

# Titanium Alkoxide Induced BiOBr-Bi<sub>2</sub>WO<sub>6</sub> Mesoporous Nanosheet Composites with Much Enhanced Photocatalytic Activity

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## Supplementary Information

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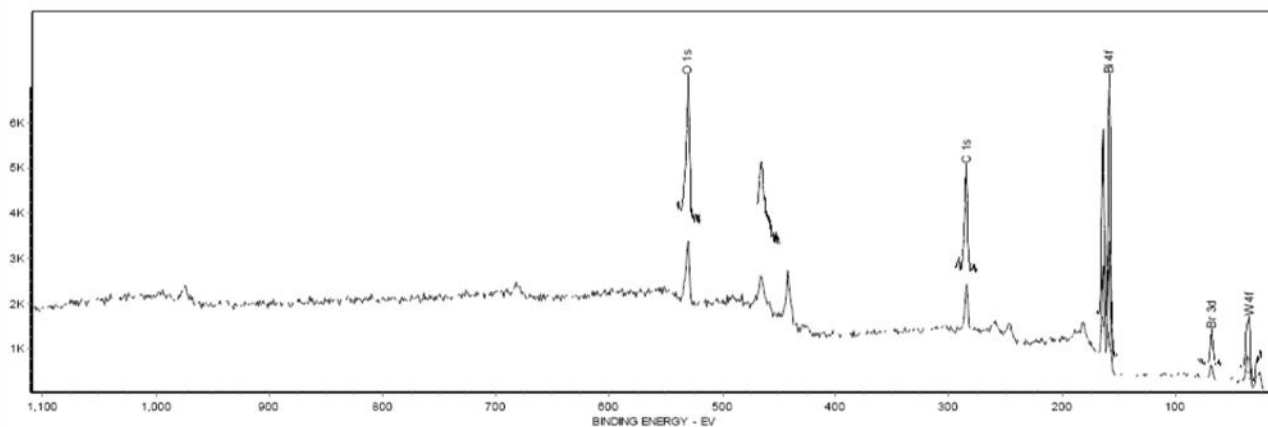


Figure S1. Typical XPS analysis from the BiOBr-Bi<sub>2</sub>WO<sub>6</sub> MNCs.

