

# **KAREN I. WINEY**

## **HAROLD PENDER PROFESSOR OF ENGINEERING AND APPLIED SCIENCE**

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My research explores the structure-processing-morphology-property relationships in polymers, particularly ionomers and other associating polymers, polymerized ionic liquids, polymer nanocomposites, polymers in confinement, and block copolymers. We have extensive experience with structural characterization, particularly X-ray scattering, and routinely incorporate computation and simulation methods into our studies. We have new research activity in polymer upcycling.

I am a strategic, collaborative, and creative leader envisioning, designing and implementing pathways to expand and improve engineering education and research within an inclusive community of scholars. While serving a department chair, my initiatives furthered the priorities of Penn Engineering and the University of Pennsylvania, capitalized on existing resources, garnered additional resources, and identified new opportunities.

### **LEADERSHIP EXPERIENCE**

### **EDUCATION**

### **WORK EXPERIENCE**

### **HONORS AND AWARDS**

### **FUNDING SUMMARY**

### **MEMBERSHIPS**

### **SCIENTIFIC PUBLICATIONS**

#### **BOOK CHAPTERS AND OTHER PUBLICATIONS**

#### **REFEREED CONFERENCE PROCEEDINGS**

#### **PUBLICATIONS IN REFEREED JOURNALS**

#### **PATENTS**

#### **LICENSING AGREEMENTS**

### **RECENT INVITED RESEARCH LECTURES (2011 - )**

### **RESPONSIBILITIES AT THE UNIVERSITY OF PENNSYLVANIA**

### **PROFESSIONAL ACTIVITIES BEYOND PENN**

### **RESEARCH GROUP**

August 3, 2021

## **LEADERSHIP EXPERIENCE**

**Department Chair, Materials Science and Engineering  
University of Pennsylvania, Philadelphia, PA**

**7/16 – 6/21**

### **Strategic Planning**

- Developed a departmental strategic plan and wrote a comprehensive report for our successful decadal external departmental review in April 2018.
- Expanded the graduate group from just the primary and secondary faculty to include > 45 additional faculty members across campus with the goal of more fully representing materials research at Penn (Spring 2019).
- Successfully recruited three (and one pending) faculty, including the first Professor of Practice. In conjunction with one of these hires, secured a multimillion-dollar investment from across the university for two new transmission electron microscopes to be housed in the Singh Nanotechnology Center's Nanoscale Characterization Facility. (Estimated value \$8.5M)
- Initiated an awards nomination process within the department for faculty and staff. Resulted in numerous internal and external recognitions.
- Initiated a multi-faceted media strategy for the department that involved hiring a new staff member. Oversee all departmental communications and launched the department's first electronic newsletter (now published 6 times per year).
- Envisioned and lead a renovation of departmental offices and related spaces to meet multiple objectives including optimizing space use, improving the visual appearance for visitors, promoting scientific accomplishments, and adding a women's restroom. (Completed April 2018.)

### **Fundraising**

- Established the first endowed lectureship in the department by initiating the department's first fundraising effort in conjunction with celebrating a colleague's 50<sup>th</sup> anniversary at Penn.

### **Education Innovation**

- Appointed a new Undergraduate Chair and adjusted teaching assignments in our freshman and sophomore courses, which lead to a significant increase in undergraduate enrollment.
- Oversaw an undergraduate curriculum revision that included transforming the one-course of required laboratory instruction into three half-courses of lab. Hired a full-time lecturer in conjunction with the new curriculum, as well as a student-lead Maker Space.
- Prepared and supported faculty and staff for ABET accreditation review in September 2017.

### **Diversity, Equity and Inclusion**

- Redesigned the process for faculty hiring to include explicit criteria and video/phone interviews prior to on-campus interviews with the goal of increasing faculty diversity. Leading a school-wide discussion about best practices for faculty hiring within Penn Engineering.
- Introduced three professional development seminars per academic year for our masters and doctoral students to address issues related to laboratory safety, career development, and diversity and inclusion.
- Served as a confidant and mentor to women engineering graduate students, professors, and department chairs at Penn and across the country.

**Penn Director, Nanotechnology Institute and Energy Commercialization Institute**      **12/11 – 6/14**  
**University of Pennsylvania, Philadelphia, PA**

The NTI and ECI were jointly directed by Benjamin Franklin Partnerships, Drexel University and the University of Pennsylvania and funded by the Commonwealth of Pennsylvania as a means to accelerate translational research and spur economic growth in the region. Prior to my tenure, the legislature decided to phase out the funding for these institutes.

- Initiated a new program for regional companies to subsize their initial use of facilities at participating universities (Penn, Drexel, Lehigh). Launched this program by organizing a full-day event (January 2013) at Penn for > 80 participants that included 21 companies from small start-ups to major international corporations, several of which became new facility users. A similar workshop is now held annually by the Singh Nanotechnology Center, a member of the National Nanotechnology Infrastructure Network.
- Regular duties included soliciting faculty to submit proposals focused on translational research, recommending projects for funding, and completing reports.

**Chair, Division of Polymer Physics**      **3/13 – 3/14**  
**American Physical Society**

While serving in the chair-line (3/11 – 3/15), the division wrestled with the contentious issue of how best to accommodate soft matter within the APS.

- Immediately upon becoming chair of the division, I called for more frequent meetings for the executive committee, so that contradictory views could be shared and respectfully discussed.
- Worked with the executive director of the APS to convene a meeting at APS headquarters to consider competing directions forward at which the clear consensus was to form a new topical group in the area of soft matter, which recently became a division.

**Chair, Polymer Physics**      **June 2010**  
**Gordon Research Conference**

When I assumed this position, the meeting had just been placed on attendance watch, which is the first step toward cancellation.

- Built a scientific program that reflected the breadth of the field and selected outstanding speakers, many of whom had not previously spoken at this GRC.
- Dramatically increased funding from external sources: 2008 – \$8,320; 2010 – \$19,500.
- Capitalized on funding from GRC to promote broader participation: 2008 – \$0; 2010 – \$3,650.
- Welcomed a record number of participants to the conference: 2008 – 108; 2010 – 168.
- Many of my strategies for increasing participation in the conference continue to be used.

**EDUCATION**

B.S. Materials Science and Engineering, Cornell University, Ithaca, NY	1985
M.S. Polymer Science and Engineering, University of Massachusetts, Amherst, MA	1989
Ph.D. Polymer Science and Engineering, University of Massachusetts, Amherst, MA	1991

**WORK EXPERIENCE****University of Pennsylvania, Philadelphia, PA**

Harold Pender Professor Engineering and Applied Science	7/21 –
Professor, Materials Science and Engineering	7/05 –
Secondary appointment in Chemical and Biomolecular Engineering	1992 –
Department Chair, Materials Science and Engineering	7/16 – 6/21
TowerBrook Foundation Faculty Fellow	10/13 – 6/21
Penn Director, Nanotechnology Institute and Energy Commercialization Institute	12/11 – 6/14
Associate Professor, Materials Science and Engineering	7/00 – 6/05
Assistant Professor, Materials Science and Engineering	7/92 – 6/00
Member: Vagelos Institute for Energy Science and Technology (VIEST)	2017 –
Member: Laboratory for Research on the Structure of Matter (LRSM) (NSF MRSEC)	1992 –

**Visiting Scholar**

Materials Research Laboratory, University of California, Santa Barbara	1/15 – 5/15
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**Visiting Miller Research Professor**

Miller Institute, University of California, Berkeley	9/14 – 12/14
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**Macromolecules**

Associate Editor	7/10 – 6/14
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**E. I. du Pont de Nemours and Company, Experimental Station, Wilmington, DE**

Visiting Scientist	9/05 – 12/05
Visiting Scientist	9/04 – 12/04

**AT&T Bell Laboratories, Murray Hill, NJ**

Postdoctoral Member of Technical Staff with Dr. R. G. Larson	2/91 – 6/92
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**University of Massachusetts, Amherst, MA**

Research Assistant, NSF Graduate Student Fellow	9/86 – 1/91
<i>“Morphologies and Morphological Transitions in Binary Blends of Diblock Copolymer and Homopolymer”</i> with Prof. E. L. Thomas, Polymer Science and Engineering	

**Eastman Kodak Research Laboratories, Rochester, NY**

Research Scientist	8/85 – 8/86
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**Cornell University, Ithaca, NY**

Undergraduate Research Assistant, various laboratories Prof. Richard Dick, Steven Sass, David Kohlstedt, Ed Kramer)	10/81 – 5/85
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**AT&T Bell Laboratories, Murray Hill, NJ**

Undergraduate Research Experience	Summer 2014
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**HONORS AND AWARDS**

