

## Supporting information

### **Hybrid BiOBr/UiO-66-NH<sub>2</sub> composite with enhanced visible-light driven photocatalytic activity toward RhB dye degradation.**

*Rehana Bibi<sup>a</sup>, Quanhao Shen<sup>a</sup>, Lingfei Wei<sup>a</sup>, dandan Hao<sup>a</sup>, Naixu Li<sup>a\*</sup>, Jiancheng Zhou<sup>a,b,c\*</sup>*

*<sup>a</sup>School of Chemistry and Chemical Engineering, Southeast University, Nanjing, 211189, P.R. China.*

*<sup>b</sup>Department of Chemical and Pharmaceutical Engineering, Southeast University, Chengxian College, Nanjing, 210088, P.R. China.*

*<sup>c</sup>Jiangsu Province Hi-Tech Key Laboratory for Bio-medical Research, Southeast University, Nanjing 211189, PR China.*

*\*Corresponding Author.*

*Tel: (+86) 025-52090621; fax: (+86) 025-52090620.*

*E-mail: jczhou@seu.edu.cn (Dr. Jiancheng Zhou)*

*Tel: +86 025 52090621; fax: +86 025 52090620*

*E-mail: naixuli@seu.edu.cn (Dr. Naixu Li)*

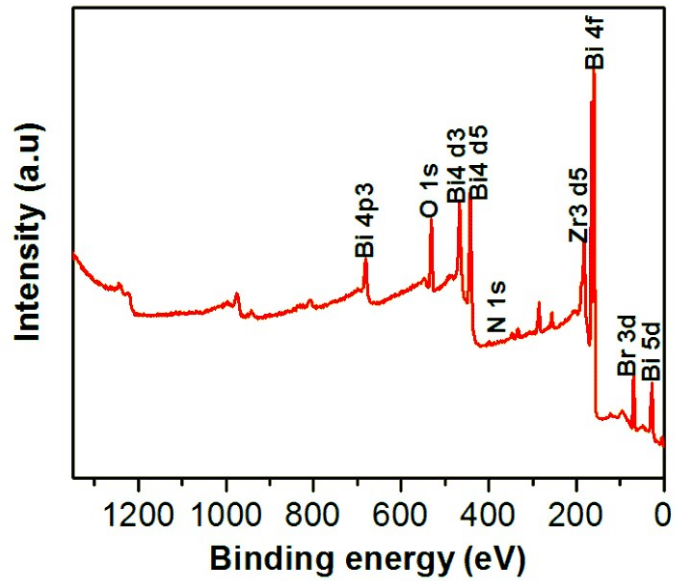


Figure.S1. Survey XPS Spectra of BUN-15.

