

Joshua Tropp, Ph.D.

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Education

- 2015 – 2020 **Ph.D. in Polymer Science and Engineering**
Department of Polymer Science and Engineering
University of Southern Mississippi, Hattiesburg, MS
Dissertation: Establishing Design Guidelines for Conjugated Polymer-Based Sensing Technologies for Environmental Monitoring
Advisor: Professor Jason D. Azoulay
- 2011 – 2015 **B.A. in Chemistry; ACS Certification; Summa cum laude**
Washington & Jefferson College, Washington, PA

Professional Appointments

- 2023 – Present **Assistant Professor**
Department of Chemistry & Biochemistry
Texas Tech University, Lubbock, TX
- 2020 – 2023 **Postdoctoral Research Associate: Organic Bioelectronics**
Department of Biomedical Engineering
Northwestern University, Evanston, IL
Advisor: Professor Jonathan Rivnay
- 2020 **Postdoctoral Research Associate: Chemical Sensing**
School of Polymer Science and Engineering
University of Southern Mississippi, Hattiesburg, MS
Advisor: Professor Jason D. Azoulay

Affiliations: Texas Center for Comparative Cancer Research (TC3R), American Chemical Society (ACS), Materials Research Society (MRS), American Institute of Chemical Engineers (AIChE), Society of Photo-Optical Instrumentation Engineers (SPIE)

Selected Academic Honors and Awards

- 2026 **New Faculty Award** – Texas Tech Alumni Association (TTAA)
- 2025 **Most Innovative Research** – Research Development & Communications, TTU
- 2024 **WelchX Retreat Invitee** – Welch, Theme: Chemistry of Life
- 2022 **PMSE Future Faculty Awardee** – ACS, Division of Polymeric Materials Science and Engineering
- 2022 **Rising Star in Soft and Biological Matter** – MRSEC at the University of Chicago
- 2022 **Postdoc of the Month, August** – Northwestern University Postdoctoral Association
- 2022 **Postdoc Talk Competition Winner** – Georgia Institute of Technology
- 2020 **2020 CAS Future Leaders Program** – Chemical Abstract Services (CAS)
- 2019 **Graduate Student Hall of Fame (*One recipient per school*)** - The University of Southern Mississippi
- 2019 **3-Minute Thesis Grand Champion** – Graduate School, The University of Southern Mississippi
- 2018 **Graduate Competitive Travel Award** – University of Southern Mississippi
- 2016 **Graduate Research Traineeship** – National Science Foundation
- 2015 **Phi Beta Kappa Inductee (*One recipient per school*)** – Washington & Jefferson College
- 2015 **Jesse W. Lazear Book Prize** – Department of Chemistry, Washington & Jefferson College
- 2015 **Outstanding Senior Chemistry Major** – Society of Analytical Chemists of Pittsburgh
- 2015 **Samuel Jones Prize in Chemistry (*Top Grade on Exam*)** – Departments of Chemistry and Physics

Funding – Principal Investigator (Total: ~\$2.87 million)

- 2026 Pantex (DOE Subcontract)** – Alternative Polymeric Binder Formulations – \$853,620
- 2026 DARPA YFA** – Nanoconfined Polycondensation of Sequence Defined Conjugated Materials within Responsive Reticular Frameworks – \$822,591
- 2026 AFOSR YIP** – Morphology-Directed Excited-State Engineering of Organic Nanomaterials for NIR-II/SWIR-Edge Emission – \$450,000
- 2025 Pantex (DOE Subcontract)** – Subaward PI – Project Details Restricted – \$300,000
- 2025 Pantex (DOE Subcontract)** – Subaward PI – Project Details Restricted – \$235,000
- 2025 TTU A&S** – Portable Optical Tests for Per- and Polyfluoroalkyl substances (PFAS) Toward Rapid Water Quality Monitoring Efforts – \$3,000
- 2024 ACS PRF DNI** – Nanoconfinement Enabled Synthetic Control of Conjugated Polymers – \$110,000
- 2024 WelchX Pilot Grant** – Unraveling the Role of Iron in the Gut Microbiome using Iron-Selective Organic Electrochemical Transistors – \$100,000

