

LaShanda T.J. Korley, Ph.D.
Distinguished Professor
Department of Materials Science and Engineering
Department of Chemical and Biomolecular Engineering
University of Delaware
Newark, DE 19716
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Education

Massachusetts Institute of Technology (MIT), Department of Chemical Engineering/Program in Polymer Science and Technology, 2000-2005; Degree: Ph.D.
Advisors: Profs. Paula T. Hammond and Gareth H. McKinley

Thesis Title: PEO-containing Copolymers as Polyurethane Soft Segments in the Development of High Performance Materials

Georgia Institute of Technology (GA Tech), 1997-1999; Degree: B.S. Chemical Engineering (Dual Degree Program)

Clark Atlanta University (CAU), 1994-1998; Degrees: B.S. Chemistry and Engineering

Professional Experience

Distinguished Full Professor

University of Delaware (UD), Department of Materials Science and Engineering,
September 2020 –

University of Delaware (UD), Department of Chemical and Biomolecular Engineering,
September 2020 –

Co-Director, NSF MRSEC Center for Hybrid, Active and Responsive Materials (CHARM)

September 2020 –

Director, DOE ERFC Center for Plastics Innovation (CPI)

August 2020 –

Distinguished Associate Professor

University of Delaware (UD), Department of Materials Science and Engineering,
January 2018 –

University of Delaware (UD), Department of Chemical and Biomolecular Engineering,
January 2018 –

Associate Director, Center for Research in Soft matter and Polymers (CRiSP)

April 2018 –

Associate Editor, Journal of Applied Physics

June 2018 –

Director, PIRE: Bio-inspired Materials and Systems

September 2017 –

MLK Visiting Associate Professor,

MIT, Department of Chemistry, January 2016 – August 2016

Visiting Associate Professor

Petroleum and Petrochemical College (PPC), Chulalongkorn University, July 2015

Climo Associate Professor

Department of Macromolecular Science and Engineering, Case Western Reserve University (CWRU), 2014-2017

Climo Assistant Professor

Department of Macromolecular Science and Engineering, Case Western Reserve University (CWRU), 2012 – 2014

Platform Leader, NSF Science and Technology Center for Layered Polymeric Systems (CLiPS)

Case School of Engineering, CWRU, 2011-2016

Nord Distinguished Assistant Professor

Department of Macromolecular Science and Engineering, CWRU, 2009 – 2012

Co-Director, REU Program in Polymers

Department of Macromolecular Science and Engineering/CLiPS, CWRU, 2009-2015

Director, REU Site: Bio-inspired Materials and Systems

Case School of Engineering, CWRU, 2017

Member, NSF Science and Technology Center, CLiPS

Case School of Engineering, CWRU, 2007-2016

Assistant Professor

Department of Macromolecular Science and Engineering, CWRU, 2007-2014

Provost's Academic Diversity Postdoctoral Fellow

Department of Chemical Engineering, Cornell University, 2005-2007

Postdoctoral Associate

Department of Chemical Engineering, MIT, 2005

Graduate Instructor

Department of Chemical Engineering, MIT, 2004

Graduate Teaching Assistant

Department of Chemical Engineering, MIT, 2002

Graduate Research Assistant

Department of Chemical Engineering, MIT, 2000-2005

Chemical Engineering Corporate Research Fellow

Bell Laboratories, Lucent Technologies, Murray Hill, NJ 1999

Current Research Areas***Mechanically-enhanced, multifunctional materials inspired by nature***

- *Hierarchical peptide polymer hybrids*
- *Sustainable materials*
- *Polymer recycling and upcycling strategies*
- *New fiber manufacturing strategies for functional material development*
- *Responsive composites*
- *Interplay of covalent and non-covalent interactions*

Honors, Awards, and Fellowships

2020 New Castle County Chamber of Commerce, Trailblazer Award

2020 AIMBE Fellow

2019 NOBCCHE Lloyd N. Ferguson Young Scientist Award

2019 China-America FOE organizing committee

Soft Matter Emerging Investigator Alumni Spotlight

2019 National Nanotechnology Coordination Office, Celebrating Women in Nanotechnology

Prior to UDel

15th Japanese/American Frontiers of Science Symposium - Planning
Group Member 2016

14th Japanese/American Frontiers of Science Symposium - Planning
Group Member 2014

Nominated, Young Talent Award (**1 of 6 internationally**) Polymers for Advanced Technologies, 2013

Invited Participant Global Challenges Summit (US National Academy of Engineering (NAE), UK Royal Society of Engineering & Chinese Academy of Engineering), 2013

Japanese/American Frontiers of Science Symposium – National Academy of Science Kavli Fellow, 2012

NAE U.S. Frontiers of Engineering Symposium, 2012

Best Poster Prize, National Faculty Collaborative Poster Session, 2012

DuPont Young Professor Award, 2011

CWRU Diekhoff Graduate Mentoring Award, 2011

International of Pure and Applied Chemistry (IUPAC) Young Observer, 2011
National Science Foundation (NSF) CAREER Award, 2010
3M Nontenured Faculty Grant, 2010
Who's Who in Black Cleveland, 2010
Kaleidoscope Magazine 40-40 Club Class of 2010
NSF Broadening Research Participation Initiation Grant in Engineering, 2010
US-India Nanoscience and Engineering Institute (USINSEI), 2008
NSF ADVANCE Cross-Disciplinary Initiative for Minority Women Faculty, 2007

Prior to CWRU

Cornell University Provost's Academic Diversity Postdoctoral Fellowship, 2005
Gordon Research Conference Carl Storm Fellowship, 2005
Georgia Tech FOCUS Fellow, 2002, 2004
MIT Ford Motor Company Fellowship, 2003
Bell Labs, Lucent Technologies Cooperative Research Fellowship, 1999
Office of Naval Research Graduate Research Fellowship, *Declined*, 1999
Ford Foundation Predoctoral Fellowship, *Declined*, 1999
NSF Graduate Research Fellowship, *Declined*, 1999
American Chemical Society Scholarship Award, 1995

Research Publications

The names of current and former graduate students and postdocs are underlined, while undergraduate students are doubled underlined in the publication list. *denotes LTJK as corresponding author

Peer-Reviewed Publications

1. Jensen, R.E.; O'Brien, E.; Wang, J.; Bryant, J.; Ward, T.C.; **James, L.T.**; Lewis, D.A.; Characterization of Epoxy-Surfactant Interactions; *Journal of Polymer Science: Polymer Physics Edition* **1998**, 36(15), 2781-2792.
2. **Korley, L.T.J.**; Pate, B.D.; Thomas, E.L.; Hammond, P.T.; Effect of the Degree of Soft and Hard Segment Ordering on the Morphology and Mechanical Behavior of Semicrystalline Segmented Polyurethanes; *Polymer* **2006**, 47(9), 3073-3082; DOI:10.1016/j.polymer.2006.02.093
3. **Korley, L.T.J.**; Liff, S.M.; Kumar, N.; McKinley, G.H.; Hammond, P.T.; Preferential Association of Segment Blocks in Polyurethane Nanocomposites; *Macromolecules* **2006**, 39(20), 7030-7036; DOI: 10.1021/ma061383
4. Waletzko, R.S.; **Korley, L.T.J.**; Pate, B.D.; Thomas, E.L.; Hammond, P.T.; Role of Increased Crystallinity in Deformation-Induced Structure of Segmented Thermoplastic Polyurethane Elastomers with PEO- and PEO-PPO-PEO Soft Segments and HDI Hard Segments, *Macromolecules*, **2009**, 42(6), 2041–2053; DOI: 10.1021/ma8022052

Publications based upon work initiated or completed while at Case Western Reserve University

5. Ponting, M.; Abernathy, T.; **Korley, L.T.J.**; Hiltner, A.; Baer, E.; Gradient Multilayer Films by Forced Assembly Coextrusion, *Industrial and Engineering Chemistry Research (special contribution in honor of Don Paul's 65th Birthday)*, **2010**, 49(23), 12111–12118; DOI: 10.1021/ie100321h
6. Kamperman, M; **Korley, L.T.J.**; Yau, B.; Johansen, K.M.; Joo, Y.L.; Wiesner, U.; Nanomanufacturing of Continuous Composite Nanofibers with Confinement-induced Morphologies, *Polymer Chemistry* **2010**, 1, 1001-1004; DOI:10.1039/c0py00146e
7. Stone, D.A.; **Korley L.T.J.***; *Invited Perspective to Macromolecules, Cover Article*, *Macromolecules* **2010**, Bioinspired Polymeric Nanocomposites, 43(22), 9217–9226; DOI:10.1021/ma101661p
8. Stone, D.A.; Hsu, L.; Wheeler, N.R.; Wilusz, E.; Zukas, W.; Wnek, G.E.; **Korley, L.T.J.***; Mechanical Enhancement via Self-Assembled Nanostructures in Polymer Nanocomposites, *Soft Matter* **2011**, 7(6), 2449 – 2455; DOI:10.1039/C0SM01262A
9. Burt, T.M.; Keum, J.; Hiltner, A.; Baer, E.; **Korley, L.T.J.***; Confinement of Elastomeric Block Copolymers via Forced Assembly Co-extrusion, *ACS Applied Materials and Interfaces* **2011**, 3(12), 4804-4811; DOI/10.1021/am201297f
10. Stone, D.A.; Wanasekara, N.D.; Jones, D.; Wheeler, N.R.; Wilusz, E.; Zukas, W.; Wnek, G.E.; **Korley, L.T.J.***; All-Organic, Stimuli-Responsive Polymer Composites with Electrospun Fiber Fillers, *ACS Macro Letters* **2012**, 1(1), 80-83; DOI:10.1021/mz200049v
11. Johnson, J. Casey; Wanasekara, N.D.; **Korley, L.T.J.***; Utilizing Peptidic Ordering in the Design of Hierarchical Polyurethane/ureas, *Biomacromolecules* **2012**, 13(5), 1279-1286; DOI:10.1021/bm201800v
12. Lai, C-Y.; Hiltner, A.; Baer, E.; **Korley, L.T.J.***; The Deformation of Confined Poly(ethylene oxide) in Multilayer Films, *ACS Applied Materials and Interfaces* **2012**, 4(4), 2218–2227; DOI: 10.1021/am300240r
13. Johnson, J.C.; **Korley, L.T.J.***; *Invited Review*, Enhanced Mechanical Function with Nature's Building Blocks: Amino Acids; *Soft Matter* **2012**, 8(45), 11431-11442; DOI: 10.1039/C2SM26185E
14. Burt, T.M.; Jordan, A.M.; **Korley, L.T.J.***; Towards Anisotropic Materials via Forced Assembly Co-extrusion, *ACS Applied Materials and Interfaces* **2012**, 4(10), 5155–5161; DOI:10.1021/am301072s
15. Wanasekara, N.W.; Stone, D.A.; Wnek, G.E., **Korley, L.T.J.***; Stimuli-responsive

- and Mechanically-switchable Electrospun Composites; *Macromolecules* **2012**, 45(22), 9092–9099; DOI:10.1021/ma301896u
16. Burt, T.M.; Jordan, A.M.; **Korley, L.T.J.***; Investigating Interfacial Contributions on the Layer-thickness Dependent Mechanical Response of Confined Self-assembly via Forced Assembly, *Macromolecular Chemistry and Physics* **2013**, 214(8), 873-881; DOI:10.1002/macp.201200588
 17. Wanasekara, N.W.; **Korley, L.T.J.***; *Invited Feature Article*, Toward Tunable and Adaptable Polymer Nanocomposites; *Journal of Polymer Science Part B: Polymer Physics* **2013**, 51(7), 463-467; DOI:10.1002/polb.23253
 18. Burt, T.M.; Monemian, S.; Jordan, A.M.; **Korley, L.T.J.***; Thin Film Confinement of Spherical Block Copolymers via Forced Assembly Co-extrusion, *Soft Matter* **2013**, 9(17), 4381-4385; DOI:10.1039/C3SM27797F
 19. Wojtecki, R.J.; Wu, Q.; Johnson, J.C.; Ray, D. E.; **Korley, L.T.J.**, Rowan, S.J.; Optimizing the formation of 2,6-bis(N-alkyl-benzimidazolyl)pyridine-containing [3]catenates through component design, *Chemical Science* **2013**, 4(12), 4440-4448; DOI: 10.1039/C3SC52082J
- ****Publications Post-tenure (2014-2019)*
20. Johnson, J. Casey; Wanasekara, N.D.; **Korley, L.T.J.***; *Invited Article 2014 Emerging Investigators Themed Issue*, Influence of Secondary Structure and Hydrogen-Bonding Arrangement on the Mechanical Properties of Peptidic-Polyurea Hybrids, *J. Mat. Chem. B.* **2014**, 2, 2554-2561; DOI: 10.1039/C3TB21476A
 21. Wang, J.; Langhe, D.; Ponting, M.; Wnek G.E.; **Korley, L.T.J.**; Baer, E.; Manufacturing of Polymer Continuous Nanofibers Using a Novel Co-extrusion and Multiplication Technique, *Polymer* **2014**, 55(2), 673-685; DOI: 10.1016/j.polymer.2013.12.025
 22. Jordan, A.M.; Lenart, W.; Carr, J.; Baer, E.; **Korley, L.T.J.***; Structural evolution during mechanical deformation in high-barrier PVDF-TFE/PET multilayer films using in-situ X-ray techniques. *ACS Applied Materials and Interfaces* **2014**, 6(6), 3987-3994; DOI: 10.1021/am4053893
 23. Kim, S-E.; Wang, J.; Jordan, A.M.; **Korley, L.T.J.**; Baer, E.; Pokorski, J; Surface Modification of Melt Extruded Poly(ϵ -caprolactone) Nanofibers: Toward a New Scalable Biomaterial Scaffold, *ACS MacroLetters* **2014**, 3(6), 585–589. DOI: 10.1021/mz500112d
 24. Jang, K-S.; Johnson, J.C.; Hegmann, T.; Hegmann, E.; **Korley, L.T.J.***; Biphenyl-based Liquid Crystals for Elevated Temperature Processing with Polymers, *Liquid Crystals* **2014**, 41(10), 1473-1482; DOI:10.1080/02678292.2014.926405

