

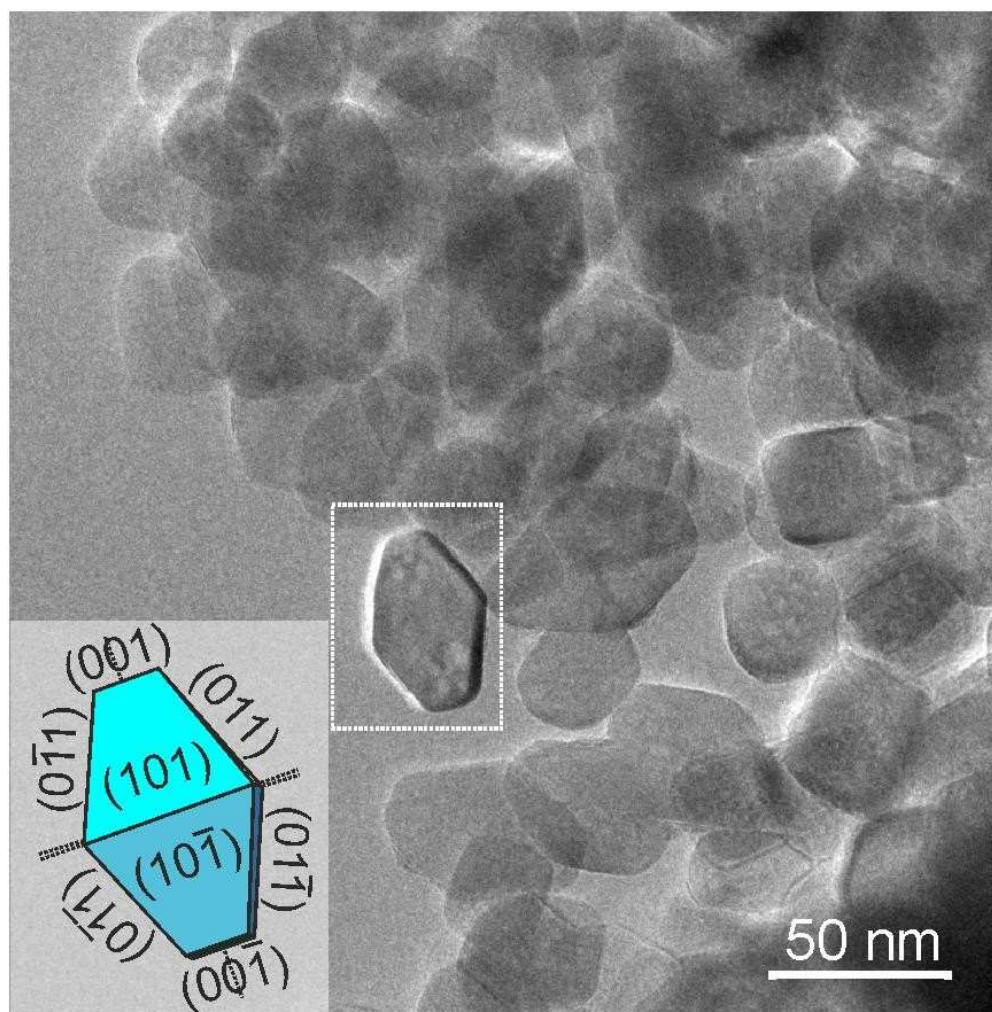
# In Situ Assembling of Well Defined MoS<sub>2</sub> Slabs on Shape-Tailored Anatase TiO<sub>2</sub> Nanostructures: Heterojunctions Role in Phenol Photodegradation

