

# QIU JIANG

## PERSONAL INFORMATION

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## EDUCATION

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MAR 2021 - Associate Professor  
**University of Electronic Science and Technology of China. China**

JUNE 2019 - NOVEMBER 2020 Research Accosiate in ELECTRICAL ENGINEERING  
**University of Cambridge. United Kingdom**  
Advisor: Prof. Andrea Ferrari

JULY 2016 - APRIL 2019 Ph.D. in MATERIAL SCIENCE & ENGINEERING  
**King Abdullah University of Science and Technology. Saudi Arabia**  
Advisor: Prof. Husam N. alshareef

SEPTEMBER 2014 - JULY 2016 Master in MATERIAL SCIENCE & ENGINEERING  
**King Abdullah University of Science and Technology. Saudi Arabia**  
Advisor: Prof. Husam N. alshareef

SEPTEMBER 2010 - JULY 2014 Bachelor in MATERIAL PHYSICS  
**University of Science and Technology of China. China**  
Advisor: Prof. Changfei Zhu

## CURRENT RESEARCH

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- Graphene-Based Battery Materials and Electrochemistry
- Two-dimensional transition metal carbide(MXene) for Energy storage.
- On-Chip energy storage devices for smart electronics

## PROFESSIONAL AFFILIATION AND ACTIVITIES

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- **Membership:** Materials Research Society (MRS)
- **Journal Referee:** Carbon, Energies, Batteries, Sensors et.al
- **Guest Editor:** Frontier in nanotechnology

## PUBLICATION LIST

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1. **Qiu Jiang**, Narendra Kurra, Kathleen Maleski, Yongjiu Lei, Hanfeng Liang, Yizhou Zhang, Yury Gogotsi and Husam N. Alshareef "On-chip MXene Microsupercapacitors for AC-line Filtering Applications." [Advanced Energy Materials](#), 9(2019) 1901061.
2. **Qiu Jiang**, Narendra Kurra, Mohamed Alhabeab, Yury Gogotsi, and Husam N. Alshareef. "All Pseudocapacitive MXene-RuO<sub>2</sub> Asymmetric Supercapacitors." [Advanced Energy Materials](#) 8 (2018) 1703043. (**ESI highly cited paper**)
3. **Qiu Jiang**, Narendra Kurra, Chuan Xia and Husam N. Alshareef. "Hybrid Microsupercapacitors with Vertically Scaled 3D Current Collectors Fabricated using a Simple Cut-and-Transfer Strategy." [Advanced Energy Materials](#) 7 (2017) 1601257.
4. **Qiu Jiang**, Narendra Kurra, and Husam N. Alshareef. "Marker Pen Lithography for Flexible and Curvilinear On-Chip Energy Storage." [Advanced Functional Materials](#) 25 (2015) 4976-4984. (**Back Cover**)
5. **Qiu Jiang**, Changsheng Wu, Zhengjun Wang, Aurelia Chi Wang, Jr-Hau He, Zhong Lin

Wang and Husam N. Alshareef. "MXene Electrochemical Microsupercapacitor Integrated with Triboelectric Nanogenerator as a Wearable Self-charging Power Unit." *Nano Energy* 45 (2018) 266-272. (ESI highly cited paper)

6. **Qiu Jiang**, Yongjiu Lei, Hanfeng Liang, Kai Xi, Chuan Xia, Husam N Alshareef. "Review of MXene electrochemical microsupercapacitors" *Energy Storage Materials* 27 (2020) 78–9579.

7. Pranati Nayak<sup>+</sup>, **Qiu Jiang**<sup>+</sup>, Rajeshkumar Mohanraman, Dalaver Anjum, Mohamed Nejjib Hedhili, and Husam N. Alshareef. "Inherent Electrochemistry and Charge Transfer Properties of Few-Layer Two Dimensional  $Ti_3C_2T_x$  MXene." *Nanoscale*,10 (2018),17030–17037. (Equal contribution) (Front Cover)

8. Narendra Kurra<sup>+</sup>, **Qiu Jiang**<sup>+</sup>, Pranati Nayak<sup>+</sup> and Husam N. Alshareef. "Laser-Derived Graphene: Three-Dimensional Printed Electrodes for Device Applications." *Nano Today*, 24 (2019), 81-102. (Equal contribution)

9. Steven L. Zhang<sup>+</sup>, **Qiu Jiang**<sup>+</sup>, Zhiyi Wu<sup>+</sup>, Wenbo Ding, Lei Zhang, Husam N. Alshareef and Zhong Lin Wang "Energy Harvesting-Storage Bracelet Incorporating Electrochemical Microsupercapacitors Self-charged from a Single Hand Gesture" *Advanced Energy Materials*, (2019), 1900152. (Equal contribution)

10. Shaobo Tu<sup>+</sup>, **Qiu Jiang**<sup>+</sup>, Xixiang Zhang and Husam N. Alshareef. "Giant Dielectric Constant Enhancement in  $Ti_3C_2$  MXene percolated Polymers." *ACS Nano*, 12(2018), 3369-3377. (Equal contribution)

