Supporting Information

Efficient Photodegradation of 2-Chloro-4-Nitrophenol over Fe-Doped BiOCl Nanosheets with Oxygen Vacancy

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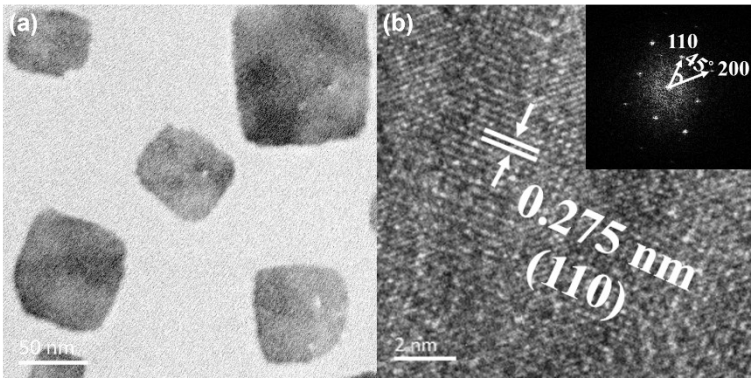

Figure S1 (a) TEM image, (b) HRTEM image and FFT pattern (inset) of BOC.

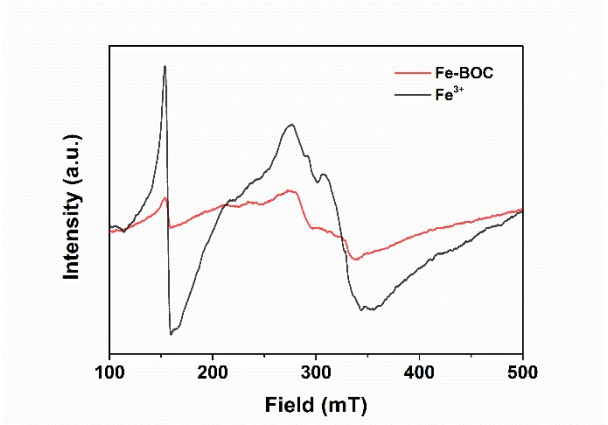

Figure S2 EPR spectra of Fe-BOC and Fe^{3+} standard sample.

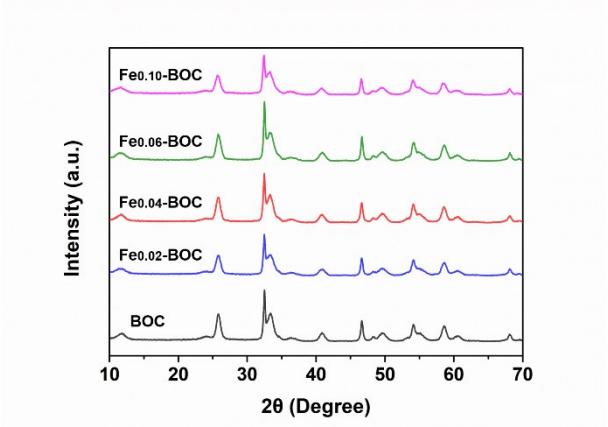

Figure S3 XRD patterns of Fe-doped BiOCl with various concentration of Fe.

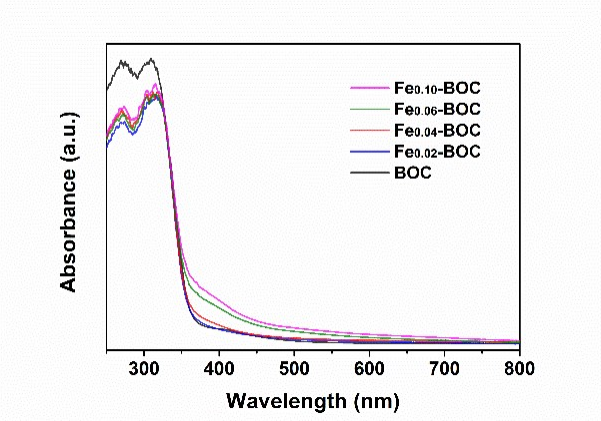

Figure S4 UV-visible diffuse reflectance spectra of Fe-doped BiOCl with various concentration of Fe.

