

Danielle J. Mai

Assistant Professor
Department of Chemical Engineering
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Education

- 2016 Ph. D. Chemical and Biomolecular Engineering
University of Illinois at Urbana-Champaign, Urbana, IL
Advisor: Professor Charles M. Schroeder
Dissertation title: *Single Molecule Studies of Branched Polymer Dynamics*
- 2014 M. S. Chemical and Biomolecular Engineering
University of Illinois at Urbana-Champaign, Urbana, IL
- 2011 B. S. E. Chemical Engineering, Minor in Mathematics, *Summa Cum Laude*
University of Michigan, Ann Arbor, MI

Research Appointments

- 9/2023 – present Assistant Professor by courtesy, Department of Materials Science & Engineering
- 1/2020 – present Assistant Professor, Department of Chemical Engineering
- 1/2020 – 8/2022 James and Anna Marie Spilker Faculty Fellow
Stanford University, Stanford, CA
- 9/2017 – 11/2019 Arnold O. Beckman Postdoctoral Fellow
- 9/2016 – 9/2017 Postdoctoral Associate
Department of Chemical Engineering, Bradley D. Olsen Group
Massachusetts Institute of Technology, Cambridge, MA
- 8/2013 – 8/2016 National Science Foundation Graduate Research Fellow
- 8/2011 – 8/2013 Illinois Distinguished Fellow
Department of Chemical & Biomolecular Engineering, Charles M. Schroeder Group
University of Illinois at Urbana-Champaign, Urbana, IL
- 5/2011 – 8/2011 Process Research Intern, ExxonMobil Research & Engineering, Catalyst Technology
ExxonMobil Corporation, Annandale, NJ
- 5/2010 – 8/2010 Research and Development Intern, High Performance Foams, BISCO Silicones
Rogers Corporation, Rogers, CT
- 4/2009 – 5/2010 Research Assistant, Department of Chemical Engineering, Weber Research Group
University of Michigan, Ann Arbor, MI
- 9/2006 – 8/2007 Research Assistant, Department of Biological Sciences, Rossbach Research Group
Western Michigan University, Kalamazoo, MI

Awards and Honors

- 2023 MIT Technology Review 35 Innovators Under 35 (TR35)
- 2023 ACS Petroleum Research Fund Doctoral New Investigator Award
- 2023 Arthur K. Doolittle Award, ACS Polymeric Materials Science and Engineering (PMSE)
- 2023 Stanford Asian American Activities Center (A³C) Faculty Award
- 2022 Air Force Office of Scientific Research Young Investigator Program Award (AFOSR YIP)
- 2022 Stanford Faculty Women's Forum Inspiring Early Academic Career Award
- 2022 *ACS Polymers Au* Rising Stars in Polymers

- 2021 DPOLY/UKPPG Polymer Lecture Exchange Award
 2020 AIChE 35 Under 35 Award
 2017 – 2019 Arnold O. Beckman Postdoctoral Fellows Award
 2018 ACS Polymeric Materials Science and Engineering (PMSE) Future Faculty Scholar
 2018 1st Place Poster Prize, APS Division of Polymer Physics (DPOLY)
 2018 MIT IMPACT Fellow
 2013 – 2016 National Science Foundation Graduate Research Fellowship
 2011 – 2016 Illinois Distinguished Fellowship
 2013 – 2015 Mavis Future Faculty Fellowship
 2016 University of Washington Distinguished Young Scholar Seminar
 2016 APS FGSA Travel Award for Excellence in Graduate Research
 2015 Lam Research Outstanding Graduate Student Award
 2015 AIChE Women's Initiative's Committee (WIC) Travel Award
 2015 1st Place Oral Presentation, 14th ChBE Graduate Research Symposium, U. Illinois
 2013, '15, '16 Hanratty Travel Award, U. Illinois Chemical & Biomolecular Engineering
 2013 1st Place Poster, 12th ChBE Graduate Research Symposium, U. Illinois
 2013 List of Teachers Ranked as Excellent, University of Illinois
 2012 George M. Landes Technical Communication Team Prize, U. Michigan Engineering
 2011 George M. Landes Individual Prize, U. Michigan Chemical Engineering
 2011 Proprietary Technology Innovation Award, Rogers Corporation
 2010 – 2011 James B. Angell Scholar, University of Michigan
 2007 – 2011 University Honors, University of Michigan
 2007 – 2011 College of Engineering Dean's List, University of Michigan
 2007 – 2011 National Merit Scholarship
 2007 – 2011 Robert C. Byrd Honors Scholarship
 2007 – 2011 College of Engineering Scholarship, University of Michigan
 2007 Regents Merit Scholarship, University of Michigan

Publications (undergraduate author, *equal contributions, †corresponding, ORCID: 0000-0001-5447-2845)

- [18] Q. Zhou, B. M. Wirtz, T. H. Schloemer,*† M. Hu, P. Narayanan, J. Lyu, A. O. Gallegos, C. Layton, **D. J. Mai**,*† D. N. Congreve,*† “Spatially controlled UV light generation at depth using upconversion micelles.” *Advanced Materials*, (2023), in press.
- [17] A. P. Gudinas, **D. J. Mai**.† “Polymer protagonists for biological processes.” *Nature Chemistry*, **15**, 751–752 (2023). News & Views Article.
- [16] M. C. Burroughs, T. H. Schloemer, D. N. Congreve, **D. J. Mai**†. “Gelation dynamics during photocrosslinking of polymer nanocomposite hydrogels.” *ACS Polymers Au*, **3**(2), 217–227 (2023).
- [15] M. A. Morris, R. Bataglioli, **D. J. Mai**, Y. J. Yang, J. M. Paloni, C. E. Mills, Z. Schmitz, E. Ding, A. C. Huske, B. D. Olsen.† “Democratizing the rapid screening of protein expression for materials development.” *Molecular Systems Design & Engineering*, **8**, 227–239 (2023).
- [14] **D. J. Mai**. “Turn on the stereo: engaging in mentorship from all directions.” *AIChE CEP Magazine*, **118**(3), 16, (2022).
- [13] M. P. Chang,* W. Huang,* **D. J. Mai**.† “Monomer-scale design of functional protein polymers using consensus repeat sequences.” *Journal of Polymer Science*, **59**, 2644–2664, (2021).
- [12] Y. J. Yang, **D. J. Mai**, S. Li, M. A. Morris, B. D. Olsen.† “Tuning selective transport of biomolecules through site-mutated nucleoporin-like protein (NLP) hydrogels.” *Biomacromolecules*, **22**(2), 289–298 (2021).
- [11] **D. J. Mai**,*† C. M. Schroeder,*† “100th Anniversary of Macromolecular Science Viewpoint: Single-Molecule Studies of Synthetic Polymers.” *ACS Macro Letters*, **9**(9), 1332–1341 (2020).

