

## Electronic Supplementary information

### **g-C<sub>3</sub>N<sub>4</sub>/Bi<sub>4</sub>O<sub>5</sub>I<sub>2</sub> 2D-2D heterojunctional nanosheets with enhanced visible-light photocatalytic activity**

Na Tian, Yihe Zhang\*, Chengyin Liu, Shixin Yu, Min Li, Hongwei Huang\*

*Beijing Key Laboratory of Materials Utilization of Nonmetallic Minerals and Solid Wastes, National Laboratory of Mineral Materials, School of Materials Science and Technology, China University of Geosciences, Beijing 100083, PR China*

\*Corresponding author. Tel.: +86-10-82323433.

*E-mail address:* [zyh@cugb.edu.cn](mailto:zyh@cugb.edu.cn) (Y. H. Zhang); [hwh@cugb.edu.cn](mailto:hwh@cugb.edu.cn) (H. W. Huang).

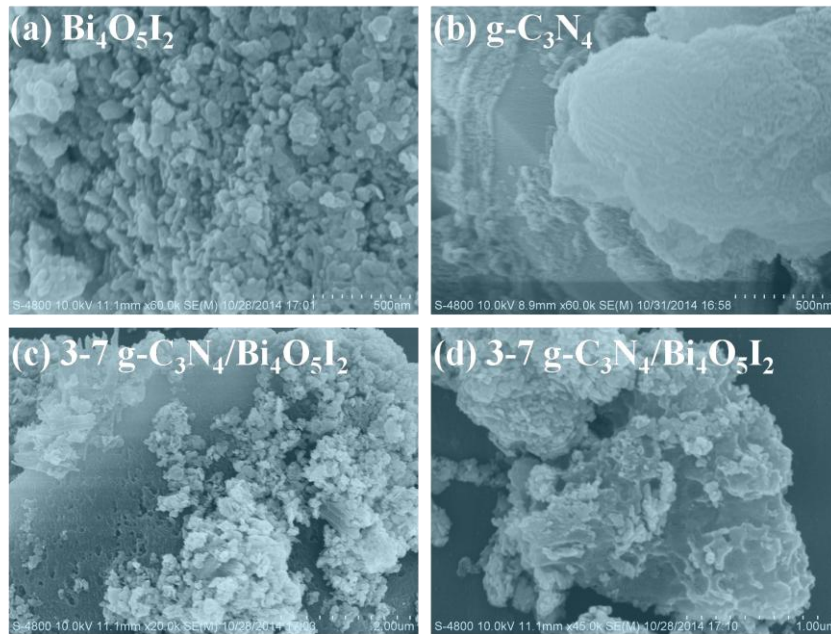


Fig. S1. SEM images of the as-obtained samples: (a)  $\text{Bi}_4\text{O}_5\text{I}_2$ , (b)  $\text{g-C}_3\text{N}_4$ , (c, d)  $3-7 \text{ g-C}_3\text{N}_4/\text{Bi}_4\text{O}_5\text{I}_2$ .

Table. S1. B.E.T surface area data of Bi<sub>4</sub>O<sub>5</sub>I<sub>2</sub>, g-C<sub>3</sub>N<sub>4</sub> and g-C<sub>3</sub>N<sub>4</sub>/Bi<sub>4</sub>O<sub>5</sub>I<sub>2</sub>.

No.	Sample	S <sub>BET</sub> (m <sup>2</sup> /g)
1	Bi <sub>4</sub> O <sub>5</sub> I <sub>2</sub>	23.45
2	3-7 g-C <sub>3</sub> N <sub>4</sub> /Bi <sub>4</sub> O <sub>5</sub> I <sub>2</sub>	17.23
3	4-6 g-C <sub>3</sub> N <sub>4</sub> /Bi <sub>4</sub> O <sub>5</sub> I <sub>2</sub>	13.77
4	5-5 g-C <sub>3</sub> N <sub>4</sub> /Bi <sub>4</sub> O <sub>5</sub> I <sub>2</sub>	10.21
5	g-C <sub>3</sub> N <sub>4</sub>	4.25