Electronic Supplementary Information for:

Polyacrylonitrile/polyaniline core/shell nanofiber mat for removal of hexavalent chromium from aqueous solution and the mechanism study

Jianqiang Wang^a, Kai Pan^{a,b}*, Emmanuel P. Giannelis^{b,c}, and Bing Cao^a*

^a Key laboratory of carbon fiber and functional polymers, Ministry of Education,

Beijing University of Chemical Technology, Beijing, 100029, China

^b Department of Materials Science and Engineering, Cornell University, Ithaca, NY,

USA

^c Center for Refining & Petrochemicals, KFUPM, Dhahran-31261, Saudi Arabia



Fig. S1 Optical image of PAN and PAN/PANI nanofiber mat.





Fig. S2 Satistical results of the diameter for the pure PAN nanofibers (a), and PAN/PANI nanofibers prepared at 35 $^{\circ}$ C (b), 16 $^{\circ}$ C (c), and 0 $^{\circ}$ C (d).

The average diameter of PAN and PAN/PANI nanofiber was calculated through the measurement of 50 single nanofiber. The diameter of the single nanofiber was measured by using the soft of Image-Pro Plu (Version 6.0) via the SEM images.



Fig. S3 Adsorption capacity of PAN/PANI nanofiber mat prepared at different temperature.



Fig. S4 The morphology of PAN/PANI nanofiber mats after regeneration for 5 times using of

0.002~M (a), 0.01~M (b), and 0.05~M (c) NaOH concentration.

	PAN nanofiber mat	PAN/PANI nanofiber mat
Porosity	80%	70%

Tab. S1 Porosity of PAN and PAN/PANI nanofiber mat.

The porosity of the nanofiber mat was studied by mercury intrusion porosimetry.