S. Eileen Seo

Arizona State University
School for Engineering of Matter, Transport and Energy
Biodesign Center for Sustainable Macromolecular Materials and Manufacturing
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Professional Appointments

Arizona State University, Tempe Campus **2021 – present**
Assistant Professor of Chemical Engineering
Faculty of Biodesign Center for Sustainable Macromolecular Materials and Manufacturing
Graduate Faculty of School of Molecular Sciences (Chemistry)
Graduate Faculty of Materials Science and Engineering

University of California, Santa Barbara **2018 – 2021**
Postdoctoral Fellow in Materials (Advisor: Craig J. Hawker)
Research focus: 2- and 3D polymeric materials using light-mediated radical polymerization reactions

Education

Northwestern University **2012 – 2018**
Ph.D. in Chemistry (Advisor: Chad A. Mirkin)
Thesis: Single Crystal Engineering with DNA

University of California, Berkeley **2008 – 2011**
B.S. in Chemical Biology in College of Chemistry (Advisor: Jamie H. D. Cate)

Research Interests

Polymer nanocomposites; stimuli-responsive polymeric and composite materials; photo-mediated 3D printing of chemically reprocessable polymers; self-assembly of kinetically controlled nanoparticle superlattices; macromolecule sustainability.

Awards/Fellowships

Beckman Young Investigator Award Finalist	**2025**
BioPACIFIC MIP Catalyzing Automated Polymer Synthesis Fellowship	**2025**
ACS PRF Doctoral New Investigator Grant	**2024**
DOE Early Career Award	**2024**
Oak Ridge Associated Universities (ORAU) Ralph E. Powe Junior Faculty Enhancement Award	**2023**
Engineering for One Planet Faculty Fellowship	**2023**
Dow MI/MRL Travel Fellowship Award, UCSB	**2020**
Outstanding Oral Presentation Award, Polymers for Advanced Technologies	**2019**
International Institute for Nanotechnology (IIN) Outstanding Researcher Award, IIN	**2018**
Fellowship in Center of Computation and Theory of Soft Materials, Northwestern University	**2016**
NUANCE Image Gallery Award, Northwestern University	**2015**
Fellowship in Center for Bio-Inspired Energy Science, Northwestern University	**2015**
Presidential Fellowship Semi-Finalist, Northwestern University	**2015**

Research and Training Grants (Chronological)

1. Title: EFRI E3P GOALI: Waste Management and Circularity of Crosslinked Polyurethane Foams – REM Supplement (co-PI)
   Agency: National Science Foundation, Emerging Frontiers in Research and Innovation (EFRI) Program

Time/Amount: 6/1/22-5/31/23, $110,000 / 6/1/23-5/31/24, $110,000 / 6/1/24-5/31/25, $110,000
PI Recognition: $70,400 (total)

2. Title: Training for Improving Plastics Circularity Grant Program – Exciting Students for Sustainability with Curriculum, Open-Access Resources and Training (ESSCORT) (co-PI)
   Agency: National Institute of Standards and Technology
   Time/Amount: 9/1/22-8/31/24, $500,000
   PI Recognition: $50,000

3. Title: Membrane Processes for Continuous Removal of Alcohol (Lead co-PI)
   Agency: ASU Lightworks Sustainable Fuels and Products (SF&P) Seed Funding
   Time/Amount: 1/1/23-6/30/23, $15,000 (No overhead)

4. Title: Photo-Switching Polymer Nanocomposites (single PI)
   Agency: Oak Ridge Associated Universities (ORAU) Ralph E. Powe Junior Faculty Enhancement Award
   Time/Amount: 6/1/23-5/31/24, $10,000
   PI Recognition: $10,000 (No overhead)

