This journal is © The Royal Society of Chemistry 2011

Support Information

Improved Visible Light Photocatalytic Activity of sphere-like BiOBr hollow and porous structures Synthesized via a Reactable Ionic liquid

Jiexiang Xia[1, 2], Sheng Yin[1], Huaming Li[1,*], Hui Xu[2], Li Xu[1], Yuanguo Xu[1]

[1]School of Chemistry and Chemical Engineering, Jiangsu University, 301 Xuefu Road, Zhenjiang, 212013, P R China

[2]School of the Environment, Jiangsu University, 301 Xuefu Road, Zhenjiang, 212013, P R China

E-mail: lihm@ujs.edu.cn, Tel: 86-511-88791108, Fax: 86-511-88791108

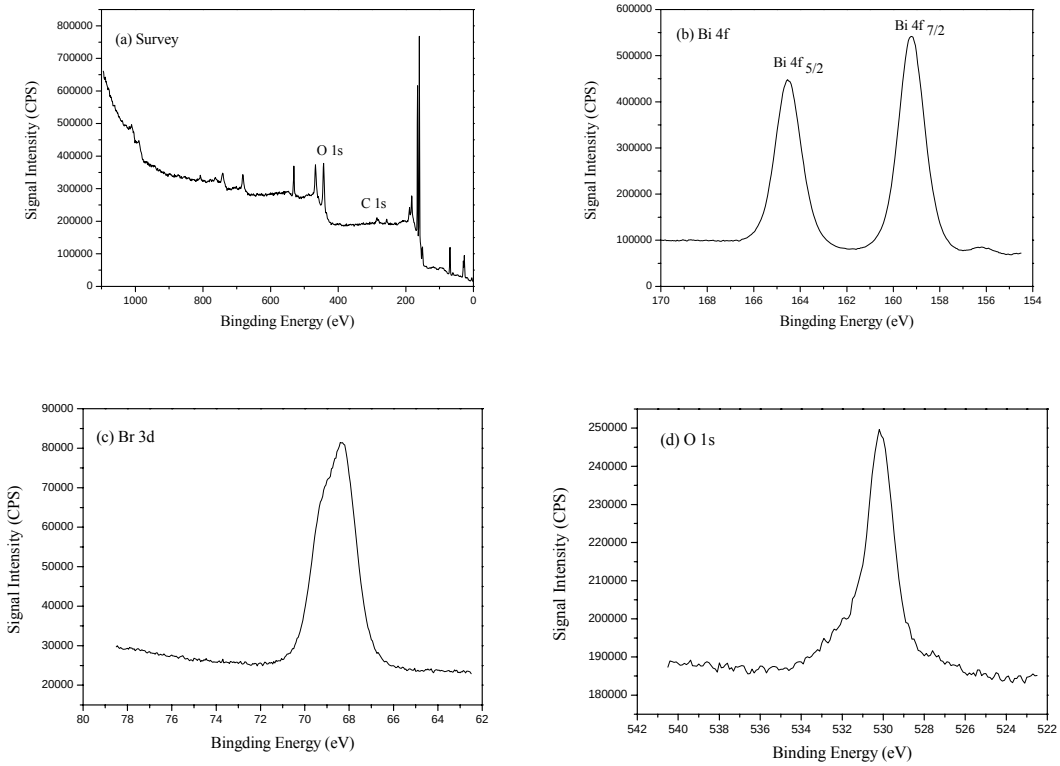


Figure S1. XPS spectra of the as-prepared BiOBr porous nanospheres. (a) Survey of the sample; (b) Bi 4f; (c) Br 3d; (d) O 1s.

