

SIYAO WANG

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Personal Statement

- Strong polymer background and hands-on experience in polymer synthesis, processing and characterization. Persistence and curiosity in research and enthusiasm in exploring novel ideas.
- Highly self-motivated individual with leadership skills and problem solving capability, an adapter, a quick learner and an excellent team player within an industrial environment.
- Good communication and collaboration skills through coordinating industry advisors. Extensive public speaking experience with the ability to deliver compelling and coherent presentations.

Education

- Ph.D., Chemical & Biomolecular Engineering | North Carolina State University (*GPA 4.0/4.0*) expected May. 2021
- B.S., Polymer Science & Engineering | Zhejiang University, China (*GPA 3.93/4.0*) Jun. 2016

Professional Experience

TE Connectivity Fremont, CA
Material Scientist Intern – Printed Electronics, Corporate Technology May 2019 – Aug. 2019

- Formulated conductive inks and optimized the processing conditions for a scalable printing process.
- Investigated material surface and interface properties and characterized functional materials.
- Delivered the prototype to internal customer ahead of schedule by leading and contributing to the project.

Research Experience

Chemical & Biomolecular Engineering / NC State University Raleigh, NC
Graduate Research Assistant Aug. 2016 – present

- Synthesized and characterized Polymers with Intrinsic Microporosity (PIMs).
- Optimized operating conditions to fabricate PIM microfibers via electrospinning and investigated polymer/solvent interactions to produce fibers with hierarchical structures.
- Developed PIM/PAN/MOF composite fibers with hetero structure through different engineering approaches and evaluated the material functional performance.

Research, Development and Engineering Center / U.S. Army CCDC Soldier Center Natick, MA
Graduate visiting scholar Apr. 2016

- Performed toxic gas permeation tests on porous polymeric fabrics.
- Fabricated flexible and mechanically robust 3D printed structure using polymer blends.

Polymer Science & Engineering / Zhejiang University Hangzhou, China
Undergraduate Research Assistant Aug. 2012 – Jun. 2016

- Assembled rechargeable aluminum-ion batteries with ultralong cycle life and high-rate capability using graphene film cathode.

Selected Awards, Publications and Conference Presentations

- *Student Travel Award* for Chemical and Biological Defense Science & Technology Conference (20 selected nationwide); *Best presentation award* and *Technical Merit Award* within the Nonwovens Institute.
- 4 peer-reviewed publications at *Science Advances*, *ACS Applied Materials & Interfaces*, *Journal of Materials Chemistry A*, *Extreme Mechanics Letters*. <https://scholar.google.com/hk/citations?user=Kbss79MAAAAJ&hl=en>
- Presentations at 3 national conferences including: AICHE, MRS and CBD S&T

Skills and Outreach

- *Analytical Characterization Tools*: SEM, ¹H NMR, FTIR, DSC-TGA, GPC, XRD, EDS, Rheometer, DMA, Instron, profilometer, goniometer, BET, UV-vis.
- *Software Skills*: Origin, LabVIEW, 3DS Max, Microsoft Office.
- *Secretary in Graduate Student Association*, organized team-building events and student seminars in the department. Jul. 2017 – Jul. 2018
- *Volunteer with Habitat for Humanity*, worked side-by-side with Habitat Wake staff, partner families, and community partners to build new homes for our neighborhood.
- *Interests and Affiliations*: cooking, yoga, travel, food photography; member of AICHE, SOR, MRS