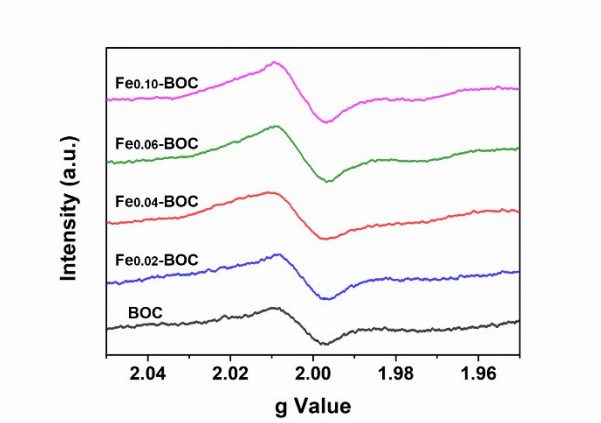

Figure S5 EPR spectra to detect the concentration of oxygen vacancy in BiOCl and Fe-doped BiOCl with various concentration of Fe.

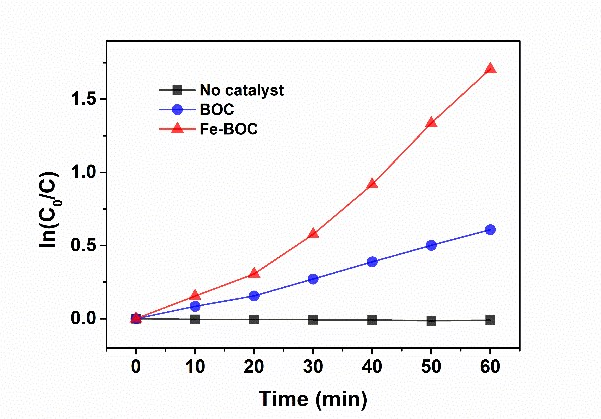

Figure S6 Corresponding kinetic curves of prepared BOC and Fe-BOC.

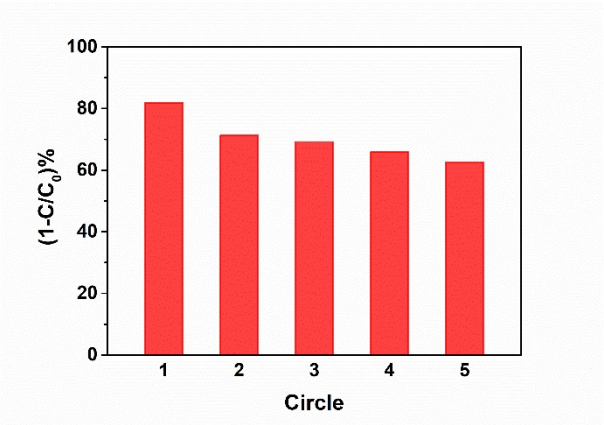

Figure S7 Cycle test for 2-C-4-NP photodegradation of Fe-BOC in 60 min.

The percentage of the 2-chloro-4-nitrophenol photodegraded were tested to be 81%, 71%, 69%, 65%, and 62% after each cycle in 60 min.

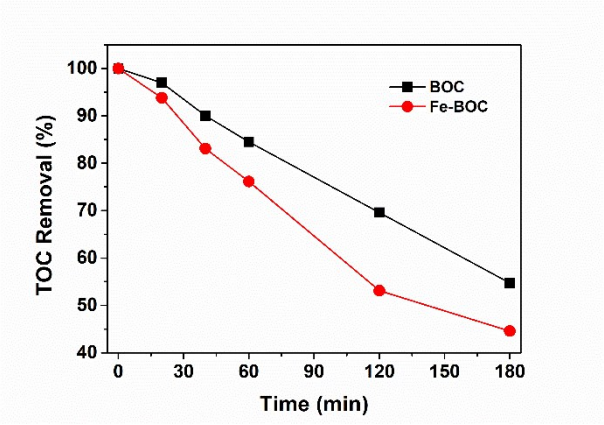

Figure S8 TOC removal efficiency of the BOC and Fe-BOC.

