

Supporting Information

Characterization

X-ray diffraction patterns (XRD) were got on a Shimadzu XRD-7000S diffractometer with $\text{Cu}_{k\alpha}$ radiation ($\lambda=1.548\text{\AA}$) from 20 to 80°. Fourier transform infrared spectra (FTIR) were obtained on a Bruker TENSOR 27 spectrometer. The measurement of PANI coating shells was proceeded on a Nano Measurer software. Field emission scanning electron microscopy (FE-SEM) images were generated with JEOL JSM-6700F microscope. Samples dispersed in ethanol were deposited onto silicon wafers and sputtered with platinum by a JFC-1600 auto fine coater at a current of 20mA for 300s before observation.

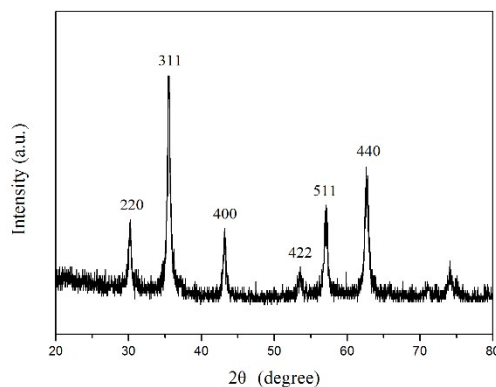
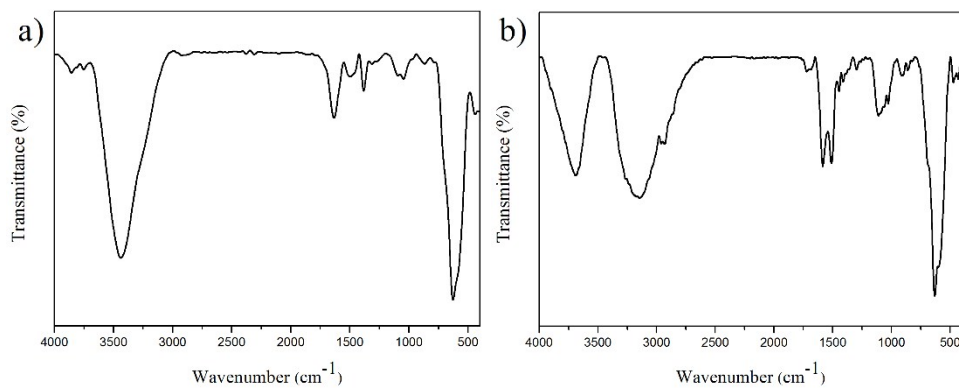


Figure S1. XRD pattern of Fe₃O₄ microspheres.



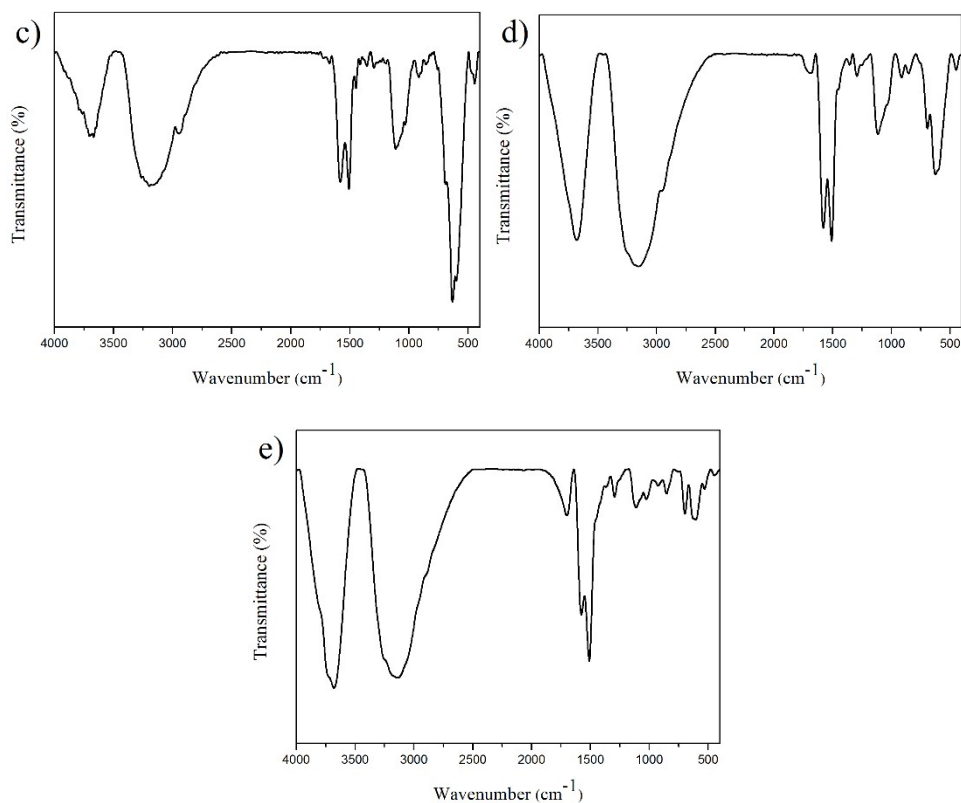


Figure S2. FTIR spectra of PANI-coated Fe_3O_4 microspheres chains (PFMC) composites obtained with different dosages of aniline: (a): 0.050mL, (b): 0.10mL, (c): 0.20mL, (d): 0.25 mL, (e): 0.30mL.

