Electronic Supplementary Material (ESI) for RSC Advances. This journal is © The Royal Society of Chemistry 2016

Supplementary Information

Shape-selective synthesis of Bi₂WO₆ hierarchical structures and their morphology-dependent photocatalytic activities

Hua Lv,^{ab} Yumin Liu,*ab Jing Guang,^{ab} Zhiwei Ding^{ab} and Jianji Wang*ab

^aCollaborative Innovation Center of Henan Province for Green Manufacturing of Fine Chemicals,

Key Laboratory of Green Chemical Media and Reactions, Ministry of Education, Henan Normal

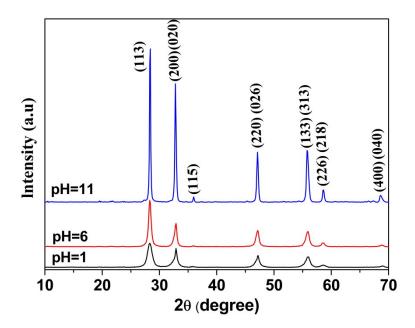
University, Xinxiang, Henan 453007, P. R. China.

^bHenan Key Laboratory of Green Chemistry, School of Chemistry and Chemical Engineering,

Henan Normal University, Xinxiang, Henan 453007, P. R. China

* To whom correspondence should be addressed. Tel: +86 373 3326335; Fax: +86 373 3326336.

E-mail addresses: hualv2009@163.com (Y Liu), jwang@htu.cn (J Wang).



 $\label{eq:Fig.S1} \textbf{Fig. S1}. \ XRD \ patterns \ of \ Bi_2WO_6 \ samples \ synthesized \ at \ different \ pH \ values \ in \ the \ absence \ of \ L-lysine.$

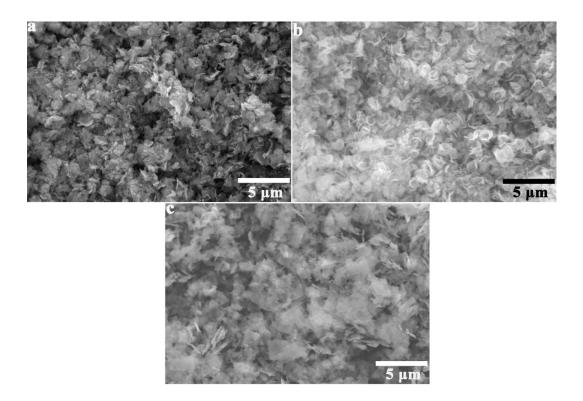


Fig. S2. SEM images of Bi_2WO_6 samples synthesized at (a) pH = 1, (b) pH = 6, and (c) pH =11 without using L-lysine.

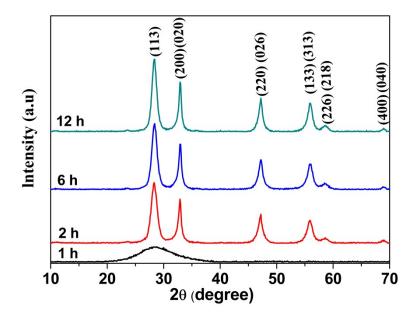


Fig. S3. XRD patterns of flower-like $\mathrm{Bi}_2\mathrm{WO}_6$ microspheres prepared at different hydrothermal time.

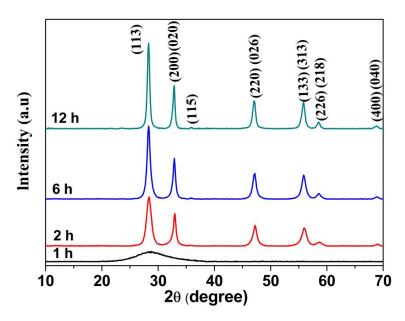
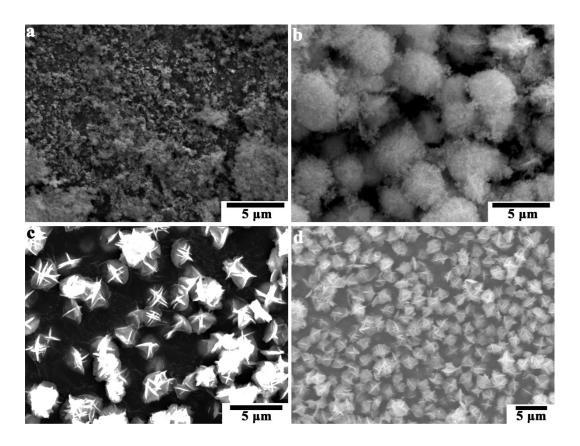


Fig. S4. XRD patterns of clew-like Bi₂WO₆ microspheres prepared at different hydrothermal time.



