

# ***Microcystis@TiO<sub>2</sub>* Nanoparticles for Photocatalytic Reduction Reactions: Nitrogen Fixation and Hydrogen Evolution**

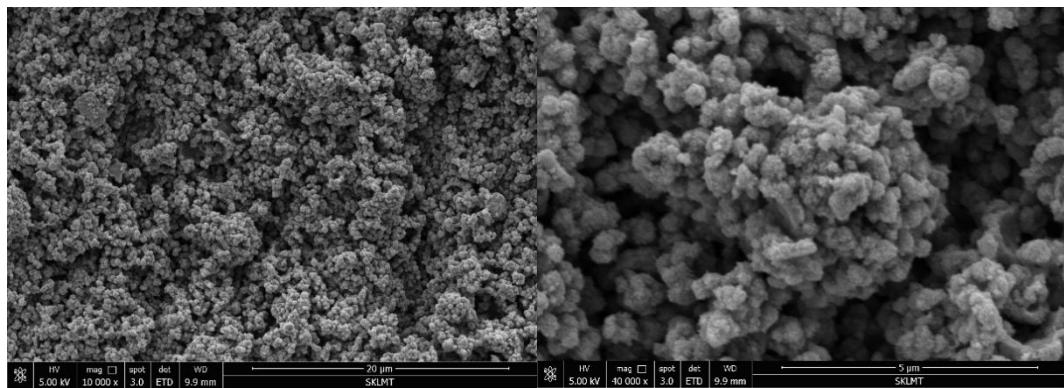
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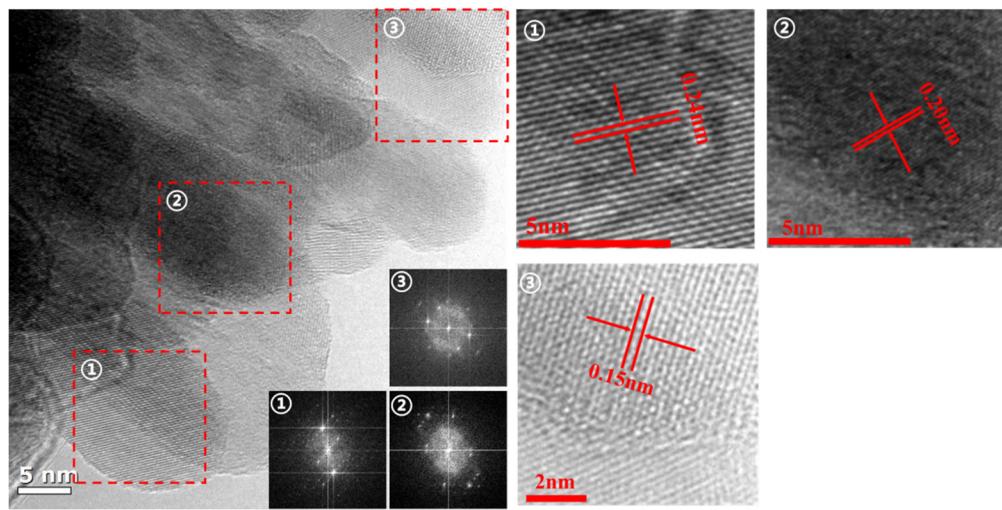
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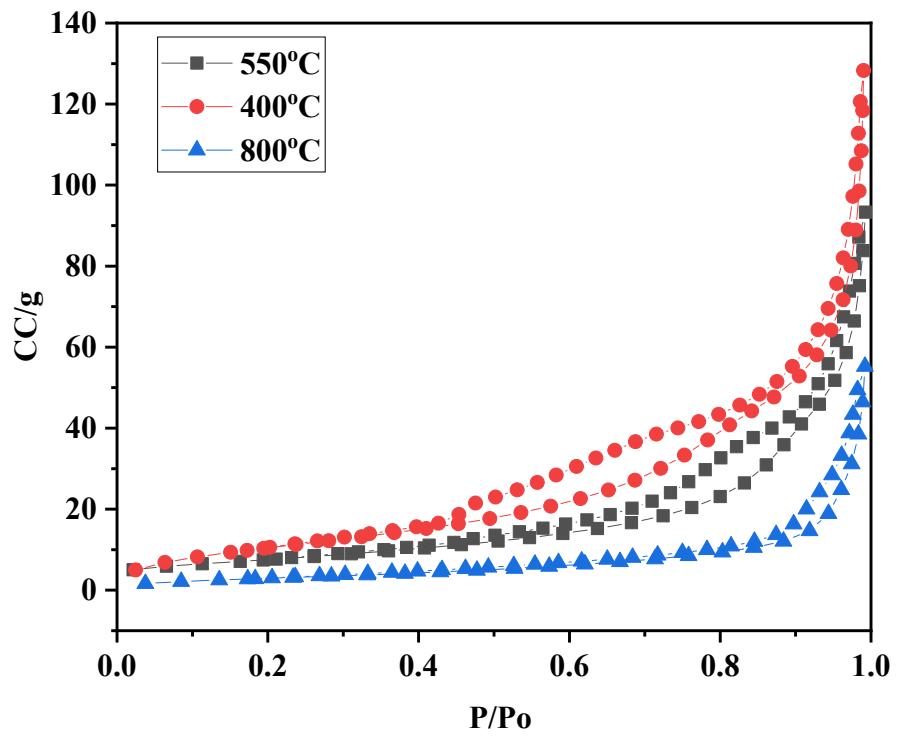
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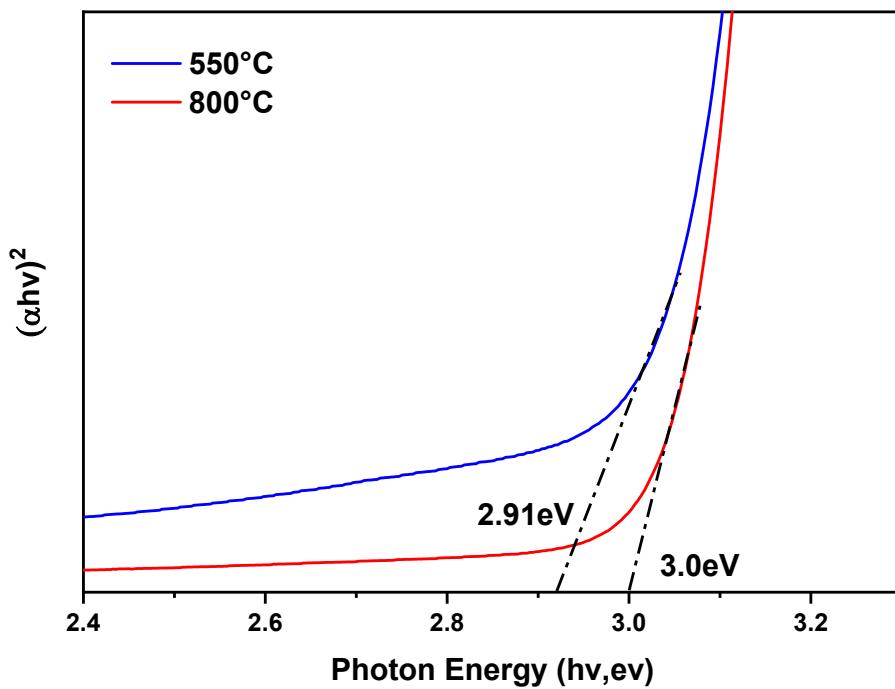
**Figure S1.** The SEM image of the *Microcystis@TiO<sub>2</sub>* sample without calcination.