25. Monemian, S.; Jang, K-S.; Ghassemi, H.; **Korley, L.T.J.***; Probing the interplay of ultraviolet crosslinking and non-covalent interactions in supramolecular elastomers, *Macromolecules* **2014**, 47(16), 5633-5642; DOI:10.1021/ma501183a.
26. Sharma, A., Neshat, A., Mahnen, C.J., Nielsen, A.d., Snyder, J., Stankovich, T.L., Daum, B.G., LaSpina, E.M., Beltrano, G., Li, S., Park, B.-W., Clements, R.J., Freeman, E.J., Malcuit, C., McDonough, J.A., **Korley, L.T.J.**, Hegmann, T., Hegmann, E.; Biocompatible, biodegradable and porous liquid crystal elastomer scaffolds for spatial cell cultures, *Macromolecular Bioscience* **2015**, 15, 200–214; DOI:10.1002/mabi.201400325. *Highlighted in Materials Views*, 10/24/14, *Journal Back Cover*
27. Johnson, J.C., **Korley, L.T.J.**, Tsige, M. Coarse-Grained Modeling of Peptidic/PDMS Triblock Morphology, *The Journal of Physical Chemistry B* **2014**, 118(47), 13718-13728; DOI:10.1021/jp506553v
28. Jordan, A.M., **Korley, L.T.J.***; Toward a Tunable Fibrous Scaffold: Structural Development during Uniaxial Drawing of Coextruded Poly(caprolactone) Fibers, *Macromolecules*, **2015**, 48 (8), 2614–2627; DOI:10.1021/acs.macromol.5b00370
29. Monemian, S., **Korley, L.T.J.***; Exploring the Role of Supramolecular Associations in Mechanical Toughening of Interpenetrating Polymer Networks, *Macromolecules* **2015**, 48(19) 7146-7155; DOI:10.1021/acs.macromol.5b01752
30. Wanasekara, N.D., Matolyak, L., **Korley, L.T.J.***; Tunable Mechanics in Electrospun Composites via Hierarchical Organization, *ACS Applied Materials and Interfaces* **2015**, 47(41), 22970-22979; DOI:10.1021/acsami.5b06230
31. Jordan, A.M., Marotta, T., **Korley, L.T.J.***; Reducing Environmental Impact: Solvent and PEO Reclamation During Production of Melt-Extruded PCL Nanofibers, *ACS Sustainable Chemistry and Engineering* **2015**, 3(11), 2994-3003; DOI:10.1021/acssuschemeng.5b0101
32. Jang, K-S., **Korley, L.T.J.***; Phase diagrams of thermally-stable, polymer-dispersed liquid crystals: exploring the impact of chain length and chemical structure, *Polymer Engineering and Science* **2016**, 56(4), 388-393; DOI:10.1002/pen.24264
33. Jordan, A.M.; Viswanath, V.; Kim, S.-E.; Pokorski, J.; **Korley, L.T.J.***; *Invited Review*, Processing and Surface Modification of Polymer Nanofibers for Biological Scaffolds: A Review, *Journal of Materials Chemistry B* **2016**, 4, 5958-5974; DOI:10.1039/C6SM00749J; *Designated a 2016 Journal of Materials Chemistry B Hot Paper*

34. Lenart, W.R.; Jang, K.-S.; Jordan, A.M., Baer, E.; **Korley, L.T.J.***; Mechanically Tunable Dual-Component Polyolefin Fiber Mats via Two-Dimensional Multilayer Coextrusion, *Polymer* **2016**, 103(26), 328–336; DOI:10.1016/j.polymer.2016.09.060
35. Matolyak, L.E.; Keum, J.K.; **Korley, L.T.J.***; Molecular design – network architecture and its impact on the organization and mechanics of peptide-polyurea hybrids, *Biomacromolecules* **2016**, 17(12), 3931–3939; DOI:10.1021/acs.biomac.6b01309
36. Alexander, Symone L.M.; **Korley, L.T.J.***; Tunable hygromorphism: structural implications of low molecular weight gels and electrospun nanofibers in bilayer composites, *Soft Matter* **2017**, 13, 283-291; DOI:10.1039/C6SM00749J
37. Sharma, A., Mori, T., Mahnen, C.J., Everson, H.R., Leslie, M.T., Nielsen, A.d., Lussier, L., Zhu, C., Malcuit, C., Hegmann, T., McDonough, T., Freeman, E.J., **Korley, L.T.J.**, Clements, R.J., Hegmann, E.; Effects of structural variations on the cellular response and mechanical properties of biocompatible, biodegradable, and porous smectic liquid crystal elastomers, *Macromolecular Bioscience* **2017**, 17 1600278; DOI:10.1002/mabi.201600278
38. Chen, M., Gu, Y., Singh, A., Zhong, M., Jordan, A.M., Balazs, A.C., **Korley, L.T.J.**, Johnson, J.A.; Living additive manufacturing: transformation of parent gels into diversely functionalized daughter gels made possible by visible light photo-redox catalysis, *ACS Central Science* **2017**, 3 (2), 124–134; DOI: 10.1021/acscentsci.6b00335 (*First Reaction: Cyrille Boyer*)
39. Kim, S.-E.; Jordan, A.M.; **Korley, L.T.J.**; Porkoski, J.; Drawing in poly (ϵ -caprolactone) Fibers: Tuning Mechanics, Fiber Dimensions and Surface-Modification for Biomedical Applications, *Journal of Materials Chemistry B* **2017**, 5, 4499-4506; DOI:10.1039/C7TB00096K
40. Gu, T., Kawamoto, K., Zhong, M., Chen, M., Hore, M.J.A., Jordan, A.M., Olsen, B.A., **Korley, L.T.J.**, Johnson, J.A.; Semi-batch monomer addition as a general method to tune and enhance the mechanics of polymer networks via loop defect control, *Proceedings of the National Academy of Sciences* **2017**, 114(19) 4875-4880; DOI:10.1073/pnas.1620985114
41. Thompson, C.B.; **Korley, L.T.J.***; *Invited Review*, Harnessing Supramolecular and Peptidic Self-Assembly for the Construction of Reinforced Polymeric Tissue Scaffolds, *Bioconjugate Chem.* **2017**, 28 (5), 1325–1339; DOI: 10.1021/acs.bioconjchem.7b00115
42. Alexander, S.L.M.; Matolyak, L.E.; **Korley, L.T.J.***; *Invited Feature Article*, Intelligent nanofiber composites: Dynamic communication between materials and their environment, *Macromolecular Materials and Engineering* **2017**, 302, 1700133; DOI: 10.1002/mame.201700133

43. Jordan, A.M.; Kim, S.-E.; Van de Voorde, K.M.; Porkoski, J.; **Korley, L.T.J.***; In Situ Fabrication of Fiber Reinforced Three-Dimensional Hydrogel Tissue Engineering Scaffolds, *ACS Biomater. Sci. Eng.* **2017**, 3 (8), 1869–1879; DOI: 10.1021/acsbiomaterials.7b00229
44. Alexander, S.L.M.; **Korley, L.T.J.***; Programming Shape and Tailoring Transport: Advancing Hygromorphic Bilayers with Aligned Nanofibers, *Soft Matter* **2017**, 13, 5589 – 5596; DOI: 0.1039/C7SM00962C
45. Matolyak, L.E.; Keum, J.K.; Van de Voorde, K.M.; **Korley, L.T.J.***; *Invited Article, Special Issue - Peptide materials*, Synthetic Approach to Tailored Physical Associations in Peptide-Polyurea/Polyurethane Hybrids, *Organic and Biomolecular Chemistry* **2017**, 15, 7607-7617; DOI: 10.1039/c7ob01352c,
46. Prévôt, M.E.; Bergquist, L. E.; Sharma, A., Mori, T., Gao, Y.; Bera, T.; Zhu, C.; Leslie, M.T.; Cukelj, R.; **Korley, L.T.J.**; Freeman, E.J.; McDonough, J. A., Clements, R.J., Hegmann, E.; New developments in 3D liquid crystal elastomers scaffolds for tissue engineering: from physical template to responsive substrate, *Proc. of SPIE* **2017**, 10361,103610T-11

Publications based upon work initiated or completed while at the University of Delaware

47. Prévôt, M. E.; Andro, H.; Alexander, S.L.M.; Ustunel, S.; Zhu, C.; Nikolov, Z.; Rafferty, S. T.; Brannum, M. T.; Kinsel, B.; **Korley, L.T.J.**; Freeman, E.J.; McDonough, J.A.; Clements, R.J.; Hegmann, E.; Liquid crystal elastomer foams with elastic properties specifically engineered as biodegradable brain tissue scaffolds, *Soft Matter* **2018**, 14, 354 – 360; DOI: 10.1039/c7sm01949a
48. Alexander, S. L. M.; **Korley, L.T.J.***; *Invited Article*, Nucleation effects of high molecular weight polymer additives on low molecular weight gels, *Polymer Journal* **2018**, 50, 775-786; DOI: 10.1038/s41428-018-0076-0
49. Matolyak, L.E.; Thompson, C. B.; Li, B.; Keum, J.; Cowen, J.; Tomazin, R.; **Korley, L.T.J.***; Secondary Structure Mediated Hierarchy and Mechanics in Polyurea-Peptide Hybrids, *Biomacromolecules* **2018**, 19 (8), 3445–3455; DOI: 10.1021/acs.biomac.8b00762
50. Alexander, S. L. M.; **Korley, L.T.J.***; Restricting molecular mobility in polymer nanocomposites with self-assembling low molecular weight gel additives, *ACS Applied Materials and Interfaces* **2018**, 10, 43040–43048; DOI: 10.1021/acsami.8b15112
51. Brannum, M.L.; Steele, A.B.; Venetos, M.C.; **Korley, L.T.J.**; Wnek, G.E.; White, T.J.; Light Control with Liquid Crystalline Elastomers, *Advanced Optical Materials* **2019**, 7, 1801683-1801687; DOI: 1002/adom.201801683

