Electronic Supplementary Material

$ZnFe_2O_4/BiVO_4$ Z-scheme heterojunction for efficient visible-light photocatalytic degradation of ciprofloxacin

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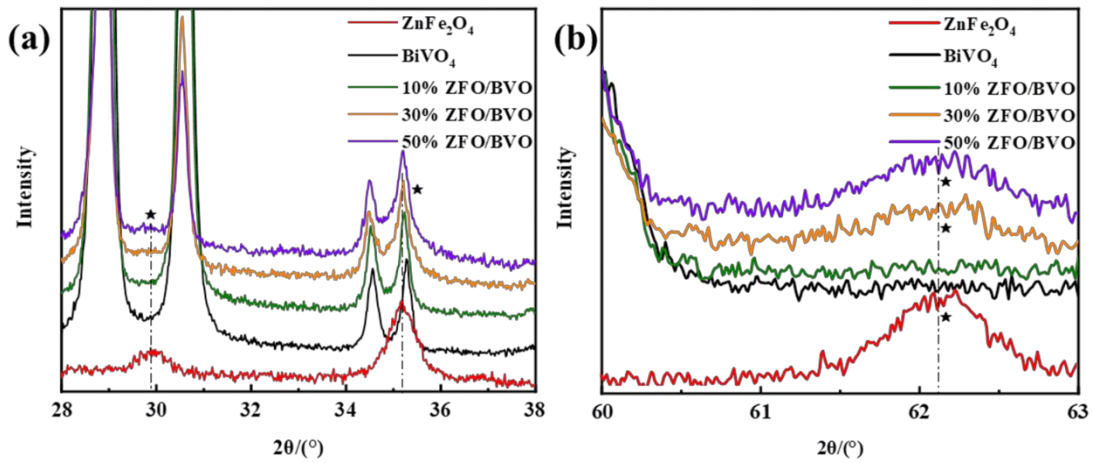


Fig. S1. XRD patterns of materials at (a) 28°-38°, and (b) 60°-63°.

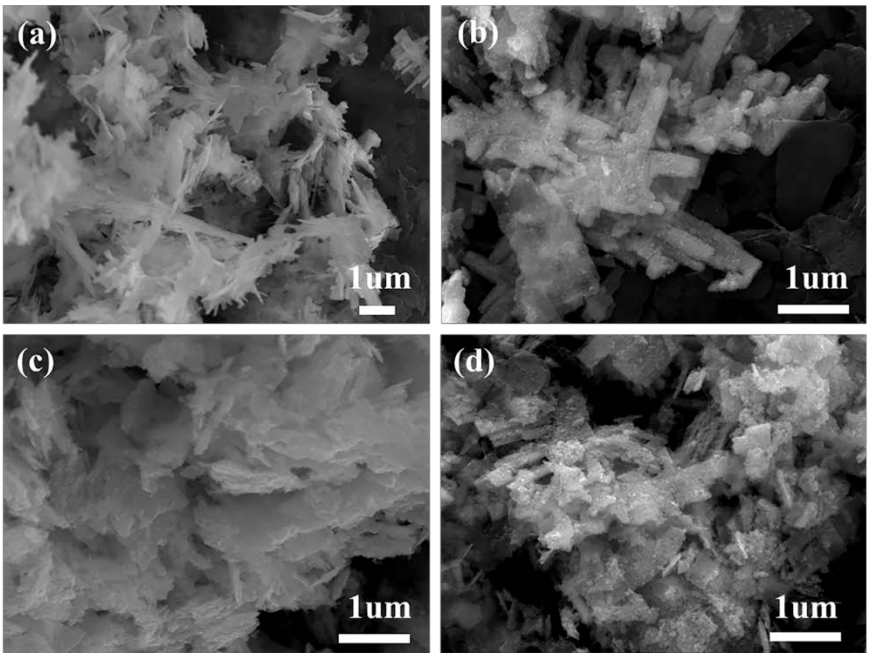


Fig. S2. SEM images of (a) $BiVO_4$, (b) 10% ZFO/BVO, (c) 30% ZFO/BVO, and (d) 50% ZFO/BVO.