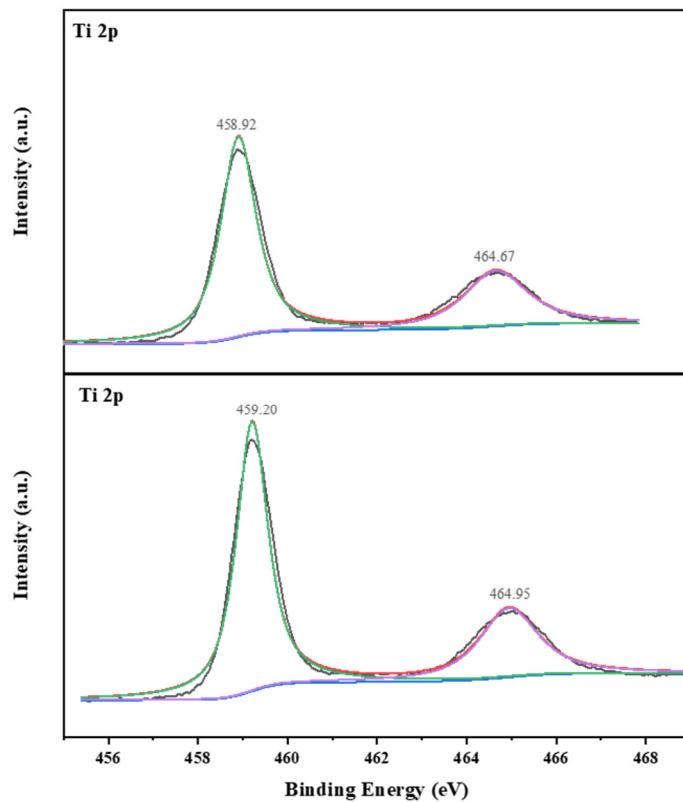
**Figure S2.** The TEM image of *Microcystis*@TiO<sub>2</sub>-550.