52. Thompson, C.B.; Chatterjee, S.; **Korley, L.T.J.***; *Invited Article, Special Issue – Biomimetic Polymers, Gradient Supramolecular Interactions and Tunable Mechanics in Polychaete Jaw Inspired Supramolecular Interpenetrating Networks, European Polymer Journal* **2019**, 116, 201-209; DOI: 10.1016/j.eurpolymj.2019.04.015
53. Wang, C.; Brown, G.; Burris, D.; **Korley, L.T.J.**; Epps, III, T.H.; The Coating Architects: Manipulating Multi-Scale Structures in Polymer Coatings to Optimize Interfacial Properties", *ACS Applied Polymer Materials* **2019**, 1, 9, 2249-2266; DOI:10.1021/acsapm.9b00302
54. Brannum, M.; Auguste, A.; Donovan, B.; Godman, N.; Malatujv, V.; Steele, A.; **Korley, L.T.J.**; Wnek, G.E.; White, T.; Deformation and Elastic Recovery of Acrylate-based Liquid Crystalline Elastomers, *Macromolecules* **2019**, 52, 21, 8248-8255; DOI:10.1021/acs.macromol.9b01092
55. Redondo, A.; Chatterjee, S.; Brodard, P.; **Korley, L.T.J.**; Gunkel, I.; Weder, C.; Steiner, U.; Melt-Spun Nanocomposite Fibers Reinforced with Aligned Tunicate Nanocrystals, *Polymers* **2019**, 11, 1912; DOI:10.3390/polym11121912
56. Redondo, A.; Jang, D.; **Korley, L.T.J.**; Gunkel, I.; Steiner, U.; Electrospinning of Cellulose Nanocrystal-Reinforced Polyurethane Fibrous Mats, *Polymers* **2020**, 12(5), 1021; DOI:10.3390/polym12051021
57. Van de Voorde, K.; Pokorski, J. P.; and **Korley, L.T.J.**; Exploring morphological effects on the mechanics of blended PLA/PCL extruded fibers fabricated using multilayer coextrusion, *Macromolecules* **2020**, 53(13), 5047-5055; DOI:10.1021/acs.macromol.0c00289
58. Hore, M.J.A.; **Korley, L.T.J.**; and Kumar, S.K.; Introduction to Special Topic: Polymer-Grafted Nanoparticles, *Journal of Applied Physics* **2020**, 128, 030401; DOI:10.1063/5.0019326
59. Thompson, C.B.; **Korley, L.T.J.**; 100th Anniversary of Macromolecular Science Viewpoint: Engineering Supramolecular Materials for Responsive Applications – Design and Functionality, *Invited Viewpoint, ACS Macro Letters* **2020**, 9, 1198–1216; DOI:10.1021/acsmacrolett.0c00418
60. Beckett, L.E.; Lewis, J.T.; Tonge, T.K.; **Korley, L.T.J.**; Enhancement of the mechanical properties of hydrogels with continuous fibrous reinforcement, *ACS Biomaterials Science and Engineering*, *Accepted*
61. Mahajan, J.; O'Dea, R.; Norris, J.; **Korley, L.T.J.**; Epps, III, T.H.; Aromatics from Lignocellulosic Biomass: A Platform for High-Performance Thermosets, *Invited Perspective, ACS Sustainable Chemistry and Engineering*, *Accepted*

Submitted

Intellectual Property (Patents, Invention Disclosures)

1. **Korley, L. T.**; Stone, D.A.; Wnek, G. E.; Wanasekara, N.D. "Polymer composite and method of forming same", US 9,797,075 B2, October 24, 2017
2. **Korley, L. T.**; Wnek, G. E.; Jordan, A.; "Fiber reinforced hydrogels and methods of making same", US 10,286,585 B2, May 14, 2019
3. Epps, III, T.; **Korley, L.T.J.**; Green, M. "Bio-Based Polysulfones and Uses Thereof", Invention Disclosure, May 21, 2019

Invited Conference Presentations

1. TA Instruments Users Meeting, "Elucidating Structure-property Relationships in Elastomers, Nanocomposites, and Multi-layered Films: A Macro@CWRU Perspective". Thermal Analysis Session, May 5, 2008. **Invited Speaker**
2. American Chemical Society, PMSE Young Investigator Symposium, San Francisco, CA. "Bio-inspired Strategies for Mechanical Enhancement", March 24, 2010. **Invited Speaker**
3. First Annual Meeting of NSF's ENG/BRIGE Principal Investigators, NSF, Arlington, VA. August 1-3, 2010. **Invited Speaker**
4. University of Minnesota/IPrime Toughness Workshop, Minneapolis, MN, "Bio-inspired Strategies for Mechanical Enhancement", January 14, 2010. **Invited Speaker**
5. Gordon Conference: Polymers, Mount Holyoke College, South Hadley, MA. "Bio-inspired design of mechanically-enhanced materials", June 14, 2011. **Invited Speaker**
6. ACS National Meeting, Denver, CO. Session: Function through Macromolecular Assembly, "Bio-inspired fillers for mechanical enhancement", August 31, 2011. **Invited Speaker**
7. ACS National Meeting, Denver, CO. Session: Symposium in Memory of Professor Anne Hiltner, "Combining forced-assembly and self-assembly to generate mechanically-enhanced, multi-functional materials", August 31, 2011. **Invited Speaker**
8. APS, Boston, MA. "Nature-inspired fillers for mechanical enhancement", March 2012. **Invited Speaker**
9. TA Instruments Users Meeting, "Elucidating Structure-property Relationships in Elastomers, Nanocomposites, and Multi-layered Films: A Macro@CWRU Perspective". Thermal Analysis Session, April 30, 2012. **Invited Speaker**
10. IUPAC World Polymer Congress, "Mechanical tuning in bio-inspired polymer nanocomposites", June 24-29, 2012. **Invited Speaker**
11. "Towards Mechanically-tunable Materials Inspired by Nature", 244th ACS National Meeting, Philadelphia, PA. Polymeric Biomaterials Symposium, August 2012. **Invited Speaker**

12. NEO Microscopy Meeting, "Lessons from Nature: Tuning Mechanics in Polymeric Materials", February 20, 2013. ***Invited Speaker***
13. 245th ACS National Meeting, New Orleans, LA, "Reinforcement of bio-inspired elastomers via control of secondary structure", April 7-11, 2013. ***Invited Speaker***
14. 245th ACS National Meeting, New Orleans, LA, "Multilayer co-extrusion as a platform for combining forced assembly and self-assembly", April 7-11, 2013. ***Invited Speaker***
15. 245th ACS National Meeting, New Orleans, LA, "From REU student to professor: The role of mentoring in the polymer science and engineering", April 7-11, 2013. ***Invited Speaker.***
16. University of Philippines, Diliman, Institute of Chemistry, MACROManila, "Tailoring mechanics via lessons from nature", May 22-23, 2013. ***Invited Speaker***
17. CWRU, MACRO Frontiers 2013, "Mechanical tuning in bio-inspired polymer nanocomposites", June 6-8, 2013. ***Invited Speaker***
18. 246th ACS National Meeting, PMSE: Bioconjugates and Hybrid Biomaterials, Indianapolis, IN, "Polymer-peptide hybrids: Tuning mechanics via secondary structure", September 8-12, 2013. ***Invited Speaker***
19. Polymers for Advanced Technologies (PAT) 2013, Berlin, Germany, "Designer materials: Taking cues in mechanics from Nature", September 29 – October 3, 2013. ***Invited Speaker & Nominated, Young Talent Award (1 of 6 internationally) Polymers for Advanced Technologies, 2013***
20. 3rd Annual Chinese Chemical Society – Polymer Division/ACS-PMSE Joint Symposium, Shanghai, China, "Multilayer co-extrusion as a platform for combining forced assembly and self-assembly", October 15, 2013. ***Invited Speaker***
21. 3rd Annual Chinese Chemical Society – Polymer Division/ACS-PMSE Joint Symposium, Tsinghua University, Beijing, China, "Multilayer co-extrusion as a platform for combining forced assembly and self-assembly", October 17-18, 2013. ***Invited Speaker***
22. AIChE, San Francisco, CA. *Emerging Areas in Polymer Science and Engineering Plenary session*, "Tunable and Responsive Polymer Nanocomposites Inspired By Nature", November 3-8, 2013. ***Invited Plenary Speaker***
23. 247th ACS National Meeting, PMSE: Supramolecular Assembly and Gelation in Organic Solvents, Dallas, TX., "Controlled dispersion and inherent percolation in polymer composites via supramolecular assembly and filler design", March 16, 2014. ***Invited Speaker***
24. 248th ACS National Meeting, PMSE: Functional Supramolecular Polymers, San Francisco, CA. "Functional fillers (and architectures) for mechanical enhancement of polymeric systems", August 12, 2014. ***Invited Speaker***
25. 2nd International Conference on Bioinspired and Biobased Chemistry & Materials, Nice, France. "Polymer-Peptide Hybrids: Tuning Mechanics via Nature's Building Blocks", October 15, 2014.
26. Conference on Deformation, Yield and Fracture in Polymers (DYFP2015), Rolduc Abbey, Kerkrade, NL, "Exploiting the structural diversity in Nature as a path towards mechanical enhancement", April 2, 2015. ***Invited Speaker***

27. 250th ACS National Meeting, POLY: Herman Mark Scholars Award Symposium in Honor of Stuart Rowan, Boston, MA, “Harnessing the power of phase interactions - tailoring mechanics via supramolecular motifs”, August 16, 2015. ***Invited Speaker***
28. 250th ACS National Meeting, POLY: Henry A. Hill Centennial Symposium: Innovation in Polymer Science, Boston, MA. “New Fabrication Strategy toward functional fiber mats and composites”, August 18, 2015. ***Invited Speaker***
29. 250th ACS National Meeting, POLY: Herman Mark Young Scholars Award Symposium in Honor of Bradley Olsen, Boston, MA, “Polymer-peptide hybrids: tuning mechanics via nature’s building blocks”, August 19, 2015. ***Invited Speaker***
30. AIChE, Salt Lake City, Utah. *Mechanics and Structure in Polymers*, “From Multilayer Films to Nanoscale Fibers: Probing the Connection Between Assembly and Mechanics, November 10, 2015. ***Invited Speaker***
31. MRS Fall Meeting, H11 Multifunctionality in Polymer-Based Materials, Gels and Interfaces, Boston, MA. “Exploiting structural diversity in Nature: Supramolecular Associations and Hierarchical Organization Drive Mechanical Tunability in Polymer Composites and Networks”, December 4, 2015. ***Invited Speaker***
32. Pacific Polymer Conference 14 (PPC 14), 3B – Advanced Processing, Kauai, Hawaii, “New fabrication strategy toward functional fiber mats and composites”, December 11, 2015. ***Invited Speaker***
33. Pacificchem, Current Polyurethane Science, Honolulu, Hawaii, “Polyurethane-peptide hybrids: Hierarchy and mechanics inspired by nature”, December 19, 2015.
34. Academic Research and Leadership Network, 2016 Research Symposium, MIT, Cambridge, MA, “Bio-inspired Approaches to Mechanical Tuning: Fiber Innovations”, March 25, 2016. ***Invited Speaker***
35. GRC Bioinspired Materials, Les Diablerets Conference Center, Les Diablerets, Switzerland, “Exploiting the structural diversity in Nature: mechanical implications in elastomers, composites, and fibers”, June 5-10, 2016. ***Invited Speaker***
36. 252nd ACS Fall National Meeting, Division of Polymer Chemistry, Advanced Functional Biopolymers and Biomaterials, Philadelphia, PA. “Toward fibrous biomaterial scaffolds: Manufacturing and functionalization strategies”, August 21, 2016. ***Invited Speaker***
37. 252nd ACS Fall National Meeting, Division of Colloid and Surface Chemistry: Synergy at the Bio-Nano Interface, Philadelphia, PA. “Tuning mechanics via structural interplay in polymer-peptide hybrids”, August 21, 2016. ***Invited Speaker***
38. Biennial Meeting of the GDCh-Division Macromolecular Chemistry, Halle, Germany. “Utilizing concepts of mechanics, transport, and assembly in Nature – towards responsive materials”, September 11-13, 2016. ***Invited Speaker (1 of only 2 US invitees)***
39. MRS Fall, Boston, MA. “Inspired by Nature: scalable fabrication of functional fiber scaffolds and fiber-reinforced hydrogels”, November 27-30, 2016. ***Invited Speaker***
40. ACS Layered Polymeric Systems Conference, Pacific Grove, CA. “Transforming layered materials into mechanically-robust fibers and hydrogels”, February 21-24, 2017. ***Invited Speaker***

