

Supporting Information

Efficient advanced oxidation process (AOP) for photocatalytic contaminant degradation using exfoliated metal-free graphitic carbon nitride and visible light-emitting diodes

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The photocatalytic experiments were conducted in a jacketed glass reactor (Peschl Ultraviolet GmbH) with a maximum working capacity of 225 mL, under a custom-made LED immersion lamp comprising 6 LEDs (each of 10 W) with maximum emission at 430 nm and UV-visible light irradiation using a 150 W full-spectrum xenon lamp. The reactor was placed in a safety cabinet. The light source is immersed in the reaction medium and is 1 cm away from the medium with jacket and coolant in between. There are four ports at the reactor and these are used to introduce air and take samples. The safety cabinet has a fan to keep the environment cool in case of heating.

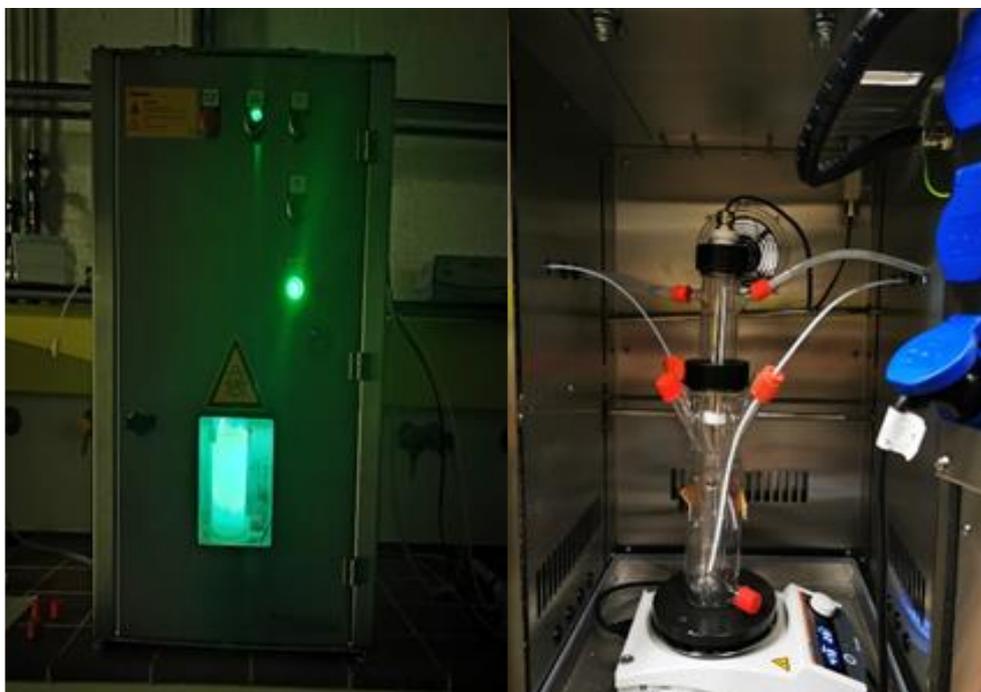


Figure S1 Photocatalytic reactor setup

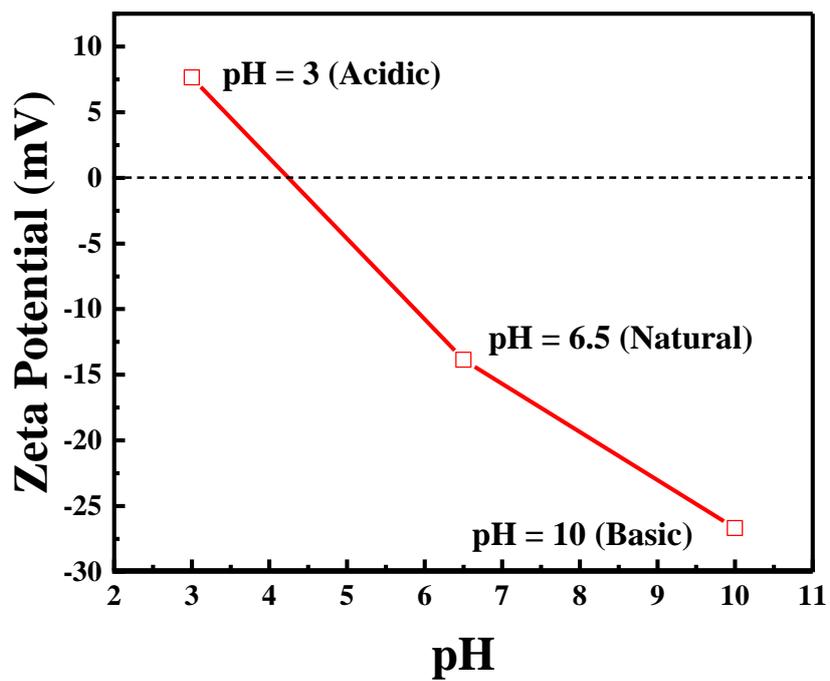


Figure S2 Zeta potential of exfoliated g-C₃N₄ as a function of the pH value of the suspension

