

JESSICA D. SCHIFFMAN, PH.D.

Gary R. Lapidus Professor

Professor of Chemical Engineering

University of Massachusetts Amherst

N533 Life Sciences Laboratories, 240 Thatcher Road, Amherst, MA 01003-9364

(e) schiffman@umass.edu | (web) <https://schiffmanlab.org/>

PROFESSIONAL APPOINTMENTS

2022-present	Professor , Department of Chemical Engineering, University of Massachusetts Amherst, Amherst, MA
2022-present	Deputy Editor , ACS Applied Engineering Materials
2022-present	Graduate Program Faculty , Materials Science & Engineering Graduate Program, University of Massachusetts Amherst, Amherst, MA
2021-2022	Interim Department Head , Department of Chemical Engineering, University of Massachusetts Amherst, Amherst, MA
2021-present	Graduate Program Faculty , Molecular and Cell Biology Graduate Program, University of Massachusetts Amherst, Amherst, MA
2020-2021	Associate Department Head , Department of Chemical Engineering, University of Massachusetts Amherst, Amherst, MA
2017-2022	Associate Professor , Department of Chemical Engineering, University of Massachusetts Amherst, Amherst, MA
2011-2017	Assistant Professor , Department of Chemical Engineering, University of Massachusetts, Amherst, Amherst, MA
2009-2011	Postdoctoral Associate , Department of Chemical and Environmental Engineering, Yale University, New Haven, CT
2004-2005	Engineer , Division of Research and Development, Stryker Orthopedics, Mahwah, NJ

EDUCATION

2005-2009	PhD, Materials Science and Engineering, Drexel University, Philadelphia, PA Dissertation: "Determination of the electrospinning parameters for biopolyelectrolytes and their modifications" Advisor: Prof. Caroline L. Schauer
2003-2004	MEng, Materials Science and Engineering, Cornell University, Ithaca, NY Thesis: "Biodegradation of chitosan films, electrospun polylactic acid mesh, and chitosan films reinforced with electrospun polylactic acid mesh" Advisor: Prof. Margaret W. Frey (Department of Fiber Science)
1999-2003	BS, Ceramic and Materials Engineering, Rutgers University, New Brunswick, NJ Thesis: "Predictive process control, linear optimization, and particle packing of alumina" Advisor: Prof. Richard Haber

OVERVIEW

Dr. Schiffman has ~100 peer-reviewed publications and has been a PI or coPI on awards totaling \$35M+, with \$5M+ directly supporting her laboratory to research natural polymers, polyelectrolytes, membrane science, antibacterial/antifouling strategies, and other topics. She has received past funding from the NSF, DOD, ARL, USGS, USDA, and BASF. She is recognized for her expertise in living materials, bioinspired materials science, green strategies to reduce biofouling, and engineering functional coatings. She is Deputy Editor of *ACS Applied Engineering Materials*, the former Director of the Materials Engineering & Science Division of the American Institute of Chemical Engineers and former Interim Department Head of the Department of Chemical Engineering at UMass Amherst. Schiffman is currently a Fellow of ELATES, which is a national leadership development program for academic engineering.

AWARDS AND HONORS

2024-2025	ELATES Fellow
2022-present	Deputy Editor, <i>ACS Applied Engineering Materials</i>
2022-present	Gary R. Lapidus Professor
2022	Distinguished Graduate Mentor Award
2022	NSF ADVANCE Faculty Peer Mentor Award

2022-2024	Editorial Advisory Board Member, <i>ACS Applied Materials & Interfaces</i>
2021	<i>Biomaterials Science</i> Emerging Investigator
2021	<i>Industrial & Engineering Chemistry Research</i> Class of Influential Researchers
2020	Outstanding Teaching Award
2019	<i>ACS Applied Materials & Interfaces</i> Young Investigator Award
2019-2021	NSF ADVANCE Collaboration & Equity Faculty Fellow
2017	Barbara & Joseph Goldstein Outstanding Junior Faculty Award
2016	Women in Science You Should Be Following on Social Media, Sci Chic
2014-2020	Professor James M. Douglas Career Development Faculty Fellow
2013	NSF Early Career BRIGE Award
2013	Invited Member, US-China Workshop on Solar Energy and Environment
2009	Doctoral Award, Drexel University
2008-2009	Koerner Family Fellow
2008	NSF/AAAS International Science & Engineering Visualization Challenge: Honorable Mention, published in <i>Science</i> , <i>Nature</i> , <i>Illustreret Videnskab</i> , <i>Focus Italy</i> , <i>National Geographic News</i> , <i>Weekly Reader</i> , <i>Forskning & Framsteg</i>
2008	Finalist, Fall MRS Science as Art Competition
2008	NSF Lindau Fellow, 58 th meeting of Nobel Laureates (physics), Lindau, Germany
2007-2008	Best of the MatPac, Best graduate research in Materials Science in Pennsylvania
2007	Outstanding Teaching Assistant Award (Drexel University)
2006-2009	Graduate Assistantship in Areas of National Need (GAANN) Fellow
2005-2009	Dean's Fellow
2005-2006	NSF Integrative Graduate Education and Research Traineeship (IGERT) Fellow
2002-2003	Malcolm G. McLaren Scholarship Recipient

PEER-REVIEWED PUBLICATIONS

[ORCID](#) 0000-0002-1265-5392 | [Google Scholar](#) | As of Feb 2025: Total citations = 10294 & h-index = 41
Trainees are underlined, † are authors that contributed equally, ^{UG} indicates an undergraduate researcher and * designates the corresponding author.

98. Song, J., Chiang, M.-C., Le, T.U.H.^{UG}, Hung, S.-H., Klier, J., **Schiffman, J.D.*** “Room temperature, force-activated crosslinked coatings from reactive core-shell particles” *to be submitted Mar 2025*
97. Shah, R.M., Song, J., Ho, E.^{UG}, Gougerdchi, B., Cheng, Y., Hu, W., **Schiffman, J.D.*** “Fluoro-polydopamine-enabled antifouling membranes and liquid-infused membranes” *to be submitted Feb 2025*
96. Chiang, M.-C., Steppan, C., Deisenroth, T.W., Konradi, R., Emrick, T., **Schiffman, J.D.*** “Impact of polymer chemistry on the touch transfer of microorganisms” *to be submitted Feb 2025*
95. Chiang, M.-C., Clarke, B., Tew, G., **Schiffman, J.D.*** “Antifouling activity of bottlebrush PEG/PDMS amphiphilic polymer co-networks” *to be submitted Feb 2025*

94. Barajas, B., Chiang, M.-C., Lechner, D.^{UG}, Uwazuruonye-Anyanwu, U.^{UG}, **Schiffman, J.D.*** Polydimethylsiloxane gel stiffness and thickness affect the initial adhesion of *Escherichia coli* and *Staphylococcus aureus*” *ACS Applied Materials & Interfaces. Under Revisions*
93. **Schiffman, J.D.*** (2025) “Introducing the Inaugural ACS Applied Engineering Materials Early Career Board” *ACS Applied Engineering Materials*. In Press. **(Editorial)**
92. Rathore, P., Montz, B., Hung, S.-H., Pandey, P., Perry, S.L., Emrick, E., **Schiffman, J.D.*** (2025) “Electrospinning of self-assembling oligopeptides into nanofiber mats: Impacts of peptide composition and end-groups” *Biomacromolecules*. DOI: 10.1021/acs.biomac.4c01401
91. Hung, S.-H., Chiang, M.-C., **Schiffman, J.D.*** (2025) “Optimization of polyelectrolyte coacervate membranes via aqueous phase separation” *ACS Applied Materials & Interfaces*. 17 (1), 1361–1373. DOI: 10.1021/acsami.4c18989
90. Shah, R.M., Bennett, M.G.^{UG}, Goodwin, T.^{UG}, Ribbe, A.E., Hu, W., **Schiffman, J.D.*** (2025) “Fouling resistant liquid-infused membranes for oil separations” *Separation and Purification Technology*. 358,130253. DOI: 10.1016/j.seppur.2024.130253
89. Lorenzana, A., Naing, H.S.Y., Song, J., **Schiffman, J.D.**, Klier, J.*, Peyton, S.* (2024) “Molecularly shielded, on-demand, ultrasound-cured polymer networks” *Macromolecules*. 57, 6465-6473. DOI: 10.1021/acs.macromol.4c00315

88. [Diep, E.](#) & [Schiffman, J.D.*](#) (2024) “Targeted release of live probiotics from alginate-based nanofibers in a simulated gastrointestinal tract” *RSC Applied Polymers*. 2, 719-725. DOI: 10.1039/D4LP00023D
87. [Diep, E.](#) & [Schiffman, J.D.*](#) (2024) “Living antimicrobial wound dressings: Using probiotic-loaded, alginate nanofibers for protection against methicillin-resistant *Staphylococcus aureus*” *ACS Applied Bio Materials*. 7 (2), 787-790. DOI: 10.1021/acsabm.3c01240
86. Hancock, S.N., Yuntawattana, N.[†], [Diep, E.[†]](#), Maity, A., Tran, A., [Schiffman, J.D.*](#), Michaudel, Q.* (2023) “Ring-opening metathesis polymerization of *N*-methyl pyridinium-fused norbornenes to access antibacterial main-chain cationic polymers” *PNAS*. 120(51) e2311396120. DOI: 10.1073/pnas.2311396120
- **Highlighted in [Science Daily](#), [EurekAlert!](#), [Tech Explorist](#), [Curiosity Daily Podcast](#), etc**
 - **Highlighted in [Texas A&M](#) and [UMass News](#) Articles**
85. [Barajas, B.](#), [Kurtz, I.S.](#), [Waldman, A.J.^{UG}](#), [Schiffman, J.D.*](#) (2023) “Stiffness and oligomer content affect the initial adhesion of *staphylococcus aureus* to polydimethylsiloxane gels” *ACS Applied Materials & Interfaces*. 15(45), 52197-52206. DOI: 10.1021/acsami.3c11349
84. [Rathore, P.](#) & [Schiffman, J.D.*](#) (2023) “Effect of pH value on the electrical properties of PEDOT:PSS-based fiber mats” *ACS Engineering Au*. 3, 6, 527–536. DOI: 10.1021/acseengineeringau.3c00044
- **Invited to *Virtual Special Issue on “Materials Design”***
83. [Rehmann, K.M.](#), Klier, J., [Schiffman, J.D.*](#) (2023) “Anionic polymerization and transport of diethyl methylidene malonate on polyolefin copolymer surfaces” *Polymer Chemistry*. 14, 3695-3706. DOI: 10.1039/D3PY00506B
82. [Kurtz, I.S.[†]](#), Sathyan, A.[†], [Rathore, P.](#), Emrick, T., [Schiffman, J.D.*](#) (2023) “Using catechol and zwitterion-functionalized copolymers to prevent dental bacterial adhesion” *ACS Applied Bio Materials*. 6 (7), 2905-2915. DOI: 10.1021/acsabm.3c00371.
81. [Diep, E.](#) & [Schiffman, J.D.*](#) (2023) “Establishing crosslinking methods for the controlled release from alginate nanofibers” *Biomacromolecules*. 24 (6), 2908-2917. DOI: 10.1021/acs.biomac.3c00274
80. [Diep, E.](#) & [Schiffman, J.D.*](#) (2023) “Electrospinning Living Bacteria: A Review of Applications from Agriculture to Health Care” *ACS Applied Bio Materials*. 6 (3), 951–964. DOI: 10.1021/acsabm.2c01055
- **Invited Spotlight on Application**
 - **Highlighted in [UMass News](#) Article**
79. [Schiffman, J.D.*](#) (2023) “ACS Applied Engineering Materials: A new journal for applied materials research” *ACS Applied Engineering Materials*. 1 (1), 1-2. **(Editorial)** DOI: 10.1021/acsaenm.2c00098
78. Regan, D.P., Fong, C.; Bond, A.C.S., Desjardins, C., Hardcastle, J., [Hung, S.-H.](#), Holmes, A.P., [Schiffman, J.D.](#), Maginnis, M.S., Howell, C.* (2022) “Improved recovery of captured airborne bacteria and viruses with liquid-coated air filters” *ACS Applied Materials & Interfaces*. 14 (45), 50543–50556. DOI: 10.1021/acsami.2c14754.
77. Ward, L.M.[†], [Shah, R.M.[†]](#), [Schiffman, J.D.*](#), Weinman, S.T.* (2022) “Nanopatterning reduces bacteria fouling in ultrafiltration” *ACS ES&T Water*. 2(9), 1593–1601. DOI: 10.1021/acsestwater.2c00256
76. [Cihanoğlu, A.](#), [Schiffman, J.D.*](#), Altinkaya, S.A.* (2022) “Biofouling-resistant ultrafiltration membranes via co-deposition of dopamine and cetyltrimethylammonium bromide with retained size selectivity and water flux” *ACS Applied Materials & Interfaces*. 14, 33, 38116–38131. DOI: 10.1021/acsami.2c05844
75. Sanjayan, C.G., Jyothi, M.S., Balakrishna, R.G., [Schiffman, J.D.](#), Sakar, M., Budagumpi, S. (2022) “Aqueous, non-polymer-based perovskite quantum dots for bioimaging; Conserving fluorescence and long-term stability via simple and robust synthesis” *ACS Applied Materials & Interfaces* 14 (34), 38471–38482. DOI: 10.1021/acsami.2c08087
74. [Sun, J.](#), [Schiffman, J.D.*](#), Perry, S.L.* (2022) “Linear viscoelasticity and time-alcohol superposition of chitosan/hyaluronic acid complex coacervates” *ACS Applied Polymer Materials*. 4(3), 1617–1625. DOI: 10.1021/acsapm.1c01411
73. [Shah, R.M.](#), [Cihanoğlu, A.](#), Hardcastle, J., Howell, C., [Schiffman, J.D.*](#) (2022) “Liquid-infused membranes exhibit stable flux and fouling resistance” *ACS Applied Materials & Interfaces*. 14(4), 6148–6156. DOI: 10.1021/acsami.1c20674
72. [Cihanoğlu, A.](#), [Schiffman, J.D.](#), Altinkaya, S.A.* (2021) “Ultrasound-assisted dopamine polymerization: Rapid and oxidizing agent-free PDA coatings on membrane surfaces” *Chemical Communications*. 57, 13740-13743. DOI: 10.1039/D1CC05960B

71. Hung, S-H., Bowden, M.E.^{UG}, Peltier, R., **Schiffman, J.D.*** (2021) "Optimizing the packing density and chemistry of cellulose nanofilters for high-efficiency particulate removal" *Industrial & Engineering Chemistry Research*. 60(43), 15720–15729. DOI: 10.1021/acs.iecr.1c03051
- **Invited to Special Forum Celebrating the 2021 I&EC Research Class of Influential Researchers**
70. Huang, M.[†], Liu, Y.[†], Khalkhali, Z., Kim, A., Hu, W., Rothstein, J.P., Lee, J-H., Klier, J., **Schiffman, J.D.*** (2021) "Epoxy resin-encapsulated polymer microparticles for room-temperature cold sprayable coatings" *ACS Applied Materials & Interfaces*. 13(42), 50358–50367. DOI: 10.1021/acsami.1c15415
69. Dobosz, K.M., Kuo-Leblanc, C.A.^{UG}, Bowden, M.E.^{UG}, **Schiffman, J.D.*** (2021) "Robust, small diameter hydrophilic nanofibers improve the flux of ultrafiltration membranes" *Industrial & Engineering Chemistry Research*. 60(25), 9179–9188. DOI: 10.1021/acs.iecr.1c01332
68. Meng, X., Du, Y., Liu, Y., Coughlin, E.B., Perry, S.L.* , **Schiffman, J.D.*** (2021) "Electrospinning fibers from oligomeric complex coacervates: No chain entanglements needed" *Macromolecules*. 54, 11, 5033–5042. DOI: 10.1021/acs.macromol.1c00397
67. Zhou, Z., Lopez-Dominguez, P., Abdullah, M., Barber, D., Meng, X., Park, J., Van Driessche, I., **Schiffman, J.D.**, Crosby, A., Kittilstved, K., Nonnenmann, S.S.* (2021) "Memristive behavior of mixed oxide nanocrystal assemblies" *ACS Applied Materials & Interfaces*. 13, 18, 21635–21644. DOI: 10.1021/acsami.1c03722
66. Diep, E. & **Schiffman, J.D.*** (2021) "Encapsulating bacteria into alginate-based nanofibers" *Biomaterials Science*. 9, 4364-4373. DOI: 10.1039/D0BM02205E
- **Invited to 2021 Biomaterials Science Emerging Investigators Issue**
 - **In Special Collection Biomaterials Science Most Popular 2021**
 - **One of the Top 25 Articles of 2021**
65. Rathore, P. & **Schiffman, J.D.*** (2021) "Beyond the single nozzle: Coaxial electrospinning enables innovative nanofiber chemistries, geometries, and applications" *ACS Applied Materials & Interfaces*. 13, 1, 48–66. DOI: 10.1021/acsami.0c17706
- **Invited Spotlight on Application**
64. Mijailovica, A.S., Galarza, S., Raayai-Ardakanic, S., Birch, N.P., **Schiffman, J.D.**, Crosby, A.J., Cohen, T., Peyton, S.R., Van Vliet, J.J. (2021) "Localized characterization of brain tissue mechanical properties by needle induced cavitation rheology and volume controlled cavity expansion" *Journal Mechanical Behavior of Biomedical Materials*. 114, 104168. DOI: 10.1016/j.jmbbm.2020.104168
63. Holland, M., Eggensperger, C.G., Giagnorio, M., **Schiffman, J.D.**, Tiraferri, A., Zodrow, K.R.* (2020) "Facile post-processing alters permeability and selectivity of microbial cellulose ultrafiltration" *Environmental Science & Technology*. 54, 20, 13249–13256. DOI: 10.1021/acs.est.0c00451
62. Huang, M., Liu, Y., Klier, J.* , **Schiffman, J.D.*** (2020) "High-performance, UV-curable crosslinked films via grafting of hydroxyethyl methacrylate methylene malonate" *Industrial & Engineering Chemistry Research*. 59(10), 4542-4548. DOI: 10.1021/acs.iecr.9b06618
61. Eggensperger, C.G., Giagnorio, M., Holland, M.D., Dobosz, K.M., **Schiffman, J.D.**, Tiraferri, A., Zodrow, K.R.* (2020) "Sustainable living filtration membranes" *Environmental Science & Technology Letters*. 7(3), 213-218. DOI: 10.1021/acs.estlett.0c00019
- **Highlighted as ACS Editors' Choice**
 - **Featured in C&EN (2020) "Taking the Diet Coke-and-Mentos demo to new heights, and testing a kombucha-based water filter" 98(14). [link](#)**
60. Sharma, A., Kwak, J-G.^{UG}, Kolewe, K.W., **Schiffman, J.D.**, Forbes, N.* , Lee, J.* (2020) "In vitro reconstitution of an intestinal mucus layer shows that cations and pH control the pore structure that regulates its permeability and barrier function" *ACS Applied Bio Materials*. 3(5), 2897–2909. DOI: 10.1021/acsabm.9b00851
59. Heckmann, T.S. & **Schiffman, J.D.*** (2020) "Spatially organized nanopillar arrays dissimilarly affect the antifouling and antibacterial activities of *Escherichia coli* and *Staphylococcus aureus*" *ACS Applied Nano Materials*. 3(2), 977-984. DOI: 10.1021/acsanm.9b01942
- **Invited to Special Forum Celebrating the Contributions of Young Investigators for Winning the ACS Applied Materials & Interfaces Young Investigator Award**
58. Zhuang, J., Zhao, B., Meng, X., **Schiffman, J.D.**, Perry, S.L., Vachet, R.W., Thayumanavan, S.* (2020) "Programmable chemical switch based on triggerable michael acceptors" *Chemical Science*. 11, 2103-2111. DOI: 10.1039/C9SC05841A

