From Pollutant to Non-Toxic Product: Ov-Rich S-scheme Heterojunction for Photocatalytic Antibiotic Degradation and Toxicity Assessment

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3. Results and discussion

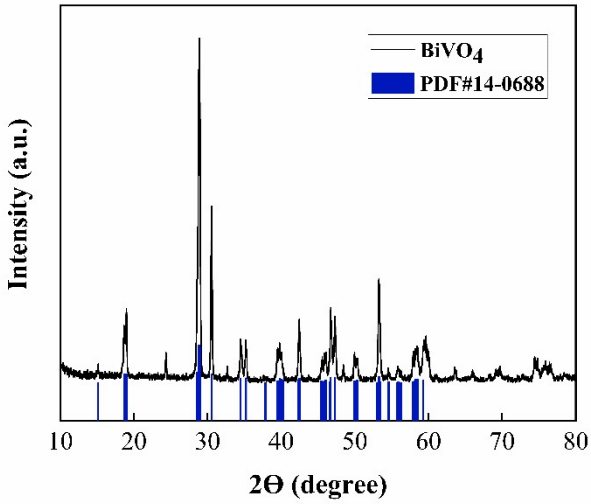


Fig. S1. The XRD pattern of $BiVO_4$

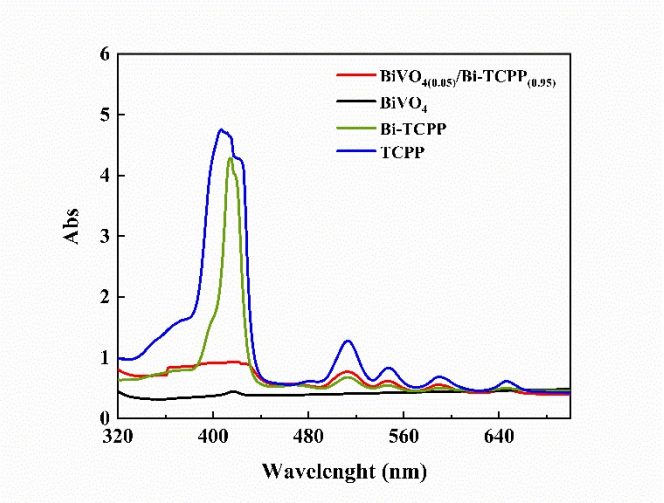
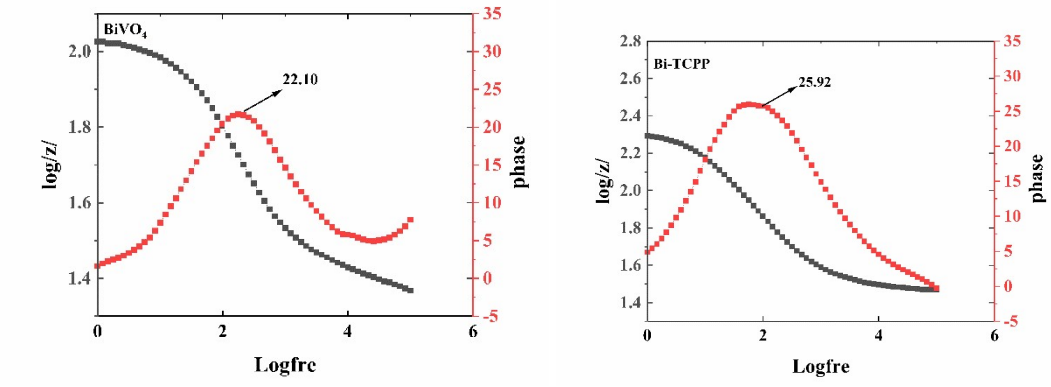