Publications ([Google Scholar Profile](#); ORCID: 0000-0002-1427-1296)

Journal Articles (chronological order) – (*equally contributed first-author or (co)corresponding author)

1. K Sarker, T. A. Oyshi, R. Posey, **J. Tropp**,* C. Korzeniewski* “In-Situ Confocal Raman Microscopy of a Glycolated Polythiophene Mixed Conductor” *Chem. Mater.* **2026**, 38, 8873.
M. Megahed, A. Harun, K. Herrera, M. H. Rashid, R. Posey, D. L. Itzel, J. Tropp, I. Srivastava* "Architecture-Dependent Stability, Cellular Uptake, and Redox Modulation of Poly(p-Coumaric Acid) Hybrid Nanoparticles for Ovarian Carcinoma Intervention" *ACS Nano Med.*, **2026**, 1, 2091.
2. R. Posey, K. C. Akula, Y. C. Simon,* **J. Tropp**,* “Conjugated Depolymerizable Organic Excitonic Polymeric Materials: A Platform for Functional and Sustainable Electronics” *J. Phys. Mater.* **2026**, 9, 041001.
–Invited for Focus Issue on Organic Excitonic Materials, *Journal of Physics: Materials (IOP)*
3. A. Harun, I. Vasquez, H. Bowman, R. Posey, Z. Hong, **J. Tropp**,* I. Srivastava,* “Rational Design and Development of Organic Afterglow Nanoparticles for Image-Guided Interventions” *Small Methods*, **2026**, 10, e70694.
4. E. Lee, C. Cunin, R. Meacham, W. Li, R. Posey, **J. Tropp**, Y. Zhao, A. Gumyusenge,* “Enabling Mixed Ionic-Electronic Conduction in Thienoisindigo Based Polymers via Side Chain Engineering” *J. Mater. Chem. C* **2026**, 14, 14492.
5. N. Gill,* R. Posey,* B. Alfaro, H. Garza, J. Tran, K. Mustafa Mahmud, A. C. Fritz, T. A. Oyshi, E. Nozohouri, I. Srivastava, U. Bickel, H. Lischka, **J. Tropp**,* “Multivariable Design of a Minimalist Conjugated Polymer Nanoparticle with Bright NIR-II Emission” *Adv. Opt. Mater.*, **2025**, 13, e02433.
6. R. Posey,* N. Gill,* D. Fernandez, L. G. F. Dos Santos, H. Garza, J. Tran, B. Alfaro, N. Payne, T. A. Oyshi, C. Cashman, B. Salinas, I. Srivastava, U. Bickel, H. Lischka, **J. Tropp**,* “Tuning the Structure of Thienoisindigo (TIG) Copolymers to afford Bright Near Infrared Emission for Bioimaging Through Aggregation-Enhanced Emission” *J. Mater. Chem. B*, **2025**, 13, 12918.
–Thematic Issue on Materials Developments in Cancer Therapeutics, *Journal of Materials Chemistry B HOT Paper, Highlighted Research, Front Cover*
7. R. E. Daso, R. Posey, H. Garza, A. Perry, C. Peterson, A. C. Fritz, J. Rivnay,* **J. Tropp**,* “Standardized Electrochemical Characterization of Conductive Hydrogels” *Adv. Funct. Mater.*, **2025**, 35, e08859.
–Highlighted Research, Front Cover
8. I. Vasquez, A. Harun, R. Reddy, R. Posey, U. Bickel, **J. Tropp**, I. Srivastava* “Ultrabright NIR-II Nanoprobes for Ex Vivo Bioimaging: Protein Nanoengineering Meets Molecular Engineering” *ACS Nanosci. Au.* **2025**, 5, 527. –Invited for Rising Stars Special Issue.

