Electronic Supplementary Material (ESI) for New Journal of Chemistry.

Supporting Information

Universal and environment-friendly inorganic compounds strategy for preparation of porous carbon nitride for efficient photocatalytic hydrogen production and environmental remediation

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Table S1 The full widths at half maxima (FWHMs) of XRD patterns of CN and CN-m-n (m/n=1:1, 1:2 and 1:4).

Sample	FWHMs
CN	0.899
CN-1-1	0.940
CN-1-2	0.983
CN-1-4	0.906

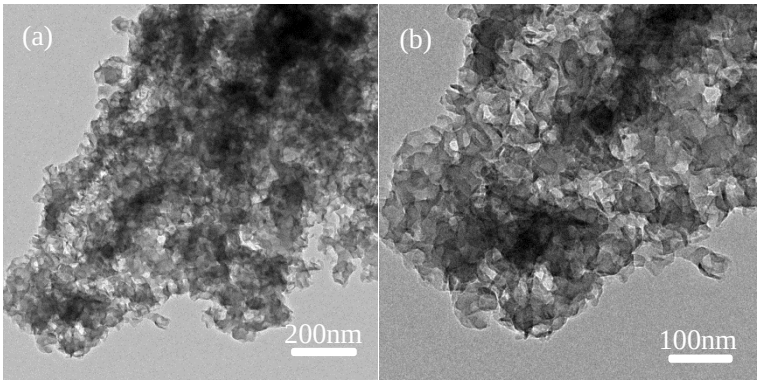

Fig. S1 The TEM image of CN-1-2 (a) and (b).

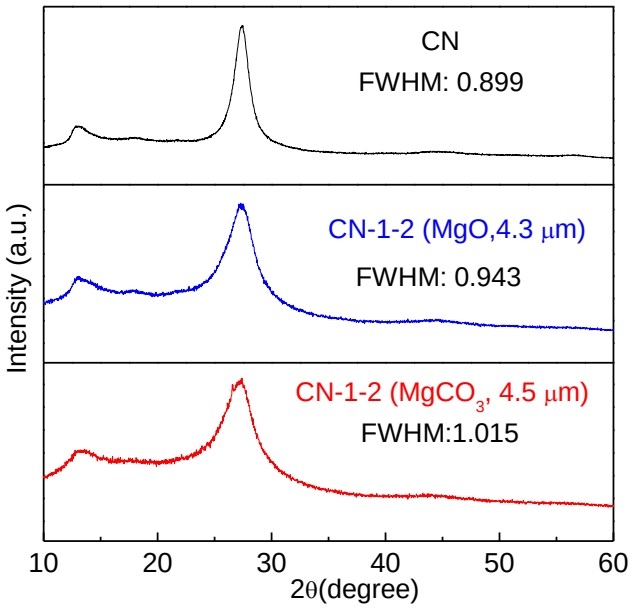

Fig. S2 The XRD patterns of CN, CN-1-2 (MgO, 4.3μm) and CN-1-2 ($MgCO_3$, 4.5μm).

