



Xu Xiao, Ph.D.

Address: A.J. Drexel Nanomaterials Institute,

Materials Science and Engineering, Drexel University,

3141 Chestnut Street, Philadelphia, PA 19104

Email: xx58@drexel.edu; xu.xiao1989@gmail.com

Google scholar: <https://scholar.google.com.hk/citations?user=neE3h2QAAAAJ&hl=en>

Educational Background

- 09/2011-06/2016, *PhD of Physical Electronics*
Wuhan National Laboratory for Optoelectronics (WNLO), Department of Optical and Electronic Information
Huazhong University of Science and Technology (HUST)
Supervisor: Prof. Jun Zhou
- 09/2013-11/2013, *Visiting student*
Drexel University
Supervisor: Prof. Yury Gogotsi
- 09/2007-06/2011, *Bachelor of Physics*
Department of Physics, HUST

Research Experience

- | | |
|--------------------|---|
| 2016.12-
Now | ▪ A.J. Drexel Nanomaterials Institute, Material Science and Engineering, Drexel University
Supervisor: Prof. Yury Gogotsi
Position: Postdoctoral researcher
Project: Synthesis of novel two-dimensional transition metal carbides and nitrides for energy storage and beyond |
| 2016.7-
2016.12 | ▪ WNLO, HUST
Supervisor: Prof. Jun Zhou
Position: Research Associate
Project: Fundamental study of metal oxide nanostructures for supercapacitor |
| 2011.9-
2016.6 | ▪ WNLO, Department of Optical and Electronic Information, HUST
Supervisor: Prof. Jun Zhou
Position: PhD candidate
Project: Structure design and modification of transition metal oxides for pseudocapacitive energy storage |
| 2010.04-
2011.9 | ▪ WNLO, Department of Optical and Electronic Information, HUST
Supervisor: Prof. Jun Zhou
Position: Undergraduate student
Project: High-temperature synthesis of tungsten oxide nanowires |

Publications

Cited times: 4721, h-index: 24.