41. APS, New Orleans, LA. "Structural Interplay - Tuning Mechanics in Peptide-Polyurea Hybrids", March 13-17, 2017. **Invited Speaker**
42. 1st Pan-American Polymer Science Conference, São Paulo, Brazil. "Mechanical tuning in Nature-inspired elastomers and gels, March 22-24, 2017. **Invited Speaker**
43. 3rd Functional Polymeric Material conference, Rome, Italy. "Utilizing concepts of mechanics, transport, and assembly in Nature – towards responsive, fibrous materials", July 7-10, 2017. **Invited Speaker**
44. APS, Los Angeles, CA. Symposium: Lessons from Biological Soft Materials and Their Applications, "Hierarchy and architecture - tailoring physical associations toward functional networks and gels", March 5-9, 2018. **Invited Speaker**
45. SPIE Smart Structures/NDE Symposium, Bioinspiration, Biomimetics, and Bioreplication VII, "Utilizing concepts of mechanics, transport, and assembly in nature: towards responsive materials", March 4-8, 2018. **Invited Speaker**
46. ACS, New Orleans, LA. ACS Award in Applied Polymer Science: Symposium in Honor of Paula T. Hammond, "Hierarchy-mediated mechanics in peptide-polyurea hybrids", March 18-22, 2018. **Invited Speaker**
47. 4th Annual Functional Polymeric Materials Conference, Nassau, Bahamas. "Manipulating phase interactions and mechanics in supramolecular systems", June 5-8, 2018. **Invited Speaker**
48. NOBCCHE, Orlando, FL. "Programmable responses in hygromorphic bilayer composites", September 17-20, 2018. **Invited Speaker**
49. ACS POLY 2018 Polycondensation Workshop, Alexandria, VA. "Manipulating hierarchy, mechanics, and function in polyurea-peptide hybrids", October 14-17, 2018. **Invited Speaker**
50. International Symposium on Stimuli-Responsive Materials, Windsor, CA. "Engineering Responsive, Bilayer Composites via Strategic Control of Fiber Alignment and Interfacial Assembly", October 21-23, 2018. **Invited Speaker**
51. AIChE, MS&E, Polymer Processing and Rheology Session, Pittsburgh, PA. "Transforming Layered Materials into Mechanically-Robust Fibers and Hydrogels", October 28-November 2, 2018. **Invited Speaker**
52. NE Section ACS/NE Region NOBCCHE, Boston, MA. "Utilizing concepts of mechanics, transport, and assembly in Nature – towards responsive materials via strategic control of architecture and alignment", February 28, 2019. **Invited Speaker**
53. ACS, Orlando, FL. Polymers & Biomimicry, "Biologically-inspired supramolecular systems: architecture and mechanics", March 31-April 4, 2019. **Invited Speaker**
54. ACS, Orlando, FL. Polymer Bioconjugates, "Manipulating hierarchy, mechanics, and function in polyurea-peptide hybrids", March 31-April 4, 2019. **Invited Speaker**
55. Polymer GRS, Mount Holyoke, MA. June 8-9, 2019. **Invited Keynote Speaker**
56. Polymer GRC, Mount Holyoke, MA. "Interplay of Assembly, Alignment, and Architecture in Biologically-Inspired, Polymer Composites. June 9-14, 2019. **Invited Speaker**
57. ACS, San Diego, CA. PMSE Future Faculty Symposium, "Nature-inspired strategies for reinforcement of polymer gels and composites". August 25-29, 2019. **Invited Keynote Speaker**

58. XVIII Brazilian MRS Meeting 2019, Symposium B - Biological, biopolymer-based and bio-inspired materials, "Gradient Architectures and Tunable Mechanics in Biologically-inspired, Supramolecular Semi-Interpenetrating Networks", September 22 – 26, 2019. **Invited Speaker**
59. NOBCCChE, St. Louis, MO, Lloyd N. Ferguson Award Lecture, "Transforming Layered Materials into Mechanically-Robust Fibers and Hydrogels", November 20, 2019. **Invited Speaker**
60. APS 2019, Denver, Colorado, Responsive Polymers, Soft Materials, and Hybrids, "Silk-inspiration: hierarchy, assembly, and mechanics in polyurea-polypeptide hybrids", March 2-6, 2020. **Invited Speaker (Canceled)**
61. APS 2019, Denver, Colorado, Dillon Medal Symposium in Honor of Rodney Priestley, "Exploiting supramolecular associations in interpenetrating networks and elastomers", March 2-6, 2020. **Invited Speaker (Canceled)**
62. 2nd Pan American Congress of Nanotechnology, "Transforming Layered Materials: Mechanically-Robust, Films, Fibers and Hydrogels", March 4-7, 2020. **Plenary Speaker (Withdrawn)**
63. ACS, Philadelphia, PA. US – Israel Joint Symposium, Polymeric Materials: From Synthesis to Application, "Manipulating hierarchy, mechanics, and function in polyurea-peptide hybrids", March 22-26, 2020. **Invited Speaker (Canceled)**
64. ACS, Philadelphia, PA. Bio-Inspired Macromolecular Materials, "Lessons from pine cones: Structural hierarchy and programmable actuation in hygromorphic composites", March 22-26, 2020. **Invited Speaker (Canceled)**
65. Lessons from pine cones: Structural hierarchy and programmable actuation in hygromorphic composites
66. ACS, Philadelphia, PA. Next Generation of Functional Polymeric Materials: Correlating Structure, Property & Application, "Transforming layered materials into mechanically-robust fibers and hydrogels", March 22-26, 2020. **Invited Speaker (Canceled)**
67. MRS Joint Spring and Fall Meeting, Boston, MA. F.SM01: Lessons from Nature—From Biology to Bioinspired Materials "Exploiting supramolecular associations in interpenetrating networks and elastomers", November 28 – December 4, 2020. **Invited Speaker**

Lectures, Seminars, and Panels (July 2007-Present)

1. NASA Glenn, Cleveland, OH, "Manipulating Self-assembly Behavior in Nanostructured Materials", November 28, 2007. **Invited Speaker**
2. Rochester Institute of Technology, Department of Chemistry, "Manipulating Self-assembly Behavior in Nanostructured Materials", October 31, 2007. **Invited Speaker**
3. Lubrizol Corporation, "Mechanically-enhanced, Multi-functional Elastomers", December 12, 2008. **Invited Speaker**
4. Cleveland Society of Applied Spectroscopy, "Taking Shape: Confinement-induced Assembly of Block Copolymer Systems", February 26, 2009. **Invited Speaker**
5. Ohio Northern University, Department of Chemistry, Ada, OH, "Mechanically-enhanced, Multi-functional Materials", October 29, 2009. **Invited Speaker**

6. American Chemical Society, Columbus, OH, Local Section, "Bio-inspired Strategies for Material Toughening", September 21, 2010. ***Invited Speaker***
7. 3M Technical Center, Minneapolis, MN, "Bio-inspired Strategies for Mechanical Enhancement", September 28, 2010. ***Invited Speaker***
8. Iowa State University, Department of Material Science and Engineering, Ames, IA, "Mechanically-tunable Materials Inspired by Nature", December 2, 2010. ***Invited Speaker***
9. P&G, Cincinnati, OH. "Exploring Barrier Properties of Liquid Crystalline Multilayer Films", November 19, 2010. ***Invited Speaker***
10. Case Western Reserve University, Department of Chemical Engineering, Cleveland, OH, "Mechanically-tunable Materials Inspired by Nature", December 9, 2010. ***Invited Speaker***
11. Northeastern University, Department of Chemical Engineering, Boston, MA. "Mechanically-Tunable Materials Inspired from Nature". September 19, 2011. ***Invited Speaker***
12. DuPont Experimental Station, DuPont, Wilmington, DE. "Mechanically-Tunable Materials Inspired from Nature", November 2, 2011. ***Invited Speaker***
13. University of Delaware, Department of Chemical Engineering, Newark, DE. "Mechanically-Tunable Materials Inspired from Nature", December 15, 2011. ***Invited Speaker***
14. Andrews University, Department of Chemistry/Biochemistry, Berrien Springs, MI, February 2, 2012. ***Invited Speaker***
15. Carnegie Mellon University, Department of Chemistry, Pittsburgh, PA. "Mechanically-Tunable Materials Inspired from Nature", March 8, 2012. ***Invited Speaker***
16. University of Akron, Integrated Bioscience, Department of Biology, Akron, OH. "Mechanically-Tunable Materials Inspired from Nature", April 20, 2012. ***Invited Speaker***
17. MIT, Program in Polymer Science and Technology (PPST), "Towards Mechanically-tunable Materials Inspired by Nature", May 16, 2012. ***Invited Speaker***
18. University of Akron, Department of Polymer Engineering. "Lessons from Nature: Tuning Mechanics in Polymeric Materials", November 16, 2012. ***Invited Speaker***
19. Syracuse University, Department of Biomedical Engineering. "Lessons from Nature: Tuning Mechanics in Polymeric Materials", December 5, 2012. ***Invited Speaker***
20. 13th Annual Japanese-American Kavli Frontiers of Science Symposium, Beckman Center, Irvine, CA. November 30-December 2, 2012. ***Poster***
21. Kentucky State University, Department of Chemistry, "Tailoring mechanics via combining forced assembly with self-assembly", February 7, 2013. ***Invited Speaker***
22. University of Michigan, 37th Annual Symposium of the Macromolecular Science and Engineering Program, "Tunable Materials Inspired by Nature", October 24, 2013. ***Invited Speaker***

23. Stanford University, Department of Materials Science and Engineering, “Design rules from Nature for new material development”, November 14, 2013. ***Invited Speaker***
24. University of Southern Mississippi, School of Polymers and High Performance Materials, “Lessons from Nature: Tuning Mechanics in Polymeric Materials”, November 20, 2013. ***Invited Speaker***
25. University of South Florida, Department of Chemical and Biomedical Engineering, “Lessons from Nature: Tuning Mechanics in Polymeric Materials”, March 28, 2014. ***Invited Speaker***
26. Université Savoie, Campus Scientifique, France. “From multilayer films to nanoscale fibers: probing the connection between assembly and mechanics”, October 13, 2014. ***Invited Speaker***
27. Kent State University, Liquid Crystal Institute, “Hierarchical organization in polymer thin films – towards enhanced mechanics and barrier properties”, April 22, 2015. ***Invited Speaker***
28. Cornell University, Department of Chemical and Biomolecular Engineering, Symposium in Honor of Prof. Claude Cohen, “Exploiting the structural diversity in Nature as a path towards mechanical enhancement”, May 21, 2015. ***Invited Speaker***
29. CWRU Macro/Brazil Workshop, Rio de Janeiro, “Exploiting the structural diversity in Nature as a path towards mechanical enhancement”, July 11- July 13, 2015. ***Invited Speaker***
30. NCCR Bio-inspired Materials Annual Center Conference 2015, Murten-Muntelier, Switzerland, “Polymer-peptide hybrids: tuning mechanics via nature’s building blocks”, September 14, 2015. ***Invited Speaker***
31. Carnegie Mellon University, Department of Chemical Engineering, “Exploiting the structural diversity in Nature as a path toward mechanical enhancement”, September 29, 2015. ***Invited Speaker***
32. The Ohio State University, Department of Chemistry and Biochemistry, Columbus, OH. “Exploiting the structural diversity in Nature as a path towards mechanical enhancement”, February 8, 2016. ***Invited NOBCChE Speaker***
33. University of Delaware, Department of Chemical and Biomolecular Engineering, Newark, DE. “Exploiting the structural diversity in Nature as a path towards mechanical enhancement”, February 26, 2016. ***Invited Speaker***
34. MIT Lincoln Laboratory, Lincoln, MA. “Bio-inspired Approaches to Mechanical Tuning”, March 10, 2016. ***Invited Speaker***
35. University of Massachusetts, Amherst. Graduate Students for Diversity in Science and Engineering (GSDSE) “Bio-inspired Approaches to Mechanical Tuning”, April 21-22, 2016. ***Invited Speaker***
36. MIT Program in Polymers and Soft Matter (PPSM), Cambridge, MA. “Utilizing concepts of mechanics, transport, and assembly in Nature – towards responsive materials”, May 4, 2016. ***Invited Speaker***
37. MIT, ICEO MLK Diversity Luncheon, “Bio-inspired Mechanics”, May 18, 2016. ***Invited Speaker***
38. Wright Patterson AFRL, “Hygromorphs - transport and mechanics derived from electrospun and gel fiber constructs”, November 7, 2016. ***Invited Speaker***

39. Cleveland State University, Chemical and Biomedical Engineering Department, "Utilizing concepts of mechanics, transport, and assembly in Nature – towards responsive materials via fibrous architectures", January 26, 2017. **Invited Speaker**
40. Georgia Institute of Technology, Chemical and Biomolecular Engineering Department, "Towards responsive, fibrous materials via a bio-inspired framework", September 20, 2017. **Invited Speaker**
41. Florida State University-Florida Agricultural and Mechanical University, Chemical and Biomedical Engineering Department, "Towards responsive, fibrous materials via a bio-inspired framework", December 1, 2017. **Invited Speaker**
42. University of Delaware, Center for Molecular and Engineering Thermodynamics, "Transforming Layered Materials into Mechanically-robust Fibers and Hydrogels", April 16, 2018. **Invited Speaker**
43. Arizona State University, Chemical Engineering Department, "Manipulating Architecture and Mechanics via Bio-inspired Design: Gels, Fibers, and Composites", November 5, 2018. **Invited Speaker**
44. Gore Corporation, Newark, DE, January 16, 2019. **Invited Speaker**
45. Princeton University, Chemical and Biological Engineering, "Manipulating Architecture and Mechanics via Bio-inspired Design: Gels, Fibers, and Composites", April 24, 2019. **Invited Speaker**
46. Johns Hopkins University, Department of Chemistry, "Silk-inspiration: hierarchy, assembly, and mechanics in polyurea-polypeptide hybrids", May 7, 2019. **Invited Speaker**
47. University of Pennsylvania, Polymer Program. "Manipulating Architecture and Mechanics via Bio-inspired Design: Fibers, Gels, and Composites", November 22, 2019. **Invited Speaker**
48. Arkema, "Transforming Layered Materials into Mechanically-Robust Fibers and Hydrogels", January 16, 2020. **Invited Speaker**
49. Braskem, "Transforming Layered Materials into Mechanically-Robust Fibers and Hydrogels", October 9, 2020. **Invited Speaker**
50. University of Pennsylvania, Chemical and Biomolecular Engineering. "Bio-inspired pathways to manipulating architecture and mechanics in polymeric materials", December 9, 2020. **Invited Speaker**
51. Cornell University, Materials Science and Engineering. "TBD", April 22, 2020. **Invited Speaker**