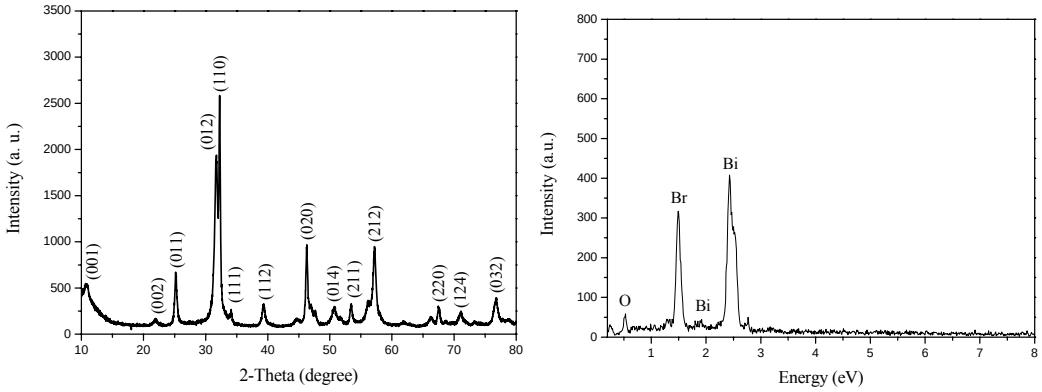


Figure S2. (a) The XRD pattern of the BiOBr crystal synthesized with NaBr as Br source; (b) The energy-dispersive X-ray spectroscope (EDS) of BiOBr crystal synthesized with NaBr as Br source.

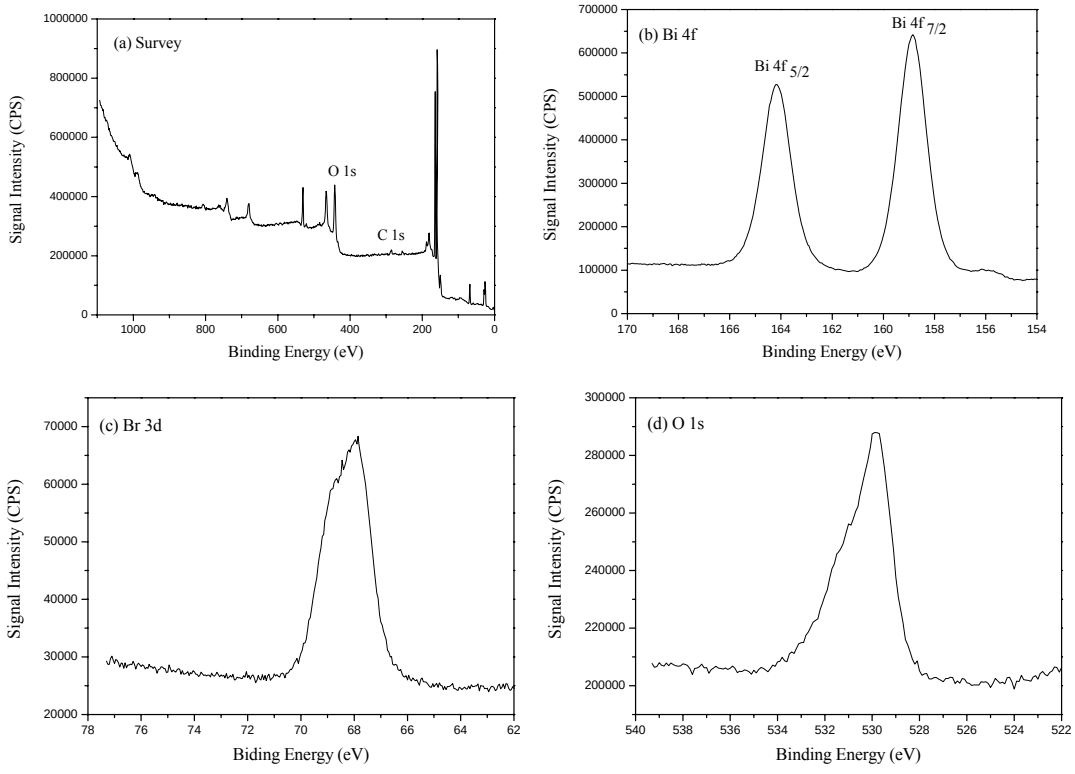


Figure S3. XPS spectra of the BiOBr microspheres synthesized with NaBr as Br source. (a) Survey of the sample, (b) Bi 4f, (c) Br 3d, (d) O 1s.

