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## EDUCATION

**New York University, Polytechnic School of Engineering, New York, NY, USA**
M.S. & Ph.D. in Chemical Engineering (2015)

**Dalian University of Technology, Dalian, Liaoning, China**
B.S. in Chemical Engineering (2007)
Minor in English Literatures (2007)

## WORK EXPERIENCE

**Industry Associate Professor** Fall 2022 - Present

- Director and instructor of Unit Operation Laboratory of Chemical Engineering
- Computing Facilities and Simulation Software
- Undergraduate Academics committee - Curriculum development and student advising.
- Department LinkedIn Group: Alumni Social Network and Marketing

**Industry Assistant Professor** Fall 2016 - Fall 2022
**NYU Tandon School of Engineering, Dept. of Chemical and Biomolecular Engineering (CBE)**

- Instructor of Unit Operation Laboratory of Chemical Engineering
- Faculty Advisor for undergraduate student

**Adjunct Faculty** Fall 2015 - Spring 2016
**NYU Tandon School of Engineering, Dept. of Chemical and Biomolecular Engineering**

- Instructor of Engineering Lab I & II (CBE-UY4113, CBE-UY4213)
- Technical Support for equipment
- Instructor of Aspen Tutorials and Capstone Projects in Senior Design course

**Industry R&D Co-Op** Fall 2013
**IceStone, Concrete Countertop Company, Brooklyn, New York**

- Selected optimal sealers for VOC free countertop and achieved 50% greater reduction ofstain and etching effect from household contamination.
- Originated Imaging-Quantization method with much higher accuracy than currentindustrial solutions of stain and etching tests.

- Regulated experimental standards and protocols for stain and etching research based onnewly developed method and apparatus.
- Wrote technical reports and presented biweekly to update progress and technical adviceto R&D members and marketing managers.

## RESEARCH EXPERIENCE

**Research Faculty** Fall 2016 - Present
**Postdoc** Summer 2016
**NYU Tandon School of Engineering, Optical Characterization Laboratory – PI Dr. Bruce Garetz**
**UC Berkeley, Electrochemical Energy, and Ion Transport Laboratory – PI Dr. Nitash Balsara**

- Novel optical approaches, algorithms, models for nanoscale, microscale structure characterization in block copolymer and electrolyte mixtures.
- Co-advising Ph.D. students (Doctoral Thesis Committee) and intern students for NSF funded research projects.

**Graduate Student - NSF Graduate Research Fellowship** Fall 2010 - Summer 2015
**NYU Polytechnic Institute of Engineering, Optical Characterization laboratory**
**Berkeley Lawrence Berkeley National Laboratory, Material Science Division, Advanced light source, CA (Collaborative)**

- Worked under the guidance by Prof. Bruce Garetz (NYU) and Prof. Nitash Balsara (Berkeley) to study Phase Separation and Microstructure Characterization of block copolymer and lithium salt mixtures for lithium battery electrolytes.
- Modeled and revealed microstructure influence on conductivity for lithium polymer electrolytes
- Developed innovative automated static small angle depolarized light scattering system for fast,high-throughput microstructure characterization.

**Research Assistant** Feb 2009 - Aug 2010
**NYU Polytechnic Institute of Engineering, Bio-interfacial Engineering & Diagnostics laboratory**

- Synthesized and purified ferrocene labeled DNA for electrochemical DNA microarray.
- Built DNA microarray through immobilization of DNA monolayer on differently modified gold surface.
- Designed and performed electrochemical characterization of DNA monolayer and gold-solution interface.
- Improved applicable lifetime of DNA microarray through increasing the thermostability.

## SELECTED PUBLICATIONS

- Chappel J. Sharrock, Ja Eon Cho, Xin Wang, Xiuhong Li, Whitney Loo, Nitash P. Balsara, and Bruce A. Garetz; *Macromolecules* **2021** *54* (18), 8372-8380
- Li, X. H.; Loo, W.; Jiang, X.; Wang, X.; Galluzzo, M.; Mongcopa, K.; Wang, A.; Balsara, N.; Garetz, B., Effect of quench depth on crystallization in semicrystalline block copolymer/saltmixture studied by depolarized light scattering. *Abstr Pap Am Chem S* **2019,** *257*.
- Li, X. H.; Loo, W. S.; Jiang, X.; Wang, X.; Galluzzo, M. D.; Mongcopa, K. I.; Wang, A. A.; Balsara, N. P.; Garetz, B. A., Confined versus Unconfined Crystallization in Block Copolymer/Salt

Mixtures Studied by Depolarized Light Scattering. *Macromolecules* **2019,** *52* (3),982-991.