5. Title: Improving Health and Wellbeing by Reducing Alcohol Consumption Through New Processes to Produce Alcohol-free Beverages (co-PI)
   Agency: Arizona New Economy Initiative (NEI) Performance Engineering and Research for Optimizing Response Mechanisms (PERFORM) Science and Technology Center (STC) Funding with ALTR FLTR
   Time/Amount: 9/1/23-8/31/24, $129,492
   PI Recognition: $38,848

6. Title: Selective Removal of Low Molecular Weight Molecules from Industrial Wastewater (co-PI)
   Agency: Arizona Water Innovation Initiative. Global Center for Water Technology
   Time/Amount: 12/1/20-12/31/24, $40,000,004
   PI Recognition: $400,000

7. Title: Sustainable Engineering Polymers Designed for On-Demand Depolymerization (co-PI)
   Agency: Sandia National Laboratories
   Time/Amount: 4/1/23-9/30/24, $182,747
   PI Recognition: $45,687

8. Title: ASU Knowledge Enterprise Core Facilities Seed Funding Pilot Program (single PI)
   Time/Amount: 12/19/23-7/15/24, $2,500 (No overhead)

9. Title: Center for Science of Heterogeneous Additive Printing of 3D Materials (SHAP3D) (co-PI)
   Agency: National Science Foundation Industry-University Cooperative Research Centers Program (IUCRC) Phase II
   Time/Amount: 5/1/24-4/30/29, $118,660.
   PI Recognition: $23,732

10. Title: Innovative Electroanalytical Method and Portable Sensor Development Utilizing Diffusion Mechanism in Redox Couples and Individual Particle Behavior Analysis (co-PI)
    Agency: National Research Foundation of Korea, Ewha Womans University
    Time/Amount: 5/1/24-4/30/27, $90,000.
    PI Recognition: $90,000 (17% overhead)

11. Title: 2025 ACS National Graduate Research Polymer Conference: Polymer Sustainability: Diverse Strategies for Addressing Global Challenges (single PI)
    Agency: National Science Foundation, Division of Materials Research, Polymers, Conference Grant

Time/Amount: 9/1/24-3/21/25, $6,000

12. Title: Dynamically Switching Polymer Networks using Transmutable Nanoparticles as Crosslinks (single PI)
Agency: Department of Energy, Basic Energy Sciences, Biomolecular Materials, Early Career Research Program (ECRP) Award
Time/Amount: 7/1/24-6/31/29, $1,073,959

13. Title: Designing Mechanically Robust, Self-Healing Polymer Nanocomposites with Tunable Interfacial Interactions (single PI)
Agency: American Chemical Society Petroleum Research Fund Doctoral New Investigator Grant
Time/Amount: 9/1/25-8/31/27, $110,000 (No overhead)

14. Title: Photoswitching Chemistries for Multimaterial 3D Printing (single PI)
Agency: National Science Foundation Science of Heterogeneous Additive Printing of 3D Materials (SHAP3D) IUCRC Center
Time/Amount: 1/1/25-12/31/25, $48,886 (10% overhead)

15. Title: Pervaporation Polymer Membrane Design for Continuous Removal of Alcohol (Lead co-PI)
Agency: National Science Foundation BioPACIFIC MIP User Proposal/CAPS Fellowship
Time/Amount: 3/1/25-3/31/25, $10,000
PI Recognition: $10,000 (No overhead)

Journal Publications from ASU

23. Oh, T., Seo, S. E., Mirkin, C. A. Toehold-Mediated Surface Editing of DNA-Engineered Colloidal Crystals. *Nano Lett.* **2025,** In Preparation.

22. Mirkin, C. A. et al., 33 Unresolved Questions in Nanoscience and Nanotechnology. *ACS Nano* **2025,** Accepted [doi: 10.1021/acsnano.5c12854].

21. Seo, S. E., Lee, B., Oh, T., Girard, M., Mirkin, C. A.* Salt-Induced Polymorphs Observed in Colloidal Single Crystals. *J. Am. Chem. Soc.* **2025,** Accepted.