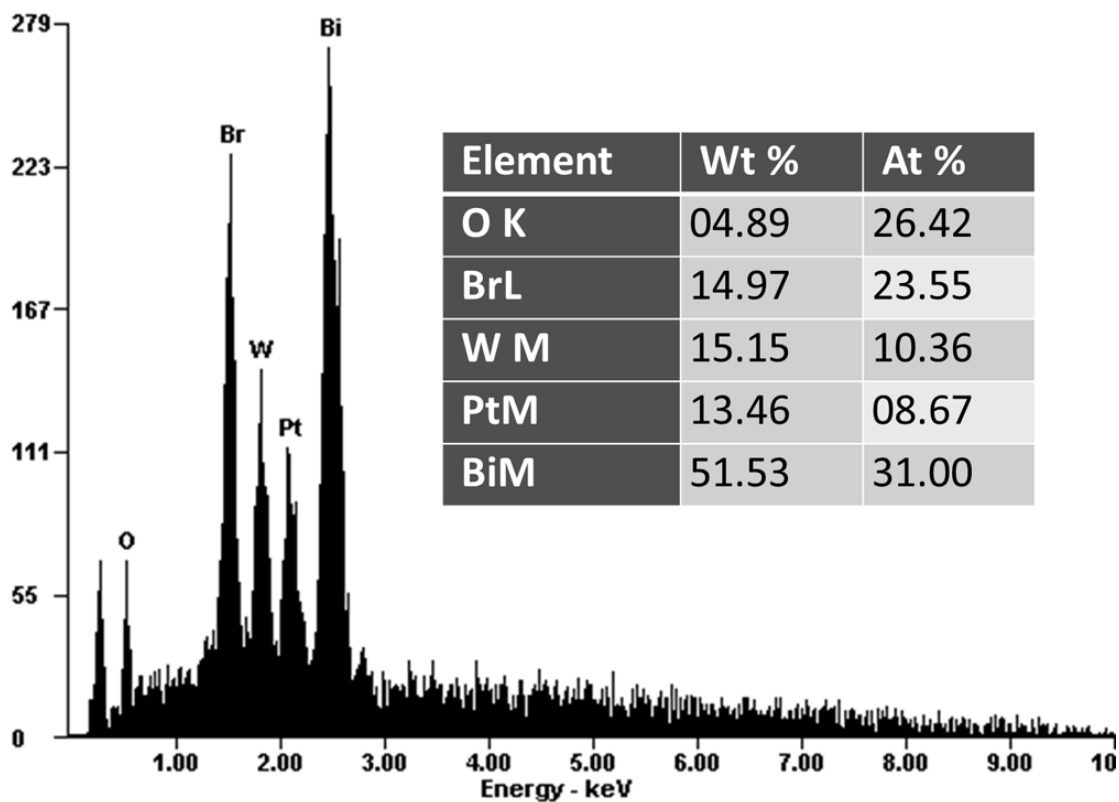
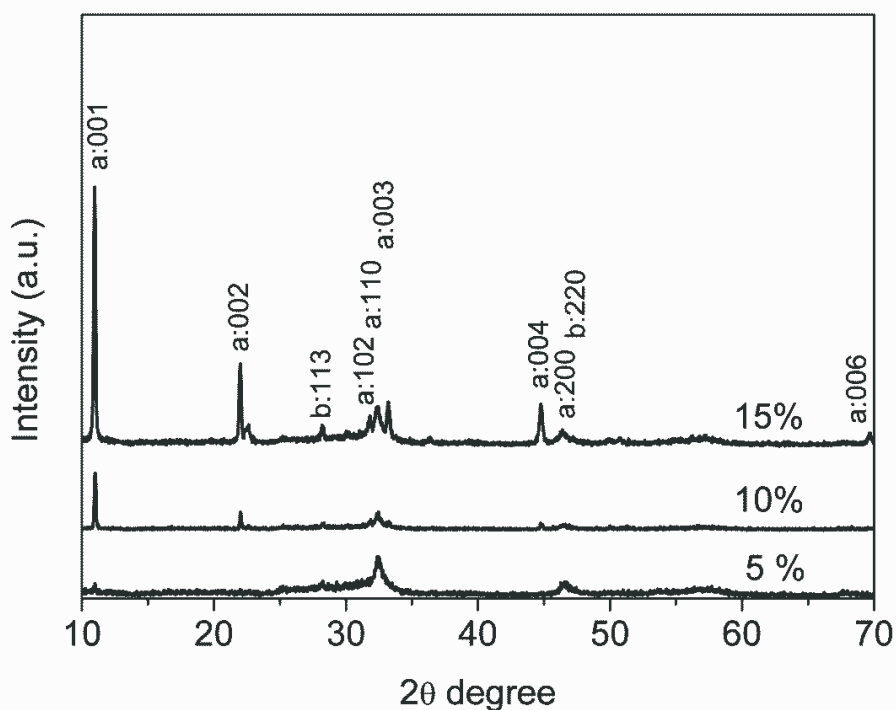
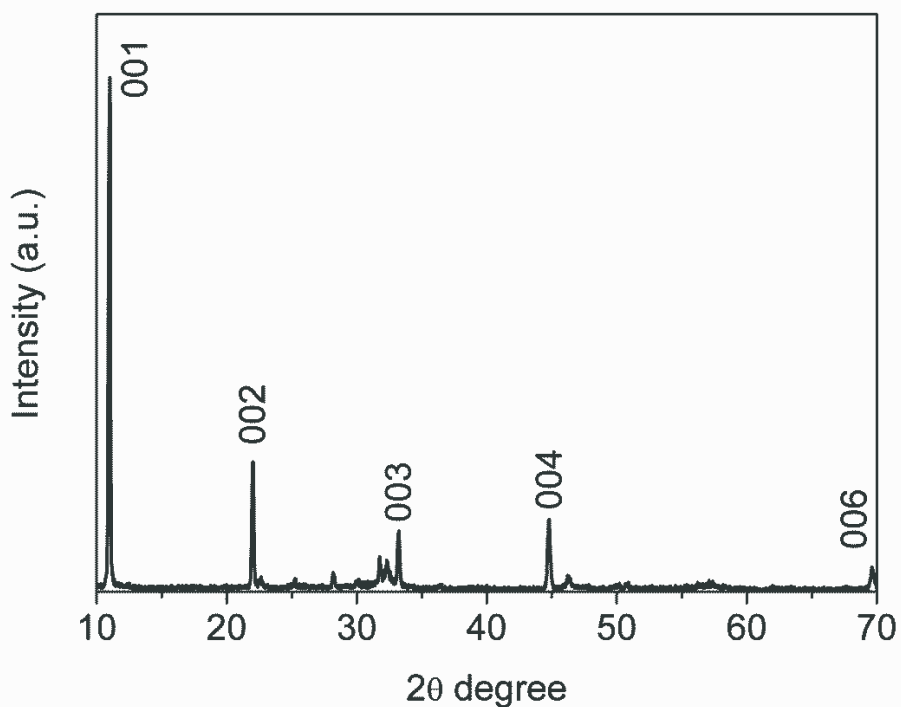