57. Sun, J., Perry, S.L.* , **Schiffman, J.D.*** (2019) “Electrospinning nanofibers from chitosan-hyaluronic acid complex coacervates” *Biomacromolecules*. 20(11), 4191-4198. DOI: 10.1021/acs.biomac.9b01072
56. Contreras, A., Raxworthy, M., Wood, S., **Schiffman, J.D.***, Tronci, G.* (2019) “Photodynamically active electrospun fibers for antibiotic-free infection control” *ACS Applied Bio Materials*. 2(10), 4258-4270. DOI: 10.1021/acsabm.9b00543
55. Kurtz, I.S.[†], Shuo, S.[†], Hao, X.^{†,UG}, Huang, M., Perry, S.L.* , **Schiffman, J.D.*** (2019) “Bacteria-resistant, transparent, free-standing films prepared from complex coacervates” *ACS Applied Bio Materials*. 2 (9), 3926-3933. DOI: 10.1021/acsabm.9b00502
54. Li, B., Dobosz, K.M., Zhang, H., **Schiffman, J.D.**, Saranteas, K., Henson, M.A.* (2019) “Predicting the performance of pressure filtration processes by coupling computational fluid dynamics and discrete element methods” *Chemical Engineering Science*. 208, 115162. DOI: 10.1016/j.ces.2019.115162
53. Huang, M., Yang, G., Liu, Y., Klier, J., **Schiffman, J.D.*** (2019) “Anionic polymerization of methylene malonate yields high performance coatings.” *ACS Applied Polymer Materials* 1(4), 657–663. DOI: 10.1021/acsapm.8b00135
52. Kolewe K.W., Kalesin S., Shave, M., **Schiffman J.D.*** Santore M.M.* (2019) “Mechanical properties and concentrations of poly(ethylene glycol) in hydrogels and brushes direct the surface transport of *Staphylococcus aureus*” *ACS Applied Materials & Interfaces* 11(1), 320–330. DOI: 10.1021/acsami.8b18302
- **Highlighted as ACS Editors’ Choice**
51. Yang, G., Xie, W., Huang, M., Champagne, V.K., Lee, J-H., Klier, J.* , **Schiffman, J.D.*** (2019) “Polymer particles with a low glass transition temperature containing thermoset resin enable powder coatings at room temperature” *Industrial & Engineering Chemistry Research*. 58(2), 908–916. DOI: 10.1021/acs.iecr.8b04698
50. Dobosz, K.M., Kuo-LeBlac, C.A.^{UG}, Emrick, T., **Schiffman, J.D.*** (2019) “Antifouling ultrafiltration membranes with retained pore size by controlled deposition of zwitterionic polymers and poly(ethylene glycol)” *Langmuir*. 35(5), 1872–1881. DOI: 10.1021/acs.langmuir.8b02184
- **Invited Full Article to Special Issue “Zwitterionic interfaces: Concepts and emerging applications”**
49. Meng, X., **Schiffman, J.D.***, Perry, S.L.* (2018) “Electrospinning cargo-containing polyelectrolyte complex fibers: Correlating molecular interactions to complex coacervate phase behavior and fiber formation” *Macromolecules*. 51(21), 8821–8832. DOI: 10.1021/acs.macromol.8b01709
48. Polio, S.R., Kundu, A.N., Dougan, C.E., Birch, N.P., Aurian-Blajeni, D.E., **Schiffman, J.D.**, Crosby, A.J., Peyton, S.R.* (2018) “Cross-platform mechanical characterization of lung tissue” *PLoS ONE* 13(10), e0204765. DOI: 10.1371/journal.pone.0204765
47. Gonzalez Arellano, D.L.[†], Kolewe, K.W.[†], Champagne, V.K.^{UG†}, Kurtz, I.S., Burnett, E.K., Zakashansky, J.A.^{UG}, Dündar Arisoy, F., Briseño, A., **Schiffman, J.D.*** (2018) “Gecko-inspired biocidal organic nanocrystals initiated from a pencil-drawn graphite template” *Scientific Reports* 8, 11618. DOI: 10.1038/s41598-018-29994-3
46. Kurtz, I.S. & **Schiffman, J.D.*** (2018) “Current and emerging approaches to engineer antibacterial and antifouling electrospun nanofibers” *Materials* 11(7), 1059. DOI: 10.3390/ma11071059
- **Invited Review Article to Special Issue “Electrospun Materials 2018”**
45. Kolewe, K.W., Dobosz, K.M., Emrick, T., Nonnenmann, S.S., **Schiffman, J.D.*** (2018) “Fouling-resistant hydrogels prepared by the swelling-assisted infusion and polymerization of dopamine” *ACS Applied Bio Materials* 1(1), 33–41. DOI: 10.1021/acsabm.8b00001
44. Kolewe, K.W., Zhu, J., Mako N.^{UG}, Nonnenmann, S.S., **Schiffman, J.D.*** (2018) “Bacterial adhesion is affected by the thickness and stiffness of poly(ethylene glycol) hydrogels” *ACS Applied Materials & Interfaces* 10(3), 2275–2281. DOI: 10.1021/acsami.7b12145
43. Dündar, F., Kolewe, K.W., Homyak, B., Kurtz, I.S., **Schiffman, J.D.**, Watkins, J.J. (2018) “Bioinspired photocatalytic shark skin surfaces with antibacterial and antifouling activity via nanoimprint lithography” *ACS Applied Materials & Interfaces* 10(23), 20055–20063. DOI: 10.1021/acsami.8b05066
- **Highlighted in ACS News Service Weekly PressPac, Health Medicine Network, IEEE Engineering 360, Science and Technology Research News, Forbes, etc**
42. Chandan, H.R., **Schiffman, J.D.**, Balakrishna, G. (2018) “Quantum dots as fluorescent probes: Synthesis, surface chemistry, energy transfer mechanisms, and applications” *Sensors & Actuators: B. Chemical* 258, 1191-1214. DOI: 10.1016/j.snb.2017.11.189

41. Sae-ung, P., Kolewe, K.W., Bai, Y., Rice, E.W.^{UG}, Schiffman, J.D.* , Emrick, T., Hoven, V.P.* (2017) "Antifouling stripes prepared from clickable zwitterionic copolymers" *Langmuir* 33(28), 7028–7035. DOI: 10.1021/acs.langmuir.7b01431
40. Meng, X., Perry, S.L.* , Schiffman, J.D.* (2017) "Complex coacervation: Chemically stable fibers electrospun from aqueous polyelectrolyte solutions" *ACS Macro Letters* 6, 505–511. DOI: 10.1021/acsmacrolett.7b00173
- **Highlighted in Biotech Week 06/28/2017**
39. Dobosz, K.M., Kuo-LeBlac, C.A.^{UG}, Martin, T.J.^{UG}, Schiffman, J.D.* (2017) "Ultrafiltration membranes enhanced with electrospun nanofibers exhibit improved flux and fouling resistance" *Industrial & Engineering Chemistry Research* 56(19), 5724–5733. DOI: 10.1021/acs.iecr.7b00631
38. Kolewe, K.W.[†], Dobosz, K.M.[†], Rieger, K.A., Chang, C-C., Emrick, T., Schiffman, J.D.* (2016) "Antifouling electrospun nanofiber mats functionalized with polymer zwitterions" *ACS Applied Materials & Interfaces* 8(41) 27585–27593. DOI: 10.1021/acsami.6b09839
37. Rieger, K.A., Porter, M.^{REU}, Schiffman, J.D.* (2016) "Polyelectrolyte-functionalized nanofiber mats control the collection and inactivation of *Escherichia coli*" *Materials* 9, 297. DOI:10.3390/ma9040297
- **Invited Full Article to Special Issue "Electrospun Materials"**
36. Sui, S., Wang, Y., Kolewe, K.W., Srajer, V., Henning, R., Schiffman, J.D., Dimitrakopoulos, C., Perry, S.L.* (2016) "Graphene-based microfluidics for serial crystallography" *Lab on a Chip* 16, 3082-3096. DOI: 10.1039/C6LC00451B
- **Invited Full Article to Special Issue "2016 Lab on a Chip Emerging Investigators"**
 - **Highlighted in Chemistry World & the 2016 Annual Report for Advanced Photon Source**
35. Rieger, K.A., Thyagarajan, R., Hoen M.^{REU}, Ford, D., Schiffman, J.D.* (2016) "Transport of microorganisms into cellulose nanofiber mats" *RSC Advances* 6, 24438-24445. DOI: 10.1039/C6RA01394E
34. Rieger, K.A.[†], Cho, H.J.[†], Yeung, H.^{UG}, Fan, W., Schiffman, J.D.* (2016) "Antimicrobial activity of silver ion exchanged zeolites immobilized on cellulose nanofibers" *ACS Applied Materials & Interfaces* 8(5), 3032–3040. DOI: 10.1021/acsami.5b10130
33. Chang, C-C., Kolewe, K.W., Li, Y., Kosif, I., Freeman, B.D., Carter, K., Schiffman, J.D.* , Emrick, T.* (2016) "Underwater superoleophobic surfaces prepared from polymer zwitterion/dopamine composite coatings." *Advanced Materials Interfaces* 1500521, 1-9. DOI: 10.1002/admi.201500521
32. Rieger, K.A., Birch, N.P., Schiffman, J.D.* (2016) "Electrospinning chitosan/poly(ethylene oxide) solutions with immiscible oils: Correlating solution rheology to nanofiber formation" *Carbohydrate Polymers* 139, 131-138. DOI: 10.1016/j.carbpol.2015.11.073
31. Jafferji, H., Sakulich, A.R.* , Schiffman, J.D.* (2016) "Preliminary study on mitigating steel reinforcement corrosion with bioactive agent" *Cement and Concrete Composites* 69, 9–17. DOI: 10.1016/j.cemconcomp.2016.02.011
30. Li, Y., John, J., Kolewe, K.W., Schiffman, J.D., Carter, J.D.* (2015) "Scaling up nature — Large area flexible biomimetic surfaces" *ACS Applied Materials & Interfaces* 7(42), 23439–23444. DOI: 10.1021/acsami.5b04957
29. Kolewe, K.W., Peyton, S.R., Schiffman, J.D.* (2015) "Fewer bacteria adhere to softer hydrogels" *ACS Applied Materials & Interfaces* 7(35), 19562-19569. DOI: 10.1021/acsami.5b04269
28. Jansen, L.E., Birch, N.P., Schiffman, J.D., Crosby, A.J., Peyton, S.R.* (2015) "Mechanics of intact bone marrow" *Journal of the Mechanical Behavior of Biomedical Materials* 50, 299–307. DOI: 10.1016/j.jmbbm.2015.06.023
27. Birch, N.P., Pandres, E.P.^{UG}, Barney, L., Peyton, S.R., Schiffman, J.D.* (2015) "Thermal-responsive behavior of a cell compatible chitosan:pectin hydrogel" *Biomacromolecules* 16(6), 1837–1843. DOI: 10.1021/acs.biomac.5b00425
26. Dobosz, K.M.[†], Kolewe, K.W.[†], Schiffman, J.D.* (2015) "Green materials science and engineering reduces biofouling: Approaches for medical and membrane-based technologies" *Frontiers in Microbiology* 6:86. DOI: 10.3389/fmicb.2015.00086
- **Invited Review Article to Special Issue on "Nanomaterial-Biofilm Interactions"**
25. Rieger, K.A., Eagan, N.M.^{UG}, Schiffman, J.D.* (2015) "Encapsulation of cinnamaldehyde into nanostructured chitosan films" *Journal of Applied Polymer Science* 132, 41739. DOI: 10.1002/APP.41739

24. Rieger, K.A. & Schiffman, J.D.* (2014) "Electrospinning an essential oil: Cinnamaldehyde enhances the antimicrobial efficacy of chitosan/poly(ethylene oxide) nanofibers" *Carbohydrate Polymers* 113, 561–568. DOI: 10.1016/j.carbpol.2014.06.075
23. Birch, N.P. & Schiffman, J.D.* (2014) "Characterization of self-assembled polyelectrolyte complex nanoparticles formed from chitosan and pectin" *Langmuir* 30(12) 3441-3447. DOI: 10.1021/la500491c
22. Rieger, K.A., Birch, N.P., Schiffman, J.D.* (2013) "Designing electrospun nanofiber mats to accelerate wound healing— A review." *Journal of Materials Chemistry B* 1(36) 4531-4541. DOI: 10.1039/C3TB20795A
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- **Invited Review Article**

BEFORE UMASS

20. Hoover, L.A., Schiffman, J.D., Elimelech, M.* (2013) "Nanofibers in thin-film composite membrane support layers: Enabling expanded application of forward and pressure retarded osmosis" *Desalination* 308, 73-81. DOI: 10.1016/j.desal.2012.07.019
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19. Zodrow, K.R., Schiffman, J.D.*, Elimelech, M. (2012) "Biodegradable polymer (PLGA) coatings featuring cinnamaldehyde and carvacrol mitigate biofilm formation" *Langmuir* 28(39) 13993-13999. DOI: 10.1021/la303286v
18. Schiffman, J.D.*, Wang, Y., Giannelis, E.P., Elimelech, M. (2011) "Biocidal activity of plasma modified electrospun polysulfone mats functionalized with polyethyleneimine-capped silver nanoparticles" *Langmuir* 27(21) 13159-13164. DOI: 10.1021/la202605z
17. Schiffman, J.D.* & Elimelech, M. (2011) "Antibacterial activity of electrospun polymer mats with incorporated narrow diameter single-walled carbon nanotubes" *ACS Applied Materials & Interfaces* 3(2) 462-468. DOI: 10.1021/am101043y
- **Highlighted in "Noteworthy Chemistry" by the American Chemical Society**
16. Vecitis, C.D.*, Schnoor, M.^{UG}, Rahaman, M.S., Schiffman, J.D., Elimelech, M. (2011) "Electrochemical multiwalled carbon nanotube filter for viral and bacterial removal and inactivation" *Environmental Science & Technology* 45 (8) 3672-3679. DOI: 10.1021/es2000062
15. Yip, N.Y., Tiraferri, A., Phillip, W.A., Schiffman, J.D., Hoover, L.A., Kim, Y.C., Elimelech, M.* (2011) "Thin-film composite pressure retarded osmosis membranes for sustainable power generation from salinity gradients" *Environmental Science & Technology* 45(10) 4360-4369. DOI: 10.1021/es104325z
14. Tiraferri, A., Yip, N.Y., Phillip, W.A., Schiffman, J.D., Elimelech, M.* (2011) "Relating performance of thin-film composite forward osmosis membranes to support layer structure and formation" *Journal of Membrane Science* 367, 340-352. DOI: 10.1016/j.memsci.2010.11.014
- **In Top 25 Most Cited Articles for 2010 and 2011**
13. Yip, N.Y., Tiraferri, A., Phillip, W.A., Schiffman, J.D., Elimelech, M.* (2010) "High performance thin-film composite membrane for forward osmosis desalination" *Environmental Science & Technology* 44(10) 3812-3818. DOI: 10.1021/es1002555
12. Schiffman, J.D.[†], Kiechel, M.A.[†], Donius, A.E., Wegst, U.G., Schauer, C.L.* (2013) "Crosslinking poly(allylamine) fibers electrospun from basic and acidic solutions" *Journal of Materials Science* 48(22) 7856-7862. DOI: 10.1007/s10853-013-7426-2
11. Brenner, E.K.^{UG}, Schiffman, J.D., Toth, L.J.^{UG}, Szweczyk, J.C., Schauer, C.L.* (2013) "Phosphate salts facilitate the electrospinning of hyaluronic acid fiber mats" *Journal of Materials Science* 48(22) 7805-7811. DOI: 10.1007/s10853-013-7532-1
10. Brenner, E.K.^{UG}, Schiffman, J.D., Thomson, E.S.^{UG}, Toth, L.J.^{UG}, Schauer, C.L.* (2012) "Electrospinning of hyaluronic acid nanofibers from aqueous ammonium solutions" *Carbohydrate Polymers* 87(1) 926-929. DOI: 10.1016/j.carbpol.2011.07.033
9. Schiffman, J.D., Blackford, A.C.^{UG}, Wegst, U.G.K., Schauer, C.L.* (2011) "Carbon black immobilized in electrospun chitosan membranes" *Carbohydrate Polymers* 84(4) 1252-1257. DOI: 10.1016/j.carbpol.2011.01.013
8. Schiffman, J.D., Stulga, L.A.^{UG}, Schauer, C.L.* (2009) "Chitin and chitosan: Transformations due to the electrospinning process" *Polymer Engineering and Science* 49(10) 1918-1928. DOI: 10.1002/pen.21434

7. Binetti, V.E., **Schiffman, J.D.**, Leafer, O.D., Spanier, J.E., Schauer, C.L.* (2009) "The natural transparency and piezoelectric response of the *Greta oto* butterfly wing" *Integrative Biology* (3) 324-329. DOI: 10.1039/B820205B
6. **Schiffman, J.D.** & Schauer, C.L.* (2009) "Solid state characterization of α -chitin from *Vanessa cardui* Linnaeus wings" *Materials Science and Engineering, C* 29(4) 1370-1374. DOI: 10.1016/j.msec.2008.11.006
5. Laudenslager, M.L.^{UG}, **Schiffman, J.D.**, Schauer, C.L.* (2008) "Carboxymethyl chitosan as a matrix material for platinum, gold, and silver nanoparticles" *Biomacromolecules* 9(10) 2682-2685. DOI: 10.1021/bm800835e
4. Garipcan, B., Winters, J.^{UG}, Atchison, J.S., Cathell, M., **Schiffman, J.D.**, Leafer, O.D., Nonnenmann, S.S., Schauer, C.L., Pikin, E., Nabet, B., Spanier, J.E.* (2008) "Controllable formation of nano-scale patterns on TiO₂ by conductive-AFM nanolithography" *Langmuir* 24(16) 8944-8949. DOI: 10.1021/la800911x
3. **Schiffman, J.D.** & Schauer, C.L.* (2008) "A review: Electrospinning of biopolymer nanofibers and their applications" *Polymer Reviews* 48(2) 317-352. DOI: 10.1080/15583720802022182
 - **3rd Most Cited Article in Journal (As of 7/21/2021)**
2. **Schiffman, J.D.** & Schauer, C.L.* (2007) "One-step electrospinning of cross-linked chitosan nanofibers" *Biomacromolecules* 8(9) 2665-2667. DOI: 10.1021/bm7006983
1. **Schiffman, J.D.** & Schauer, C.L.* (2007) "Cross-linking chitosan nanofibers" *Biomacromolecules* 8(2) 594-601. DOI: 10.1021/bm060804s
 - **In Top 20 Most-Accessed Articles of 2007**

PATENTS

12. Hung, S.-H., **Schiffman, J.D.** "Polyelectrolyte coacervate membranes and methods for the manufacture thereof" Filed 2024.
11. Shah, R.M., Howell, C., **Schiffman, J.D.** "Liquid infused membrane and uses thereof" U.S. Application No.: 63/303,571. Filed 2022.
9. Zodrow, K.R., Eggensperger, C., Giagnorio, M., Holland, M., Dobosz, K.M., **Schiffman, J.D.**, Tiraferri, A., Bechtel, C., Jiang, D. "Living filtration membrane" WO2020181167A1. 2020. [link](#).
7. Champagne, V.K., **Schiffman, J.D.**, Klier, J., Yang, G., Huang, M. "Reactive particles for coating technologies" US20200032071A1. 2018. [link](#).
6. Huang, M., Yang, G., Klier, J., **Schiffman, J.D.**, Pasule, A., Holzer, M.R. "Emulsion polymers crosslinked with compounds containing two or more dicarbonyl-substituted 1 alkene units" US20210032387A1. 2019. [link](#).
5. Perry, S.L., **Schiffman, J.D.**, Meng, X. "Polymer nanofibers from electrospinning of complex coacervates, and compositions and methods thereof" US20180100249A1. 2017. [link](#).
4. Perry, S.L., **Schiffman, J.D.**, Meng, X. "Ultra-stable printing and coatings using aqueous complex coacervates, and compositions and methods thereof" US20180334581A1. 2018. [link](#).
3. **Schiffman, J.D.** and Rieger, K.A. "Essential oils or volatile organics thereof electrospun in chitosan nanofiber mats." WO2015054377A2. 2014. [link](#).
2. Yip, N.Y., Tiraferri, A., Phillip, W.A., **Schiffman, J.D.**, Elimelech, M. "High performance thin-film composite membrane for forward osmosis desalination." US9156006B2. 2010. [link](#).
1. **Schiffman, J.D.** & Schauer, C.L. "Fibrous mats containing chitosan nanofibers." US9163338B2. 2008. [Link](#).

