

Supporting information

Porous environment friendly Chitosan-ZIFs composite fibers for dyes adsorption

Xuebin Hou^{a,b,c}, Wei Chen^a, Meihong Fan^{a,b,c}, Chen Shi^{a*}

a. College of Textile Science and Engineering, Zhejiang Sci-Tech University, Hangzhou, Zhejiang
Province 310018, PR China

b. Zhejiang Sci-Tech University Shengzhou Innovation Research Institute, Shaoxin, Zhejiang Province
310018, PR China

c. Zhejiang Sci-Tech University Tongxiang Innovation Research Institute, Jiaxin, Zhejiang Province
310018, PR China

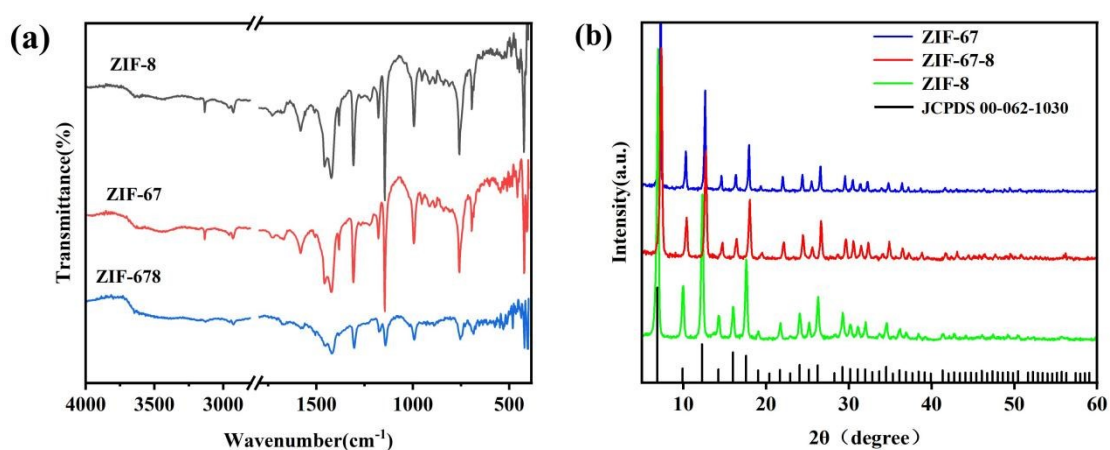


Figure S1 FTIR spectra and XRD patterns of ZIF-67, ZIF-8 and ZIF-67-8

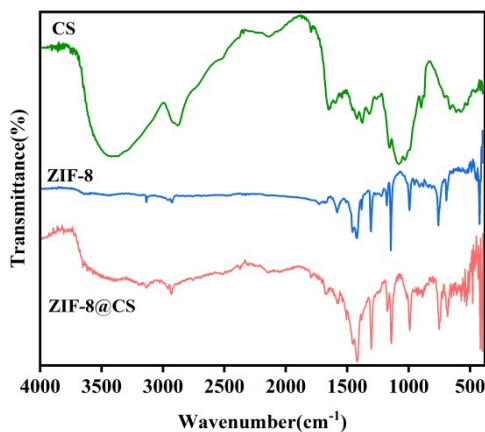
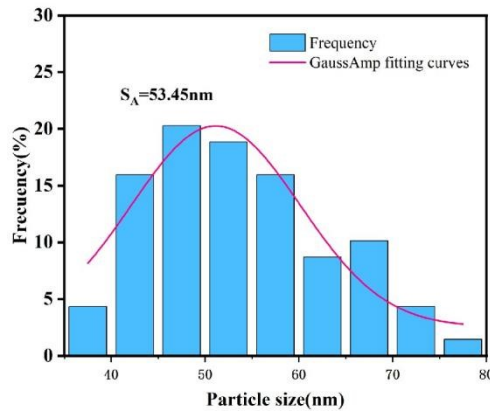
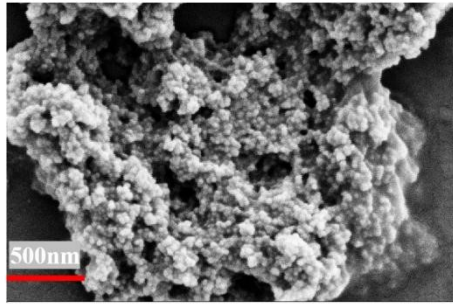


