## Electronic Supplementary Material (ESI)

## Article

## Functionalized Graphene Networks on Electrospun 3D Scaffold for Ultrasensitive NO<sub>2</sub> Gas Sensor

## Bin Zou<sup>1</sup>, Yunlong Guo<sup>1,2</sup>, Nannan Shen<sup>2</sup>, Anshan Xiao<sup>1</sup>, Mingjun Li<sup>1</sup>, Liang Zhu<sup>1,\*</sup>, Pengbo Wan<sup>2</sup>, Xiaoming Sun<sup>2,\*</sup>

- <sup>1</sup> State Key Laboratory of Safety and Control for Chemicals, SINOPEC Research Institute of Safety Engineering, Shandong Qingdao 266101, P.R. China; zoub.qday@sinopec.com (B. Z.); yunlong46@126.com (Y. G.); xiaoas.qday@sinopec.com (A. X.); limj.qday@sinopec.com (M. L.); zhul.qday@sinopec.com (L. Z.)
- <sup>2</sup> State Key Laboratory of Chemical Resource Engineering, P.O. Box 98, Beijing University of Chemical Technology, Beijing 100029, P.R. China; yunlong46@126.com (Y. G.); shen\_frank@126.com (N. S.); pbwan@mail.buct.edu.cn (P. W.); sunxm@mail.buct.edu.cn (X. S.)
- Correspondence: zhul.qday@sinopec.com (L. Z.); sunxm@mail.buct.edu.cn (X. S.); Tel.:+86-10-64448751 (X. S.)



Figure S1. SEM image of electrospun PAN onto nylon window screens for 0.5 h.



**Figure S2.** SEM images of electrospun PAN onto nylon window screens for (a) 0.5 h, (b) 1.0 h, and (c) 1.5 h, respectively.



Figure S3. TEM image of SFRGO.



**Figure S4.** SEM images of SFRGO wrapping onto the electrospun PAN nanofibers with electrospinning time at (a) 0 h, (b) 0.5 h, (c) 1.0 h, (d) 1.5 h.



Figure S5. The EDX spectra of SFRGO.



Figure S6. The XPS spectra of SFRGO.



Figure S7. Raman spectra of SFRGO and rGO.



**Figure S8.** Sensing responses of SFRGO networks wrapped onto the electrospun PAN nanofiber scaffolds with different electrospinning time.