BOOK CHAPTERS

5. Diep, E.[†], Kurtz, I.S.[†], and **Schiffman, J.D.** (2022) Interfacing electrospun nanofibers with microorganisms: Applications from killing to repelling to delivering living microbes. In: Science, Technology, and Applications of Polymer Nanofibers, 1st Edition, A.L. Andraday and S.A. Khan, eds. John Wiley & Sons, Inc., U.S.A. ISBN 978-1119267683. **Invited Book Chapter**
4. **Schiffman, J.D.** & Schauer, C.L. (2015) Biopolymer nanofibers: Electrospinning. Pages (5201-5225) In: Encyclopedia of Biomedical Polymers and Polymeric Biomaterials, Munmaya Mishra, ed. CRC Press, U.S.A. ISBN 9781439898796. **Invited Book Chapter**
3. Dubin, P., **Schiffman, J.D.**, Zheng, B. (2013) Polycation-tethered micelles as immobilized detergents for NAPL remediation. Pages (97-109) In: Novel Solutions to Water Pollution, Ahuja, S. and Hristovski, K.

eds. American Chemical Society, U.S.A. Chapter DOI: 10.1021/bk-2013-1123.ch007. **Invited Book Chapter**

2. **Schiffman, J.D.** & Schauer, C.L. (2009) Permeability studies of chitosan and chitin nanofibrous meshes. Pages (61-71) In: Nanofibers: Fabrication, Performance, and Applications, W.N. Chang, eds. Nova Science Publishers, Inc., U.S.A. ISBN: 978-1-61668-288-0. **Invited Book Chapter**
1. Mcllwee, H.A.^{UG}, **Schiffman, J.D.**, Cathell, M.D., Schauer, C.L. (2008) Deposition of chitosan: Electrospinning and thin films. Pages (81-122) In: Current Research and Developments on Chitin and Chitosan in Biomaterial Science, R. Jayakumar and M. Prabakaran, Eds. Research Signpost, India. ISBN: 978-81-308-0299-2. **Invited Book Chapter**

INVITED CONFERENCE AND COLLOQUIA PRESENTATIONS

102. **Colloquium at University of New Haven, Chemistry & Chemical Engineering and Biomedical Engineering**, Designing sustainable materials that interface with microorganisms. *To be held* April 2025. New Haven, CT.
101. **Keynote @ MRS Spring Meeting**, Engineered living textiles for biomedical applications. *To be held* April 2025. Seattle, WA.
100. **SM3 Biodesign Colloquium at Arizona State University**, Designing sustainable materials that interface with microorganisms. *To be held* Jan 2025. Tempe, AZ.
99. **UMass-Bayreuth Collaborative Symposium and Workshop on Advanced and Living Materials**, Designing sustainable materials that interface with microorganisms. Dec 2024. Amherst, MA.
98. **Plenary: Emerging Areas in Polymer Science and Engineering @ 2024 AIChE Annual Meeting**, Designing sustainable materials that interface with microorganisms: From Antibacterial to Living Materials. Oct 2024. San Diego, CA.
97. **CUMIRP Spring Polymer Event: Living composites and functional biofilms**, Engineered living composite textiles. June 2024. Amherst, MA.
96. **Plenary Talk at the University of New Hampshire's Bioengineering Symposium**, Engineering biomaterials inspired by nature. May 2024. Durham, New Hampshire.
95. **Colloquium at the University of Massachusetts Amherst**, Materials Science and Engineering, Engineering biomaterials inspired by nature. April 2024. Amherst, MA.
94. **Colloquium at the University of Massachusetts Amherst, CEE-EWRE's 'Water' Series**, Engineering of bioinspired antifouling membranes. March 2024. Amherst, MA.
93. **Colloquium at the University of Notre Dame, Department of Chemical & Biomolecular Engineering**, Engineering sustainable materials inspired by nature. Feb 2024. South Bend, IN.
92. **Colloquium at North Carolina State University, Department of Chemical and Biomolecular Engineering**, Going green to improve materials: From biomedical hydrogels to water separation membranes. Nov 2023. Raleigh, NC.
91. **Plenary Lecture @ The Fiber Society's Fall 2023 Conference**. Polyelectrolyte-containing nanofibers and membranes. Oct 2023. Philadelphia, PA.
90. **Colloquium at Northeastern University, Department of Chemical Engineering**, Going green to improve materials: From biomedical hydrogels to water separation membranes. Oct 2023. Boston, MA.
89. **Colloquium at University of Connecticut, Polymer Program**, Going green to improve materials: from biomedical hydrogels to water separation membranes. Sept 2023. Storrs, CT.
88. **ACS Fall 2023 National Meeting, Interview with Deputy Editors**. Aug 2023. San Francisco, CA.
87. **Lawrence Livermore National Laboratory (LLNL) Materials & Chemistry Institute (MaCI) Summer Program Speaker Series**, Engineering bioinspired and "greener" polymer materials. July 2023. Livermore, CA.
86. **ACS Science Talks: Free virtual lecture series**. Bioinspired, engineered materials and their interactions with microorganisms. June 2023. Hosted by ACS India.
 - **Attended by > 1070 people, from > 70 countries**
 - Lecture: <https://www.youtube.com/watch?v=5lQTSlsI13E>
 - Q&A: <https://www.youtube.com/watch?v=mXeDWP1WDkY>
85. **Atlantic Basin Conference on Chemistry**, Development of fouling resistant bioinspired membranes for liquid separations. Dec 2022. Marrakech, Morocco.

84. **AIChE Annual Meeting, Biomaterials I: Biomaterials for Infection, Wound, and/or Disease Treatment Symposium**, Controlling the adhesive behavior of pathogenic microorganisms on polymeric biomaterials. Nov 2022. Phoenix, AZ.
83. **68th Annual AVS International Symposium and Exhibition, Bioinspired Materials and Applications Symposium**. Bioinspired approaches to prevent microbes and fouling on the surface of membranes. Nov 2022. Pittsburgh, PA.
82. **Colloquium at Lehigh University, Department of Chemical and Biomolecular Engineering**, Engineering bioinspired and “greener” polymer materials. Nov. 2022. Bethlehem, PA.
81. **Colloquium at Brown University, BME/ChemE and EnvE**, Engineering bioinspired and “greener” materials for biomedical and environmental applications. Sept. 2022. Providence, RI.
80. **ACS Fall 2022 National Meeting, Interview with Deputy Editors**. Aug 2022. Chicago, IL.
79. **Membranes: Materials and Processes Gordon Research Conference**, Antifouling membranes inspired by nature. Aug 2022. New London, NH.
78. **ACS Spring 2022 National Meeting, Polymer Processing: Nanomanufacturing & Nanofabrication**, Antifouling performance of bioinspired membranes for water purification. March 2022. San Diego, CA
77. **Colloquium at Worcester Polytechnic Institute, Department of Chemical Engineering**, Engineering bioinspired materials with controlled interactions with microorganisms. Nov 2021. Worcester, MA.
76. **Colloquium at University of Florida, Department of Chemical Engineering**, Engineering bioinspired materials with controlled interactions with microorganisms. Nov 2021. Virtual.
75. **Colloquium at University of Rhode Island, Department of Chemical Engineering**, Engineering bioinspired materials with controlled interactions with microorganisms. Oct 2021. Kingston, RI.
74. **XXIX International Materials Research Congress**, Antifouling, bioinspired ultrafiltration membranes designed for water purification. Aug 2021. Cancun, México.
73. **Colloquium at Cornell University, Department of Fiber Science & Apparel Design**, Next-generation nanofibers: Applications in water purification to probiotic delivery. April 2021. Virtual due to COVID
72. **Colloquium at Mississippi State University, Dave C. Swalm School of Chemical Engineering**, Engineering the interface between polymer materials and microorganisms. April 2021. Virtual due to COVID
71. **Colloquium at Missouri S&T, Department of Chemical and Biochemical Engineering**, Engineering the interface between materials and microbes: Applications from biomaterials to water purification. March 2021. Virtual due to COVID
70. **Colloquium at Tufts University, Department of Chemical and Biological Engineering**, Engineering the interface between materials and microbes: Applications from biomaterials to water purification. Feb 2021. Virtual due to COVID
69. **Keynote UMass Homecoming**, Engineering Showcase: Fighting a Global Pandemic - The Frontlines of Innovation. Oct 2020. Virtual due to COVID
68. **2020 BASF NORA Collaboration Days**, Complex coacervation: How fundamentals enable applications. June 2020. Virtual due to COVID
67. **Membranes: Materials and Processes Gordon Research Conference**, 2020 Cancelled due to COVID
66. **XXIX International Materials Research Congress**, México. 2020. Cancelled due to COVID
65. **ACS Spring 2020 National Meeting, Bacterial Interactions with Soft Materials Symposium**, *Staphylococcus aureus* adhesion is mechanosensitive to soft materials. March 2020. Virtual due to COVID
64. **ACS Spring 2020 National Meeting, Nanomanufacturing and Nanofabrication Symposium**, Nanomanufacturing of bioinspired antifouling and antibacterial surface topographies. March 2020. Virtual due to COVID
63. **ACS Spring 2020 National Meeting, Polysaccharides: The Smart Materials for the New Millennium Symposium**, Electrospinning nanofibers from aqueous biopolyelectrolyte complex coacervate solutions. March 2020. Virtual due to COVID
62. **ACS POLY Layered Polymeric Systems 2020**, Nanofibers & polymer layers improve membrane performance. Feb 2020. Sonoma County, CA.
61. **Colloquium at The University of Alabama, Department of Chemical and Biological Engineering**, Bioinspired materials meet microbiology. Feb 2020. Tuscaloosa, AL.

60. **Microbiome, Microbes & Infectious Diseases Theme Meeting, UMass IALS**, Bioinspired materials meet microbiology. Jan 2020. Amherst, MA.
59. **Colloquium at Texas A&M University, Department of Materials Science and Engineering**, Green engineering of polymer materials for biomedical and environmental applications. Nov 2019. College Station, TX.
58. **Colloquium at the University of Pittsburgh, Department of Chemical and Petroleum Engineering**, Green engineering of polymer materials for biomedical and environmental applications. Oct 2019. Pittsburgh, PA.
57. **ACS Fall 2019 National Meeting, Langmuir and ACS Applied Materials & Interfaces Award Symposium**, Interfacing polymer materials with microbiology. Aug 2019. San Diego, CA.
- **Schiffman Awarded ACS Applied Materials & Interfaces Young Investigator Award**
56. **ECI Colloidal and Macromolecular Gels Conference**, Bacteria adhesion is mechanosensitive to polymer gel properties. July 2019. Cork, Ireland.
55. **New Frontiers in Bioinspiration Symposium**, Bioinspired materials meet microbiology. June 2019. Amherst, MA.
54. **Colloquium at the University of Colorado Boulder, Department of Chemical & Biological Engineering**, Bioinspired materials meet microbiology. April 2019. Boulder, CO.
53. **257th ACS National Meeting**, Electrospinning cargo-containing complex coacervates from synthetic and natural polyelectrolytes. April 2019. Orlando, FL.
52. **2019 Eckhardt Northeast Student Regional AIChE Conference**, Nature-inspired, engineer-improved materials. March 2019. Amherst, MA.
- **Schiffman was Invited by Undergraduates to be the Keynote Speaker**
51. **APS March Meeting 2019**, Electrospinning polyelectrolytes from complex coacervates. March 2019. Boston, MA.
50. **APS March Meeting 2019**, Electrospun nanofibers enhance the flux and fouling resistance of ultrafiltration membranes. March 2019. Boston, MA.
49. **Colloquium at the UMass, Department of Polymer Science and Engineering**, Bioinspired materials meet microbiology. Feb 2019. Amherst, MA.
48. **Colloquium at the University of Connecticut, Institute of Materials Science (Polymer Program)**, Engineering bioinspired materials for human health applications. Nov 2018. Storrs, CT.
47. **International Conference of Young Researchers on Advanced Materials (ICYRAM) 2018**, Repelling and killing microorganisms using structure-property relationships and green chemistry. Nov 2018. Adelaide, Australia.
46. **Microbes at Biomedical Interfaces, Topic Conference the 2018 AIChE Annual Meeting**, Bacteria adhesion is mechanosensitive to polymer coating properties. Oct 2018. Pittsburgh, PA.
45. **EDC Innovations and Opportunities in Water Technologies Conference**, Innovations in membrane science. Oct 2018. Amherst, MA.
44. **Colloquium at the Arizona State University, Chemical Engineering Program**, Engineering bioinspired materials for human health applications. Aug 2018. Tempe, AZ.
43. **NSF Biofilm Mechanical Properties Workshop**, Effect of surface stiffness on bacterial adhesion. April 2018. South Bend, IN.
42. **Sigma Xi Invited Lecture Series, US Army Natick Soldier Research, Development and Engineering Center**, Materials engineered to repel and kill microorganisms using structure-property relationships and green chemistry. April 2018. Natick, MA.
41. **255th ACS National Meeting**, Mechanical and chemical properties of polymer hydrogels influence bacterial adhesion. March 2018. New Orleans, LA.
40. **Colloquium at the Alcon Laboratories, Inc.** Using mechanical properties, polydopamine, and polymer zwitterions to reduce biofouling on hydrogels. Dec 2017. Duluth, GA.
39. **Colloquium at the UMass Lowell, Department of Chemistry (Polymer Lecture Series)**, Bioinspired materials meet microbiology. Nov 2017. Lowell, MA.
38. **9th Sino-US Joint Conference of Chemical Engineering**, Electrospun nanofibers enhance the flux and fouling resistance of ultrafiltration membranes. Oct 2017. Beijing, China.
37. **254th ACS National Meeting**, Functional fibers electrospun from polyelectrolyte complex coacervates. Aug 2017, Washington DC.
36. **BASF/NORA Collaboration Days**, Biostatic catechol copolymers. May 2017, Amherst, MA.

35. **CUMIRP: Center for Evolutionary Materials**, Electrospun nanofibers: Non-fouling, antimicrobial, and encapsulation. May 2017. Amherst, MA.
34. **21st Food Science Strategic Research Alliance Meeting**, Electrospun nanofibers: Non-fouling, antimicrobial, and encapsulation coatings. April 2017, Amherst, MA.
33. **Pioneer Valley Microbiology Symposium 2017**, Bioinspired materials meet microbiology. Jan 2017. Amherst, MA.
32. **International Conference of Young Researchers on Advanced Materials (IUMRS-ICYRAM) 2016**, Engineering nanomaterials to interface with microbiology. Dec 2016. Bangalore, India.
31. **Emerging Areas in Polymer Science and Engineering Plenary, AIChE Annual Meeting**, Bioinspired materials meet microbiology: The role of ion-containing polymers and structure-property relationships in preventing biofouling. Nov 2016. San Francisco, CA.
30. **CUMIRP/NRT Retreat**, Soft slippery surfaces reduce biological fouling. Oct 2016. Amherst, MA.
29. **Fiber Society's 2016 Fall Conference**, Adhering zwitterions to electrospun nanofiber mats using bioglue. Oct 2016. Ithaca, NY.
28. **Nanofibers, Applications and Related Technologies Conference 2016**, Cellulose nanofiber environments tailored for microorganisms and mammalian cells. Sept 2016. Raleigh, NC.
27. **NSF Workshop on "Surface Activity Driven by Material Geometry and Elasticity"** Bioinspired materials meet microbiology. Sept 2016. Amherst, MA.
26. **XXV International Materials Research Congress**, Nanofiber-enabled separation membranes. Aug 2016. Cancún, Mexico.
25. **Chalk Talk, UMass, Chemistry-Biology Interface Program**, Learning from nature: Using materials science to engineering antimicrobial and antifouling surfaces. Feb 2016. Amherst, MA.
24. **Symposium on Additive Manufacturing and Innovative Technologies**, Engineering antifouling bioinspired materials, Sept 2015. Linz, Austria.
23. **Summer Engineering Institute (SENGI), UMass**, Materials based on crab shells, fruit peels, and cinnamon: Nature-inspired, engineer-improved. July 2015. Amherst, MA.
22. **CUMIRP: Polymers in Drug Delivery and the BioArena**, Engineering the bioinspired materials–microbiology interface. May 2015. Amherst, MA.
21. **Colloquium at the UMass, Department of Mechanical and Industrial Engineering**, Bioinspired materials to decrease microbial contamination. Feb 2015. Amherst, MA.
20. **The Fiber Society 2014 Fall Meeting**, (Bio)active nanofiber mats functionalized with silver ion exchanged LTA zeolites. Oct 2014. Philadelphia, PA.
19. **Summer Engineering Institute (SENGI), UMass**, Materials based on crab shells, fruit peels, and cinnamon: Nature-inspired, engineer-improved. July 2014. Amherst, MA.
18. **Keynote, Global Materials Network Workshop at École Polytechnique de Montréal**, Engineering bioinspired nanomaterials to decrease microbial contamination. May 2014. Montréal, Canada.
17. **Keynote, New England Nanomanufacturing Association Conference**, Looking to nature to improve antimicrobial materials. May 2014. Amherst, MA.
16. **International Conference on Chemical and Bioprocess Engineering-India**, Development of cellulose fiber mats for the removal of nitrates using *Pseudomonas stutzeri*. Nov 2013. India.
15. **AIChE Annual Fall Meeting**, Invited: Green chemistry and polymer stiffness influences bacterial attachment and biofilm formation. Nov 2013. San Francisco, CA.
 - **Schiffman Awarded Andrew W. Mellon Foundation Grant Support**
14. **The Fiber Society International Symposium**, Immobilizing microbes on cellulose fiber mats. Oct 2013. Clemson, SC.
13. **Sigma Xi Invited Lecture Series, US Army Natick Soldier Research, Development and Engineering Center**, Antimicrobial nanofibers: New strategies and opportunities. Feb 2013. Natick, MA.
12. **Chalk Talk, UMass, Chemistry-Biology Interface Program**, 'Green' nanofiber mats kill bacteria! Nov 2012. Amherst, MA.
11. **11th NJ Symposium on Biomaterials Science**, Antibacterial activity of biopolymer-cinnamaldehyde nanofiber coatings. Oct 2012. New Brunswick, NJ.
10. **International Conference of Young Researchers on Advanced Materials (IUMRS-ICYRAM) 2012**, Antibacterial activity of electrospun mats featuring nano- and bioactive-materials. July 2012. Singapore.
9. **Colloquium at the University of Massachusetts Lowell, Department of Chemistry**, Synthesis of biocidal nanofiber mats. April 2012. Lowell, MA.

8. **ICE Coffee and Connections**, Designing extracellular playgrounds. Feb 2012. Amherst, MA.
7. **Colloquium at the UMass, Environmental & Water Resources Engineering**, Nanofibers as anti-bacterial coatings. March 2012. Amherst, MA.
6. **Lunch Series for UMass CoE and CS Female Faculty**, Renewable soft materials for medical and environmental applications. Oct 2011. Amherst MA.
5. **Koerner Family Fellow Research Symposium**, Electrospinning crab shells into fibrous membranes. 2009. Philadelphia, PA.
4. **Materials Science Institute and IGERT Retreat**, Buttery wings, crustacean shells, and squid pens: Studies on chitin sources. 2008. Gleneden Beach, OR.
 - **Schiffman Awarded NSF-IGERT Travel Grant**
3. **Women's International Research Engineering Summit**, Renewable biopolymers for biomedical and environmental applications. 2011. Orlando, FL.
 - **Schiffman Awarded NSF Travel Grant**
2. **MatPac Award Seminar Series**, Nanofibrous biopolyelectrolytes: tailoring crab shells for water purification systems. 2008. Philadelphia, PA.
1. **NSF-IGERT Retreat**, Electrospinning chitosan: mechanisms and applications. 2006, Lake Harmony, PA

CONTRIBUTED PRESENTATIONS: Presenter is underlined. ^{UG}= undergraduate student

230. He, L., Lopez, J.E.^{UG}, Hung, S., Voyer, A., JDS “Sustainable and recyclable nonwoven materials from kombucha biofilms” UMass-Bayreuth Collaborative Symposium and Workshop on Advanced and Living Materials. Dec 2024. Amherst, MA.
229. He, L., Lopez, J.E.^{UG}, Hung, S., Voyer, A., JDS “Sustainable and recyclable nonwoven materials from kombucha biofilms” Los Alamos National Lab/MSE IDGP Poster Conference. Nov 2024. Amherst, MA.
228. Song, J., Klier, J., JDS “Additive manufacturing of functional coatings using designer crosslinkable powder particles” Los Alamos National Lab/MSE IDGP Poster Conference. Nov 2024. Amherst, MA.
227. Song, J., Klier, J., JDS “Additive manufacturing of functional coatings using designer crosslinkable powder particles” Fall 2024 Polymer Event. Oct 2024. Amherst, MA.
226. Hung, S., & JDS “Sustainable fabrication of polyelectrolyte coacervate membranes via aqueous phase separation” Department of Chemical Engineering G.R.A.S.S. Seminar. Oct 2024. Amherst, MA
225. Ban, H., Rondthaler, S., Lebovich, M., Lora, M., JDS, Andrews, L.B. “Cross-strain transferability of CRISPRi systems from laboratory to clinical *Escherichia coli* strains” 7th International Conference on Microbiome Engineering. Boston, MA. Nov 2024.
224. Meng-Chen C., Barajas, B., Gougerdchi, B.F., Fianu, F., Cheng, Y., JDS “Physicochemical and bioadhesion properties of poly(ethylene glycol dimethacrylate)-coated polydimethylsiloxane biomaterials” Department of Chemical Engineering G.R.A.S.S. Seminar. Sept 2024. Amherst, MA
223. JDS “Engineered living textiles: Alginate nanofiber mats loaded with probiotic bacteria for biomedical applications” ACS Fall 2024. Denver, CO. Aug 2024.
222. Lopez, J.^{UG}, He, L., JDS “Brewing better materials: Impact of growth parameters on the mechanical properties of sustainable, non-woven biofilms. Summer Undergraduate Research Symposium. Amherst, MA. Aug 2024.
221. Shah, R., Bennett, M.G.^{UG}, Goodwin, T.^{UG}, Ribbe, A.E., Hu., W., JDS “Pitcher plant inspired liquid-infused membranes for oil separations. Membranes: Materials and Processes Gordon Research Conference. Aug 2024. New London, NH
220. Song, J., Klier, J., JDS “Synthesis of room temperature crosslinked coatings using core-shell particles” ACS Colloid and Surface Science Symposium. Seattle, WA. June 2024.
219. Meng-Chen C., Barajas, B., Gougerdchi, B.F., Fianu, F., Cheng, Y., JDS “Physicochemical and bioadhesion properties of poly(ethylene glycol dimethacrylate)-coated polydimethylsiloxane biomaterials” ACS Colloid and Surface Science Symposium. Seattle, WA. June 2024.
218. Song, J., Klier, J., JDS “Additive manufacturing of functional coatings using designer crosslinkable powder particles” Poster. CUMIRP: Spring Polymer Event. Amherst, MA. June 2024.