20. Li, Y., Oddonetto, T., Chen, L., Alvidrez, J., Deemer, E. M., Walker, W. S., Seo, S. E., Perreault, F., Lind, M. L.* Quaternized Poly(p-phenylene oxide) Membrane as a Type of Anion Exchange Membrane to Remove Ions from Water through Electrodialysis. **2025,** In Preparation.

19. Gonzalez Calvo, T., Yu, J. -C., Seo, S. E.* Fun Radical Chemistry. **2025**, In Preparation.

18. Du, J., Qi, X., Seo, S. E., Zhang, S., Borkiewicz, O. J. Crystallization and Assembly at Interfaces: Celebrating the Achievements of a Vibrant Research Community. *MRS Adv.* **2024,** *9*, 1037-1038 [doi: 10.1557/s43580-024-00922-0].

17. Yu, J. -C., Browne, R. A., Seo, S. E.* Mechanically Robust, Self-Healing Polymer Nanocomposites with Tailorable Nanoparticle-Based Bonds. *Macromolecules* **2024**, *57*, 9059-9066 [doi: 10.1021/acs.macromol.4c01013].

16. Alfarhan, S., Nettles, J., Prabhudesai, P., Yu, J. -C., Westover, C., Tang, T., Wang, W., Chen, X., Seo, S. E., Li, X., Long, T. E., Jin, K. Directing Network Degradability using Wavelength-Selective Thiol-Acrylate Photopolymerization. *Polym. Chem.* **2024,** *15*, 1141 [doi: 10.1039/D3PY01285A].

15. (Invited) Gonzalez Calvo, T.,[+] Hawkins, K.,[+] Seo, S. E.* Rapid, Visible Light-Controlled Cationic Polymerization of Vinyl Ethers for 3D Printing of Chemically Reprocessable Networks under Ambient Conditions. *J. Polym. Sci.* **2024**, *62*, 2630 [doi.org/10.1002/pol.20230678]. *featured as a journal cover.

14. Kwon, Y., Seo, S. E., Lee, J., Berezvai, S., Read de Alaniz, J., Eisenbach, C. D., McMeeking, R. M., Hawker, C. J., Valentine, M. T.* 3D-Printed Polymer Foams Maintain Stiffness and Energy Dissipation under Repeated Loading. *Compos. Commun.* **2023**, *37*, 101453 [doi: 10.1016/j.coco.2022.101453].

Journal Publications Prior to ASU

13. Seo, S. E., Kwon, Y., Dolinski, N. D., Sample, C. S., Self, J., Bates, C. M., Valentine, M. T., Hawker, C. J.* Three-Dimensional Photochemical Printing of Thermally Activated Polymer Foams. *ACS Appl. Polym. Mater.* **2021**, *3*, 4984-4991 [doi: 10.1021/acsapm.1c00726].

12. Seo, S. E., Hawker, C. J.* The Beauty of Branching in Polymer Science. *Macromolecules* **2020**, *53,* 3257-3261 [doi: 10.1021/acs.macromol.0c00286].

11. Abdilla, A., Dolinski, N. D., de Roos, P., Ren, J. M., van der Woude, E., Seo, S. E., Zayas, M. S., Lawrence, J., Read de Alaniz, J., Hawker, C. J.* Polymer Stereocomplexation as a Platform for Scalable Nanoparticle Assembly. *J. Am. Chem. Soc.* **2020**, *142,* 1667-1672 [doi: 10.1021/jacs.9b10156].

10. Seo, S. E., Discekici, E. H., Zhang, Y., Bates, C. M., Hawker, C. J. Surface-Initiated PET-RAFT Polymerization under Metal-Free and Ambient Conditions using Enzyme Degassing. *J. Polym. Sci.* **2020**, *58,* 70-76 [doi: 10.1002/pola.29438].

9. Jung, K., Corrigan, N., Ciftci, M., Xu, J., Seo, S. E., Hawker, C. J., Boyer, C.* Designing with Light: Advanced 2D, 3D, and 4D Materials. *Adv. Mater.* **2020**, *32,* 1903850 [doi: 10.1002/adma.201903850].