9. A. Harun, N. Bendele, M. I. Khalil, I. Vasquez, J. Djuanda, R. Posey, G. Christopher, U. Bickel, V. Gruev, **J. Tropp**, P. F. Egan, I. Srivastava,* “3D Tumor-Mimicking Phantom Models for Evaluating NIR I/II Nanoparticles in Fluorescence-Guided Surgical Interventions” *ACS Nano*, **2025**, 19, 19757.
10. T. K. Brown, R. E. Daso, C. Peterson, C. Beaumont, **J. Tropp**, A. Carmen, C. L. Chao, C. Dang, R. Keate, J. Rivnay,* B. Jiang,* “Sulfonated PEDOT-Modified Decellularized Arteries as Electroactive Scaffolds for Vascular Tissue Engineering.” *J. Biomed. Mater. Res. A*. **2025**, 113, e70002.
11. N. Wilson, B. Mete, N. Payne, **J. Tropp**, G. Botte,* “Adaptable Pectin Extraction and Functional Group Impact on Electrolytes Suitable for Energy Storage Applications” *J. Electrochem. Soc.*, **2025**, 172, 023505.
12. N. Gill, I. Srivastava, **J. Tropp**,* “Rational Design of NIR-II Emitting Conjugated Polymer Derived Nanoparticles for Image-Guided Cancer Interventions” *Adv. Health. Mater.* **2024**, 13, 240197.
13. A. S. Mehta, S. L. Zhang, X. Xie, S. Khanna, **J. Tropp**, X. Ji, R. Daso, C. K. Franz, S. W. Jordan, J. Rivnay,* “Decellularized Biohybrid nerve promotes motor neuron projections” *Adv. Health. Mater.* **2024**, 13, 2401875.
14. R. Wu, X. Ji, Q. Ma, B. D. Paulsen, **J. Tropp**, J. Rivnay,* “Direct quantification of ion composition and mobility in organic mixed ionic-electronic conductors” *Sci. Adv.* **2024**, 10, eadn8628.
15. R. Keate, **J. Tropp**, R. Wu, A. Petty, E. Hsu, G. Ameer, J. Rivnay,* “Decoupling the Influence of Poly(3,4-ethylenedioxythiophene)-Collagen Composite Characteristics on Cell Stemness” *Adv. Sci.* **2024**, 11, 2305562.
–**Highlighted Research, Front Cover**
16. R. P. Trueman, O. Guillemot-Legrís, H. T. Lancashire, A. S. Mehta, **J. Tropp**, R. E. Daso, J. Rivnay, A. B. Tabor, J. B. Phillips,* B. C. Schroeder,* “Aligned Bioelectronic Polypyrrole/Collagen Constructs for Peripheral Nerve Interfacing” *Adv. Eng. Mater.* **2024**, 26, 2301488.
17. **J. Tropp**, C. P. Collins, X. Xie, R. E. Daso, A. S. Mehta, S. P. Patel, M. M. Reddy, S. E. Levin, C. Sun, J. Rivnay,* “Conducting polymer nanoparticles with intrinsic aqueous dispersibility for conductive hydrogels” *Adv. Mater.* **2024**, 36, 2306691. **Top 10% of Most-Viewed Papers of Adv. Mater. from 2024**
18. **J. Tropp**, D. Meli, J. Rivnay, “Organic Mixed Conductors for Electrochemical Transistors” *Matter*. **2023**, 6, 3132. –**Highlighted Research, Front Cover**
19. **J. Tropp**,* D. Meli,* R. Wu, B. Xu, S. Hunt, J. D. Azoulay, B. Paulsen,* J. Rivnay,* “Revealing the Impact of Molecular Weight on Mixed Conduction in Glycolated Polythiophenes Through Electrolyte Choice” *ACS Mater. Lett.*, **2023**, 5, 1367.
20. **J. Tropp**,* “Biomaterial Platforms Offer Capability of Efficacious Male Contraceptives” *MRS Bull.* **2022**, 47, 649.
21. **J. Tropp**, A. S. Mehta, R. Wu, M. M. Reddy, A. Petty, J. Rivnay,* “Versatile Poly (3, 4-ethylenedioxythiophene) Polyelectrolytes for Bioelectronics by Incorporation of an Activated Ester” *Chem. Mater.*, **2022**, 35, 41.
22. M. H. Ihde,* **J. Tropp**,* M. Diaz, A. M. Shiller, J. D. Azoulay,* M. Bonizzoni,* “A Sensor Array for the Ultra-Sensitive Discrimination of Heavy Metal Pollutants in Seawater” *Adv. Funct. Mater.*, **2022**, 32, 2112634.
23. R. L. Keate, **J. Tropp**, C. Collins, H. T. O. Ware, A. J. Petty, G. Ameer, C. Sun,* J. Rivnay,* “3D-printed electroactive hydrogel architectures with sub-100 μm resolution promote myoblast viability” *Macromol. Biosci.*, **2022**, 22, 2200103.
24. E. A. Schafer, R. Wu, D. Meli, **J. Tropp**, M. Moser, I. B. McCulloch, B. D. Paulsen,* J. Rivnay,* “Sources and Mechanisms of Degradation in P-type Thiophene-Based Organic Electrochemical Transistors” *ACS Appl. Electron. Mater.*, **2022**, 4, 1391.
25. A. R. Benasco, **J. Tropp**, V. Kaphle, Y. Chen, W. Zhao, N. Eedugurala, A. Flood, J. D. Azoulay,* “Macrocyclic Induced Doping of Conjugated Polymer Transistors: Toward the Selective and Ultrasensitive Detection of Phosphate in Seawater” *Adv. Electron. Mater.*, **2022**, 7, 2101353.