- [10] B. M. Seifried,* W. Qi,* Y. J. Yang, **D. J. Mai**, W. B. Puryear, J. A. Rundstadler, G. Chen, B. D. Olsen.† “Glycoproteins with tunable functionalization through global amino acid substitution and copper click chemistry.” *Bioconjugate Chemistry*, **31**(3) 554–556 (2020).
- [9] C. E. R. Edwards,* **D. J. Mai**,* S. Tang, and B. D. Olsen.† “Molecular anisotropy and rearrangement as mechanisms of toughness and extensibility in entangled physical gels.” *Physical Review Materials*, **4**, 015602 (2020).
- [8] Y. J. Yang,* **D. J. Mai**,* T. J. Dursch, B. D. Olsen.† “Nucleopore-inspired polymer hydrogels for selective biomolecular transport”. *Biomacromolecules*, **19**(10), 3905–3916, (2018).
- [7] **D. J. Mai**,* A. Saadat,* B. Khomami,† C. M. Schroeder.† “Stretching dynamics of single comb polymers in extensional flow”. *Macromolecules*, **51**(4), 1507–1517, (2018).
- [6] **D. J. Mai**, C. M. Schroeder.† “Single polymer dynamics of topologically complex DNA”. *Current Opinion in Colloid and Interface Science*, **26**, 28–40, (2016).
- [5] **D. J. Mai**, A. B. Marciel, C. E. Sing, C. M. Schroeder.† “Topology-controlled relaxation dynamics of single branched polymers”. *ACS Macro Letters*, **4**(4), 446–452, (2015). Cover.
- [4] A. B. Marciel, **D. J. Mai**, C. M. Schroeder.† “Template-directed synthesis of structurally defined branched polymer architectures”. *Macromolecules*, **48**(5), 1296–1303, (2015).
- [3] **D. J. Mai**, C. A. Brockman, C. M. Schroeder.† “Microfluidic systems for single DNA dynamics”. *Soft Matter*, **8**, 10560–10572, (2012).
- [2] E. J. Petersen,† R. A. Pinto, **D. J. Mai**, P. F. Landrum, W. J. Weber.† “Influence of polyethyleneimine graftings of multi-walled carbon nanotubes on their accumulation and elimination by and toxicity to *Daphnia magna*”. *Environmental Science & Technology*, **45**(3), 1133–1138, (2010).
- [1] S. Rossbach,† **D. J. Mai**, E. L. Carter, L. Sauviac, D. Capela, C. Bruand, F. J. de Bruijn. “Response of *Sinorhizobium meliloti* to elevated concentrations of cadmium and zinc”. *Applied and Environmental Microbiology*, **74**(13), 4218–4221, (2008).

Invited Lectures

- [47] March 2024, ACS Spring Meeting, PMSE Centennial: Celebration of Success and New Frontiers in Polymeric Materials Science and Engineering, New Orleans, LA
- [46] March 2024, ACS Spring Meeting, Adaptive Materials from Dynamic Polymer Networks and Composites, New Orleans, LA
- [45] March 2024, APS March Meeting, Programmed Responsive Polymers and Soft Matter, Minneapolis, MN
- [44] October 2023, “Molecular-Scale Engineering of Stimuli-Responsive Polymer Hydrogels”
Rochester Institute of Technology, Department of Chemical Engineering
- [43] September 2023, “Molecular-Scale Engineering of Stimuli-Responsive Polymer Hydrogels”
University of California, Berkeley, Nanosciences and Nanoengineering Institute
- [42] July 2023, “Molecular-Scale Engineering of Stimuli-Responsive Polymer Hydrogels”
Northwestern University, Department of Chemical and Biological Engineering,
Context, Connections, and Community (C3S) Symposium, Keynote Speaker
- [41] June 2023, “Leveraging Consensus Repeat Sequences to Engineer Calcium-Responsive Soft Materials”,
Telluride Science Research Center Workshop on Molecular Engineering of Soft Matter:
Spanning Small Molecules to Macromolecules, Telluride, CO
- [40] May 2023, “Molecular-Scale Engineering of Stimuli-Responsive Polymer Hydrogels”
Golden Gate Polymer Forum, San Francisco, CA

- [39] May 2023, "Designing Calcium-Binding Repeat Proteins as Biomolecular Actuators and Composites"
United States Army DEVCOM Soldier Center, Natick, MA
- [38] May 2023, "A Circular 3D Printing Economy Enabled by Triplet Fusion Upconversion"
Stanford University, Energy Solutions Week (Panel: Sustainable Manufacturing)
- [37] March 2023, "Engineering Calcium-Responsive Biopolymers using Consensus Repeat Sequences",
ACS Spring Meeting, Polymers at the Interface with Biology Symposium, Indianapolis, IN
- [36] March 2023, "Molecular-Scale Engineering of Stimuli-Responsive Hydrogels",
Massachusetts Institute of Technology, Langer Lab Seminar Series
- [35] January 2023, "Leveraging Consensus Repeat Sequences to Engineer Calcium-Responsive Soft Materials",
Peptide Materials Gordon Research Conference, Galveston, TX
- [34] December 2022, "Sequence Effects in Calcium-Responsive Biopolymers",
ACS POLY Workshop, Polymers in Medicine and Biology, Napa, CA
- [33] November 2022, "Sequence Effects in Calcium-Responsive Biopolymers",
AIChE Annual Meeting, Polymers (Area 8A) Plenary, Phoenix, AZ
- [32] October 2022, "Sequence Effects in Calcium-Responsive Biopolymers",
Stanford University, Department of Chemical Engineering,
Engineering of Soft Matter Symposium in Honor of Emeritus Professor Curt Frank
- [31] September 2022, "Sequence Effects in Calcium-Responsive Biopolymers",
Physical Aspects of Polymer Science (IoP Physics Polymer Physics Group), London, United Kingdom
- [30] July 2022, "Sequence Effects in Calcium-Responsive Biopolymers",
Polymer Physics Gordon Research Conference, Mount Holyoke, MA
- [29] October 2021, "Dynamic Stretching and Stiffening of Protein-Based Hydrogels",
Inha University (Incheon, South Korea), Department of Biological Engineering
- [28] April 2021, "Engineering Biopolymer Hydrogels by Molecular Programming",
University of Illinois, Department of Materials Science and Engineering, Soft Materials Seminar
- [27] March 2021, "Stretching Mechanisms of Entangled Physical Gels",
86th New England Complex Fluids Symposium, Virtual
- [26] October 2020, "Stretching Dynamics of Topologically Complex Polymers",
Carnegie Mellon University, Department of Chemical Engineering, Complex Fluids Engineering Seminar
- [25] October 2020, "Engineering Biopolymer Hydrogels by Molecular Programming",
Stanford University, Shriram Basement Seminar
- [24] September 2020, "Molecular-Scale Engineering of Topologically Complex Biopolymers",
Stanford University, Department of Chemical Engineering, Convocation Keynote
- [23] February 2020, "Stretching Dynamics of Topologically Complex Polymers",
Stanford University, Stanford Polymer Collective, Lunch & Learn Seminar
- [22] August 2019, "Mimicking the Nuclear Pore to Control Protein Transport",
Beckman Symposium, Irvine, CA
- [21] March 2019, "Engineering Hierarchical Polymers to Control Biomolecular Transport",
Stanford University, Department of Chemical Engineering
- [20] February 2019, "Engineering Hierarchical Polymers to Control Biomolecular Transport",
University of British Columbia, Department of Chemical and Biological Engineering

