

Supporting Information (SI)

Carbon nitride nanosheets as visible light photocatalytic initiator and crosslinkers for hydrogels with thermoresponsive turbidity

*Jian Liu,^{*a} Tong An,^b Zhihan Chen,^b Zizhao Wang,^b Han Zhou,^{*b} Tongxiang Fan,^b Di Zhang,^b and Markus Antonietti^{*c}*

^aDepartment of Chemistry, Northwestern University, Evanston 60208, USA. E-mail: liujian@iccas.ac.cn

^bState Key Lab of metal matrix composites, Shanghai Jiaotong University, Shanghai, 200240, P.R. China. E-mail: hanzhou_81@sjtu.edu.cn

^cDepartment of Colloid Chemistry, Max Planck Institute of Colloids and Interfaces, Potsdam 14424, Germany. E-mail: markus.antonietti@mpikg.mpg.de

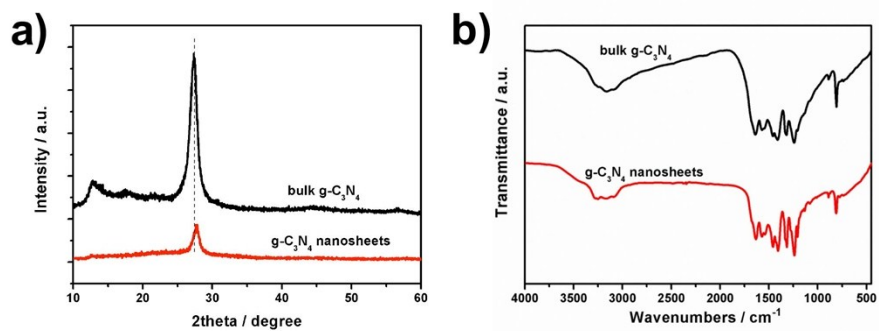


Figure S1. XRD, FTIR characterizations of CNS and bulky g-C₃N₄, respectively.

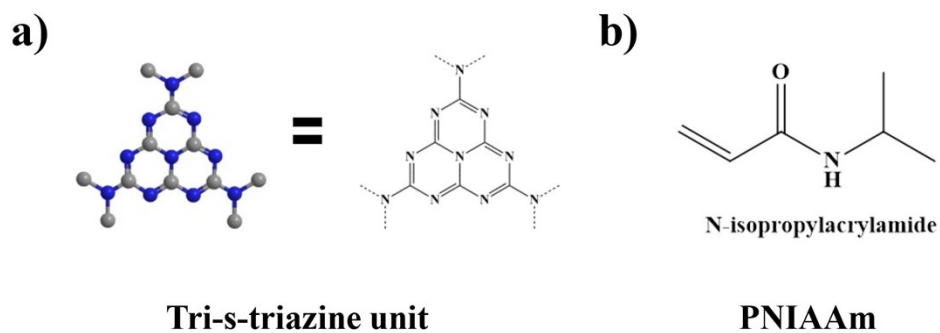


Figure S2. (c) Molecular structure of tri-s-triazine (C₆N₇) as building block of g-C₃N₄.

Monomer concentration

8wt%、 10wt%、 12wt%

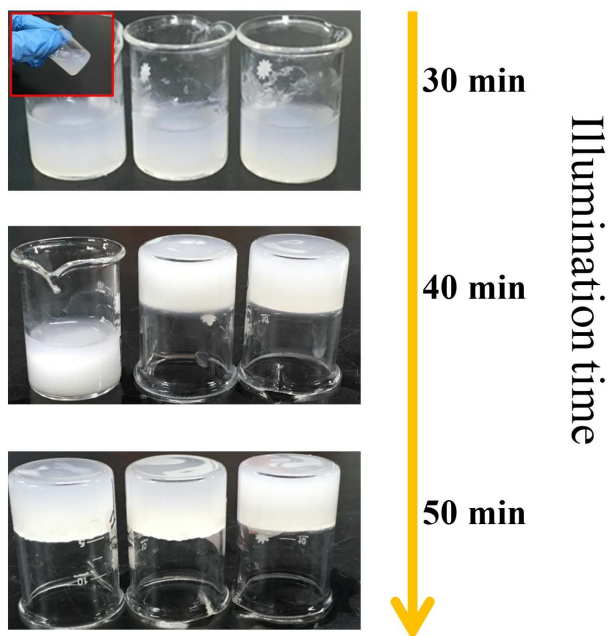


Figure S3. The investigation between the NIPAm monomer concentration and the irradiation time required to achieve the gelation under UV light irradiation.