<b>Fellow</b> , Division of Polymer Chemistry, American Chemical Society	2021
Covestro Distinguished Lecturer, University of Southern Mississippi	2021
<b>Braskem Award, Materials Engr. and Sci. Division, Am. Inst. of Chemical Engineering</b>	2020
“For outstanding contributions to the understanding and advancement of polymer nanocomposites and ion-containing polymers”	
<b>Mark J. Herman Senior Scholar Award</b> , POLY Division, American Chemical Society	2020
Distinguished Speaker, Dept of Chemical & Materials Eng., New Jersey Institute of Tech.	2018
Keynote Speaker, PMSE Symposium, American Chemical Society	2018
Plenary Session, American Institute of Chemical Engineers	2017
DB Robinson Distinguished Lecture, University of Alberta	2017
Trustees Council of PennWomen <b>Award for Undergraduate Advising</b>	2017
Plenary Speaker, 2017 Joint CNMS-SNS User Meeting	2017
Plenary Lecture, 5th International Symposium Frontiers in Polymer Science	2017
IUPAC Lecture, Chemistry Department, University of Montreal	2017
Plenary Speaker, Macromolecular Innovation Institute Conference	2016
Plenary Speaker, ECNP International Conf. on Nanostructured Polymers & Nanocomposites	2016
<b>Fellow</b> , Polymeric Material Science and Engineering, American Chemical Society	2016
“For outstanding contributions to the understanding of polymer nanocomposites and ion-containing polymers through quantitative scattering and microscopy studies.”	
<b>Visiting Miller Research Professor</b> , University of California, Berkeley	9 – 12/2014
Dow Lecture, Northwestern University	2013
<b>Fellow</b> , Materials Research Society	2013
“For outstanding contributions to the understanding of polymer nanocomposites and ion-containing polymers through rigorous and insightful experiments; distinguished leadership in the materials community.”	
<b>George H. Heilmeier Faculty Award for Excellence in Research</b> , Penn Engineering	2012
"For innovative methods in the fabrication & processing of polymer-based nanotube composites"	
Chair, Polymer Physics, Gordon Research Conference	2010
Special Creativity Award, National Science Foundation	2009-2011
<b>Fellow</b> , American Physical Society	2003
“For exquisite application of electron microscopy and X-ray scattering to the determination of the microstructure of polymers and to elucidating the roles of microdomains geometry on polymer properties.”	

Cosslett Award, Best Invited Paper, Microscopy and Microanalysis Meeting	2000
National Science Foundation Young Investigator Award (forerunner to NSF CAREER)	1994-1999
Materials Research Society Graduate Student Award	1989
National Science Foundation Graduate Student Fellowship	1987-1990
Lockheed Fellowship, University of Massachusetts Fellowship	1987
Tau Beta Pi	1984
Alpha Sigma Mu (honor society for materials science and engineering)	1984
McMullen Scholar, Cornell University (merit)	1981-1985

### FUNDING SUMMARY

The Winey Research Group has been supported by various governmental agencies, as well as private foundations and industry. Highlights include continual single-investigator funding from NSF since 1993, member of the NSF-MRSEC at the University of Pennsylvania since 1992, co-director of an Army-sponsored MURI (2007-2013), and four NSF-DMR-Major Research Instrumentation grants.

Federal Agencies (cumulative number of grants): ARO (7), DOE (5), NIH/NIMH (2), NSF (26), ONR (3), other (3).

Non-Federal Sources: Dupont (3), Kraton Polymers (5), Nanotechnology Institute (4), Petroleum Research Foundation (3), University Research Foundation (6), ExxonMobil (5), other (9).

User Grants: Argonne National Laboratory, Brookhaven National Laboratory, Lawrence Berkeley National Lab, National Institute of Standards and Technology, Oak Ridge National Laboratory (1 current), Sandia National Laboratory (2 current)

The group is currently supported by the following (August 2021):

- Department of Energy – Basic Energy Sciences – Materials Science – Neutron Scattering
- ExxonMobil (Riggleman, PI)
- ExxonMobil (Osuji, PI)
- National Science Foundation – DMR – Polymers Program
- National Science Foundation – ENG – Chemical, Bioengineering, Environmental, and Transport
- National Science Foundation – PIRE (Composto, PI)

### MEMBERSHIPS

- Advancement Association for the Advancement of Science
- American Chemical Society: Division of Polymer Chemistry and Division of Polymeric Materials Science and Engineering
- American Institute of Chemical Engineers
- American Physical Society: Division of Polymer Physics, Soft Matter Topical Group
- Materials Research Society

## SCIENTIFIC PUBLICATIONS

## PUBLICATIONS IN REFEREED JOURNALS

## PATENTS

## LICENSING AGREEMENTS

## PUBLICATIONS IN REFEREED JOURNALS (\* corresponding author)

Google Scholar on August 3, 2021: h-index – 80 (54 since 2016)

1. D. J. Kinning\*, K. I. Winey, E. L. Thomas, *Macromolecules* **21**, 3502-3506, 1988.  
“Structural transitions from spherical to nonspherical micelles in blends of poly(styrene-butadiene) diblock copolymer and polystyrene homopolymers.”  
<https://doi.org/10.1021/ma00190a027>
2. K. I. Winey\*, E. L. Thomas, L. J. Fetters, *J. Chem. Physics* **95**, 9367-9375, 1991.  
“Ordered morphologies in binary blends of diblock copolymer and homopolymer and characterization of their intermaterial dividing surfaces.”  
<https://doi.org/10.1063/1.461164>
3. K. I. Winey\*, E. L. Thomas, L. J. Fetters, *Macromolecules* **24**, 6182-6188, 1991.  
“The swelling of lamellar diblock copolymer by homopolymer: The influences of homopolymer concentration and molecular weight.”  
<https://doi.org/10.1021/ma00023a020>
4. K. R. Shull\*, K. I. Winey, E. L. Thomas, E. J. Kramer, *Macromolecules* **24**, 2748-2751, 1991.  
“Segregation of block copolymer micelles to surfaces and interfaces.”  
<https://doi.org/10.1021/ma00010a017>
5. K. I. Winey\*, E. L. Thomas, L. J. Fetters, *Macromolecules* **25**, 422-428, 1992.  
“The ordered bicontinuous double diamond morphology in diblock copolymer/ homopolymer blends.”  
<https://doi.org/10.1021/ma00027a065>
6. K. R. Shull\*, K. I. Winey, *Macromolecules* **25**, 2637-2644, 1992.  
“Homopolymer distributions in lamellar copolymer/homopolymer blends.”  
<https://doi.org/10.1021/ma00036a013>
7. K. I. Winey\*, E. L. Thomas, L. J. Fetters, *Macromolecules* **25**, 2645-2650, 1992.  
“Isothermal morphology diagrams for binary blends of diblock copolymer and homopolymer.”  
<https://doi.org/10.1021/ma00036a014>
8. K. I. Winey\*, S. S. Patel, R. G. Larson, H. Watanabe, *Macromolecules* **26**, 2542-2549, 1993.  
“Interdependence of shear deformation and block copolymer morphology.”  
<https://doi.org/10.1021/ma00062a024>
9. R. G. Larson\*, K. I. Winey, S. S. Patel, H. Watanabe, R. Bruinsma, *Rheologica Acta* **32**, 245-253, 1993.  
“The rheology of layered liquids: lamellar block copolymers and smectic liquid layers.”  
<https://doi.org/10.1007/BF00434188>

