Electronic Supplementary Information

Solvothermal Synthesis of Poly(acrylic acid) Decorated Magnetic Molybdenum Disulfide Nanosheets for Highly-Efficient Adsorption of Cationic Dyes from Aqueous Solutions

Li Lei[a], Zhuo Peng[a], Ting Liang[a], Hai-Rong Yu*[a] and Chang-Jing Cheng*[a]

College of Chemistry and Environment, Southwest Minzu University, No.16 South Section 4, Yihuan Road, Chengdu, Sichuan, 610041, P. R. China

Corresponding authors: yuhr@swun.edu.cn (H.-R. Yu); chengcj@swun.edu.cn (C.-J. Cheng).

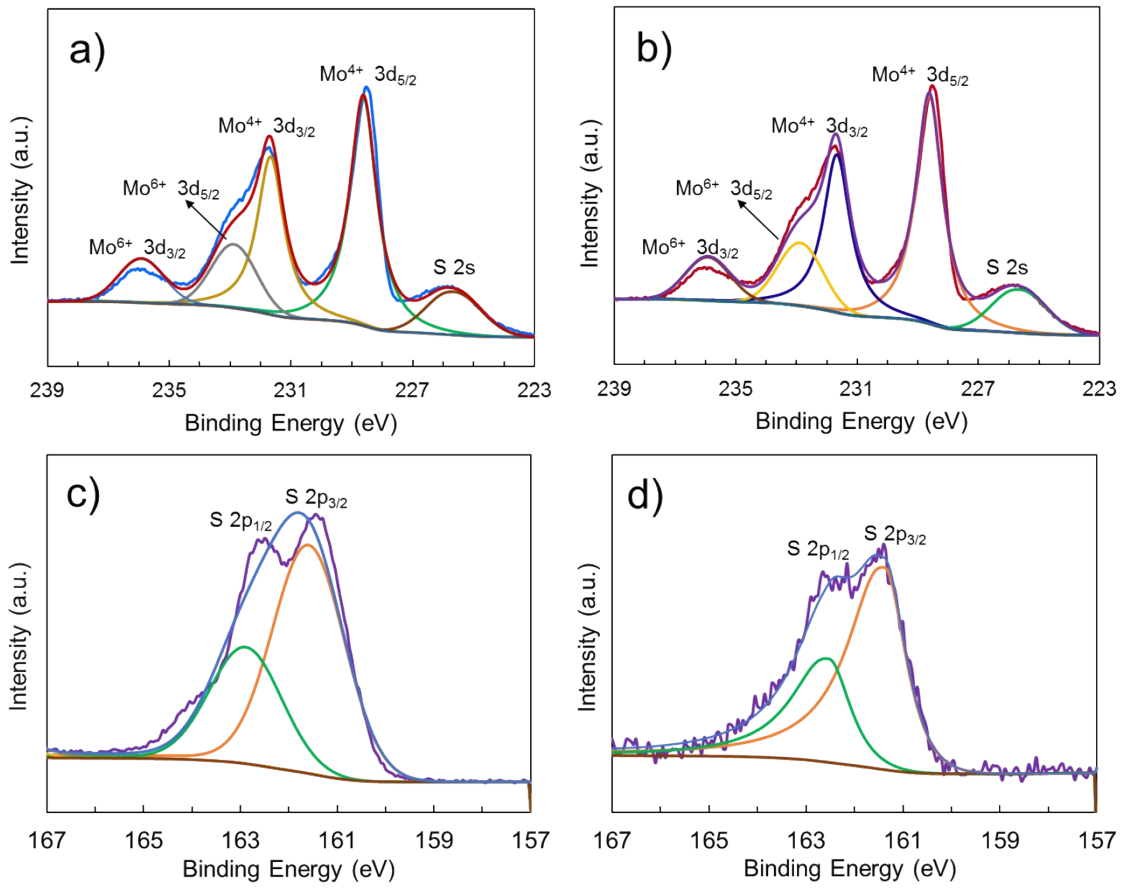

Fig. S1 High-resolution XPS spectra of Mo 3d (a, b) and S 2p (c, d) in MoS_2 (a, c) and $MMoS_2$/PAA-80 (b, d) samples.