8. Seo, S. E., Girard, M., de la Cruz, M. O., Mirkin, C. A.* The Importance of Salt-Enhanced Electrostatic Repulsion in Colloidal Crystal Engineering with DNA. *ACS Cent. Sci.* **2019**, *5,* 186-191 [doi: 10.1021/acscentsci.8b00826].

7. Seo, S. E., Girard, M., de la Cruz, M. O., Mirkin, C. A.* Non-Equilibrium Anisotropic Colloidal Single Crystal Growth with DNA. *Nat. Commun.* **2018**, *9,* 4558 [doi: s41467-018-06982-9].

6. Gabrys, P. A.,[+] Seo, S. E.,[+] Wang, M. X.,[+] Oh, E., Macfarlane, R. J., Mirkin, C. A.* Lattice Mismatch in Crystalline Nanoparticle Thin Films. *Nano Lett.* **2018**, *18,* 579-585 [doi: 10.1021/acs.nanolett.7b04737].

5. Wang, M. X.,[+] Brodin, J. D.,[+] Millan, J. A., Seo, S. E., Girard, M., de la Cruz, M. O., Lee, B., Mirkin, C. A.* Altering DNA-Programmable Colloidal Crystallization Paths by Modulating Particle Repulsion. *Nano Lett.* **2017**, *17,* 5126-5132 [doi: 10.1021/acs.nanolett.7b02502].

4. Seo, S. E.,[+] Li, T.,[+] Senesi, A. J., Mirkin, C. A., Lee, B.* The Role of Repulsion in Colloidal Crystal Engineering with DNA. *J. Am. Chem. Soc*. **2017**, *139,* 16528-16535 [doi: 10.1021/jacs.7b06734].

3. Wang, M. X.,[+] Seo, S. E.,[+] Gabrys, P. A., Fleischman, D., Lee, B., Kim, Y., Atwater, H. A., Macfarlane, R. J., Mirkin, C. A.* Epitaxy: Programmable Atom Equivalents *versus* Atoms. *ACS Nano* **2017**, *11,* 180-185 [doi: 10.1021/acsnano.6b06584].

2. Seo, S. E.,[+] Wang, M. X.,[+] Shade, C. M., Rouge, J. L., Brown, K. A., Mirkin, C. A.* Modulating the Bond Strength of DNA-Nanoparticle Superlattices. *ACS Nano* **2016**, *10,* 1771-1779 [doi: 10.1021/acsnano.5b07103].

1. Shade, C. M., Kennedy, R. D., Rouge, J. L., Rosen, M. S., Wang, M. X., Seo, S. E., Clingerman, D. J., Mirkin, C. A.* Duplex Selective Ruthenium-Based DNA Intercalators. *Chemistry* **2015**, *21*, 10983-10987 [doi: 10.1002/chem.201502095].

Patents

1. Mirkin, C. A.,* Shade, C. M., Rouge, J. L., Seo, S. E., Wang, M. X. "DNA Intercalators with Duplex-Selective Luminescence Enhancement and Their Use as Nanoparticle-Conjugate Sensing Agents." Patent 9969759, Issued May **2018**.
2. Seo, S. E.,* Yu, J. -C. "Dynamic Supramolecular Bonds in Self-Healing Polymer Nanocomposites." Provisional U.S. Patent 2952332-000021, Non-Provisional Patent filed April **2024** (US Patent Application Serial No. 18/645,069).
3. Seo, S. E.,* Gonzalez Calvo, T., Yu, J. -C. "Photo-Cleavable Capsules for On-Demand Plastic Biodegradation." Provisional US Patent filed June **2025** (US Patent Application Serial No. 63/816,728).
4. Seo, S. E.,* Sarmas Farfan, J. J. "Thermoplasmonically Induced Phase Separation Additive Manufacturing and Compositions Thereof." Provisional US Patent filed April **2025** (US Patent Application Serial No. 62/795,043).
5. Seo, S. E.,* Gonzalez Calvo, T., "Compositions and Methods of Orthogonal Photopolymerization." Provisional US Patent filed August **2025** (US Patent Application Serial No. 63/863,185).
6. Seo, S. E.,* Thomas, M. L., Sarmas Farfan, J. J., Lai, T., Taysha, T. B. "Sustainable polymer membranes synthesized with biofeedstock for continuous removal of organics over water." In Preparation **2025**.