217. Chiang, M.-C., Steppan, C., Delsenroth, T.W., Konradi, R., Emrick, R., JDS “Development of a touch transfer assay to evaluate how surface energy impacts bacteria transmission” *Poster*. CUMIRP: Spring Polymer Event. Amherst, MA. June 2024.
216. Hung, S., & JDS. “Optimization of fouling resistant polyelectrolyte coacervate membranes via aqueous phase separation” North American Membrane Society (NAMS). May 2024. Santa Fe, NM.
215. Hung, S., & JDS. “Optimization of fouling resistant polyelectrolyte coacervate membranes via aqueous phase separation” *Poster*. North American Membrane Society (NAMS). May 2024. Santa Fe, NM.
214. Norton, H.^{UG}, Chiang, M.-C., JDS “Understanding bacterial transfer on high-touch surfaces with a novel touch transfer assay” Chemistry Undergraduate Poster Session. April 2024. Amherst, MA.
213. Chiang, M.-C., Steppan, C., Delsenroth, T.W., Konradi, R., Emrick, R., JDS “Development of a touch transfer assay to evaluate how surface energy impacts bacteria transmission” UMass Recruitment Event. *Poster*. March 2024. Amherst, MA.
212. Hung, S., & JDS. “Development of polyelectrolyte coacervate membranes via sustainable aqueous phase separation” UMass Recruitment Event. *Poster*. March 2024. Amherst, MA.
211. Chiang, M.-C., Steppan, C., Delsenroth, T.W., Konradi, R., Emrick, R., JDS “Development of a touch transfer assay to evaluate how surface energy impacts bacteria transmission” Pioneer Valley Microbiology Symposium. Feb 2024. Amherst, MA
210. Barajas, B., Rondthaler, S., Ban, H., Andrews, L., JDS “Understanding the adhesion of microorganisms to biomaterials with CRISPRi tools” CBI Chalk Talk. Feb 2024. Amherst, MA.
209. Shah, R., Goodwin, T.^{UG}, Bennett, M.G.^{UG}, Ribbe, A.E., JDS “Fouling resistance and chlorine stability of bioinspired liquid-infused membranes” Department of Chemical Engineering G.R.A.S.S. Seminar. Nov 2023. Amherst, MA
208. Rathore, P. & JDS “Bio-inspired and conductive nanofibers for health care applications” The Fiber Society's Fall 2023 Conference. Oct 2023. Philadelphia, PA.
207. Chavez, R.^{UG}, Chiang, M.-C., Barajas, B., JDS “Initial bacterial retention of polydimethylsiloxane (PDMS) and zwitterionic hydrogels of various stiffness” Summer Undergraduate Research Symposium. Aug 2023. Amherst, MA.
206. Blackwood, C.^{UG}, Chiang, M.-C., Barajas, B., JDS “Zwitterionic gels and the materials-biology interface” ASCENDS Symposium. July 2023. Amherst, MA.
205. Ward, L.M., Fickling, B.G., Roy, U., Shah, R.M., JDS, Weinman, S.T. “Effect of nanopatterning on *E. coli* fouling and concentration polarization” North American Membrane Society Annual Meeting May 2023. Tuscaloosa, AL.
204. Ward, L.M., Fickling, B.G., Roy, U., Shah, R.M., JDS, Weinman, S.T. “Poster: effect of nanopatterning on *E. coli* fouling and concentration polarization” North American Membrane Society Annual Meeting May 2023. Tuscaloosa, AL.
203. Chiang, M.-C., Steppan, C., Goodwin, T.^{UG}, Deisenroth, T.W., Konradi, R., Emrick, T., JDS “Evaluating the antiadhesion properties of polymer zwitterion coatings using microbial touch-transfer assays” BASF NORA 10 Year Anniversary Event. May 2023. Boston, MA.
202. Goodwin, T.^{UG}, Shah, R., JDS “Characterization and performance of robust membranes infused with perfluoropolyether oils for water purification” Massachusetts Statewide Undergraduate Research Conference. April 2023. Virtual/Amherst, MA.
201. Peisner, E.^{UG}, Rathore, P., JDS “Fabrication of conductive nanofibers for sensory applications” Massachusetts Statewide Undergraduate Research Conference. April 2023. Virtual/Amherst, MA.
200. Hung, S., & JDS. “Development of polyelectrolyte coacervate membranes via sustainable aqueous phase separation” 2023 Membrane Technology Conference. Feb 2023. Knoxville, TN.
- **Hung Awarded American Membrane Technology Association (AMTA) and the Bureau of Reclamation Fellowship**
199. Rathore, P., Montz, B., Nelson, B., Nonnenmann, S.S., Emrick, T., JDS “Electrospinning of end-capped oligopeptides” 2022 AIChE Annual Meeting. Nov 2022. Phoenix, AZ.
- **Rathore Awarded Women in Chemical Engineering (WIC) Travel Award**
198. Diep, E. & JDS “Crosslinking alginate-based nanofibers for pH-controlled delivery: A study examining crosslinking solution pH and co-solvent systems” 2022 AIChE Annual Meeting. *Poster*. Nov 2022. Phoenix, AZ.

- **Diep Awarded 3rd Place in MESD Graduate Student Poster Award Competition**
197. Rathore, P., Montz, B., Nonnenmann, S.S., Emrick, T., JDS “Bioinspired, conductive polymeric composites of end-capped oligopeptides” 2022 AIChE Annual Meeting. Poster. Nov 2022. Phoenix, AZ.
196. Bennett, M.G.^{UG}, Shah, R., Howell, C., JDS “Chlorine stability of bio-inspired liquid infused membranes”. 2022 AIChE Annual Student Conference. Nov 2022. Phoenix, AZ.
195. Peisner, E.^{UG}, Rathore, P., JDS “Exploring the temperature and humidity dependence of biocompatible and conductive nanofibers” Society of Women Engineers Annual Conference. Oct 2022. Houston, TX.
- **Peisner Selected Finalist in Competitive WE22 Collegiate Rapid Fire Competition**
 - **Peisner Awarded SWE Travel Funds**
194. Shah, R., Cihanoğlu, A., Bennett, M.G.^{UG}, Hardcastle, J., Howell, C., JDS “Chlorine stability and fouling resistance of bioinspired liquid-infused membranes” Fall 2022 Polymer Event. Oct 2022. Amherst, MA.
193. Hung, S. & JDS “Development of fouling resistant polyelectrolyte coacervate membranes via aqueous phase separation” Fall 2022 Polymer Event. Oct 2022. Amherst, MA.
192. Barajas, B. & JDS “Establishing the mechanoselective adhesion of microorganisms to biomaterials” Department of Chemical Engineering G.R.A.S.S. Seminar. Oct 2022. Amherst, MA.
191. Shah, R., Cihanoğlu, A., Bennett, M.G.^{UG}, Hardcastle, J., Howell, C., JDS “Chlorine stability and fouling resistance of bioinspired liquid-infused membranes” Membranes: Materials and Processes Gordon Research Conference. Aug 2022. New London, NH.
190. Hung, S. & JDS “Development of fouling resistant polyelectrolyte coacervate membranes via aqueous phase separation” Membranes: Materials and Processes Gordon Research Conference. Aug 2022. New London, NH.
189. Kaushik, P., Perry, S.L., JDS “Exploring coacervates to regulate uptake and release of active ingredients” 2022 NORA Collaboration Days. June 2022. Amherst, MA.
188. Kaushik, P., Perry, S.L., JDS “Exploring coacervates to regulate uptake and release of actives” 2022 Spring Polymer Event. May 2022. Amherst, MA.
187. Hardcastle, J., Regan, D.P., Fong, C., Evangelista, D., Shah, R., Hung, S., Cihanoğlu, A., JDS, Howell, C. “Immiscible liquid-coated materials for water and aerosol filtration” UMaine Student Symposium. April 2022. Orono, ME.
186. Goodwin, T.^{UG}, Shah, R., JDS “Flux and antifouling performance of bioinspired liquid-infused membranes for water purification” Massachusetts Statewide Undergraduate Research Conference. April 2022. Amherst, MA.
185. Rathore, P., Montz, B., Emrick, T., JDS “Conductive and bioinspired polymeric composites” ACS Spring 2022. March 2022. San Diego, CA.
- **Rathore Awarded NSF Travel Funds**
 - **Rathore Awarded Spring 2022 ACS CVS Travel Award**
184. Ban, H., Call, S.N., Barajas, B.E., JDS, Andrews, L.B. “Elucidation of genetic targets and cellular-physicochemical interactions for prevention of catheter-associated bacterial biofilm infections using a genome-wide approach” Pioneer Valley Microbiology Symposium. March 2022. Amherst, MA.
183. Shah, R., Cihanoğlu, A., Hardcastle, J., Howell, C., JDS “Flux and antifouling performance of bioinspired liquid-infused membranes” 2022 Membrane Technology Conference & Exposition. Feb 2022. Las Vegas, NV.
- **Shah Awarded American Membrane Technology Association (AMTA) and the Bureau of Reclamation Fellowship**
 - **Shah Awarded “Best Student Paper Award” at Conference**
182. Hardcastle, J., Regan, D.P., Fong, C., Shah, R., Hung, S., Cihanoğlu, A., JDS, Howell, C. “Bioinspired liquid-coated filters resist biofouling” MRS Fall Meeting. Dec 2021. Boston, MA.
181. Hung, S., Bowden, J.W.^{UG}, Peltier, R.E., JDS “High-performance nanoparticle capture using surface functionalized electrospun cellulose nanofilters” 2021 AIChE Annual Meeting. Nov 2021. Boston, MA.
180. Shah, R., Cihanoğlu, A., Hardcastle, J., Howell, C., JDS “Flux and antifouling performance of bioinspired liquid-infused membranes” 2021 AIChE Annual Meeting. Nov 2021. Boston, MA.

179. Hardcastle, J., Regan, D.P., Fong, C., Shah, R., Hung, S., Cihanoğlu, A., JDS, Howell, C. "Immiscible liquid-coated materials for bioseparations" 2021 AIChE Annual Meeting. Nov 2021. Boston, MA.
178. Hardcastle, J., Regan, D.P., Fong, C., Shah, R., Hung, S., Cihanoğlu, A., JDS, Howell, C. "Immiscible liquid-coated materials for bioseparations" The Society of Rheology. Nov 2021. Bangor, Maine.
177. Barajas, B. & JDS "Establishing adhesive responses of uropathogenic *E. coli* to gels with various stiffnesses" 2021 SANCAS National Diversity in STEM Digital Conference. Oct 2021. Virtual.
176. Huang, M., Liu, Y., Klier, J., JDS "Synthesis of high-performance UV-curable crosslinked coating films via grafting of HEMA functionalized methylene malonate" Thermoset Resin Formulators Association (TRFA) 2021 Virtual Annual Meeting. Oct 2021.
- **Huang Awarded Excellence in Thermoset Polymer Research Award**
175. Hu, E.^{UG}, Kaushik, P., Shah, R., JDS "Casting phase inversion water purification membranes using polyelectrolyte coacervation" Summer Undergrad Research Symposium. Aug 2021. Amherst, MA.
174. Kaushik, P., Perry, S.L., JDS "Delivery of agricultural actives using complex coacervates" BASF NORA Collaboration Days. May 2021. Virtual due to COVID.
173. Barajas, B. & JDS "Establishing adhesive responses of uropathogenic *E. coli* to gels with various stiffnesses" CBI Chalk Talk. May 2021. Virtual due to COVID.
172. Rehmann, K.M.S., Klier, J., JDS "Surface initiated polymerization from poly(ethylene) surfaces for biomedical applications" MIT Polymer Day. April 2021. Virtual due to COVID.
171. Diep, E. & JDS "Electrospinning of bacteria into alginate-based nanofibers" MIT Polymer Day. April 2021. Virtual due to COVID.
170. Peisner, E.^{UG}, Rathore, P., JDS "Fabrication of biocompatible conductive nanofibers" 2021 ACS CVS Undergraduate Research Symposium. April 2021. Virtual due to COVID.
169. Goodwin, T.R.^{UG} & JDS "Engineering membranes for separations" 27th Massachusetts Statewide Undergraduate Research Conference. April 2021. Virtual due to COVID.
168. Koprek, S.M.^{UG} & JDS "Investigating crosslinking methods to develop composite-alginate nanofibrous mats for biomedical applications" 27th Massachusetts Statewide Undergraduate Research Conference. April 2021. Virtual due to COVID.
167. Regan, D.P., Hardcastle, J., Fong, J., Shah, R., JDS, Howell, C. "Bioinspired liquid-infused membranes reduce biofouling" UMaine Student Symposium. April 2021. Virtual due to COVID.
166. Diep, E. & JDS "Electrospinning of bacteria into alginate-based nanofibers" Biofilm Technologies: Pathways to Product Development. Hosted by the Center for Biofilm Engineering at Montana State University. Feb 2021. Virtual due to COVID.
165. Huang, M., Klier, J., JDS "High-performance coatings featuring methyldene malonate derivatives" Virtual Research Symposium. Dec 2020. Virtual due to COVID.
164. Kurtz, I.S., Sathyan, A., Emrick, T., JDS "Zwitterion-containing copolymers reduce bacterial adhesion in dental environments" 2020 AIChE Annual Meeting. Nov 2020. Virtual due to COVID.
163. Kurtz, I.S., Waldman, A.J.^{UG}, JDS "Controlling the adhesion of *Staphylococcus aureus* to polydimethylsiloxane biomaterials" 2020 AIChE Annual Meeting, Topical Conference: Microbes at Biomedical Interfaces. Nov 2020. Virtual due to COVID.
- **Kurtz Invited Finalist in Graduate Student Oral Competition in Microbiointerface Research**
162. Rehmann, K.M.S., JDS, Klier, J. "Chain extension of carboxylic acid capped polyesters via methylene malonate chemistry" 2020 AIChE Annual Meeting. Nov 2020. Virtual due to COVID.
161. Rehmann, K.M.S., JDS, Klier, J. "Surface initiated polymerization from poly(ethylene) surfaces for biomedical applications" 2020 AIChE Annual Meeting. Nov 2020. Virtual due to COVID.
160. Rehmann, K.M.S., JDS, Klier, J. "Initiation of methyldene malonates from polymers to promote mechanical properties and polymer compatibility" 2020 AIChE Annual Meeting. Nov 2020. Virtual due to COVID.
159. Liadinskaia, V., Perry, S.L., JDS "Improving delivery of fungicides using complex coacervates" NORA meets BASF Challenges, Oct 2020. Virtual due to COVID.
158. Diep, E. & JDS, "Electrospinning of bacteria into alginate-based nanofibers" Fall 2020 Polymer Event. Oct 2020. Virtual due to COVID.
157. Rathore, P. & JDS "Coaxial electrospinning of polydimethylsiloxane (PDMS) fibers" 84th New England Complex Fluids meeting. Sept 2020. Virtual due to COVID.

156. Cihanoglu, A., JDS, Alsoy Altinkaya, S. "Ultrasound-assisted dopamine polymerization: Rapid and oxidizing agent free polydopamine coatings on membrane surfaces" 12th International Congress on Membranes and Membrane Processes. London, UK. 2020 Cancelled due to COVID.
155. Bowden, J.^{UG}, Peltier, R., JDS "High-efficiency particulate matter capture via surface functionalized electrospun cellulose nanofibers" 26th Massachusetts Statewide Undergraduate Research Conference. Amherst, MA. April 2020 Cancelled due to COVID.
154. Waldman, A.J.^{UG}, Kurtz, I.S., JDS "Utilizing polydimethylsiloxane film properties to modulate bacterial adherence" 26th Massachusetts Statewide Undergraduate Research Conference. Amherst, MA. April 2020 Cancelled due to COVID.
153. Latayan, J.S.^{UG}, Rathore, P., JDS "Enabling the electrospinning of PEDOT:PSS nanofibers using carrier polymers" 26th Massachusetts Statewide Undergraduate Research Conference. Amherst, MA. April 2020. Cancelled due to COVID.
152. Donovan, G.^{UG}, Meng, X., Perry, S.L., JDS "Mechanical properties of spin-coated polyelectrolyte complex films" 26th Massachusetts Statewide Undergraduate Research Conference. Amherst, MA. April 2020 Cancelled due to COVID.
151. Kurtz, I.S. & JDS "Chemical and mechanical properties of polymer thin films affect the initial adhesion of Staphylococcus aureus" Pioneer Valley Microbiology Symposium 2020. Jan 2020. Amherst, MA.
 • **Kurtz Awarded 2nd Place in Oral Presentation Competition**
150. Meng, X., Du, Y., Liu, Y., Coughlin, E.B., Perry, S.L., JDS "Electrospinning coacervates – No chain entanglements required" Life Sciences Graduate Research Symposium. Nov 2019. Amherst, MA.
 • **Meng 2nd Place in Oral Presentation at Life Sciences Graduate Research Symposium**
149. Meng, X., Du, Y., Liu, Y., Coughlin, E.B., Perry, S.L., JDS "Electrospinning coacervates – No chain entanglements required" 2019 AIChE Annual Meeting. Nov 2019. Orlando, FL.
 • **Meng Invited Finalist in AIChE Area 8A: Polymers Graduate Student Award Symposium**
148. Li, B., Dobosz, K.M., Zhang, H., JDS, Saranteas, K., Henson, M.A., "Predicting pressure filtration performance by the CFD-DEM approach" 2019 AIChE Annual Meeting. Nov 2019. Orlando, FL.
147. Perry, S.L., Liu, Y., Meng, X., Chang, L-W., Lytle, T.K.^{UG}, Madinya, J., JDS, Sing, C.E., The science and engineering of complex coacervates" Okinawa Colloids 2019. Nov 2019. Japan.
146. Diep, E. & JDS, "Designing a biocompatible matrix for the delivery of living bacteria" Fall 2019 Polymer Event. Oct 2019. Amherst, MA.
145. Meng, X., Du, Y., Liu, Y., Coughlin, E.B., Perry, S.L., JDS "Electrospinning coacervates – No chain entanglements required" Fall 2019 Polymer Event. Oct 2019. Amherst, MA.
144. Rathore, P. & JDS "Electrospinning of polydimethylsiloxane fibers for biocompatible medical devices" Fall 2019 Polymer Event. Oct 2019. Amherst, MA.
143. Kurtz, I.S. & JDS "Polymer thin film mechanics and chemistry modulate the initial adhesion of Staphylococcus aureus" Fall 2019 Polymer Event. Oct 2019. Amherst, MA.
142. Liadinskaia, V., Perry, S.L., JDS "Improving delivery of fungicides using complex coacervates" NORA meets BASF Challenges, Oct 2019. Somerville, MA.
 • **Liadinskaia Awarded 1st Place in NORA Project Showcase Poster Competition**
141. Kurtz, I.S., Sathyan, A., Emrick, T., JDS "Antifouling polymer zwitterion coating for dental applications" NORA meets BASF Challenges, Oct 2019. Somerville, MA.
140. Huang, M., Liu, Y., Palsule, A., Holzer, M., Klier, J., JDS "Methylidene malonate for high performance coatings" Coatings Trends & Technologies. Sept 2019. Chicago, IL.
139. Contreras, A., Raxworthy, M.J., Wood, S., JDS, Tronci, G. "Photodynamically active electrospun fibres for antibiotic-free infection control" IADR British Annual Meeting. Sept 2019. Leeds, UK.
138. Perry, S.L., Meng, X., Liu, Y., Sun, J., JDS "Understanding the electrospinning of complex coacervates" ECI Colloidal and Macromolecular Gel conference. Poster. July 2019. Cork, Ireland.
137. Perry, S.L., Meng, X., Liu, Y., Sun, J., JDS "Understanding complex coacervates" ECI Colloidal and Macromolecular Gel conference. July 2019. Cork, Ireland.
136. Kurtz, I.S. & JDS "Polymer thin film mechanics and chemistry modulate the initial adhesion of Staphylococcus aureus" Gordon Research Conference on the Science of Adhesion. July 2019. South Hadley, MA.
135. Kurtz, I.S. & JDS "Polymer thin film mechanics and chemistry modulate the initial adhesion of Staphylococcus aureus" Gordon Research Seminar on the Science of Adhesion. July 2019. South Hadley, MA.