11. Pranati Nayak<sup>+</sup>, **Qiu Jiang**<sup>+</sup>, Narendra Kurra, Xianbin Wang, Ulrich Buttner and Husam N. Alshareef. "Monolithic Laser Scribed Graphene Scaffolds with Atomic Layer Deposited Platinum for the Hydrogen Evolution Reaction." *Journal of Materials Chemistry A* 20422 (2017). (Equal contribution)

12. Narendra Kurra<sup>+</sup>, **Qiu Jiang**<sup>+</sup>, Ahad Syed, Chuan Xia, and Husam N. Alshareef. "Micro-Pseudocapacitors with Electroactive Polymer Electrodes: Toward AC-Line Filtering Applications." *ACS Applied Materials & Interfaces* 8 (2016) 12748-12755. (Equal contribution)

13. Shaobo Tu<sup>+</sup>, **Qiu Jiang**<sup>+</sup>, Junwei Zhang, Xin He, Chenhui Zhang, Qiang Zhang, Peng Li, Mrinal K. Hota, Xixiang Zhang and Husam N. Alshareef "Enhancement of Dielectric Permittivity of  $Ti_3C_2T_x$  MXene/Polymer Composites by Controlling Flake Size and Surface Termination" *ACS Applied Materials & Interface*, 11(2019) 27358 (Equal contribution)

14. Yizhou Zhang<sup>+</sup>, Yang Wang<sup>+</sup>, **Qiu Jiang**<sup>+</sup>, Jehad K.El Demellawi, Hyunho Kim and Husam N. Alshareef. "MXene Printing and Patterned Coating for Device Applications" *Advanced Materials*, 1908486(2020) (Equal contribution)

15. Chuan Xia, Peng Zhu, **Qiu Jiang**, Ying Pan, Wentao Liang, Eli Stavitsk, Husam N. Alshareef Haotian Wang "Continuous production of pure liquid fuel solutions via electrocatalytic CO<sub>2</sub> reduction using solid-electrolyte devices" *Nature Energy*, 4(2019) 776-785

16. Mrinal K. Hota, **Qiu Jiang**, Zhenwei Wang, Zhong Lin Wang, Khaled N. Salama, and Husam N. Alshareef. "Integration of Electrochemical Microsupercapacitors with Thin Film Electronics for On-Chip Energy Storage." *Advanced Materials*, 31(2019) 1807450.

17. Yi-Zhou Zhang, Jehad K. El-Demellawi, **Qiu Jiang**, Gang Ge, Hanfeng Liang, Kanghyuck Lee, Xiaochen Dong and Husam N. Alshareef "MXene Hydrogels" *Chemical Society Review* (2020) Accepted

18. Narendra Kurra, **Qiu Jiang**, and Husam N. Alshareef. "A General Strategy for the Fabrication of High Performance Microsupercapacitors." **Nano Energy** 16 (2015) 1-9.
19. Mrinal K. Hota, **Qiu Jiang**, Yousof Mashraei, Khaled N. Salama and Husam N. Alshareef. "Fractal Electrochemical Microsupercapacitors." **Advanced Electronic Materials** 3 (2017) 1700185.
20. Chuan Xia, **Qiu Jiang**, Chao Zhao, Pierre M. Beaujuge and Husam N. Alshareef. "Asymmetric Supercapacitors with Metal-like Ternary Selenides and Porous Graphene Electrodes." **Nano Energy** 24 (2016) 78-86.
21. Chuan Xia, **Qiu Jiang**, Chao Zhao, Mohamed N. Hedhili and Husam N. Alshareef. "Selenide-Based Electrocatalysts and Scaffolds for Water Oxidation Applications." **Advanced Materials** 28 (2016) 77-85. (ESI highly cited paper)
22. Wenli Zhang, **Qiu Jiang**, Yongjiu Lei, and Husam N. Alshareef "Wettability-Driven Assembly of Electrochemical Microsupercapacitors" **ACS Appl. Mater. Interfaces** 11 (2019) 20905-20914.
23. Shaobo Tu, **Qiu Jiang**, Xixiang Zhang, and Husam N. Alshareef "Solid state MXene based electrostatic fractional capacitors" **Appl. Phys. Lett.** 114 (2019), 232903
24. Kumar Raju, Hyungkyu Han, Dhinesh Babu Velusamy, **Qiu Jiang**, Huachao Yang, Funeka P Nkosi, Nithyadharseni Palaniyandy, Katlego Makgopa, Zheng Bo, Kenneth Ikechukwu Ozoemena " Rational Design of 2D Manganese Phosphate Hydrate Nanosheets as Pseudocapacitive Electrodes" **ACS Energy Letters** 5 (2020) 23-30.
25. Chuan Xia, Yungang Zhou, Dhinesh Babu Velusamy, Abdiaziz A. Farah, Peng Li, **Qiu Jiang**, Ihab N. Odeh, Zhiguo Wang, Xixiang Zhang, and Husam N. Alshareef. "Anomalous Li Storage Capability in Atomically Thin Two-Dimensional Sheets of Nonlayered MoO<sub>2</sub>." **Nano Letters** 18 (2018) 1506-1515.
26. Hanfeng Liang, Chuan Xia, **Qiu Jiang**, Appala N. Gandi, Udo Schwingenschlögl and Husam N. Alshareef. "Low Temperature Synthesis of Ternary Metal Phosphides using Plasma for Asymmetric Supercapacitors." **Nano Energy** 35 (2017) 331-340. (ESI highly cited paper)
27. Chuan Xia, Peng Li, Jun Li, **Qiu Jiang**, Xixiang Zhang, and Husam N. Alshareef. "General Top-Down Ion Exchange Process for the Growth of Epitaxial Chalcogenide Thin Films and Devices." **Chemistry of Materials** 29 (2017) 690-698.
28. Yi-Zhou Zhang, Kang Hyuck Lee, Dalaver H Anjum, Rachid Sougrat, **Qiu Jiang**, Hyunho Kim, Husam N Alshareef "MXenes stretch hydrogel sensor performance to new limits." **Science Advances** 4(2018): eaat0098.
29. Wenli Zhang, Yongjiu Lei, Fangwang Ming, **Qiu Jiang**, Pedro M. F. J. Costa, Husam N. Alshareef "Lignin laser lithography: a direct-write method for fabricating 3D graphene electrodes for microsupercapacitors" **Advanced Energy Materials** 8(2018) 1801840.
30. Wenli Zhang, Yongjiu Lei, **Qiu Jiang**, Fangwang Ming, Pedro M. F. J. Costa, Husam N. Alshareef "3D Laser Scribed Graphene Derived from Carbon Nanospheres: An Ultrahigh-Power Electrode for Supercapacitors" **Small Method** 3(2019) 1900005.
31. Yongjiu Lei, Wenli Zhao, Yizhou Zhang, **Qiu Jiang**, Jr-Hau He, A.J. Baeumner, Otto Wolfbeis, Zhong Lin Wang, Khaled N. Salama and Husam N. Alshareef "A MXene-based wearable biosensor system for high-performance in-vitro perspiration analysis" **Small** 15(2019) 1901190.

