Supporting Information

Scalable Synthesis of Mesoporous Titania Wrinkled Microspheres with Uniform Large Micron Sizes for Efficient Removal of Cr (VI)

Zhikai Yu¹, Xingmin Gao¹, Yan Yao¹, Xiangcheng Zhang¹, Guo-Qing Bian,² Winston Duo Wu¹*, Xiao Dong Chen¹, Wei Li³, Cordelia Selomulya⁴, Zhangxiong Wu^{1,3*} and Dongyuan Zhao^{3,4}

¹Suzhou Key Laboratory of Green Chemical Engineering, School of Chemical and Environmental Engineering, College of Chemistry, Chemical Engineering and Materials Science, Soochow University, Suzhou City, Jiangsu 215123, P.R. China ²Testing and Analysis Centre, Soochow University, Suzhou City, Jiangsu 215123, P.R. China ³Department of Chemistry and Laboratory of Advanced Materials, Fudan University, Shanghai 200133, P. R. China ⁴Department of Chemical Engineering, Monash University, Clayton, VIC 3800, Australia

*Corresponding authors: zhangwu@suda.edu.cn (Z. Wu), duo.wu@suda.edu.cn (W.

D. Wu)



Figure S1. SEM images (a-c and g-i) and the corresponding particle size distributions (d-f) of the TiO₂ samples obtained at a TTIP/F127 mass ratio of 2 : 6 (a, d, g), 3 : 6 (b, e, h), and 4 : 6 (c, f, i), respectively, with a drying temperature of 150 °C and a calcination of 350 °C.



Figure S2. SEM image and the corresponding elemental maps of the representative sample UMWM-TiO2-150-350 after a typical adsorption process for Cr (VI).



Figure S3. Wide-angle XRD patterns of the control sample TiO_2 -NP (a), the control sample Meso-TiO_2-EISA-350 (b), the representative sample UMWM-TiO_2-150-350 (c), and the control sample UWM-TiO_2-150-350 (d), respectively.



Figure S4. SEM (a-c) and HRSEM (d-f) images of the control sample TiO_2 -NP (a, d), the control sample Meso- TiO_2 -EISA-350 (b, e), and the control sample UWM- TiO_2 -150-350 (c, f), respectively. Inset c is the corresponding particle size distribution. Inset f is a SEM image of an individual particle, the surface of which is partially shown in f.



Figure S5. N₂ sorption isotherms and the inset corresponding pore size distribution curves of the control sample TiO_2 -NP (a), the control sample Meso- TiO_2 -EISA-350 (b), the representative sample UMWM- TiO_2 -150-350 (c), and the control sample UWM- TiO_2 -150-350 (d), respectively.