 $\textbf{Fig. S5.} \ SEM \ images \ of \ clew-like \ Bi_2WO_6 \ microspheres \ prepared \ at \ different \ hydrothermal \ time:$

(a) 1 h, (b) 2 h (c) 6 h (d) 12 h.

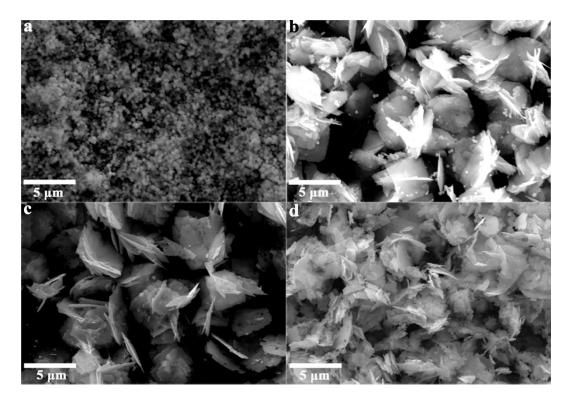


Fig. S6. SEM images of Bi_2WO_6 nanoplates prepared at different hydrothermal time: (a) 1 h, (b) 2 h (c) 6 h (d) 12 h.

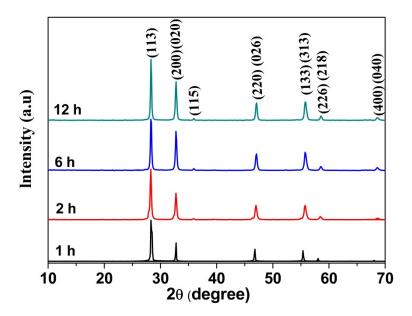


Fig. S7. XRD patterns of Bi₂WO₆ nanoplates prepared at different hydrothermal time.

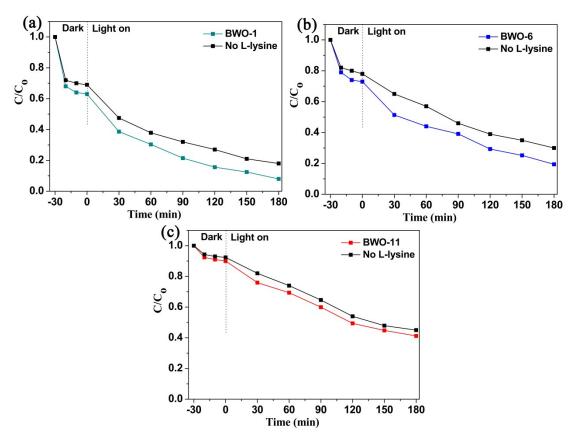


Fig. S8. Effects of L-lysine on the photocatalytic activities of $\mathrm{Bi}_2\mathrm{WO}_6$ samples.

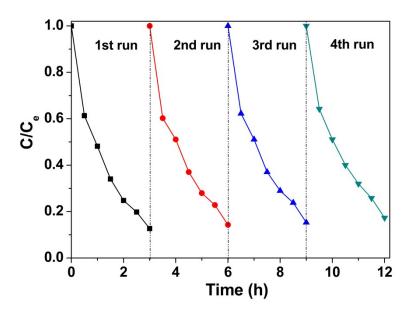


Fig. S9. Cycling runs of the flower-like $\mathrm{Bi}_2\mathrm{WO}_6$ under visible light irradiation (C_e is the absorption of RhB when the adsorption-desorption equilibrium is reached).

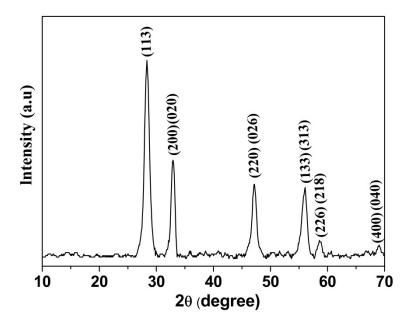


Fig. S10. XRD pattern of BWO-1 sample after four cycling runs.

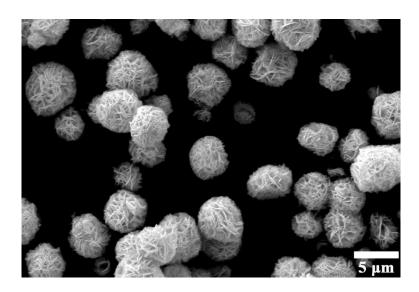


Fig. S11. SEM image of BWO-1 sample after four cycling runs.