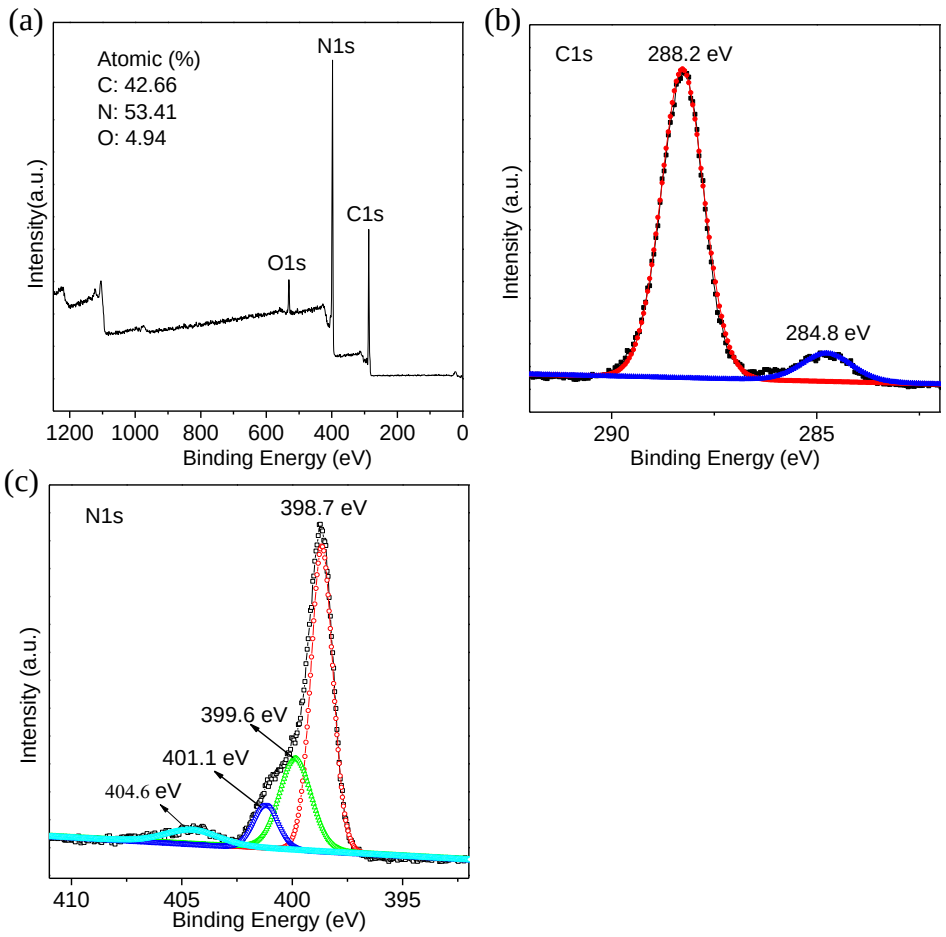

Fig. S3 (a) XPS survey spectrum of CN-1-2; (b) high resolution C1s spectra and (c) N1s spectra.

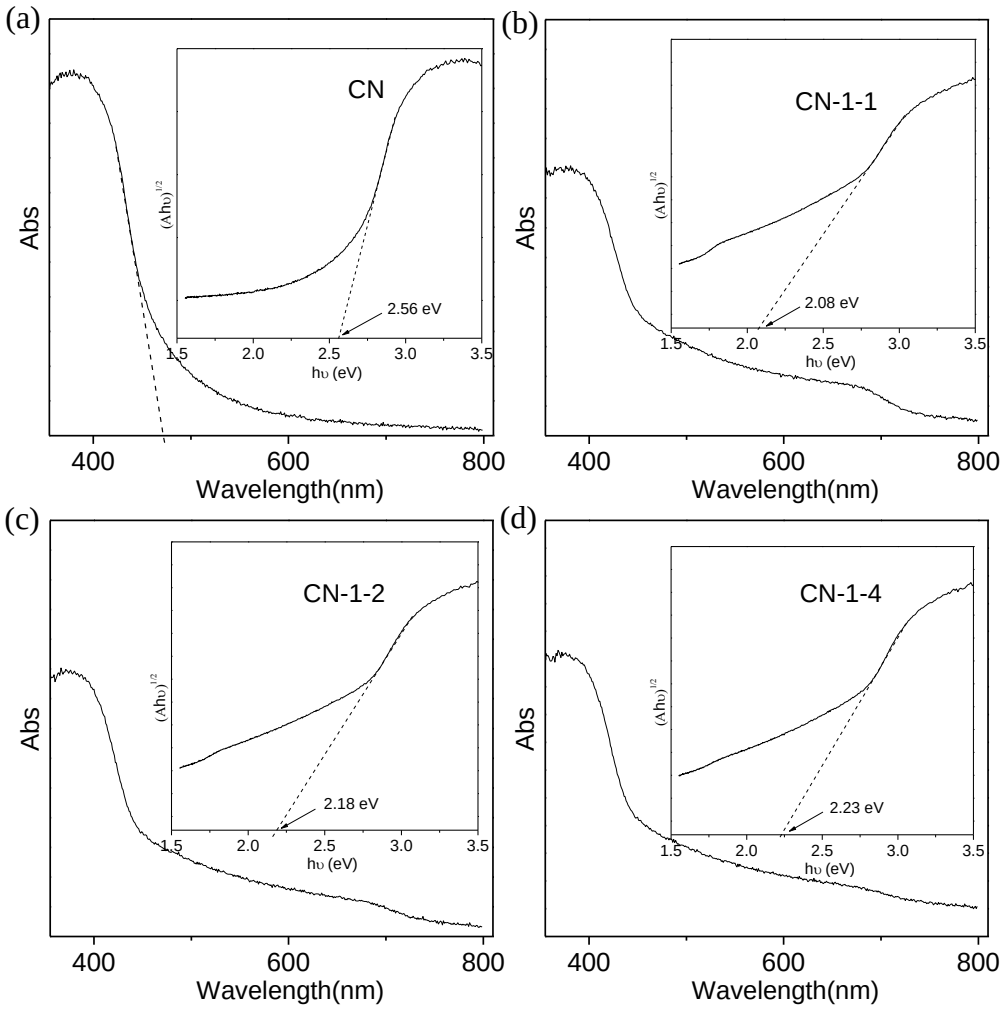

Fig. S4 The UV-vis spectra and Kubelka-Munk plots for CN and CN-m-n (m/n=1:1, 1:2 and 1:4).