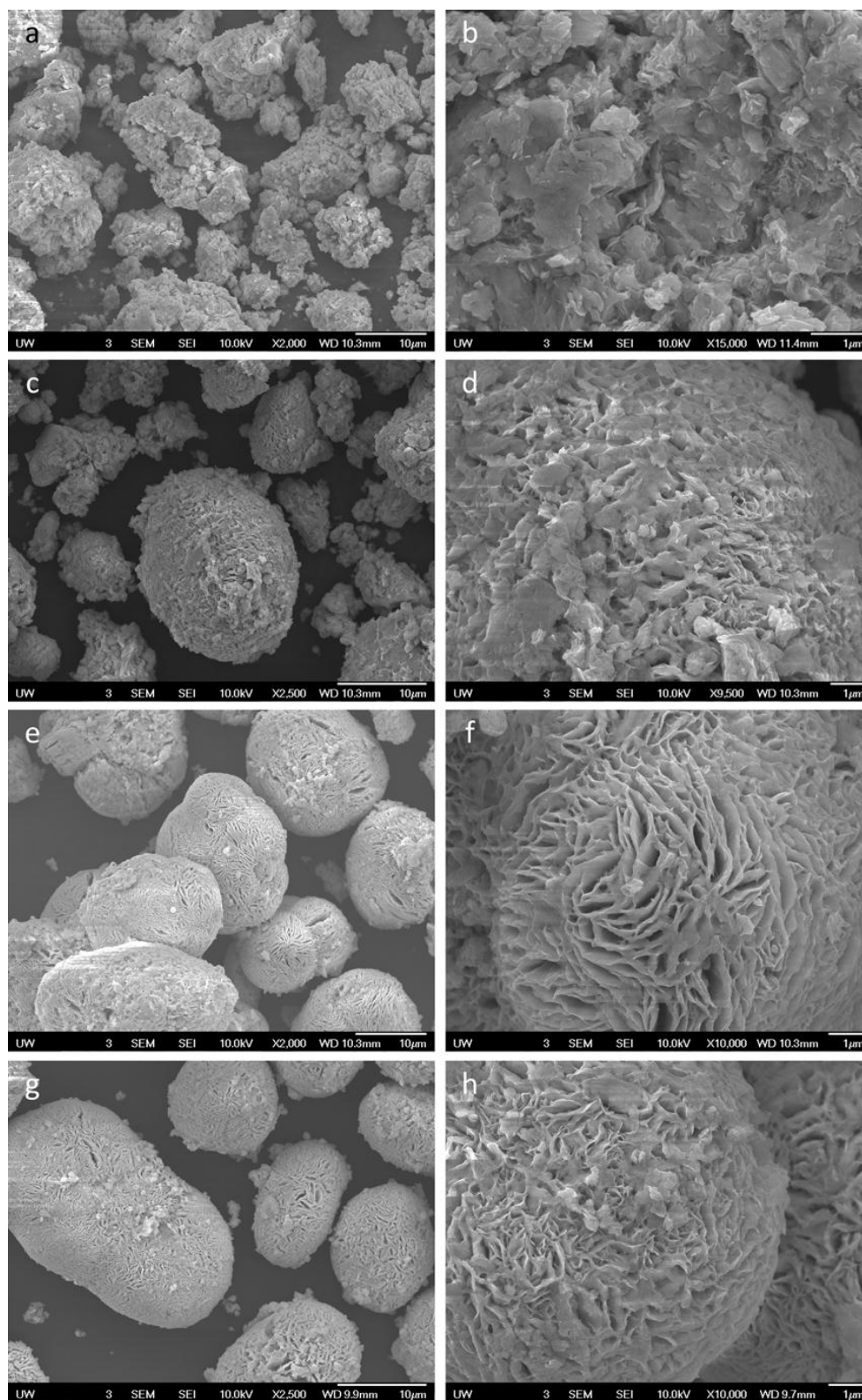
Figure S2. EDS analysis of BiOBr-Bi<sub>2</sub>WO<sub>6</sub> MNCs.