10. K. I. Winey\*, S. S. Patel, R. G. Larson, H. Watanabe, *Macromolecules* **26**, 4373-4375, 1993.  
“Morphology of a lamellae diblock copolymer aligned perpendicular to the sample plane: Transmission electron microscopy and small angle X-ray scattering.”  
<https://doi.org/10.1021/ma00068a047>
11. K. I. Winey\*, D. A. Gobran, Z. Xu, L. J. Fetters, E. L. Thomas, *Macromolecules* **27**, 2392-2397, 1994.  
“Compositional dependence of the Order-Disorder Transition in Diblock Copolymers.”  
<https://doi.org/10.1021/ma00087a005>
12. M. E. Galvin\*, S. Heffner, K. I. Winey\* *Macromolecules* **27**, 3520-3524, 1994.  
“Deuterium effects on blend miscibility of an alternating copolymer and a homopolymer.”  
<https://doi.org/10.1021/ma00091a012>
13. S. S. Patel\*, R. G. Larson, K. I. Winey, H. Watanabe, *Macromolecules* **28**, 4313-4318, 1995.  
“Shear orientation and rheology of a lamellar polystyrene-polyisoprene block copolymer.”  
<https://doi.org/10.1021/ma00116a038>
14. A. Faldi, R. J. Composto\*, K. I. Winey\*, *Langmuir* **11**, 4855-4861, 1995.  
“Unstable polymer bilayers. 1. Morphology of dewetting.”  
<https://doi.org/10.1021/la00012a044>
15. B. S. Pinheiro, D. A. Hajduk, S. M. Gruner, K. I. Winey\*, *Macromolecules* **29**, 1482-1489, 1996.  
“Shear stabilized bi-axial texture and lamellar contraction in both diblock copolymer and diblock copolymer / homopolymer blends.”  
<https://doi.org/10.1021/ma951284o>
16. K. I. Winey\*, M. L. Berba M. E. Galvin, *Macromolecules* **29**, 2868-2877, 1996.  
“Ternary phase diagrams of poly(styrene-co-methyl methacrylate), poly(methyl methacrylate), and polystyrene: Monomer sequence distribution effect and encapsulation.”  
<https://doi.org/10.1021/ma951434v>
17. M. Sikka, L. F. Cerini, S. S. Ghosh, K. I. Winey\*, *J. Poly. Sci.: Part B: Polym. Phys.* **34**, 1443-1449, 1996.  
“Melt intercalation of polystyrene in layered silicates.”  
[https://doi.org/10.1002/\(SICI\)1099-0488\(199606\)34:8<1443::AID-POLB7>3.0.CO;2-T](https://doi.org/10.1002/(SICI)1099-0488(199606)34:8<1443::AID-POLB7>3.0.CO;2-T)
18. D. L. Polis, K. I. Winey\*, *Macromolecules* **29**, 8180-8187, 1996.  
“Kink bands in a lamellar diblock copolymer induced by large amplitude oscillatory shear.”  
<https://doi.org/10.1021/ma960831i>
19. M. Sikka, N. N. Pellegrini, E. A. Schmidt, K. I. Winey\*, *Macromolecules* **30**, 445-455, 1997.  
“Modifying a polystyrene / poly(methyl methacrylate) interface with poly(styrene-co-methyl methacrylate) random copolymers.”  
<https://doi.org/10.1021/ma961302h>
20. Q. Pan, K. I. Winey, H. H. Hu, R. J. Composto\*, *Langmuir* **13**, 1758-1766, 1997.  
“Unstable polymer bilayers. 2. The effect of film thickness.”  
<https://doi.org/10.1021/la960757x>



21. K. B. Arbogast, K. L. Thibault, B. S. Pinheiro, K. I. Winey, S. S. Margulies\*, *J. Biomechanics* **30**, 757-759, 1997.  
“A high-frequency shear device for testing soft biological tissues.”  
[https://doi.org/10.1016/S0021-9290\(97\)00023-7](https://doi.org/10.1016/S0021-9290(97)00023-7)
22. N. N. Pellegrini, M. Sikka, S. K. Satija, K. I. Winey\*, *Macromolecules* **30**, 6640-6644, 1997.  
“Segregation of a random copolymer from miscible blends.”  
<https://doi.org/10.1021/ma970586j>
23. D. L. Polis, K. I. Winey\*, *Macromolecules*, **31**, 3617-3625, 1998.  
“Controlling kink band morphology in block copolymers: Threshold criteria and stability.”  
<https://doi.org/10.1021/ma971839a>
24. B. S. Pinheiro, K. I. Winey\*, *Macromolecules*, **31**, 4447-4456, 1998.  
“Mixed parallel-perpendicular morphologies in diblock copolymer systems correlated to the linear viscoelastic properties of the parallel and perpendicular morphologies.”  
<https://doi.org/10.1021/ma980186a>
25. J. H. Laurer, K. I. Winey\*, *Macromolecules*, **31**, 9106-9108, 1998.  
“Direct imaging of ionic aggregates in Zn-neutralized poly(ethylene-co-methacrylic acid) copolymers.”  
<https://doi.org/10.1021/ma981503g>
26. D. Kuhlmann-Wilsdorf\*, K. I. Winey, *Journal of Applied Physics*, **85**, 6392-6399, 1999.  
“Does plastic deformation proceed near thermodynamic equilibrium? The case of shear induced kink bands in lamellar diblock copolymers.”  
<https://doi.org/10.1021/ma960831j>
27. D. L. Polis, S. D. Smith, N. J. Terrill, A. J. Ryan, D. C. Morse, K. I. Winey\*, *Macromolecules*, **32**, 4668-4676, 1999.  
“Shear-induced lamellar rotation observed in a diblock copolymer by in situ small angle X-ray scattering.”  
<https://doi.org/10.1021/ma981796d>
28. J. H. Laurer, B. S. Pinheiro, D. L. Polis, K. I. Winey\*, *Macromolecules*, **32**, 4999-5003, 1999.  
“Persistence of surface-induced alignment in block copolymers upon large amplitude oscillatory shear processing.”  
<https://doi.org/10.1021/ma982019g>
29. D. L. Polis, A. J. Ryan, S. D. Smith, K. I. Winey\*, *Physical Review Letters*, **83**, 2861-2864, 1999.  
“Nature of viscoelasticity in lamellar diblock copolymers: Contraction correlated to strain localization.”  
<https://doi.org/10.1103/PhysRevLett.83.2861>
30. N. N. Pellegrini, M. Sikka, S. K. Satija, K. I. Winey\*, *Polymer*, **41**, 2701-2704, 2000.  
“Random copolymer / homopolymer interfacial widths as a function of copolymer composition.”  
[https://doi.org/10.1016/S0032-3861\(99\)00607-2](https://doi.org/10.1016/S0032-3861(99)00607-2)

31. N. N. Pellegrini, K. I. Winey\*, *Macromolecules*, **33**, 73-79, 2000.  
“Asymmetric miscibility in random copolymer / homopolymer blends: Monomeric size and polarity.”  
<https://doi.org/10.1021/ma991151t>
32. K. I. Winey\*, J. H. Laurer, B. P. Kirkmeyer, *Macromolecules*, **33**, 507-513, 2000.  
“Ionic aggregates in partially Zn-neutralized poly(ethylene-co-methacrylic acid) ionomers: Shape, size, and size dispersity.”  
<https://doi.org/10.1021/ma991374j>
33. L. Qiao, K. I. Winey\*, *Macromolecules*, **33**, 851-856, 2000.  
“Evolution of kink bands and tilt boundaries in block copolymers at large shear strains.”  
<https://doi.org/10.1021/ma991303k>
34. N. N. Pellegrini, R. J. Composto\*, K. I. Winey\*, *Journal of Polymer Science: Polymer Physics Edition*, **38**, 1547-1552, 2000.  
“Investigating polymer blend miscibility with forward recoil spectrometry.”  
[https://doi.org/10.1002/\(SICI\)1099-0488\(20000601\)38:11<1547::AID-POLB150>3.0.CO;2-L](https://doi.org/10.1002/(SICI)1099-0488(20000601)38:11<1547::AID-POLB150>3.0.CO;2-L)
35. R. Haggemueller, H. H. Gommans, A. G. Rinzler, J. E. Fischer, K. I. Winey\*, *Chemical Physics Letters*, **330**, 219-225, 2000.  
“Aligned single-wall carbon nanotubes in composites by melt processing methods.”  
[https://doi.org/10.1016/S0009-2614\(00\)01013-7](https://doi.org/10.1016/S0009-2614(00)01013-7)
36. J. Hwang, H. H. Gommans, A. Ugawa, H. Tashiro, R. Haggemueller, K. I. Winey, J. E. Fischer, D. B. Tanner, A. G. Rinzler\*, *Physical Review B: Rapid Communications*, **62**, R13 310-313, 2000.  
“Polarized spectroscopy of aligned single-wall carbon nanotubes.”  
<https://doi.org/10.1103/PhysRevB.62.R13310>
37. B. P. Kirkmeyer, R. A. Weiss, K. I. Winey\*, *J. Polym. Sci.: Polym. Phys.*, **39**, 477-483, 2001.  
“Spherical and vesicular ionic aggregates in Zn-neutralized sulfonated polystyrene ionomers.”  
[https://doi.org/10.1002/1099-0488\(20010301\)39:5<477::AID-POLB1021>3.0.CO;2-M](https://doi.org/10.1002/1099-0488(20010301)39:5<477::AID-POLB1021>3.0.CO;2-M)
38. L. Qiao, K. I. Winey\*, D. C. Morse\*, *Macromolecules*, **34**, 7858-7867, 2001.  
“Dynamics of kink bands in layered liquids: Theory and *in situ* SAXS experiments on a block copolymer melt.”  
<https://doi.org/10.1021/ma010611r>
39. B. P. Kirkmeyer, A. Taubert, J.-S. Kim, K. I. Winey\*, *Macromolecules*, **35**, 2648-2653, 2002.  
“Vesicular ionic aggregates in poly(styrene-co-methacrylic acid) ionomers neutralized with Cs.”  
[https://doi.org/10.1002/1099-0488\(20010301\)39:5<477::AID-POLB1021>3.0.CO;2-M](https://doi.org/10.1002/1099-0488(20010301)39:5<477::AID-POLB1021>3.0.CO;2-M)
40. L. Qiao, A. J. Ryan, K. I. Winey\*, *Macromolecules*, **35**, 3596-3600, 2002.  
“A correlation between lamellar contraction and applied shear stress in diblock copolymer.”  
<https://doi.org/10.1021/ma011109+>

