Electronic supplementary information

Magnetic-field induced formation of 1D Fe_3O_4/C/CdS coaxial nanochains as highly efficient and reusable photocatalysts for water treatment

Yu Liu,[a] *Liang Zhou,*[b] *Yong Hu,**[a] *Changfa Guo,*[a] *Haisheng Qian,*[a] *Fumin Zhang*[a] *and Xiong Wen (David) Lou**[b]

[a] Institute of Physical Chemistry, Zhejiang Normal University, Jinhua, 321004, P. R. China E-mail: yonghu@zjnu.edu.cn

[b] School of Chemical and Biomedical Engineering, Nanyang Technological University, 70 Nanyang Drive, Singapore, 639798, Singapore E-mail: xwlou@ntu.edu.sg

According to the Lambert-Beer Law, $A=\varepsilon cd$, where A is the absorbance, ε is the molar absorption coefficient, c is the concentration of the absorbing species, and d is the length of the light path through the sample. The absorbance of RhB is linear to samples' concentration; hence the ratio of absorbance of RhB can be used to calculate the ratio of C/C_0. Here, C_0 is the concentration of the RhB after adsorption equilibrium by stirring for 2 h in the dark and before irradiation. The absorption spectra of the RhB solutions at different exposure times in the presence of different samples (a-e) are shown in Figure S1 below.

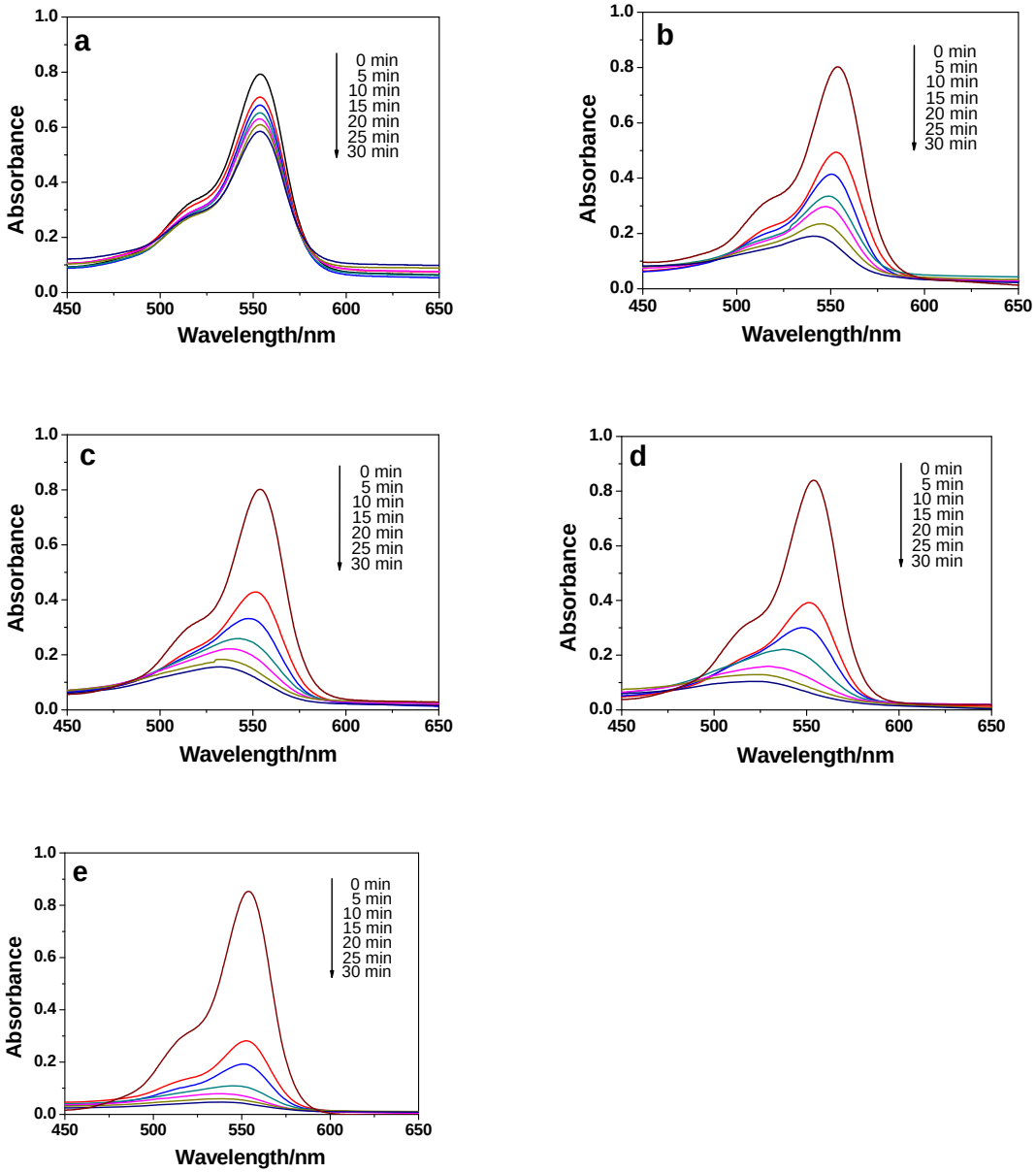

Figure S1. The absorption spectra of the RhB solutions at different exposure times in the presence of different samples a) S0, b) S5, c) S10, d) S15 and e) S20.