Electronic Supplementary Material (ESI) for Physical Chemistry Chemical Physics.

Supporting Information

Bioinspired construction of ordered carbon nitride array for photocatalytic mediated enzymatic reductions

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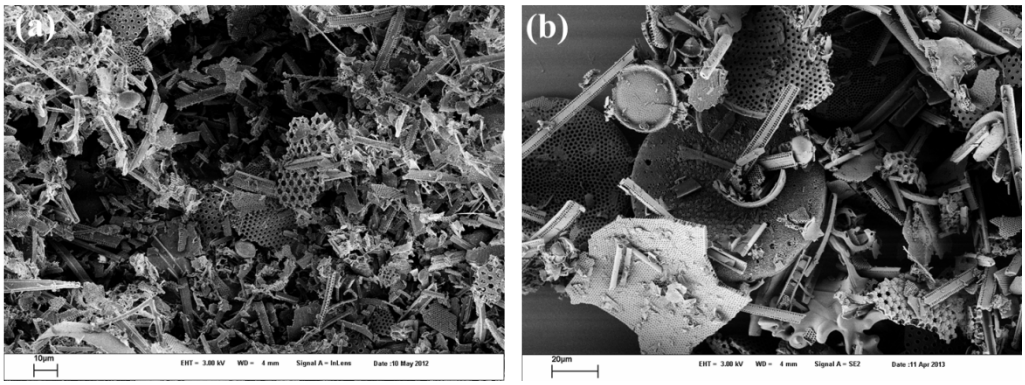

Figure S1. SEM images of pristine diatom template (a) and purified diatom template (b).

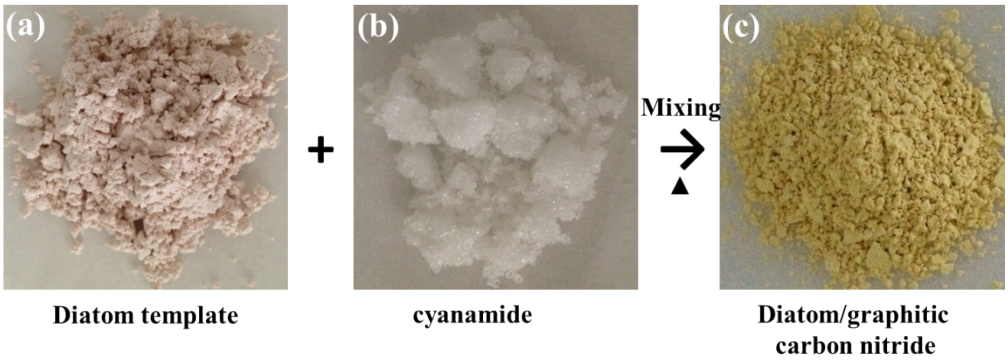

Figure S2. Illustration of solid phase mixing diatom (a) and cyanamide (b) to synthesize diatom templated carbon nitride.

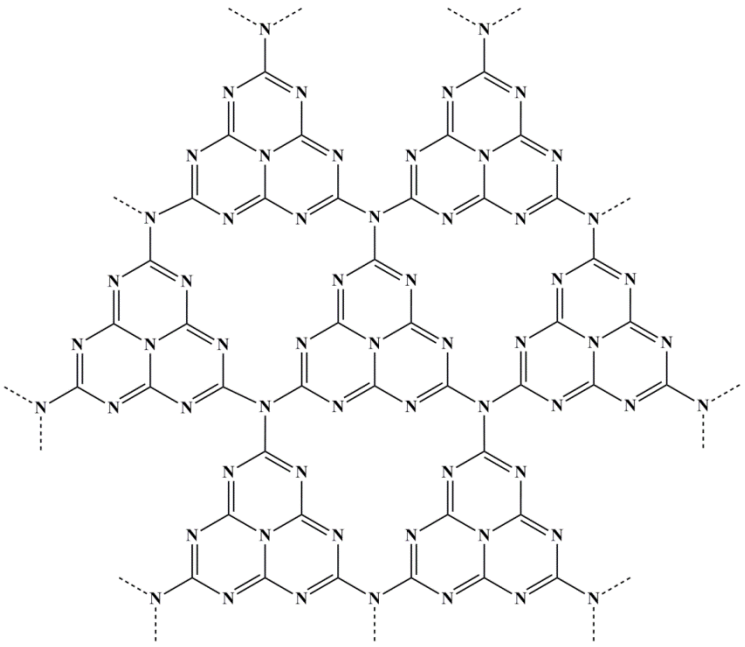

Figure S3. Schematic diagram of a perfect carbon nitride sheet constructed from tri-s-triazine building blocks.