41. S. J. Siegel\*, K. I. Winey, R. E. Gur, R. H. Lennox, D. Ikeda, N. Gandhi, W.-X. Zhang, *Neuropsychopharmacology*, **26**, 817-823, 2002.  
“Surgically implantable long-term antipsychotic delivery systems for the treatment of schizophrenia.”  
[https://doi.org/10.1016/S0893-133X\(01\)00426-2](https://doi.org/10.1016/S0893-133X(01)00426-2)
42. A. Taubert, K. I. Winey\*, *Macromolecules*, **35**, 7419-7426, 2002.  
“Imaging and X-ray microanalysis of poly(ethylene-*ran*-methacrylic acid) ionomer melt neutralized with sodium.”  
<https://doi.org/10.1021/ma0203952>
43. R. M. Walters, K. E. Sohn, K. I. Winey\*, R. J. Composto\*, *Journal of Polymer Science: Part B: Polymer Physics Edition*, **40**, 2833-2841, 2002.  
“Local acid environments in poly(ethylene-*ran*-methacrylic acid) ionomers.”  
<https://doi.org/10.1002/polb.10333>
44. B. P. Kirkmeyer, R. Puetter, A. Yahil, K. I. Winey\*, *J. Polym. Sci.: Polym. Phys.*, **41**, 319-326, 2003.  
“Deconvolution of scanning transmission electron microscopy images of ionomers.”  
<https://doi.org/10.1002/polb.10383>
45. A. Taubert, J. D. Wind, D. R. Paul, W. J. Koros\*, K. I. Winey, *Polymer*, **44**, 1881-1892, 2003.  
“Novel polyimide ionomers: CO<sub>2</sub> plasticization, morphology, and ion distribution.”  
[https://doi.org/10.1016/S0032-3861\(03\)00052-1](https://doi.org/10.1016/S0032-3861(03)00052-1)
46. R. Haggemueller, W. Zhou, J. E. Fischer, K. I. Winey\*, *J. Nanoscience and Nanotechnology*, **3**, 105-110, 2003.  
“Production and characterization of polymer nanocomposites with highly aligned single-walled carbon nanotubes.”  
<https://doi.org/10.1166/jnn.2003.173>
47. A. Taubert, J. H. Ferris, K. I. Winey\*, *Microscopy Today*, **11**, 36-38, 2003.  
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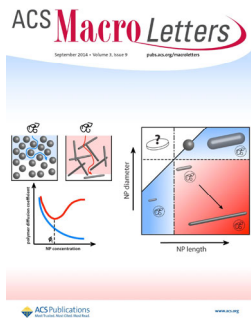
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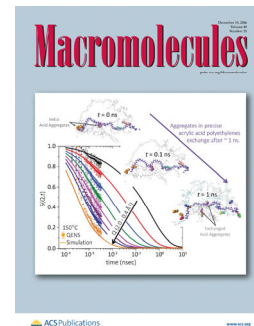
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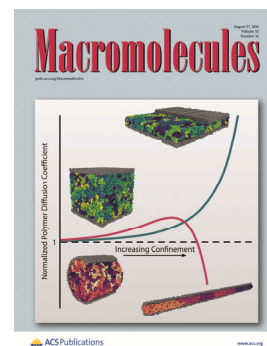
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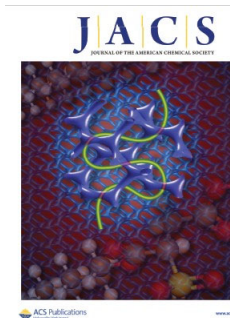
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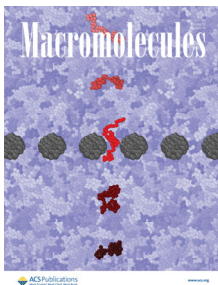


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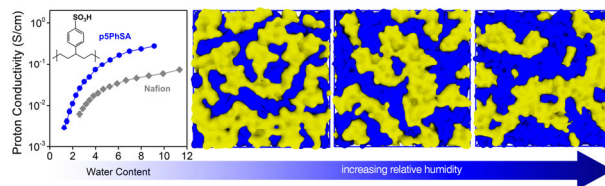
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“Drug-containing implants and methods of use thereof.”
8. S. J. Siegel, K. I. Winey, U.S. Patent 8,741,327 issued June 3, 2014.  
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14. S. J. Siegel, K. I. Winey, U.S. Patent 9,439,905 issued September 13, 2016.  
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“Drug-containing implants and methods of use thereof.”
16. Y. A. Elabd, K. I. Winey, Y. Ye, J.-H. Choi, T.-S. S. Sharick, U.S. Patent 9,806,314 issued October 31, 2017.  
“Polymerized ionic liquid block copolymers as battery membranes.”
17. S. J. Siegel, K. I. Winey, U.S. Patent 9,895,447 issued February 20, 2018.  
“Drug-containing implants and methods of use thereof.”
18. S. J. Siegel, K. I. Winey, U.S. Patent 9,925,268 issued March 27, 2018.  
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20. Y. A. Elabd, K. I. Winey, Y. Ye, J.-H. Choi, T.-S. S. Sharick, U.S. Patent 10,122,001 issued November 6, 2018.  
“Polymerized ionic liquid block copolymers as battery membranes.”
21. S. J. Siegel, K. I. Winey, U.S. Patent 10,736,965 issued August 11, 2020.  
“Risperidone biodegradable implant.”

#### **LICENSING AGREEMENTS**

NuPathe: Concept for a long-term drug delivery implant.

JJ X-ray: Designs for an environmental sample chamber for X-ray scattering experiments.

CSIRO: Polymerized ionic liquid block copolymers (exclusive license). Includes the following patents: 8,853,286; 9,365,688; 9,806,314; 10,122,001. (June 2021)

**RECENT INVITED RESEARCH LECTURES (2011 - )****2011**

136. 2<sup>nd</sup> Int'l Conference on Multifunctional, Hybrid and Nanomaterials (March) Strasbourg, France  
"Electrical conductivity and switching in polymer nanocomposites"
137. Spring Meeting, American Chemical Society (March) Anaheim, CA  
"Morphology of polymerized ionic liquid polymers" in Cooperative Research Award symposium
138. Spring Meeting, American Chemical Society (March) Anaheim, CA  
"Precise poly(ethylene-*co*-acid) copolymers and ionomers produced via metathesis polymerization" in Functionalized Polyolefins and ROMP Materials symposium
139. Materials Science and Engineering, University of Tennessee (April) Knoxville, TN  
"Polymer Nanocomposites: Polymer Diffusion, Electrical Conductivity and Resistive Switching"
140. Milliken Chemical (May) Spartanburg, SC  
"Research Overview: Polymer nanocomposites and ion-containing polymers"
141. CINT, Sandia National Laboratory (June) Albuquerque, NM  
"Morphologies in Acid- and Ion-Containing Polymers"
142. Materials Science and Engineering, Pennsylvania State University (August) State College, PA  
"Morphologies in Precise Acid- and Ion-Containing Polymers"
143. Composites at Lake Louise (October) Alberta, Canada  
"Electrical Properties in Polymer Nanocomposites"