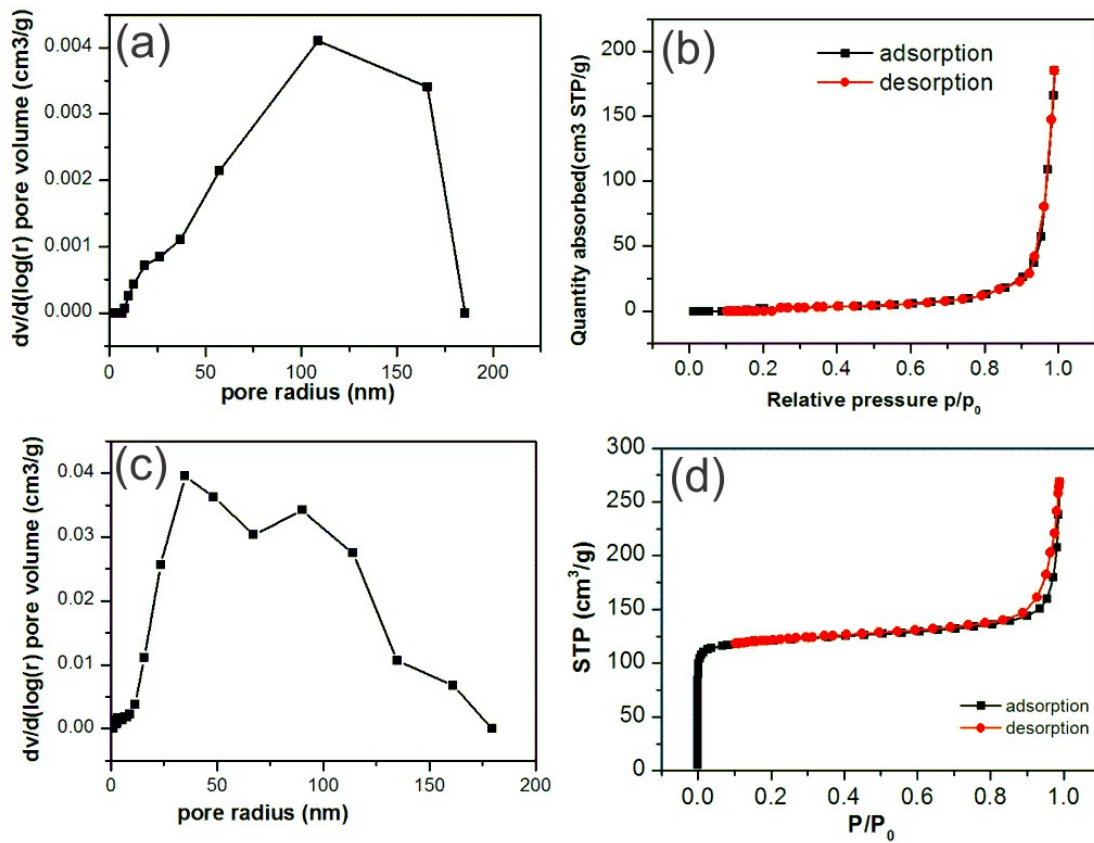
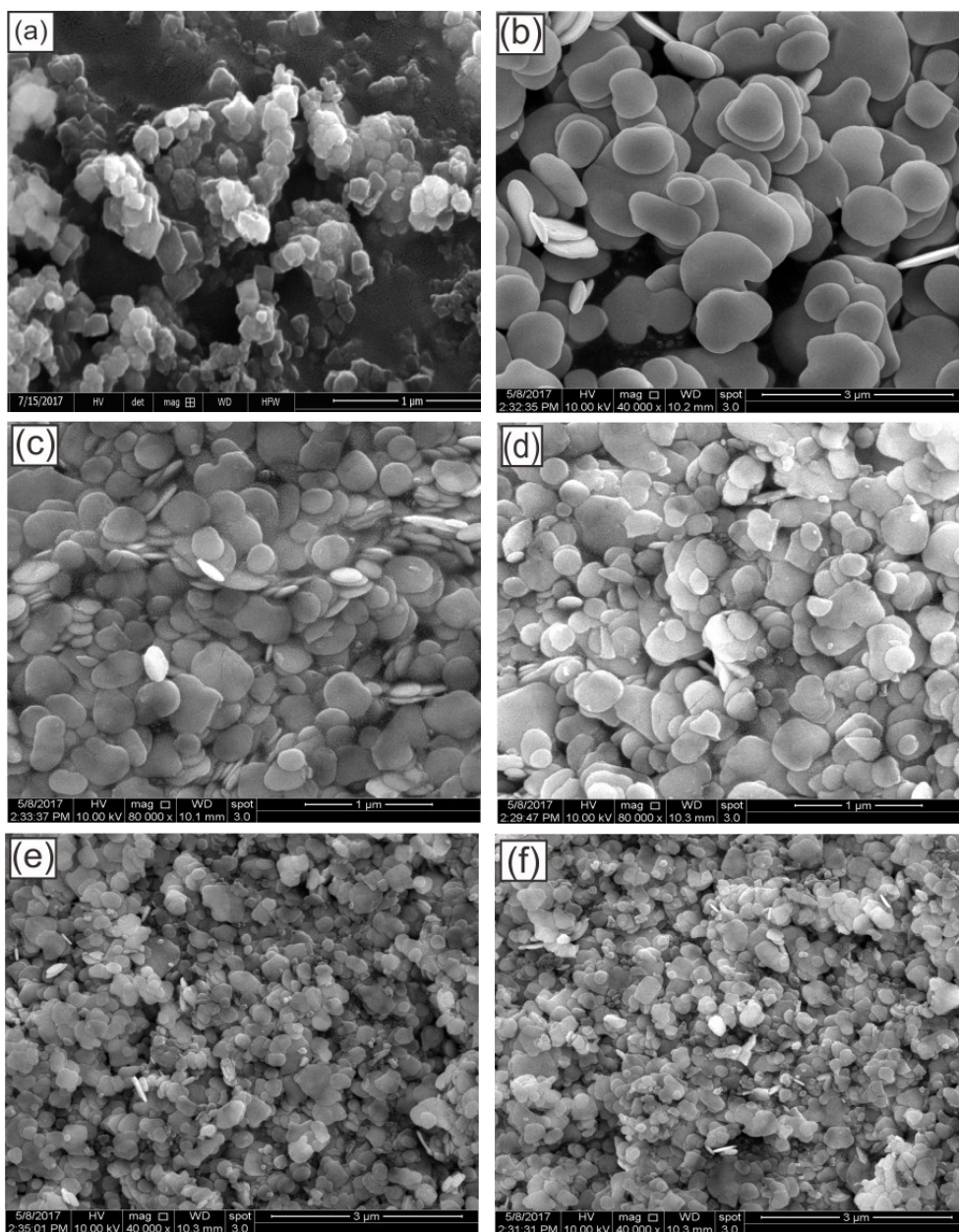
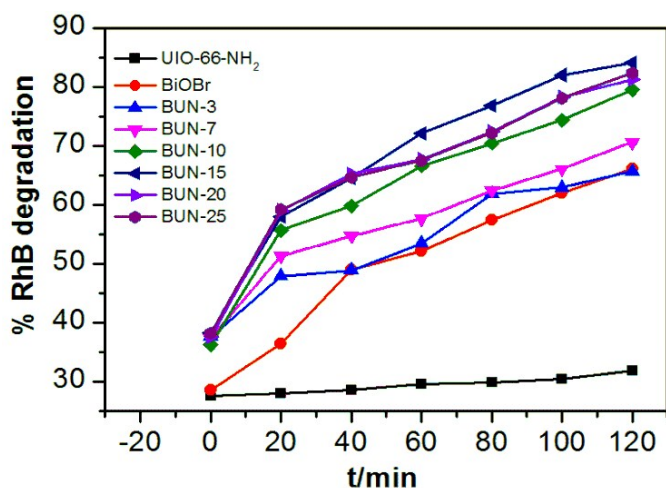


Figure.S2 (a)(b) pore size and surface area of BiOBr (c)(d) pore size and surface area of UiO-66-NH<sub>2</sub>.



**Figure.S3.** SEM images of (a) UiO-66-NH<sub>2</sub> (b) BiOBr (c) BUN-3 (d) BUN-7 (e) BUN-10 (f) BUN-15.



**Figure S5.** %age removal of RhB dye by photocatalytic degradation.

**Table S1.** Elements content of Composites by the ICP-MS analysis.

Samples		Wt % (ICP-MS)	
Nominal mass	Calculated wt%	Bi	Zr
BUN-3	0.95	61.49	0.32
BUN-7	2.24	58.27	1.21
BUN-10	3.19	51.68	2.13
BUN-15	4.79	47.34	3.12
BUN-20	6.3	38.55	4.13
BUN-25	7.9	32.54	4.53

**Table S2.** Metal ions detection after photocatalytic degradation in aqueous solution by ICP-MS analysis.

Samples	$\mu\text{g/L}$	
	Zr	Bi
UiO-66-NH <sub>2</sub>	0.29	0
BUN-15	0.051	113.03