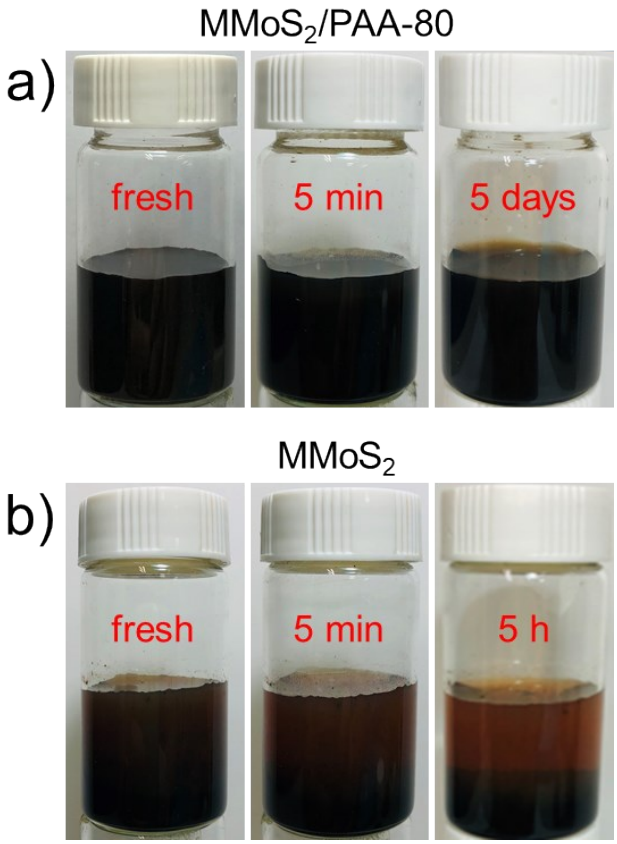

Fig. S2 Digital photographs of $MMoS_2$/PAA-80 (a) and $MMoS_2$ (b) aqueous dispersions after keeping different times.

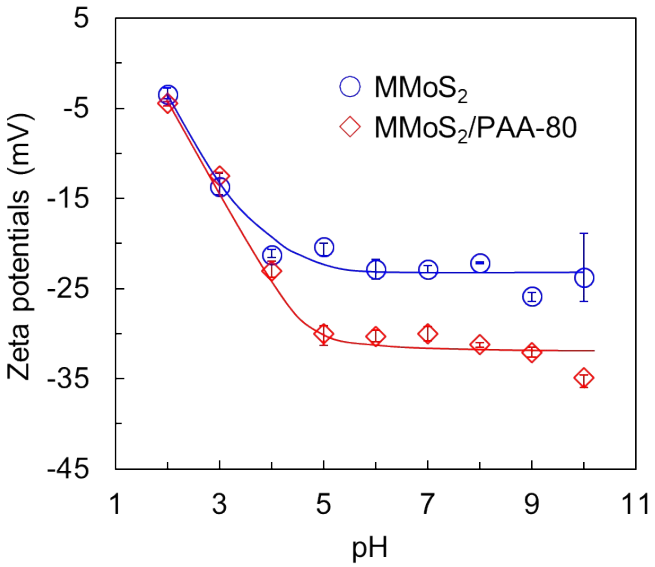

Fig. S3 Zeta potentials of $MMoS_2$ and $MMoS_2$/PAA-80. The concentrations of both two samples are 0.1 mg/mL.