- [19] February 2019, “Engineering Hierarchical Polymers to Control Biomolecular Transport”, University of Texas, McKetta Department of Chemical Engineering
- [18] February 2019, “Engineering Hierarchical Polymers to Control Biomolecular Transport”, University of Utah, Department of Chemical Engineering
- [17] February 2019, “Engineering Hierarchical Polymers to Control Biomolecular Transport”, University of Pennsylvania, Department of Materials Science and Engineering
- [16] February 2019, “Engineering Hierarchical Polymers to Control Biomolecular Transport”, University of Southern California, Mork Family Department of Chemical Engineering & Materials Science
- [15] February 2019, “Engineering Hierarchical Polymers to Control Biomolecular Transport”, University of California, Berkeley, Department of Chemical and Biomolecular Engineering
- [14] January 2019, “Engineering Hierarchical Polymers to Control Biomolecular Transport”, University of Chicago, Institute for Molecular Engineering
- [13] January 2019, “Engineering Hierarchical Polymers to Control Biomolecular Transport”, Princeton University, Department of Chemical and Biological Engineering
- [12] January 2019, “Engineering Hierarchical Polymers to Control Biomolecular Transport”, Northeastern University, Department of Chemical Engineering
- [11] January 2019, “Engineering Hierarchical Polymers to Control Biomolecular Transport”, Georgia Institute of Technology, School of Chemical and Biomolecular Engineering
- [10] January 2019, “Engineering Hierarchical Polymers to Control Biomolecular Transport”, University of California, Davis, Department of Chemical and Biomolecular Engineering
- [9] January 2019, “Engineering Hierarchical Polymers to Control Biomolecular Transport”, University of California, Irvine, Department of Chemical and Biomolecular Engineering
- [8] January 2019, “Engineering Hierarchical Polymers to Control Biomolecular Transport”, University of Minnesota, Department of Chemistry
- [7] January 2019, “Engineering Hierarchical Polymers to Control Biomolecular Transport”, University of Delaware, Department of Chemical and Biomolecular Engineering
- [6] December 2018, “Engineering Hierarchical Polymers to Control Biomolecular Transport”, University of Wisconsin–Madison, Department of Chemical and Biological Engineering
- [5] October 2018, “Engineering Hierarchical Polymers to Control Biomolecular Transport”, University of Illinois at Chicago, Department of Chemical Engineering
- [4] August 2018, “Engineering Hierarchical Polymers to Control Biomolecular Transport”, ACS Fall Meeting, PMSE Future Faculty Symposium, Boston, MA
- [3] July 2016, “Single Molecule Dynamics of Branched DNA Polymers”, Polymer Physics Gordon Research Seminar, Mount Holyoke, MA
- [2] July 2016, “Single Molecule Dynamics of Branched DNA Polymers”, University of Washington, Department of Chemical Engineering, Distinguished Young Scholars Seminar
- [1] February 2016, “Single Molecule Dynamics of Branched DNA Polymers”, University of Illinois, Department of Mechanical Engineering, Fluid Mechanics Seminar Series

Contributed Presentations

- [60] M. C. Burroughs (speaker), E. L. Quirk, T. H. Schloemer, B. M. Wirtz, D. N. Congreve, **D. J. Mai**. “Influence of polymer architecture on the reversible photocrosslinking of hydrogel networks”, American Institute of Chemical Engineers Annual Meeting. Orlando, FL, November 2023.

