Supplementary material

Heterogeneous activation of peroxymonosulfate for bisphenol AF degradation with BiOI$_{0.5}$Cl$_{0.5}$

Weihong Tang$^a$, Yongli Zhang$^a$,* , Hongguang Guo$^a,b$, Yang Liu$^a$

$^a$ College of Architecture and Environment, Sichuan University, Chengdu 610065, China

$^b$ Department of Civil & Environmental Engineering, University of Washington, Box 352700, Seattle, WA 98195-2700, United States

*Corresponding author. Tel: +86-028-85408889; fax: +86-028-85405534
Email: xyl_scu@126.com (Yongli Zhang)

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Fig. S1 EDX mappings of the BiO$I_{0.5}$Cl$_{0.5}$
Fig. S2 Removal of BPAF in different reaction systems: PMS/\(\text{BiO}_{0.5}\text{Cl}_{0.5}\), PMS/ BiOI and PMS/ BiOCl ([BPAF]=10 mg/L, PMS/BPAF=5/1, catalyst dosage=0.5 g/L, \(T=298\text{K}\)).
Fig. S3

Fig. S3 Nitrogen adsorption–desorption isotherms of BiOI\textsubscript{0.5}Cl\textsubscript{0.5}.
Fig. S4 The adsorption efficiencies of BPAF by varying the BiO$_{1.5}$Cl$_{0.5}$ dosage ([BPAF]=10 mg/L, BiO$_{1.5}$Cl$_{0.5}$ dosage=0.1-1.0 g/L, T=298K).
Fig. S5 Zeta potential versus pH for the as-prepared BiOI$_{0.5}$Cl$_{0.5}$
Fig. S6 Effect of initial solution (a) sulfate ion concentration, (b) chloride ion concentration and (c) nitrate ion concentration on BPAF removal efficiency ([BPAF] = 10mg/L, BiO\textsubscript{0.5}Cl\textsubscript{0.5} dosage=0.5g/L, PMS/BPAF=5, [ions] = 0-10Mm, T=298K).
**Fig. S7** Effect of different water matrices ([BPAF] =10mg/L, BiO$I_{0.5}$Cl$_{0.5}$ dosage=0.5g/L, PMS/BPAF=5, T=298K).
Fig. S8 The reusability of the BiO\textsubscript{0.5}Cl\textsubscript{0.5} samples to degrade BPAF ([BPAF] =10mg/L, BiO\textsubscript{0.5}Cl\textsubscript{0.5} dosage=0.5g/L, PMS/BPAF=5, T=298K).
Fig. S9 (a) The degradation of the PMS in different systems and (b) in the presence of NaF, TBA and methanol as radical scavengers ([BPAF]=10mg/L, BiOI$_{0.5}$Cl$_{0.5}$ dosage=0.5g/L, PMS/BPAF=5, [methanol]=[TBA]=0.075mol/L, [NaF]=0-0.015mol/L, T=298K).