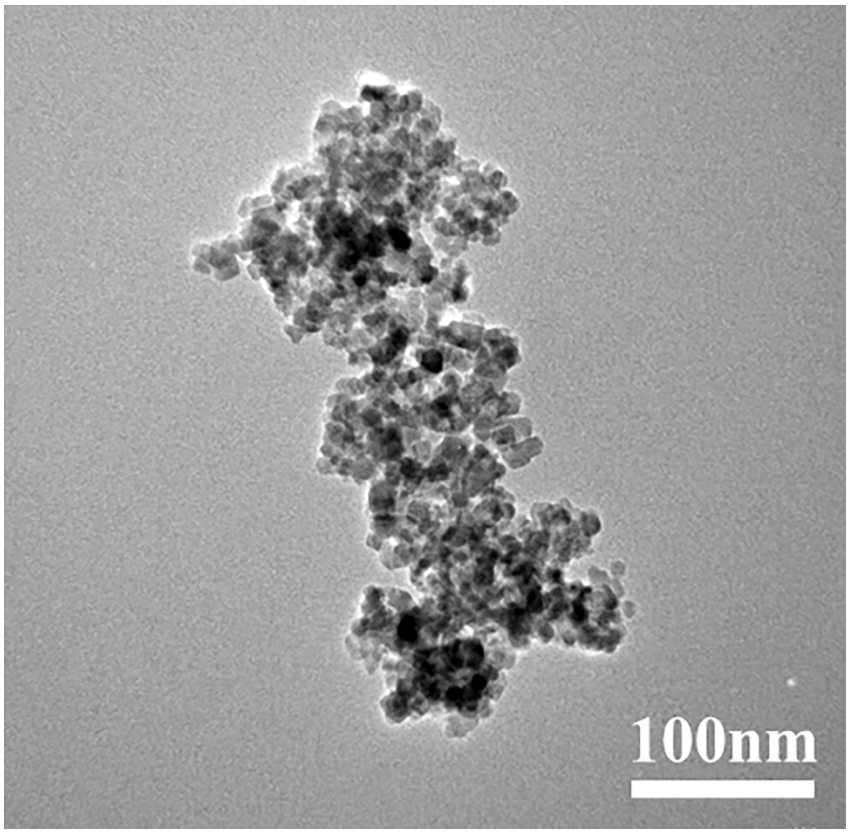


Fig. S3. TEM image of pure $ZnFe_2O_4$.

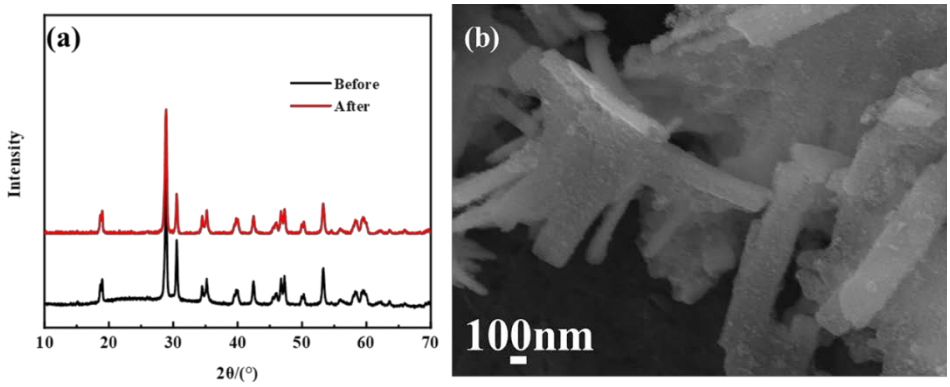


Fig. S4. (a) XRD patterns of 30% ZFO/BVO before and after photocatalytic reaction, (b) SEM of 30% ZFO/BVO after photocatalytic cycle reaction.