26. F. M. Fung,* S. Z. Jilani,* M. L. Ohnsorg,* R. L. Pinals,* M. Saraf,* **J. Tropp**,* P. Carlton, “How Early-Career Scientists Responded to the Space Created by the COVID-19 Pandemic with Resiliency” *ACS Cent. Sci.*, **2022**, *8*, 294-296.
27. S. Griggs, A. Marks, D. Meli, G. Rebetez, O. Bardagot, B. D. Paulsen, H. Chen, K. Weaver, M. I. Hugraha, E. A. Shafer, **J. Tropp**, C. M. Aithison, T. D. Anthopoulos, N. Baneerji, J. Rivnay, I. McCulloch,* “The effect of residual palladium on the performance of organic electrochemical transistors” *Nat. Commun.* **2022**, *13*, 7964.
28. **J. Tropp**, J. Rivnay,* “Design of Biodegradable and Biocompatible Conjugated Polymers for Bioelectronics” *J. Mater. Chem. C* **2021**, *9*, 13543-13556. –**Highlighted Research, “HOT Paper” and Front Cover.**
29. R. L. Keate, **J. Tropp**, J. Rivnay,* “A Collagen-Conducting Polymer Composite with Enhanced Chondrogenic Potential” *Cell Mol. Bioeng.* **2021**, *14*, 501-512.
30. P. R. Paudel, **J. Tropp**, V. Kaphle, J. D. Azoulay, B. Lussem,* “Organic Electrochemical Transistors – From Device Models to a Targeted Design of Materials” *J. Mater. Chem. C* **2021**, *9*, 9761-9790.
31. E. R. King, **J. Tropp**, N. Eedugurala, L. E. Gonce, S. Stanciu, J. D. Azoulay,* “Gold Catalyzed Direct C-H Activation Polymerization for the Synthesis of Aromatic Polymers” *Angew. Chem.* **2020**, *132*, 22155-22159. –**Highlighted Research, Supplemental Cover**
32. **J. Tropp**, M. H. Ihde, E. R. Crater, N. C. Bell, R. Bhatta, I. C. Johnson, M. Bonizzoni, J. D. Azoulay,* “A Sensor Array for the Nanomolar Detection of Azo Dyes in Water” *ACS Sens.* **2020**, *5*, 1541-1547.
33. S. Davis, D. Nugegoda, **J. Tropp**, J. D. Azoulay, J. H. Delcamp,* “Molecular Au(I) Complexes in the Photosensitized Photocatalytic CO₂ Reduction Reaction” *MRS Commun.* **2020**, *10*, 252-258. –**Highlighted Research, Front Cover**
34. W. Zhao, **J. Tropp**, B. Qiao, M. Pink, J. D. Azoulay, A. H. Flood,* “Tunable Adhesion from Stoichiometry-controlled Supramolecular Polymers emerge using Cyanostar-stabilized Anion-anion Attraction” *J. Am. Chem. Soc.*, **2020**, *142*, 2579–2591.
35. **J. Tropp**, M. H. Ihde, A. K. Williams, N. J. White, N. Eedugurala, N. C. Bell, J. D. Azoulay,* M. Bonizzoni,* “A Sensor Array for the Discrimination of Polycyclic Aromatic Hydrocarbons Using Conjugated Polymers and the Inner Filter Effect” *Chem. Sci.*, **2019**, *10*, 10247–10255. –**Highlighted Research, Back Cover**
36. A. E. London, H. Chen, M. A. Sabuj, **J. Tropp**, B. A. Zhang, Y. Liu, X. Gu, B. Wong, N. Rai, M. K. Bowman, J. D. Azoulay,* “A High Spin Ground State Donor-Acceptor Conjugated Polymer” *Sci. Adv.*, *5*(5), eaav2336, **2019**.
37. W. Zhao, B. Qiao, **J. Tropp**, M. Pink, J. D. Azoulay, A. H. Flood* “Anion Dimers Drive Supramolecular Polymerization of Telechelic Di-phosphonates inside Cyanostar Macrocycles” *J. Am. Chem. Soc.* **2019**, *130*, 10464–10465. –**Highlighted Research, Supplemental Cover**
38. A. K. Williams,* **J. Tropp**,* E. R. Crater, N. Eedugurala, J. D. Azoulay,* “Thiol-Ene Click Post-Polymerization Modification of a Fluorescent Conjugated Polymer for Parts-per-Billion Pyrophosphate Detection in Seawater” *ACS Appl. Polym. Mater.* **2019**, *1*, 309–314.
39. A. E. London, L. Huang, B. A. Zhang, M. B. Oviedo, **J. Tropp**, W. Yao, Z. Wu, B. M. Wong, T. N. Ng, J. D. Azoulay,* “Donor–Acceptor Polymers with Tunable Infrared Photoresponse” *Polym. Chem.*, **2017**, *8*, 2922–2930. –**Highlighted Research, Back Cover**