Contributed Presentations since July 2007

1. American Institute of Chemical Engineers Annual Meeting; November 2009, Nashville, TN. *Speaker* – T.B. Abernathy; "Confinement of Elastomeric Block Copolymers via Forced Assembly"
2. American Institute of Chemical Engineers Annual Meeting; November 2009, Nashville, TN. *Speaker* – L.T.J. Korley; "Confinement-Induced Morphologies in Electrospun and Templated Block Copolymer/Polymer Derived Ceramic Precursor Nanocomposites"
3. American Institute of Chemical Engineers Annual Meeting; November 2009, Nashville, TN. *Speaker* – D.A. Stone; "Catalytic Thin Films for the Degradation of Organophosphates"

4. American Chemical Society Fall Meeting; August 2010, Boston, MA. *Speaker* – T.M. Burt; “Using Forced Assembly Co-extrusion to Confine the Self-assembly of Elastomeric Block Copolymers”
5. 43rd IUPAC World Chemistry Congress; August 4, 2011, San Juan, PR. *Speaker* – L.T.J. Korley; “Bio-inspired polymer nanocomposites”
6. American Institute of Chemical Engineers Annual Meeting; September 2011, Minneapolis, MN. *Presenter* – T.M. Burt; “Confinement of Elastomeric Block Copolymers via Forced Assembly”
7. XVIth International Congress on Rheology; August 5-10, 2012, Lisbon, Portugal. *Speaker* – L.T.J. Korley; “Hierarchically-assembled Multiblock Copolymers Inspired by Nature”
8. American Chemical Society National Meeting; August 2012, Philadelphia, PA. *Speaker* – J. Casey Johnson; “Bio-inspired, hierarchically-ordered peptidic polyurethane/ureas”
9. American Physical Society; March Meeting 2013, Baltimore, MD. *Speaker* – N. D. Wanasekara; “Utilizing Matrix-Filler Interactions in the Design of Stimuli-Responsive, Mechanically-Adaptive Electrospun Composites”
10. American Chemical Society National Meeting; April 2013, New Orleans, LA. *Speaker* – S. Monemian; “Superior Mechanical Properties of Bio-inspired Polymers through Supramolecular Chemistry”
11. American Physical Society; March Meeting 2014, Denver, CO. *Speaker* – N.D. Wanasekara; “Mechanical tuning of elastomers via peptide secondary structure”
12. Polymer Processing Society, June 2014, Cleveland, OH. *Speaker* – K.-S. Jang – “Thermal stability, miscibility, and self-assembly of liquid crystal/polymer composites for extrusion processing”
13. American Institute of Chemical Engineers, November 2014, Atlanta, GA. *Speaker* – A. M. Jordan; “An Examination of Post-Processing Orientation in Coextruded Poly (ϵ -caprolactone) Fibers”
14. National Technical Association 86th Annual Conference, September 2015, Cleveland, OH. *Speaker* – S.L.M. Alexander, “Synthesis, Modeling, and Rheological Investigation of Polydiacetylene Gels”
15. AIChE Annual Meeting, November 2016, San Francisco, CA. *Speaker* – Alex M. Jordan, “Fiber-Reinforced Hydrogels: In Situ fabrication from Coextruded Polymeric Composites”
16. 255th ACS Meeting, March 2018, New Orleans, LA. *Speaker* – Symone L.M. Alexander, “Molecular gel composites: From solution to solid-state reversibility”
17. 255th ACS Meeting, March 2018, New Orleans, LA. *Speaker* – Chase B. Thompson, “Role of interfacial interactions in the toughening of supramolecular interpenetrating network elastomers”
18. 258th ACS Meeting, Fall 2019, San Diego, CA. *Speaker* – C.B. Thompson, “Bio-inspired supramolecular interpenetrating networks: Impacts of supramolecular confinement on mechanics and stimuli-responsive behavior”
19. 258th ACS Meeting, Fall 2019, San Diego, CA. *Speaker* – K.M. Van de Voorde, “Multilayer coextrusion production of tunable bioresorbable polyester fibers for tissue engineering”

20. 258th ACS Meeting, Fall 2019, San Diego, CA. *Speaker* – Sara T. R. Velasquez, “Tailoring the mechanical properties of bioinspired amphiphilic polymer conetwork composites”

Poster Presentations

1. American Institute of Chemical Engineers Annual Meeting, November 18, 2008, Philadelphia, PA. *Presenter* – T.B. Abernathy; “Using Forced-Assembly Microlayer Co-extrusion to Produce Material Systems with Novel Properties”
2. Research ShowCASE; April 2009, Cleveland, OH. *Presenter* – T.M. Burt; “Confinement of Elastomeric Block Copolymers via Forced Assembly”
3. Central Regional Meeting of the American Chemical Society (CERMACS); May 2009, Cleveland, OH. *Presenter* – T.M. Burt; “Confinement of Elastomeric Block Copolymers via Forced Assembly”
4. Central Regional Meeting of the American Chemical Society (CERMACS); May 2009, Cleveland, OH. *Presenter* – J. Casey Johnson; “Hierarchically Designed Segmented Polyurethanes for High Performance Applications”
5. Central Regional Meeting of the American Chemical Society (CERMACS); May 2009, Cleveland, OH. *Presenter* – N.R. Wheeler; “Enhancing Toughness in a Crosslinked and Telechelic Supramolecular Polymer System”
6. Polymers Gordon Research Conference; June 23, 2009, South Hadley, MA. *Presenter* – L.T.J. Korley; “Mechanically-enhanced, Multi-functional Materials”
7. National Science Foundation Science and Technology Director’s Meeting; August 2010, Arlington, VA. *Presenter* – T.M. Burt; “Confinement of Elastomeric Block Copolymers via Forced Assembly”
8. American Physical Society; March Meeting 2011, Dallas, TX. *Speaker* - N. D. Wanasekara; “Hierarchical assembly of coil-rod-coil peptide-based copolymers”
9. ARVO 2011 Annual Meeting, Visionary Genomics; May 1, 2011. Fort Lauderdale, FL. *Presenter* – L.T.J. Korley; “Electrospun Polymer Micro- and Nanofibers as Biomaterials: Modulation of Optical Properties”
10. Polymers Gordon Research Conference; June 2011, South Hadley, MA. *Presenter* – J. Casey Johnson; Peptidic Coil-Rod-Coil Block Copolymers: Synthesis and Morphology”
11. PINO (Polymer Initiative of Northeast Ohio) Conference, Case Western Reserve University; June 2011, Cleveland, OH. *Presenter* – N.D. Wanasekara; “Hierarchical assembly of coil-rod-coil peptide-based copolymers”
12. American Physical Society (APS); March Meeting 2012, Boston, MA. *Presenter* - S. Monemian, “Confinement of Block Copolymer Nanocomposites within Nanoporous Templates”
13. Minority Faculty Development Workshop, March 15-18, 2012, Georgia Tech, Atlanta, GA. *Presenter* – L.T.J. Korley; “Bio-inspired Strategies for Mechanical Enhancement” (*Poster Winner*)
14. NSF STC Center for Layered Polymeric Systems Site Visit; April 2012, Cleveland, OH. *Presenter* – A.M. Jordan; “Confinement of Elastomeric Block Copolymers via Forced Assembly Co-extrusion”

15. PINO (Polymer Initiative of Northeast Ohio) Conference, Case Western Reserve University; June 2012, Cleveland, OH. *Presenter* – A.M. Jordan; “Confinement of Elastomeric Block Copolymers via Forced Assembly Co-extrusion”
16. MACRO Alumni Poster Session; September 29, 2012, Cleveland, OH. *Presenter* – S. Monemian; “Block Copolymer-Magnetite Composites”
17. 13th Annual Japanese-American Kavli Frontiers of Science Symposium, Beckman Center, Irvine, CA; November 30 - December 2, 2012. *Presenter* – L.T.J. Korley; “Lessons from Nature: Tuning Mechanics in Polymeric Systems”
18. PINO (Polymer Initiative of Northeast Ohio) Conference; June 2012, Cleveland, OH. *Presenter* – A.M. Jordan; “Forced assembly coextrusion as an approach to investigate confinement effects in phase separated block copolymers”
19. NSF STC Center for Layered Polymeric Systems Site Visit; April 2013, Cleveland, OH. *Presenter* – A. M. Jordan; “Forced assembly coextrusion as an approach to investigate confinement effects in phase separated block copolymers”
20. A PINO (Polymer Initiative of Northeast Ohio) Conference; June 2013, Cleveland, OH. *Presenter* – A.M. Jordan; “Forced assembly coextrusion as an approach to investigate confinement effects in phase separated block copolymers”
21. 248th ACS Meeting, August 2014, San Francisco, CA. *Presenter* – L.E. Matolyak; “All-organic ion-sensitive composites with electrospun nanofibers”
22. 253th ACS Meeting, Excellence in Graduate Polymer Research, April 2017, San Francisco, CA. *Presenter* – M.E. Leslie; “Bioinspired stimuli-responsive materials: Concurrent shape and color change in programmed cholesteric liquid crystal elastomers”
23. 253th ACS Meeting, April 2017, San Francisco, CA. *Presenter* – S.L.M. Alexander; “Tunable hygromorphism: Structural implications of low molecular weight gels and electrospun nanofibers in bilayer composites”
24. 255th ACS Meeting, March 2018, New Orleans, LA. *Presenter* – K.M. Van de Voorde; “Tailoring the mechanics and degradation of polyester fibers through manipulating structure and morphology”
25. Gore Poster Session, December 18, 2018, Newark, DE. *Presenter* – C.B. Thompson; “Chemical Gradients and Tunable Mechanics in *Nereis* Jaw Inspired Supramolecular Interpenetrating Networks”
26. GRC Polymers, June 9-14, 2019, Holyoke, MA. *Presenter* – C.B. Thompson; “Impacts of Morphology and Network Architecture on Stimuli-Responsive Behavior and Mechanics in Polychaete Jaw Inspired Supramolecular Interpenetrating Networks”
27. AIChE Annual Meeting, Orlando, FL. “Structural Guides: Influence of High Molecular Weight Polymer Additives on Low Molecular Weight Gels Towards Solid-State, Composites”, November 12, 2019

Workshops Taught/Organized

1. University of Minnesota/IPrime Toughness Workshop, Minneapolis, MN, “Bio-inspired Strategies for Mechanical Enhancement”, January 14, 2010. *Organizer*: Frank S. Bates.

2. "Personal Experiences during the Interview Process: *The Do's and Don'ts*", Future Faculty Workshop: Diverse Leaders of Tomorrow, July 19-21, 2010, Amherst, MA. *Organizer*: Gregory Tew (UMass Amherst)
3. "Promoting Diversity in Academia: The Importance of Mentoring", CWRU Power of Diversity Lecture Series, February 9, 2011. *Organizer*: Marilyn Mobley
4. "Personal Experiences during the Interview Process: *The Do's and Don'ts*", Future Faculty Workshop: Diverse Leaders of Tomorrow, June 19-21, 2011, Boston, MA. *Organizer*: Timothy Swager (MIT)
5. "Quick-start Professor", Path for Professorship, October 29, 2011; MIT, Boston, MA. *Organizer*: Dean Blanche Staton (MIT)
6. "Personal Experiences during the Interview Process: *The Do's and Don'ts*", Future Faculty Workshop: Diverse Leaders of Tomorrow, July 15-17, 2012; UCSB, Santa Barbara, CA. *Organizer*: Craig Hawker (UCSB)
7. "Developing Research Interests (Creating an Identity)", and "Getting Started - Running a Group", Future Faculty Workshop: Diverse Leaders of Tomorrow, July 15-17, 2013; GA Tech, Atlanta, GA. *Organizer*: Rosario Gerhardt (GA Tech)
8. "Developing Research Interests (Creating an Identity)", "Junior Faculty Panel Discussion" "Unwritten Rules of the Path to Professorship Panel Discussion", Future Faculty Workshop: Diverse Leaders of Tomorrow, 2014; MIT, Cambridge, MA. *Organizers*: Timothy Swager and Jeremiah Johnson (MIT)
9. "How to ask Research Questions", Polymer Physics GRS, July 12-13, 2014.
10. "Preparing Proposals", Future Faculty Workshop: Diverse Leaders of Tomorrow, 2016; University of Delaware, Newark, DE. *Organizer*: Thomas Epps (UD)
11. 3rd Annual Academic Research and Leadership Symposium, March 25-26, 2016, Boston, MA. Faculty Development Symposium, "High Impact Publishing"
12. "Promoting Diversity in Academia: The Importance of Mentoring and STEM", University of Massachusetts, Amherst, Graduate Students for Diversity in Science and Engineering (GSDSE), April 22, 2016.
13. Faculty Diversity Workshop, CWRU, Cleveland, OH, "The Road to Tenure", May 2, 2016.
14. Strategies for Success", Future Faculty Workshop: Diverse Leaders of Tomorrow, 2016; University of Delaware, Newark, DE. *Organizers*: Emily Pentzer (CWRU), LaShanda Korley (CWRU), Thomas Epps (UD)
15. 2018 Academic Research and Leadership Network, Faculty Development Symposium; Research Network Symposium, March 23-24, 2018, NSBE, Pittsburgh, PA. *Organizers*: Chekesha Watson (Cornell), LaShanda Korley (UD), Valencia Koomson (Tufts)