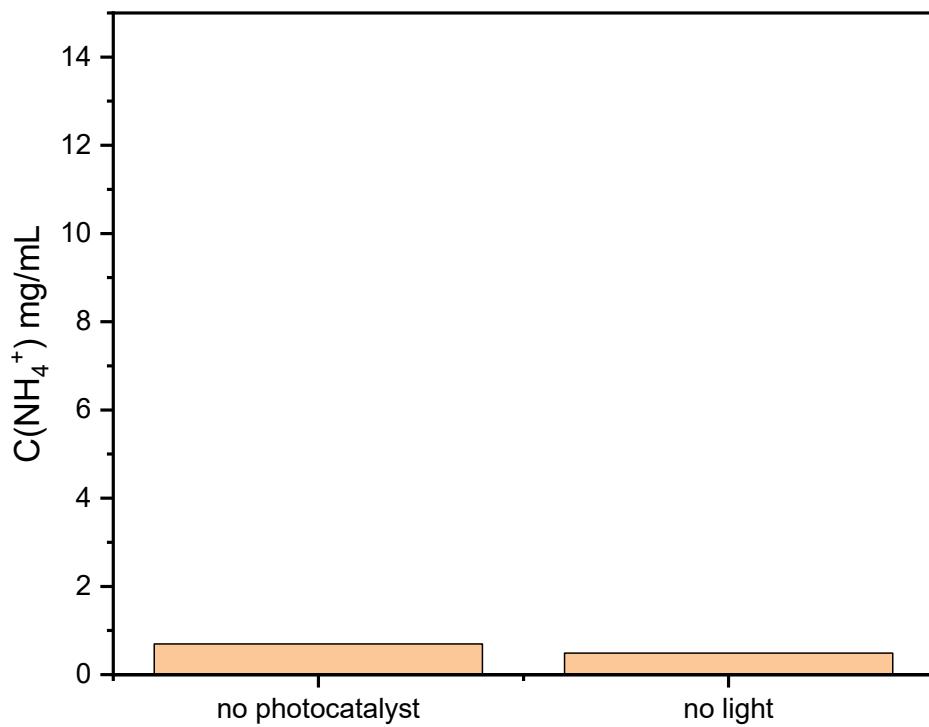
**Figure S3.** The nitrogen adsorption-desorption isotherms of *Microcystis*@TiO<sub>2</sub> samples.



