

Highly Dispersed and Stable Nano Zero-Valent Iron Doped Electrospun Carbon Nanofibers Composite for Aqueous Hexavalent Chromium Removal

Qijian Niu^{1#}, Meili Liu^{2#}, Longyang Fang², Yangyang Yu², Liang Cheng^{2,3*}, Tianyan You^{1*}

1. Key Laboratory of Modern Agriculture Equipment and Technology, School of Agricultural Engineering, Jiangsu University, Zhenjiang, Jiangsu, 212013, China

2. School of Environment and Safety Engineering, Jiangsu University, Zhenjiang, Jiangsu, 212013, China

3. School of Civil and Mechanical Engineering, Curtin University, Perth, 6102, Australia

The two authors who contributed equally to the work should be considered co-first authors.

* Corresponding authors: Liang Cheng E-mail: clcheng@ujs.edu.cn
Tianyan You E-mail: youty@ujs.edu.cn

Table S1. The EDS survey of 60%-nZVI-CNFs.

Elements	Weight percentage (%)	Atomic percentage (%)
C K	73.97	86.14
O K	11.77	10.29
Fe K	14.26	3.57
Total	100.00	100.00

Fig. S1 The XPS survey (A); Fe_{2p} XPS spectra (B); Cr_{2p} XPS spectra (C) of nZVI-CNFs reaction with pure water.

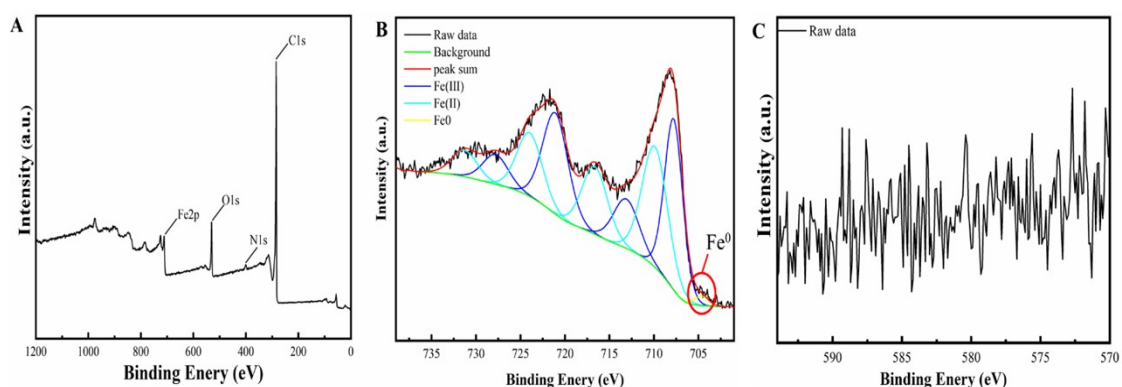


Table S2. The element content of nZVI-CNFs in different reaction conditions.

Elements	Atomic %		
	Before reaction	Reaction in water	Reaction in Cr(VI) solution
C1s	86.28	63.04	56.66
N1s	5.76	1.54	2.56
O1s	7.06	15.71	29.04
Fe2p	0.90	19.64	1.38
Cr2p	0	0.07	10.36

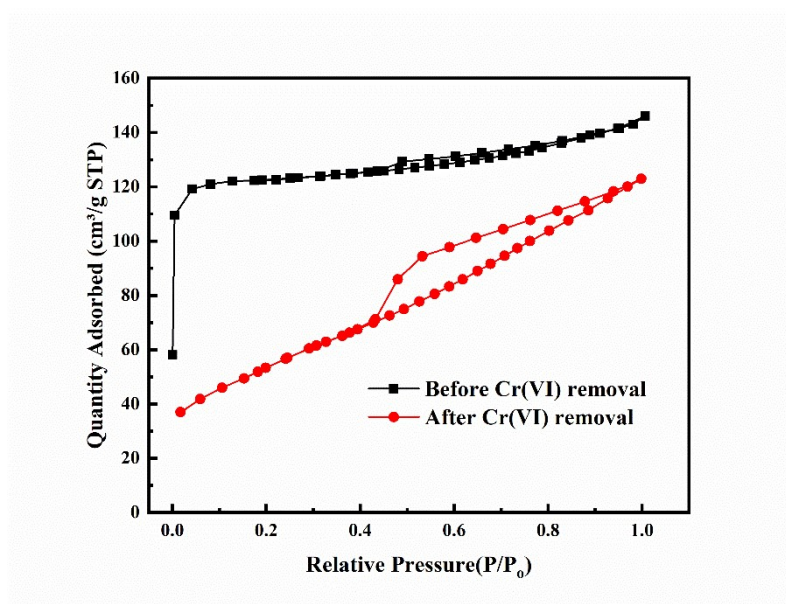


Fig. S2 Nitrogen adsorption and desorption curve before and after Cr(VI) removal.