Supporting Information

Construction and Synthesis of MoS_2/Biocarbon Composites for Efficient Visible Light-driven Catalytic Degradation of Humic Acid

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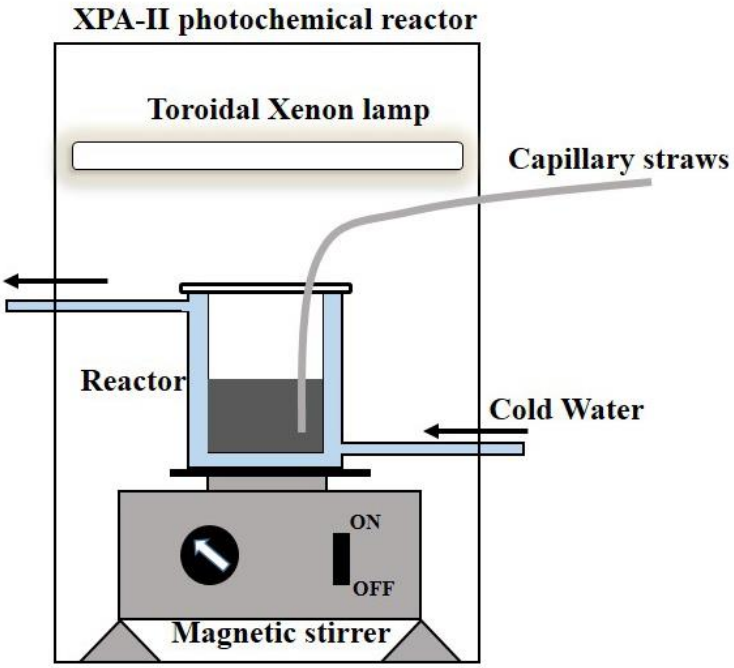

Figure S1 Diagrammatic sketch of diagrammatic sketch

The catalytic performance of the material was assessed by the visible light-driven degradation of humic acid in an XPA-II photochemical reactor (Nanjing Xujiang machine electronic plant). The photocatalytic degradation experiments were carried out as follows: 100 mg of material was weighed and added to a reactor containing 100 mL of humic acid solution (concentration: 100 ppm). The reactor was installed in the instrument rack, and the mixture was magnetically stirred in the dark for about 90 min to fully operate the dark reaction experiment. After the dark reaction was completed, the magnetic stirring was continued, and the reactor was illuminated with a visible light source simulated by a Xenon lamp to drive the photocatalytic reaction. During the photocatalytic reaction, cold water was introduced into the sandwich space between the outer and inner transparent shell of the reactor and then discharged to eliminate the interference of the results caused by degradation of humic acid due to thermal reaction. The specific setup of the experiment is shown in Fig.S1. Throughout the experiment, 5 mL of solution was taken from the reactor through a capillary pipette in the reactor at 30 min intervals and UV–visible absorption parameters of the solution were measured after high-speed centrifugation until the

value did not change significantly. The photocatalytic degradation of humic acid was calculated as C/C_0, where C_0 was the absorbance of humic acid at the initial concentration (100 ppm) and C was the absorbance of humic acid at this moment.