Manuscripts submitted, in review, or in press:

40. R. Meacham, C. Cunin, G. G. Yang, S. Upreti, W. Li, S. Samal, R. Posey, **J. Tropp**, Y. Zhao, X. Gu, A. Gumyusenge,* “Impact of backbone fluorination on self-assembly and mixed conduction of isoindigo-based polymers” **2026**, *In Review – Submitted 6/9/26*.
41. B. Alfaro, F. Morales, K. Jewell, S. German-Kavle, R. Posey, **J. Tropp*** “Fluorine-Free Conjugated Polyelectrolyte Optical Nanosensor Array Enables Trace PFAS Detection and Discrimination” **2026**, *ChemRxiv*. DOI: 10.26434/chemrxiv.15005537/v1. *In Review – Submitted 7/3/26*.

Patents and Patent Applications:

42. R. Posey, N. Gill, **J. Tropp**, "Thienoisindigo-Based Near-Infrared Fluorophores for Bioimaging" US Provisional Patent App. No. 63/873,998, filed September 2, **2025**.
43. R. Posey, N. Gill, **J. Tropp**, "Conjugated Polymer-Based NIR-II Fluorophores with Enhanced Brightness for Advanced Imaging" US Patent App. No. PCT/US2025/032653, **2025**.
44. J. D. Azoulay, **J. Tropp**, V. Kaphle, A. R. Benasco, A. Flood, "Macrocyclic Embedded Organic Electronic Materials, Composites, and Compositions for Chemical Sensing" US Patent No. 12,320,774 B2, **2025**.
45. **J. Tropp**, J. Rivnay "Conductive Nanomaterials and Composites Thereof" US Patent App. 18/613,535, **2024**.
46. **J. Tropp**, J. D. Azoulay "Methods for Detecting Analytes Using Conjugated Polymers and the Inner Filter Effect" US Patent Serial Number. 11/781,986, **2023**.
47. **J. Tropp**, J. Rivnay, "Acid Crystallized PEDOT Particles and Composites Thereof" US Patent Serial Number. 63/491,753, **2023**.
48. **J. Tropp**, D. Amato, D. Patton, J. D. Azoulay "Thiol Based Post-Modification of Conjugated Polymers" US Patent Serial Number 11,649,320, **2023**.
49. J. D. Azoulay, **J. Tropp**, E. King "Gold Catalyzed Polymerization Reactions of Unsaturated Substrates" US Patent Serial Number. 11/359,049, **2022**.