- [59] M. C. Burroughs (speaker), T. H. Schloemer, D. N. Congreve, **D. J. Mai**. “Gelation dynamics during photocrosslinking of polymer nanocomposite hydrogels”, American Institute of Chemical Engineers Annual Meeting. Orlando, FL, November 2023.
- [58] Q. Zhou, B. M. Wirtz, T. H. Schloemer, D. N. Congreve, **D. J. Mai** (speaker). “Micellar encapsulation of organic upconversion systems to increase the penetration depth of UV light in aqueous environments”, American Institute of Chemical Engineers Annual Meeting. Orlando, FL, November 2023.
- [57] A. P. Gudinas, I. Tavarez, M. P. Chang, **D. J. Mai** (speaker). “Molecular-scale mechanics of calcium-responsive repeat proteins”, American Institute of Chemical Engineers Annual Meeting. Orlando, FL, November 2023.
- [56] M. A. Morris (speaker), Y. J. Yang, **D. J. Mai**, B. D. Olsen. “Engineered Selective Biotxin-Binding Hydrogels for Barrier Membranes”, American Institute of Chemical Engineers Annual Meeting. Orlando, FL, November 2023.
- [55] M. C. Burroughs (speaker), T. H. Schloemer, D. N. Congreve, **D. J. Mai**. “Gelation dynamics and reversibility of photocrosslinkable polymer nanocomposite hydrogels”, American Chemical Society Fall Meeting. San Francisco, CA, August 2023. **PMSE Future Faculty Symposium.**
- [54] M. C. Burroughs, L. Nieman, L. X. Wang, **D. J. Mai** (poster). “Hybrid synthesis of bottlebrush DNA polymers for single-molecule rheology”, XIXth International Congress on Rheology. Athens, Greece, July 2023.
- [53] M. C. Burroughs (speaker), T. H. Schloemer, D. N. Congreve, **D. J. Mai**. “Gelation dynamics and reversibility of photocrosslinkable polymer nanocomposite hydrogels”, XIXth International Congress on Rheology. Athens, Greece, July 2023.
- [52] M. C. Burroughs, T. H. Schloemer, D. N. Congreve, **D. J. Mai** (speaker). “Gelation dynamics during photocrosslinking of polymer nanocomposite hydrogels”, American Chemical Society Spring Meeting. Indianapolis, IN, March 2023. **2023 Spring Arthur K. Doolittle Award.**
- [51] Q. Zhou (speaker), B. M. Wirtz, T. H. Schloemer, M. C. Burroughs, M. Hu, P. Narayanan, J. Lyu, A. Gallegos, C. Layton, **D. J. Mai**, D. N. Congreve. “Spatially controlled UV Light Generation at Depth by Upconversion Micelles”, American Chemical Society Spring Meeting. Indianapolis, IN, March 2023.
- [50] M. C. Burroughs (speaker), T. H. Schloemer, D. N. Congreve, **D. J. Mai**. “Gelation dynamics during photocrosslinking of polymer nanocomposite hydrogels”, American Physical Society March Meeting. Las Vegas, NV, March 2023.
- [49] L. X. Wang (speaker), **D. J. Mai**. “Single-Molecule Studies of Confined Branched Polymers”, American Physical Society March Meeting. Las Vegas, NV, March 2023.
- [48] B. M. Wirtz (speaker), Q. Zhou, T. H. Schloemer, M. Hu, **D. J. Mai**, D. N. Congreve. “Performing UV photochemistry with blue light using triplet fusion upconversion micelles”, American Physical Society March Meeting. Las Vegas, NV, March 2023.
- [47] A. P. Gudinas (speaker), M. P. Chang, **D. J. Mai**. “Molecular-scale mechanical properties of calcium-responsive proteins”, American Physical Society March Meeting. Las Vegas, NV, March 2023.
- [46] M. P. Chang, W. Huang, A. P. Gudinas, S. Wakatsuki, **D. J. Mai** (poster). “Determining Sequence–Structure Relationships for Calcium-Responsive Repeat Proteins”, American Physical Society March Meeting. Las Vegas, NV, March 2023.
- [45] I. J. Tavarez, A. P. Gudinas, **D. J. Mai** (poster). “Enzyme-mediated polyprotein conjugation for single-molecule force spectroscopy”, American Physical Society March Meeting. Las Vegas, NV, March 2023. **Third Place, Journal of Polymer Science/DPOLY Poster Prize.**
- [44] A. Dhawan, L. X. Wang, **D. J. Mai** (poster). “Fabrication of High Aspect Ratio Nanoconfined Environments for Single-Molecule Experiments”, American Physical Society March Meeting. Las Vegas, NV, March 2023.

- [43] M. P. Chang (speaker), **D. J. Mai**. “Sequence Control of Bioinspired Calcium-Responsive Protein Polymers”, American Physical Society March Meeting. Las Vegas, NV, March 2023.
- [42] M. C. Burroughs, T. H. Schloemer, D. N. Congreve, **D. J. Mai** (poster). “Effect of polymer architecture on gelation and reversibility in photocrosslinkable polymer hydrogels”, American Physical Society March Meeting. Las Vegas, NV, March 2023.
- [41] M. C. Burroughs, T. H. Schloemer, D. N. Congreve, **D. J. Mai** (poster). “Gelation dynamics during photocrosslinking of polymer nanocomposite hydrogels”, Colloidal, Macromolecular, and Polyelectrolyte Solutions Gordon Research Conference. Ventura, CA, November 2022.
- [40] M. P. Chang, A. P. Gudinas, W. Huang, **D. J. Mai** (speaker). “Structure and Mechanics of Calcium-Responsive Protein Hydrogels”, Society of Rheology, 93rd Annual Meeting. Chicago, IL, October 2022.
- [39] M. P. Chang (speaker), **D. J. Mai**. “Leveraging Repetitive Protein Polymers to Engineer Calcium-Responsive Soft Materials”, American Physical Society March Meeting. Chicago, IL, March 2022.
- [38] A. P. Gudinas, M. P. Chang, **D. J. Mai** (poster). “Molecular-scale mechanical properties of calcium-responsive proteins”, American Physical Society March Meeting. Chicago, IL, March 2022.
- [37] L. X. Wang, **D. J. Mai** (poster). “Single-Molecule Studies of Confined Branched Polymers”, American Physical Society March Meeting. Chicago, IL, March 2022.
- [36] M. P. Chang, **D. J. Mai** (speaker). “Integration of Calcium Responsiveness into Self-Healing Protein Hydrogels through Consensus Repeat Sequence Engineering”, American Institute of Chemical Engineers Annual Meeting. Boston, MA, November 2021.
- [35] M. A. Morris (speaker), R. Bataglioli, **D. J. Mai**, Y. J. Yang, J. M. Paloni, C. E. Mills, Z. Schmitz, E. A. Ding, A. C. Huske, B. D. Olsen. “A Rapid Screening Platform for Protein Expression to Enable Materials Development”, American Institute of Chemical Engineers Annual Meeting. Boston, MA, November 2021.
- [34] **D. J. Mai** (speaker), Y. J. Yang, B. D. Olsen. “Engineering Selective Biomolecular Transport in Nucleoporin-like Protein Hydrogels”, American Institute of Chemical Engineers Annual Meeting. Orlando, FL, November 2019.
- [33] C. E. R. Edwards, **D. J. Mai** (speaker), S. Tang, B. D. Olsen. “Molecular Anisotropy and Rearrangement as Mechanisms of Toughness and Extensibility in Entangled Physical Gels”, American Institute of Chemical Engineers Annual Meeting. Orlando, FL, November 2019.
- [32] B. D. Olsen (speaker), Y. J. Yang, **D. J. Mai**. “Nucleoporin-Like Proteins and Bioinspired Gels”, 258th American Chemical Society National Meeting. San Diego, CA, August 2019.
- [31] **D. J. Mai**. “Molecular-Scale Engineering of Functional and Responsive Biopolymers” (poster), American Institute of Chemical Engineers Annual Meeting. Pittsburgh, PA, October 2018.
- [30] C. Edwards, **D. J. Mai** (speaker), S. Tang, B. D. Olsen. “Uniaxial Extension of Associative Proteins Reveals Chain Alignment Mechanism in Highly Extensible and Tough Protein Hydrogels”, American Institute of Chemical Engineers Annual Meeting. Pittsburgh, PA, October 2018.
- [29] **D. J. Mai** (speaker), Y. J. Yang, A. C. Huske, T. J. Dursch, B. D. Olsen. “Engineering Nucleoporin-Inspired Hydrogels to Control Biomolecular Transport”, American Institute of Chemical Engineers Annual Meeting. Pittsburgh, PA, November 2018.
- [28] C. Edwards, **D. J. Mai**, S. Tang, B. D. Olsen (poster). “Mechanism of high extensibility and toughness in entangled associative protein hydrogels”, 256th American Chemical Society National Meeting, Boston, MA, August 2018.
- [27] **D. J. Mai**, Y. J. Yang, T. J. Dursch, B. D. Olsen. “Engineering Hierarchical Polymers to Control Biomolecular Transport” (poster), Polymer Physics Gordon Research Conference. Mount Holyoke, MA, July 2018.