Presentations

1. Invited: *IUPAC-The Polymer Society of Korea 50* — Busan, South Korea, September **2026**.
2. Invited: *Macromolecules Innovation Institute Spring Seminar Series, Virginia Tech* — Blacksburg, VA, April **2026**.
3. Invited: *Brookhaven National Laboratory* — Upton, NY, February **2026**.
4. Invited: *Columbia University* — New York, NY, February **2026**.
5. Invited: *Structural Adhesives Division, Annual Meeting of the Adhesion Society 2026* — Savannah, GA, February **2026**.
6. Invited: *Stimuli-Responsive Materials and Nanocomposites, Pacifichem 2025* — Honolulu, HI, December **2025**.
7. Invited: *Emerging Leaders in Inorganic and Materials Chemistry, 2025 ACS Western Regional Meeting* — San Jose, CA, October **2025**.
8. Invited: *Symposium for The Herman F. Mark Polymer Chemistry Award in Honor of Craig J. Hawker, ACS Fall Meeting* — Washington D.C., August **2025**.
9. Invited: Two-Day Virtual Short Course: *Introduction to Polymer Characterization: Molecular Architecture, Morphology, and Thermomechanical Response, Golden Gate Polymer Forum* — virtual, July **2025**.
10. Invited: *DuPont Polymer Processing Community of Practice* — virtual, May **2025**.
11. (Poster) *Self-Assembly and Supramolecular Chemistry, Gordon Research Conference* — Les Diablerets, Vaud, Switzerland, May **2025**.
12. Invited: *Boston University* — Boston, MA, May **2025**.
13. Invited: *Polymers and Soft Matter Program, MIT* — Boston, MA, April **2025**.
14. Invited: *Center for Nanophase Materials Sciences Theme Science Seminar Harnessing Complex Macromolecular Conformations at the Oak Ridge National Laboratory* (Director-Theme Special Seminar) — Oak Ridge, TN, May **2025**.
15. *Polymer Blends: Eurofillers 2025 Conference* — Lyon, France, January **2025**.
16. Invited: *Korea Institute of Science and Technology* — Seoul, Korea, December **2024**.
17. Invited: *Department of Chemistry and Nanoscience, Ewha Womans University* — Seoul, Korea, December **2024**.
18. Invited: *Department of Chemical and Biological Engineering, University of New Mexico* — Albuquerque, NM, October **2024**.