Selected Academic Presentations (*Contributed to > 60 Presentations*)

1. [Oral] "Ultra-Bright NIR-II/SWIR Conjugated Polymer Nanoparticles for Low-Dose, High-Contrast Imaging in Resource-Limited Environments" *MHSRS 2026, Far-Forward Portable Life Support & Imaging Devices*, San Diego, CA, August **2026**.
2. [Oral] "Bright Near-Infrared Emissive Conjugated Polymer Nanoparticles with Tunable Degradation" *International Society of Optical Engineering (SPIE) Annual Meeting – Organic and Hybrid Sensors, Detectors, and Bioelectronics XIX*, San Diego, CA, August **2026**.
3. [Oral] "Aggregation-Induced Near-Infrared Emission via Self-Assembly of Conjugated Polymer Nanoparticles" *Materials Research Society Spring 2026 National Meeting*, Honolulu HI, April **2026**.
4. [Invited Talk] "Rational Design of Conjugated Polymer Nanoparticle NIR-II/SWIR Emitters" *American Chemical Society Spring 2026 National Meeting*, Atlanta, GA, March **2026**.
5. [Invited Talk] "Unexpected Near-Infrared Photoluminescence in P-type Organic Mixed Ionic-Electronic Conductors" *International Society of Optical Engineering (SPIE) Annual Meeting – Organic and Hybrid Transistors XXIV*, San Diego CA, August **2025**.
6. [Poster] "Tailoring Bright Conjugated Polymer NIR-I/NIR-II Emitters" *2025 Polymers Gordon Research Conference*, South Hadley, MA, June **2025**.
7. [Invited Talk] "Standardizing the Characterization of Conductive Hydrogels" *Fundamentals of Organic and Hybrid Mixed Ionic and Electronic Conductors, Telluride Workshop*, Telluride CO, September **2024**.
8. [Invited Talk] "Standardizing the Characterization of Conductive Hydrogels" *IUPAC MACRO 2024, The 50th World Polymer Congress*, Warwick UK, July **2024**.
9. [Invited Talk] "Enabling Novel Organic Mixed Conductors Through Controlled Synthesis and Processing" *15th International Symposium on Functional-Pi Electron Systems*, Raleigh, June **2023**.

Teaching and Mentoring Experience

Selected Educational/Mentoring Honors and Awards

- 2026 – **STEM Center for Outreach, Research & Education** – 2026 STEM CORE Faculty of the Year
2025 – **Center for Transformative Undergraduate Experiences** – Outstanding Faculty Mentor
2025 – **TTU Mortar Board** – Apple Polishing Award
2024 – **TTU Mortar Board** – Apple Polishing Award
2022 – **CIRTL Scholar** – Searle Center for Advancing Learning and Teaching, Northwestern University

Instructor of Record

Fall 2026 – **CHEM 5304 Special Topics: Polymer Chemistry**, Texas Tech University
Summer 2026 – **CHEM 3306 Undergraduate Organic Chemistry II**, Texas Tech University
Spring 2026 – **CHEM 5102 Graduate Literature Seminar – Organic Division**, Texas Tech University
Spring 2026 – **CHEM 3306 Undergraduate Organic Chemistry II**, Texas Tech University
Fall 2025 – **CHEM 5304 Special Topics: Polymer Chemistry**, Texas Tech University
Summer 2025 – **CHEM 3306 Undergraduate Organic Chemistry II**, Texas Tech University
Spring 2025 – **CHEM 3306 Undergraduate Organic Chemistry II**, Texas Tech University
Fall 2024 – **CHEM 5304 Special Topics: Polymer Chemistry**, Texas Tech University
Fall 2023 – **CHEM 5304 Special Topics: Polymer Chemistry**, Texas Tech University