Funding

Funded Proposals (Completed)

ACS PRF Starter G

ACS PRF-47999-G7

"Hierarchically-assembled Segmented Polyurethanes: Mechanical Reinforcement in a Multi-phase Elastomeric System"

Amount: \$55,000 Project Period: May 1, 2008 – August 31, 2010

NSF BRIGE

NSF EEC-0824333

“BRIGE: Toughening Mechanisms in Supramolecular Networks with Photocrosslinkable” Moieties”

Amount: \$175,000 Project Period: August 15, 2008 – July 31, 2011

DOD-ARO; Natick Labs

W911QY-08-C-0142 (co-PI: Gary Wnek; co-PI: L.T.J. Korley)

“Toward Thin and Tactile, Chem/Bio Agent-Protective Gloves” (co-PI)

Amount: \$205,650 Project Period: October 1, 2008 – December 31, 2011

NSF REU

NSF DMR-0851620 (PI: David Schiraldi; co-PI: L.T.J. Korley)

REU: Research Experience for Undergraduates in Polymer Science & Engineering

Amount: \$270,000 Project Period: April 1, 2009 – March 31, 2012

DOD Defense University Research Instrumentation Program (DURIP)

W911NF-11-1-0343 (PI: Stuart Rowan; co-PI: L.T.J. Korley)

“Mini-Mechanical Testing Machine”

Amount: \$95,764 Project Period: August 18, 2011 – August 17, 2012

3M Nontenured Faculty Grant

“Advanced Materials: Combining self-assembly and confined-assembly”

Amount: \$45,000 Project Period: July 1, 2010 – June 30, 2013

CWRU Skin Diseases Research Center Pilot and Feasibility Program

NIH AR039750 (PI: Gary Wnek; co-PI: L.T.J. Korley)

“The Development of a Multilayered Drug Delivery System for Enhanced Administration of Silicon Phthalocyanine Photosensitizer (Pc4)”

Amount: \$30,900 Project Period: August 1, 2010 – July 31, 2011

NSLS Faculty/Student Research Support Program at BNL

“Confinement-induced Assembly of Block Copolymers in Multilayer Films: In-situ Deformation Behavior”

Amount: \$2,000 Project Period: September 1, 2010 – December 31, 2010

ACS PRF New Directions

“Biomimetic IPNs - harnessing the power of phase interactions”

Amount: \$100,000 Project Period: September 1, 2012 – August 31, 2015

Department of Education GAANN

“Polymer Research and Education for a Sustainable Economy: A Graduate Assistance in Areas of National Need (GAANN) Proposal” (PI: Alexander Jamieson; co-PI: L.T.J. Korley; L. Zhu)

Amount: \$659,625 Project Period: August 31, 2012 – August 30, 2015

NSF-STC: Center for Layered Polymeric Systems (CLiPS)

NSF DMR-0423914

“CLiPS: Confinement-induced assembly” (PI: Eric Baer; Investigator: L.T.J. Korley)

Amount: \$120,000/yr (to Korley) Project Period: July 1, 2007 – July 31, 2016

NSF CAREER Award

NSF DMR-0953236

“CAREER: Hierarchical Polymeric Hybrids – Lessons from Nature in Mechanical Behavior”

Amount: \$505,000 (including \$15,000 in REU Supplements) Project Period: August 1, 2010 – July 31, 2016

The Sherwin-Williams Company

“The Sherwin Williams - Case Western Reserve Partnership Fund”

Amount: \$125,000 Project Period: September 1, 2007 – August 30, 2014

NSF CMMI

“Nanofibers from Multilayered Forced Assembly Polymer Films” PI: Wnek, co-PI: Korley

Amount: \$299,963 Project Period: September 1, 2013 – August 31, 2017

DuPont Young Professor Grant

Amount: \$75,000 Project Period: September 1, 2011 – August 31, 2017

NSF REU (*change of PI*)

REU Site: Bioinspired Materials and Systems

Amount: \$ 358,444 Project Period: September 1, 2016 – August 31, 2019

Chemours

Optimization and Design of Next-Generation Low Surface Energy Fluoropolymer Coatings Technologies (PI: T. H. Epps, III; co-PIs: L.T.J. Korley; D. Burris)

Amount: \$170,694 Project Period: October 1, 2018 – September 30, 2019

NSF DMR Polymers

Harnessing the power of polymer phase interactions in the design of supramolecular interpenetrating networks

Amount: \$ 435,728 Project Period: July 1, 2016 – June 30, 2020

ACS PRF

Probing the Influence of the Assembly of Polymer Additives in the Reinforcement of Responsive Gels

Amount: \$110,000 Project Period: September 1, 2017 – August 31, 2020

Funded Proposals (Current)**PIRE: Bio-inspired Materials and Systems**

Amount: ~\$5,500,000 Project Period: September 1, 2017 – June 30, 2022

NSF

Growing Convergence Research (GCR): Life Cycle Management of Materials: Sustainable Biomass to Designer Polymer Systems (PI: T.H.Epps, III; Senior Personnel: L.T.J. Korley)

Amount: \$3,599,999 Project Period: December 1, 2019-November 30, 2024

Gore

Assessment of fiber-reinforced hydrogel systems: fundamental factors for effective enhancement (PI: Korley)

Amount: \$211, 584 Project Period: January, 2020 – June 30, 2021

NSF

CAS: Lignocellulosic building blocks towards high-performance and sustainable polysulfones and polyurethanes (PI: L.T.J. Korley)

Amount: \$511, 883 Project Period: June 1, 2020 – May 31, 2022

NSF

University of Delaware MRSEC - Center for Hybrid, Active, and Responsive Materials (CHARM) (PI: T. Epps, III; co-PI: L.T.J. Korley)

Amount: \$18,000,000 Project Period: September 1, 2020 – August 31, 2026

DOE

EFRC: Center for Plastics Innovation (PI: L.T.J. Korley)

Amount: \$11,650, 000 Project Period: August 1, 2020 – July 31, 2024

Accepted Beamline Proposals

"Confinement-induced Assembly of Block Copolymers in Multilayer Films: In-situ Deformation Behavior", BNL X27C, September - December 2010

"Confinement-induced Assembly of Block Copolymers in Multilayer Films: In-situ Deformation Behavior", BNL X27C, September - December 2011

"Confinement-induced Assembly of Block Copolymers in Multilayer Films: In-situ Deformation Behavior", BNL X27C, May - August 2012

"In-situ tensile deformation of nanofiber composites produced via forced-assembly coextrusion", BNL X27C, September - December 2013

"Investigation of the Structural Evolution of Self-assembling Nanoscale Fillers using In-situ SAXS/WAXS", Argonne National Lab, APS 12-ID-B, Run Cycle 2015-3

"Investigation of the Structural Evolution of Self-assembling Nanoscale Fillers using In-situ SAXS/WAXS", Argonne National Lab, APS 12-ID-B, Run Cycle 2016-1

Researchers Supervised

Ph.D. Students Completed

1. Tiffani M. Burt (nee Abernathy) – *Structure-property Relationships of Block Copolymers Confined via Forced-Assembly Co-extrusion for Enhanced Physical Properties*, 10/6/12 (Process Engineer at Sealed Air)
2. J. Casey Johnson – *Hierarchically-assembled Elastomers Inspired by Nature*, 6/16/14 (Research Investigator, DuPont – Circleville Research Lab)
3. Nandula D. Wanasekara – *Responsive Mechanics in Composite Materials* - 08/2014 (University of Moratuwa, Sri Lanka)
4. Keon-Soo Jang – *Exploring Mechanics via Structural Interplay in Supramolecular Networks, Melt-Extruded Fibers, and Liquid Crystal/Polymer Blends* - 10/7/15 (University of Suwon)
5. Seyedali Monemian* - *Tuning Mechanics of Bio-Inspired Polymeric Materials through Supramolecular Chemistry* – 5/2016
6. Alex M. Jordan – *Fiber-Composite In Situ Fabrication: Multilayer Coextrusion As An Enabling Technology* – 06/28/16 (Assistant Professor, Department of Engineering and Technology, University of Wisconsin-Stout)
7. Lindsay E. Matolyak – *Design of Hierarchy in Polymers via Synthesis and Fabrication Methods* - 09/7/17 (Research Chemist, PPG)
8. Symone L.M. Alexander – *Exploring Interfaces of Nanofiber Networks Functioning As Hierarchical Additives In Polymer Nanocomposites* - 06/14/18 (Assistant Professor, Auburn University, January 1, 2021)
9. Michelle Leslie Brannum – *Functional Performance of Liquid Crystal Elastomers* – 01/18/19 (Scientist – Air Force Research Laboratory)
10. Chase Thompson (MSEG) – *Utilizing Self-Assembly and Covalent Crosslinking to Control Mechanics and Stimuli-Response in Supramolecular Polymer Networks* 07/22/2020 (Post-doc, NIST)

M.S. Students Completed

1. Nicholas R. Wheeler – *Tunable Supramolecular Elastomers*, 9/9/11 (Ph.D. CWRU, 2017)
2. Bingrui Li – *Peptide PU Hybrid Networks*, 3/26/16 (Oak Ridge National Laboratory)
3. Ada Anyanwu – *Hygromorphic Composites*, 4/30/19
4. Akash Vaidya (CBE) – *Biologically-inspired Networks and Elastomers*, Expected May 2020

Ph.D. Students Current

University of Delaware

1. Kristen Van De Voorde (MSEG; co-advised, Jon Pokorski - UCSD) – *Functional Extruded Fiber Scaffolds and Hydrogels* 07/2021 (expected)
2. Daseul Jang (MSEG) – *Bio-inspired Polymer Peptide Hybrid Nanocomposites* 07/2022 (expected)
3. Jignesh Mahajan (MSEG, Co-advised T. H. Epps III) – *Biomass Components in Isocyanate-Free Polyurethanes* 07/2023 (expected)
4. Francis Klinecicz (MSEG, UNIDEL Fellow) – *Multifunctional Fibers* 07/2023 (expected)

5. Joanne Norris (MSEG, Co-advised J. Rabolt, B. Chase) – *Industrial Project* 07/2023 (expected)
6. Jessica Thomas (MSEG) – *Supramolecular Polymeric Systems* 07/2024 (expected)
7. Yu-Tai Wong (CBE) – *IPNs and Networks derived from Biomass* 07/2024 (expected)
8. Maida Mahmood (MSEG, Co-advised T. H. Epps III) – *Lignin-derived Catalysts and Polymeric Systems* 07/2024 (expected)

Visiting Researchers

1. Kevin van der Ploeg – Wageningen University, The Netherlands 2/2018-07/2018, *Supramolecular Semi-IPN Nanocomposites*

Postdoctoral Researchers

1. Linden Bolisay – Peptide-based Polyurethane Elastomers (2007-2008) *now at L'Garde, Inc., Senior Materials Engineer
2. Jong Keum – Scattering Phenomena in Confined BCP-Iron Oxide Nanocomposites and Confined BCP Multilayered Films (2009) *now at Oak Ridge National Laboratory, X-ray Scientist
3. David A. Stone – Thin, Breathable, and Protective Elastomeric Composites (2009 – 2010) *now at PPG, Research Chemist
4. Vidya Viswanath – Functional Fiber Scaffolds (2015-2016)* now at UNIFI Mfg., Inc., Materials Technology Scientist
5. Sourav Chatterjee – Peptide-hybrids toward functional gels and actuators (2018-2019)
6. Yanchun Tang – Polymer-reinforced gels (2018-)
7. Laura Beckett – Fiber-reinforced hydrogels and reconfigurable networks (2019-)

Undergraduate Students (current students in bold) (non-UD/CWRU researchers in italics)