- **Kurtz Awarded “Best Talk” and selected to be the Student Speaker at GRC**
134. Perry, S.L., Meng, X., Sun, J., JDS “Electrospinning polyelectrolyte complex fibers” 93rd ACS Colloid & Surface Science Symposium. June 2019. Atlanta, GA.
133. Meng, X., Perry, S.L., JDS “Shifting the paradigm of electrospinning: Forming fibers with complex coacervates” NRT Retreat. May 2019. Amherst, MA.
132. Huang, M., Liu, Y., Palsule, A., Holzer, M., Klier, J., JDS “Methylidene malonate for high performance coatings” Eastern Coating Show. May 2019. Atlantic City, NJ.
- **Huang Awarded “Most Outstanding Paper” at Conference**
131. Huang, M., Klier, J., JDS, Palsule, A., “Synthesis of high-performance UV curable crosslinked coating films via grafting of HEMA functionalized methylene malonates” CoatingsTech Conference. April 2019. Cleveland, OH.
130. Meng, X., Perry, S.L., JDS “Electrospinning polyelectrolyte complex (PEC) coacervates into fiber mats” UMass Recruitment Event. *Poster*. March 2019. Amherst, MA.
- **Meng Awarded Maden Travel Award for Winning Poster Presentation**
129. Kurtz, I.S. & JDS “Materials stiffness and hydration influence bacterial attachment” Pioneer Valley Microbiology Symposium 2019. *Poster*. Jan 2019. Amherst, MA.
128. Yang, G., Huang, M., Klier, J., JDS “Additive manufacturing of core-shell microparticles containing thermosetting resins” 2018 AIChE Annual Meeting. Nov 2018. Pittsburgh, PA.
127. Kurtz, I.S., Sathyan, A., Emrick, T., JDS “Biostatic catechol copolymers” NORA meets BASF Challenges, Oct 2018. Amherst, MA.
- **Kurtz Awarded 2nd Place in NORA Project Showcase Poster Competition**
126. Meng, X., Perry, S.L., JDS “Shifting the paradigm of electrospinning: Forming fibers from complex coacervates” Graduate Research Assistant Student Seminar. Oct 2018. Amherst, MA.
125. Kurtz, I.S. & JDS “Materials stiffness and hydration influence bacterial attachment” CUMIRP/NRT Retreat. *Poster*. Oct 2018. Amherst, MA.
124. Meng, X., Perry, S.L., JDS “Encapsulating cargo in electrospun complex coacervate fibers” CUMIRP/NRT Retreat. Oct 2018. Amherst, MA.
123. Kurtz, I.S. & JDS “Materials stiffness and hydration influence bacterial attachment” 2018 NSF Research Traineeship (NRT) Annual Meeting, *Poster*. Sept 2018. Arlington, VA.
- **Kurtz Awarded NSF Travel Grant**
122. Yang, G., Huang, M., Klier, J., JDS “Synthesis of core-shell microparticles containing thermosetting resins via suspension polymerization for cold spray” CSAT 2018. *Poster*. June 2018. Worcester, MA.
121. Kurtz, I.S., Sathyan, A., Emrick, T., JDS “Biostatic catechol copolymers” NORA Collaboration Days, June 2018. Amherst, MA.
120. Levinson, R.M.^{UG}, Kurtz, I.S., Sathyan, A., Nonnenmann, S.S., Emrick, T., JDS “Characterization of antifouling polydopamine-based coatings using AFM” 24th Massachusetts Statewide Undergraduate Research Conference. *Poster*. April 2018. Amherst, MA.
119. Schladenhauffen, J.M.^{UG}, Meng, X., Perry, S.P., JDS “Green electrospinning of aqueous coacervates comprised of short-chain polyelectrolytes” 24th Massachusetts Statewide Undergraduate Research Conference. *Poster*. April 2018. Amherst, MA.
118. Wu, L.^{UG}, Kurtz, I.S., Sathyan, A., Emrick, T., JDS “Bacterial pickup with polymer-stabilized emulsions” 24th Massachusetts Statewide Undergraduate Research Conference. *Poster*. April 2018. Amherst, MA.
117. Kuo-LeBlanc, C.A.^{UG}, Dobosz, K.M., JDS “Randomly aligned, mechanically robust nanofiber mats increase the flux of ultrafiltration membranes” 24th Massachusetts Statewide Undergraduate Research Conference. *Poster*. April 2018. Amherst, MA.
116. Hurley, G.P.^{UG}, Dobosz, K.M., Perry, S.P., JDS “Electrospinning nanofibers from coacervates containing chitosan” 24th Massachusetts Statewide Undergraduate Research Conference. *Poster*. April 2018. Amherst, MA.
115. Kurtz, I.S., Sathyan, A., Emrick, T., JDS “Bioinspired polymer composites for antifouling surface coatings” UMass Recruitment Event. *Poster*. March 2018. Amherst, MA.
- **Kurtz Awarded Maden Travel Award for Winning Poster Presentation**
114. Kurtz, I.S., Sathyan, A., Emrick, T., JDS “Bioinspired polymer composites for antifouling surface coatings” 255th ACS National Meeting. *Poster*. March 2018. New Orleans, LA.
- **Kurtz Awarded Eli Lilly Travel Grant**

113. Liu, Y., Blocher, W.C., Meng, X., Labbe, M.^{UG}, Voke, E.^{UG}, Boucher, C., Winter, H.H., Corradini, M., JDS, Perry, S.L. "Dynamics in polyelectrolyte complex materials" APS March Meeting. March 2018. Los Angeles, CA.
112. Huang, M., Palsule, A., Klier, J., JDS, "Advancing manufacturing through chemistry". The Waterborne Symposium. Feb 2018. New Orleans, LA.
111. Kurtz, I.S. & JDS "Immobilization of microbes in polyvinyl alcohol nanofibers" Pioneer Valley Microbiology Symposium. Jan 2018. Amherst, MA.
110. Yang, G., Huang, M., Klier, J., JDS, "Development of resin-containing polymer particles for thermoset powder coatings" 2017 AIChE Annual Meeting. Nov 2017. Minneapolis, MN.
109. Yang, G., Huang, M., Klier, J., Schiffman, J.D "Synthesis of core-shell microparticles containing thermoset resins via suspension polymerization" 2017 AIChE Annual Meeting. *Poster*. Nov 2017. Minneapolis, MN.
108. Kurtz, I.S. & JDS "Immobilization of microbes in polyvinyl alcohol nanofibers" CUMIRP/NRT Retreat. *Poster*. Oct 2017. Amherst, MA.
107. Meng, X., Perry, S.L., JDS "Encapsulating cargo in electrospun complex coacervate fibers" CUMIRP/NRT Retreat. Oct 2017. Amherst, MA.
106. Meng, X., Perry, S.L., JDS "Encapsulating cargo using electrospun complex coacervates fibers" 91st ACS Colloid & Surface Science Symposium. July 2017. New York, NY.
- ***Meng Awarded NSF NRT Travel Grant***
105. Meng, X., Perry, S.L., JDS "Encapsulating cargo using electrospun complex coacervates fibers" 91st ACS Colloid & Surface Science Symposium. *Poster*. July 2017. New York, NY.
104. Shave, M., Kolewe, K.W., JDS, Santore, M.M. "Effects of *E. coli* motility and surface mechanics on behavior in flow" 91st ACS Colloid & Surface Science Symposium. July 2017. New York, NY.
103. Dobosz, K.M., Kuo-LeBlanc, C.A.^{UG}, JDS, "Ultrafiltration membranes enhanced with electrospun nanofibers exhibit improved flux and fouling resistance." Chemical Engineering Graduate Research Assistant Student Seminar. May 2017. Amherst, MA.
- ***Dobosz Awarded 1st Place in Oral Presentation Competition***
102. Mako, N.R.^{UG}, Kolewe, K.W., Nonnenmann, S.S, JDS "Bacteria Can Feel: How Understanding Bacterial Attachment Preferences Can Improve Medical Device Design" 23rd Massachusetts Statewide Undergraduate Research Conference. *Poster*. April 2017. Amherst, MA.
101. Shamsi, R.^{UG}, Chua, B.^{UG}, Perry, S.L., JDS "Spin-coating polyelectrolyte thin films using coacervate phase to facilitate encapsulation of rhodamine" 23rd Massachusetts Statewide Undergraduate Research Conference. *Poster*. April 2017. Amherst, MA.
100. Dobosz, K.M., Kuo-LeBlac, C.A.^{UG}, Martin, T.J.^{UG}, JDS "Ultrafiltration membranes surface modified with electrospun nanofibers exhibit enhanced flux and fouling resistance" MRS Spring Meeting. April 2017. Phoenix, AZ.
99. Kolewe, K.W., Mako, N.R.^{UG}, Nonnenmann, S.S., JDS "Thickness matters: Bacteria sense through thin hydrogels" UMass Recruitment Event. *Poster*. March 2017. Amherst, MA.
- ***Kolewe Awarded Maden Travel Award for Winning Poster Presentation***
98. Kolewe, K.W., Maria, M.M., JDS "Understanding the dynamics of *Staphylococcus aureus* mechanosensitivity in flow" Pioneer Valley Microbiology Symposium. Jan 2017. Amherst, MA.
97. Kolewe, K.W., Mako, N.R.^{UG}, Nonnenmann, S.S., JDS "Thickness matters: Bacteria sense through thin hydrogels" Pioneer Valley Microbiology Symposium. *Poster*. Jan 2017. Amherst, MA.
96. Kolewe, K.W. and JDS "Mechanically responsive bacterial interactions on soft materials" Life Sciences Graduate Research Symposium. Dec 2016. Amherst, MA.
95. Kolewe, K.W., Kalasin, S., Santore, M.M., JDS "Dynamic adhesion of *Staphylococcus aureus* to poly(ethylene glycol) surfaces" 2016 AIChE Annual Meeting. Nov 2016. San Francisco, CA.
94. Kolewe, K.W., Emrick, T., JDS "Zwitterion-poly(ethylene glycol) hydrogels prevent bacterial adhesion" 2016 AIChE Annual Meeting. *Poster*. Nov 2016. San Francisco, CA.
- ***Kolewe Awarded 2nd Place in MSED Poster Competition***
93. Sui, S., Wang, Y., MacPherson, D., Kolewe, K.W., Srajer, V., Henning, R., JDS, Dimitrakopoulos, C., Perry, S.L. "Graphene-based microfluidics for serial microcrystallography" 2016 AIChE Annual Meeting. Nov 2016. San Francisco, CA.
92. Mako, N.M.^{UG}, Kolewe, K.W., Nonnenmann, S.S., JDS "Investigating the effect of hydrogel thickness on bacterial adhesion" 2016 AIChE Annual Meeting. Nov 2016. San Francisco, CA

- **Mako Awarded 2nd Place in Undergraduate Student Poster Competition**
91. Kolewe, K.W., Mako, N.R.^{UG}, Nonnenmann, S.S., JDS, “Investigating the effect of hydrogel thickness on bacterial adhesion” Institute for Applied Life Sciences Grand Opening Celebration. Oct 2016. Amherst, MA.
 90. Sui, S., Wang, Y., Kolewe, K.W., Srajer, V., Henning, R., JDS, Dimitrakopoulos, C., Perry, S.P. “Graphene based microfluidics for serial crystallography” Institute for Applied Life Sciences Grand Opening Celebration. Oct 2016. Amherst, MA.
 89. Kolewe, K.W., Mako, N.R.^{UG}, Nonnenmann, S.S., JDS “Investigating the effect of hydrogel thickness on bacterial adhesion” CUMIRP/NRT Retreat. Oct 2016. Amherst, MA.
 88. Dundar, F., Kolewe, K.W., JDS, Watkins, J.J. “Bio-inspired multifunctional shark skin microstructures for antibacterial/antifouling application” CUMIRP/NRT Retreat. Oct 2016. Amherst, MA.
 87. Meng, X., Perry, S.L., JDS “Electrospinning polyelectrolyte complex (PEC) coacervates into fiber mats” CUMIRP/NRT Retreat. Oct 2016. Amherst, MA.
 86. Dobosz, K.M., Kuo-Leblanc, C.A.^{UG}, JDS “Electrospun nanofibers enhance the performance of ultrafiltration membranes” CUMIRP/NRT Retreat. Oct 2016. Amherst, MA.
 85. Dobosz, K.M. & JDS “Electrospun nanofiber morphology enhances the flux and antifouling performance of ultrafiltration membranes” Fiber Society's Conference. Oct 2016. Ithaca, NY.
 - **Dobosz Awarded Fiber Society Travel Grant**
 - **Dobosz Awarded 2nd in Graduate Student Paper Competition**
 84. Meng, X., Perry, S.L., JDS “Electrospinning polyelectrolyte complex coacervates into fiber mats” Fiber Society's Fall Conference. Oct 2016. Ithaca, NY.
 83. Galarza, S., Mijailovic, A.S., Birch, N.P., JDS, Crosby, A.J., Peyton, S.R., Van Vliet, K.J. “Mechanics of brain tissue measured by cavitation rheology” BMES Annual Meeting. Oct 2016. Minneapolis, MN.
 82. Dobosz, K.M., Kuo-Leblanc, C.A.^{UG}, JDS “Flux and antifouling performance of ultrafiltration membranes enhanced with electrospun nanofibers” New England Graduate Student Water Symposium. Sept 2016. Amherst, MA.
 - **Dobosz Awarded 1st Place in Oral Presentation Competition**
 81. JDS “Fewer bacteria attach to soft slippery hydrogels”. XXV International Materials Research Congress. Aug 2016. Cancún, Mexico.
 80. Kolewe, K.W., Kalasin, S., Mako, N.R.^{UG}, Santore, M.M., JDS “Dynamic adhesion of *Staphylococcus aureus* to poly(ethylene glycol) surfaces” 90th ACS Colloid & Surface Science Symposium. June 2016. Cambridge, MA.
 79. Sui, S., Wang, Y., MacPherson, D., Kolewe, K.W., Srajer, V., Henning, R., JDS, Hardy, J., Dimitrakopoulos, C., Perry, S.L. “Graphene-based microfluidics for serial crystallography” 90th ACS Colloid & Surface Science Symposium. June 2016. Cambridge, MA.
 78. Chang, L.W., Liu, Y., Meng, X., Blocher, W., Vélez, J.^{UG}, Johnston, B.^{UG}, Shamsi, R.^{UG}, Wang, R.^{UG}, Radhakrishna, M., Letteri, R., Momani, B., Winter, H.H., Emrick, T., Sing, C.E., JDS, Perry, S.L. “Molecular engineering of polyelectrolyte complex materials” 90th ACS Colloid & Surface Science Symposium. June 2016. Cambridge, MA.
 77. Rice, E.W.^{UG} & JDS “Bioinspired dopamine coatings: The effect of patterning on antifouling and antimicrobial properties” AIChE Northeast Student Regional Conference. Poster. April 2016. Amherst, MA.
 76. Klinkhamer, E.J.^{UG}, Jansen, L.E., Rieger, K.A., Peyton, S.R., JDS “Engineering a nanofiber-hydrogel platform to study mammalian cell behavior” AIChE Northeast Student Regional Conference. Poster. April 2016. Amherst, MA.
 - **Klinkhamer Awarded 1st Place in Undergraduate Poster Competition**
 75. Mako, N.M.^{UG}, Kolewe, K.W., Nonnenmann, S.S., JDS “How far can microorganisms feel: Hydrogel stiffness and thickness affect microbial attachment” AIChE Northeast Student Regional Conference. Poster. April 2016. Amherst, MA.
 - **Mako Awarded 2nd Place in Undergraduate Poster Competition**
 74. Klinkhamer, E.J.^{UG}, Jansen, L.E., Rieger, K.A., Peyton, S.R., JDS “Engineering a nanofiber-hydrogel platform to study mammalian cell behavior” 22nd Massachusetts Statewide Undergraduate Research Conference. Poster. April 2016. Amherst, MA.

73. Rice, E.W.^{UG} & JDS “Bioinspired dopamine coatings: The effect of patterning on antifouling and antimicrobial properties” 22nd Massachusetts Statewide Undergraduate Research Conference. Poster. April 2016. Amherst, MA.
72. Wang, R.^{UG}, Meng, X., Perry, S.L., JDS “Fabrication and characterization of PSS/PDADMAC coacervate thin films” 22nd Massachusetts Statewide Undergraduate Research Conference. April 2016. Amherst, MA.
71. Kolewe, K.W., Mako, N.^{UG} JDS “Surface-associated transport of bacteria on poly(ethylene glycol) hydrogels” Colloidal, Macromolecular & Polyelectrolyte Solutions Gordon Research Conference, *Poster*. Feb 2016. Ventura CA.
70. Dobosz, K.M., Kuo-Leblanc, C.A.^{UG}, JDS “Electrospun nanofibers enhance the performance of ultrafiltration membranes” MRS Fall Meeting, *Poster*. Dec 2015. Boston, MA.
69. Kolewe, K.W., Kalasin, S., Mako, N.^{UG}, Santore, M.M., JDS “Tailoring poly(ethylene glycol) hydrogel properties to encourage bacteria rolling” MRS Fall Meeting, *Poster*. Dec 2015. Boston, MA.
68. Polio, S., Birch, N.P., JDS, Crosby, A., Peyton, S.R. “Developing a mechanical model for studying breast cancer metastasis to the lungs” BMES Annual Meeting. Oct 2015. Tampa, FL.
67. Kolewe, K.W., Kalasin, S., Mako, N.^{UG}, Santore, M.M., JDS “Hydrogel properties affect the rolling and adhesion of *E. coli* and *S. aureus*.” BMES Annual Meeting. Oct 2015. Tampa, FL.
66. Jansen, L., Birch, N.P., JDS, Crosby, A., Peyton, S.R. “Mechanics of intact bone marrow” BMES Annual Meeting. *Poster*. Oct 2015. Tampa, FL.
65. Rieger, K.A. & JDS “Adsorption of bacteria into electrospun cellulose nanofiber mats: Effect of surface functionality” 250th ACS National Meeting, Aug 2015. Boston, MA.
64. Mako, N.^{UG}, Kolewe, K.W., Santore, M.M., JDS “The effect of hydrogel materials properties on bacterial rolling” CBI/BMB/BMP Joint Retreat. *Poster*. June 2015. Worcester, MA.
63. Birch, B.P. & JDS “Thermoreversible gelation of a low acid chitosan/pectin hydrogel” 63rd New England Complex Fluids Meeting. June 2015. Amherst, MA.
62. Rice, E.W.^{UG}, Kolewe, K.W., Chang, C-C., Emrick, T., JDS “Bio-inspired dopamine coatings: Synthesis and characterization of antifouling and antimicrobial properties” 21st Massachusetts Statewide Undergraduate Research Conference. *Poster*. April 2015. Amherst, MA.
61. Klinkhamer, E.J.^{UG}, Rieger, K.A., Jansen, L.E., Peyton, S.R., JDS “Nanofibers influence bacteria and mammalian cell behavior” 21st Massachusetts Statewide Undergraduate Research Conference. *Poster*. April 2015. Amherst, MA.
60. Mako, N.M.^{UG}, Kolewe, K.W., Santore, M.M., JDS “The effect of hydrogel materials properties on bacterial rolling” 21st Massachusetts Statewide Undergraduate Research Conference. *Poster*. April 2015. Amherst, MA.
59. Yeung, H.F.^{UG}, Rieger, K.A., Fan, W., JDS “Rapid inactivation of bacteria using cellulose nanofiber mats functionalized with silver ion exchanged LTA zeolites” 21st Massachusetts Statewide Undergraduate Research Conference. *Poster*. April 2015. Amherst, MA.
58. Rieger, K.A., Thyagarajan, R., Hoen, M.E.^{REU}, Ford, D., JDS “Adsorption of bacteria into electrospun cellulose nanofiber mats: Development of a dynamic model” 249th ACS National Meeting, March 2015. Denver, CO.
57. Klinkhamer, E.J.^{UG}, Rieger, K.A., Jansen, L.E., Peyton, S.R., JDS “Nanofibers influence bacteria and mammalian cell behavior” AIChE Northeast Student Regional Conference. *Poster*. March 2015. Boston, MA.
56. Mako, N.M.^{UG}, Kolewe, K.W., Santore, M.M., JDS “The effect of hydrogel materials properties on bacterial rolling” AIChE Northeast Student Regional Conference. *Poster* March 2015. Boston, MA.
55. Yeung, H.F.^{UG}, Rieger, K.A., Fan, W., JDS “Rapid inactivation of bacteria using cellulose nanofiber mats functionalized with silver ion exchanged LTA zeolites” AIChE Northeast Student Regional Conference. *Poster*. March 2015. Boston, MA.
54. Kolewe, K.W., Kalasin, S., Santore, M.M., JDS “Bacteria rolling and attachment to non-fouling poly(ethylene glycol) hydrogels: Implications for catheter design” MRS Fall Meeting, Nov 2014. Boston, MA.
53. JDS “Rheological properties and electrospinning of chitosan-oil solutions” AIChE Annual Meeting. Nov 2014. Atlanta, GA.
52. Hoen, M.E.^{REU}, Rieger, K.A., JDS “Bacteria collection using electrospun cellulose nanofibers” The Fiber Society. *Poster*. Oct 22-24, 2014. Philadelphia, PA.