Figure S2 FTIR spectra of CS, ZIF-8 and ZIF-8@CS

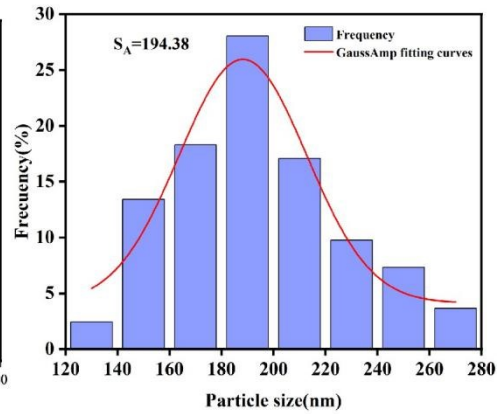
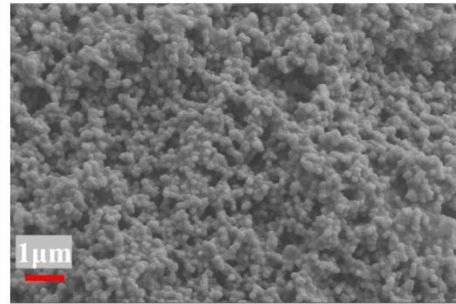
(a) Average particle size: 53.45nm

$Zn^{2+}:2\text{-Methylimidazole}=1:2$



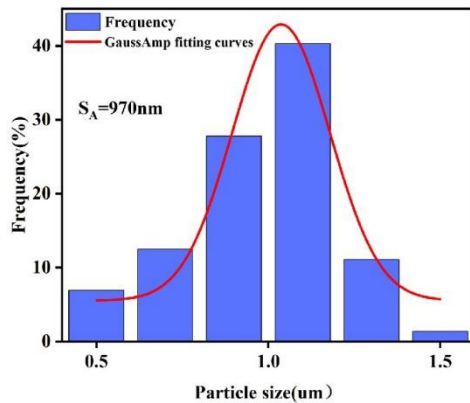
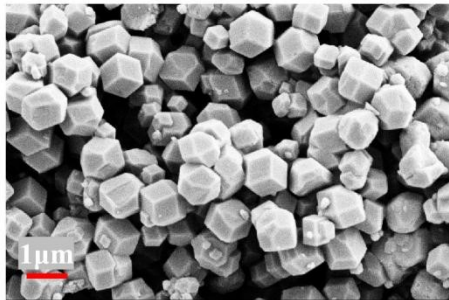
(b) Average particle size: 194.38nm

$Zn^{2+}:2\text{-Methylimidazole}=1:4$



(c) Average particle size: 970.44nm

$Zn^{2+}:2\text{-Methylimidazole}=1:6$



(d) Average particle size: 208.78nm

$Zn^{2+}:2\text{-Methylimidazole}=1:8$

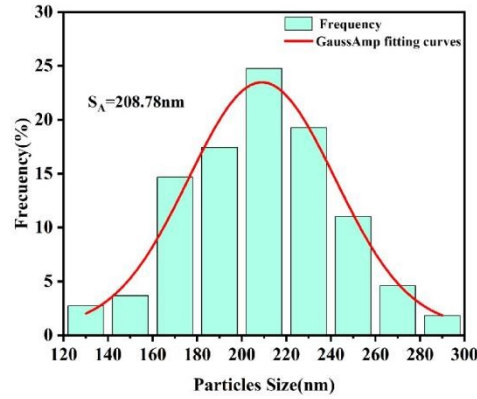
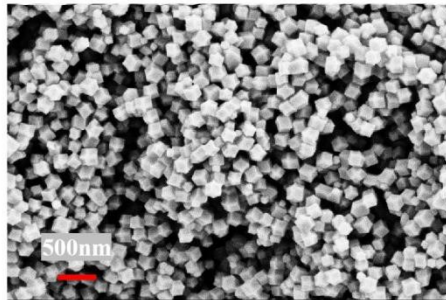


Figure S3 Comparison of the particle size of ZIF-8 nanomaterials prepared by different ligand ratio systems

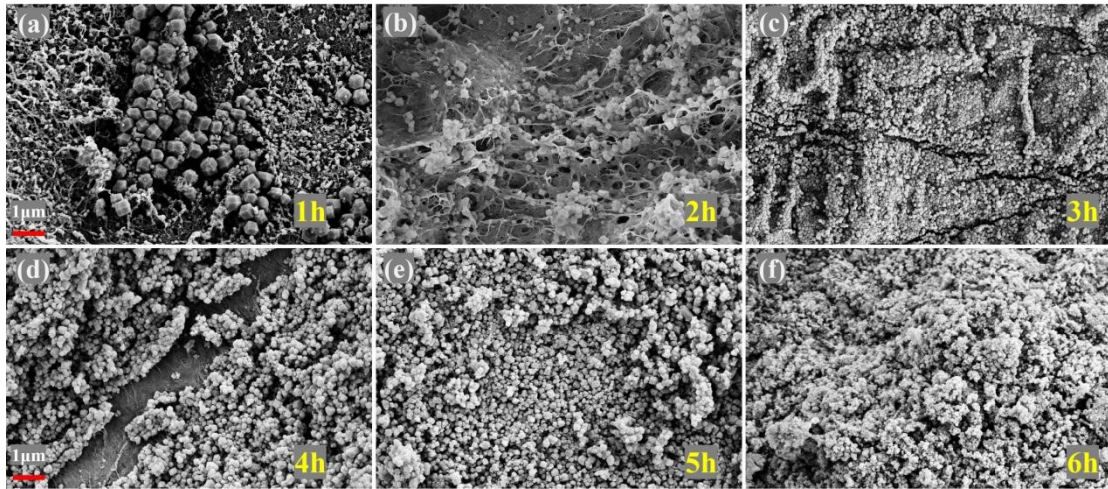


Figure S4 SEM images of ZIF-8@CS composite fibers prepared by different reaction time