- [26] B. D. Olsen (speaker), **D. J. Mai**, Y. J. Yang. "Dynamic Bonding in Nucleoporin-Like Protein Materials", 255th American Chemical Society National Meeting. New Orleans, LA, March 2018.
- [25] B. D. Olsen (speaker), S. Tang, **D. J. Mai**, J. Ramirez, T. J. Dursch, Y. J. Yang. "Skipping Polymer Physics", American Physical Society March Meeting. Los Angeles, CA, March 2018.
- [24] C. Edwards, **D. J. Mai**, S. Tang, B. D. Olsen. "Mechanism of High Extensibility in Entangled Associative Protein Hydrogels" (poster), American Physical Society March Meeting. Los Angeles, CA, March 2018. **First Place, Journal of Polymer Science/DPOLY Poster Prize.**
- [23] **D. J. Mai** (speaker), Y. J. Yang, B. D. Olsen. "Selective Biomolecular Transport due to Structure, Affinity, and Diffusion in Nucleoporin-Like Hydrogels", American Physical Society March Meeting. Los Angeles, CA, March 2018.
- [22] Y. J. Yang (speaker), S. Li, **D. J. Mai**, B. D. Olsen. "Site-Mutation of Nucleoporin Consensus Repeats for Understanding Selective Transport of Biomolecules", American Physical Society March Meeting. Los Angeles, CA, March 2018.
- [21] Y. J. Yang, **D. J. Mai**, B. D. Olsen. "Nucleoporin-Mimetic Selective PEG Hydrogel Filter for Antibody Separation" (poster), Chemical and Biological Defense Science & Technology Conference. Long Beach, CA, November 2017.
- [20] **D. J. Mai** (speaker), Y. J. Yang, T. J. Dursch, B. D. Olsen. "New Mechanism for Selective Macromolecular Filtration in Polymer Networks", 254th American Chemical Society National Meeting. Washington, DC, August 2017. **Selected from PMSE Oral Presentation Abstracts for Sci-Mix Poster Session.**
- [19] Y. J. Yang (speaker), **D. J. Mai**, B. D. Olsen. "Engineering Nucleoporin-Mimetic Polymer Hydrogels for Selective Filtration of Antibodies", 254th American Chemical Society National Meeting. Washington, DC, August 2017.
- [18] A. Saadat (speaker), **D. J. Mai**, B. Khomami, C. M. Schroeder. "Brownian Dynamics Simulations of Single Comb DNA Molecules", Society of Rheology, 88th Annual Meeting. Tampa, FL, February 2017.
- [17] A. Saadat, **D. J. Mai**, B. Khomami, C. M. Schroeder (poster). "Dynamics of Linear and Comb DNA Solutions Using Efficient Brownian Dynamics Techniques", American Institute of Chemical Engineers Annual Meeting. San Francisco, CA, November 2016.
- [16] **D. J. Mai**, A. B. Marciel, C. E. Sing, C. M. Schroeder (poster). "Single Molecule Dynamics of Branched DNA Polymers", Polymer Physics Gordon Research Conference. Mount Holyoke, MA, July 2016.
- [15] **D. J. Mai** (speaker), C. M. Schroeder. "Single Molecule Dynamics of Branched DNA Polymers", Polymer Physics Gordon Research Seminar. Mount Holyoke, MA, July 2016.
- [14] **D. J. Mai** (speaker), C. E. Sing, C. M. Schroeder. "Single Molecule Dynamics of Branched DNA Polymers", American Physical Society March Meeting. Baltimore, MD, March 2016.
- [13] **D. J. Mai** (speaker), A. B. Marciel, C. M. Schroeder. "Synthesis, Characterization, and Single Molecule Dynamics of Branched DNA Polymers", American Institute of Chemical Engineers Annual Meeting. Salt Lake City, UT, November 2015. **Finalist, Excellence in Graduate Polymer Research Session.**
- [12] **D. J. Mai** (speaker), C. E. Sing, C. M. Schroeder. "Topology-Controlled Relaxation of Branched DNA Polymers", American Institute of Chemical Engineers Annual Meeting. Salt Lake City, UT, November 2015.
- [11] E. M. Horstman, **D. J. Mai**, Y. Li, R. Bhargava. "A Program for Graduate Women in Engineering Pursuing Academic Careers (iFEAT: Illinois Female Engineers in Academia Training)" (poster), American Society of Engineering Education Annual Meeting. Seattle, WA, June 2015.
- [10] Y. Li (speaker), **D. J. Mai**, E. M. Horstman, R. Bhargava. "Preparing Female Engineering Doctoral Students for the Academic Job Market through a Training Program Inspired by Peer Review", American Society of Engineering Education Annual Meeting. Seattle, WA, June 2015.

- [9] **D. J. Mai**, A. B. Marciel, S. L. Kumar (speaker), C. M. Schroeder. “Single Molecule Observation of Topology-Controlled Branched Polymer Relaxation”, American Physical Society March Meeting. San Antonio, TX, March 2015.
- [8] A. B. Marciel, **D. J. Mai**, C. M. Schroeder. “Synthesis of Biomimetic Branched Polymer Architectures” (poster), American Physical Society March Meeting. San Antonio, TX, March 2015. **First Place, Journal of Polymer Science/DPOLY Poster Prize.**
- [7] **D. J. Mai** (speaker), C. M. Schroeder. “Relaxation of Single Comb Polymers”, American Institute of Chemical Engineers Annual Meeting. Atlanta, GA, November 2014.
- [6] **D. J. Mai**, A. B. Marciel, C. M. Schroeder. “Single Molecule Characterization of Dual-Colored DNA Comb Polymers” (poster), American Institute of Chemical Engineers Annual Meeting. Atlanta, GA, November 2014.
- [5] **D. J. Mai** (speaker), A. B. Marciel, C. M. Schroeder. “Dual-Colored DNA Comb Polymers for Single Molecule Rheology”, American Physical Society March Meeting. Denver, CO, March 2014.
- [4] A. B. Marciel (speaker), **D. J. Mai**, C. M. Schroeder. “Synthesis of Biomimetic Branched Polymer Architectures”, American Physical Society March Meeting. Denver, CO, March 2014.
- [3] **D. J. Mai**, A. B. Marciel, C. Brockman, C. M. Schroeder. “Flexible Branched Polymers for Single Molecule Rheology” (poster), *Journey through Science Day* by the New York Academy of Sciences & PepsiCo. New York, NY, December 2013. **Best Method Award, Poster Competition.**
- [2] **D. J. Mai** (speaker), A. B. Marciel, C. M. Schroeder. “Template-Directed Synthesis of Structurally Defined Branched Biopolymers”, American Institute of Chemical Engineers Annual Meeting. San Francisco, CA, November 2013.
- [1] **D. J. Mai**, A. B. Marciel, C. Brockman, C. M. Schroeder. “Flexible Branched Polymers for Single Molecule Rheology” (poster), American Institute of Chemical Engineers Annual Meeting. San Francisco, CA, November 2013. **Second Place, Area 1J (Fluid Dynamics) Poster Competition.**

