

Supporting Information

Preparation of Heterostructured TiO₂/MoS₂ for Efficient Photocatalytic Rhodamine B Degradation

Ping Li^{a†}, Mengyou Gao^{a,b†}, Lei Sun^a, Huizhong Xu^a, Xiaochen Dong^c, Jianjian Lin^{*a}

^a Shandong Key Laboratory of Eco-chemical Engineering, College of Chemistry and Molecular Engineering, Qingdao University of Science and Technology, Qingdao 266042, PR China. Email: Jianjian_Lin@qust.edu.cn

^b College of Automation and Electronic Engineering, Qingdao University of Science and Technology, Qingdao 266042, PR China.

^c Key Laboratory of Flexible Electronics (KLOFE) & Institute of Advanced Materials (IAM), Nanjing Tech University (NanjingTech), 30 South Puzhu Road, Nanjing, 211800, PR China.

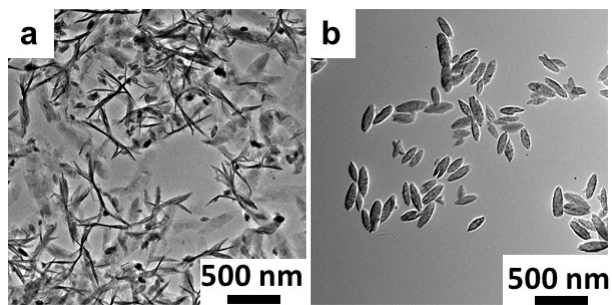


Figure S1. SEM images at the reaction time for (a) 2 h and (b) 12 h.

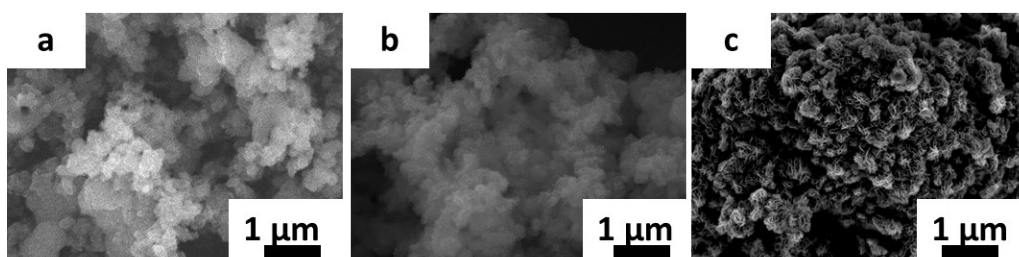


Figure S2. SEM images of as-prepared H-TiO₂/MoS₂ at stage of (a) 4 h, (b) 12 h and (c) 24 h.

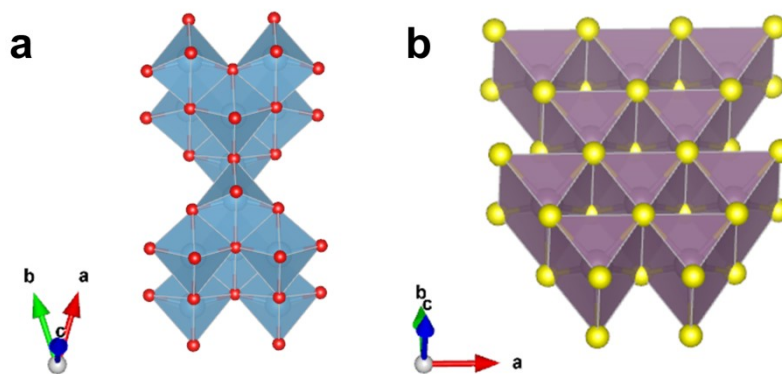


Figure S3. The crystal structures of (a) TiO₂ (anatase) and (b) MoS₂ (2H).

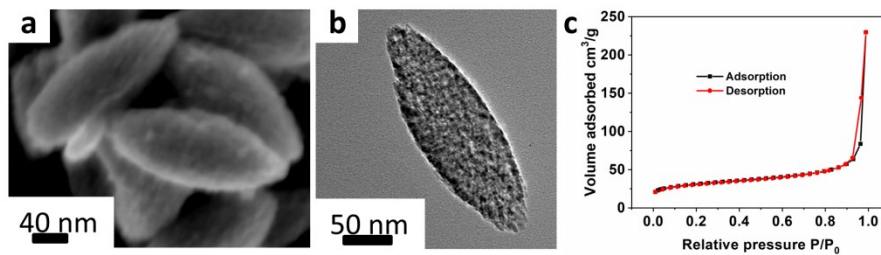


Figure S4. (a) SEM and (b) TEM images, and (c) N₂ adsorption and desorption curves of porous TiO₂.