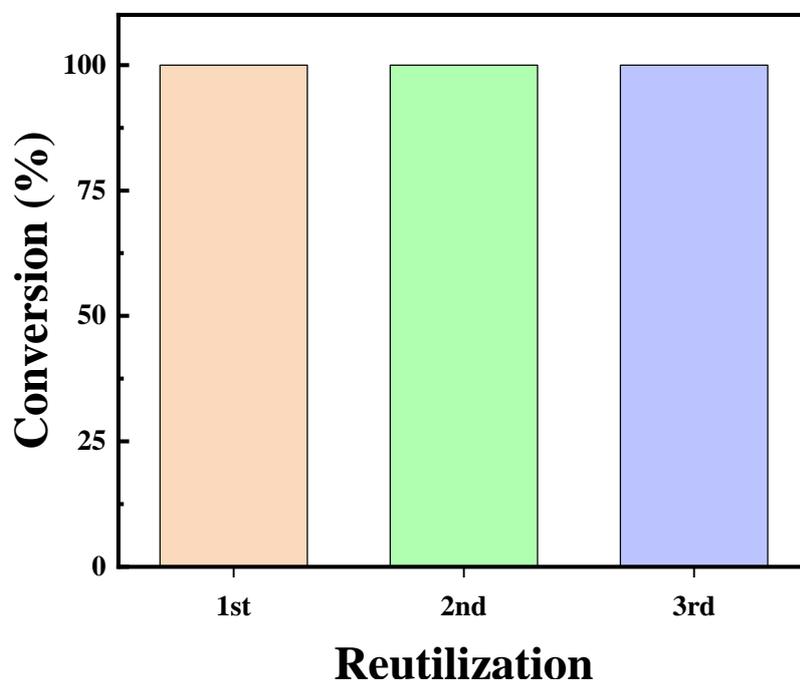
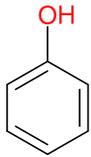
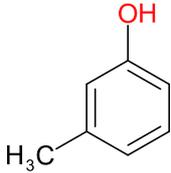
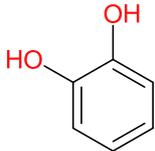
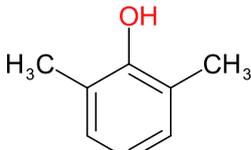


Figure S3 Phenol degradation conversion for the reutilized catalyst; $C_0 = 20$ ppm, airflow = 50 mL/min, catalyst = 0.5 g/L, pH = natural

Table S1 Chemical structures of the pollutants used

phenol	
<i>m</i> -cresol	
catechol	
xyleneol	

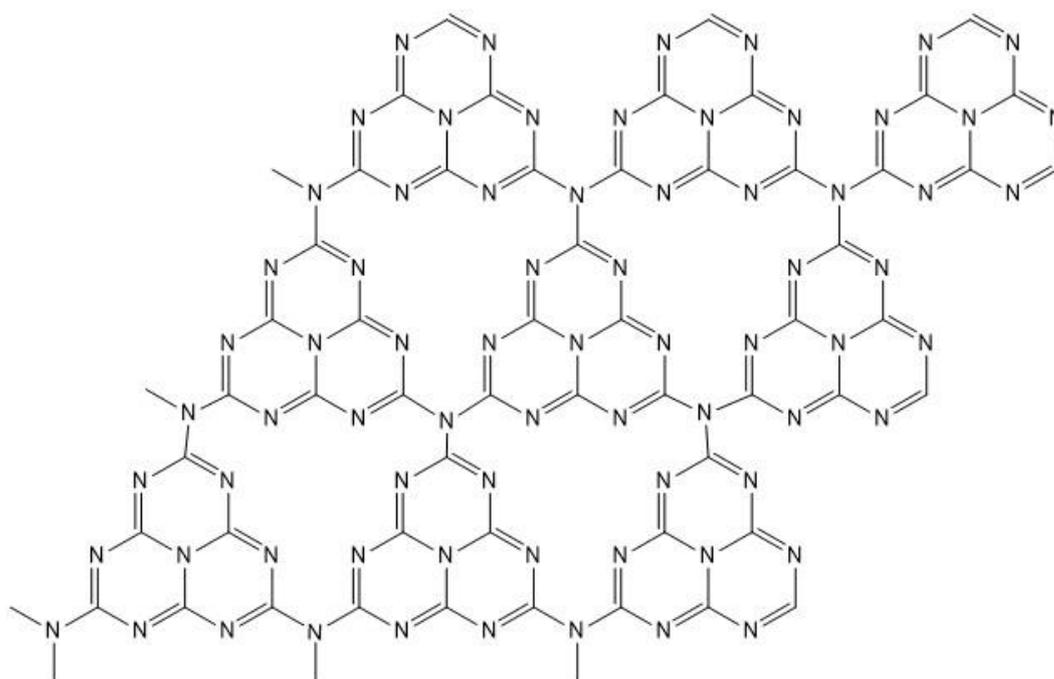


Figure S4 tri-s- triazine as unit structures of g-C₃N₄