

## **Iron-incorporated Mesoporous Silica for Enhanced Adsorption of Tetracycline in Aqueous Solution**

Ziyang Zhang<sup>a,b</sup>, Huachun Lan<sup>a</sup>, Huijuan Liu<sup>a</sup> \*, Haiyan Li<sup>c</sup>, Jiuhui Qu<sup>a</sup>

*<sup>a</sup> Key Laboratory of Drinking Water Science and Technology, Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences, Beijing 100085, China*

*<sup>b</sup> University of Chinese Academy of Sciences, Beijing 100039, China*

*<sup>c</sup> Key Laboratory of Urban Stormwater System and Water Environment of Ministry of Education, Beijing University of Civil Engineering and Architecture, Beijing 100044, China*

### ***\*Corresponding Author***

*Key Laboratory of Drinking Water Science and Technology, Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences, Beijing 100085, China*

*Tel./Fax: +86 10 62849160*

*E-mail: [hjliu@rcees.ac.cn](mailto:hjliu@rcees.ac.cn)*

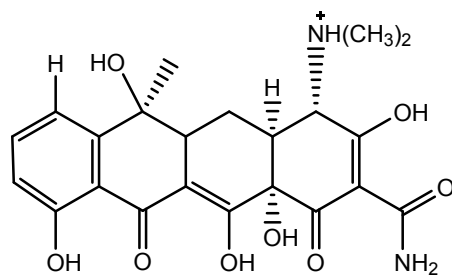


Fig. S1. Structure of tetracycline (TC)

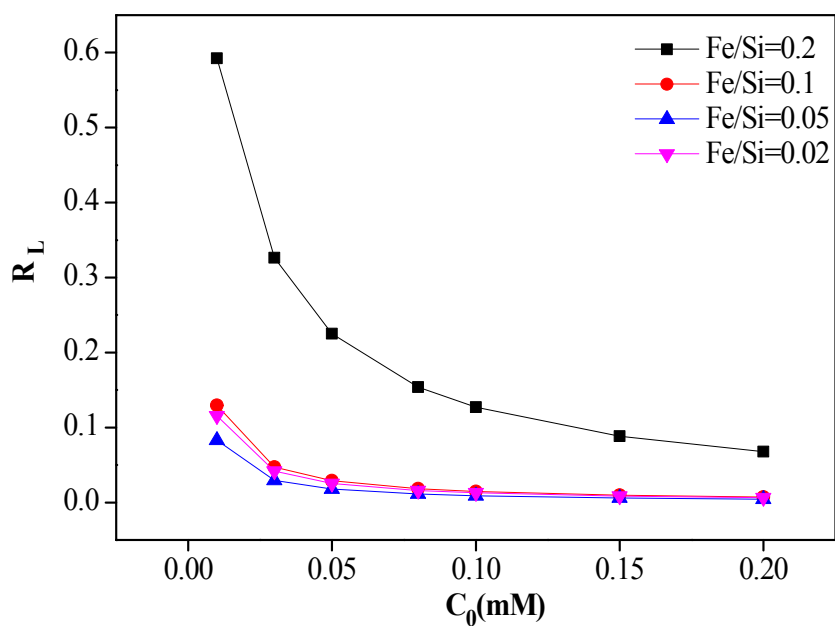


Fig. S2. Experimental data of separation factor ( $R_L$ ) of Langmuir.

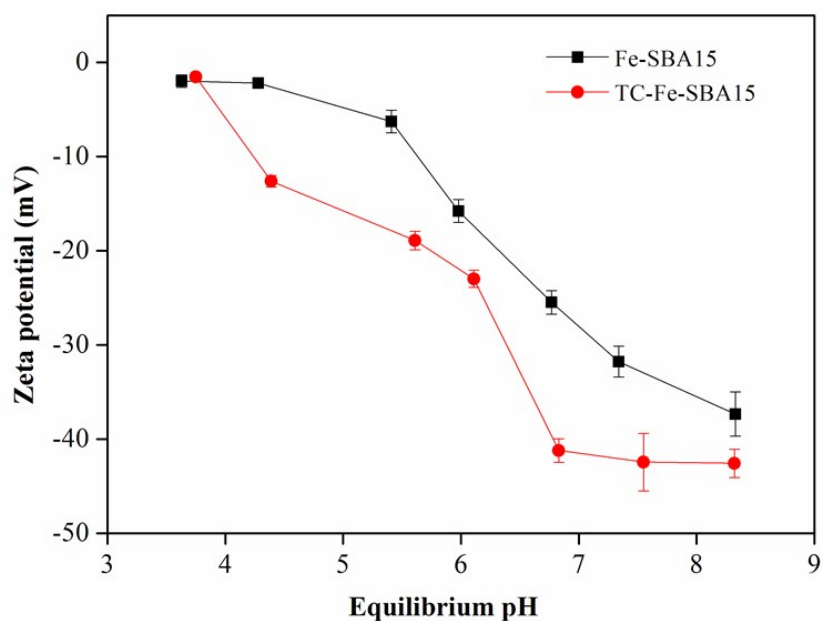


Fig. S3. The Zeta Potential of adsorbent before and after adsorption.

The Zeta potential of Fe-SBA15 before and after adsorption was measured and showed in Fig. S3. The amount of 0.010 g Fe-SBA15 was added into a 20 mL NaCl solution (0.01 M) with and without TC. The solution pH was kept at desired values in the range of 3.0 - 9.0 using HCl and NaOH. The mixtures were shaken for 24 h to allow it to reach the equilibrium and the Zeta potential was measured using a Nano Particle Sizing & Zeta potential Analyzer (Beckman Coulter, U.S.A).