Electronic Supplementary Material (ESI) for Dalton Transactions.

Supplementary Information

A novel g-C_3N_4 nanosheet/Ag_3PO_4/α-Bi_2O_3 ternary dual Z-scheme heterojunction with increasing light absorption and expanded specific surface area for efficient photocatalytic removal TC

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Section 1. Supporting Figures and Tables

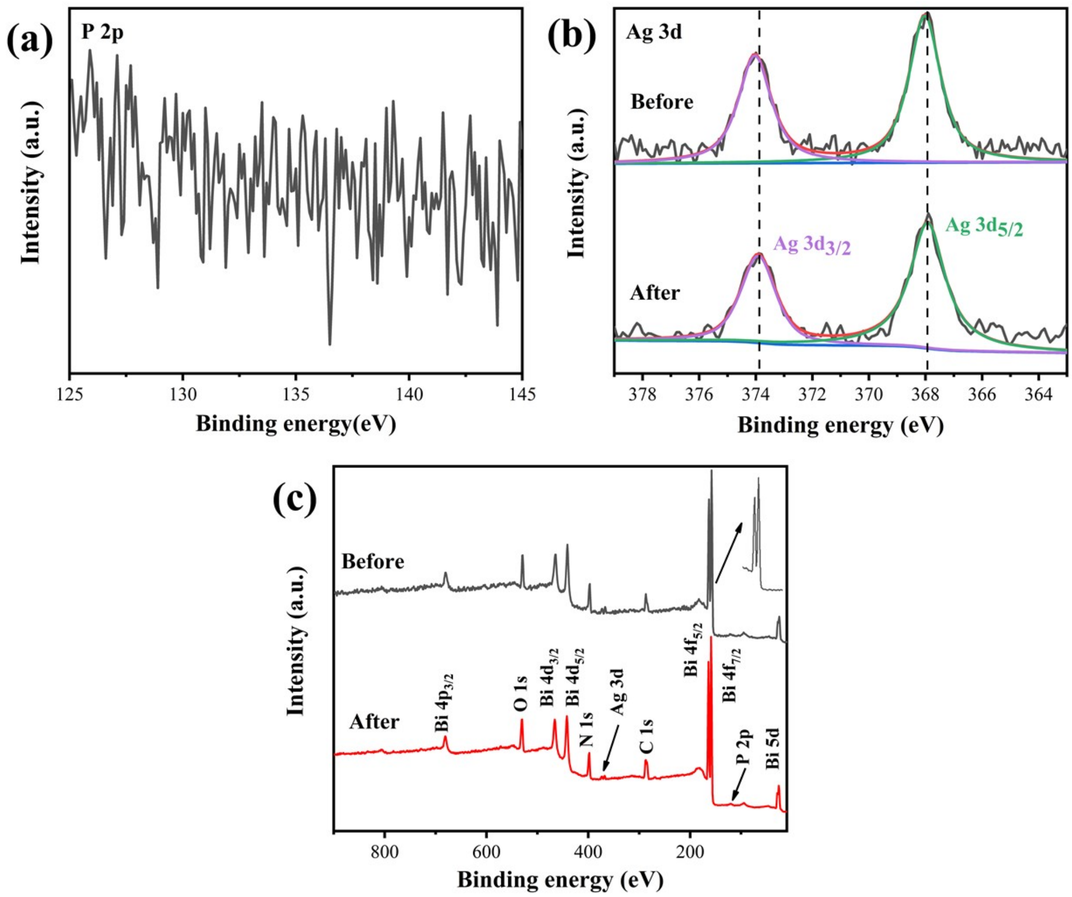

Fig. S1 The XPS spectra of P 2p (a) of CNN/AP/BO-4 photocatalyst. Ag 3d (b) and survey spectra (c) of fresh and used CNN/AP/BO-4 photocatalyst.

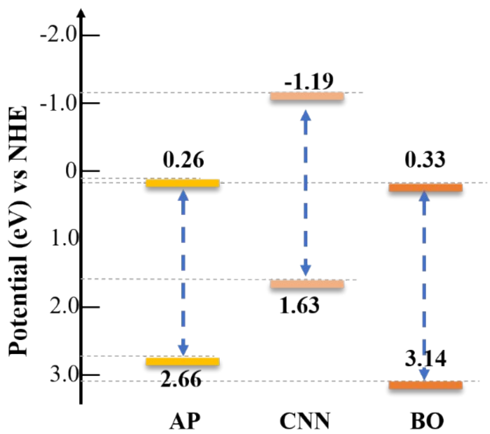

Fig. S2 Energy band structures of CNN, AP and BO.

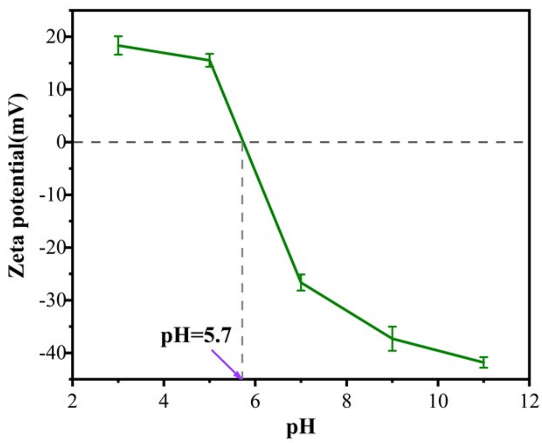

Fig. S3 Zeta potentials of CNN/AP/BO under different pH conditions.