Fig. S2. UV-Vis spectra of TCPP, Bi-TCPP, $BiVO_4$ and 5%$BiVO_4$/Bi-TCPP



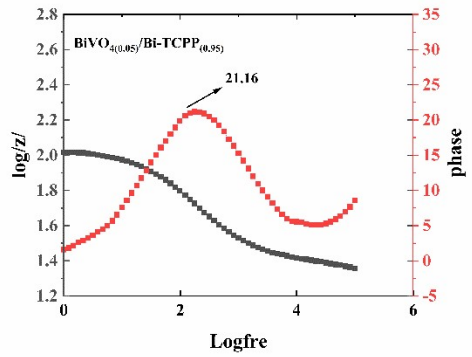


Fig. S3. EIS Bode plots of $BiVO_4$, Bi-TCPP and 5%$BiVO_4$/Bi-TCPP

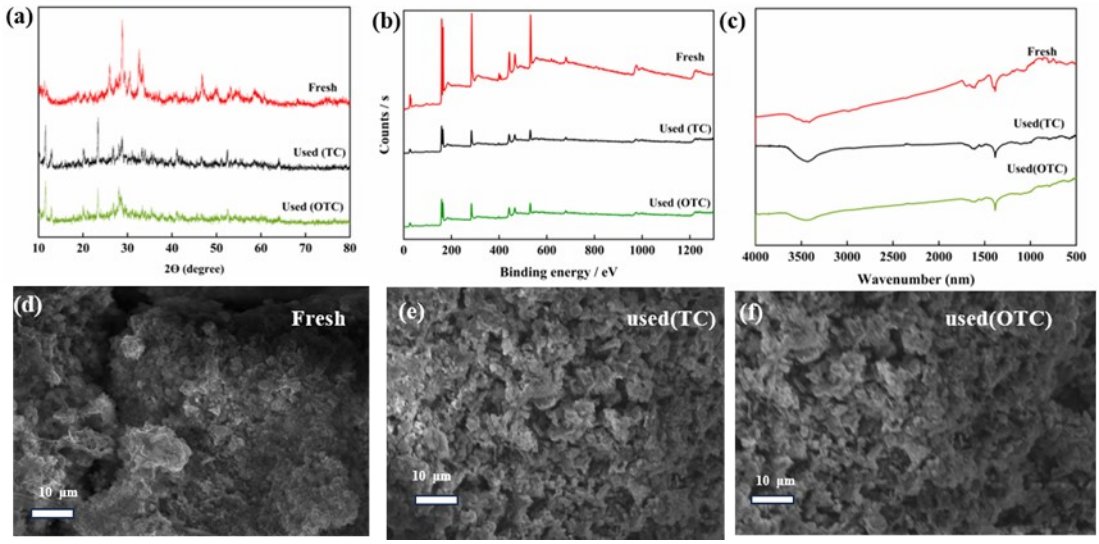
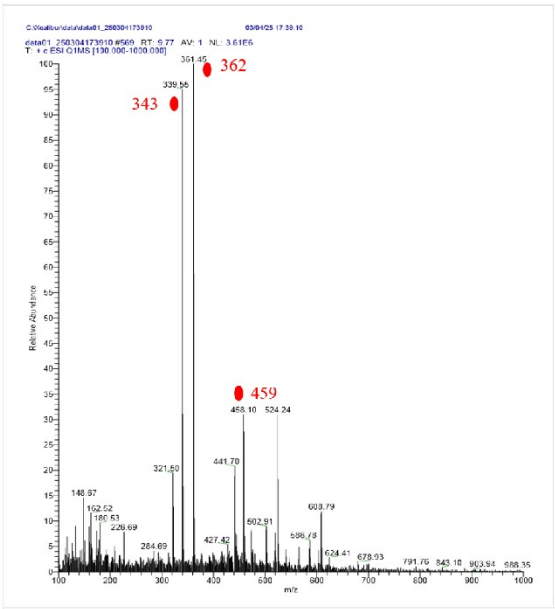
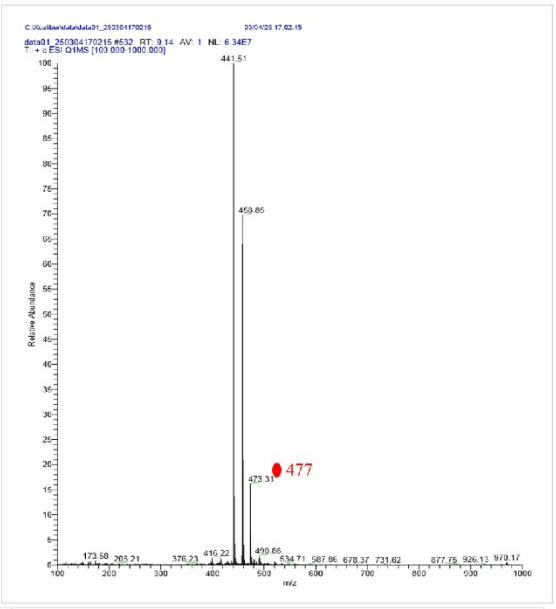
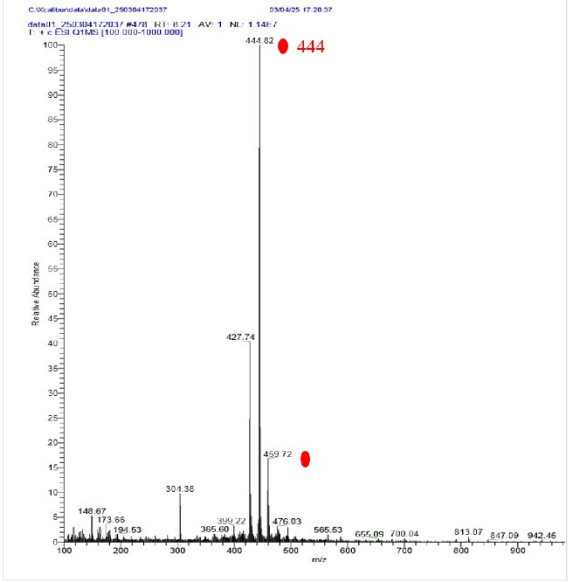
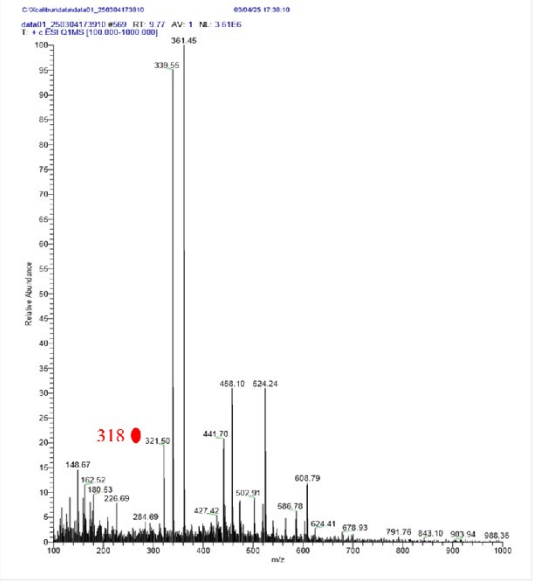