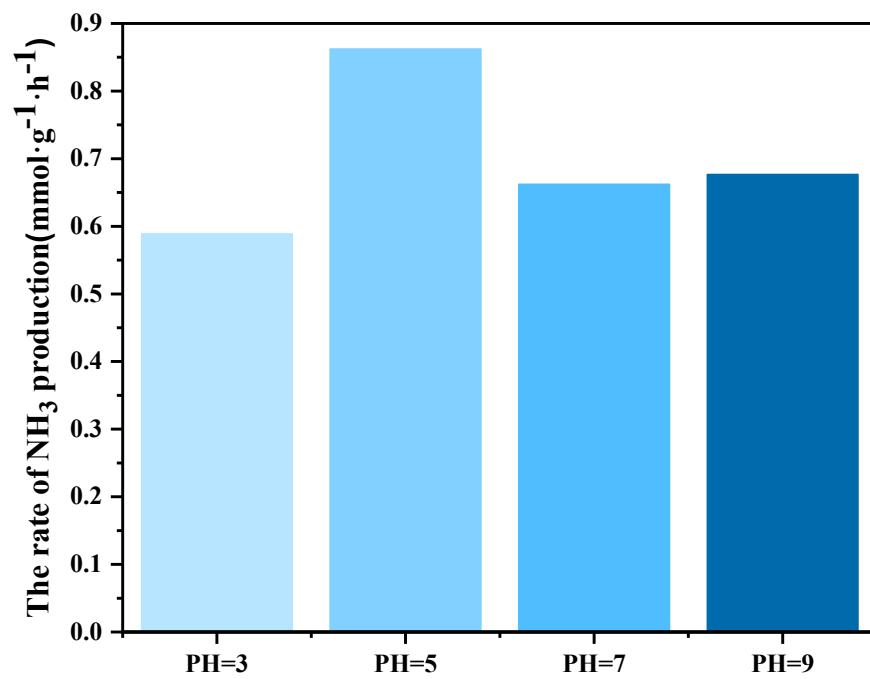
**Figure S4.** The Kubelka-Munk function vs. light energy of *Microcystis*@TiO<sub>2</sub> samples.



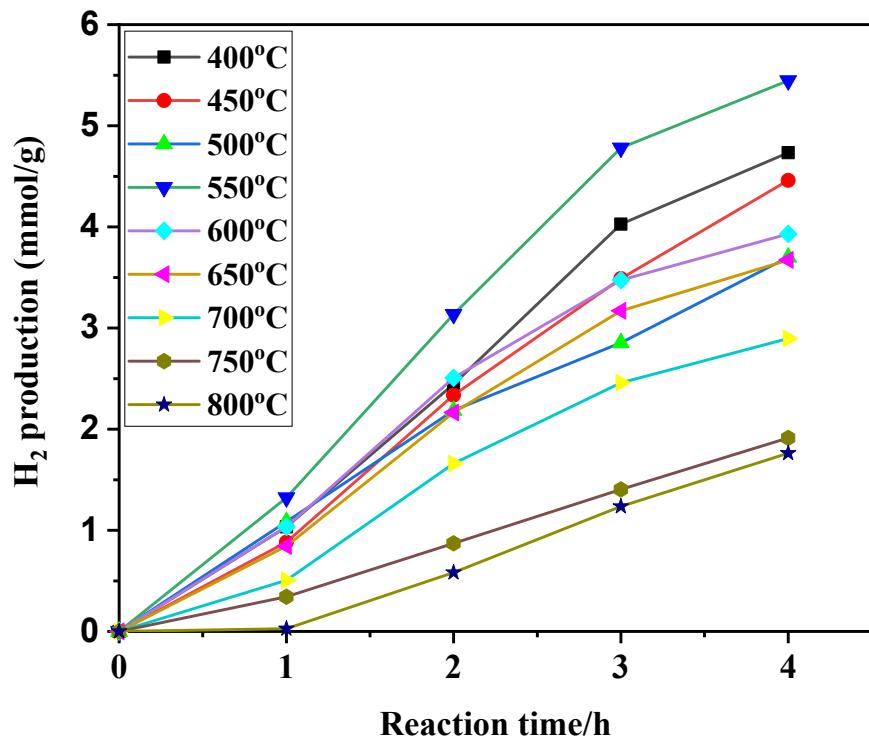
**Figure S5.** The Ti 2p high resolution spectra of samples without calcination (top) and *Microcystis*@TiO<sub>2</sub>-550 (down).



**Figure S6.** The production of  $\text{NH}_3$  in the absence of photocatalyst and light irradiation.



**Figure S7.** The rate of  $\text{NH}_3$  production under different pH conditions.



**Figure S8.** The production of H<sub>2</sub> under 4h illumination.