

# Supplementary Materials: One-Step Hydrothermal Synthesis of P25 @ Few Layered MoS<sub>2</sub> Nanosheets toward Enhanced Bi-catalytic Activities: Photocatalysis and Electrocatalysis

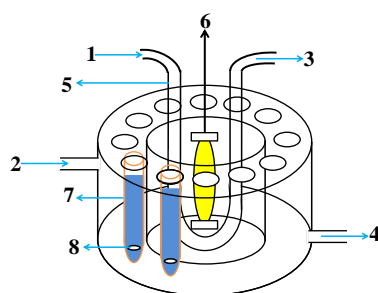
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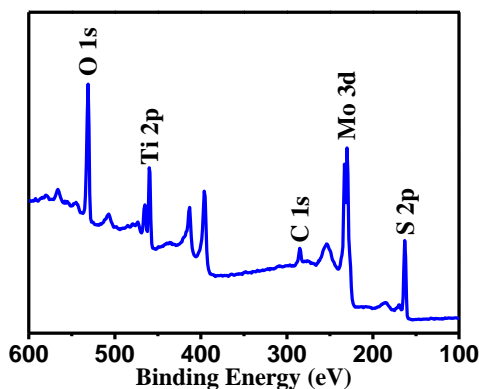
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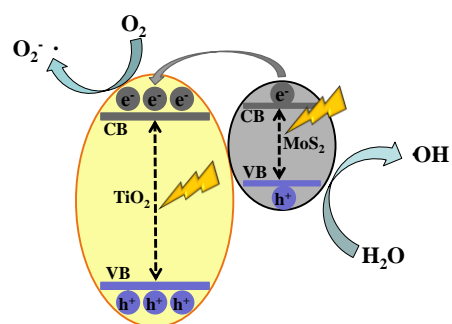
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**Figure S1.** The schematic diagram of the photocatalytic system: (1) and (2) cooling water entrance, (3) and (4) cooling water outlet, (5) quartz well, (6) Xe lamp, (7) quartz reactor, (8) magnetic stirrer. The distance between the quartz reactor and lamp is about 12 cm, and the optical density of light source is about 120 mW/cm<sup>2</sup>.



**Figure S2.** The full scan XPS spectrum of the PM11.



**Figure S3.** Schematic illustration of the mechanisms in degrading process.