

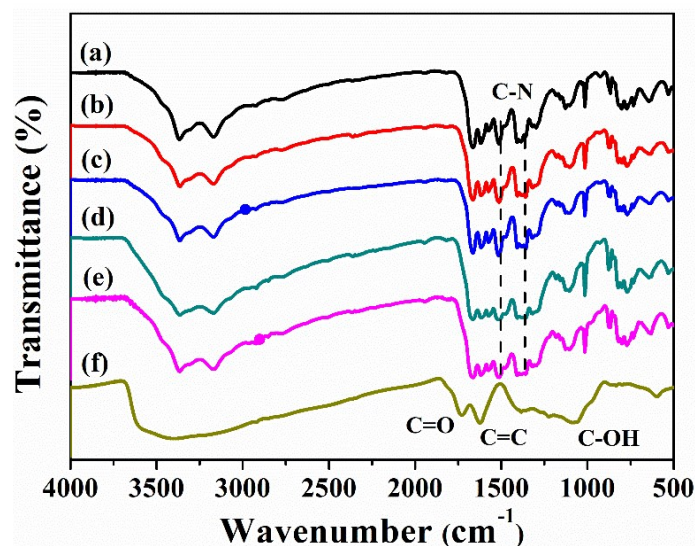
## Electronic Supplementary Information

### Visible-light-driven photocatalyst based upon metal-free covalent triazine-based frameworks for enhanced hydrogen production

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**Fig. S1.** FTIR spectra of CTF-1 (a), CTF-1/rGO-1 (b), CTF-1/rGO-2 (c), CTF-1/rG-5 (d), CTF-1/rGO-10 (e), and GO (f).

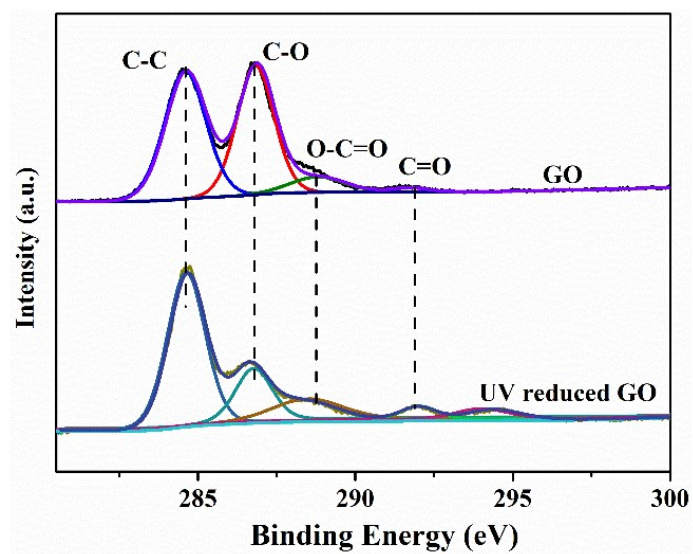


Fig. S2. C1s XPS spectra of GO and UV reduced GO.

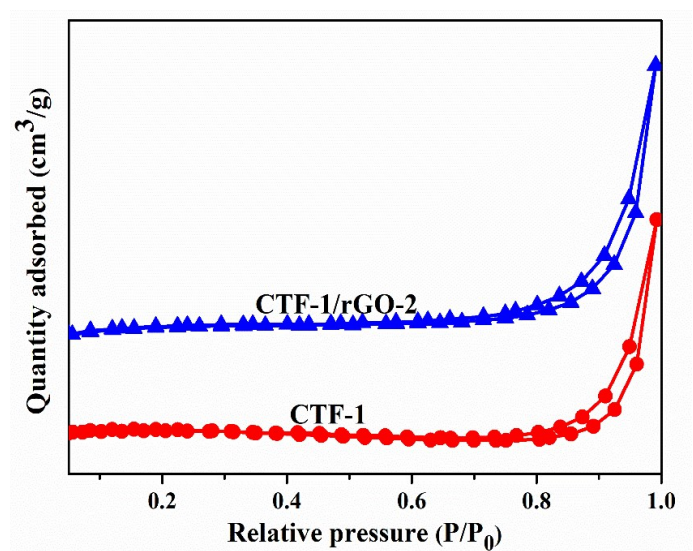
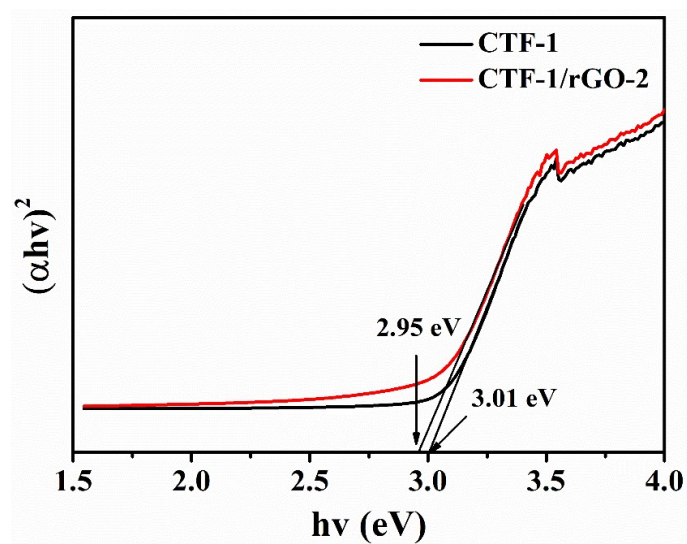


