Support Information

Zeolitic imidazolate metal organic framework ZIF-8 with ultra-high adsorption

capacity bound tetracycline in aqueous solution

Chun-sheng Wu, Zhen-hu Xiong*, Chen Li, Jin-miao Zhang

School of Environmental and Municipal Engineering, Tianjin Chengjian University, Tianjin 300384, P. R. China

The postal address: Jinjing road NO. 26, Xiqing district, Tianjin, China

E-Mail Addresses of authors:

Chun-sheng Wu, E-mail address: chunshengwu3011@126.com

Zhen-hu Xiong, E-mail address: zhenhu.xiong@126.com

Chen Li, E-mail address: li_chen_lc@163.com

Jin-miao Zhang, E-mail address: jinmiaozhang@yeah.net

*Corresponding author: Zhen-hu Xiong

Tel: +86 022 23085308

E-mail address: zhenhu.xiong@126.com

The characterization of MWCNTs and PAC

Multiwalled carbon nanotubes (MWCNTs) and powdered activated carbon (PAC) were purchased from Jiang Tian Chemical Technology Co., Ltd. (Tianjin, China). The properties of these two materials were provided as follows:



Figure S1. The TEM image of MWCNTs.



Figure S2. The SEM images of PAC.

The transmission electron microscopy (TEM) image of MWCNTs was obtained by Philips CM10 transmission electron microscope at 100KV. The SEM images of PAC were recorded on a JSM-7800F field emission scanning electron microscope, and the accelerating voltage is 2.0 KV.

Nitrogen adsorption-desorption isotherms of MWCNTs and PAC were conducted on a Surface Area and Porosity Analyzer (Micromeritics, Tristar II 3020). The textural properties of MWCNTs and PAC were obtained based on the Brunauer-Emmett-Teller (BET) method and the Bopp-Jancso-Heinzinger (BJH) method. The specific results are summarized in Table S1.

Adsorbent	BET surface area	Total pore volume	Average pore diameter
	(m^{2}/g)	(m ³ /g)	(nm)
MWCNTs	307.85	0.648	2.195
PAC	729.27	0.393	2.153

Table S1 N₂ adsorption data of MWCNTs and PAC.