1. Dr. Ajay Sapre – “Peptide Synthesis & Bioactive Elements for Skin Cancer Therapeutics” (2007 – 2010) * Ph.D. UC San Diego (Prof. Sadik Esener)
2. David H. Jones – “Thermally-stable Liquid Crystal Assembly in Multilayered Films” (2007-2011) * MS, Fall 2011 at Penn State (Prof. Mike Hickner)
- 3. Matthew Shaughnessy – “Peptide Assembly” (Fall 2007)**
4. Curtis Holmes – “Confined BCP Assembly” (Fall 2007)
5. Emily Hoffman – “Well-defined Networks” (Spring 2008)
6. Jessica Patz – “Study of the Mechanical and Rheological Behavior of Polyurethane Nanocomposites” (REU, Penn State Erie, Summer 2008) MS, CWRU (Prof. João Maia)
7. Sean Carr – “Polyurethane Elastomers” (Fall 2008)
8. Nirosha Wimalasena – “Deposition Methods for Tailoring Film Surfaces for Enzymatic Functionalization” (Spring 2009)

9. *Christopher Hendrix* – “Control of Peptide Secondary Structures in PBLG by Mixing with POSS functionalized with PBLG” (REU, Cornell University, Summer 2009 – funded ACS PRF Starter G)
10. *David Clark* – “Thermomechanical Analysis of Styrenic Block Copolymers” (REU, Delta State University, Summer 2009)
11. *Kristen Uitenham* – “Electrospinning Catalytic Mat for the Degradation for Chemical Warfare Agents” (REU, North Carolina Agricultural and Technical State University, Summer 2009)
12. *Sarah Jacobs* – “Supramolecular Elastomers – Synthetic Development” (2009-2011)
13. *Kenneth Keisel* – “Multilayered Elastomeric BCPs” (Fall 2009)
14. *Alex M. Jordan* – “Confinement-induced Assembly of BCPs and Dielectric Polymers in Multilayered Architectures” (2010 – 2011) *now Graduate Student at CWRU (Prof. L.T.J. Korley)
15. *Kristina Vaci* – “Supramolecular Oligomeric Toughening” (Spring 2010)
16. *Jesse Gadley* - “Bimodal Supramolecular Elastomers” (REU, Penn State Erie, Summer 2010) *now Graduate Student at CWRU (Prof. João Maia)”
17. *Mayo Adigun* – “Synthesis of PDMS-PBLG-PDMS” (REU, Fisk University, Summer 2010)
18. *Kyle Comeau* – “Self-assembling Nanofibers as Polymer Additives” (REU, Youngstown State University, Summer 2010)
19. *Ryan Boyan* – “Electrospun Polymer Composites” (Spring 2010)
20. *Carmen Kakish* - “Thin Film Behavior of Styrenic BCPs” (Fall 2011)
21. *Elena Stachew* – “Tailored Drug Delivery from Electrospun Composites” (2011 – 2012) * Ph.D. Candidate, Biomimickry Fellow, University of Akron
22. *Benjamin Yavitt* - “Tailored Drug Delivery from Electrospun Composites” (2011 – 2012) *Ph.D., UMass Amherst
23. *Gerardo Ortega* – “Small Molecule Gelators as Composite Fillers” (2011 – 2012) & “Supramolecular Toughening” (2013)
24. *Jonathan Breon* – “Polystyrene Reinforced with Highly Aligned Crosslinked Electrospun SBS Fibers” (REU, Penn State, Summer 2011)
25. *Isaiah Simpson* – “ Volume Swelling Mediated Morphological Control” (REU, GA Tech, Summer 2011-funded by NSF CAREER supplement)
26. *Jake Farkas* – “Analysis of Mechanical Properties of SEPS-PS and Synthesis of Polyurethane” (Fall 2011)
27. *William (Bill) Lenart* – “Connection between Crystal Orientation and Mechanics in PVDF-TFE Multilayered Films) *now Graduate Student, Fall 2013 at CWRU (Prof. Michael J.A. Hore)
28. *Symone Cook (Alexander)* – “The Development of Photoresponsive Filler for Use in EO-EPI Composites & Synthetic Variations toward Responsive Peptide Copolymers” (REU, Howard University, Summer 2012- funded by NSF CAREER supplement) *Ph.D. CWRU, 2018
29. *Nicholas Schindler* – “Liquid Crystal Synthesis and Assembly” (Fall 2012)
30. *Emily Vrbensky* – “Magnetic Nanorods and Nanotubes” (Spring 2013 – Spring 2014)

31. Tyler Marotta- “Effect of Strain Rate and Temperature on Elastic Modulus in PMMA/SEPS Multilayered Films” (2012 – 2013) *Ph.D. Candidate, University of Cincinnati
32. Rose Galley – “Strain Rate Effects in Confined BCP Multilayer Films” (REU, Purdue University, Summer 2013)
33. Shadi Ahmadmehrabi – “Gel Assembly and Fiber Formation” (Spring 2014) *Medical School, Cleveland Clinic
34. Evan Ostrowski – “Peptide hybrids” (Spring 2014) *Ph.D. Candidate, Princeton University
35. Jonathon Perry – “Soft Segment Synthesis for Bio-inspired Polyurethane/urea” (REU, Kentucky State University, Summer 2014)
36. Samuel Shiao – “Polymer dispersed Liquid Crystals” (Fall 2014)
37. Jenna Mancusco – “Quantification of Cross-link Density in Poly(acrylic acid)” (Spring 2015)
38. Thomas Cotey – “Polymer Composites” (Spring 2015 – Spring 2016)
39. Kristin Jones – “Electrospinning of peptide polymer hybrids” (REU Summer 2015 – NSF CAREER supplement, Fall 2015, Spring 2016) B.S. Chemical Engineering, *M.S. Candidate, Rutgers University
40. Helen Zhao – “Enhancing Gelator Mobility via Solvent Annealing” (Fall 2015)
41. Justin Lee – “Dye Elution Study of SSY in a Multi-component Composite System” (Fall 2015)
42. Jeremy Chai – “Nafion Actuation – Implications for PAA” (Spring 2015 – Fall 2015)
43. James Covello – “Supramolecular Networks” (Fall 2016 – Fall 2017)
44. Bailey Flint – “Biocompatible PEG Hydrogels Synthesized under Mild Conditions for Tissue Scaffold Engineering” (Spring 2017)
45. Brendan Cheng – “Mechanical and Moisture-Absorbing Properties of Electrospun Polyurethane Elastomer-Hydrogel Blends for Prosthetic Applications” (REU, Duke University, co-advised with Gary Wnek, Summer 2017)
46. Jonathan Petrozzini – “Blended Extruded Fibers” (Fall 2017; transferred to Cornell University)

University of Delaware

1. Mya Soukaseum – “Polymer-reinforced Gels” (CBE, UD, Volunteer, Summer 2019 -)
2. Sofia Rose Alfieri – “3D-printing of Hydrogels” (Biological Engineering, Purdue University, Volunteer, Summer 2019)
3. Erica Hild – “3D-printing of Hydrogels” (BME, UD, Volunteer, Winter 2020 – Spring 2020)
4. Juan Marcelo Hinojosa Davalos – “Supramolecular Nanocomposites” (CBE, UD, Volunteer, Winter 2020 – Spring 2020)
5. Will Quinta – “Bilayer modeling” (MSEG, UD, NSF PIRE REU, Summer 2020)
6. Eduardo Nombera – “Sustainable Material Additive Manufacturing (CBE/MSEG, Summer Scholars, Summer 2020)
7. Victoria Walters - “Lead Capture Membranes” (MSEG, UD, Volunteer, Fall 2020 -)

Undergraduate Senior Research Projects Supervised

UD

1. Mya Soukaseum – “Mechanics of Fiber-reinforced Hydrogels” (Fall 2020)

CWRU

2. David Jones - “Thermally-stable Liquid Crystal Assembly in Multilayered Films” (May 2011), (B.S. Engineering Physics)
3. Steven Vesole – “Antibiotic loaded Cyclodextrin Hydrogels” (Fall 2009, Advisor: H. von Recum)
4. Benjamin Yavitt - “Electrospinning Polypeptides: The Search for Secondary Structure Effect on Mechanical Properties” (Fall 2011 – Spring 2012)
5. Gerardo Ortega – “Tunable Fiber Diameter Through Variation in Co-Solvent Solution” (Spring 2014)
6. Emily Vrbensky – “UV-initiated Crosslinking of PEO and PETA for a Tunable Fibrous Scaffold” (Fall 2015)
7. Thomas Cotey – “Analysis of Low Molecular Weight Gel Composites” (Fall 2015)
8. Shadi Ahmadmehrabi – “Electrospinning Aligned Nanofiber Mats using Parallel Electrodes” (Spring 2016)
9. Laura Childers – “Electrospinning: Polymer-Peptide Hybrids and Drug Elution Constructs” (Spring 2017)
10. Alex Leong – “Gelator Incorporation in IPNs” (Fall 2017)

High School Students Supervised (current students in bold)

1. Edmund Lewis, East High School, Cleveland, OH (2007-2009)
2. Davon Johnson, East Technical High School, Cleveland, OH (2009-2010)
3. Gerardo Ortega, Cloverleaf High School, Lodi, OH (Summer 2009), B.S. Chemical Engineering, CWRU 2014
4. Tanautica Bush, Shaw High School, East Cleveland, OH (2011 – 2013)
5. Terrisa Nguyen, New West Technical High School, Cleveland, OH (2014-2016)
6. Sri Vidya Uppalapati, Beachwood High School, Beachwood, OH (2014-2016)
7. Catherine McCarthy, Laurel School, Shaker Heights, OH (2017)

Student Awards

1. Tiffani M. Burt, *Selected Participant* 2011 - 13th National School of Neutron and X-ray; Oak Ridge National Laboratory and Argonne National Laboratory
2. Tiffani M. Burt, Verhosek Travel Fund Award, Spring 2011
3. J. Casey Johnson, Verhosek Travel Fund Award, Spring 2011
4. Alex M. Jordan, *Selected Participant* 2013 - 15th National School of Neutron and X-ray; Oak Ridge National Laboratory and Argonne National Laboratory
5. Lindsay E. Matolyak, NSF Graduate Research Fellowship *Honorable Mention* 2013, 2014
6. Lindsay E. Matolyak, PPG Award, PINO, 2015
7. Symone L.M. Alexander, NSF Graduate Research Fellow, 2015
8. Michelle E. Leslie, DOD Science, Mathematics and Research for Transformation (SMART) Scholar, 2015
9. Kristen van der Voorde, NSF Graduate Research Fellow, 2017

10. Symone L.M. Alexander, Covestro Graduate Student Award Competition Winner, 2017
11. Symone L.M. Alexander, PMSE Graduate Student Travel Award, 2018
12. Francis Klinecicz, UNIDEL Award (5 yr), 2018
13. Chase B. Thompson, MSEG Outstanding Graduate Student Service Award, 2019
14. Chase B. Thompson, 2019 CHRNS Summer School on the Fundamentals of Neutron Scattering – Spectroscopy
15. Kris Van de Voorde - *Selected Participant* 2020 - National School of Neutron and X-ray; Oak Ridge National Laboratory and Argonne National Laboratory
16. Joanne Norris – DENIN Fellowship Award

Thesis, Qualifying Exam, and Thesis Proposal Committees

I have served or am currently serving on the following graduate student committees. The primary advisor and department are noted in parentheses.