51. Dobosz, K.M., Martin, T.^{UG}, JDS “Evaluating polysulfone ultrafiltration membranes for water purification.” New England Graduate Student Water Symposium. Poster. Sept 2014. Amherst, MA.
50. Dobosz, K.M., Martin, T.^{UG}, JDS “Evaluating polysulfone ultrafiltration membranes for water purification.” 2014 Annual UCOWR-NIWR-CUAHSI Conference. Poster. June 2014. Medford, MA.
49. Okoye, A.N.^{UG} & JDS “Kinetics of chromium remediation using chitosan-based hydrogels.” 20th Massachusetts Statewide Undergraduate Research Conference. April 2014. Amherst, MA.
48. Pandres, E.P.^{UG} & JDS “Optimization of chitosan:pectin hydrogels.” 20th Massachusetts Statewide Undergraduate Research Conference. April 2014. Amherst, MA.
47. Eagan, N.M.^{UG} & JDS “Fabrication and characterization of chitosan/cinnamaldehyde thin films.” 20th Massachusetts Statewide Undergraduate Research Conference. April 2014. Amherst, MA.
46. Klinkhamer, E.J.^{UG}, Rieger, K.A., Jansen, L., Peyton, S.R., JDS “Development of poly(ethylene) oxide fiber mats as a cellular microenvironment platform.” Northeast Regional AIChE Student Conference. Poster. April 2014. Storrs, CT.
45. Pandres, E.P.^{UG} & JDS “Purifying industrial wastewater using “green” chitosan:pectin hydrogels.” Northeast Regional AIChE Student Conference, April 2014. Storrs, CT.
44. Eagan, N.M.^{UG} & JDS “Fabrication and characterization of chitosan/cinnamaldehyde thin films.” Northeast Regional AIChE Student Conference. Poster. April 2014. Storrs, CT.
43. Jafferji, H., JDS, Sakulich, A. “Corrosion mitigation of the reinforcing steel in concrete via lightweight aggregate-corrosion inhibitor composite.” ACI Spring Convention, March 2014. Reno, NV.
42. Birch, N.P., Rieger, K.A., JDS “Chitosan modalities to enhance biomedical devices: Chitosan-pectin nanoparticles & chitosan-cinnamaldehyde nanofibers.” MRS Fall Meeting. Dec 2013. Boston, MA.
41. Rieger, K.A. & JDS, “Antibacterial activity of chitosan-cinnamaldehyde nanofiber mats” The Fiber Society. Oct 2013. Clemson, SC.
- **Rieger Awarded Fiber Society Travel Grant**
 - **Rieger Awarded 3rd in Graduate Student Paper Competition**
40. Birch, N.P. & JDS “Physiochemical properties of chitosan:pectin nanoparticles for potential wound healing applications.” 246th ACS National Meeting. Poster. Sept 2013. Indianapolis, IN.
- **Birch Awarded ACS Ciba Travel Grant in Green Chemistry**
39. Hajar, J., Keohane, G.^{UG}, JDS, Sakulich, A., “Preliminary investigations of essential oils as corrosion inhibitors in steel reinforced cementitious systems.” 35th International Conference on Cement Microscopy. April 2013. Rosemont, IL.
38. Birch, N.P., Pandres, E.P.^{UG}, JDS “Chitosan:pectin assemblies: Engineering green nanoparticles and hydrogels” AIChE Northeast Regional Student Conference. Poster. April 2013. Amherst, MA.
- **Pandres Awarded 3rd Place in Undergraduate Poster Competition**
37. Rieger, K.A., Eagan, N.M.^{UG}, JDS “Nanostructured chitosan-cinnamaldehyde materials inactivate microbes.” AIChE Northeast Regional Student Conference. Poster. April 2013. Amherst, MA.
- **Eagan Awarded 1st Place in Undergraduate Poster Competition**
36. Okoye, A.N.^{UG}, Gamliel, D.P.^{UG}, JDS “Fabricating chemically robust chitosan films for water purification” AIChE Northeast Regional Student Conference. Poster. April 2013. Amherst, MA.
35. Birch, N.P., Pandres, E.P.^{UG}, JDS “Chitosan:pectin assemblies: Engineering green nanoparticles and hydrogels” WSSS Interdisciplinary Water Symposium. Poster. April 2013. Medford, MA.
34. Rieger, K.A., Eagan, N.M.^{UG}, JDS “Nanostructured chitosan-cinnamaldehyde materials inactivate microbes.” WSSS Interdisciplinary Water Symposium. Poster. April 2013. Medford, MA.
33. Yip, N.Y., Tiraferri, A., Phillip, W.A., JDS, Hoover, L.A., Elimelech, M. “Renewable energy production with natural salinity gradients by pressure retarded osmosis” AEESP Distinguished Lecture. Poster. Feb 2013. Amherst, MA.
32. Rieger, K.A. & JDS “Incorporation of cinnamaldehyde into chitosan nanofiber mats.” AIChE Annual Meeting. Nov 2012. Pittsburgh, PA.
31. Birch, N.P. & JDS “Synthesis and antibacterial activity of chitosan-pectin nanoparticles.” AIChE Annual Meeting. Oct 2012. Pittsburgh, PA.
30. Rieger, K.R. & JDS “Incorporation of cinnamaldehyde within chitosan nanofiber coatings to inactivate bacteria” 244th ACS National Meeting. Aug 2012. Philadelphia, PA.
- **Rieger Awarded Eli Lilly Travel Grant Award**
29. Rieger, K.R. & JDS “Electrospinning of core/shell nanofiber mats for the controlled release of bactericidal cinnamaldehyde” 244th ACS National Meeting. Poster. Aug 2012. Philadelphia, PA.

• **Invited Session for Eli Lilly Award Winners**

28. Zodrow, K.R., JDS, Elimelech, M., "Biofilm reduction by cinnamaldehyde and carvacrol incorporated in a biodegradable polymer matrix." 244th ACS National Meeting. Poster. 2012. Philadelphia, PA.
27. JDS "Development of a "Nanostructured Biomaterials" course for chemical engineers." American Society for Engineering Education. Poster. July 2012. Orono, ME.
26. Okoye, A.N.^{UG}, Gamliel, D.P.^{UG}, JDS "Fabricating chemically robust chitosan films for water purification." ISPE Student Poster Competition. May 2012. Worcester, MA.
25. Okoye, A.N.^{UG}, Gamliel, D.P.^{UG}, JDS "Fabricating chemically robust chitosan films for water purification." WSSS Interdisciplinary Water Symposium. Poster. April 2012. Medford, MA.
24. Hoover, L.A., JDS, Elimelech, M. "Fabrication of thin-film composite membranes on electrospun poly(ethylene terephthalate) for engineered osmosis." North American Membrane Society Meeting. June 2011. New Orleans, L.A.

• **Hoover Awarded 2nd Place in Student Poster Competition**

23. Hoover, L.A., JDS, Elimelech, M. "Fabrication and performance testing of an electrospun membrane for engineered osmosis." Institute of Physics: Electrospinning, Principles, Possibilities, and Practice. March 2012. London, UK.
22. JDS, Zodrow, K.R., Elimelech, M. "Biofilm reduction by carvacrol and cinnamaldehyde incorporated into poly(lactide-co-glycolide) thin films." MRS Fall Meeting, Nov 2011. Boston, MA.
21. JDS, Wang, Y., Giannelis, E.P., Elimelech, M. "Electrospun polysulfone mats using biocidal nanomaterials" AIChE Annual Meeting, Oct 2011. Minneapolis, MN.
20. Yip, N.Y., Tiraferri, A., Phillip, W.A., JDS, Elimelech, M. "Thin-film composite membranes for osmotically-driven processes" IWA Leading-Edge Conference on Water and Wastewater Technologies, June 2011. Amsterdam, The Netherlands.
19. Hoover, L.A., JDS, Elimelech, M. "Fabrication of thin-film composite membranes on electrospun poly(ethylene terephthalate) for engineered osmosis" North American Membrane Society Meeting. June 2011. Las Vegas, NV.

• **Hoover Awarded 1st Place in Student Poster Competition**

18. JDS, Wang, Y., Giannelis, E.P., Elimelech, M. "Antibacterial activity of composite electrospun polysulfone mats featuring biocidal nanomaterials" 85th ACS Colloid & Surface Science Symposium, June 2011. Montreal, Quebec, Canada.
17. JDS & Elimelech, M. "Non-woven polysulfone-single-walled carbon nanotube membranes as antibacterial coatings." Gordon Research Conference on Membranes. Poster July 2010. New London, NH.
16. Hoover, L.A., JDS, Elimelech, M. "Incorporation of electrospun poly(ethylene terephthalate) in thin-film composite membranes for osmotically driven processes" Gordon Research Conference on Membranes. Poster. July 2010. New London, NH.
15. Yip N.Y., Tiraferri A., Phillip, W.A., JDS, Elimelech, M. "Thin-film composite membrane for osmotically-driven membrane processes" Gordon Research Conference on Membranes. Poster. July 2010. New London, NH.
14. Yip N.Y., Tiraferri, A., Phillip, W.A., JDS, Elimelech, M. "Thin-film composite membrane for forward osmosis applications" Singapore International Water Week. June 2010. Singapore.
13. Yip, N.Y., Tiraferri, A., Phillip, W.A., JDS, Elimelech, M. "Thin-film composite membrane for osmotically-driven membrane processes" ACS National Meeting. March 2010. San Francisco, CA.
12. JDS & Schauer, C.L. "Buttery wings, crustacean shells, and squid pens: Studies on chitin sources" 40th Middle Atlantic Regional Meeting of ACS. Poster. 2008. Queens, NY.
11. JDS & Schauer, C.L. "Buttery wings, crustacean shells, and squid pens: Studies on chitin sources" 10th Annual Research Day at Drexel University. Poster. 2008. Philadelphia, PA.
10. JDS & Schauer, C.L. "Evaluation of electrospun biopolymer nanocomposite filtration membranes" MRS Fall Meeting. 2008. Boston, MA.
9. JDS & Schauer, C.L. "Membranes composed of chitosan, carbon black, and glutaraldehyde: Morphological, chemical, and crystalline changes" 236th National ACS Meeting, 2008. Philly, PA.
8. JDS & Schauer, C.L. "Cross-linked chitosan nanofibers" 39th ACS Middle Atlantic Regional Meeting. 2007. Collegeville, PA.
7. JDS & Schauer, C.L. "Chitosan nanofibers and composite chitosan nanofibers: conception to application." ASM International Philly Liberty Bell Chapter Meeting. Poster. 2007. Horsham, PA.

- **Schiffman Awarded 1st Place in Poster Competition**
- 6. JDS & Schauer, C.L. "Chitosan nanofibers and composite chitosan nanofibers: conception to application" Drexel University Research Symposium. Poster. 2007. Philadelphia, PA.
- 5. JDS & Schauer, C.L. "Cross-linked chitosan nanofibers" MRS Fall Meeting. 2006. Boston, MA.
- 4. JDS & Schauer, C.L. "Electrospinning of various chitosans for medical applications" 8th Annual Research Day. Poster. 2006. Philadelphia, PA.
- **Schiffman Awarded Honorable Mention in Emerging Technology**
- 3. JDS & Schauer, C.L. "Electrospinning of various chitosans for medical applications" 38th Middle Atlantic Regional Meeting of ACS. Poster. 2006. Hershey, PA.
- 2. JDS & Frey, M.W. "Biodegradation of chitosan films, electrospun PLA mesh, and PLA mats embedded in chitosan films" 15th Annual Polymers Outreach Symposium. Poster. 2004. Ithaca, NY.
- 1. JDS & Frey, M.W. "Biodegradation of chitosan films, electrospun PLA mesh, and chitosan films surrounded by electrospun PLA mesh" Eng Grad Research Symposium. Poster, 2004. Ithaca, NY.

RESEARCH SUPPORT. Separated by Funding Agency/Type: ON = ON GOING, = COMPLETED.

Schiffman is a PI or coPI on awards totaling \$35M+, with \$5M+ going directly to her laboratory. Fellowships or awards that directly support students are not included.

Total Support from the National Science Foundation (NSF)

- ON NSF CMMI (2227307) BRITE: SYNERGY: Chemically resilient, fouling resistant separation membranes manufactured using aqueous phase inversion. PI: Schiffman. 2023-2026. \$386,034
- NSF I-CORP (SEED) Support for IP on membranes manufactured using aqueous phase inversion. PI: Schiffman. 2024. \$2,500
- NSF Biomaterials (1904901) Establishing the mechanoselective adhesion of microorganisms to biomaterials + AGEP-GRS supplement. PI: Schiffman, coPI: Andrews. 2020-2024. \$599,551
- NSF CBET (1930610) Collaborative Research: Bioinspired liquid-gated membranes reduce biofouling. PI: Schiffman. 2019-2024. \$340,541
- ON NSF CMMI (1921839) DMREF: Conductive protein nanowires as next generation polymer nanocomposite fillers. PI: Nonnenmann coPIs: Schiffman, Emrick, Lovley. 2019-2025. \$1,434,641
- NSF MRI (1919324) Acquisition of a variable pressure scanning electron microscope with serial block-face imaging for bio and soft materials research. PI: Hoagland, coPI: Schiffman, Bradley, Katz, Ribbe. 2019-2022. \$526,915
- NSF CBET (2029371) EAGER: Collaborative Research: Detection and analysis of airborne coronavirus with bioinspired membranes. PI: Schiffman, 2020-2022, \$75,317
- SEED from NSF ADVANCE (1824090) Elucidating mechanoselective adhesion and antibiotic resistance for catheter-associated bacterial infections using genomics approaches. PI: Andrews, coPI: Schiffman. 2019-2021. \$15,000
- NSF CMMI (1727660) Electrospinning nanofiber mats from aqueous polyelectrolyte solutions. PI: Schiffman, coPI: Perry, \$338,180
- SEED from NSF ADVANCE (1824090) Mutual Mentoring Grant: Interdisciplinary STEM women's group. PI: Kandula, coPIs: Schiffman + 3 others. 2020-2021. \$6,000
- NSF CBET (1719747) EAGER: Confining biofouling using sticky stripes. PI: Schiffman. 2017-2019. \$100,000
- SEED from NSF NSEC (1025020) Flexible multifunctional surfaces. PI: Schiffman. 2015-2016. \$15,000
- Supplement on NSF (1543717) Emerging areas in polymer science and engineering: plenary session at AIChE meeting. PI: Robertson (UHouston), coPI: Schiffman. \$5,000
- NSF CBET (1342343) BRIGE: Engineering antifouling ultrafiltration membranes using polycationic nanofibers. PI: Schiffman. 2013-2015. \$174,321
- SEED from NSF NSEC (1025020) Nanomanufacturing using biomaterials. PI: Rotello, co-PI: Schiffman, Goddard. 2012-2013. \$90,000

Total Support from Federal Funding Agencies (DOD, ARL, USGS, USDA)

- ON NCMS AM and Advanced Materials Technology for Sustainment and Environmental Compliance Phase V. 2024-2026. Collaborator: Schiffman. \$14.5M (\$30,799 to Schiffman)

- ON NCMS/LIFT Advancing structural materials for Army modernization priorities via direct write approaches. 2022-2025. Lead: Rowan U. Collaborator: Schiffman. \$14.5M (\$70,000 to Schiffman)
- ON DOD/LIFT (W911NF1920152) High rate additive manufacturing for functional films and devices. PI: Watkins, Senior Personnel: Schiffman. 2021-2025. \$2,780,95 (\$170,000 to Schiffman)
- ☑ DOD/NCMS (202028-141054) High rate additive manufacturing for functional films and devices. PI: Watkins, coPI: Schiffman + 19 Others. 2020-2023. \$2,550,000 (\$80,000 to Schiffman)
- ☑ ARL (W911QY-19-9-0011) Capability development document for Army standard family of rigid wall shelters. PI: Watkins. coPIs: Schiffman, Carter, Arbabi. 2020-2021. \$1,891,841 (\$70,916 to Schiffman)
- ☑ USDA: Agricultural Research Service. Acquisition of goods and services. PI: Schiffman. 2019-2020. \$35,039
- ☑ ARL (W911NF-15-2-0024 P00003) Intelligent processing of materials by design. PI: Schmidt, co-PIs: Schiffman + 8 Others. 2018-2020. \$1,000,000 (\$75,002 to Schiffman)
- ☑ ARL (504109-75055) Capability development document for army standard family of rigid wall shelters. PI: Watkins, co-PIs: Schiffman, Carter, Arbabi. 2017-2019. \$785,996
- ☑ ARL (W911NF-15-2-0024) Cold spray: Basic physics and applications. PI: Schmidt, coPIs: Schiffman + 7 Others. 2017-2019. \$900,000
- ☑ ARL (W911NF-15-0026) Multifunctional cold spray coatings. PI: Schiffman + 9 coPIs. 2016-218. \$750,000
- ☑ ARL (W911NF-15-0024) Additive manufacturing using cold spray technology. PI: Schmidt coPIs: Schiffman, Lee, Rothstein, Watkins. 2015-2016. \$249,999
- ☑ USGS State Water Resources, Enhancing the flux of ultrafiltration membranes using nanofibers. PI: Schiffman. 2015-2016. \$5,000
- ☑ ARL (W911NF-10-2-0098) Cold spray of nanoparticle biocidal coatings and modeling of graphene polymer coatings. PI: Schmidt, coPIs: Schiffman, Maroudas, Ramasubramaniam, Rothstein. 2015-2016. \$200,000
- ☑ ARL (W911NF-10-2-0098) Materials properties of nanoparticle coatings, biocidal coatings, and polymer coatings. PI: Ramasubramaniam coPIs: Schiffman, Maroudas, Watkins. 2014-2015. \$300,000
- ☑ USGS State Water Resources, Biopolymer sorbents for tungsten removal. PI: Schiffman. 2012-2013. \$5,000

Total Support from Companies

- ☑ BASF Corporation (Project #48) Non-fouling surfaces via anti-adhesion under ambient conditions in air. PI: Schiffman, coPI: Emrick. 2023-2024. \$415,000 (\$255,000 to Schiffman)
- ☑ BASF Corporation (Project #35) Exploring coacervates to regulate uptake and release of active ingredients. PI: Schiffman, PI: Perry. 2019-2022. \$150,000
- ☑ Sirrus Inc., Methylidene malonate copolymers and tunable dispersants based thereon. PI: Schiffman, coPI: Klier. 2021-2022. \$45,000
- ☑ Sirrus Inc., Improving mechanical properties of recycled polyesters. PI: Klier, coPI: Schiffman. 2019-2021. \$43,800
- ☑ BASF Corporation (Project #25) Novel approach to regulate uptake and enhance rain-fastness of activate ingredients on leafs. PI: Schiffman, PI: Perry. 2018-2020. \$150,000
- ☑ BASF Corporation (Project #30) Parametric investigation on the effect of polymer properties and salt on coacervation and materials. PI: Schiffman, PI: Perry. 2019-2020. \$150,000
- ☑ BASF Corporation (Project #26) Biofilm prevention with amphiphilic polymers. PI: Schiffman, PI: Emrick. 2019-2019. \$250,000
- ☑ Sirrus Inc., Exploratory research agreement. PI: Klier, coPI: Schiffman. 2017-2019. \$70,800
- ☑ Banzan International Group, Inc., Reactive modification of polymers for adhesives. PI: Schiffman, coPI: Klier. 2017-2018. \$283,355
- ☑ BASF Corporation (Project #16) Polymers for preventing bacterial growth under wet conditions. PI: Schiffman, PI: Emrick. 2016-2017. \$150,000
- ☑ Hamilton Company, Electrospinning of biopolymer nanofibers. PI: Schiffman. 2012. \$1,000

Private Foundation, Private Donors, UMass Amherst & IALS Funds

- ON Lapidus Faculty Fund. PI: Schiffman. 2022-2027. \$81,460

- ON Flex Grant. Research experience in fermentation. 2025. \$500
- ☑ IALS Core Facilities Incentive Funds (Project 23-5) Acquisition of a surface zeta potential cell. PI: Schiffman. 2023-2024. \$8,000.
 - ☑ Flex Grant. Independent Study for URM students. 2023. \$500
 - ☑ Flex Grant. Nanomaterials research for sophomores. 2023. \$500
 - ☑ Flex Grant. Research experiences for URM students. 2022. \$500
 - ☑ Dean's DEI Curriculum Challenge. Donation to NSBE. 2022. \$100
 - ☑ Flex Grant. DE&I in undergraduate education. 2020. \$500
 - ☑ ORD Investigator Initiated Workshop. NSF STC proposal planning meeting. PI: Crosby, coPIs: Schiffman, Hayward. 2018. \$3,000
 - ☑ Faculty Research Grant. Electrospinning of complex coacervates. PI: Schiffman, coPI: Perry. 2017-2018. \$11,875
 - ☑ Prof. James M Douglas Career Development Faculty Award. PI: Schiffman. 2014-2024. \$125,000
 - ☑ Armstrong Fund for Science, Nanomechanics, biofilms, and cystic fibrosis. PI: Schiffman, coPIs: Peyton, Nonnenmann. 2014-2016. \$30,000
 - ☑ ACI Foundation, Mitigation of steel reinforcement corrosion via bioactive agents. PI: Sakulich (WPI) coPI: Schiffman. 2013-2014. \$10,000
 - ☑ Andrew W. Mellon Foundation. Attending the annual AIChE meeting. PI: Schiffman. 2013-2014. \$1,200

COMMONWEALTH HONORS COLLEGE RESEARCH GRANTS

TOTAL: \$12, 430

Awards made to undergrad researchers to purchase materials for research projects in the Schiffman lab.

