Supporting Information for:

## Facile gel-based morphological control of Ag/g-C<sub>3</sub>N<sub>4</sub> porous nanofibers for photocatalytic hydrogen generation

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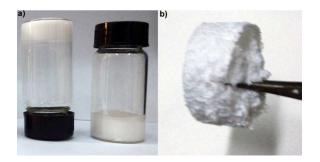


Figure S1. Photograph of AgMA2 hydrogel and freeze-dried sample.

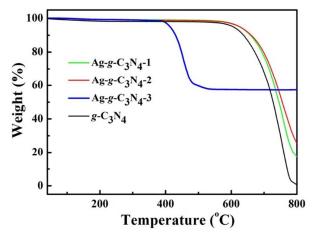


Figure S2. The TG curves of Ag-g-C<sub>3</sub>N<sub>4</sub>-1, Ag-g-C<sub>3</sub>N<sub>4</sub>-2, Ag-g-C<sub>3</sub>N<sub>4</sub>-3 and g-C<sub>3</sub>N<sub>4</sub>.

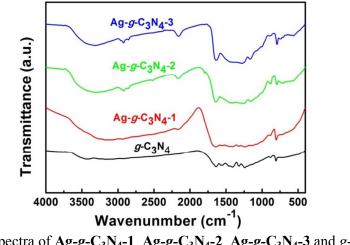
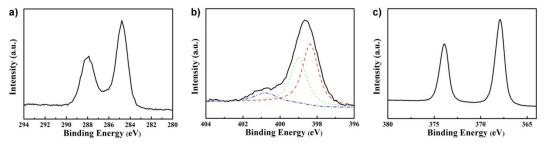


Figure S3. IR spectra of  $Ag-g-C_3N_4-1$ ,  $Ag-g-C_3N_4-2$ ,  $Ag-g-C_3N_4-3$  and  $g-C_3N_4$ .



**Figure S4.** XPS spectra of the synthesized **Ag-***g***-C**<sub>3</sub>**N**<sub>4</sub>**-3**. (a) C 1s spectra of **Ag-***g***-C**<sub>3</sub>**N**<sub>4</sub>**-3**. (b) N 1s spectra of **Ag-***g***-C**<sub>3</sub>**N**<sub>4</sub>**-3**. (c) Ag 3d spectra of **Ag-***g***-C**<sub>3</sub>**N**<sub>4</sub>**-3**.

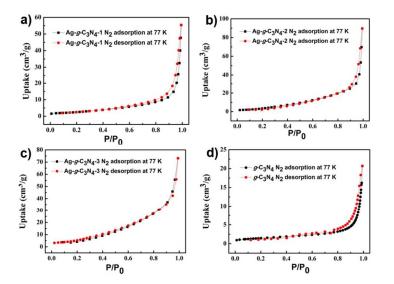
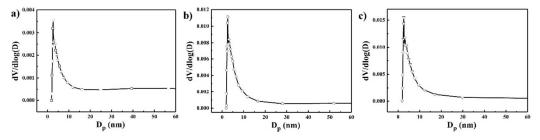


Figure S5. Nitrogen sorption isotherm of (a)  $Ag-g-C_3N_4-1$ ; (b)  $Ag-g-C_3N_4-2$ ; (c)  $Ag-g-C_3N_4-3$ ; (d)  $g-C_3N_4$ .



**Figure S6.** The BJH pore-size distribution curves (a) **Ag-g-C**<sub>3</sub>**N**<sub>4</sub>**-1**; (b) **Ag-g-C**<sub>3</sub>**N**<sub>4</sub>**-2**; (c) **Ag-g-C**<sub>3</sub>**N**<sub>4</sub>**-3**.

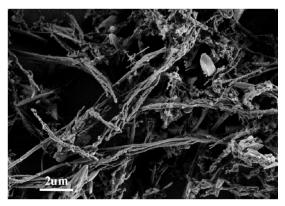
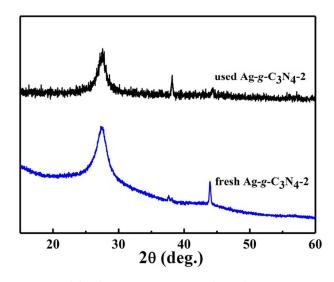


Figure S7. SEM image of used Ag-g-C<sub>3</sub>N<sub>4</sub>-2 after photocatalysis.



**Figure S8.** XRD pattern of fresh **Ag-***g***-C**<sub>3</sub>**N**<sub>4</sub>**-2** and used **Ag-***g***-C**<sub>3</sub>**N**<sub>4</sub>**-2** after photocatalysis.