Supporting information

Visible-Light-Driven Photocatalytic Water Disinfection toward *Escherichia coli* by Nanowired g-C₃N₄ Film Yizhu Zhang,¹ Shigang Su,¹ Yuanyuan Zhang,¹ Xia Zhang,¹ Paolo Giusto,^{2,*} Xiaohua Huang,^{3,*} and Jian Liu^{1,*} ¹College of Materials Science and Engineering, Qingdao University of Science and Technology, Qingdao 266042, P.R. China ²Department of Colloid Chemistry, Max Planck Institute of Colloids and Interfaces, Am Mühlenberg 1, 14476 Potsdam, Germany ³Bestee Materials (Tsingdao) Co. Ltd, Qingdao 266071, P.R. China ^{*}E-mail: Paolo.Giusto@mpikg.mpg.de; huangxiaohua@by-herb.com; liujian@qust.edu.cn



Figure S1. Schematic illustration for synthesis of $g-C_3N_4$ film by vapor-assisted confined deposition.

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Figure S2. Optical images of g-C₃N₄ film prepared from different precursor.



Figure S3. SEM images of g- C_3N_4 film prepared from Melamine (a) and Urea (b).



Figure S4. Normalized photoluminescence spectra of g-C₃N₄ films.



Figure S5. The transmittance spectra of the g-C₃N₄ films.

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Figure S6. Optical images of g-C₃N₄ film after soaking for 4 h.



Figure S7. Repeated experiments for bacterial inactivation.



Figure S8. SEM images of $g-C_3N_4$ film prepared from 30 mg precursor (a) and 100 mg precursor (b).



Figure S9. Comparison of the disinfection performance of g-C₃N₄ films prepared by different precursor.



Figure S10. Optical contact angle images of water on the g-C₃N₄ film treated by polytetrafluoroethylene.