Name	Year	Total	Name	Year	Total
Elana Peisner	Fall 2022	\$1000	Natalie Mako	Fall 2016	\$900
Tom Goodwin	Fall 2022	\$1000	Rasmia Shamsi	Fall 2016	\$900
Avi Waldman	Fall 2020	\$1000	Emma Klinkhamer	Fall 2015	\$500
Jared Bowden	Fall 2019	\$1000	Ruoting Wang	Fall 2015	\$470
Bryan Chua	Spr 2018	\$950	Nathaniel Eagan	Spr 2014	\$1,000
Robbin Levinson	Fall 2017	\$810	Nathaniel Eagan	Fall 2013	\$1000
Griffin Hurley	Fall 2017	\$900	Elena Pandres	Fall 2013	\$1,000

MENTORING OF SCHIFFMAN LAB MEMBERS

SELECT AWARDS RECEIVED BY GRADUATE STUDENTS WHILE IN THE SCHIFFMAN LAB.

- **Hyerim Ban**
 - UMass Biotechnology Training Program (BTP) Fellowship (2021-2023)
- **Brandon Barajas**
 - 3rd Place, UMass Chemical Engineering Outstanding Graduate Student Seminar Award (2023)
 - David C. Tillwick Outstanding Teaching Assistant Award (2022)
 - NIH Chemistry-Biology Interface (CBI) Fellowship (2020-2022)
 - Spaulding-Smith STEM Fellowship (2019, 2025)
- **Nathan P. Birch**
 - J.W. Eldridge Graduate Fellowship UMass Amherst (2014)
 - ACS Ciba Travel Award in Green Chemistry (2012, 4 awarded nationally)
- **Meng-Chen "Billy" Chiang**
 - Tillwick and Eldridge Outstanding Teaching Assistant Award (2023)
- **Aydın Cihanoglu**
 - Postdoctoral Study, The Scientific & Technological Research Council of Turkey (TÜBİTAK) (2021)
 - Research Grant, The Scientific & Technological Research Council of Turkey (TÜBİTAK) (2019-2020)
- **Brennan Coleman**
 - Dean's Fellowship (2024-2025)
- **Emily Diep**
 - Best Dissertation Award (2024)
 - Merck Internship, Chemical Engineering R&D (CERD) Department (2023)
 - Invited Participant, 2023 BASF North American Research Forum (competitive)

- Graduate Fellows Travel Grant (2022)
- 3M RISE (Raising Influence in Science & Engineering) (2022, very competitive)
- PPG Fellowship (2022)
- David C. Tillwick Outstanding Teaching Assistant Award (2020)
- NSF-NRT Soft Materials for Life Sciences Fellowship (2020-2021)
- Spaulding-Smith STEM Fellowship (2018, 2023)
- **Kerianne M. Dobosz**
 - UMass Chemical Engineering Outstanding Graduate Student Seminar Award (2018)
 - GE Global Research Fellowship (2017)
 - UMass Chemical Engineering Outstanding Graduate Student Research Award (2017)
 - UMass Biotechnology Training Program (BTP) Fellowship (2015-2017)
- **Luying “Louise” He**
 - MSE Doctoral Fellowship (2025)
- **Mengfei Huang**
 - 3M RISE (Raising Influence in Science & Engineering) (2021, 10% of >430 applications selected)
 - UMass Chemical Engineering Maden Travel Award (2021)
 - 3M Internship (2021, Postponed from 2020 due to COVID)
 - TRFA Excellence in Thermoset Polymer Research Award, Honorable Mention (2020)
 - Pflaumer Honors for Innovation for Most Outstanding Paper, Eastern Coatings Conference (2019)
 - PPG Fellowship (2017-2018)
 - UMass Chemistry-Biology Interface (CBI) Fellowship (2017-2019)
 - Jean Brady & Nilesch Shah Award (UMass, 2016)
- **Shaohsiang “Joe” Hung**
 - Tillwick and Eldridge Outstanding Teaching Assistant Award (2023)
 - UMass Chemical Engineering Maden Travel Award (2023)
 - American Membrane Technology Association (AMTA)/Reclamation Fellowships for Membrane Technology (2022-2023)
- **Kristopher W. Kolewe**
 - UMass Chemical Engineering Maden Travel Award (2017)
 - NIH Chemistry-Biology Interface (CBI) Fellowship (2016-2017)
 - UMass Chemistry-Biology Interface (CBI) Fellowship (2015-2016)
 - UMass Chemical Engineering Outstanding Graduate Student Research Award (2015)
 - Founding President of the UMass Materials Research Society (MRS) Chapter (2014)
 - Innovation Challenge Winner UMass Amherst (2015)
- **Deepa Konuganti**
 - Apple Research Fellowship (2022)
- **Irene S. Kurtz**
 - AAAS CASE (Catalyzing Advocacy in Science and Engineering) Travel Award (Cancelled COVID)
 - Invited Participant, BASF International Summer Course in Ludwigshafen, Germany (2019)
 - David C. Tillwick Outstanding Teaching Assistant Award (2018)
 - Invited participant to NSF-sponsored Biofilms Workshop (2018)
 - UMass Chemical Engineering Maden Travel Award (2018)
 - Eli Lilly/ACS Women Chemist Committee Travel Award (2018, 10 awarded nationally)
 - NSF-NRT Soft Materials for Life Sciences Fellowship (2017-2018, Awarded Certificate 2019)
- **Xiangxi “Zoey” Meng**
 - Best Dissertation Award (2022)
 - NSF-NRT Soft Materials for Life Sciences Certificate (2019)
 - UMass Chemical Engineering Maden Travel Award (2019)
 - Soft Materials for Life Sciences NSF-NRT Travel Grant (2017)
- **Prerana Rathore**
 - James M. Douglas Teaching Fellowship (2023)
 - To teach “Introduction to nanomaterials: a bridge between microbiology and nanotechnology”
 - Women in Chemical Engineering (WIC) Travel Award (2022)
 - UMass Chemical Engineering Outstanding Graduate Student Seminar Award (2022)
 - Finalist in the Graduate School’s Three Minute Thesis (3MT) competition (2022)

- Jean Brady & Nilesh Shah Award (2019)
- Dean Fellowship (2018)
- **Katrina A. Rieger**
 - Future Faculty Workshop at UDelaware (Received full travel support, Declined 2016)
 - Steuben-Schurz-Gesellschaft Berliner Luftbrückenstipendium (German-American Friendship Society, Very Competitive, given to 1 Fulbrighter studying in Germany per year, 2015-2016)
 - Fulbright Fellowship U.S. Student Award to Germany (Competitive, 2015-2016)
 - Germanistic Society of America Fellow (2016 Competitive, Given to 1-2 of the Fulbright Fellows)
 - DAAD Fellowship Recipient (2015, Declined to Accept Fulbright Fellowship)
 - Chemistry-Biology Interface (CBI) Travel Award (2015)
 - AAAS CASE (Catalyzing Advocacy in Science and Engineering) Travel Award, Wash, DC (2015)
 - David C. Tillwick Memorial Fellowship UMass Amherst (2015)
 - UMass Innovation Challenge Finalist, Overall 2nd Place (2014)
 - J.W. Eldridge Graduate Fellowship, UMass (2014)
 - UMass Innovation Challenge Executive Summary and Elevator Pitch, 2nd Place (2014)
 - NSF-IGERT Fellowship from the Institute for Cellular Engineering (2013-2014)
 - NSF-GRFG Honorable Mention (2013)
 - Eli Lilly/ACS Women Chemist Committee Travel Award (2012, Competitive 9 awarded nationally)
- **Rushabh Shah**
 - Vertex Pharmaceutical Internship (2023)
 - UMass Graduate School Travel Award (2022)
 - UMass Chemical Engineering Maden Travel Award (2021-2022)
 - American Membrane Technology Association (AMTA)/Reclamation Fellowships for Membrane Technology (2021-2022)
- **Jichao Song**
 - PPG Fellowship (2023)
- **Nicholas “Nic” Thomas**
 - Spaulding-Smith STEM Fellowship (2025, 2029)

SELECT AWARDS RECEIVED BY UNDERGRAD RESEARCHERS WHILE IN THE SCHIFFMAN LAB

- **Team MicrobeBlaster: Sarah Kaunfer, Phoebe Lasic-Ellis, Hayley Mclsaac, & Simran Jeet (Awarded \$3,500):** 2nd place Minute Pitch and 1st place Viewer’s Choice in the Innovation Challenge (2020), Draper Competition Pitch Honorable Mention (2021), Honorable Mention Innovation Challenge Final (2021)
- **Nathaniel Eagan:** Haensel UOP Award
- **Thomas Goodwin:** Freshman Recognition Award
- **Emma Klinkhamer:** Dream Job of “Biomaterials Lab Boss” published in *C&EN News 2014*, 92(30) 42-44.
- **Natalie Mako:** 2016 Rising Researcher, John and Abigail Adams Scholarship
- **Annuli Okoye:** ACS Scholar, SWE Scholar, DOE Mickey Leland Energy Fellow
- **Eric Rice:** William F. Field Alumni Scholar Award, Laplante Emergency Scholarship
- **Lina Wu:** Jack Welsh Scholarship
- **Maya Bowden, Bryan Chua, Sara Koprek, Julie Le, Natalie Mako, Hayley Norton, Nat Eagan, Annuli Okoye, Elena Pandres, Avi Waldman:** CHC Research Assistant Fellowships (to pay student salary)

TOTAL POSTDOCTORAL RESEARCHERS (5)

Former Postdoctoral Researchers and Visiting Faculty

Name	Years	Current affiliation
1. Dr. Priyanka Kaushik	2020-2022	
2. Dr. Vanda Liadinskaia	2018-2020	Senior Researcher at Pentair (Netherlands)
3. Dr. Yuan Liu	2017-2019	Polymer Scientist at Reckitt Benckiser (China)
4. Dr. Guozhen Yang	2016-2018	R&D Scientist at ITW
5. Prof. S. Srinu Naik	2013	Professor, Univ College of Technology, Osmania

TOTAL GRADUATE STUDENT ADVISEES (28)**Current PhD & MS Advisees**

Name	Years	Discipline
1. Hyerim Ban	2020-Exp. Fall 2025 Co-advised w/Lauren Andrews	Molecular & Cellular Biology
2. Brandon Barajas	2019-Exp. May 2025	Chemical Engineering
3. Meng-Chen Chiang	2021-present	Chemical Engineering
4. Brennan Coleman	2024-present	Materials Science & Engineering
5. Luying "Louise" He	2024-present	Materials Science & Engineering
6. Shaohsiang "Joe" Hung	2021-Exp. Fall 2025	Chemical Engineering
7. Jichao Song	2021-Exp. Summer 2025	Chemical Engineering
8. Nicholas "Nic" Thomas	2024-present	Chemical Engineering

Former PhD Advisees and Visiting PhD Advisees

Name	Year	Dissertation title Current affiliation
9. Rushabh Shah	PhD 2024	Bioinspired liquid-infused membranes to reduce biofouling <i>Apple Inc.</i>
10. Prerana Rathore	PhD 2024	Soft, conductive, and bioinspired nanomaterials <i>Intel</i>
11. Emily Diep	PhD 2024	Electrospinning living bacteria into alginate-based nanofibers for biomedical applications
12. Kelsi M.S. Rehmann	PhD 2022	Transport and anionic polymerization of methylenedimethyl malonates on polymer substrates <i>NRC Postdoctoral Researcher, NIST</i>
13. Mengfei Huang	PhD 2022	Development of crosslinking technologies for waterborne & powder coatings <i>Polymer Chemist, Infineum</i>
14. Irene S. Kurtz	ABD 2021	<i>Science Teacher, Bethlehem Catholic High School</i>
15. Xiangxi "Zoey" Meng	PhD 2021	Electrospinning fibers via complex coacervation <i>Senior Research Specialist at Dow</i>
16. Aydın Cihanoğlu	PhD 2021	Visiting Researcher, İzmir Institute of Technology, Turkey <i>Assistant Professor, Ege University</i>
17. Amy Contreras (Smith)	PhD 2019	Visiting Researcher, University of Leeds <i>Research Commercialization, University of Leeds</i>
18. Kerianne M. Dobosz	PhD 2019	Tuning electrospun nanofibers and chemistry to enhance the flux and fouling resistance of ultrafiltration membranes <i>Science and Technology Research Chemist Lead, PPG</i>
19. Kristopher W. Kolewe	PhD 2018	Structure-property relationships of polymer films and hydrogels to control bacterial adhesion <i>Product Development Engineer at Fisher & Paykel Healthcare</i>
20. Nathan P. Birch	PhD 2017	Synthesis of biopolymer materials tailored for biological applications <i>Senior R&D Engineer, Abbott</i>
21. Katrina A. Fitzpatrick (Rieger)	PhD 2016	Electrospinning biopolymer nanofiber mats for bacterial removal and inactivation <i>Co-Founder, Optical Waters</i>

Former MS Advisees, Including Visiting MS Advisees

Name	Year	Dissertation title (if submitted formal thesis) <i>Current Affiliation</i>
22. Deepa Konuganti Co-advised with Peter Beltramo	MS 2024	<i>Process Engineer, Tesla</i>
23. Xi "Lindsay" Ning	MS 2024	
24. Shao-Hsiang "Joe" Hung	MS 2021	Surface functionalized electrospun cellulose nanofilters for high-efficiency particulate matter removal <i>PhD Student, UMass Amherst</i>
25. Jichao Song Co-advised with John Klier	MS 2021	Incorporating epoxy and amine into poly(methyl methacrylate) for a crosslinkable waterborne coating <i>PhD Student, UMass Amherst</i>
26. Thilo Heckmann	MS 2019	Nanotopographies to control bacterial adhesion and inactivation <i>PhD Student, Karlsruhe Institute of Technology, Germany</i>
27. Juangfeng Sun Co-advised with Sarah Perry	MS 2019	Electrospinning nanofibers from chitosan and hyaluronic acid coacervates <i>Complete Genomics Inc</i>
28. Thomas C. DiGiovanni	MS 2016	

TOTAL UNDERGRADUATE STUDENTS ADVISED IN RESEARCH (60)

All students are majoring in Chemical Engineering unless otherwise noted. ^ϕIndicates that the student was a member of the Commonwealth Honors College and typically, also completed a research-based thesis

Current Undergraduate Researcher Advisees

Name	Years
1. Ethan Ho ^ϕ	2023-Exp. 2027
2. Hao Thanh Uyen (Julie) Le ^ϕ	2023-Exp. 2026
3. Chi Luu	2022-Exp. 2025
4. Hayley Norton ^ϕ	2023-Exp. 2026 Biomedical Engineering & Chemistry
5. Autumn Voyer ^ϕ	2024-Exp. 2027

Former Undergraduate Researcher Advisees

Name	Years	Current Affiliation
6. Dylan Lechner	2022-2024	Graduate student at UMass Amherst
7. Thomas "Tommy" Goodwin ^ϕ	2020-2023	Graduate student at MIT
8. Oshiokhai "Oshio" Oyageshio	2021-2023	Engineer at Charter Next Generation
9. Elana Peisner ^ϕ	2021-2023	Photolithography Process Engineer at HRL Laboratories, LLC
10. Uzo Uwazuruonye-Anyanwu	2022-2023	Engineer at Pfizer
11. Sara Koprek ^ϕ	2020-2021	Process Engineer at Dennis Group
12. Sarah Kaunfer ^ϕ	2020-2021	Clinical Research Coordinator at Brigham and Women's Hospital
13. Hayley Mclsaac ^ϕ	2020-2021	Market Development Representative at Definitive Healthcare
14. Simran Jeet ^ϕ	2020-2021	Sales Development Representative at Definitive Healthcare
15. Phoebe Lasic-Ellis ^ϕ	2020-2021	Emergency Medical Technician
16. Abraham "Avi" Waldman ^ϕ	2018-2021	Graduate student at University of Pennsylvania

17. Ali Ahmad Jallow	2019-2020	Process Engineer at 42° North Solutions, LLC
18. Maya E. Bowden ^ϕ	2018-2020	Research Assistant at Brigham and Women's Hospital
19. Gregory Donovan	2018-2020	Graduate student at University of Colorado Boulder
20. Jana Latayan	2018-2020	Graduate student at University of Cincinnati/Cincinnati Children's Immunology Program
21. Madison Stetz	2017-2019	Radiological Engineer at Commonwealth Fusion Systems
22. Lina Wu ^ϕ	2017-2018	Senior Associate at Eli Lilly and Company
23. Robin M. Levinson ^ϕ	2016-2018	Process Engineer II at uniQure
24. Griffin Hurley ^ϕ	2015-2018	Software Engineer at Roblox
25. Christopher Kuo-LeBlanc ^ϕ	2015-2018	Process Control Engineer at Shell
26. Bryan Chua ^ϕ	2016-2018	Senior Automation Engineer at Biogen
27. Tushar Bahl ^ϕ	2016-2018	Authorizations and Benefits Specialist at Variantyx Chemistry
28. Ibrahim Abusharkh	2018	VP of Customer Success at NewsCatcher
29. Caleb Boucher	2017-2018	
30. Rasmia Shamsi ^ϕ	2016-2017	Sr. Commodity Manager at Moses Lake Industries
31. Natalie Mako ^ϕ	2014-2017	Test Engineer II at Form Energy, Inc.
32. Jacob Schladenhauffen	2017-2018	Graduate student at Rice University
33. Emma J. Kowalewski (Klinkhamer) ^ϕ	2013-2016	Senior Research Scientist at PSI
34. Eric Rice ^ϕ	2014-2016	Systems Engineer at NECI
35. Ruoting "Robert" Wang ^ϕ	2015-2016	Senior Software Engineer at CarGurus
36. Richard Jr. "RJ" Hall	2015	Senior Research Associate at Surface Oncology Inc Biochemistry
37. Hiu Fai "Marco" Yeung	2014-2015	Advisory Engineer at IBM
38. Tyler Martin	2014-2015	Engineering Consultant, Self Employed
39. Bryanna Dague ^ϕ	2014	Project Manager at AGC Biologics
40. Dr. Nathaniel "Nat" M. Eagan ^ϕ	2012-2014	Assistant Professor at Tufts University
41. Annuli Daramola (Okoye) ^ϕ	2012-2014	Co-founder, KAMIA Concepts
42. Dr. Elena P. Pandres ^ϕ	2012-2014	Scientist at Solid Power, Inc.
43. Shelby D'Abbraccio	2013	Process and Packaging Engineer at Indivior
44. Gregory T. Keohane	2012	Sr. Procurement Manager at Edelman Financial Engines
45. Stephanie Arboleda Butler	2012	Hazardous Materials Engineer at Pratt & Whitney
46. Dr. David P. Gamliel ^ϕ	2011-2012	Group Leader at Physical Sciences Inc.