**2012**

144. Mechanical Engineering and Materials Science, Rice University (January) Houston, TX  
"Morphologies in Precise Acid- and Ion-Containing Polymers"
145. Naval Research Laboratory (January) Washington, D.C.  
"Electrical Properties in Polymer Nanocomposites"
146. DSM (January) Geleen, The Netherlands  
"Structure - Property Relationships in Acid- & Ion-Containing Polymers"
147. Department of Physics and Astronomy, University of Sheffield (January) Sheffield, UK  
"Electrical Properties in Polymer Nanocomposites"
148. Chemical Engineering, Yale University (February) New Haven, CT  
"Electrical Properties in Polymer Nanocomposites"
149. March Meeting, American Physical Society (February - March) Boston, MA  
"Morphologies in Semi-Crystalline Precise Acid-Containing Polymers"
150. Central Research and Development, Dupont (March) Wilmington, DE  
"Structure - Property Relationships in Acid- & Ion-Containing Polymers"
151. Chemical and Biomolecular Engineering Dep't, University of Delaware (March) Newark, DE  
"Electrical Properties in Polymer Nanocomposites"
152. **George H. Heilmeier Faculty Award for Excellence in Research** (March) Philadelphia, PA  
"Electrical Properties in Polymer Nanocomposites"
153. Thermal Analysis Forum of the Delaware Valley (March) Philadelphia, PA  
"Electrical Properties in Polymer Nanocomposites"
154. Spring Meeting, American Chemical Society (March) San Diego, CA  
"Morphologies in Precise Acid- and Ion-Containing Polymers"
155. Chemical and Biological Department, Drexel University (April) Philadelphia, PA  
"Electrical Properties in Polymer Nanocomposites"
156. IUPAC World Polymer Congress (June) Blacksburg, VA  
Advanced Macromolecular Materials: Structure and Function by Design Symposium  
"Correlating Morphology and Ion Transport in Polymerized Ionic Liquids"
157. Chemical Engineering, University of Texas (November) Austin, TX  
"Electrical Properties in Polymer Nanocomposites"

**2013**

158. **Dow Lecture**, Materials Science and Eng., Northwestern University (February) Evanston, IL  
“Electrical Properties in Polymer Nanocomposites”
159. Materials Science and Engineering, University of Michigan (March) Ann Arbor, MI  
“Recent Progress in the Morphology of Precise Copolymers, Ionic Conductivity in Ionomers, and Electrical Conductivity in Polymer Nanocomposites”
160. Chemical Heritage Foundation, Joseph Priestley Society (May) Philadelphia, PA  
“Nanotechnology in the Philadelphia Region”
161. Fall Meeting, American Chemical Society (September) Indianapolis, IN  
“Remarkable Morphologies in Precise Acid- and Ion-Containing Copolymers”
162. Chemical Engineering, Columbia University (October) New York, NY  
“Electrical Properties and Polymer Dynamics in Polymer Nanocomposites”

**2014**

163. Colloidal, Macromolecular & Polyelectrolyte Solutions, Gordon Res. Conf. (Feb.) Ventura, CA  
“Remarkable Morphologies in Acid- and Ion-Containing Polymers”
164. March Meeting, American Physical Society (March) Denver, CO  
“Polymer Diffusion in the Presence of Immobile Nanoparticles”
165. Spring Meeting, American Chemical Society (March) Dallas, TX  
“Direct Comparison of Experiments and Simulations of Precise Acid Copolymers and Ionomers”
166. ChemVet Meeting, ACS Delaware Section (May) Wilmington, DE  
“Nanotechnology in the Philadelphia Region”
167. Chemical and Biomolecular Engineering, University of California, Berkeley (Sept.) Berkeley, CA  
“Morphologies, Mechanical Properties and Chain Dynamics in Precise Copolymers”
168. Center for Integrated Nanotechnologies (CINT), Sandia National Lab. (Sept.) Santa Fe, NM  
“Morphologies and Dynamics in Precise Copolymers”
169. Miller Institute, University of California, Berkeley (Oct.) Berkeley, CA  
“Moving Ions in Plastics”

**2015**

170. Macromolecular Materials, Gordon Research Conference (Jan.) Ventura, CA  
“Polymer Dynamics in Nanocomposites and Other Confined Spaces”
171. Materials Science and Engineering, Texas A&M University (Jan.) College Station, TX  
“Polymer Nanocomposites: Polymer Diffusion and Electrical Conductivity ”
172. Materials Research Outreach Program Symposium at the MRL (Feb.) Santa Barbara, CA  
“Morphologies and Mechanical Properties in Precise Functional Copolymers”
173. Chemical Engineering, Seoul National University (Feb.) Seoul, South Korea  
“The Advantages of Precision in Functional Copolymers”
174. Chemical Engineering, KAIST (Feb.) Daejeon, South Korea  
“The Advantages of Precision in Functional Copolymers”
175. Chemistry and Chemical Engineering, POSTECH (Feb.) Pohang, South Korea  
“The Advantages of Precision in Functional Copolymers”
176. Dillon Medal Symposium for Chinedum Osuji (Mar.) San Antonio, TX  
“Polymer Dynamics under Cylindrical Nano-Confinement”
177. Chemical Engineering, Caltech (Apr.) Pasadena, CA  
“The Advantages of Precision in Functional Copolymers”
178. IBM Almaden Research Center (Jun.) San Jose, CA  
“Impact of Nanoconfinement on Polymer Diffusion in Polymer Nanocomposites and Cylindrical Pores”

179. Total Cray Valley (Jun.) Exton, PA  
“Precise Acid- and Ion-Containing Copolymers: New Morphologies and New Insights about Mechanical Properties”
180. Structure and Dynamics of Polymer Nanocomposites (Jun.) Montpellier, France  
“Polymer Melts inside Nanoscale Cylindrical Pores: Chain Conformations, Polymer Diffusion and Local Dynamics”
181. Solvay (Jun.) Lyon, France  
“The Advantages of Precision in Functional Copolymers”
182. Fall Meeting, American Chemical Society; Ionic Liquids in Polymer Design (Aug.) Boston, MA  
“Molecular Weight Effects on Ionic Conductivity in Diblock Copolymer/Ionic Liquid Mixtures”
183. Fall Meeting, American Chemical Society; Adv. Materials for High Performance Boston, MA  
“The Advantages of Precision in Functional Copolymers: Mechanical Properties and Chain Dynamics”
184. Fall Meeting, American Chemical Society; J. Polymer Science Innovation Prize Boston, MA  
“Polymer Melts inside Nanoscale Cylindrical Pores: Chain Conformations, Polymer Diffusion and Local Dynamics”
185. Fall Meeting, American Chemical Society; Celebrating 50 Years of PSE at UMass Boston, MA  
“Evolution of Polymer Science – A Personal Perspective”
186. Chemical and Biomolecular Engineering, Ohio State University (Sept.) Columbus, OH  
“Precise Acid- and Ion-Containing Polymers: New Morphologies and New Insights about Mechanical Properties”
187. Chemical and Biomolecular Engineering, Cornell University (Sept.) Ithaca, NY  
“Precise Acid- and Ion-Containing Polymers: New Morphologies and New Insights about Mechanical Properties”
188. Neutron Scattering on Nano-Structured Soft Matter Workshop (Oct.) Starnberger See, Germany  
“Morphology and dynamics in precise acid copolymers and ionomers”
189. Army Research Laboratory (October) Aberdeen, MD  
“Precise Acid- and Ion-Containing Copolymers: New Morphologies and New Insights about Mechanical Properties”
190. Composites at Lake Louise (Nov.) Alberta, Canada  
“Polymer Melts inside Nanoscale Cylindrical Pores: Chain Conformations, Polymer Diffusion and Local Dynamics”
191. 14<sup>th</sup> Pacific Polymer Conference; Hybrids Symposium (Dec.) Kauai, Hawaii  
“Polymer Melts inside Nanoscale Cylindrical Pores: Chain Conformations, Polymer Diffusion and Local Dynamics”
192. 14<sup>th</sup> Pacific Polymer Conference; Polyolefins Symposium (Dec.) Kauai, Hawaii  
“Precise Acid- and Ion-Containing Polymers: New Morphologies and New Insights about Mechanical Properties”
- 2016**
193. Kramer Memorial Conference, University of California (Jan.) Santa Barbara, CA  
“Precise Polymers that Control Nanoscale Morphologies & Properties”
194. ExxonMobil (Jan.) Clinton, NJ  
“Precise Polyethylenes: New Morphologies and Mechanical Properties”
195. Technical Community Organization Lecture, Dow (Jan.) Collegeville, PA  
“Using Polymer Structure to Control Nanoscale Morphologies, But What About Properties?”
196. Kraton Polymers (Feb.) Houston, TX  
“NEXAR: A Literature Review”
197. Dep’t of Chemical & Biomolecular Engineering, University of Houston (Feb.) Houston, TX  
“Precise Polymers that Control Nanoscale Morphologies & Properties”