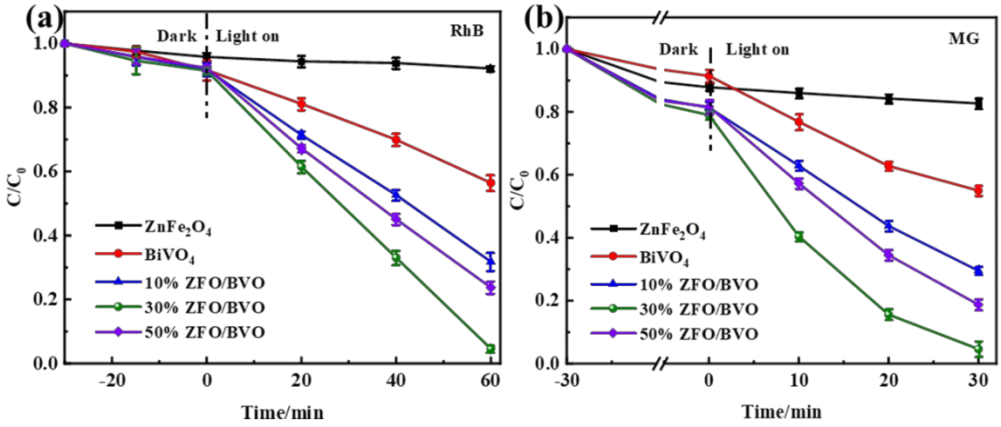
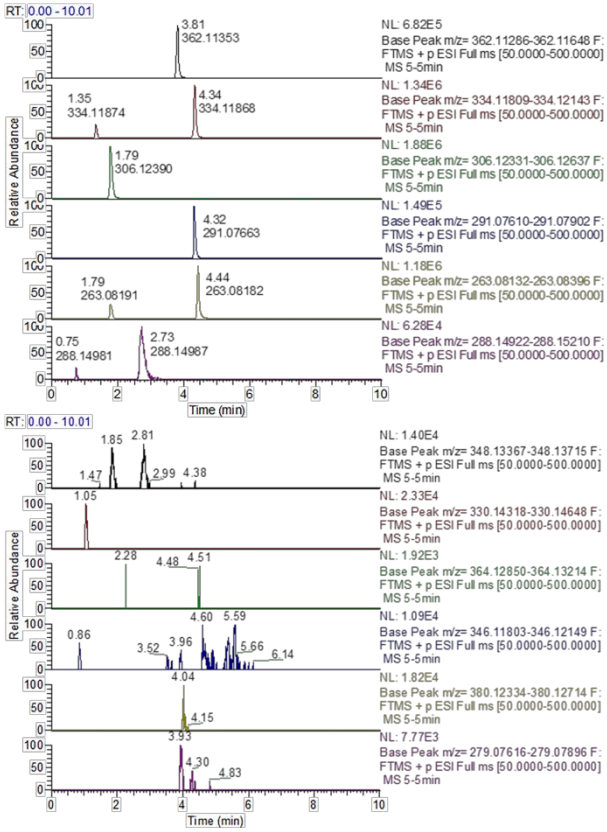
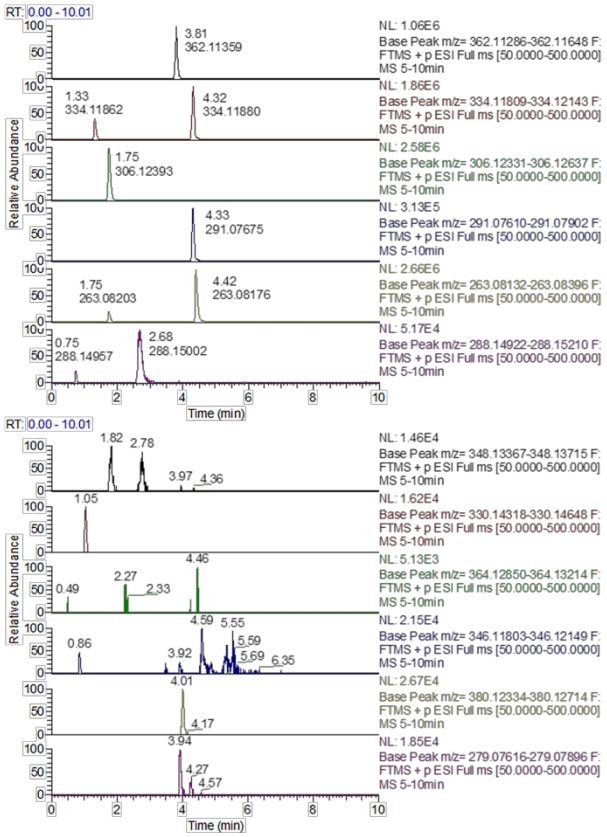