32. Jun Tang, Tyler S. Mathis, Narendra Kurra, Asia Sarycheva, Xu Xiao, Mohamed N. Hedhili, **Qiu Jiang**, Husam N. Alshareef, Baomin Xu, Feng Pan, and Yury Gogotsi\* "Tuning the Electrochemical Performance of Titanium Carbide MXene by Controllable In Situ Anodic Oxidation" [Angew.Chem.Int.Ed](#) 58 (2019) 2-9.
33. Kang Hyuck Lee, Yizhou Zhang, **Qiu Jiang**, Hyunho Kim, Abdulkader A Alkenawi and Husam N Alshareef "Ultrasound-Driven Two-Dimensional  $Ti_3C_2T_x$  MXene Hydrogel Generator" [ACS Nano](#) 14 (2020) 3199-3207.
34. Ze Zhang, Jia-Nan Wang, A-Hu Shao, Dong-Gen Xiong, Jian-Wei Liu, Cheng-Yen Lao, Kai Xi, Shi-Yao Lu, **Qiu Jiang**, Ji Yu, Huang-Long Li, Zhen-Yu Yang, R Vasant Kumar "Recyclable cobalt-molybdenum bimetallic carbide modified separator boosts the polysulfide adsorption-catalysis of lithium sulfur battery" [Science China Materials](#) (2020) 1-13.

## LIST OF PRESENTATIONS

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- **2018**: "Integrating MXene Electrochemical Microsupercapacitor with Triboelectric Nanogenerator as a Wearable Self-Charging Power Unit" , Materials Research Society (MRS) Fall Meeting in Boston, USA. **Poster**
- **2018**: "All Pseudocapacitive MXene-RuO<sub>2</sub> Asymmetric Supercapacitors" , Materials Research Society (MRS) Spring Meeting in Phoenix, USA. **Oral**
- **2017**: "Micro-Pseudocapacitors with Electroactive Polymer Electrodes: Toward AC-Line Filtering Applications" Materials Research Society (MRS) Fall Meeting in Boston, USA. **Poster**
- **2015**: "A General Strategy for the Fabrication of High Performance Microsupercapacitors" , 66<sup>th</sup> Annual Meeting of the International Society of Electrochemistry in Taipei, China. **Poster**

## HONORS & AWARDS

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- **2014 - 2019**: Graduate Fellowship. (KAUST)
- **2013**: Outstanding Student Scholarship, Grade 3. (Top 20%, USTC)
- **2012**: Outstanding Student Scholarship, Grade 2. (Top 10%, USTC)
- **2011**: Outstanding Student Scholarship, Grade 3. (Top 20%, USTC)
- **2010**: The 7<sup>th</sup> Yang Ya alumni fund. (2<sup>nd</sup> in chemistry department, USTC)