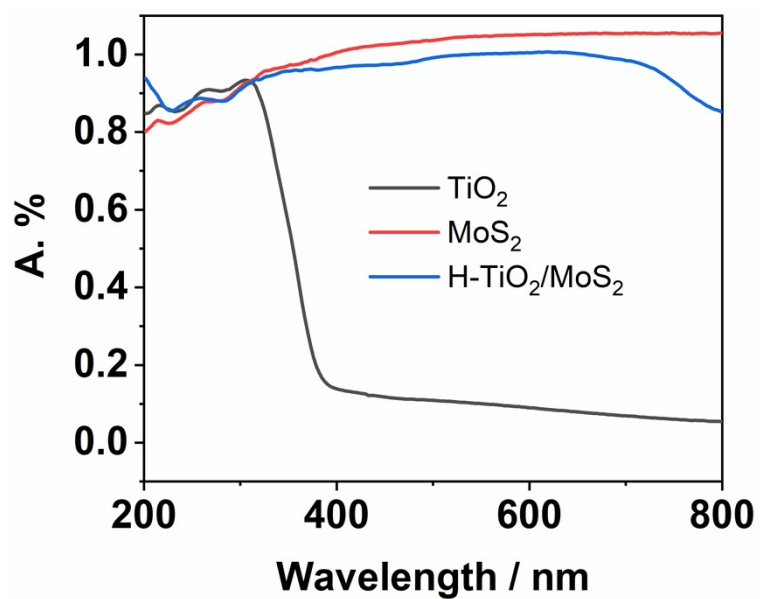


Figure S5 UV-visible absorption spectra of TiO₂, H-TiO₂/MoS₂ and pure MoS₂.

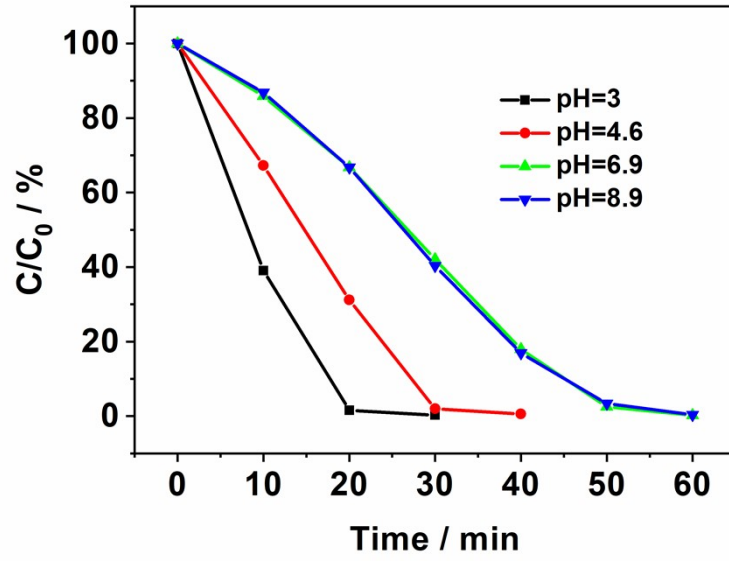


Figure S6. The photodegradation effects of H-TiO₂/MoS₂ for RhB under various pH condition.

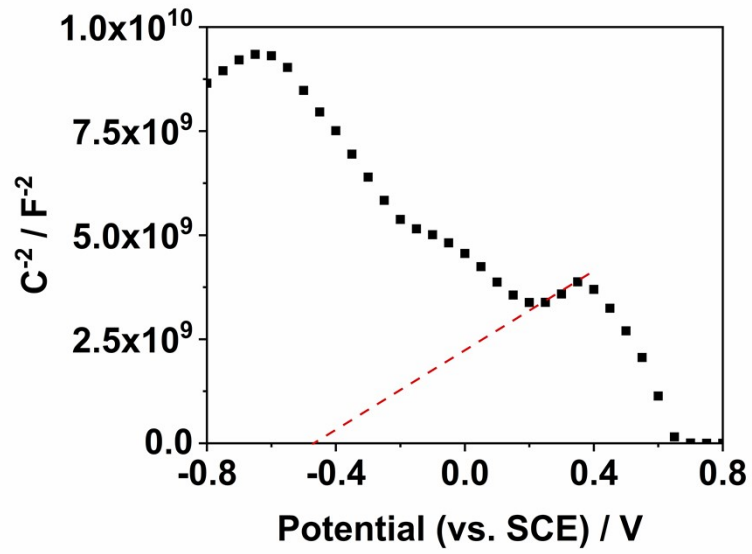


Figure S7. Mott-Schottky curves of H-TiO₂/MoS₂.

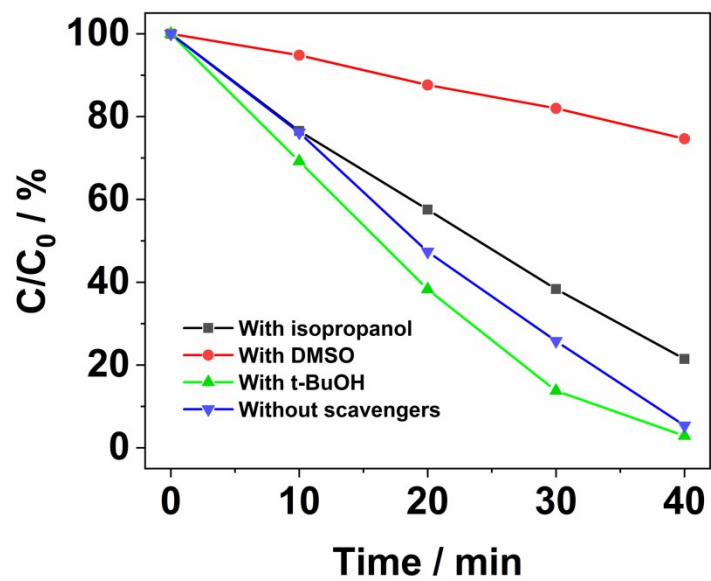


Figure S8. The photodegradation effects of H-TiO₂/MoS₂ for RhB with isopropanol, DMSO and t-BuOH added and without scavengers added.