Selected publications

1. **Xiao, X.**; Wang, H.; Bao, W.; Urbankowski, P.; Yang, L.; Yang, Y.; Maleski, K.; Cui, L.; Billinge, S. J. L.; Wang, G.; Gogotsi, Y., *Adv. Mater.*, **2019**, just accepted.
2. **Xiao, X.**; Urbankowski, P.; Hantanasirisakul, K.; Yang, Y.; Sasaki, S.; Yang, L.; Chen, C.; Wang, H.; Miao, L.; Tolbert, S.; Billinge, S.; Abruña, H.; May, S.; Gogotsi, Y., *Adv. Func. Mater.*, **2019**, 29, 1809001.
3. **Xiao, X.**; Wang, H.; Urbankowski, P.; Gogotsi, Y. *Chem. Soc. Rev.*, **2018**, 47, 8744-8765.
4. **Xiao, X.**; Yu, H.; Jin, H.; Wu, M.; Fang, Y.; Sun, J.; Hu, Z.; Li, T.; Wu, J.; Huang, L.; Gogotsi, Y.; Zhou, J., *ACS Nano*, **2017**, 11, 2180. **(ESI highly cited paper)**
5. **Xiao, X.**; Song, H.; Lin, S.; Zhou, Y.; Zhan, X.; Hu, Z.; Zhang, Q.; Sun, J.; Yang, B.; Li, T.; Jiao, L.; Zhou, J.; Tang, J.; Gogotsi, Y. *Nat. Commun.*, **2016**, 7, 11296. **(ESI highly cited paper, reports and mentions by 23 news articles, such as Materials Today, Nanowerk, Science Daily, Yahoo...)**
6. **Xiao, X.**; Zhang, C.; Lin, S.; Huang, L.; Hu, Z.; Cheng, Y.; Li, T.; Qiao, W.; Long, D.; Huang, Y.; Mai, L.; Gogotsi, Y.; Zhou, J., *Energy Storage Mater.*, **2015**, 1, 1-8.
7. **Xiao, X.**; Peng, Z.; Chen, C.; Zhang, C.; Beidaghi, M.; Yang, Z.; Wu, N.; Huang, Y.; Miao, L.; Gogotsi, Y.; Zhou, J., *Nano Energy*, **2014**, 9, 355-363.
8. **Xiao, X.**; Peng, X.; Jin, H.; Li, T.; Zhang, C.; Gao, B.; Yuan, L.; Hu, B.; Huo, K.; Zhou, J., *Adv. Mater.*, **2013**, 25, 5091-5097. **(ESI highly cited paper)**
9. **Xiao, X.**; Li, T.; Peng, Z.; Jin, H.; Zhong, Q.; Hu, Q.; Yao, B.; Luo, Q.; Zhang, C.; Gong, L.; Chen, J.; Gogotsi, Y.; Zhou, J., *Nano Energy*, **2013**, 6, 1-9. **(ESI highly cited paper, reported by Materials Today)**
10. **Xiao, X.**; Ding, T.; Yuan, L.; Shen, Y.; Zhong, Q.; Zhang, X.; Cao, Y.; Hu, B.; Zhai, T.; Gong, L.; Chen, J.; Tong, Y.; Zhou, J.; Wang, Z. L., *Adv. Energy Mater.*, **2012**, 2, 1328-1332. **(ESI highly cited paper)**
11. **Xiao, X.**; Li, T.; Yang, P.; Gao, Y.; Jin, H.; Ni, W.; Zhan, W.; Zhang, X.; Cao, Y.; Zhong, J.; Gong, L.; Yen, W.-C.; Mai, W.; Chen, J.; Huo, K.; Chueh, Y.-L.; Wang, Z. L.; Zhou, J., *ACS Nano*, **2012**, 6, 9200-9206. **(ESI highly cited paper)**
12. **Xiao, X.**; Yuan, L.; Zhong, J.; Ding, T.; Liu, Y.; Cai, Z.; Rong, Y.; Han, H.; Zhou, J.; Wang, Z. L., *Adv. Mater.* **2011**, 23, 5440-5444. **(ESI highly cited paper)**
13. Yang, J.†; **Xiao, X.**†; Gong, W.; Zhao, L.; Li, G.; Jiang, K.; Ma, R.; Rummeli, M. H. ; Li, F.; Sasaki, T.; Geng, F., *Angew. Chem. Int. Ed.*, **2019**, 58, 8740-8745. **(co-first author)**
14. Yu, H.†; Yang, X.†; **Xiao, X.**†; Chen, M.; Zhang, Q.; Huang, L.; Wu, J.; Li, T.; Chen, S.; Song, L.; Gu, L.; Xia, B. Y.; Feng, G.; Li, J.; Zhou, J., *Adv. Mater.*, **2018**, 30, e1805655. **(co-first author)**
15. Hu, Z.†; **Xiao, X.**†; Jin, H.†; Li, T.; Chen M.; Liang Z.; Guo Z.; Li J.; Wan J.; Huang L.; Zhang Y.; Feng G.; Zhou J. *Nat. Commun.*, **2017**, 8, 15630. **(co-first author) (ESI highly cited paper)**
16. Li T.†; Hu, Z.†; **Xiao, X.**†; Yu, H.; Huang, L.; Zhou, J., *ACS appl. mater. interface.*, **2017**, 9, 41233-41238. **(co-first author)**
17. Zhang, Q.†; **Xiao, X.**†; Zhao, R.; Lv, D.; Xu, G.; Lu, Z.; Sun, L.; Lin, S.; Gao, X.; Zhou, J.; Jin, C.; Ding, F.; Jiao, L., *Angew. Chem. Int. Ed.* **2015**, 54, 8957-8960. **(co-first author)**
18. Xu, D. F.†; **Xiao, X.**†; Cai, J.; Zhou, J.; Zhang, L. N., *J. Mater. Chem. A*, **2015**, 3, 16424-16429. **(co-first author)**

