

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

Ziyang Zhang^{a,b}, Huachun Lan^a, Huijuan Liu^a *, Haiyan Li^c, Jiuhui Qu^a

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

^b University of Chinese Academy of Sciences, Beijing 100039, China

^c 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

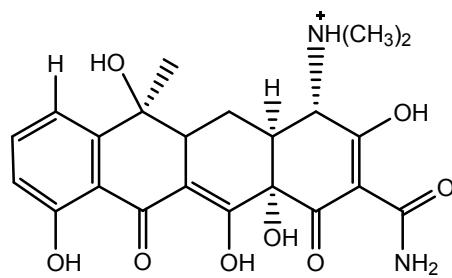


Fig. S1. Structure of tetracycline (TC)

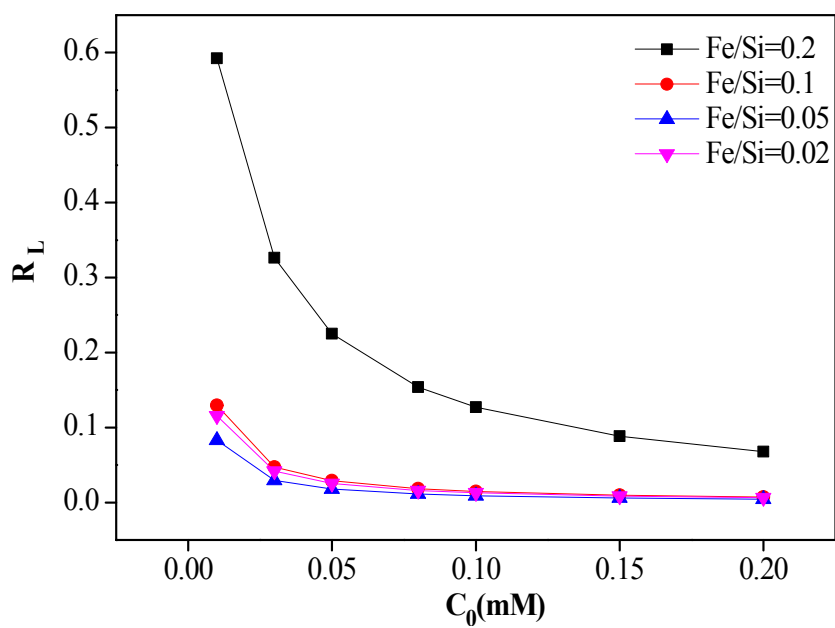


Fig. S2. Experimental data of separation factor (R_L) of Langmuir.

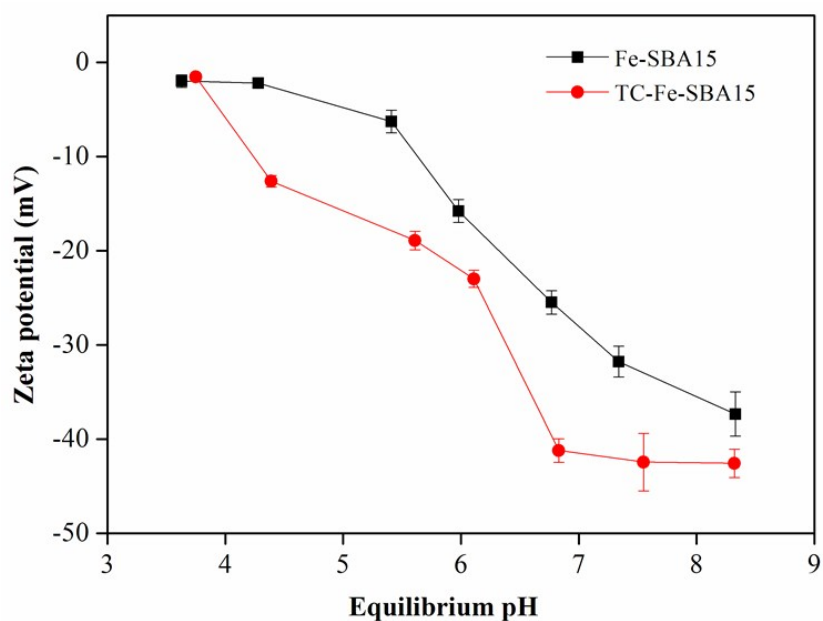


Fig. S3. The Zeta Potential of adsorbent before and after adsorption.

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).