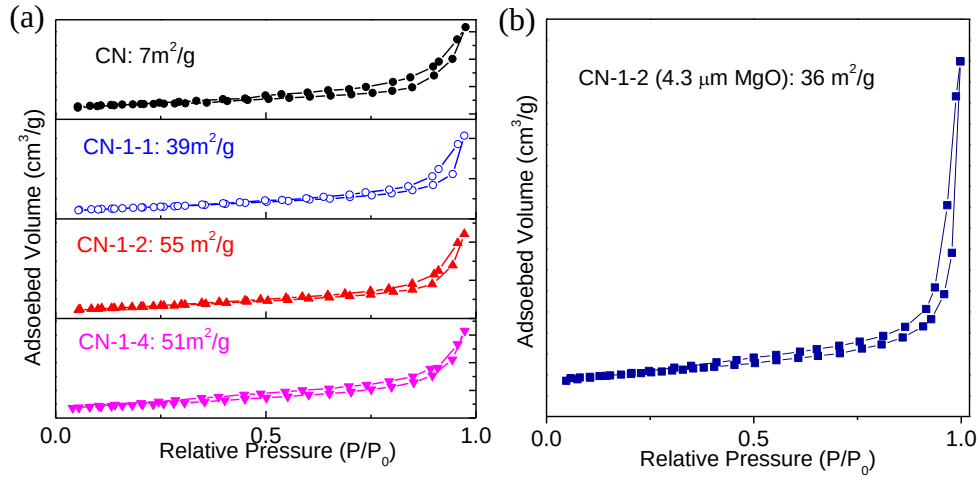

Fig. S5 The N_2 absorption-desorption isotherms of (a) CN and CN-m-n (m/n=1:1, 1:2 and 1:4); (b) CN-1-2 (4.3 μm MgO).

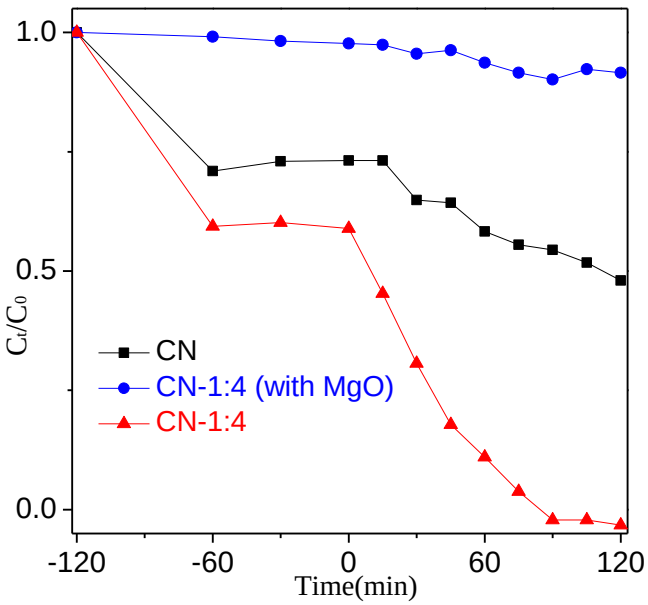

Fig. S6 The photocatalytic activities of CN, CN-1:2 and CN-1:2 (with MgO) for RhB degradation.

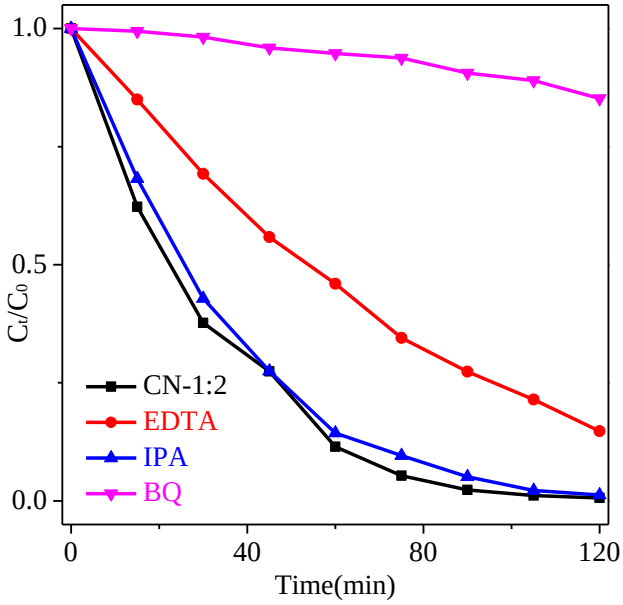

Fig. S7. The active species trapping experiments on the degradation of RhB over CN-1:2.

