

JIAQI YAN

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Education

Ph.D., Chemical and Biomolecular Engineering | North Carolina State University expected May. 2021
B.S., Chemical Engineering (w/honors) | East China University of Science & Technology July 2016

Research Experience

The Nonwovens Institute / NC State University Raleigh, NC
Research Assistant Aug. 2017 – present

- Develop post-polymerization modifications on thermoplastic elastomers.
- Incorporate metallic species into block ionomers for gas/water separation, membrane applications.

Oak Ridge National Lab & Argonne National Lab/ Department of Energy Chicago, IL/Oak Ridge, TN
Research Assistant Jun. 2019

- Visited SNS and HFIR beamlines at ORNL, APS beamlines at ANL.
- Studied neutron and X-ray scattering physics and conducted data analysis from beamline experiments.

Solvay (China) Co., LTD. Shanghai, China
Research and Innovation Intern 2015 – 2016

- Stimulated chemical process and set the original parameters with ASPEN, solved flowsheet problems of convergence and circular flowsheet.
- Controlled primary amine selectivity in nitrile hydrogenations by using lithium hydroxide modified sponge catalyst.

Honors and Awards

- The Vinyl Institute's 2019 Vinyltec Travel Grant Recipient, Society of Plastic Engineers 2019
- Selected for 21st National School on Neutron and X-ray Scattering, Department of Energy 2019
- National Polymer Modifiers & Additives Division Challenge Awards, Society of Plastic Engineers 2019
- Best Poster Award, Schoenborn Graduate Research Symposium, NC State 2019
- Graduate Merit Awards Scholarship, NC State 2017
- Graduation with Honors, College Graduate Excellence Award of Shanghai 2016
- Outstanding Award, *Mitsui* National Chemical Design Competition, China 2016
- Honorable Mention, Mathematical Contest in Modeling (MCM), USA 2015
- Student of the Year, East China University of Science & Technology 2015
- DOW Chemical Scholarship, The Dow Chemical Company, China 2015

Publications

- **Yan, J.**; Spontak, R. J. Toughening Poly(lactic acid) with Thermoplastic Elastomers Modified by Thiol-ene Click Chemistry. *ACS Sustainable Chemistry & Engineering* 2019, 7, 12, 10830-10839.
- Dai, Z.; Deng, J.; Aboukeila, H.; **Yan, J.**; Ansaloni, L.; Spontak, R. J.; Deng, L. Highly CO₂-Permeable Membranes Derived from a Humidified, Post-Submersion Midblock-Sulfonated Multiblock Polymer, *NPG Asia Materials* 2019, 11 (1), 1–7.
- Deng, J.; Dai, Z.; **Yan, J.**; Sandru, M.; Sandru, E.; Spontak, R. J.; Deng, L. Facile and Solvent-Free Fabrication of PEG-Based Membranes with Interpenetrating Networks for CO₂ Separation. *Journal of Membrane Science* 2019, 570–571, 455–463.
- Deng, J.; **Yan, J.**; Tilly, J. C.; Deng, L.; Mineart, K. P.; Spontak, R. J. Incorporation of Metallic Species into Midblock-Sulfonated Block Ionomers. *Macromolecular Rapid Communication* 2018, 39 (22).
- Dai, Z.; Lee, D. T.; Shi, K.; Wang, S.; Barton, H. F.; Zhu, J.; **Yan, J.**; Ke, Q.; Parsons, G. N. Fabrication of Freestanding Metal Organic Framework Predominant Hollow Fiber Mat and Its Potential Applications in Gas Separation and Catalysis. *Submitted*.