Supporting Information

**Bi$_2$O$_3$ quantum dots decorated nitrogen doped Bi$_3$NbO$_7$ nanosheets: In-situ synthesis and enhanced visible-light photocatalytic activity**

Jungang Hou,* Zheng Wang, Shuqiang Jiao,* Hongmin Zhu

Corresponding authors: lorinhjg@yahoo.com.cn (J. Hou)
sjiao@ustb.edu.cn (S. Jiao)

School of Metallurgical and Ecological Engineering, University of Science and Technology Beijing, Beijing.

100083, China
1. Results

**Fig. S1.** The enlarged image of nitrogen doped $\text{Bi}_3\text{NbO}_7$ nanosheets homogeneously decorated with 3 mol% $\text{Bi}_2\text{O}_3$ quantum dots.
**Fig. S2.** The enlarged image of nitrogen doped Bi$_3$NbO$_7$ nanosheets decorated with 5 mol% Bi$_2$O$_3$ nanoparticles with the significant aggregation.
### Table S1. Energy-Dispersive Spectra (EDS) Analysis Data

<table>
<thead>
<tr>
<th>3mol% Bi₂O₃ decorated</th>
<th>N-Bi₃NbO₇</th>
<th>Molar ratio of each element</th>
</tr>
</thead>
<tbody>
<tr>
<td>N-Bi₃NbO₇</td>
<td></td>
<td>bismuth</td>
</tr>
<tr>
<td>Bi₂O₃ nanoparticle</td>
<td>2.0</td>
<td>0</td>
</tr>
<tr>
<td>N-Bi₃NbO₇ nanosheet</td>
<td>3.0</td>
<td>1.0</td>
</tr>
</tbody>
</table>

Note: the average weight percentage of each element were measured by an energy dispersive spectrum using several nanoparticles and nanosheets. Besides, it is hard to check the presence of the nitrogen using EDS analysis.
Fig. S3. The enlarged HRTEM image of nitrogen doped Bi$_3$NbO$_7$ nanosheets decorated with 3 mol% Bi$_2$O$_3$ Bi$_2$O$_3$ quantum dots.
Fig. S4. XPS spectra of a) survey spectrum, b) Bi 4f, c) Nb 3d and (d) N 1s for as-prepared 3mol% Bi$_2$O$_3$/N-Bi$_3$NbO$_7$ samples.
Fig. S5. The XRD patterns of 3 mol% Bi$_2$O$_3$ quantum dots decorated nitrogen doped Bi$_3$NbO$_7$ nanosheets as photocatalysts before photocatalysis and after photocatalysis for five cycling runs.