19. Invited: *2024 International Symposium on Stimuli-Responsive Materials* — Sonoma, CA, October **2024**.
20. Invited: *Syensqo Stimuli-Responsive Polymers Lecture* — Alpharetta, GA, August **2024**.
21. Invited: *Additive Manufacturing of Soft Materials, Gordon Research Conference* — Smithfield, RI, August **2024**.
22. Invited: *ACS Fall Meeting* — Denver, CO, August **2024**.
23. *IUPAC Macro 2024 World Polymer Congress* — Warwick, UK, July **2024**.
24. Invited: *Polymer Group Meeting at Sandia National Laboratories* — Albuquerque, NM, July **2024**.
25. (Poster) *2024 Tosoh Polymer Conference* — Raleigh, NC, June **2024**.
26. *ACS Spring Meeting, Adaptive Materials from Dynamic Polymer Networks and Composites* — New Orleans, LA, March **2024**.
27. *ACS Spring Meeting, Many Flavors of Polymer Chemistry for 3D Printing* — New Orleans, LA, March **2024**.
28. Invited: *UCSB-ASU Partnership Meeting* — Santa Barbara, CA, February **2024**.
29. Invited: *2024 Biodesign Institute Town Hall, 7 Minutes of Science* — Tempe, AZ, February **2024**.
30. *AIChE Annual Meeting, Polymer Thermodynamics, Self-Assembly, and Polymer-Molecule Interactions II* — Orlando, FL, November **2023**.
31. *AIChE Annual Meeting, Polymer Synthesis and Reaction Engineering* — Orlando, FL, November **2023**.
32. Invited: *AIChE Annual Meeting, 2023 KIChE-US Chapter Emerging Junior Investigator Forum* — Orlando, FL, November **2023**.
33. Invited: *2023 International Symposium on Stimuli-Responsive Materials* — Sonoma, CA, October **2023**.
34. *ASU Technical Advisory Board Meeting* — Tempe, AZ, October **2023**.
35. Invited: *Emerging Engineer and Scientist Seminar Series in the Department of Mechanical Engineering at Ohio State University* — Virtual, October **2023**.
36. Invited: *ASU Biological Design Seminar Series* — Tempe, AZ, September **2023**.
37. Invited: *Department of Chemical Engineering Seminar, Korea University* — Seoul, South Korea, May **2023**.
38. Invited: *Department of Chemical and Biological Engineering, Colorado School of Mines* — Golden, CO, April **2023**.
39. *AIChE Annual Meeting, 3D Printing of Composites* — Phoenix, AZ, November **2022**.
40. *ACS Fall Meeting* — Chicago, IL, August **2022**.
41. (Poster) *Additive Manufacturing of Soft Materials Gordon Research Conference* — Ventura, CA, August **2022**.
42. *ACS Spring Meeting* — San Diego, CA, March **2022**.
43. *ASU Technical Advisory Board Meeting* — Tempe, AZ, February **2022**.
44. Invited: *Biodesign Center for Sustainable Macromolecular Materials and Manufacturing Seminar Series* — Tempe, AZ, October **2021**.
45. Invited: *School for Engineering of Matter, Transport & Energy, Arizona State University* — Tempe, AZ, February **2021**.
46. Invited: *Department of Materials Science and Engineering, University of California, Berkeley* — Berkeley, CA, February **2021**.
47. *ACS Fall Meeting* — Virtual Meeting, August **2020**.
48. Invited: *Department of Materials Science and Engineering, Cornell University* — Ithaca, NY, February **2020**.
49. *Polymers for Advanced Technologies Conference* — College Station, TX, August **2019**.
50. (Poster) *Materials Research Outreach Program* — Santa Barbara, CA, January **2019**.
51. Invited: *SPIE-MRSEC Student Seminar Series at Northwestern University* — Evanston, IL, March **2018**.
52. Invited: *Materials Research Laboratory, University of California, Santa Barbara* — Santa Barbara, CA, November **2017**.
53. (Poster) *Gordon Research Conference on Noble Metal Nanoparticles* — South Hadley, MA, June **2016**.
54. Invited: *Korean American Scientists and Engineers Association Seminar Series at Northwestern University* — Evanston, IL, March **2016**.
55. (Poster) *Materials Research Society National Meeting* — San Francisco, CA, April **2015**.

