Supporting information for

## "The adsorption performance of polyaniline/ZnO synthesized through two-step method"

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## 1. FTIR

Figure S1 displayed the FTIR spectra of all the sample including ZnO,PANI and PANI/ZnO. As Figure S1 shown, the peaks located at 1623 and 1363 $cm^{-1}$ were attributed to the bending vibration of –OH on the surface or bridging -OH of ZnO, and the characteristic peak of ZnO at 490 $cm^{-1}$ belonged to the stretching vibration of Zn-O (seen in Figure S1a); the peaks located at 1616 and 1492 $cm^{-1}$ were attributed to the stretching vibration of C=C on quinone ring and benzene ring, respectively; the peak at 1384 $cm^{-1}$ corresponded to the stretching vibration of C-N on aromatic amines from secondary structure; the peak at 1153 $cm^{-1}$ was attributed to the bending vibration of aromatic C-H; the peak at 831 $cm^{-1}$ was caused by the out of plane deformation of C-H on 1,4-disubstituted benzene ring (seen in Figure S1b). Compared to the above analysis, it was obtained that the the peaks of PANI/ZnO was attributed to the PANI and ZnO.
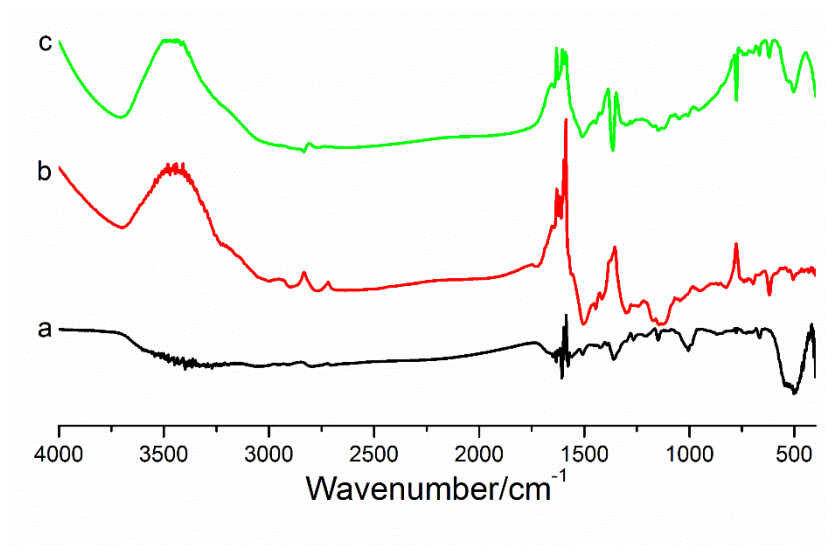


Figure S1 FTIR spectra of ZnO (a)，PANI (b) and PANI/ZnO (c)