Former Visiting Undergraduate Researchers

Name	Year	Program and Home Institution	Current Affiliation
47. Julia Lopez	2024	MURALS REU from UFlorida	Undergrad
48. Roxana Chavez	2023	MURALS REU from California State University, Dominguez Hills	Sequencing Technician at Laragen Inc.
49. Chantae Blackwood	2023	ASCENDS REU from Jackson State	Undergrad
50. Nha "Norah" Nguyen	2022	REU from Mount Holyoke College	Undergrad
51. Madelyn Bennett	2022	ASCENDS REU from UKansas	GRFP at UC Boulder
52. Anthony Dee	2022	MURALS REU from Cornell	Undergrad
53. Evan Hu	2021	REU from Tufts University	Systems Engineer at Decarbon
54. Claire King	2020	Virtual REU from Georgia Tech	
55. Sara Koprek	2020	Virtual REU from UMass Amherst	Process Engineer at Dennis Group

56. Michael Porter	2015	ICE REU from Johns Hopkins	Graduate student at Caltech
57. Maureen Hoen Rauhut	2014	ICE REU from Clarkson University	Graduate student at UC Anschutz Medical
58. Jeffrey Marshall	2013	ICE REU from RIT, National Technical Institute for the Deaf	
59. Gita Ramakrishnan	2013	National Student Exchange from Mississippi State University	
60. Robert Darling	2012	ICE REU from Rice University	Medical Student at UTexas

TOTAL MEMBERSHIP ON GRADUATE DEGREE COMMITTEES (61)

Membership, Graduate Degree Committees at UMass

Name	Department	Advisor(s)	Year
1. John Bauer	Chemical Engineering	Lauren Andrews	In Progress
2. Timothy Onuh	Chemical Engineering	Caitlyn Butler	In Progress
3. Md Anisur Rahman	Chemical Engineering	Peter Beltramo	In Progress
4. Biprodev Sarker	Chemical Engineering	Lauren Andrews	In Progress
5. Yingjie Hang	Chemical Engineering	Nianqiang Wu	In Progress
6. Aniket Majee	Chemistry	Thai Thayumanavan	In Progress
7. Arpan Ghosh	Chemistry	Thai Thayumanavan	In Progress
8. Ranit Dutta	Chemistry	Thai Thayumanavan	In Progress
9. Sima Khajouei	Chemistry	Mingxu You	In Progress
10. Tien (Daisy) Pham	Chemistry	Jiahui (Chris) Wu	In Progress
11. Lohita Rajesh	Environmental Engineering	Sean McBeath	In Progress
12. Muhammad Salman Mohsin	Environmental Engineering	Mariana Lanzarini-Lopes	In Progress
13. Carlos Woern	Food Science	Lutz Grossmann	In Progress
14. Eric Chia	Mechanical Engineering	Stephen Nonnenmann	In Progress
15. Yuhui (Helen) Du	Polymer Science & Engineering	Bryan Coughlin	In Progress
16. Cornelia Meissner	Polymer Science & Engineering	Al Crosby, Todd Emrick	PhD 2025
17. Isaac A. Ramirez-Marrero	Chemical Engineering	Sarah Perry	PhD 2025
18. Aritra Nath Chattopadhyay	Chemistry	Vince Rotello	PhD 2024
19. Chuyen Nguyen	Environmental Engineering	John Tobiason	PhD 2024
20. Darshan Ahire	Chemical Engineering	Peng Bai	MS 2024
21. Kashyap Sundara Rajan	Mechanical Engineering	Jonathan Rothstein	PhD 2024
22. Hyemin Kim	Polymer Science & Engineering	Al Crosby, James Watkins	PhD 2024
23. Stephen Rondthaler	Chemical Engineering	Lauren Andrews	PhD 2024
24. Ara Kim	Mechanical Engineering	Jae-Hwang Lee	PhD 2024
25. James Moore	Chemical Engineering	Lauren Andrews	MS 2024
26. Min Zeng	Chemical Engineering	Lauren Andrews	PhD 2023
27. Swetaparna Mohanty	Mechanical Engineering	Jae-Hwang Lee	PhD 2023
28. Brittany Nelson	Mechanical Engineering	Stephen Nonnenmann	MS ABD
29. Ria Ghosh	Polymer Science & Engineering	Bryan Coughlin	PhD 2023
30. Sam Trevenen	Chemical Engineering	Peter Beltramo, John Klier	PhD 2023
31. Hongbo Fu	Polymer Science & Engineering	Al Crosby	PhD 2022
32. Cindy Bukowski	Polymer Science & Engineering	Al Crosby	PhD 2022
33. Rigumula Wu	Chemistry	Mingxu You	PhD 2022
34. Aishwarya Menon	Chemical Engineering	Ashish Kulkarni	MS 2021
35. Robert L. Sourk II	Chemical Engineering	Michael Henson	MS 2021

36. Guinevere Tillinghast	Chemical Engineering	Peter Beltramo, John Klier	MS 2021
37. Sydney Foster	Chemical Engineering	Omar Abdelrahman	MS 2021
38. Nicholas Bryant	Chemical Engineering	Sarah Perry, John Klier	MS 2021
39. Fani Derveni	Civil Engineering	Simos Gerasimidis, Kara Peterman	PhD 2021
40. Mimi Alkattan	Environmental Engineering	Emily Kumpel	MS 2021
41. Yunbing Tan	Food Science	Julian McClements	PhD 2021
42. Yifeng Du	Polymer Science & Engineering	Bryan Coughlin	PhD 2021
43. Ashlin Sathyan	Polymer Science & Engineering	Todd Emrick	PhD 2021
44. Allen Chang	Polymer Science & Engineering	Ken Carter	PhD 2021
45. Abhinav Sharma	Chemical Engineering	Jungwoo Lee, Neil Forbes	PhD 2020
46. Yalin Liu	Chemical Engineering	Sarah Perry	PhD 2020
47. Zimu Zhou	Mechanical Engineering	Stephen Nonnenmann	PhD 2020
48. Poonam Phalak	Chemical Engineering	Michael Henson	PhD 2019
49. Lei Zheng	Chemical Engineering	John Klier	MS 2019
50. Zahra Khalkhali	Mechanical Engineering	Jonathan Rotstein	PhD 2019
51. Megan Hann	Environmental Engineering	Caitlyn Butler	MS 2018
52. Molly Shave	Polymer Science & Engineering	Maria Santore	PhD 2018
53. Feyza Dundar	Polymer Science & Engineering	James Watkins	PhD 2018
54. Brian Momani	Chemical Engineering	Henning Winter	ABD 2017
55. Ying Qi	Chemical Engineering	Lakis Mountziaris	PhD 2015
56. Joseph Goodwill	Environmental Engineering	John Tobiason	PhD 2015
57. Katherine Carrasquillo	Polymer Science & Engineering	Shaw Ling Hsu	MS 2015
58. Omkar Vyavahare	Polymer Science & Engineering	Shaw Ling Hsu	PhD 2014

Membership, Graduate Degree Committees outside of UMass (3)

Name	Affiliation	Advisor	Year
59. Anonymous Evaluation	Ben-Gurion University of the Negev		PhD 2023
60. Justin Hardcastle	UMaine, Biomedical Science	Caitlin Howell	MS 2022
61. Xuechen Yin	Stony Brook University, Chemistry	Surita Bhatia	PhD 2020

Membership, UMass Honors Thesis Committees (10)

Name	Department	Advisor	Year
1. Marcos Lora	Chemical Engineering	Lauren Andrews	BS 2024
2. Brian Voke	Chemical Engineering	Lauren Andrews	BS 2023
3. Kyle Schoenberg	Chemical Engineering	Jim Watkins	BS 2022
4. Simran Singh	Chemical Engineering	Ashish Kulkarni	BS 2022
5. Simran Jeet	Biology	Al Crosby	BS 2022
6. Abraham Waldman	Chemical Engineering	Todd Emrick	BS 2021
7. Taylor Lewis	Chemical Engineering	Michael Henson	BS 2019
8. Ishita Shah	Chemical Engineering	Lauren Andrews	BS 2019
9. Tyler Carpenter	Chemical Engineering	Sarah Perry	BS 2018
10. Tristan Tay	Chemical Engineering	Vince Rotello	BS 2017

EDUCATIONAL ACTIVITIES: *On Sabbatical from Teaching/Service Fall 2022 & Spring 2023*

- **ENGIN 100: Introduction to Engineering**, Fall 2023-2024

Revised course for first year undergraduate students trying to decide which engineering major to choose

- **CHEM-ENG 320: Kinetics and Reactor Design**, Falls 2012-2021

Junior-level undergraduate core Chemical Engineering course

- **CHEM-ENG 589: Nanostructured Biomaterials** (formerly CHEM-ENG 597D), Spr 2012-2022, 2024-2025
A new course designed for upper-level undergraduate and graduate students
- **CHEM-ENG 291H: Honors Colloquium** (formerly CHEM-ENG H226), Spr 2012-2017
A new course designed for Sophomore Honors Chemical Engineering students
- **CHEM-ENG 491H: Honors Colloquium** (formerly CHEM-ENG H401), Fall 2012-2016
A new course designed for Senior Honors Chemical Engineering students
- **CHEM-ENG H402: Honors Colloquium**, Spr 2013
A new course designed for Senior Honors Chemical Engineering students

GUEST LECTURES

- CHEM 797J ST: Ethical Conduct of Research (Winter 2021, 2022, 2024, 2025)
- CHEM-ENG 290B, Experimental Design and Methods
- NIH BTP Program: Biotech tAle, Biomaterials: Slippery or Sticky?
- PSE-797NR, Foundations of Soft Materials for Life Sciences II
- CHEM-ENG 590E, Microfluidics and Microscale Analysis in Materials and Biology
- MICROBIO 391H, The Secret Lifestyle of Microorganisms, Honors Colloquium for Microbiology
- CHEM-ENG 578, Nanomaterials Chemistry and Engineering
- CHEM-ENG/MIE 590L, Materials Science and Engineering Project
- MIE 201, Introduction to Materials Science and Engineering
- FFYS 197CEE1, The Janus Face of Nanotechnology: Promises, Products and Problems
- CHEM-ENG 110, Introduction to Chemical Engineering

Teaching Conferences/Training

- Completed Advancing DEIR: Practical Strategies for ACS Editors (2022)
- Completed ACS Leading Inclusively: Beyond Lip Service (2022)
- Completed Multi-part AAAS Course: Building Gender Equity in the Academy: Institutional Strategies for Change (2021)
- Participant in the American Society for Engineering Education (ASEE) Conference, Orono, ME (2012)
- Attendee, NSF-Women's International Research Engineering Summit (WIRES), Orlando, FL (2011)
 - **Schiffman Awarded NSF Travel Grant**
- Received Certification, "Fundamentals of Teaching Engineering" from Yale University (2010)

SERVICE ACTIVITIES

Service to the Chemical Engineering Department/College of Engineering at UMass Amherst

- Member, College Personnel Committee (CPC) for the College of Engineering (2024-2025)
- Member, CNS/COE Materials Science and Engineering (MSE) Research Strategy Committee (2016-2020, 2024-2025)
- Ad hoc Member, Departmental Personal Committee (DPC) for Biomedical Engineering (2024)
- Chair, Workload Equity Committee for Chemical Engineering (2023-2024)
- Member, Department of Materials Science and Engineering (MSE) Steering Committee (2023-present)
- Director, COE-Wide Undergraduate Materials Engineering Certificate (2023-present)
- Department Head of Chemical Engineering (Acting 9/2021-10/2021; Interim 10/2021-5/2022)
- Associate Department Head of Chemical Engineering (Interim 5/2020-1/2021; 1/2021-9/2021)
- Graduate Admissions Committee (Co-chair: 2020-2021 & Member 2012-2020, 2023-2024)
- Member, Strategic Planning Committee for the College of Engineering (2019-2020)
- Departmental Personal Committee (DPC) for Chemical Engineering (Chair: 2020-2021, Member: 2015-2016 (Observer) & 2018-2020)
- Faculty Search Committee Member:
 1. Chemical Engineering "Energy-related fields"(2023-2024)
 2. Chemical Engineering "All fields considered - Junior Candidate" (2021-2022)
 3. Biomedical Engineering (2019-2020)
 4. Chemical Engineering "Armstrong-Siadat Endowed Professor in Materials Science" (2017-2019)
 5. Chemical Engineering "All fields considered - Junior Candidate" (2017-2018)
 6. Chemical Engineering/IALS "Materials/Thin films/Rheology/Wearable devices" (2016-2017)

7. Chemical Engineering/IALS “Biomaterials/Polymers/Bioengineering” (2016-2017)
 8. Electrical Engineering/IALS “Bioelectronic Devices and Systems” (2015-2016)
 9. Chemical Engineering “Polymers/Biotechnology” (2015-2016)
 10. Chemical Engineering “Materials Science” (2013-2014)
 11. Mechanical and Industrial Engineering “Materials Engineering” (2012-2013)
- Program Director, Chemical Engineering Departmental Honors Program (2011-2017)
 - Chair, Senior Thesis Defense Presentations at the Massachusetts Statewide Annual Undergraduate Research Conference (2013-2019)
 - Design new workshop “Going to Graduate School?” (2011, 2012, 2024)
 - Member, Undergraduate Program Committee (2014-2017)
 - Member, Ph.D. Qualifying Exam Committee (2012-2019)
 - New Student Orientation – Undergraduate Advising (Summers 2012-present)
 - Undergraduate Academic Advising (2011-present)

Service to UMass Amherst

- Member, University Research & Scholarly Misconduct Board (2023-2024)
- Member, UMass Electron Microscopy Advisory Committee (2021-present)
- Member, IALS M2M Steering Committee (2016-2023)
- Chair, IALS Theme Leader “Biomaterials for Devices and Regenerative Medicine (BDRM)” (2016-2023)
- Member, IALS Theme “Microbes in Human Health and Disease (MHHD)” (2016-2021)
- Member, Faculty Senate’s University Relations and Advancement Council (2015-2018)
- NSF NRT-Soft Materials for Life Sciences (SMLS) Graduate Student Training Grant Program
 - Executive Member of the Leadership Team (2015-2021)
 - Recruitment and Diversity Committee (Member: 2015-2021)
- Founded and Faculty Advisor, Materials Research Society (MRS) Student Chapter (2014)
- NIH Chemistry-Biology Interface (CBI) Graduate Student Training Grant Program
 - Chair, CBI Diversity Equity and Inclusion Committee (2021-present)
 - Executive Committee Member (2015-present)
 - CBI Academic Committee Member (2014-2021)
 - CBI Faculty participant (2012-present)
- Faculty Participant, NIH Biotechnology Training Program (BTP) (2015-present)
- University Goldwater and Udall Scholarship Committee (Nominate & advise applicants, 2014-2018)

Select Service that Supports Outreach and Inclusion (After joining UMass Amherst)

- Organize and run “Graduate School Workshop for Women and Non-Binary Chemical Engineering Undergraduate Students interested in Materials Science Research” (2024)
- Organize and run workshop on Information Literacy for REU programs (Summers 2023, 2024)
- Affinity Project, Zoom with fifth-graders at Winchester Thurston School in Pittsburgh, PA (2022)
- In charge of recruitment efforts at Annual Biomedical Research Conference for Minority Students (ABRCMS) for UMass CBI program (2020-202)
- Departmental representative on College of Engineering DEI Committee (2020-2023)
- Member, Chemical Engineering DEI Committee (Founding Chair: 2019-2020, Member 2020-2023)
- NSF ADVANCE Collaboration & Equity Faculty Fellow (2019-2021)
- Member, Engineering Allies for Equity (UMass, 2020-2022)
- Completed National Research Mentoring Network (NRMN) Mentor Training (2019)
- Official mentor for multiple junior faculty in chemical engineering (ongoing)
- Lecturer, Summer Engineering Institute for High School Students (UMass, 2014-2020, Cancelled 2021)
- Mentor, Graduate Women in STEM (GWIS) Luncheon (UMass, 2018)
- Invited Panelist, Round table discussion for junior faculty at the AIChE Annual Meeting, Women’s Initiatives Committee (WIC) (San Francisco, CA, 2016)
- Invited Keynote/Developed Workshop, NEAGEP Seminar, “The Cover Letter That Will Get You Noticed” (UMass, 2015)
- Invited Panelist, Graduate Women in STEM (GWIS) Luncheon (UMass, 2015)
- Invited Discussion Leader & Poster Judge, 8th NEA Science Days (UPuerto Rico Mayaguez, 2015)
- Invited Panelist, “Game of Life” for Society of Women Engineers (SWE) (UMass, 2014)

- Mentor for High School Female Students at Women in Engineering Career Day (UMass, 2013)
- Invited Panelist, Women in Engineering Discussion for Senior Graduate Students (at Drexel, 2011)

Professional Service

- Governing Council (Nominated/Elected): The Fiber Society (2024-2026)
- Editorial Advisory Board Member of *ACS Applied Materials & Interfaces* (2022-2024)
- Director (2019-2021): Executive Council of AIChE MESD Area 8
- Editorial Board Member (2019-present): *BMC Materials* (part of Springer Nature)
- Symposium Organizer (2018-2020): "Biomaterials and Biointerfaces" for the Division of Colloid and Surface Chemistry at the 2020 Spring National ACS Meeting, Philadelphia, PA, March 22-26, 2020, Moved Virtual
- Invited member, Project Advisory Committees (PAC) (2018-2019): Water Research Foundation
- Invited Journal Guest Editor (2015-2018): *Nanotechnology*, Special focus: "Life Cycle of Nanomaterials"
- Invited Participant (2013): NSF US-China Workshop on Solar Energy and Environment. (30 persons total)
- Advisory Board Member (2011-present): Materials Young Alumni Advisory Board for Drexel University

Programming at National and International Technical Conferences

- International Steering Committee, Applied Materials & Interfaces Conference, Singapore 2025
- Poster Judge, The Fiber Society 2023
- Chair, AIChE Annual Meeting 2021, MESD Poster Session & Competition (In Person & Virtual Session)
- Chair, Topical Plenary: Microbes at Biomedical Interfaces program at the 2021 AIChE Annual Meeting
- Chair, AIChE Annual Meeting 2020, MESD Poster Session & Competition
- Chair, Topical Plenary: Microbial Interactions with Biomaterials and Host Cells 2020 (All Invited Talks)
- Session Organizer, Topical Conference: Microbes at Biomedical Interfaces program at the 2020 AIChE Annual Meeting, Biophysical Properties of Microbes and Microbial Communities
- Chair, POLY-sponsored workshop, Layered Polymeric Systems 2020
- Chair, Topical Conference: Microbes at Biomedical Interfaces program at the 2019 AIChE Annual Meeting, Microbial Interaction with Biointerfaces
- Chair, AIChE Annual Meeting 2019, Excellence in Graduate Polymer Research (All Invited Talks)
- Chair, AIChE Annual Meeting 2018, Biomacromolecular Gels
- Chair, AIChE Annual Meeting 2017, Charged and Ion-Containing Polymers
- Chair, 254th American Chemical Society National Meeting 2017, Polyelectrolyte Coacervates, Precipitates & Multilayers
- Chair/Discussion Leader, International Conference of Young Researchers on Advanced Materials (IUMRS-ICYRAM) 2016, Global Materials Network, Bangalore, India
- Chair, AIChE Annual Meeting 2016, Polymer Thin Films and Interfaces
- Chair, AIChE Annual Meeting 2016, Thin Film Block Copolymer Self-Assembly and Morphology
- Co-Chair, 90th ACS Colloid & Surface Science Symposium 2016, Biological Interfaces
- Committee Member, The Fiber Society Graduate Student Paper Competition (2015-2017)
- Chair, AIChE Annual Meeting 2015, Emerging Areas in Polymer Science & Engineering Plenary
- Chair, AIChE Annual Meeting 2014, Polymer Properties and Rheology
- Chair, The Fiber Society 2014, (Bio)active Fibers
- Co-Chair, AIChE Annual Meeting 2013, Nanoscale Structure in Polymers
- Co-Chair, AIChE Annual Meeting 2012, Charged and Ion-Containing Polymers
- Poster Judge, AIChE Annual Meeting, Division 8A Polymers, 2012-2016
- Advisory Committee, International Conference on Chemical and Bioprocess Engineering 2013, National Institute of Technology, India
- Chair/Discussion Leader, International Conference of Young Researchers on Advanced Materials (IUMRS-ICYRAM) 2012, Global Materials Network

Grant Refereeing

- UMass Proposals: Armstrong Fund for Science (annually), IALS Research Grant (rolling basis), etc
- Reviewer, U.S.-Israel Binational Science Foundation (BSF) (2025)
- Reviewer, National Science Foundation, CBET– Interfacial Engineering (2024)
- Reviewer, National Science Foundation, CMMI – Future Manufacturing (FM) (2023)
- Reviewer, Israel Science Foundation (ISF) (2023)

- Reviewer, U.S.-Israel Binational Science Foundation (BSF) (2023)
- Reviewer, National Science Foundation, Division of Chemistry, Macromolecular, Supramolecular, and Nanochemistry (MSN) (2023)
- Reviewer, National Science Foundation, Advanced Manufacturing (AM) (2022)
- Reviewer, American Chemical Society, Petroleum Research Fund (2022)
- Reviewer, National Science Foundation, Advanced Manufacturing (AM) (2021)
- Reviewer, National Science Foundation, GRFP – Materials Engineering (2021)
- Reviewer, National Science Foundation, CBET– Interfacial Engineering (2020)
- Reviewer, National Science Foundation, Advanced Manufacturing (AM) (2019)
- Reviewer, French National Research Agency (ANR) (2019)
- Reviewer, American Chemical Society, Petroleum Research Fund (2018)
- Reviewer, National Science Foundation, CBET – Process Separations (2017)
- Reviewer, National Science Foundation, STTR/SBIR (2017)
- Reviewer, Israel Science Foundation (ISF) (2017)
- Reviewer, National Science Foundation, CBET –Separations (2017)
- Reviewer, American Chemical Society, Petroleum Research Fund (2016)
- Reviewer, National Science Foundation, CBET – Joint Chemical and Biological Separations and Environmental Engineering Panel (2016)
- Reviewer, U.S. Department of Agriculture, SBIR Biofuels and Biobased Products (2015)
- Reviewer, National Science Foundation, CBET – Chemical and Biological Separations (2014)
- Reviewer, National Science Foundation, DMR – Biomaterials (2014)
- Reviewer, American Chemical Society, New Directions (2013)
- Reviewer, New Zealand’s Science Investment Round (2013)
- Reviewer, National Science Centre, Poland OPUS Grant Reviewer (2013)
- Site Reviewer, National Science Foundation, International Materials Institute for Solar Energy and Environment at Northwestern University (2012)
- Reviewer, National Science Foundation, CMMI – Materials and Surface Engineering (2012)
- Reviewer, American Chemical Society, Petroleum Research Fund (2012)

Ad-Hoc Journal Reviewer: As of July 2023, I have reviewed ~130 articles for ACS Journals, as well as articles for other publishers (i.e., Elsevier, Wiley). More information can be provided upon request.

Professional Society Memberships

- American Institute of Chemical Engineers (AIChE)
- Materials Research Society (MRS)
- American Chemical Society (ACS)
- The Fiber Society (FS)
- American Physical Society (APS)