This journal is © The Royal Society of Chemistry 2011

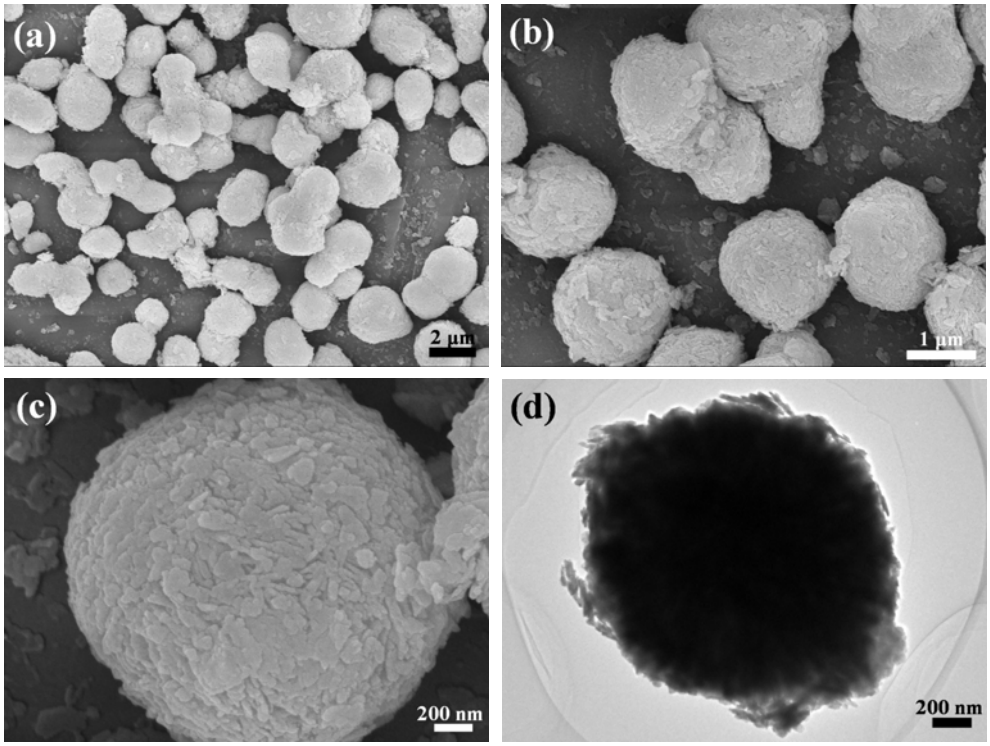
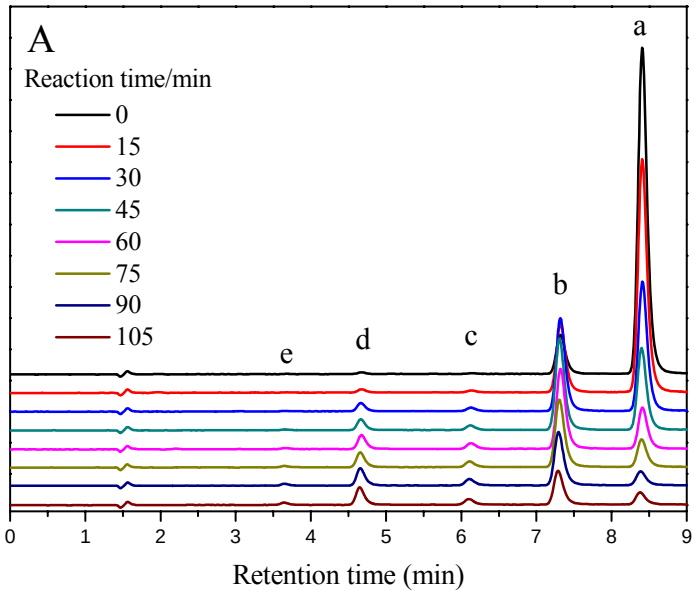