198. NIST Materials Science and Engineering Colloquium (Mar.) Gaithersburg, MD  
“Precise Polymers that Control Nanoscale Morphologies & Properties”
199. Spring Meeting, American Chemical Society; 6th Joint Symposium on Polymers with the  
Chinese Chemical Society, Polymer Division (Mar.) San Diego, CA  
“Chain Dynamics in Polymer Nanocomposites”
200. March Meeting, American Physical Society (Mar.) Baltimore, MD  
“Polymer Melt Diffusion inside Nanoscale Cylindrical Pores”
201. Milliken (Apr.) Spartanburg, SC  
“Precise Polyethylenes that Control Nanoscale Morphologies and Properties”
202. Penn Engineers without Borders (Apr.) Philadelphia, PA  
“New Materials for Next Generation Batteries”
203. Philadelphia Science Festival, Science 2066 (Apr.) Philadelphia, PA  
“New Materials for Next Generation Batteries”
204. ExxonMobil (May) Baytown, TX  
“Precise Polyethylenes that Control Nanoscale Morphologies & Properties”
205. Fall Meeting, American Chemical Society, PMSE Division (Aug) Philadelphia, PA  
“Direct Comparisons of Experiments & Atomistic Molecular Dynamics of Precise Polyethylenes”
206. **Plenary Speaker**, ECNP Internat’l Conf. on Nanostructured Polymers & Nanocomposites (Sep.)  
“Polymer Melts in Nanoscale Confinement: Polymer Nanocomposites  
and Cylindrical Nanopores” Rome, Italy
207. Dep’t of Chemical and Biomolecular Engineering, Tulane University (Oct.) New Orleans, LA  
*Faculty Networking Seminar Program*  
“Precise Polyethylenes that Control Nanoscale Morphologies & Properties”
208. **Plenary Speaker**, Macromolecular Innovation Institute Conference (Oct.) Blacksburg, VA  
“Precise Polyethylenes that Control Nanoscale Morphologies & Properties”
- 2017**
209. **Featured Speaker** (Mar.) Lisbon, Portugal  
5<sup>th</sup> International Conference on Multifunctional, Hybrid and Nanomaterials  
“Polymer Melts in Nanoscale Confinement: Polymer Nanocomposites & Cylindrical Nanopores”
210. Dillon Medal Symposium for Moon Jeong Park (Mar.) New Orleans, LA  
“Unusual Semi-Crystalline Morphology of a Precise Carboxylic Acid Polyethylene”
211. Spring Meeting, Am. Chem. Soc. 50<sup>th</sup> Anniversary of Macromolecules (Apr.) San Francisco, CA  
“How Advances in Polymer Synthesis have Enabled Advances in Polymer Physics”
212. Polymer Science and Engineering, University of Massachusetts (April) Amherst, MA  
“Precise Polymers that Control Nanoscale Morphologies & Properties”
213. Penn Polymer Program, University of Pennsylvania (April) Philadelphia, PA  
“Precise Polyethylenes that Control Nanoscale Morphologies & Properties”
214. High Polymer Research Group Conference (Apr.) Pott Shrigley, United Kingdom  
“Precise Functional Polymers: New Morphologies and New Insights to Properties”
215. **IUPAC Lecture in Chemistry**, Universite de Montreal (May) Montreal, Canada  
“Precise Associating Polyethylenes that Control Nanoscale Morphologies & Properties”
216. **Plenary Lecture** (May) Seville, Spain  
5<sup>th</sup> International Symposium Frontiers in Polymer Science  
“Precise Associating Polymers: New Insights and Strategies for Designing Advanced Materials”
217. Ned Thomas’s 70<sup>th</sup> Birthday Symposium, Rice University (June) Houston, TX  
“First Model Materials and Structure, Then...”
218. **Plenary Speaker**, 2017 Joint CNMS-SNS User Meeting (Aug.) Oak Ridge, TN  
“Neutron Scattering in Polymer Nanocomposites”
219. Dep’t of Chemistry & Biochemistry, University of South Carolina (Sept.) Columbia, SC  
“Precise Associating Polyethylenes that Control Nanoscale Morphologies & Properties”

220. **DB Robinson Distinguished Lecture Series**, University of Alberta (Oct.) Alberta, Canada  
“Precise Polyethylenes that Control Nanoscale Morphologies & Properties”
221. **Keynote Speaker**, 2nd International Conference on Innovative Engineering Materials  
Conference (Oct.) Philadelphia, PA  
“Precise Polyethylenes that Control Nanoscale Morphologies & Properties”
222. **Plenary Session**, American Institute of Chemical Engineers (Nov.) Minneapolis, MN  
“Layered Morphologies in Precise Acid-Containing Polyethylenes: Hierarchical Structures and  
the Implications on Properties”
223. Polymer College Seminar, University of Akron (Nov.) Akron, OH  
“Precise Polyethylenes that Control Nanoscale Morphologies & Properties”
224. Materials Science and Engineering Department, Georgia Tech (Dec.) Atlanta, GA  
“Precise Polyethylenes that Control Nanoscale Morphologies & Properties”
225. Materials Science and Engineering Department, Univ. of Illinois (Dec.) Urbana-Champagne, IL  
“Precise Polyethylenes that Control Nanoscale Morphologies & Properties”

**2018**

226. Dept of Chemical and Biological Engineering, Rensselaer Polytechnic Institute (Jan.) Troy, NY  
“Precise Polyethylenes that Control Nanoscale Morphologies & Properties”
227. Dept of Materials Science and Engineering, University of Pittsburgh (Feb.) Pittsburgh, PA  
“Precise Polyethylenes that Control Nanoscale Morphologies & Properties”
228. March Meeting, American Physical Society (Mar.) Los Angeles, CA  
“Precise Associating Polymers Exhibit New Morphologies and Promising Properties.”
229. **Keynote Speaker**, PMSE Symposium, American Chemical Society (Mar.) New Orleans, LA  
“Proton Transport through Lamellar Water Channels in Chain-Folded Precisely Sulfonated  
Polyethylene”
230. Conference on Deformation, Yield and Fraction in Polymers (Mar.) The Netherlands  
“Morphology Evolution During Tensile Deformation of Precise Acid- and Ion-Containing  
Polyethylenes”
231. Dept of Chemical & Biomolecular Engineering, Univ. of Notre Dame (Apr.) Notre Dame, IN  
“Precise Polyethylenes that Control Nanoscale Morphologies & Properties”
232. Dept of Materials Science & Engineering, Ohio State University (Apr.) Columbus, OH  
“Precise Polyethylenes that Control Nanoscale Morphologies & Properties”
233. Dept of Materials Science & Engineering, Lehigh University (Apr.) Bethlehem, PA  
“Precise Associating Polyethylenes Exhibit New Morphologies and Promising Properties”
234. University of Grenoble, CNRS-CEA (Jun.) Grenoble, France  
“Precise Polyethylenes that Control Nanoscale Morphologies & Properties”
235. **Distinguished Lecture**, Dept of Chemical & Materials Engineering, New Jersey Institute of  
Technology (Nov.) Newark, NJ  
“Precise Polyethylenes that Control Nanoscale Morphologies & Properties”

**2019**

236. University of Konstanz (Jan.) Konstanz, Germany  
“Precise Polyethylenes that Control Nanoscale Morphologies & Properties”
237. Spring Meeting, Transport in Polymer Membranes Symposium, ACS Meeting (Apr.) Orlando, FL  
“Ion Transport in Precise Polymers with layered and Disordered Aggregates”
238. Dept of Materials Science, University of Maryland (May) College Park, MD  
“Precise Polymers that Control Nanoscale Morphologies & Transport Properties”
239. Dept of Materials Science, Northwestern University (May) Evanston, IL  
“Precise Polymers that Control Nanoscale Morphologies & Transport Properties”
240. Telluride Science Research Conference – Polymer Physics (July) Telluride, CO  
“Nanostructured Ionic Aggregates for Proton and Ion Transport”

241. Advances in Polyolefins, POLY American Chemical Society (Sept.) Sonoma, CA  
 “Precise Polyethylenes that Control Nanoscale Morphologies & Properties”
242. **MSE Distinguished Seminar**, Univ. of Central Florida (Oct) Orland, FL  
 “Self-Assembly of Periodic Polyethylene Sulfonated: Layered, Bicontinuous Gyroid and Hexagonal Nanoscale Morphologies for Transport”