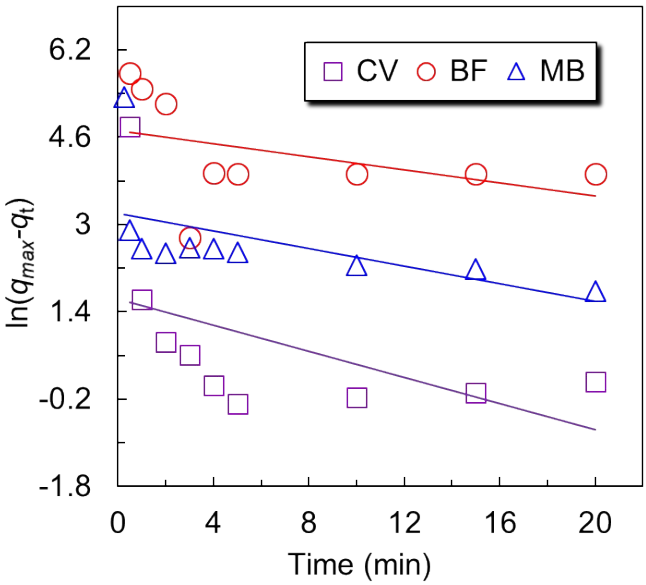

Fig. S4 Fitting of pseudo-first-order kinetic model of BF, MB, and CV adsorption onto $MMoS_2$/PAA-80. Condition: pH = 7.0, m/V = 10 mg/30 mL, T = 25 °C, C_{CV}=100 mg/L, and C_{BF}=C_{MB}=200 mg/L.

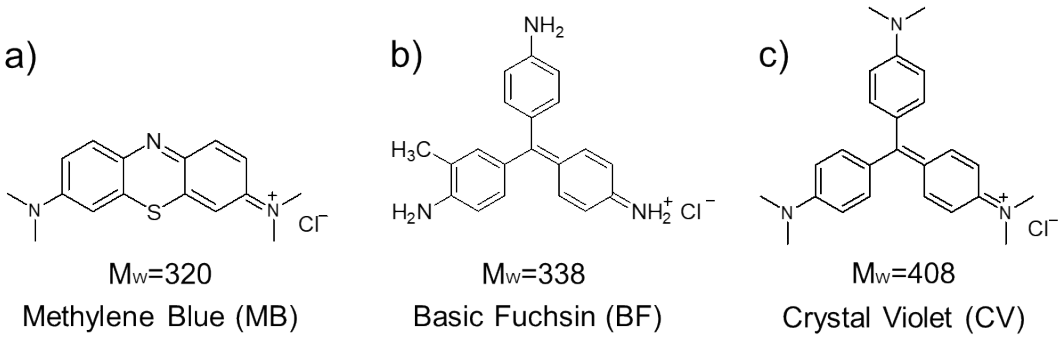

Fig. S5 Molecular structures of methylene blue (MB), basic fuchsin (BF), and crystal violet (CV).

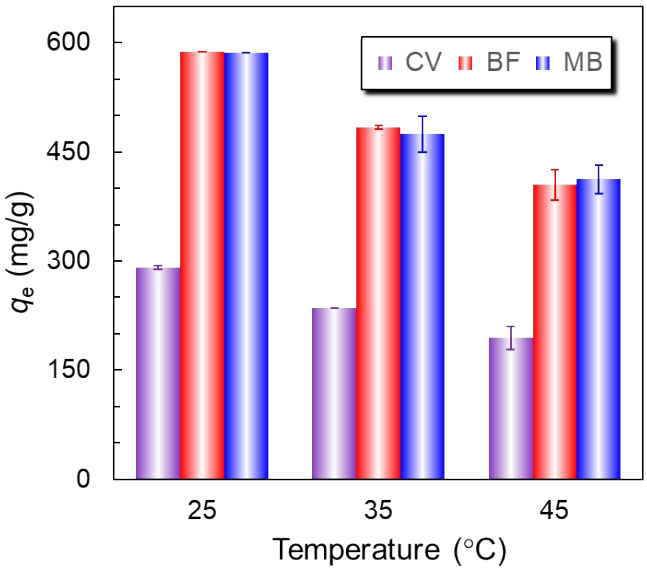

Fig. S6 Effect of temperature on the adsorption of BF, MB, and CV onto $MMoS_2$/PAA-80. Condition: C_{BF}= C_{MB}=200 mg/L, C_{CV}=100 mg/L, pH =7.0, m/V = 10 mg/30 mL, T = 25 °C and contact time = 5 min.