Fig. S5. Photocatalytic degradation of (a) RhB, (b) MG over different samples (Reaction conditions: RhB/MG = 10 ppm (50 mL); photocatalyst dosage = 10 mg; 300 W Xenon lamp (λ > 420 nm); reaction temperature = 25 ℃).

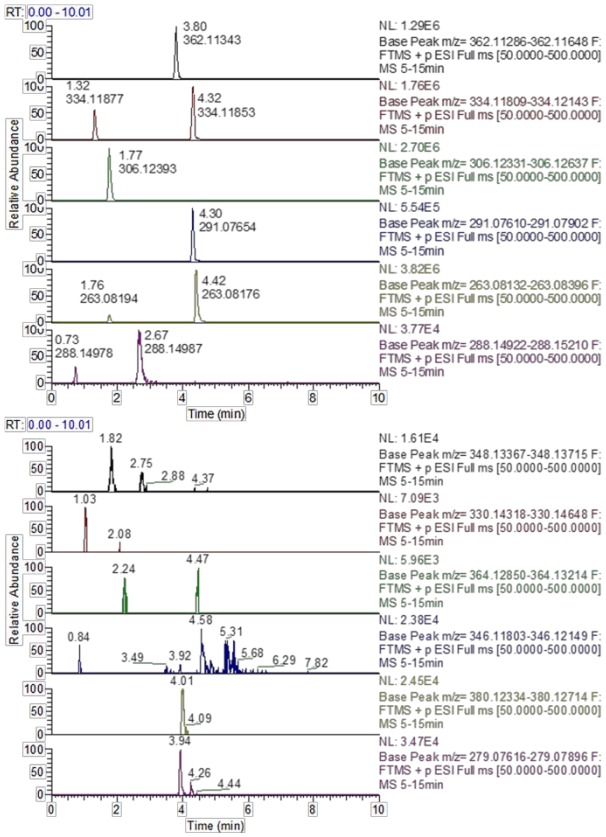
(a) 5 min



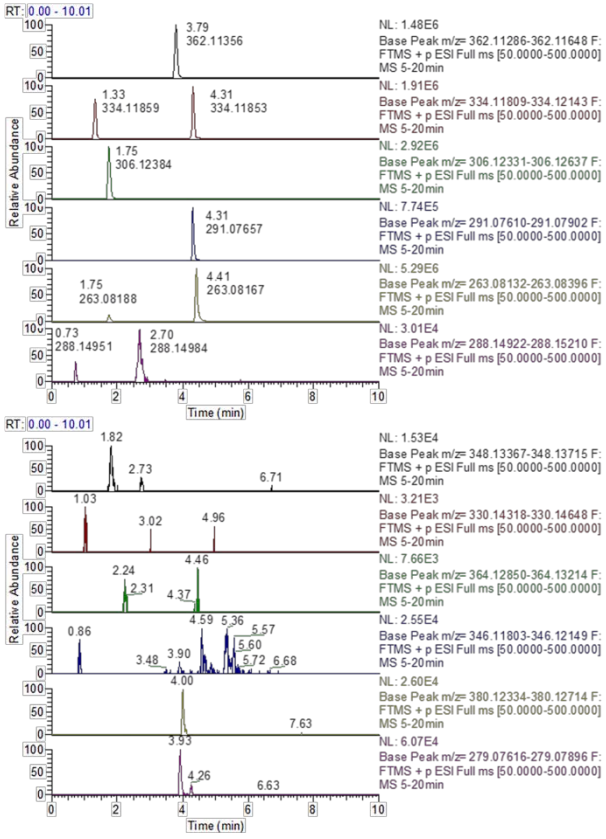
(b) 10 min



(c) 15 min



(d) 20 min



(e) 30 min

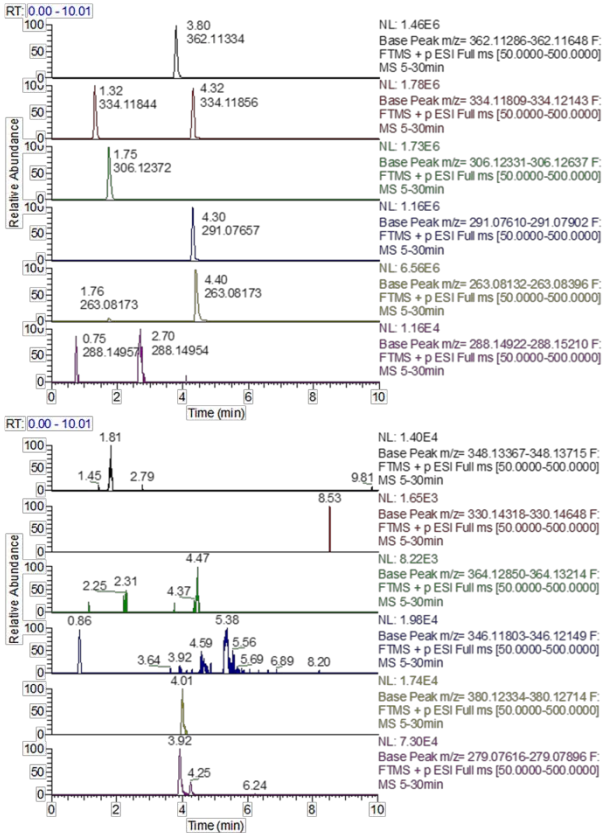


Fig. S6. LC-MS chromatograms of CIP reaction solution under visible light irradiation for (a) 5 min, (b) 10 min, (c) 15 min, (d) 20 min and (e) 30 min.

Table S1. Degradation of CIP over different photocatalysts

Photocatalyst	Photocatalyst dosage	CIP concentration; Volume	Degradation rate; Time	Light source	Ref.