Teaching

Introduction to Applied Chemical Thermodynamics, CHE342 Fall **2024 – 2025**

Circular Plastics Laboratory, CHE/CHM 598	Spring **2024 – 2025**
Soft Matter Morphology, CHE/CHM 494/598	Spring **2023 – 2025**
Thermodynamics of Chemical Systems, CHE543	Fall **2021 – 2023**

Professional Activities and Service (External)

Session Chair for the American Institute of Chemical Engineers, MES Division *Excellence in Graduate Polymer Research*	**2025**
Session Chair for the International Symposium on Stimuli-Responsive Materials	**2024 – 2025**
Faculty Chair for the ACS POLY National Graduate Research Polymer Conference, Tempe, AZ	**2024 – 2025**
Session Chair for the American Institute of Chemical Engineers, MES Division *Polymer Synthesis and Reaction Engineering*	**2024**
MRS Advances Co-Editor	**2024**
Doolittle Judge for the ACS Fall Meeting, Denver CO	**2024**
Poster Judge for the ACS Fall Meeting, Denver CO	**2024**
Discussion Leader for Gordon Research Conference: Additive Manufacturing of Soft Materials	**2024**
Discussion Leader for Tosoh Polymer Conference	**2024**
Proposal Reviewer for *NSF BioPACIFIC MIP (UCSB/UCLA)*	**2023 – 2025**
Track Chair for the Society for Laboratory Automation and Screening Meeting *Micro-and Nanotechnology*	**2023 – 2024**
Session Chair for the Society for Laboratory Automation and Screening Meeting *Next Generation 3D Printing in Medicine*	**2023 – 2024**
Session Chair for the American Institute of Chemical Engineers, MES Division *Polymer Synthesis and Reaction Engineering*	**2023**
Graduate Student Award Reviewer for the 2023 MRS Fall Meeting, Boston MA	**2023**
Symposium Organizer for the 2023 MRS Fall Meeting, Boston MA *Crystallization and Assembly at Interfaces*	**2023**
Session Chair for the Society for Laboratory Automation and Screening Meeting *Nanomedicine*	**2023**
Associate Track Chair for the Society for Laboratory Automation and Screening Meeting *Micro-and Nanotechnology*	**2022 – 2023**
Session Chair for the American Institute of Chemical Engineers, MES Division *Polymer Synthesis and Reaction Engineering* *Polymer Thermodynamics and Self-Assembly*	**2022**
NSF DMR Workshop: Materials Laboratories of the Future	**2022**
Mentor for NSF EFRI REM Program	**2022 – 2024**
Mentor for the Chemistry Women Mentorship Network	**2022**
Peer Reviewer for Nano Letters	**2025 – present**
Peer Reviewer for RSC Applied Polymers	**2024 – present**
Peer Reviewer for Macromolecules	**2024 – present**
Peer Reviewer for Polymer Chemistry	**2024 – present**
Peer Reviewer for ACS Nano	**2023 – present**
Peer Reviewer for Giant	**2023 – present**
Peer Reviewer for ACS Applied Polymer Materials	**2022 – present**
Peer Reviewer for Journal of American Chemical Society	**2021 – present**
Peer Reviewer for Journal of Polymer Science	**2018 – present**
Reviewer for the Office of Basics Energy Sciences within DOE	
Review Panelist for Programs in NSF SBIR/STTR, ENG (Interfacial Engineering, Nanoscale Interactions), CHE (Macromolecular, Supramolecular, and Nanochemistry) Divisions, and Graduate Research Fellowship Program	

Professional Activities and Service (Internal)

Internal Culture Committee, Chemical Engineering Program	**2024**
Lead PI, NSF EFRI REM Program	**2024**
Faculty Hiring Committee, SEMTE/Center for Biomaterials Innovation and Translation	**2023 – 2024**
New Faculty Advisory Council, Ira A. Fulton Schools of Engineering	**2023 – present**
Faculty Mentor for AIChE ASU Student Chapter	**2023 – present**
External Engagement Leader for Biodesign Center for SM3	**2021 – present**
Mentor for Swing 4 SWE (The Society of Women Engineers)	**2023**
Poster Judge for Biodesign FUSION Retreat	**2023, 2025**
Scientist for Meet the Scientist Working in Sustainability Day – Grades KG-2	**2022**
Faculty Hiring Committee, School of Molecular Sciences/Center for SM3	**2021 – 2023**
Poster Judge for Biomaterials Day Conference	**2021**
Review Committee for Fulton Undergraduate Research Initiative and Master's Opportunity for Research in Engineering	**2021, 2023**

