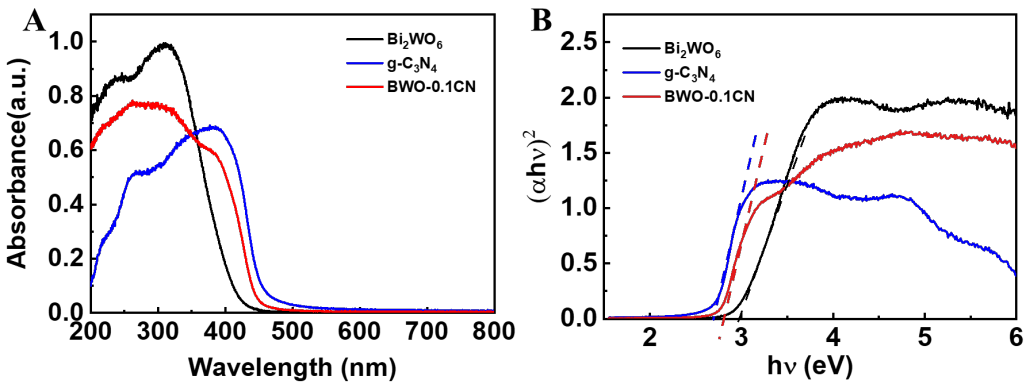

Figure S3. (A) UV-vis diffuse reflectance absorption spectra, (B) the corresponding K-M plot of Bi_2WO_6, g-C_3N_4, and BWO-0.1CN.

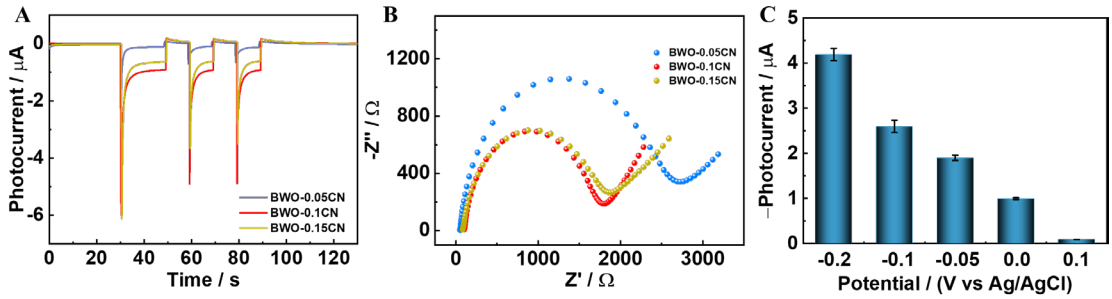

Figure S4. (A) Photocurrent response of BWO-0.05CN, BWO-0.1CN, and BWO-0.15CN in the presence of 50 μM DA. (B) EIS spectra of BWO-0.05CN/FTO and BWO-0.1 CN/FTO in 5 mM $[Fe(CN)_6]^{3-/4-}$ containing 0.1 M KCl. (C) Effects of the applied potential on photocurrent response of BWO-0.1CN/FTO electrode in 0.1 M PBS (pH=7.4) containing 50 μM DA.

Table S1. Comparison of previous and current DA detection methods.

Material	Method	Linear Range (μM)	Limit of Detection (μM)	Refs.
F-$CuInS_2$	FL	1-100	0.5	[1]
Cu-MOFs/MWCNT- Au@Ag/GCE	EC	0.6-70 and 70-300	0.082	[2]
DMSA-CdTe QDs/FTO	PEC	0.4–10000	0.17	[3]
Ti_3C_2/TiO_2	PEC	0.125-400	0.045	[4]
Ti_3C_2@(001)TiO_2	PEC	1-1000	0.52	[5]
ZnPc-P8BT-Pdots	PEC	0.0025-125	0.00169	[6]
Bi_2WO_6@g-C_3N_4	PEC	0.1-10 and 10-250	0.028	This work

References

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