Supporting Information for

Two steps hydrothermal to prepare carbon sphere from bamboo and construction of core-shell non-metallic photocatalysts

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Preparation of biochar by high-temperature pyrolysis

Biochar was prepared by the high-temperature pyrolysis method[1]. The bamboo was washed, dried and crushed by a shredder. Subsequently, the biomass was placed in a tube furnace with a quartz boat, which was heated from 20 ℃ to 800 ℃ at a rate of 5 ℃/min and held constant for 2 h to assume a complete charring in an inert atmosphere (N_2). The cooled charred residues were washed with deionized water, ethanol, dried and collected.

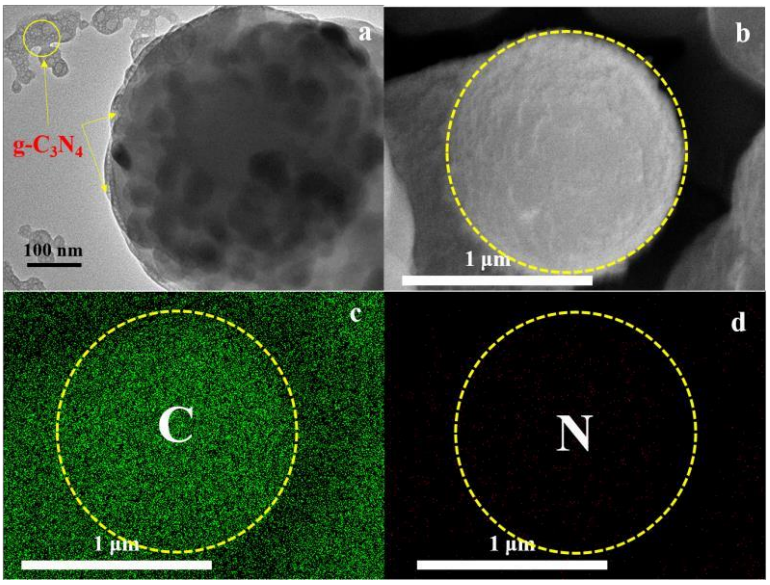

Fig. S1. TEM (a) and SEM (b) image of biochar spheres@g-C_3N_4 core-shell samples, (c, d) EDS mapping images of biochar spheres@g-C_3N_4 composites.

References

1 P. Liu, J. Rui, W.C. Zhou, H. Zhu, W. Xiao, D.H. Wang and X.H. Mao, *Appl. Sur. Sci.*, 2015, **358** 231-239.