University of Delaware

First Year Qualifying Exam

UD Chemical and Biomolecular Engineering

1. Robert O'Dea, 1st Yr Qualifier (Thomas Epps, III) 2018
2. Arjita Kulshreshtha, 1st Yr Qualifier (Arthi Jayaraman) 2018
3. Bader Jarai, 1st Yr Qualifier (Catherine Fromen) 2018
4. Mukund Kabra, 1st Yr Qualifier (Chris Kloxin) 2018
5. Kartik Bomb, 1st Yr Qualifier (Cathy Fromen, April Kloxin) 2019
6. Zijie Wu, 1st Yr Qualifier (Arthi Jayaraman) 2019
7. Haesoo Lee, 1st Yr Qualifier (Norman Wagner) 2019
8. Jordan Willie, 1st Yr Qualifier (Thomas Epps) 2019

Thesis Committee

UD Chemical and Biomolecular Engineering

1. Priyanka Ketkar (Thomas Epps, III) 2018
2. Josh Meisenhelter (Chris Kloxin) 2020
3. Mukund Kabra (Chris Kloxin) 2020
4. Zijie Wu (Arthi Jayaraman) 2020

UD Materials Science and Engineering

1. Colleen Murray (Erik Thostenson) M.S. Thesis 2020

CWRU Macromolecular Science and Engineering

1. William (Bill) Lenart (Michael J.A. Hore) Ph.D. March 2020
2. Susan Kozawa (Gary E. Wnek) Ph.D. April 2020

Senior Thesis Committee

1. Christopher Johnson (Self-Assembly of Tapered Brush-Coil Polymers on Surfaces in Dilute Solution; Arthi Jayaraman) 2019-2020, Second Reader

Qualifying Exam

UD Materials Science and Engineering

1. Gregory Peterson (Thomas Epps, III)
2. Keith Coasey (Michael Mackay)
3. Sai Patkar (Kristi Kiick)
4. Yao Tang (Darrin Pochan)

UD Biomedical Engineering

1. N'Dea Irvin-Choy (Emily Day, Jason Gleghorn)

CWRU

1. Vishwas Pethe, M.S. 2007 (Anne Hiltner and Eric Baer, Macromolecular Science and Engineering)
2. Charles Sing, M.S. 2008 (Christoph Weder, Macromolecular Science and Engineering)
3. Jill Kunzelman, Ph.D. 2009 (Christoph Weder, Macromolecular Science and Engineering)
4. Joseph Lott, Ph.D. 2010 (Christoph Weder, Macromolecular Science and Engineering)
5. Marlena Washington, Ph.D. 2010 (John Protasiewicz, Chemistry)
6. Mohit Gupta, Ph.D. 2010 (David Schiraldi, Macromolecular Science and Engineering)
7. Yeheng Wu, Ph.D. 2010 (Kenneth Singer, Physics)
8. Mark Burnworth, Ph.D. 2011 (Stuart Rowan, Macromolecular Science and Engineering)
9. Blayne McKenzie, Ph.D. 2011 (Stuart Rowan, Macromolecular Science and Engineering)
10. Jack Johnson III, Ph.D. 2011 (David Schiraldi, Macromolecular Science and Engineering)
11. Lauren Buerkle, Ph.D. 2011 (Stuart Rowan, Macromolecular Science and Engineering)
12. Deepak Langhe, Ph.D. 2011 (Eric Baer, Macromolecular Science and Engineering)
13. Yuxin Wang, Ph.D. 2012 (David Schiraldi, Macromolecular Science and Engineering)
14. Chuan-Yar (Yaya) Lai, Ph.D. 2012 (Eric Baer, Macromolecular Science and Engineering)
15. Joel Carr, Ph.D. 2013 (Eric Baer, Macromolecular Science and Engineering)
16. Shannon Armstrong, Ph.D. 2013 (Eric Baer, Macromolecular Science and Engineering)
17. Amanda Way, Ph.D. 2013 (Stuart Rowan, Macromolecular Science and Engineering)
18. Shannon Moore, Ph.D. 2013 (Melissa Knothe Tate, Biomedical Engineering)
19. Guojun Zhang, Ph.D. 2014 (Eric Baer, Macromolecular Science and Engineering)
20. Matt Herbert, Ph.D. 2015 (David Schiraldi, Macromolecular Science and Engineering)
21. Saide Tang, Ph.D. 2015 (Lei Zhu, Macromolecular Science and Engineering)

22. Alicia Smith-Train, PhD Candidate (Department of Sociology)
23. Si-Eun Kim, Ph.D. Candidate (Jon Pokorski, Macromolecular Science and Engineering)
24. Elvis Cudjoe, Ph.D. Candidate (Stuart Rowan, Macromolecular Science and Engineering)
25. Parker Lee, Ph.D. Candidate (Jon Pokorski, Macromolecular Science and Engineering)
26. Anuja Shirole, Ph.D. Candidate (Christoph Weder, Adolphe Merkle Institute, University of Fribourg, Switzerland)

Teaching Experience and Qualifications

UD

1. MSEG 667 Bio-inspired Materials: From Synthesis to Manufacturing (Fall, 2018)
2. MSEG 608 Introduction to Structure and Properties of Materials (Fall, 2019)

CWRU

Undergraduate (Required course for Polymers Track)

1. EMAC 355 Polymer Analysis Laboratory (Spring, 2008 - 2017)

Undergraduate

1. USSO 290 E – The Evolution of Running (Spring 2015)
2. FSNA 156 – The Chemistry, Physics, and Engineering of Chocolate (Fall, 2015 - 2016)

Graduate (Electives)

1. EMAC 413 Polymers Plus Green Chemistry and Engineering (Fall 2009, Spring 2011, Fall 2012, Fall 2014, Fall 2016, Fall 2017)
2. EMAC 422 Polymers Plus Microscopy (Fall 2008, Fall 2011, Fall 2013, Fall 2015)
3. EMAC 427 Polymers Plus a Sustainable Economy (Fall 2013) Co-taught

Professional Service

Membership in Professional Societies

1. American Chemical Society (2005 – present), Polymeric Materials Science and Engineering (PMSE) Division
2. American Physical Society (2010 – present), Division of Polymer Physics (DPOLY)
3. American Institute of Chemical Engineers (2005 – present), Materials Science and Engineering Division (MSED), Minority Faculty Forum, Minority Affairs Committee
4. The Philippine Polymer Society (PPS), Inaugural Honorary Member
5. Materials Research Society

Leadership Positions in Professional Societies

1. Member-at-Large American Chemical Society, PMSE Division, 2007-2009, 2012-2014; 2013-2015, 2016-2018, 2018-2020, 2020-2022 (*Elected Nationally*)
2. Founding Board Member, The Philippine Polymer Society (PPS)
3. Member, US National Committee for IUPAC

Conference/Program Committees

1. Organizing Committee, 2019 China-America FOE

2. Planning Group Member, 15th Annual US/Japan Kavli Frontiers of Science Symposium
3. Planning Group Member, 14th Annual US/Japan Kavli Frontiers of Science Symposium
4. Symposium Co-organizer, "Functional Materials", ACS Regional Meeting, May 2009
5. APS DPOLY, Session Organizer, "Polymer Networks, Gels, and Elastomers, March 2020

Workshops

National Science Foundation (NSF) Biomaterials Workshop 2012 – Thin Films and Interfaces (Invited Participant)
 National Science Foundation (NSF) Polymer Workshop 2016 –Societal Needs
 National Science Foundation (NSF) Design Engineering Materials Workshop 2016
 National Academies of Sciences, Engineering, and Medicine's draft report, "Frontiers of Materials Research: A Decadal Survey (Reviewer)

Chaired or Co-chaired Conference Sessions

1. *Discussion Leader*, Polymers Gordon Research Conference, 2009
2. Nanoscale Structure in Polymers II, AIChE 2009 Annual Meeting
3. Nanoscale Structure in Polymers III, AIChE 2009 Annual Meeting
4. Structure and Properties in Polymers I, 2010 AIChE Annual Meeting
5. Macromolecular, Supramolecular and Nanotechnology - General Oral Session III, 43rd IUPAC World Chemistry Congress, San Juan, PR. August 2011
6. Morphology and Transport in Charged Polymers, Block Copolymers, Membranes, and Films, APS, March 2011
7. Nanoscale Structure in Polymers I, AIChE 2011 Annual Meeting
8. Nanoscale Structure in Polymers I, AIChE 2012 Annual Meeting
9. Discussion Leader, Bioinspired Gordon Research Conference, 2014
10. MRS, SM8, Advanced Polymers, 2017
11. ACS PMSE Spring 2018: A) Advances in Macromolecular Science and Engineering: Symposium in Honor of David Schiraldi; B) ACS Award in Applied Polymer Science in Honor of Paula T. Hammond
12. *Discussion Leader*, Polymer Physics Gordon Research Conference, 2018

Editorial Position(s)/Advisory Boards/External Reviewer

Journal of Applied Physics, June 2018 – present (Associate Editor)
 NanoLetters, January 2020 - present
 ACS Applied Materials & Interfaces, January 2020-December 2021
 Macromolecules/ACS Macro Letters, January 1, 2012 to December 31, 2014
 Journal of Materials Chemistry B, January 1, 2014 – August 31, 2017
 Bioconjugate Chemistry, January 1, 2014 – August 31, 2018
 Scientific Reports, February 2015 – present
 WHYY Health + Science Advisory Group, March 2019 – June 2020
 External Reviewer, NC State University's Department of Textile Engineering, Chemistry, and Science, November 2019

Reviewer for Journals and Organizations

Journals

ACS Applied Materials & Interfaces, ACS Macro Letters, ACS Nano, ACS Omega, ACS Sustainable Chemistry and Engineering, Acta Biomaterialia, Advanced Materials, Biomacromolecules, Chemical Communications, Chemistry of Materials, Composites Science and Technology, Encyclopedia of Polymer Science and Technology, Journal of Applied Polymer Science, Journal of Biomedical Research: Part A, Journal of Materials Chemistry, Journal of Polymer Science Part A Polymer Chemistry, Langmuir, Macromolecular Chemistry and Physics, Macromolecules, Polymer, RSC Advances, Science, Soft Matter

Funding Agencies

National Science Foundation (NSF) Division of Materials Research (DMR); Chemical, Bioengineering, Environmental, and Transport Systems (CBET); Macromolecular, Supramolecular and Nanochemistry (MSN) Program, Research Infrastructure Improvement Initiative, Civil, Mechanical and Manufacturing Innovation (CMMI)

Department of Energy (DOE) Basic Energy Sciences (BES)

American Chemical Society (ACS) Petroleum Research Fund (PRF)

Defense Threat Reduction Agency (DTRA) Chemical and Biological Technologies Department

Technology Foundation STW, The Netherlands

U.S.-Israel Binational Science Foundation

National Organizations

Reviewer, National Academies of Sciences, Engineering, and Medicine's draft report, "Frontiers of Materials Research: A Decadal Survey"

University, College, and Department Service at UD

University

1. Chemical Safety and Infrastructure Working Group

College

1. College of Engineering, Strategic Formulation Initiative and Strategic Plan Steering Committee (Industrial Engagement)
2. *Sister 2 Sister* Mentoring event for STEM women graduate students and post-docs
3. College of Engineering, Guiding Coalition Committee

Department

1. CBE Selection Committee - Nominations for University Outstanding Thesis Prize
2. MSEG Faculty Search Committee, Chair 2018-2019
3. MSEG Graduate Committee

University, College, and Department Service at CWRU

University

1. President's Committee on Child Care Options, Vice Chair (September 2012 – 2015)
2. Women in Science and Engineering Roundtable (WISER), Committee Member, Appointed (August 2012 – 2017)
3. President's Advisory Council on Women (PACOW), Committee Member, Appointed. (August 2011 – May 2017)
4. Phi Sigma Rho Engineering Sorority, Faculty Mentor, (August 2009 – 2017)
5. Dean's Evaluation Committee (2017)
6. Swagelok Center for Surface Analysis of Materials Decision Group (2016-2017)

College

1. Strategic Performance Committee, Committee Member, Appointed (February 2012 – August 2012)
2. CSE Undergraduate Committee, Fall 2013 - 2017
3. Platform Leader, Science and Technology Innovations, NSF CLiPS (2011 – 2016)
4. Faculty Panel on How to Write a Successful NSF CAREER Proposal (2013)
5. Committee for Strategic Planning in Materials (2016-2017)
6. Launch Committee, Julie Renner and Ya-Ting Lao Fall 2016 – Fall 2017

Department

1. Faculty Search Committee, Chair Fall 2016
2. Thermal and X-ray Laboratory Facilities, Faculty Director (2009 – 2017)
3. REU, Co-Director (2009 – 2015)
4. REU, Director (2015 – 2017)
5. Undergraduate Macro Student Organization (ugMSO), Student Org Advisor (2012 – 2016)
6. Undergraduate Committee, Committee Member (2008 – Present), Chair (Fall 2013 – 2017)

Other External Service

1. **National Centre of Competence in Research (NCCR) Bio-Inspired Materials** (*Fribourg, Switzerland*), External Advisory Board Member (2014 – present)
2. **Future Faculty Workshop**, Invited Mentor, 2009 – 2018 (Carnegie Mellon, UMass Amherst, MIT, UCSB, GA Tech, UD, CWRU)
3. **Future Faculty Workshop**, Co-organizer, 2017, 2018, 2019 – Case Western Reserve University, Cleveland, OH; University of Delaware, Newark, DE; Princeton University, Princeton, NJ
4. **American Chemical Society**, Mentor in ACS Minority Scholars Program
5. **NSF CLiPS**, Polymer Envoy Advisor
6. **Citizens' Academy**, Introduced K – 1 underrepresented students at an urban charter school in the Cleveland area to polymer concepts. Introduced chemical engineering and plastics engineering to 4th grade students. Spring 2009, Fall 2010
7. **Many Faces of STEM**, Exposed Cleveland middle school students to role models (minority professors and administrators in CSE & CAS) in STEM disciplines and demonstrated key concepts in STEM. October 2008, November 2009

8. **Sister 2 Sister**, Engaged underrepresented, female undergraduates & graduate students in a roundtable discussion of concerns and strategies related to pursuing advanced degrees in STEM disciplines. 2008 - present
9. **McNair's Scholar 'Master Class' Speaker**, Discussed career paths and the importance of mentoring. July 2018