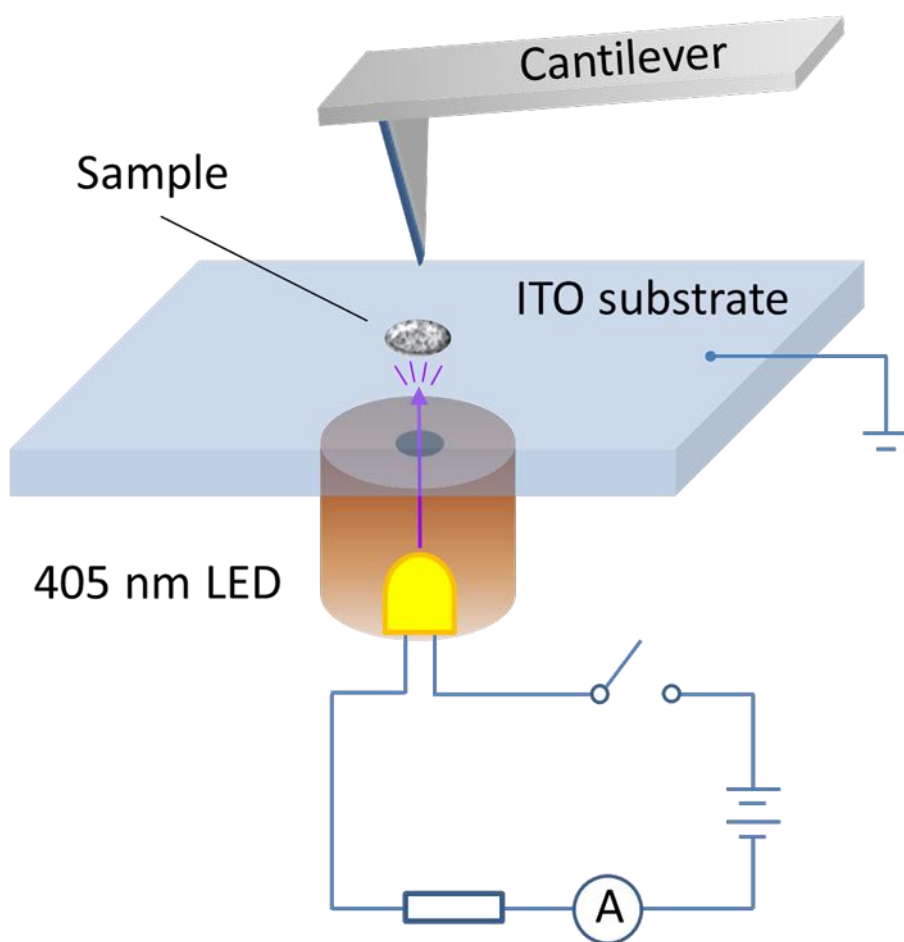
**Figure S3.** XRD patterns of BiOBr-Bi<sub>2</sub>WO<sub>6</sub> MNCs with different fraction of Ti(O<sup>i</sup>Pr)<sub>4</sub>.  
a: BiOBr, b: Bi<sub>2</sub>WO<sub>6</sub>