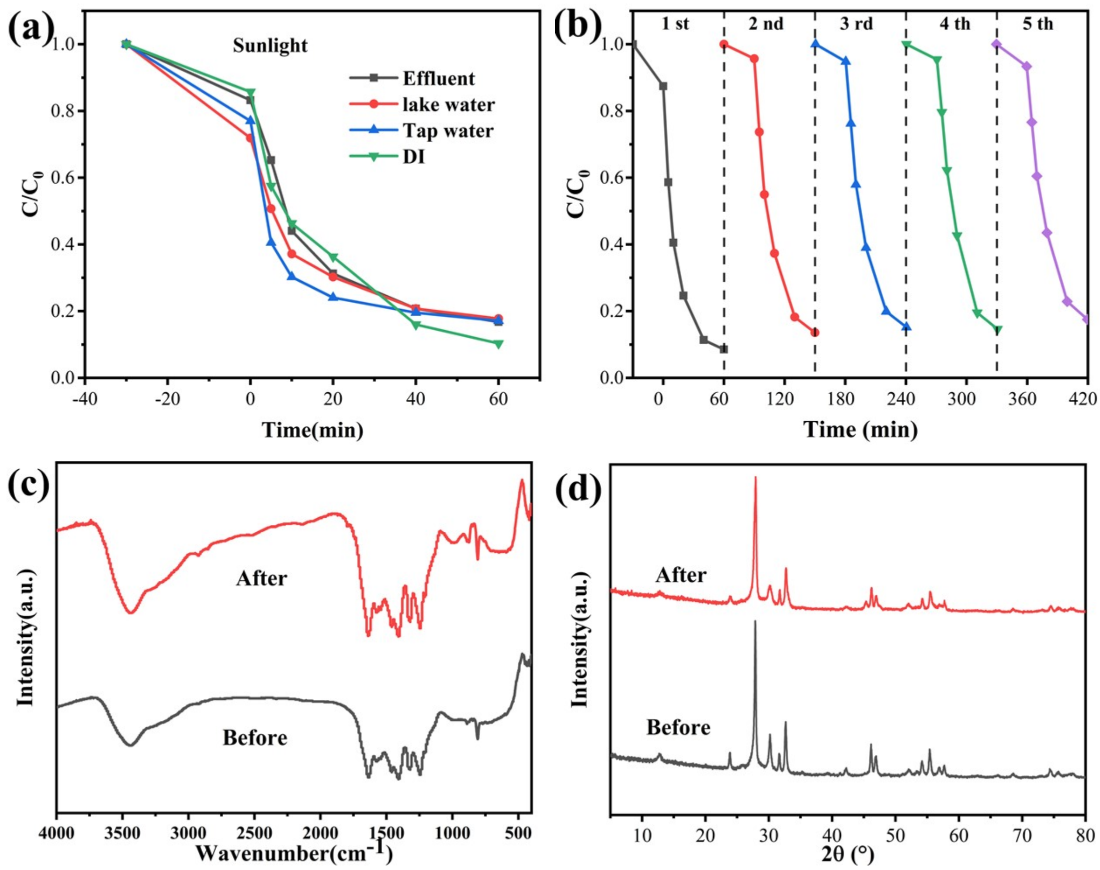

Fig. S4 (a) Effect of different water body samples condition under sunlight irradiation; (b) stability test on the performance of CNN/AP/BO-4 for TC degradation; (c) FTIR spectra and (d) XRD patterns of fresh and used CNN/AP/BO-4.

Table S1 Comparison of photocatalytic performance with other previously reported photocatalysts for tetracycline (TC) degradation

Materials	Light source Xe lamp/W	Catalyst (g/L)	Concentration (mg/L)	Volume (mL)	Degradation Performance (%)	Refs.
Ag_3PO_4/AgBr-	300 (λ>	0.5	40	100	80 (25min)	1

20%g-C_3N_4	420 nm)					
$Bi_2Zr_2O_7$/g-C_3N_4/Ag_3PO_4	300 (λ＞420 nm)	0.5	20	100	86.2 (45min)	2
g-C_3N_4/Ag_3PO_4-1	LED10($400 nm<\lambda<700 nm$)	1	20	100	90 (150min)	3
Ag_3PO_4/g-C_3N_4/$MoSe_2$	300 (λ＞420 nm)	1	10	50	69(10 min)	4
Ag_3PO_4/ $Co_3(PO_4)_2$/g-C_3N_4	300 (λ＞420 nm)	0.5	10	/	88 (120 min)	5
PNIPAM@Ag/Ag_3PO_4-20/CN	800 (λ＞400 nm)	0.5	20	100	88.96 (120 min)	6
Ag_3PO_4/NG/g-C_3N_4	100 (λ＞420 nm)	0.5	20	50	93.6 (90 min)	7
$Bi_2O_2CO_3$/g-C_3N_4/Bi_2O_3	300 (λ＞420 nm)	0.2	10	50	95 (60 min)	8
WO_3/g-C_3N_4/Bi_2O_3	300 (λ＞420 nm)	1	10	100	80.2 (60 min)	9
Bi_2O_3 QDs/g-C_3N_4 (ii)	300 (λ＞420 nm)	0.5	10	100	84 (120 min)	10
Bi/α-Bi_2O_3/g-C_3N_4	300 (λ＞400 nm)	1	10	50	90.2 (180 min)	11
CNN/AP/BO	300 (λ＞420 nm)	1	30	50	91.6 (60min)	This work

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