**2020**

243. Dept of Materials Science, University of Delaware (Feb.) Wilmington, DE  
 “Self-Assembly of Segmented Polyolefin-Based Single Ion Conductors: New Morphologies and Ion Conductivity”
- x March Meeting, American Physical Society (Mar. - postponed) Denver, CO  
 “Combining Advanced Experimental Methods to Characterization of Polymer Nanocomposites”
- x Spring Meeting, American Chemical Society (Mar. - canceled) Philadelphia, PA  
 “Nanoparticle, Segmental and Chain Dynamics in Polymer Nanocomposites”
- x Spring Meeting, American Chemical Society (Mar. - postponed) Philadelphia, PA  
 Celebrating 50 Years of Polymer Science at ExxonMobil (POLY)  
 “Precise Microstructures in Ionomers: New Morphologies for Improved Properties”
- x Spring Meeting, American Chemical Society (Mar. - postponed) Philadelphia, PA  
 Macromolecular Chemistry at the Dawn of Its Second Century (POLY/PMSE)  
 “Self-Assembly of Segmented Polyolefin Ionomers: New Morphologies and Ion Conductivity”
- Functional Polyolefin Symposium (PMSE)
244. Polymer Physics and Polymer Spectroscopy Webinar (July) remote  
 “Self-Assembly of Segmented Polyolefin Ionomers: New Morphologies and Ion Conductivity”
245. Braskem, Innovation and Technology Division (July) remote  
 “Self-Assembly of Segmented Polyolefin Ionomers: New Morphologies and Ion Conductivity”
- x Division of Polymer Chemistry, American Chemical Society (Aug. - postponed)  
 “The Role of Ionic Aggregate Morphology in Single-Ion Conductors on Ion Mobility”
246. Dept of Chemistry, University of North Carolina (Sept.) remote  
 “Precise Polymer Microstructures: New Nanoscale Morphologies for Improved Properties”
247. MRSEC, Brandeis University (Oct.) remote  
 “Nanoparticle, Segmental & Chain Dynamics in Polymer Nanocomposites”
248. Dept of Materials Science, University of Washington (Oct.) remote  
 “Nanoparticle, Segmental & Chain Dynamics in Polymer Nanocomposites”
249. Polymer Program, MIT (Oct.) remote  
 “Nanoparticle, Segmental & Chain Dynamics in Polymer Nanocomposites”
250. Dept of Chemical Engineering and Materials Sci., Michigan State University (Nov.) remote  
 “Nanoparticle, Segmental & Chain Dynamics in PNCs Nanocomposites”
251. **Award Lecture**, Braskem Award for Excellence in Materials Engineering and Science  
 AIChE Annual Meeting (Nov.) remote  
 “Nanoparticle, Segmental & Chain Dynamics in Polymer Nanocomposites”
252. Ctr for Sustainable Macromolecular Mat’ls & Manufacturing, Arizona State Univ. (Dec.) remote  
 “Precise Polymer Microstructures Produce Nanoscale Morphologies for Improved Transport Properties”

**2021**

253. **Covestro Distinguished Lectureship**, Southern Mississippi University (Jan.) remote  
 “Precise Polymer Microstructures Produce Nanoscale Morphologies for Improved Transport Properties”
254. March Meeting, American Physical Society (Mar.) remote  
 “Combining Advanced Experimental Methods to Characterization of Polymer Nanocomposites”



255. ExxonMobil Research and Engineering Company (Mar.) remote  
“New Microstructures in Ionomers: New Morphologies for Improved Transport Properties”
256. Materials Science and Engineering Program, University of Houston (Apr.) remote  
“New Microstructures in Ionomers: New Morphologies for Improved Transport Properties”
257. Macromolecular Chemistry at the Dawn of Its Second Century (Apr.) remote  
Spring Meeting, POLY/PMSE, American Chemical Society  
“Precise Microstructures in Ionomers: New Morphologies for Improved Properties”
258. Self-Assembly in Polymer Systems, Spring Meeting, American Chemical Society (Apr.) remote  
“Self-Assembly of Segmented Polyolefin Ionomers: New Morphologies and Ion Conductivity”
259. Polymer Award for Ken Wagener, Spring Meeting, American Chemical Society (Apr.) remote  
“Look at What ADMET Started”
260. Polymer Science and Engineering, University of Massachusetts (May) remote  
“Precise Microstructures in Functional Polymers: New Morphologies and Improved Transport Properties”
261. **Award Lecture**, Herman J. Mark Senior Scholar Award (Aug.) Atlanta, GA  
Division of Polymer Chemistry, American Chemical Society (postponed)  
“Precise Microstructures in Ionomers: New Morphologies for Improved Properties”
262. Materials Science and Engineering, Purdue University (Nov.) West Lafayette, IN  
“TBD”
263. Arkema (Nov.) XXX  
“TBD”

**RESPONSIBILITIES AT THE UNIVERSITY OF PENNSYLVANIA****Department of Materials Science and Engineering**

<u>Department Chair</u>	7/16 – 6/21
<u>Chair</u> , Hiring Committee for Materials Science and Engineering	8/15 – 5/16
<u>Chair</u> , Hiring Committee for Materials Science and Engineering	7/11 – 6/14
<u>Chair</u> , JackFest, A Symposium in Celebration of Prof. John E. Fischer	9/08 - 5/09
<u>Chair</u> , ABET Committee	1/05 - 1/07
<u>Chair</u> , Graduate Admissions, Materials Science and Engineering	9/00 - 10/03
<u>Chair</u> , Graduate Recruiting, Materials Science and Engineering	9/98 - 10/03
<u>Chair</u> , MSE Departmental Website	9/01 - 7/03

<u>Member</u> , Consultative Committee for Vice Provost for Research	2/13 – 7/13
<u>Member</u> , University Nano Advisory Council	11/11 – 7/13
<u>Member</u> , Hearing Panel for Student Disciplinary System	9/11 – 8/13
<u>Member</u> , ABET Committee	7/10 - 12/11
<u>Member</u> , Faculty Hiring Committee	10/06 - 6/10
<u>Member</u> , Consultative Committee for New Department Chair	4/07 - 6/07
<u>Member</u> , MSE Departmental Seminars	1/06 to 12/06
<u>Member</u> , Graduate Admissions, Materials Science and Engineering	7/96 - 6/99
<u>Member</u> , Graduate Recruiting, Materials Science and Engineering	9/92 - 6/98
<u>Member</u> , MSE Consultative Committee for New Department Chair	5-9/97; 9-11/00, 12/01 - 3/02
<u>Member</u> , MSE Research and Centers Planning Committee	9/95 - 5/96
<u>Member</u> , Biomaterials Curriculum Committee	9/94 - 6/96

<u>Faculty Advisor</u> , Undergraduate Student Advisor	9/92 -
<u>Faculty Advisor</u> , Materials Engineering and Research Society (MERS)	1/07 - 12/11
<u>Faculty Advisor</u> , initiated Alpha Sigma Mu, honor society for materials science	9/97 - 4/05

<u>Founder</u> , MSE Undergraduate Laboratory in Polymer Science	6/93 - 6/98
<u>Coordinator</u> , MSE Departmental Seminar Series	9/92 - 5/93

**School of Engineering and Applied Science**

<u>Chair</u> , Bioengineering Chair Search Committee	5/12 - 9/12
<u>Chair</u> , Oversight Committee, Engineering Management & Technology Masters' Pgm	10/09 - 6/11
<u>Chair</u> , Faculty Council	7/03 – 6/04
<u>Chair</u> , Academic Performance Committee	1-6/96; 7/97 - 6/99
<u>Co-Faculty Advisor</u> , Society of Women Engineers	11/98 - 6/04

<u>Penn Engineering Wellness Ambassador</u> ,	10/15 -
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<u>Member</u> , SEAS Faculty Awards Committee	9/12 – 6/14
<u>Member</u> , Faculty Personnel Committee	7/11 - 6/12
<u>Member</u> , Chemical and Biomolecular Engineering Chair Search Committee	04/12 - 5/12
<u>Member</u> , Steering Committee, Advancing Women in Engineering (AWE)	3/07 - 12/11
<u>Member</u> , Faculty Personnel Committee	9/07 - 6/09
<u>Member</u> , Faculty Council	7/02 - 6/06
<u>Member</u> , Academic Performance Committee	9/92 - 6/99

**University**

<u>Penn Director</u> , Nanotechnology Institute	12/11 – 6/14
<u>Penn Director</u> , Energy Commercialization Institute	12/11 – 3/14

<u>Co-Chair</u> with Paul Heiney, Structural Tools Workshop, LRSM full-day workshop	1/10
<u>Co-Chair</u> with Ray Gorte, Public Symp., Fuel Cells: Materials, Challenges & Breakthroughs	9/09
<u>Member</u> , Search committee for the LRSM Director	10/19 -
<u>Member</u> , Vagelos Institute for Energy Science and Technology (VIEST)	9/17 -
<u>Member</u> , Laboratory for Research on the Structure of Matter (LRSM)	9/92 -
<u>Member</u> , Pennergy Advisory Board	1/10 -12/16
<u>Member</u> , Vice Provost for Research's Faculty Innovation Council	12/13 - 6/17
<u>Member</u> , Nano-Bio Interface Center Education Committee	7/06 - 6/09
<u>Member</u> , Institute for Medicine and Engineering	4/03 - 6/09
<u>Member</u> , University Committee on Communications	/02 - 7/03
<u>Member</u> , University Safety and Security Committee	9/96 - 6/99
<u>Co-Instructor</u> , X-ray Scattering Mini-Course sponsored by LRSM	6/01
<u>Instructor</u> , Advanced Materials Characterization sponsored by LRSM	4/00
<u>Faculty Associate</u> , Ware College House	9/98 - 5/99