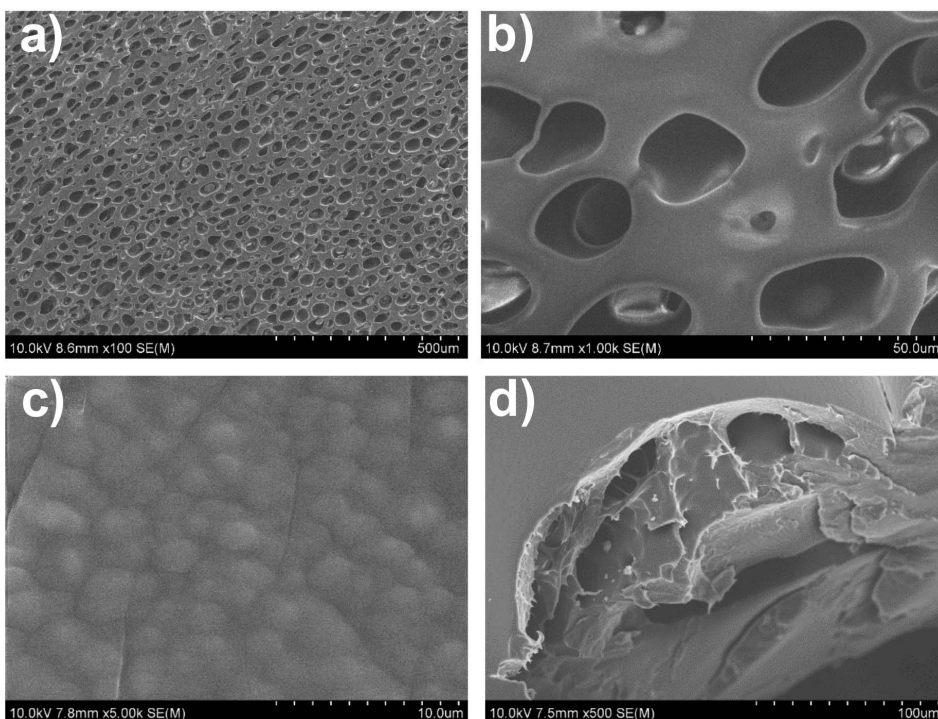


Figure S4. The SEM images of PNIPAm/CNS after supercritical CO₂ drying (a, b). SEM images of the PNIPAm/CNS after freeze drying (c, d).

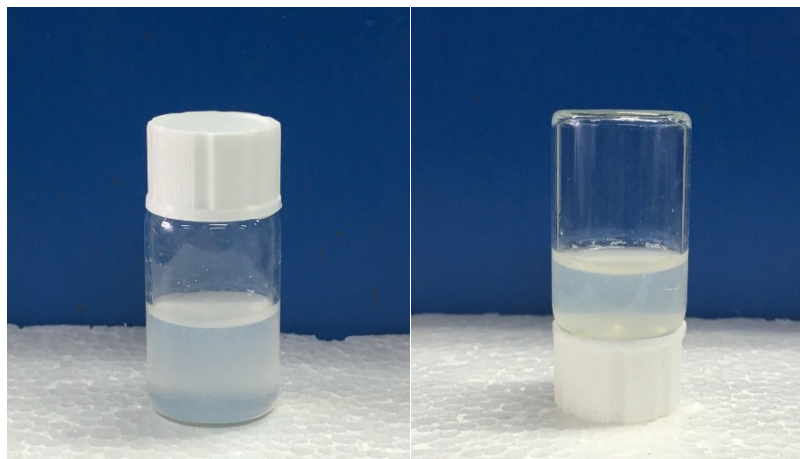


Figure S5. CNS containing NIPAm solution before heating (left) and after heating (right).

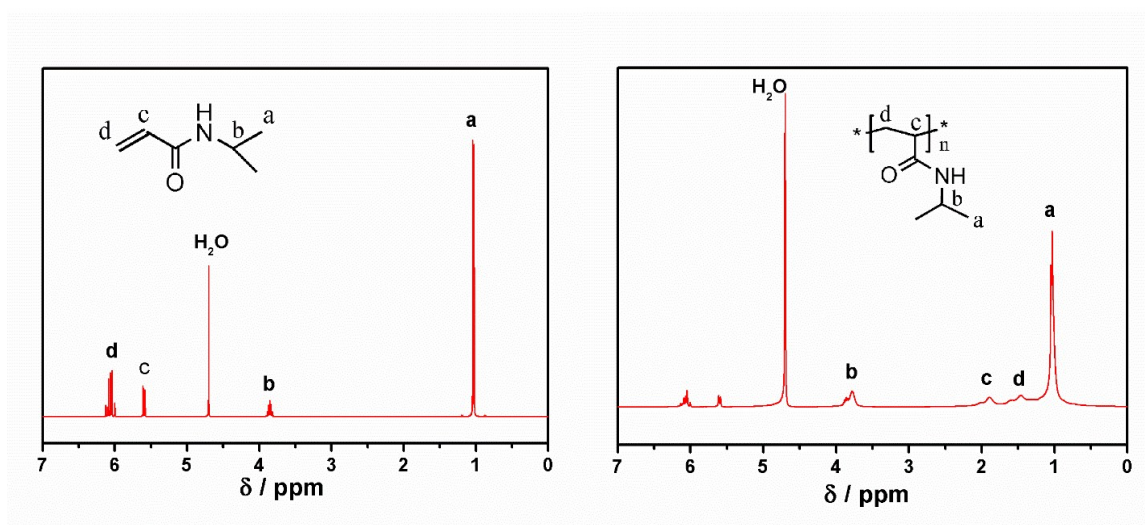


Figure S6. ^1H NMR spectra of NIPAm (left) and PNIPAm (right)