Figure S4. SEM images of the BiOBr microspheres synthesized with NaBr as Br source. (a) the low magnification SEM image; (b) the high magnification SEM image; (c) top view SEM image; (d) TEM image of the BiOBr microspheres synthesized with NaBr as Br source;



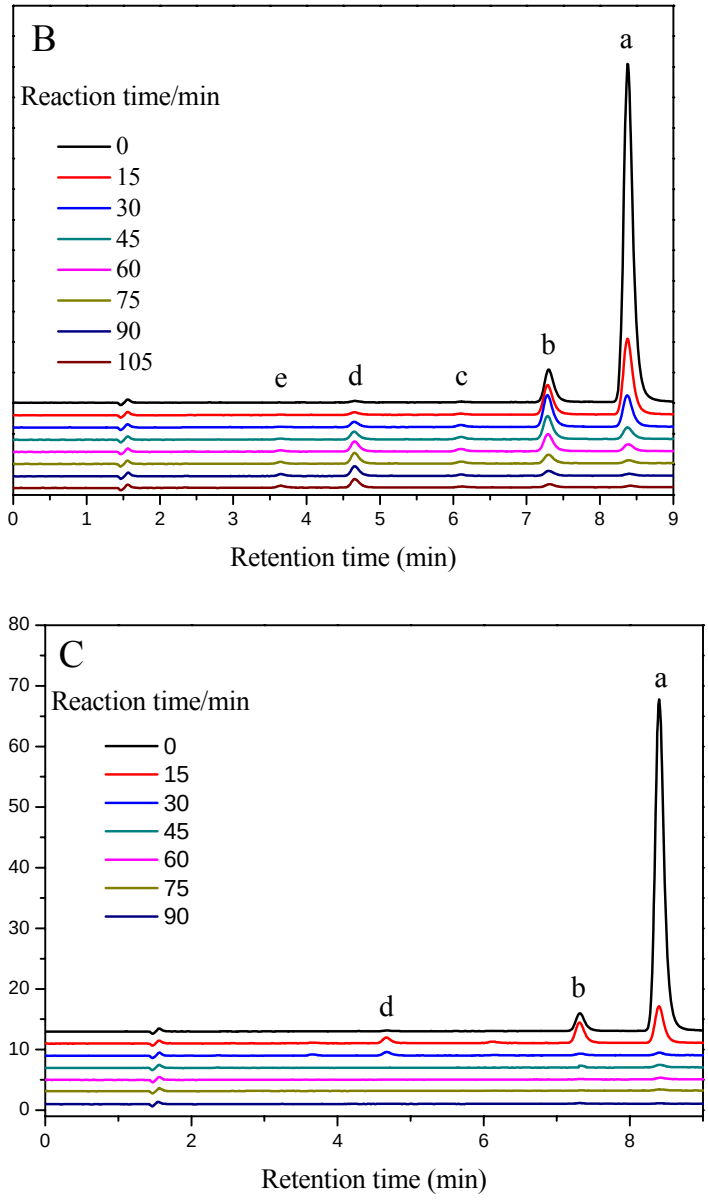


Figure S5. HPLC chromatograms of the N-deethylated intermediates at different irradiation intervals: (A) in the role of the BiOBr microspheres(NaBr) synthesized with NaBr as Br source; (B) in the role of the flower-like BiOBr hollow microspheres; (C) in the role of the BiOBr porous nanospheres

a Parent RhB

b N,N-diethyl-N′-ethylrhodamine (DER)

c N-ethyl-N′-ethylrhodamine (EER)

d N,N-diethylrohodamine (DR)

e Nethylrhodamine (ER)