19. Hu, Z.†; **Xiao, X.†**; Huang, L.†; Chen, C.; Li, T.; Su, T.; Cheng, X.; Miao, L.; Zhang, Y.; Zhou, J., *Nanoscale*, **2015**, 7, 16094-16099. (co-first author)
20. Yuan, L.†; **Xiao, X.†**; Ding, T.; Zhong, J.; Zhang, X.; Shen, Y.; Hu, B.; Huang, Y.; Zhou, J.; Wang, Z. L., *Angew. Chem. Int. Ed.* **2012**, 51, 4934-4938. (co-first author) (ESI highly cited paper)

Other publications

21. Zhang, X.; Gong, L.; Liu, K.; Cao, Y.; **Xiao, X.**; Sun, W.; Hu, X.; Gao, Y.; Chen, J.; Zhou, J.; Wang, Z. L., *Adv. Mater.* **2010**, 22, 5292-5296. (ESI highly cited paper)
22. Yuan, L.; Lu, X. H.; **Xiao, X.**; Zhai, T.; Dai, J.; Zhang, F.; Hu, B.; Wang, X.; Gong, L.; Chen, J.; Hu, C.; Tong, Y.; Zhou, J.; Wang, Z. L., *ACS Nano* **2012**, 6, 656-661. (ESI hot paper, report and comment by Rodney Ruoff on Chemical & Engineering news)
23. Yang, P., **Xiao, X.**, Li, Y., Ding, Y., Qiang, P., Tan, X., Mai, W., Lin, Z., Wu, W., Li, T., Jin, H., Liu, P., Zhou, J., Wong, C. P., Wang, Z. L., *ACS Nano* **2013**, 7, 2617-2626. (ESI highly cited paper)
24. Yao, B.; Yuan, L.; **Xiao, X.**; Zhang, J.; Qi, Y.; Zhou, J.; Zhou, J.; Hu, B.; Chen, W.; *Nano Energy* **2013**, 2, 1071-1078.
25. Hu, Z.; **Xiao, X.**; Chen, C.; Li, T.; Huang, L.; Zhang, C.; Su, J.; Miao, L.; Jiang, J.; Zhang, Y.; Zhou, J.; *Nano Energy* **2015**, 11, 226-234.
26. Cheng, Y.; Huang, L.; **Xiao, X.**; Yao, B.; Yuan, L.; Li, T.; Hu, Z.; Wang, B.; Wan, J.; Zhou, J., *Nano Energy* **2015**, 15, 66-74. (ESI highly cited paper)
27. Ge, D.; Yang, L.; Fan, L.; Zhang, C.; **Xiao, X.**; Gogotsi, Y.; Yang, S., *Nano Energy* **2015**, 11, 568-578.
28. Huang, L.; Gao, X.; Dong, Q.; Hu, Z. M.; **Xiao, X.**; Li, T. Q.; Cheng, Y. L.; Yao, B.; Wan, J.; Ding, D.; Ling, Z.; Qiu, J. S.; Zhou, J., *J. Mater. Chem. A* **2015**, 3, 17217-17223.
29. Luo, Q.-P.; Huang, L.; Gao, X.; Cheng, Y.; Yao, B.; Hu, Z.; Wan, J.; **Xiao, X.**; Zhou, J., *Nanotechnology* **2015**, 26, 304004.
30. Sun, Y.; Sills, R. B.; Hu, X.; Seh, Z. W.; **Xiao, X.**; Xu, H.; Luo, W.; Jin, H.; Xin, Y.; Li, T.; Zhang, Z.; Zhou, J.; Cai, W.; Huang, Y.; Cui, Y., *Nano Lett.* **2015**, 15, 3899-906. (ESI highly cited paper)
31. Li, T.; Beidaghi, M.; **Xiao, X.**; Huang, L.; Hu, Z.; Sun, W.; Chen, X.; Gogotsi, Y.; Zhou, J., *Nano Energy* **2016**, 26, 100.
32. Yao, B.; Huang, L.; Zhang, J.; Gao, X.; Wu, J.; Cheng, Y.; **Xiao, X.**; Wang, B.; Li, Y.; Zhou, J., *Adv. Mater.* **2016**, 28, 6353.
33. Zhang, C.; Beidaghi, M.; Naguib, M.; Lukatskaya, M. R.; Zhao, M.-Q.; Dyatkin, B.; Cook, K. M.; Kim, S. J.; Eng, B.; **Xiao, X.**; Long, D.; Qiao, W.; Dunn, B.; Gogotsi, Y., *Chem. Mater.* **2016**, 28, 3937.
34. Wan, J.; Yao, X.; Gao, X.; **Xiao, X.**; Li, T.; Wu, J.; Sun, W.; Hu, Z.; Yu, H.; Huang, L.; Liu, M.; Zhou, J., *Adv. Func. Mater.* **2016**, 26, 7263-7270.
35. Li, T.; Wu, J.; **Xiao, X.**; Zhang, B.; Hu, Z.; Zhou, J.; Yang, P.; Chen, X.; Wang, B.; Huang, L., *RSC Adv.* **2016**, 6, 13914-13919.
36. Cheng, Y.; Huang, L.; **Xiao, X.**; Yao, B.; Hu, Z.; Li, T.; Liu, K.; Zhou, J., *J. Power Source* **2016**, 327, 488-494.
37. Wang, H.; Ouyang, L.; Zou, G.; Sun, C.; Hu, J.; **Xiao, X.**; Gao, L., *ACS Catalysis* **2018**, 9529-9536.
38. Yang, J.; **Xiao, X.**; Chen, P.; Zhu, K.; Cheng, K.; Ye, K.; Wang, G.; Cao, D.; Yan, J., *Nano Energy* **2019**, 58, 455-465.
39. Li, J.; Levitt, A.; Kurra, N.; Juan, K.; Noriega, N.; Xiao, X.; Wang, X.; Wang, H.; Alshareef, H. N.; Gogotsi, Y., *Energy Storage Mater.*, **2019**, 10.1016/j.ensm.2019.04.028.