The total organic carbon (TOC) removal efficiencies were 15.5% and 23.9% for BOC and Fe-BOC in 60 min, respectively. After 3 h, the TOC removal efficiency could reach to 55.5% for Fe-BOC.

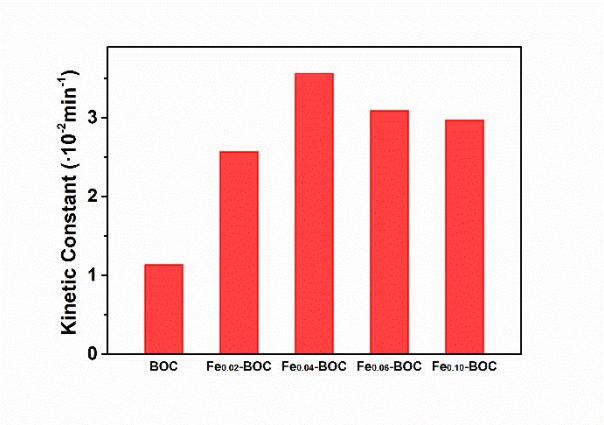

Figure S9 2-C-4-NP photodegradation activity of BiOCl and Fe-doped BiOCl with various concentration of Fe.

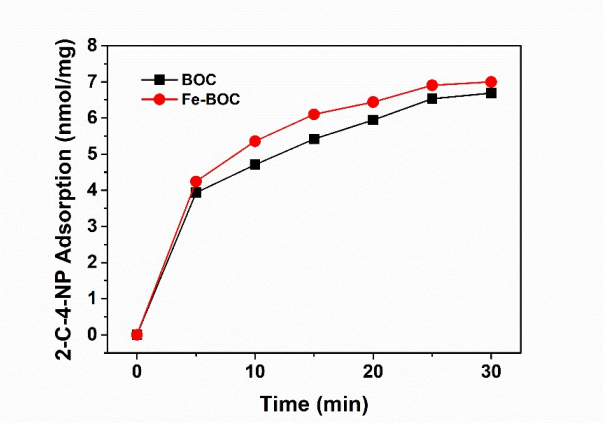

Figure S10 Adsorption curves of 2-C-4-NP over BOC and Fe-BOC.

The amounts of adsorbed 2-C-4-NP were detected to be 6.68 and 6.99 nmol/mg for BOC and Fe-BOC, respectively.

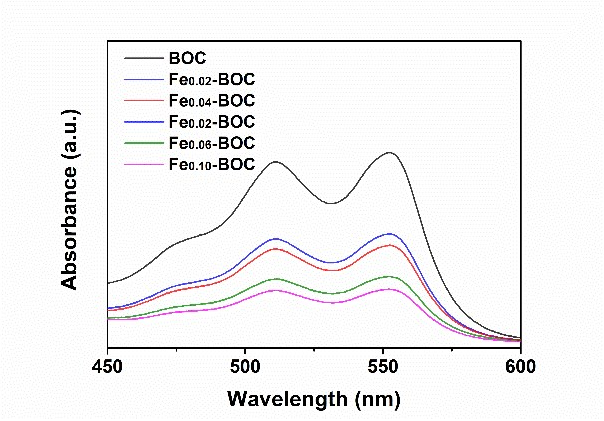

Figure S11 Absorption spectra of DPD/POD-H_2O_2 over BiOCl and other Fe-doped BiOCl samples.