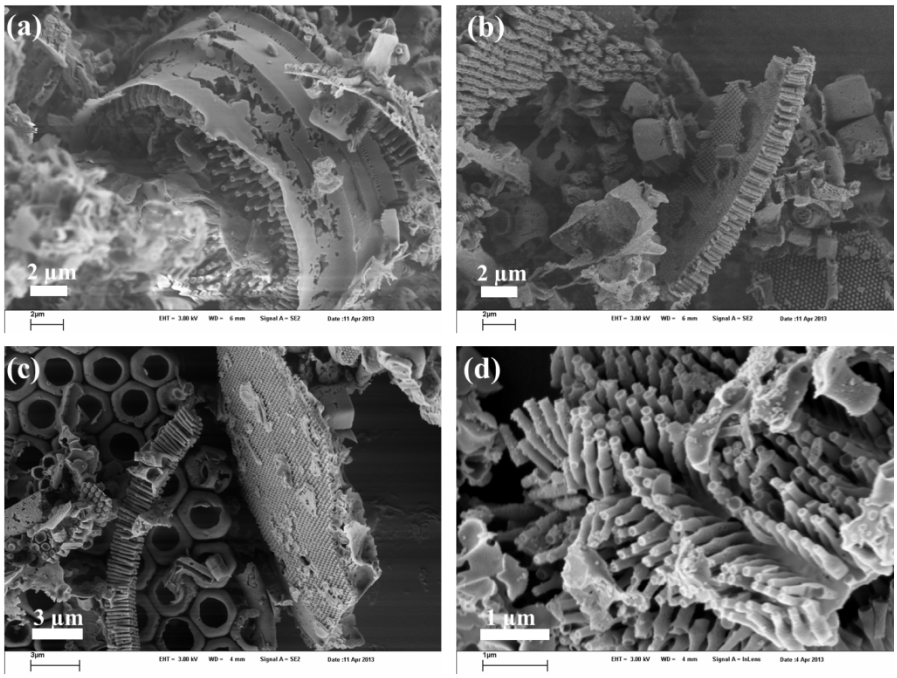

Figure S4. SEM images of CNA.

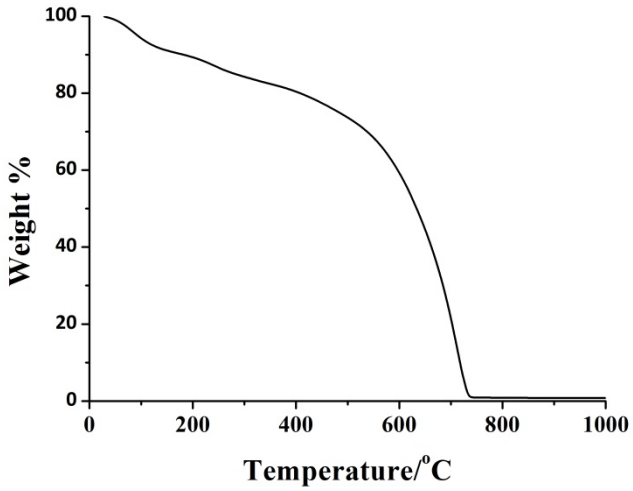

Figure S5. TGA curve of CNA.

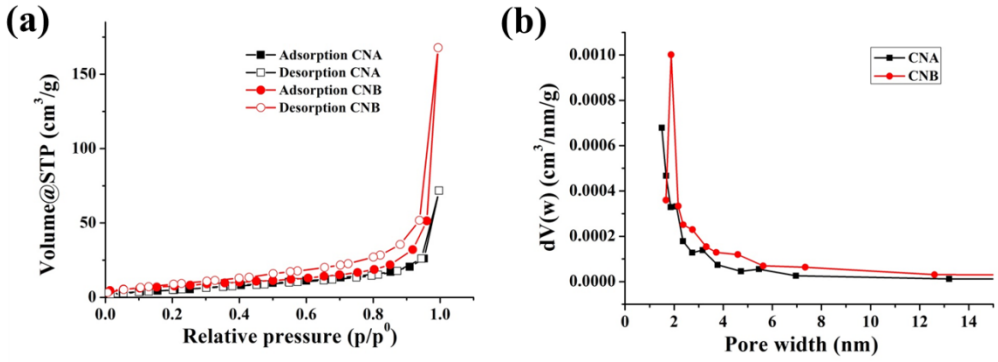

Figure S6. N_2 sorption isotherms of CAN and CNB (a) and corresponding pore size distributions (b), respectively.