Fig. S4. Characterization of the photocatalyst before and after use: (a) XRD patterns, (b) XPS survey spectra, (c) FTIR spectra, and (d-f) SEM images of fresh and used catalysts.


362
343
459
Relative Abundance
m/z


441.51
459.85
477
Relative Abundance
m/z


444.82
444
427.74
459.72
Relative Abundance
m/z


361.45
339.55
318
321.50
441.70
458.10
624.24
Relative Abundance
m/z

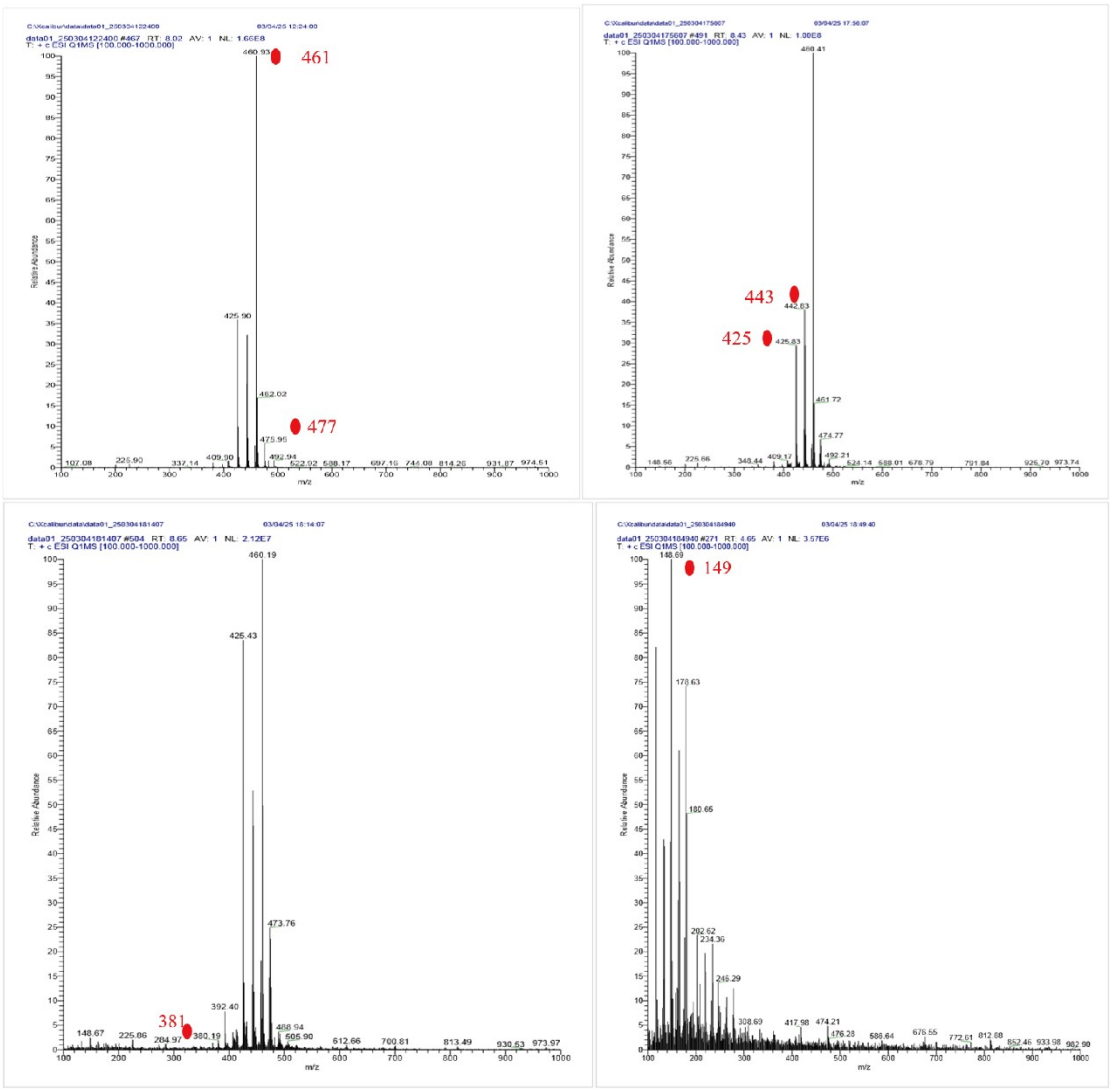


Fig. S5. MS/MS results of the reaction between TC and OTC with $BiVO_4$/Bi-TCPP.