Ag@PCNS/$BiVO_4$	50 mg	10 mg/L; 100mL	92.6%; 120min	300 W Xe lamp ($\lambda > 420$ nm)	[1]
$BiVO_4$-2	20 mg	10 mg/L; 30mL	98.5%; 70min	500 W Xe lamp ($\lambda > 420$ nm)	[2]
CuS/$BiVO_4$	100 mg	10 mg/L; 100mL	86.7%; 90min	300 W Xe lamp ($\lambda > 420$ nm)	[3]
W-$BiVO_4$-x/rGO	20 mg	10 mg/L; 20mL	93.6%; 60min	300 W Xe lamp ($\lambda > 420$ nm)	[4]
biochar@$ZnFe_2O_4$/BiOBr	50 mg	15 mg/L; 100mL	65.26%; 60 min	300 W Xe lamp	[5]
$ZnFe_2O_4$@RGO	20 mg	20 mg/L; 20mL	73%; 60min	300 W Xe lamp ($\lambda > 420$ nm)	[6]
Bi_2MoO_6/UiO-66-NH_2	10 mg	10 mg/L; 50mL	96%; 90min	300 W Xe lamp ($\lambda > 420$ nm)	[7]
ZFO/BVO	10 mg	20 mg/L; 50mL	97%; 30 min	300 W Xe lamp ($\lambda > 420$ nm)	This work

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