Research Support

- [6] “Anthracene-Directed Reinforcement and Stabilization of Polymer Nanocomposites”, Doctoral New Investigator Award, American Chemical Society Petroleum Research Fund, September 2023-August 2025. Role: PI.
- [5] “Structure of Ion-Binding Repeat Proteins for Biomolecular Actuation”, Macromolecular Structure Knowledge Center Training Program, Sarafan ChEM-H, March-August 2023. Role: PI.
- [4] “Engineering Biomolecular Actuators from Ion-Responsive Repeat Proteins”, Young Investigator Research Program, Air Force Office of Scientific Research, June 2022-May 2025. Role: PI.
- [3] “Engineering biolubrication at the molecular scale: a microfluidic platform to study tribological properties of bottlebrush polymers”, Arnold O. Beckman Postdoctoral Fellowship (Mike Burroughs), Arnold and Mabel Beckman Foundation, September 2022-August 2024. Role: co-PI/Faculty Mentor. Co-PI: Mike Burroughs
- [2] “A Circular 3D-Printing Economy Enabled by Photon Upconversion”, Precourt Pioneering Projects Grant for Re-inventing Plastics and their Lifecycle of Use, Precourt Institute for Energy and Stanford University, October 2021-September 2023. Role: co-PI. Co-PIs: Dan Congreve, Yan Xia
- [1] “Nanostructural Dynamics of Muscle-Mimetic Protein Actuators”, Seed Grant for New Science and Technology Ideas Exploiting the Capabilities of X-ray Lasers, Linac Coherent Light Source (LCLS) and Stanford University, October 2020-December 2021. Role: PI. Co-PIs: Soichi Wakatsuki, Mark Hunter

Experimental Resource Allocations

- [6] “Ion-Responsive Nanostructure of Muscle-Mimetic Protein Actuators”, Proposal S-XV-ST-6057, SLAC National Accelerator Laboratory, Stanford Synchrotron Radiation Light Source (SSRL), Bio-SAXS 4-2, May 2022-August 2024.
- [5] “Characterizing the Network Structure of Supramolecular Hydrogels for Drug Delivery Applications”, Proposal 30254, Oak Ridge National Laboratory (ORNL), High Flux Isotope Reactor, Bio-SANS CG-3, July 2023.
- [4] “Characterizing the Network Structure of Supramolecular Hydrogels for Drug Delivery Applications”, Proposal 27951, Oak Ridge National Laboratory (ORNL), High Flux Isotope Reactor, Bio-SANS CG-3, March 2022.
- [3] “Structure of protein-polymer materials for selective bioseparations”, Proposal 19847, Oak Ridge National Laboratory (ORNL), High Flux Isotope Reactor, Bio-SANS CG-3, May 2018.
- [2] “Structure of protein-polymer materials for selective bioseparations”, Proposal S37-07, NIST Center for Neutron Research, NG-7 SANS, March 2018.
- [1] “Biophysical characterization of protein-polymer materials for selective bioseparations”, Proposal 18744, Oak Ridge National Laboratory (ORNL), High Flux Isotope Reactor, Bio-SANS CG-3, September 2017.

Service to the Scientific Community

- [14] **Manuscript Peer Reviewer** (alphabetical): *ACS Applied Polymer Materials, ACS Macro Letters, ACS Polymers Au, Advanced Materials, AIChE Journal, Bioconjugate Chemistry, Biomicrofluidics, Chem, Colloids and Surfaces A, Journal of Polymer Science, Journal of Physical Chemistry, Macromolecular Chemistry and Physics, Macromolecular Rapid Communications, Macromolecules, Molecular Pharmaceutics, Nano Letters, Nature, Physical Review Fluids, Proceedings of the National Academy of Sciences, Science Advances, Soft Matter, Trends in Chemistry*
- [13] **Grant Peer Reviewer**
 - 2023 National Science Foundation (2 panels)
 - 2023 Stanford PRISM Baker Fellowship
 - 2023 American Chemical Society Petroleum Research Fund (ad hoc)
 - 2022 National Science Foundation (panel)
 - 2021 National Science Foundation (2 panels)
 - 2020 American Chemical Society Petroleum Research Fund (ad hoc)
 - 2020 National Science Foundation (panel)
 - 2020 Emergent Ventures COVID-19 Fast Grants (ad hoc)
 - 2019 MIT Chemical Engineering Communications Lab Postdoctoral Grants
- [12] Journal of Polymer Science, **Editorial Board Member** (2023-present)
- [11] APS DPOLY Executive Committee, **Early Career Member-at-Large** (2022-present)
- [10] AIChE Fluids Programming Committee, **Member** (2020-present)
- [9] Journal of Polymer Science, **Guest Editor**, Special Issue: Single-Molecule Studies in Polymer Science (2023)
- [8] Oak Ridge National Lab Neutron Sciences, Science Review Committee, **HFIR/Bio-SANS Reviewer** (2023)
- [7] AIChE 35 Under 35 Award Steering Committee, **Member** (2023)
- [6] **Session Chair/Co-Chair**, American Institute of Chemical Engineering
 - 2023 Soft and Active Systems (Area 1J)
 - 2023 Area Plenary: Emerging Areas in Polymer Science and Engineering (Area 8A)
 - 2022 Rheology of Biomaterials and Biological Systems (Area 1J)