- Loo, W. S.; Galluzzo, M. D.; Li, X. H.; Maslyn, J. A.; Oh, H. J.; Mongcopa, K. I.; Zhu, C. H.; Wang, A. A.; Wang, X.; Garetz, B. A.; Balsara, N. P., Phase Behavior of Mixtures of Block Copolymers and a Lithium Salt. *J Phys Chem B* **2018,** *122* (33), 8065-8074.
- Thelen, J. L.; Wang, A. A.; Chen, X. C.; Jiang, X.; Schaible, E.; Balsara, N. P., Correlations between Salt-Induced Crystallization, Morphology, Segmental Dynamics, and Conductivity in Amorphous Block Copolymer Electrolytes. *Macromolecules* **2018,** *51* (5), 1733-1740.
- Wang, X.; Li, X. H.; Loo, W.; Newstein, M. C.; Balsara, N. P.; Garetz, B. A., Depolarized Scattering from Block Copolymer Grains Using Circularly Polarized Light. *Macromolecules***2017,** *50* (13), 5122-5131.
- Wang, X.; Chintapalli, M.; Newstein, M. C.; Balsara, N. P.; Garetz, B. A., Characterization of a Block Copolymer with a Wide Distribution of Grain Sizes. *Macromolecules* **2016,** *49* (21), 8198-8208.
- Thelen, J. L.; Teran, A. A.; Wang, X.; Garetz, B. A.; Nakamura, I.; Wang, Z. G.; Balsara, N. P., Phase Behavior of a Block Copolymer/Salt Mixture through the Order-to-Disorder Transition. *Macromolecules* **2014,** *47* (8), 2666-2673.
- Wang, X.; Thelen, J. L.; Teran, A. A.; Chintapalli, M.; Nakamura, I.; Wang, Z. G.; Newstein,
- M. C.; Balsara, N. P.; Garetz, B. A., Evolution of Grain Structure during Disorder-to-Order Transitions in a Block Copolymer/Salt Mixture Studied by Depolarized Light Scattering. *Macromolecules* **2014,** *47* (16), 5784-5792.
- Chintapalli, M.; Chen, X. C.; Thelen, J. L.; Teran, A. A.; Wang, X.; Garetz, B. A.; Balsara, P., Effect of Grain Size on the Ionic Conductivity of a Block Copolymer Electrolyte.
- *Macromolecules* **2014,** *47* (15), 5424-5431.
- Ge, D. B.; Wang, X.; Williams, K.; Levicky, R., Thermostable DNA Immobilization and Temperature Effects on Surface Hybridization. *Langmuir* **2012,** *28* (22), 8446-8455.

## CONFERENCE AND PRESENTATIONS

- "Chemistry & Materials for Energy", American Chemical Society Annual Meeting, Dallas (TX), Spring, 2014
- "Materials for Health and Medicine", American Chemical Society Annual Meeting, Philadelphia (PA), Fall, 2012
- Presentation "Progress in Depolarized light scattering of lithium doped block copolymer", Collaborative Group meeting, UC, Berkeley, 2012
- Presentation "Morpholino Genodiagnostics", Life Science for Health Exposition, NYU SternSchool of Business, 2011
- Presentation "Depolarized light scattering of lithium doped block copolymer", CollaborativeGroup meeting, UC, Berkeley, 2011

## ACADEMIC HONOR

- Turner Alfrey Award of 2015
- NSF Research Fellowship (2010-2014)
- Graduate Center Fellowship (2008-2010)

## PROFESSIONAL AFFILIATIONS

- American Chemical Society (ACS)
- American Institute of Chemical Engineering (AIChE)