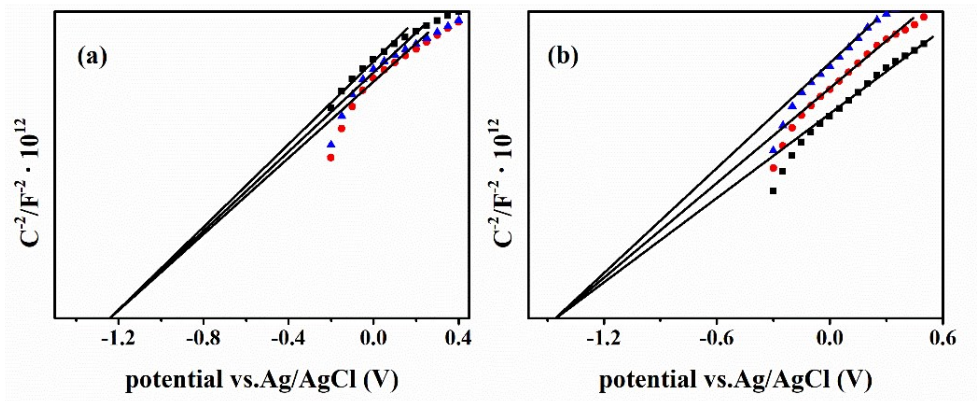
Fig. S3. N<sub>2</sub> adsorption-desorption isotherms of CTF-1 and CTF-1/rGO-2.

**Table S1** Pore volumes, average pore sizes, BET surface areas of CTF-1 and CTF-1/rGO-2.

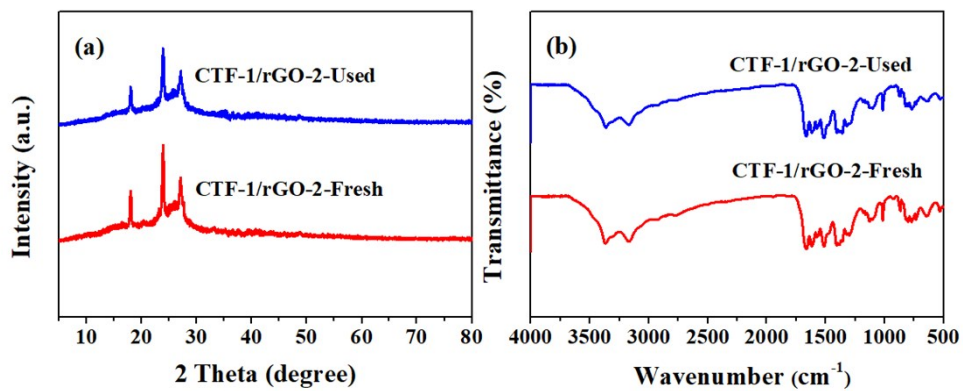
Photocatalyst	Pore volume (cm <sup>3</sup> /g)	Average pore size (nm)	Surface area (m <sup>2</sup> /g)
CTF-1	0.01	23.4	2.8
CTF-1/rGO-2	0.02	14.9	5.7



**Fig. S4.** Band gaps of CTF-1 and CTF-1/rGO-2.



**Fig. S5.** Mott-Schottky of CTF-1 (a) and CTF-1/rGO-2 (b).



**Fig. S6.** XRD patterns (a) and FTIR spectra (b) of fresh and used CTF-1/rGO-2 after photocatalytic experiments for five cycles.