Conference Presentations

1. 2018 MS&T conference in Columbus, Ohio. Oct 16, 2018. Invited talk.
2. The first MXene international conference in Changchun, China. May 25, 2018. Oral.
3. Seminar in University of Petroleum in Qingdao. May 11, 2018. Invited talk.
4. Seminar in Dalian University of Science and Tech. May 09, 2018. Invited talk.
5. Seminar in Jilin University. May 07, 2018. Invited talk.
6. 2018 Energy materials meeting in Tianjin, China. April 26, 2018. Invited talk.
7. Seminar in BUCT. April 25, 2018. Invited talk.
8. Seminar in Yangzhou University. April 22, 2018. Invited talk.
9. Seminar in Huazhong University of Sci and Tech (HUST). April 16, 2018. Invited talk.
10. 2017 MRS fall meeting in Boston, MA. Nov 30, 2017. Oral.
11. 68th Annual ISE Meeting in Providence, RI, USA. Oct. 2017. Keynote talk.
12. 2014 MRS fall meeting in Boston, MA. Nov 30, 2014. Poster
13. The 6th International Photonics and OptoElectronics Meetings in Wuhan, China. June 2013. Poster.

Honors and Awards

1. Nomination award of the Excellent Doctoral Dissertation of Chinese Institute of Electronics in 2017
2. Outstanding graduate of Huazhong University of Science and Technology in 2016
3. Graduate representative of Huazhong University of Science and Technology in 2016
4. National Scholarship of China in 2014
5. “Top Ten Graduate in Science” of Huazhong University of Science and Technology in 2013
6. “Best Student Paper Award” of The 6th International Photonics and OptoElectronics Meetings in 2013
7. National Scholarship of China in 2012
8. “Three Goods” graduate of Huazhong University of Science and Technology in 2012

Technical Skills and Expertise

- Skilled for nanomaterials synthesis and characterization process and experienced with data analysis: SEM, TEM, XRD, XPS, BET, X-ray PDF.
- Experienced with fabricating electrical electrodes and cells (supercapacitor and batteries) in glovebox and performing electrical test equipment, including battery cyclers, potentiostats and electrochemical impedance spectroscopy.
- Experience with nanosensor fabrications and measurements.
- Familiar with nanofabrication: photolithography, electron beam evaporation, thermal evaporation, etc.