Electronic Supplementary Information

Research on the influence of alkyl ammonium bromides on the properties of Ag/AgBr/GO composites

Shuang Wang¹, Chun Liu², Leizhi Zheng², Changqing Lin², Pengpeng Kuang¹, Xiaoqi Fu¹³*, Naichao Si¹*

¹School of Material Science and Engineering, Jiangsu University, Zhenjiang 212013, P. R. China;
²Jingjiang college of Jiangsu University, Zhenjiang 212013, P. R. China;
³School of Chemistry and Chemical Engineering, Jiangsu University, Zhenjiang 212013, P. R. China

* Corresponding author Tel. and Fax: +86 511 88791800
Corresponding Email: xfu@ujs.edu.cn and snc@ujs.edu.cn

Fig. S1 The magnified XRD spectra of as-synthesized Ag/AgBr/GO composites with 2θ from 36° to 40°: (a) Ag/AgBr/GO-CTAB, (b) Ag/AgBr/GO-DTAB, (c) Ag/AgBr/GO-TBAB, and (d) Ag/AgBr/GO-TMAB.
**Fig. S2** The magnified XPS spectra of Ag 3d of the resultant Ag/AgBr/GO composites with binding energies from 368 to 371 eV: (a) Ag/AgBr/GO-CTAB, (b) Ag/AgBr/GO-DTAB, (c) Ag/AgBr/GO-TBAB, and (d) Ag/AgBr/GO-TMAB.
Fig. S3  TEM images of (a) Ag/AgBr/GO-CTAB, (b) Ag/AgBr/GO-DTAB, (c) Ag/AgBr/GO-TBAB and (d) Ag/AgBr/GO-TMAB after the photocatalytic degradation of MO dye under visible-light irradiation.
Fig. S4  Raman spectra of four detection/light cleaning cycles of MO on the surface of Ag/AgBr/GO-DTAB.

Fig. S5  Raman spectra of the detection/light cleaning cycle of MO on the surface of Ag/AgBr/GO-TBAB. The Raman signal of MO on the surface of Ag/AgBr/GO-TBAB was still remaining after visible light irradiation.
Fig. S6  Raman spectra of the detection/light cleaning cycle of MO on the surface of Ag/AgBr/GO-TMAB. The Raman signal of MO on the surface of Ag/AgBr/GO-TMAB was still remaining after visible light irradiation.