

Supporting Information

Article

New Insights into $\text{Cd}^{2+}/\text{Fe}^{3+}$ Co-Doped BiOBr for Enhancing the Photocatalysis Efficiency of Dye Decomposition under Visible-Light

Hong Sheng ^{1,†}, Wei Wang ^{2,3,†}, Rong Dai ², Jing Ning ², Lei Zhang ², Qiao Wu ², Fuchun Zhang ^{2,*}, Junfeng Yan ^{3,*} and Weibin Zhang ^{4,*}

¹ College of Mathematics & Physics, Weinan Normal University, Weinan 714000, China; wshenghong@163.com

² School of Physics and Electronic Information, Yan'an University, Yan'an 716000, China; wangwei@yau.edu.cn (W.W.); dairong@yau.edu.cn (R.D.); ningjing@yau.edu.cn (J.N.); yadxzl960203@163.com (L.Z.); wq@yau.edu.cn (Q.W.)

³ School of Information Science Technology, Northwest University, Xi'an 710127, China

⁴ School of Physics and Optoelectronic Engineering, Yangtze University, Jingzhou 434023, China

* Correspondence: yadxzfc@yau.edu.cn (F.Z.); yanjf@nwu.edu.cn (J.Y.); zhang@yangtzeu.edu.cn (W.Z.). Tel.: +86-1832-991-8036 (F.Z.); +86-1362-928-0982 (J.Y.); +86-1311-719-0486 (W.Z.)

† Hong Sheng and Wei Wang contributed equally.

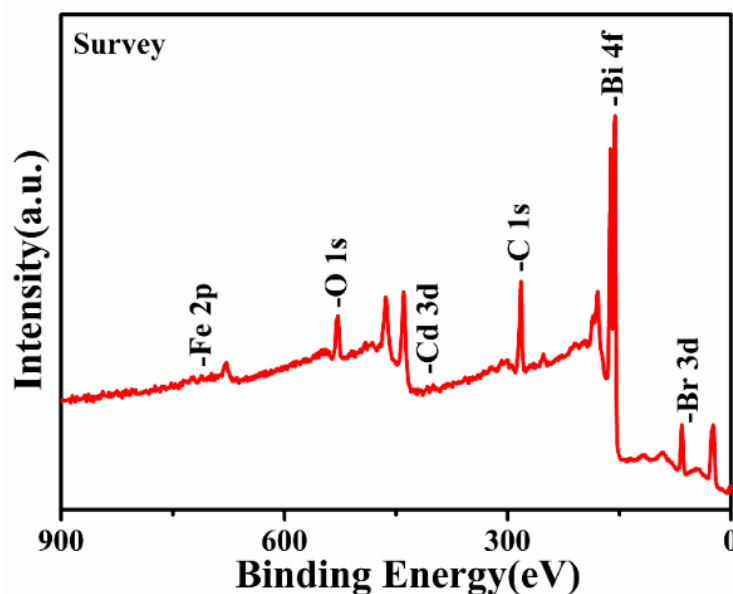


Figure S1. The survey spectra of $\text{Bi}_{1-x-y}\text{Cd}_x\text{Fe}_y\text{OBr}$.

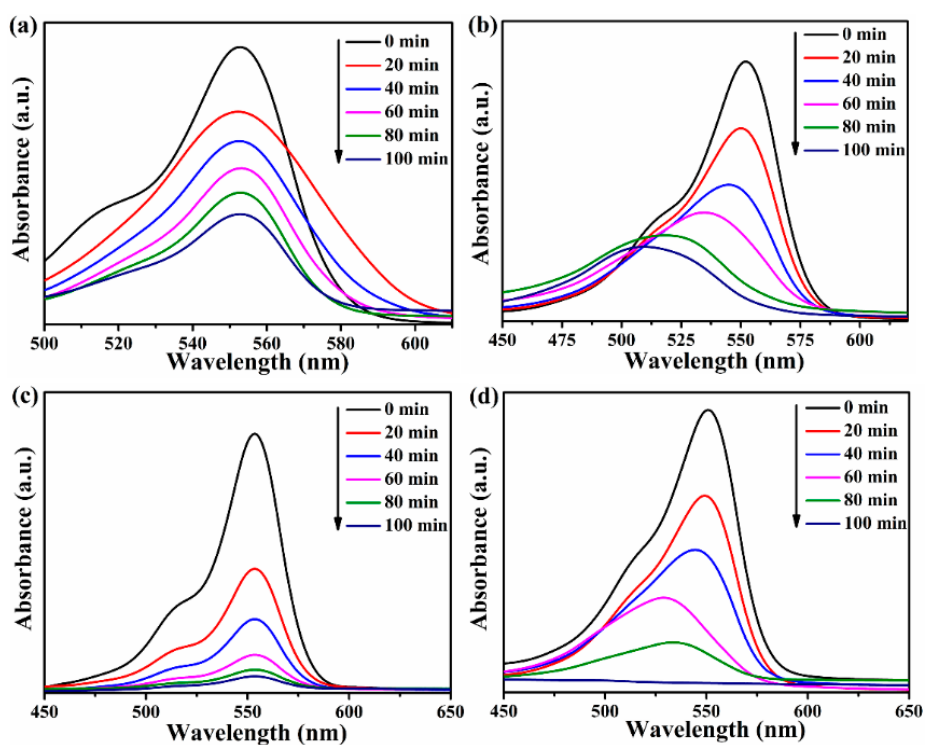


Figure S2. The UV-vis spectral of RhB solution of BiOBr (a), $\text{Bi}_{1-x}\text{Cd}_x\text{OBr}$ (b), $\text{Bi}_{1-x}\text{Fe}_x\text{OBr}$ (c) and $\text{Bi}_{1-x-y}\text{Cd}_y\text{Fe}_y\text{OBr}$ (d).

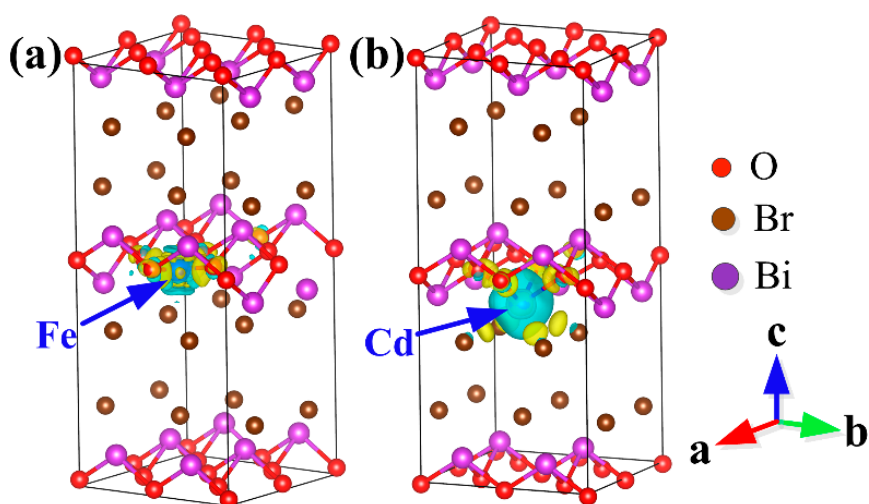


Figure S3. The calculated charge density difference of $\text{Bi}_{1-x}\text{Fe}_x\text{OBr}$ (a) and $\text{Bi}_{1-x}\text{Cd}_x\text{OBr}$ (b).