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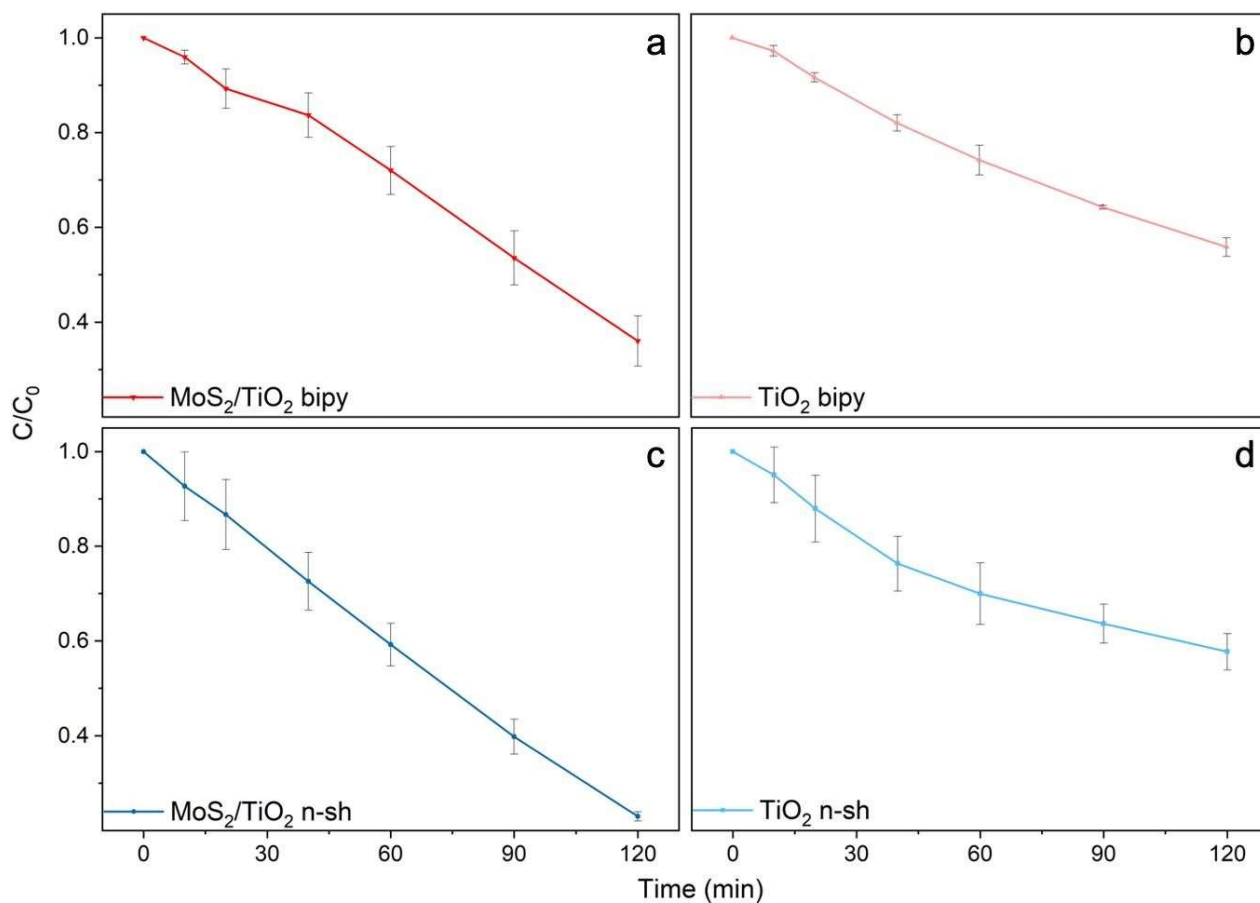
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## Supplementary Data



**Figure S1.** TEM image of MoS<sub>2</sub>/bipyramidal TiO<sub>2</sub> nanoparticles with exposed TiO<sub>2</sub> single nanocrystals nanocrystals with the assignment of exposed surfaces.



**Figure S2.** Phenol degradation profiles, expressed as the ratio between concentration after irradiation ( $C$ ) and concentration before irradiation ( $C_0$ ) of: (a)  $\text{MoS}_2/\text{TiO}_2$  bipy (red curve), (b) bipyramidal  $\text{TiO}_2$  nanoparticles (light red curve), (c)  $\text{MoS}_2/\text{TiO}_2$  n-sh (blue curve), and (d)  $\text{TiO}_2$  nanoshets (light blue curve).