Prior to ASU

Future Leaders in Advanced Materials, UCSB, Mentor	**2019**
Careers Conference, University of Chicago, Teaching Volunteer	**2016**
STEM and Sports Day, Northwestern University, Course Designer	**2015**
Science In The Classroom, Northwestern University, Teaching Volunteer	**2014 – 2016**

Professional Organizations and Boards

American Chemical Society (ACS), ACS POLY Division, ACS PMSE Division, Biodesign Center for Sustainable Macromolecular Materials and Manufacturing, American Institute of Chemical Engineers, Korea Technology Advisory Group (International Collaborative Research and Development Program in Korea Institute for Advancement of Technology initiated by MOTIE, South Korea).

Mentoring

Current Ph.D. Students

- Jen-Chieh Yu, 4th year, Chemical Engineering, School for Engineering of Matter, Transport and Energy (SEMTE Outstanding TA Award, **2023**, **2024** Excellence in Graduate Polymer Research Award at the ACS Spring Meeting, Einstein award for best use of physical principles at Fusion **2024**).
- Thalia Gonzalez Calvo, 4th year, School of Molecular Sciences (George U. Yuen Memorial Award for the **2023-2024** academic year, Marie Curie award for best use of chemistry at Fusion **2024**, **2024** School of Molecular Sciences Outstanding Graduate Student Merit Award).
- Jordy Sarmas Farfán, 3rd year, Chemical Engineering, School for Engineering of Matter, Transport and Energy.
- Jimmy Lei, 1st year, Chemical Engineering, School for Engineering of Matter, Transport and Energy.

Current M.S. Students

- Mihir Patel, Chemical Engineering, School for Engineering of Matter, Transport and Energy (Applied Project, MORE Fellow, **2024-2025**).
- Gina Briones, Chemistry, School of Molecular Sciences (**2024**).

Current Undergraduate Students

- Maren Thompson, Chemical Engineering, School for Engineering of Matter, Transport and Energy (Thesis, FURI Fellow, **2024**).
- Michael Swart, Chemical Engineering, School for Engineering of Matter, Transport and Energy (**2024**).

M.S. Students Graduated

- Christina Sims, 4+1 Student, Chemical Engineering, School for Engineering of Matter, Transport and Energy (Applied Project, **2023**).
- Ryan Browne, 4+1 Student, Chemical Engineering, School for Engineering of Matter, Transport and Energy (Applied Project, **2022**).
- Kade Hawkins, Chemical Engineering, School for Engineering of Matter, Transport and Energy (Thesis, MORE Fellow, **2021-2023**).
- Braxton Bradbeer, 4+1 Student, Chemical Engineering, School for Engineering of Matter, Transport and Energy (Applied Project, **2023**).
- Luca Welch, 4+1 Student, Chemical Engineering, School for Engineering of Matter, Transport and Energy (Applied Project, **2024**).
- Soham Sanghvi, Chemical Engineering, School for Engineering of Matter, Transport and Energy (Applied Project, MORE Fellow, **2024**).

B.S. Students Graduated

- Justin Dao, Chemical Engineering, School for Engineering of Matter, Transport and Energy (FURI Fellow, **2024**).

Summer NSF REM (equivalent to REU) Students

- Helen Nguyen, Biomedical Engineering, School of Biological and Health Systems Engineering (**2024** Spring).
- Karyme Medina Castillo, Chemistry at Smith College (**2024** Summer).
- Esther Tan, Chemical and Biomolecular Engineering at University of Maryland (**2023** Summer).
- Taras Nagornyy, Chemical Engineering at UMass Amherst (**2022** Summer, MIT (PhD)).

Visiting Faculty

Byung-Kwon Kim, Professor, Department of Chemistry and Nanoscience, Ewha Womans University, South Korea (**2024**)