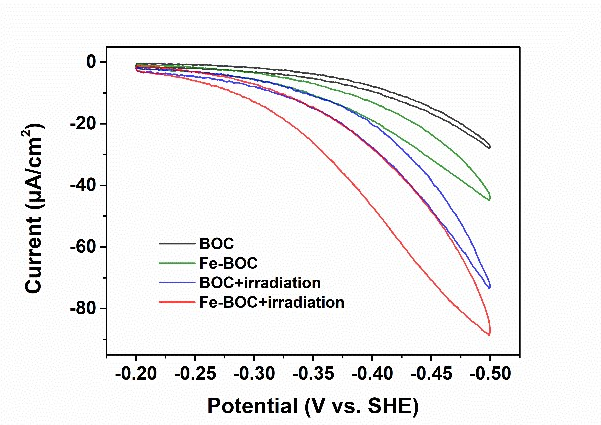

Figure S12 CV curves of prepared BOC and Fe-BOC within and without simulated light irradiation.

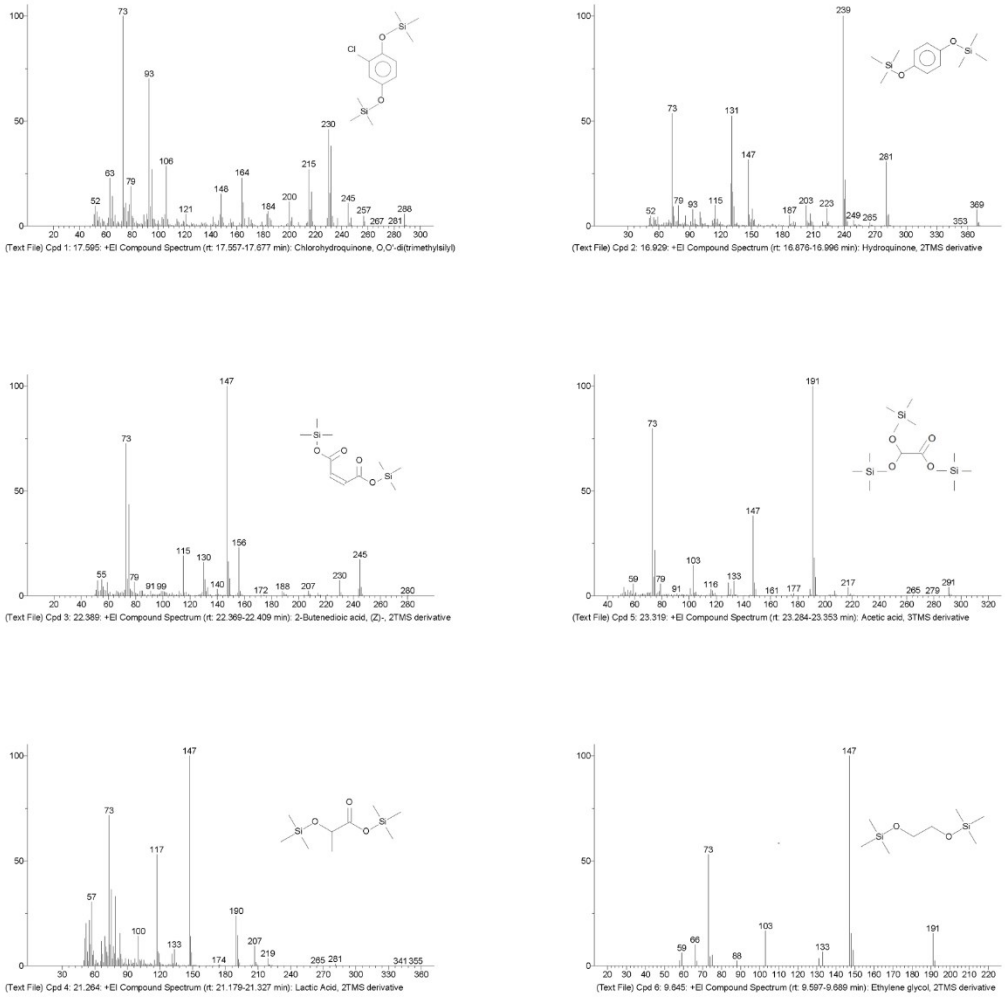

Figure S13 Intermediate products detected by GC-MS with TMCS-HDMS derivatization.