Educational Experiences and Training

2023 – **President's STEM Mentoring Academy**, Texas Tech University
2022 – **2022 Searle Teaching-As-Research Program**, Northwestern University
2021 – **2021 Searle Teaching Certificate Program**, Northwestern University
2021 – **An Introduction to Evidence-Based Undergraduates STEM Teaching**, CIRTL

Currently Mentoring – Texas Tech University (15)

Graduate Students (Ph.D) – Chemistry and Biochemistry (8)		
Robert Posey	(2023 – Present)	C.B. and Fran Carter Foundation Scholar 2024, 2026
Brenda Alfaro	(2023 – Present)	Richard C. Goodin Endowed Fellowship 2025 , Poster Award – 2026 Cross-Disciplinary GRC
Nikita Gill	(2023 – Present)	1st Place Poster – 2025 Cross-Disciplinary GRC
Tahamida Alam Oyshi	(2024 – Present)	Distinguished Graduate Student Assistantship - TTU
Nicholas Payne	(2024 – Present)	
Paulina Flores	(2025 – Present)	Distinguished Graduate Student Assistantship - TTU
Wendy Nayeli Galvan	(2025 – Present)	PDRD Cooperative Research Fellowship , ARCS Lubbock Achievement Award 2026
Esteban Rodriguez	(2026 – Present)	Recruitment Fellowship
Undergraduate Students (7)		
Helena Garza ('26)	Biology	URS Program, 1 st Place Poster – 2024 SWRM, 2025 Memorial Sloan Kettering Engineering and Imaging Summer Program (EISP) Participant, 2026 Tech 10
Kaleb Jewell ('27)	Chem. Eng.	TrUE Scholar, NIST SURF Fellow USM REU Participant 2026, 2026 Barry Goldwater Scholar , 2026 Brookshire Scholarship, 2026 Future Leaders in Chemical Engineering (NC State)
Nicholas Portillo ('27)	Chemistry	McNair Scholar 2025
Jacquelyn Tran ('27)	Biology	URS Program, TrUE Scholar, 2026 Mark of the Matador
Foster Morales ('27)	Chemistry	URS Program
Nathan Sidor ('27)	Biochemistry	TrUE Scholar
Sophia German-Kavle ('29)	Biochemistry	URS Program, 2026 MD Anderson CPRIT CURE Participant

Mentored Undergraduates and High School Students - Texas Tech University (8)

- Daniel Fernandez ('26 TTU in Biochemistry): URS Program, **Craig Memorial Endowed Scholarship 2025**
- Colin Cashman ('26 TTU in Chemistry): CASURA – College of Arts & Sciences
- Annemarie Fritz ('26 TTU in Biochemistry): CASURA – College of Arts & Sciences
 • Next Position: Research Scientist at Memsel
- Boris Salinas ('26 TTU in Kinesiology): URS Program, **Phi Beta Kappa 2025**
- Andrea Perry ('25 at TTU in Pre-Medicine): URS - Honors College, **Phi Beta Kappa 2025**

- Next Position: Graduate Medical Education Sciences (GMES) Program at TTU HSC
- Brian Arnold III (*High School Student – 2026 Welch Summer Scholars Program*)
- Simeon Gore (*High School Student – 2025 Welch Summer Scholars Program*)
- Maddox Canham (*High School Student – 2024 Welch Summer Scholars Program*)
- Next Position: Undergraduate Student and University of Southern California

Mentored Undergraduates- Northwestern University (4)

- Manideep M. Reddy ('24 *NU in Biological Sciences*): **Phi Beta Kappa 2023**
 - Next Position: Medical Student at Vanderbilt University
- Shiv Patel ('24 *NU in Neuroscience*): **3rd Place Poster - AIChE 2022: MESD**
 - Next Position: Medical Student at the University of Florida
- Caroline F. Harms ('23 *NU in Materials Science and Engineering*)
 - Next Position: Ph.D. Student in Materials Science and Engineering at University of Michigan
- Vidhika Sidda ('26 *NU in Biomedical/Medical Engineering*)