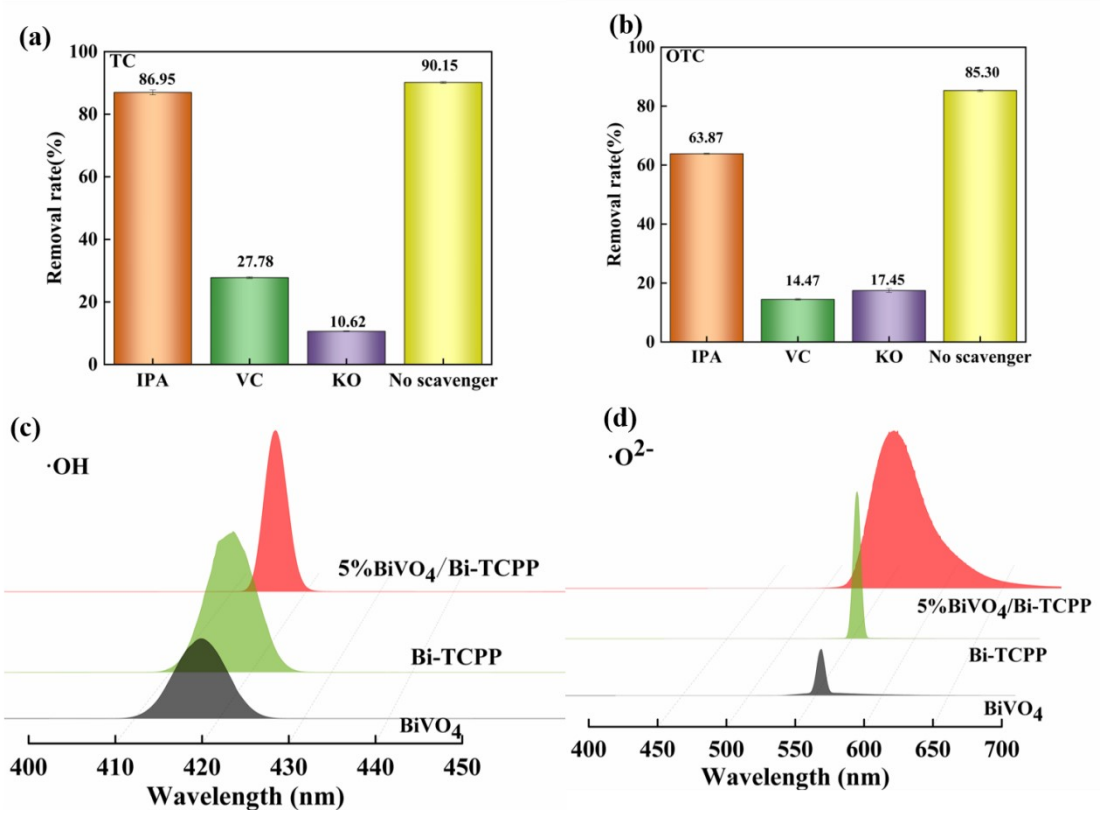


Fig. S6. Effects of diverse scavengers on the photo-oxidation of TC (a) and OTC (b). Relationship curve between the absorbance and the concentration of 2-OH-TA (c) and FS (d) in different systems.

Tables

Table S1 The specific surface areas, average pore size and pore volume of samples.

samples	BET (m2 /g)	Average pore diameter (nm)	Pore volume (cm3 /g)
$BiVO_4$	2.58	3.88	0.0050
Bi-TCPP	11.87	18.33	0.0389
BiVO4/Bi-TCPP	20.45	3.81	0.0544

Table S2 Comparison of photocatalytic degradation performance of representative photocatalysts for tetracycline antibiotics.

Photocatalyst	Target Pollutant	Removal Efficiency	Reaction Time	Ref
$BiVO_4$/Bi-TCPP	TC	90.15%	90 min	This work
$BiVO_4$/Bi-TCPP	OTC	85.30%	120 min	This work
$Cu_2O/BiVO_4$	TC	78.90%	24 min	1
$ZnO/BiVO_4$	OTC	88%	240 min	2
$AgI/BiVO_4$	TC	94.91%	60 min	3
PCN-224 (Zr-TCPP MOF)	TC	92%	180 min	4

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