**Figure S4.** XRD pattern of BiOBr-Bi<sub>2</sub>WO<sub>6</sub> MNCs with Ti(OBu)<sub>4</sub> as Ti source.



**Figure S5.** The morphology evolution of  $\text{BiOBr-Bi}_2\text{WO}_6$  MNCs different fraction of  $\text{Ti}(\text{O}^i\text{Pr})_4$ . (a, b) 0 mol%, (c, d) 5 mol%, (e, f) 10 mol% and (g, h) 15 mol% against Bi, showing the formation of assembled nanosheets to a microsphere involved  $\text{Ti}(\text{O}^i\text{Pr})_4$ .



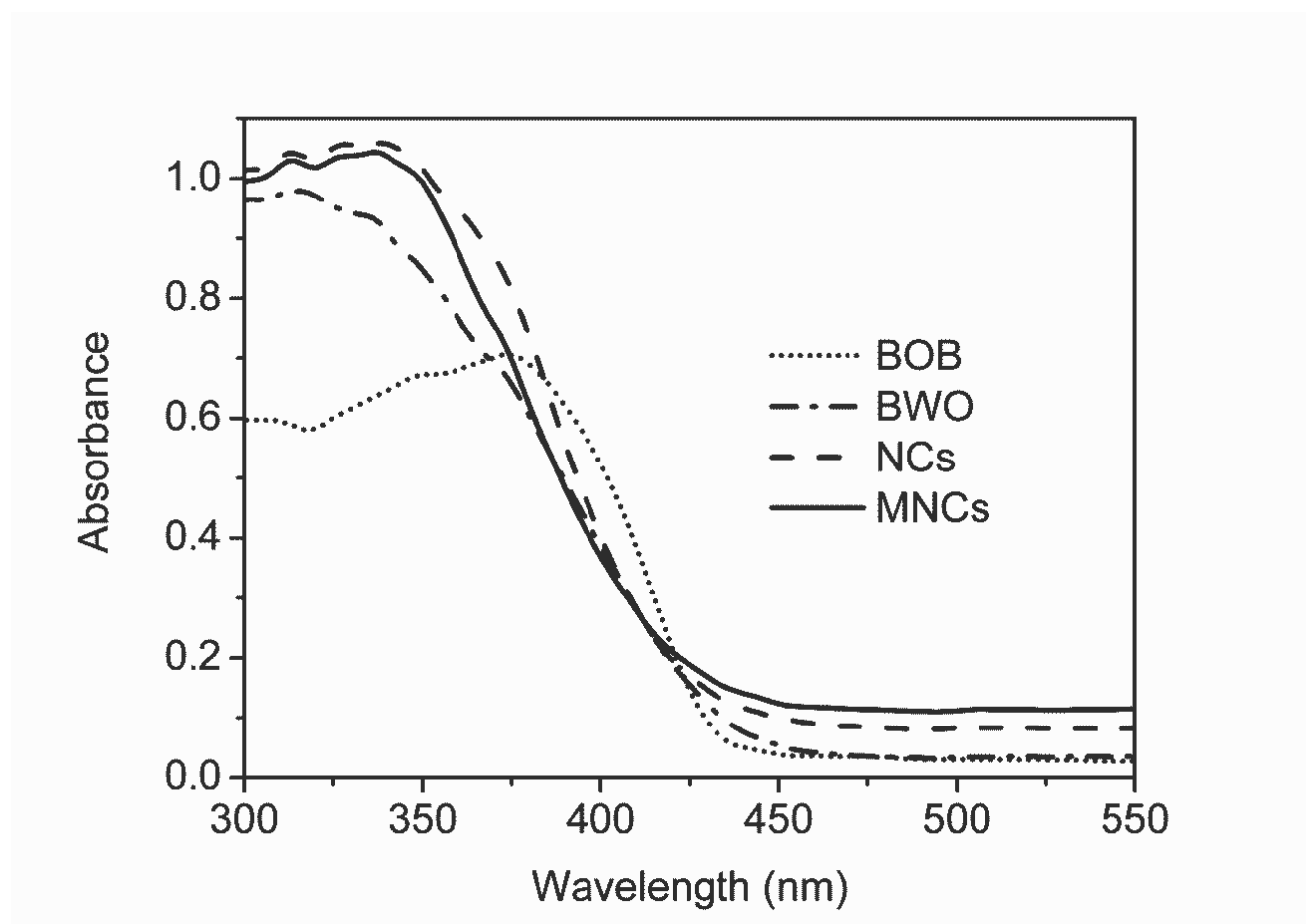
**Figure S6.** Schematics of the KPFM measurement for photoinduced surface potential.