Mentored - University of Southern Mississippi (5)

- Erin R. Crater ('20 *USM in Chemistry and Polymer Science*): **Barry M. Goldwater Scholar 2019**
 - Next Position: Ph.D. Student in Chemistry at Virginia Tech
- Rimsha Bhatta ('20 *USM in Polymer Science and Engineering*)
 - Next Position: Ph.D. Student in Materials Science and Engineering at UIUC
- Riley Bessetti (*NSF REU Participant at USM*)
 - Next Position: Ph.D. Student at Brody School of Medicine – Cell Biology and Anatomy)
- Noel Bell ('20 *USM in Polymer Science and Engineering*): **McNair Scholar 2019**
 - Next Position: Process Engineer at Masonite
- Lauren E. Gonce ('20 *USM in Polymer Science*)
 - Next Position: Research and Development Chemist at Resinall Corp)

Academic Service & Outreach

2026	SWRM 2027 Local Organizing Committee
2026	Functional Polymers: Synthetic Methodologies and Applications – Organizer 2026 Fall MRS Meeting, November, Fort Worth TX, USA.
2026	Fundamentals of Organic and Hybrid Mixed Conductors – Organizer and Co-Chair 2026 ACS SWRM Meeting, December, Boston MA, USA.
2025 – present	Grant Reviewer Responsibilities, <i>ACS PRF, NSF GFRP, NSF Poly, NSF MSN, NSF EPM, NIH INN, ERDC, National Science Center – Poland</i>
2024	ACS Science Coaches Program, Roswell High School – Roswell, NM
2024	NIH Early Career Reviewer Program
2023 – present	Serves as a STEM CORE Member
2023 – present	Local K-12 Demonstrations, Tours, and Lectures – <i>North Texas Community College (4/18/2026), Midland College (2/27/26), Ramirez Elementary (2/25/26), Texas Connections Academy (11/19/25), 2025 STEM Spooktacular Day (10/13/25), 2025 Family STEM Night (11/7/25; 11/8/24; 11/14/23), Brown Elementary School (5/1/25), Legacy Elementary School (2/25/26; 2/20/24), TTU Tech Saavy (2/8/25; 2/10/24), Upwards Bounds STEM Program (11/16/24), Bean Elementary School (11/1/24), Whiteside Elementary School (10/26/23)</i>
2023, present	Served as a Junior Mentor for the AIChE Future Faculty Mentoring Program
2023	Served as a Judge for AIChE 3MT Competition
2023	Polymer Division Meeting at 52nd IUPAC General Assembly, Virtual Attendee

2022	CIRTL Round Table , Invited Panelist – Fall 2022 CIRTL General Meeting
2018 – present	Journal Reviewer Responsibilities, <i>Cellulose, Biomaterials, Chem. Mater., Chem. Rev, J. Am. Chem. Soc., JACS Au, ACS Appl. Mater. Interfaces, ACS Mater. Lett., Adv. Funct. Mater., Adv. Mater. Interfaces, Adv. Mater., Adv. Health. Mater., Adv. Sci., Mater. Horiz., Nat. Commun., Sci. Adv., Soft Matter, J. Mater. Chem. C, ACS Macro. Lett., Angew. Chem., Macromolecules, Environ. Sci. Technol., Adv. Therap., Electroanalysis, Chem – Cell Press, Small, Interface Focus</i>
2021	ACS Science Coaches Program , Streamwood High School – Streamwood, IL
2020	Expanding your Horizons: Cornell , Invited Speaker
2018	Supramolecular Analytical Chemistry – Organizer and Co-Chair 256 th ACS National Meeting, August, Boston MA, USA.
2018	Served on Screening Committee for Selection of Dean of College of Arts and Sciences Represented Student Body, The University of Southern Mississippi
2018	President of Graduate Student Senate – University of Southern Mississippi
2018	Judge Region 1: High School Science and Engineering Fair –Southern Mississippi