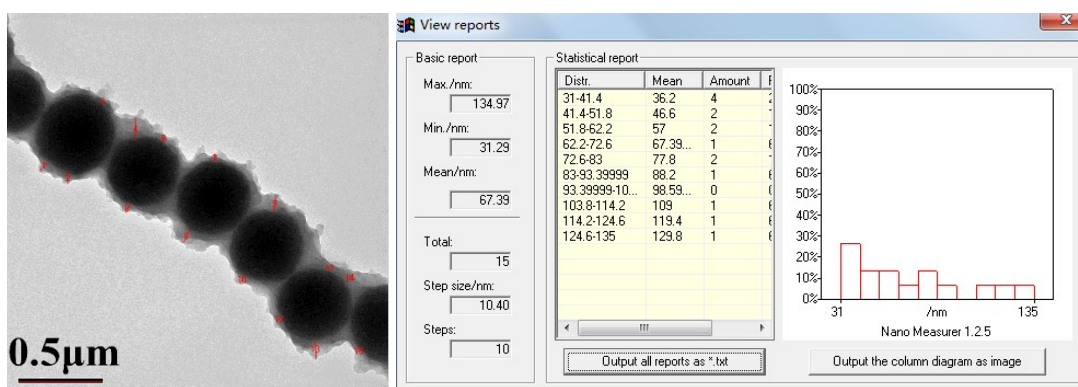


Figure S3. (a) TEM image of PFMC composites (figure 4 (c2)) with the measurement of PANI coating shell, (b) the view reports about the measurement results.

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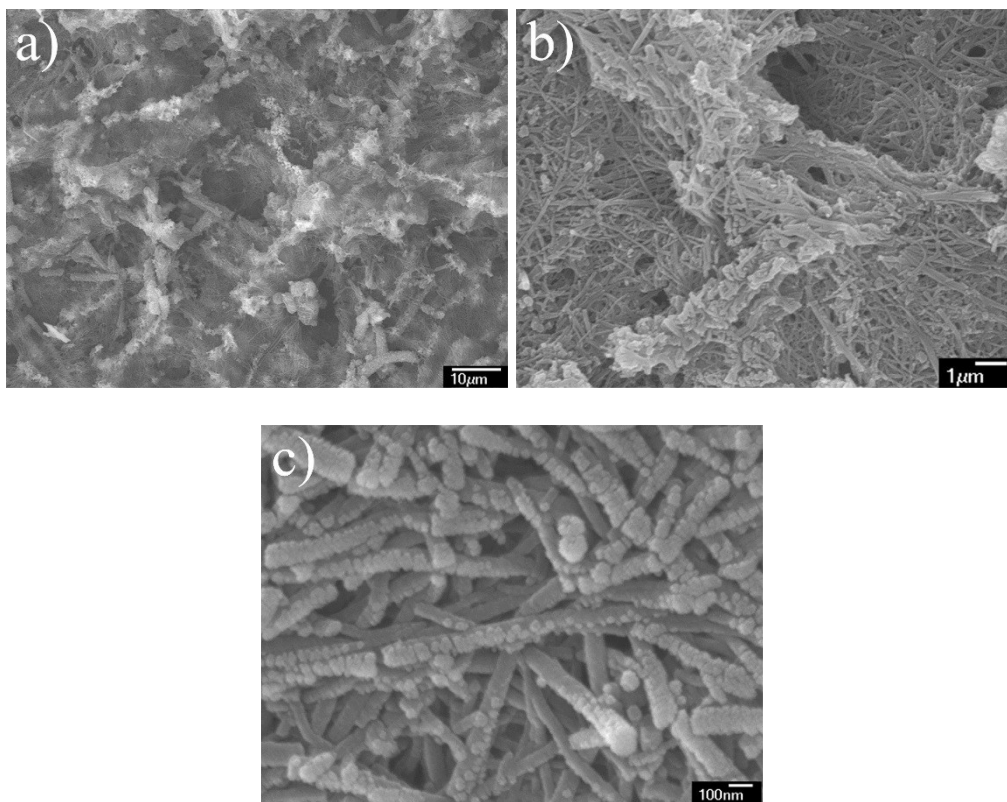


Figure S4. SEM images of PFMC composites and PANI nanofibers at different magnifications (aniline: 0.50mL).