- 2022 Excellence in Graduate Polymer Research (Area 8A)
 - 2021 Characterization of Biomaterials and Biological Systems (Area 1J)
 - 2021 Biopolymers (Area 8A)
 - 2021 Renewable Polymers and Intermediates Technology (Areas 8A/12A)
 - 2020 Microfluidic and Nanoscale Flows: Separations and Particulates (Area 1J)
 - 2020 Polymer Networks and Gels (Area 8A)
 - 2020 Development of Renewable Polymers and Intermediates (Areas 8A/12A)
 - 2019 Bio-Based Polymers (Area 8A)
 - 2019 Process Innovations on Renewable Polymers and Biobased Intermediates (Areas 8A/12A)
- [5] **Focus Session Organizer**, American Physical Society
- 2023 Single-Molecule Characterization of Polymers and Soft Matter (DPOLY)
 - 2022 Single-Molecule Characterization of Polymers and Soft Matter (DPOLY)
 - 2021 Optics and Photonics in Polymers and Soft Matter (DPOLY/DSOFT/DBIO/DAMOP)
- [4] **Session Organizer**, Society of Rheology
- 2022 Rheology of Gels, Glasses, and Jammed Systems
 - 2021 Active and Biological Materials
- [3] **Symposium Organizer**, American Chemical Society
- 2022 Molecular Design of Polymers with Multi-scale Mechanical Properties
- [2] **Symposium Organizer**, Materials Research Society
- 2024 Bio-based and Biomimetic Polymers in Soft Robotics
- [1] Gordon Research Conferences (GRC) and Seminars (GRS)
- 2022 **Discussion Leader**, Polymer Physics GRC, Mount Holyoke, MA
 - 2018 **Chair**, Polymer Physics GRS, Mount Holyoke, MA

University Service and Outreach Activities

- [18] Diversifying Academia, Recruiting Excellence (DARE) Fellowship Mentor (2023-present), Stanford Office of the Vice Provost for Graduate Education
- [17] Enhancing Diversity in Graduate Education (EDGE) Faculty Mentor (2022-present), Stanford Office of the Vice Provost for Graduate Education
- [16] Director of Finance and Operations Search Committee (2023), Stanford Chemical Engineering
- [15] Undergraduate Studies Committee (2022-present), Stanford Chemical Engineering
- [14] AIChE Student Chapter Advisor (2020-present), Stanford Chemical Engineering
- [13] Graduate Curriculum Review Committee (2020-2022), Stanford Chemical Engineering
- [12] Undergraduate Major Academic Advisor, 10 students, Stanford Chemical Engineering
- [11] Dissertation Reading Committee Member, 14 students, Stanford Chemical Engineering
- [10] Dissertation Defense Committee Member (non-reader or chair), 24 students, Stanford Chemical Engineering, Applied Physics, Bioengineering, Chemistry, Materials Science & Engineering
- [9] Outreach: Invited Panelist and/or Speaker
 - 2023 Strategic Preparation for Academic Resilience and Know-how (SPARK) Workshop (Interviews)
 - 2022 Gordon Research Seminar Mentor Panel (Colloidal, Macromolecular, and Polyelectrolyte Solutions: Navigating a Rewarding Research Career)
 - 2022 Stanford Polymer Collective Time Management Workshop
 - 2022 Stanford Bio-X Undergraduate Summer Research Program (USRP)
 - 2022 Stanford Engineering Research Introductions (SERIS)

- 2021 University of Delaware MRSEC Early Career Professional Development Workshop (Building a Lab from “Scratch”)
- 2021 Strategic Preparation for Academic Resilience and Know-how (SPARK) Workshop (Negotiations)
- 2021 Stanford Summer Undergraduate Research Fellowship (SURF) Program (Paths to Academia)
- 2021 MIT CommLab Faculty Chalk Talk Workshop
- 2020 AIChE National Capital Local Section (NCS) 35 Under 35 Panel
- 2020 How Science Happens Podcast, Season 1 (most-downloaded episode)
- 2020 Virtual Academic Job Search Workshop (Interview and Hiring Myths)
- 2020 Stanford Exposure to Research and Graduate Education (SERGE) by the Black Engineering Graduate Students Association (BEGSA)
- 2020 Stanford Summer Academic Immersion and Leadership (SAIL) Program (What I Wish I Knew About Graduate School)
- 2020 Stanford Summer Undergraduate Research Fellowship (SURF) Program (Redefining Success and Normalizing Failure)
- 2015 AIChE Women’s Initiative Committee Graduate Student Panel

- [8] Poster Judge (2020, 2023), Stanford Polymer Collective Poster Symposium
- [7] Chemical Engineering Faculty Representative (2020), Stanford Majors Night
- [6] Mentor (2016-17), NetPals Program with MIT Chemical Engineering and Cambridge School Volunteers
- [5] Co-Founder (2014-16), Illinois Female Engineers in Academia Training (iFEAT)
- [4] GradSWE Speaker Coordinator (2014-15) & Member (2013-16), Society of Women Engineers at Illinois
- [3] Organizer (2014) & Volunteer (2013), Worldwide Youth in Science and Engineering “Exploring Your Options” Program
- [2] President (2012-13) & First Year Representative (2011-12), ChBE Graduate Student Advisory Council
- [1] Planning Committee Member (2012), ChBE Graduate Research Symposium

Teaching Experience

- [14] **Instructor**, Polymer Physics (CHEMENG 466), Elective Course, Stanford University, Spring 2024
- [13] **Co-Instructor**, Multi-Component and Multi-Phase Thermodynamics (CHEMENG 110B), Undergraduate Required Course, Stanford University, Winter 2024
- [12] **Instructor**, Chemical Engineering Thermodynamics (CHEMENG 110A), Undergraduate Required Course, Stanford University, Autumn 2020, Autumn 2021, Autumn 2022, Autumn 2023
- [11] **Instructor**, Fundamentals and Applications of Spectroscopy (CHEMENG 345), Graduate Required Course, Stanford University, Winter 2020, Winter 2021, Spring 2022
- [10] **Guest Lecturer**, Structure of Soft Matter (10.566), Elective Course, MIT, Winter 2016
- [9] **Guest Lecturer**, Applied Mathematics in Chemical Engineering (CHBE 521), Graduate Required Course, University of Illinois, Fall 2015
- [8] **Facilitator**, Microteaching Session, Graduate Academy for College Teaching, University of Illinois, Summer 2015
- [7] **Guest Lecturer**, Polymer Science & Engineering (CHBE 456/594), Elective Course, University of Illinois, Spring 2013, Fall 2013
- [6] **Teaching Assistant**, Thermodynamics (CHBE 321), Undergraduate Required Course, University of Illinois, Spring 2013