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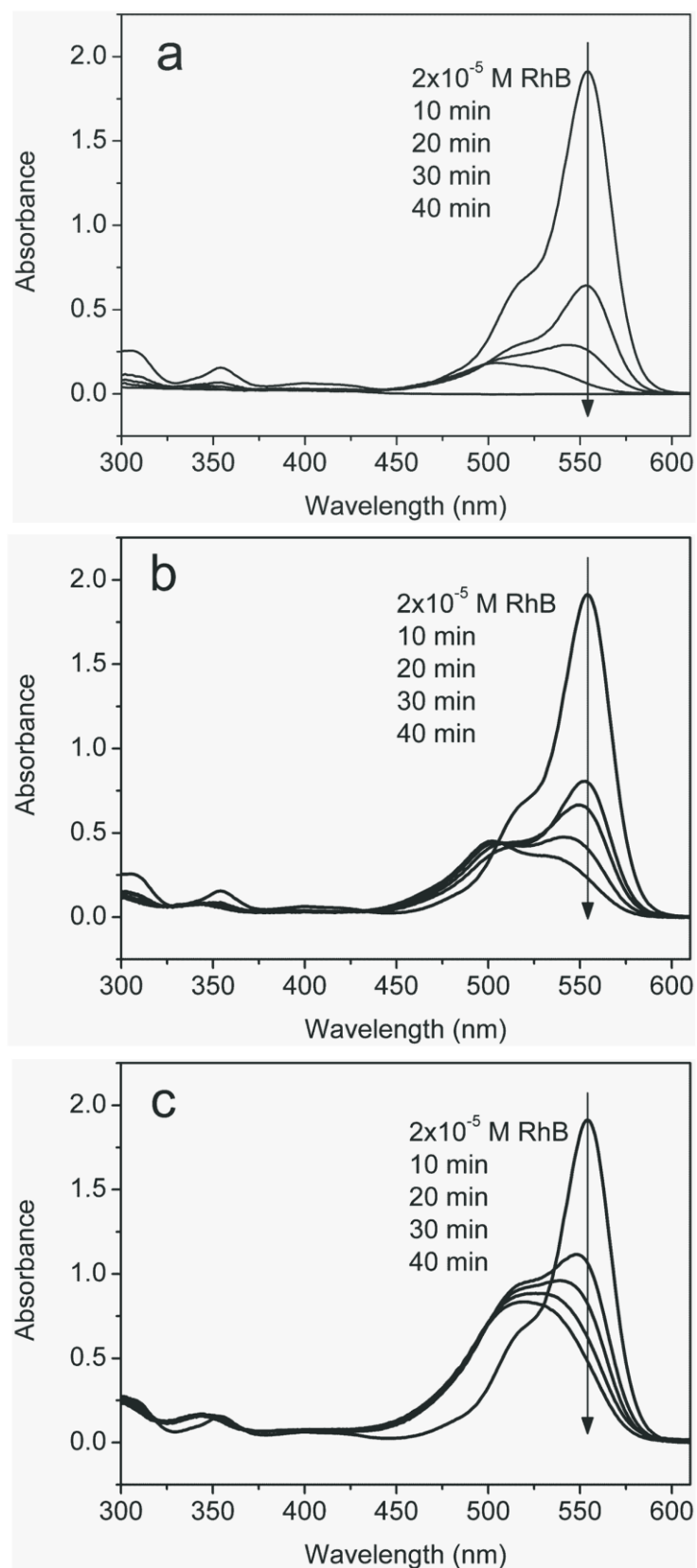
**Figure S7.** UV-vis spectra of BiOBr (BOB), Bi<sub>2</sub>WO<sub>6</sub> (BWO), NCs and MNCs of BiOBr-Bi<sub>2</sub>WO<sub>6</sub>.