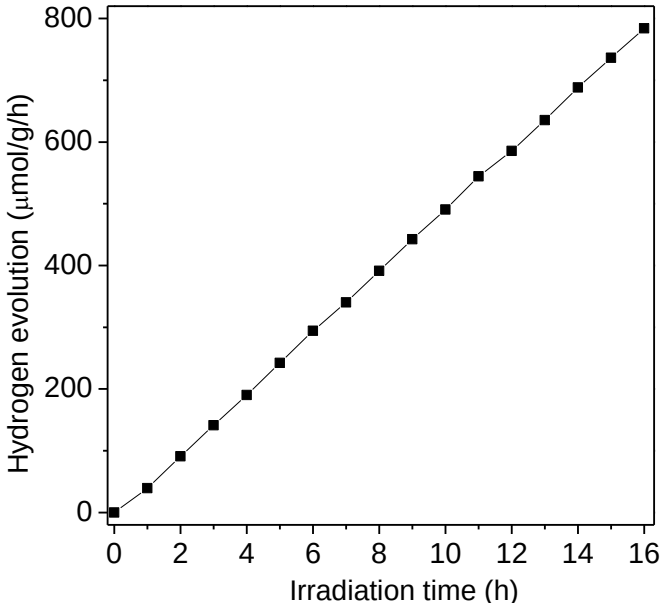

Fig. S8 The photocatalytic H_2 evolution rate of CN-1-2 for 16 hours under visible light irradiation ($\lambda \geq 420$nm).

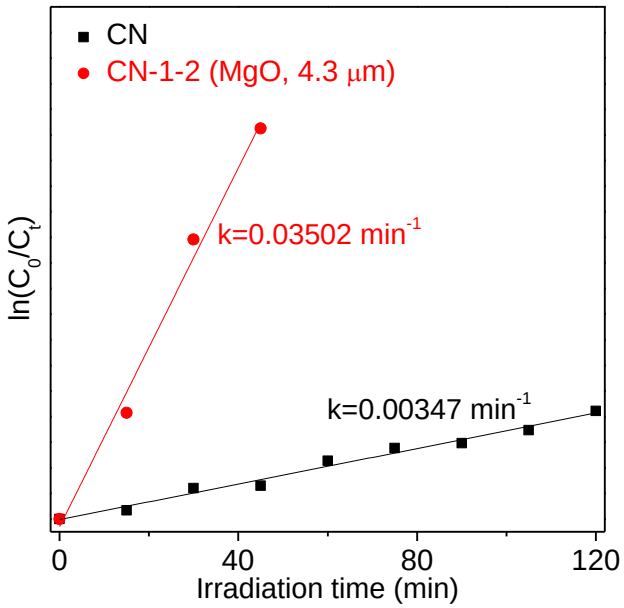

Fig. S9 Photocatalytic degradation of RhB of CN and CN-1-2 (MgO, 4.3 μm) under visible light conditions (λ≥420nm).

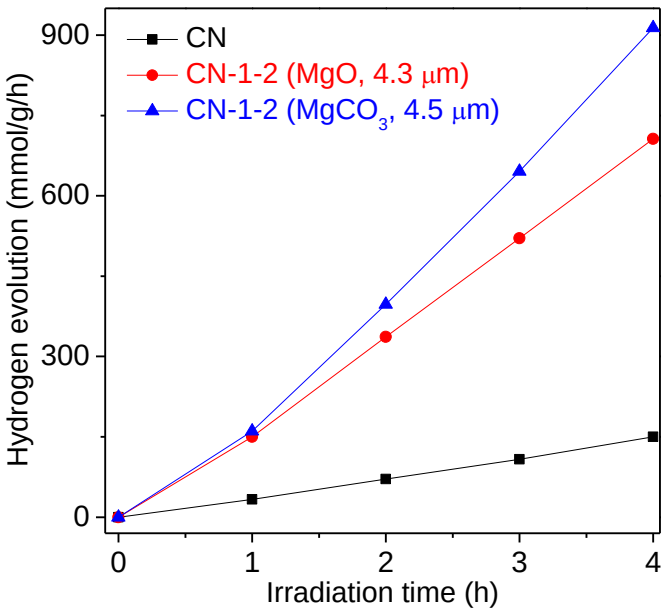

Fig. S10 Photocatalytic hydrogen evolution rate of CN, CN-1-2 (MgO, 4.3 μm) and CN-1-2 ($MgCO_3$, 4.5 μm) under visible light conditions (λ≥420nm).