- [5] **Teaching Assistant**, Applied Mathematics in Chemical Engineering (CHBE 521), Graduate Required Course, University of Illinois, Fall 2012
- [4] **Instructional Aide**, Design for Energy Sustainability (ENGR 100), 1st Year Design Course, University of Michigan, Fall 2011
- [3] **Grader**, Heat and Mass Transfer (CHE 342), Undergraduate Required Course, University of Michigan, Fall 2010
- [2] **Instructional Aide**, Chemical Engineering Thermodynamics (CHE 330), Undergraduate Required Course, University of Michigan, Winter 2010
- [1] **Peer Mentor**, Engineering Design for the Real World (ENGR 100), 1st Year Design Course, University of Michigan, Fall 2009

Graduate Research Trainees

- [7] **Eleanor Quirk**, Ph.D. Student, Stanford Chemical Engineering, March 2023 – present
- [6] **Brendan Wirtz**, Ph.D. Candidate, Stanford Chemical Engineering, March 2022 – present
- [5] **Gatha Shambharkar**, M.S. Student, Stanford Materials Science and Engineering, Jan. 2022 – June 2023
MS thesis: Response of RTX proteins to cations beyond calcium
Next role: Manufacturing Engineer, Slingshot Biosciences
- [4] **Alana P. Gudinas**, Ph.D. Candidate and NSF Fellow, Stanford Physics, March 2021 – present
- [3] **Natasha Jagnandan**, M.S. Student, Stanford Chemical Engineering, March 2021 – June 2023
- [2] **Louis X. Wang**, Ph.D. Candidate, Stanford Materials Science and Engineering, Dec. 2020 – present
- [1] **Marina P. Chang**, Ph.D. Candidate, Stanford Materials Science and Engineering, Jan. 2020 – present

Postdoctoral Research Trainees

- [2] **Michael C. Burroughs**, Arnold O. Beckman Postdoctoral Fellow, October 2021 – present
- [1] **Ta-Chung Liu**, Stanford LEAP Visiting Postdoctoral Scholar, April 2021 – January 2022
Next role: Assistant Professor, National Chiao Tung University, Taiwan

Undergraduate Research Trainees

- [20] **Ava Conyer**, Howard University, Stanford SURF Program, Summer 2023
- [19] **Yujia Bian**, Peking University, Stanford UGVR Chinese Exchange Program, Summer 2023
- [18] **Allison Yun**, Stanford University, Stanford ChemE REU, Summer 2023
- [17] **Kenny Hernandez**, Stanford University, Undergraduate Research Assistant, Stanford ChemE REU (2023), Autumn 2022 – present
- [16] **Peter Musenge**, St. Augustine's University, Stanford SURF Program, Summer 2022
- [15] **Ke Jin**, Tsinghua University, Stanford UGVR Chinese Exchange Program, Summer 2022
Next role: Chemical Engineering PhD Student, University of Minnesota
- [14] **Lisa Nieman**, Stanford University, Stanford ChemE REU, Summer 2022 – present
- [13] **Isabella Tavarez**, Stanford University, Stanford ChemE REU, Summer 2022 – Winter 2023
- [12] **Jefferson (J. D.) Pruett**, Stanford University, Undergraduate Research Assistant, Autumn 2021
- [11] **Ankush Dhawan**, Stanford University, Stanford ChemE REU, Summer 2021

- [10] **Christopher Latham**, Stanford University, Stanford ChemE REU, Summer 2021
- [9] **Andrea (Andy) Flores**, University of Puerto Rico - Mayaguez, Stanford SURF Program, Summer 2020
Next role: Bioengineering PhD Student, Stanford University
- [8] **Winnie Huang**, Stanford University, Stanford ChemE REU (2020), BioX Undergraduate Researcher (2021), June 2020 – June 2023.
Next role: Chemical Engineering PhD Student, Princeton University
- [7] **Amadou Sow**, Roxbury Community College, MIT/NSF MRSEC REU Program, Summer 2017
- [6] **Andreana Velmahos**, MIT, High School Research Intern, Summer 2017
- [5] **Allison Huske**, MIT, Undergraduate Research Assistant, Winter 2017 – Spring 2018
Next role: Public Health Associate, Center for Disease Control and Prevention
- [4] **Zhiwei Zhang**, University of Illinois, Undergraduate Research Assistant, August 2015 – May 2017
Next role: Software Developer, DRW
- [3] **Dylan Manuguerra**, University of Illinois, High School Research Intern, Summer 2015
Next role: Undergraduate Student, Rowan University
- [2] **Sarah Kuhl**, University of Illinois, Undergraduate Research Assistant, Fall 2013 – Spring 2015
Next role: R & D Engineer, The Clorox Company
- [1] **Xiaoxuan (Lily) Chen**, University of Illinois, Senior Honors Thesis, Fall 2013 – Spring 2015
Next role: Liquid Natural Gas Trading, ExxonMobil

Research Awards by Trainees

8/2023	M. C. Burroughs	Distinguished Young Scholar Seminar (DYSS) Speaker, University of Washington Chemical Engineering
8/2023	M. C. Burroughs	Future Faculty Scholar, ACS Polymeric Materials Science and Engineering
8/2023	M. C. Burroughs	Stanford Bio-X Travel Award
7/2023	M. C. Burroughs	Future Investigator Travel (FIT) Award, APS DSOFT
7/2023	M. C. Burroughs	Student-Member Travel Grant, Society of Rheology
7/2023	B. M. Wirtz	BioPACIFIC Materials Innovation Platform Summer School
6/2023	W. Huang	Mason/Marsden Prize (awarded to an outstanding senior involved in research), Stanford Chemical Engineering
5/2023	A. P. Gudinas	Judges' Poster Award, Stanford Polymer Collective
3/2023	W. Huang	National Science Foundation Graduate Research Fellowship
3/2023	B. M. Wirtz	National Science Foundation Graduate Research Fellowship
3/2023	A. P. Gudinas	3 rd Place Poster, APS Division of Polymer Physics
11/2022	W. Huang	North Carolina State University Future Leaders Symposium
7/2021	M. C. Burroughs	Arnold O. Beckman Postdoctoral Fellowship
4/2015	S. Kuhl	3 rd Place Poster, Omega Chi Epsilon Undergraduate Research Symposium
4/2014	X. Chen	Intel Innovation Award for Outstanding Poster Presentation, University of Illinois Undergraduate Research Symposium (Office of Undergraduate Research)
4/2014	X. Chen	2 nd Place Poster, Omega Chi Epsilon Undergraduate Research Symposium