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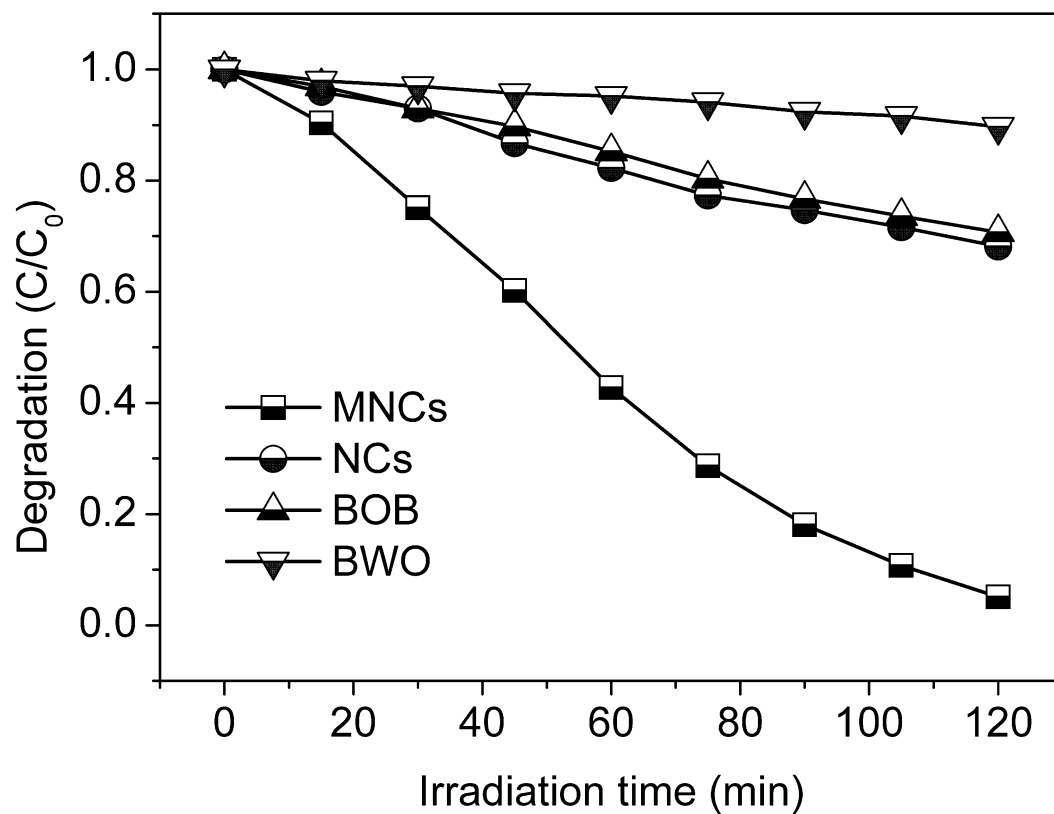
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**Figure S8.** UV-vis spectral variations of RhB aqueous solution after degradation over the materials. (a) MNCs, (b) NCs and (c) BiOBr under visible light irradiation.



**Figure S9.** Photodegradation of MO in the presence of MNCs and NCs of BiOBr-Bi<sub>2</sub>WO<sub>6</sub>, BiOBr (BOB) and Bi<sub>2</sub>WO<sub>6</sub> (BWO) under exposure to visible light.

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