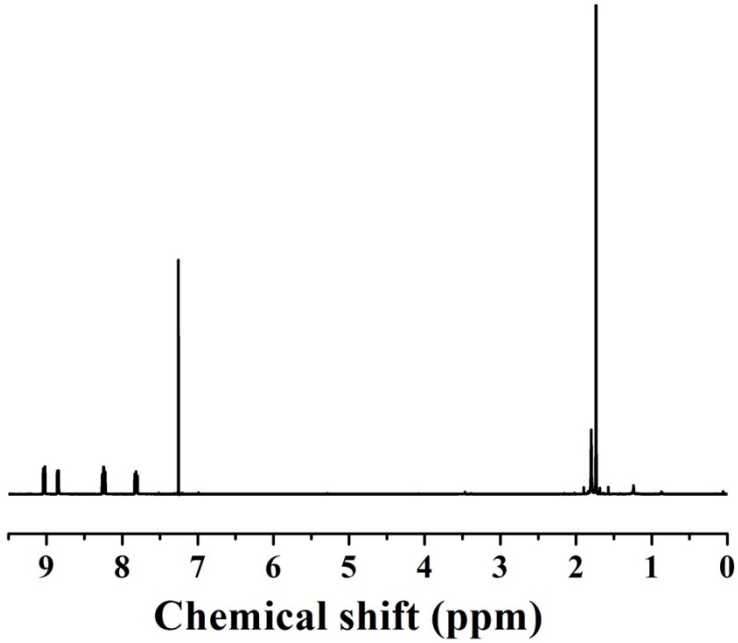

Figure S7. NMR of [Cp*Rh(bpy)Cl]Cl compound. H NMR (300 MHz, CDCl3): Cp*[Rh(2,2'-bpy)] δ(ppm) =9.02 (d, 2H, H-3, 3'), 8.84 (d, 2H, H-6, 6'), 8.24 (t, 2H, H-5, 5'), 7.81 (t, 2H, H-4, 4'), 1.74 (s, 15H, Cp*)

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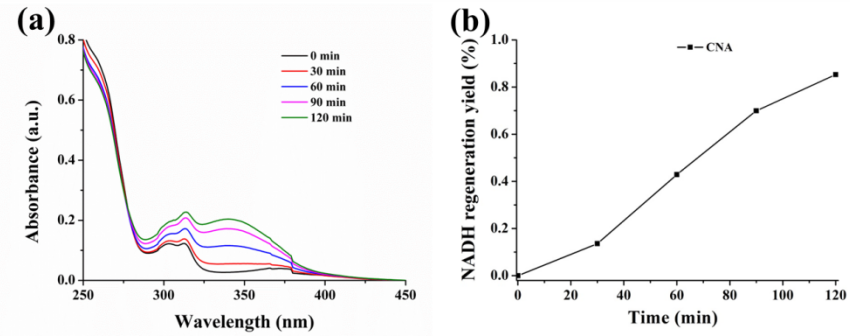

Figure S8. (a) Spectral measurement of NADH concentration in mediator involved reaction solution; (b) Photocatalytic NADH regeneration kinetics in the presence of mediator by CNA.

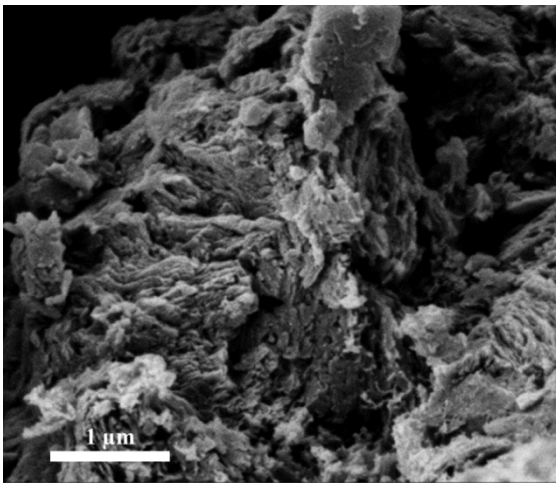

Figure S9. SEM of bulky CNB.