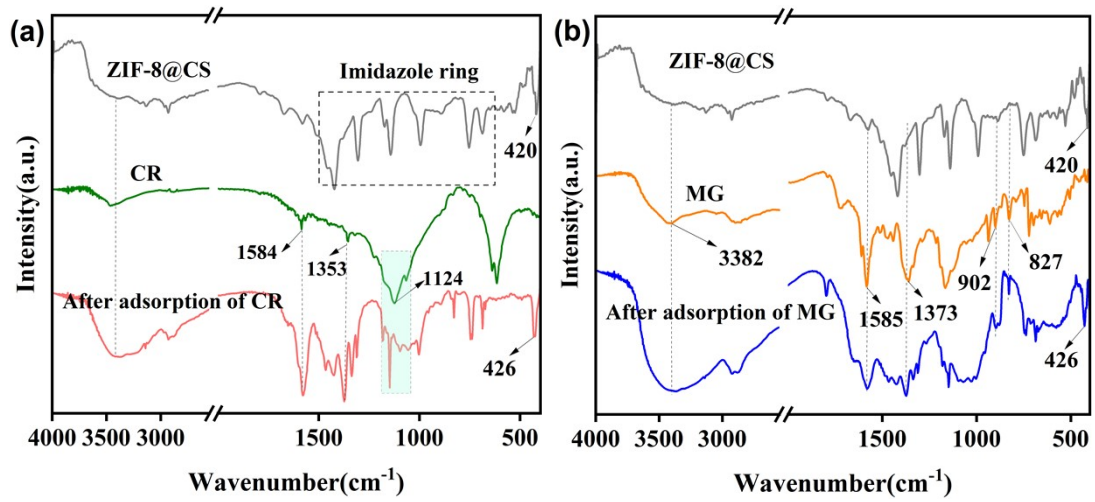


Figure S5 FTIR patterns of ZIF-8@CS before and after CR and MG adsorption

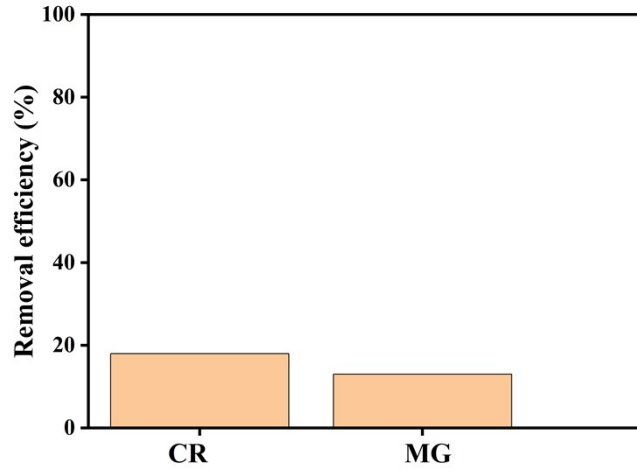


Figure S6 The adsorption of CS fibers for CR and MG

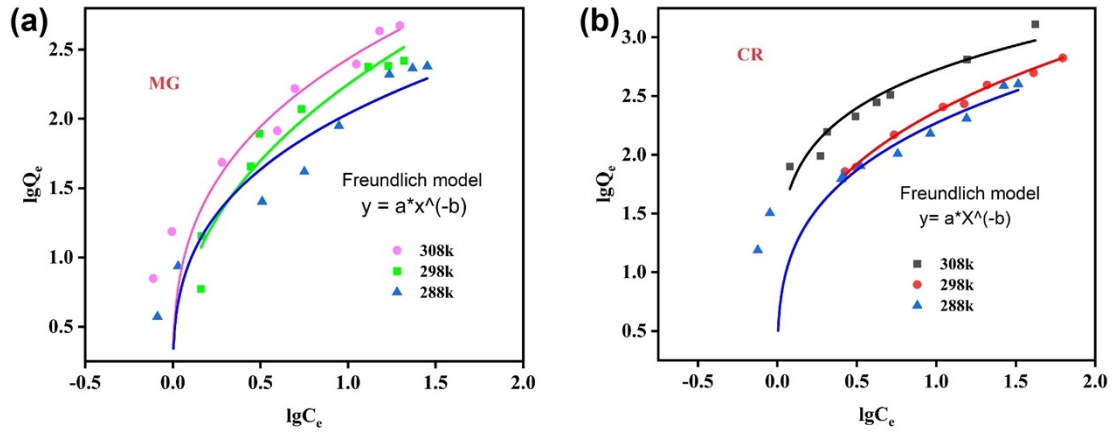


Figure S7. Non-linear Freundlich model fitting plots for MG and CR adsorption isotherm