### **Courses**

Nano-Scale Materials Laboratory (MSE 250; substantially revised undergraduate laboratory class)  
Experimental Methods in Materials Science (MSE 500; new course; graduate level laboratory class)  
Introduction to Materials Science (EMTM 665; masters level course for management program)  
Introduction to Nanotechnology (EAS 210; new course; interdisciplinary course for engineers)  
Introduction to Polymers (MSE 430 / MSE 580; first level course in polymers)  
Senior Design (MSE 495 & 496; one or two small group projects per year)  
Structural Materials (MSE 220; first required course within the department)  
Topics in Polymer Physics (MSE 790; graduate elective)

**PROFESSIONAL ACTIVITIES BEYOND PENN****Advisory Positions****Current**

APS Councilor and Member, Executive Committee, Division of Polymer Physics, APS 1/21 – (12/24)  
Member, Scientific Advisory Board,  
 Max Planck Institute of Polymer Research (Mainz, Germany) [6 year appointment] 4/19 – (3/24)  
Member, Advisory Board, *MRS Energy & Sustainability* 7/21 – (12/23)  
Member, Advisory Board, MRS-Cambridge Materials Fundamentals book series 10/18 –  
Member, External Advisory Board, Lehigh University [2-year appointment] 5/18 – (4/20)  
Expert Reviewer, European Science Foundation (3 years) 12/18 – (12/21)  
Member, Technical Advisory Board, Center for Hierarchical Materials Design (CHiMaD),  
 Northwestern University, University of Chicago, Argonne National Laboratory 3/14 -

**Past**

Member, Condensed Matter & Materials Research Committee, The National Academies 10/17 – 9/20  
Co-Chair, DOE Office of Basic Energy Science Roundtable on Polymer Upcycling 12/18 – 6/20  
Member, External Review Panel, Pennsylvania State University 2/19  
Program Reviewer, University of California, Merced, Materials Program 7/18  
Co-Organizer, NSF-Sponsored Frontiers in Polymer Science and Engineering Workshop (decadal  
 report; workshop in August 2016) 9/15 – 7/17  
Member, Search Committee for Editors of *Macromolecules* and *ACS Macro Letters* 3/17 – 8/17  
Member, International Advisory Board, Department of Materials Science and Engineering,  
 Tel Aviv University 12/13 – 12/17  
Member, Advisory Board, Materials Science and Engineering, Cornell University 4/10 – 6/17  
 Committee Chair 2011  
Member (elected), Center for Integrated Nanotechnologies Users Executive Committee,  
 Sandia National Laboratories 6/12 – 5/16  
Member, External Review Committee, Materials Science and Eng., Cornell University 11/13  
Member, European Research Council's Consolidator Grant Evaluation Panel 3/13 – 10/13  
Member, EPSRC Peer Review College 1/10 - 9/12  
Member, Committee of Visitors, Materials Science and Engineering Division,  
 Basic Energy Sciences, Department of Energy 3/09  
Invited Participant, NSF Workshop on Polymer Science and Engineering 8/07  
Member, External Review Committee, Polymer Sci. and Engineering, Univ. of Massachusetts 2/07  
Invited Participant, Institute for Theoretical Physics, University of California, Santa Barbara,  
 "Dynamics of Complex and Macromolecular Fluids" 5/02  
Trustee, Alpha Sigma Mu, honor society for materials science 9/96 - 9/98

**American Chemical Society**

Member, ACS Award Canvassing Committee 7/20 -  
Symposium Co-Organizer, Polymer Nanocomposites: Fundamentals and Applications 3/20  
Member, ACS National Award Selection Committee 3/15 – 12/18  
Member, Selection Committee for PMSE Fellows 3/15 – 2/18  
Co-Chair, 14<sup>th</sup> Pacific Polymer Conference, Polyolefin Symposium in Kauai Hawaii 12/15  
Associate Editor, *Macromolecules* 7/10 – 6/14

**American Physical Society, Division of Polymer Physics**

Invited Course Instructor, Polymer Microscopy Short Course 3/19  
Co-organizer with Robert J. Hickey, Focus Session at March Meeting  
 Polymer Nanocomposites: From Fundamentals to Applications 3/19

<u>Vice Chair, Chair Elect, <b>Chair</b>, Past Chair (elected)</u> , Division of Polymer Physics, American Physical Society	3/11 - 3/15
<u>Co-organizer</u> with Laura Clarke, Focus Session at March Meeting Polymer Nanocomposites: Active Particles and Dynamics	3/13
<u>Co-organizer</u> with Chris Soles, DPOLY Short Course, March Meeting Case Studies in Polymer Physics from the Industrial Research World	2/12
<u>Invited Course Instructor</u> , Physics of Polymer Nanocomposites Short Course	3/09
<u>Member</u> , Publicity Committee	3/04 - 3/05
<u>Member-at-Large (elected)</u> , Executive Committee	3/01 - 3/04
<u>Program Chair</u> , 2002 March Meeting, Austin, TX	4/01 - 3/02
<u>Member</u> , Program Committee	3/98 - 3/03
<u>Organizer</u> , Focus Session at March Meeting, Defects in Polymers and Soft Materials,	3/99
<u>Invited Course Instructor</u> , Polymer Microscopy Short Course	3/95
<b>Gordon Research Conference</b>	
<u>Chair</u> , Polymer Physics	6/10
<i>Record level of external funding and record number of participants.</i>	
<u>Vice-Chair</u> , Polymer Physics	6/08, 6/14
<u>Discussion Leader</u> , Polymer Physics	7/98, 8/00, 7/06, 7/16, (scheduled 7/20)
<u>Discussion Leader</u> , Ion-Containing Polymers	5/05
<b>Materials Research Society</b>	
<u>Chair</u> , Selection Committee for Innovation in Materials Characterization Award	11/12 – 11/15
<u>Guest Co-Editor</u> , <i>MRS Bulletin</i> , Polymer Nanocomposites	4/07
<u>Member</u> , Selection Committee for Innovation in Materials Characterization Award	3/09 -11/12
<u>Member</u> , Strategic Program Planning Subcommittee	1/05 - 12/06
<u>Symposium Co-organizer</u>	12/04
<b>Additional Meeting and Symposia Planning</b>	
<u>Co-Chair</u> , 2018 American Conference on Neutron Scattering, Materials Chemistry and Synthesis Session.	9/17 – 5/18
<u>Meeting Co-Chair</u> , 2 <sup>nd</sup> International Conference on Innovative Engineering Materials	10/17
<u>Meeting Co-Chair</u> , 5 <sup>th</sup> International Conference on Multifunctional, Hybrid and Nanomaterials, Lisbon, Portugal	3/17
<u>Meeting Co-Chair</u> , Neutron Scattering Contractor Meeting, Materials Science and Engineering Division, Basic Energy Sciences, Department of Energy	12/16
<u>Meeting Co-Chair</u> , Synthesis and Processing Contractor Meeting, Materials Science and Engineering Division, Basic Energy Sciences, Department of Energy	10/09
<u>Topical Conference Co-organizer</u> , Society of Plastics Engineering TOPCON SPE	10/08
<u>Symposium Co-organizer</u> , Society of Rheology	10/03
<u>Symposium Co-organizer</u> , Polymers, Microscopy Society of America	8/00
<u>Symposium Co-organizer</u> , Nanophases and Nanocomposites, Microscopy Soc. of America	8/95
<b>Editorial and Reviewing Activities</b>	
<u>Member</u> , Editorial Advisory Board, <i>Progress in Polymer Science</i>	1/17 -
<u>Member</u> , Proposal Review Panel, Brookhaven Nat. Lab. Ctr for Functional Nanomat'ls	1/12 – 12/15
<u>Member</u> , Editorial Advisory Board, <i>Polymer</i>	7/10 – 6/12
<u>Member</u> , Editorial Advisory Board, <i>Journal of Macromolecular Science Part A: Pure and Applied Chemistry</i>	7/08 – 6/12
<u>Member</u> , Editorial Advisory Board, <i>Journal of Polymer Science B: Polymer Physics</i>	1/00 – 12/04
<u>Chair</u> , Best Paper Award Selection Committee, <i>Journal of Polymer Science B</i>	2003

Member, Editorial Advisory Board, *Macromolecules*

1/01 - 12/03

**Teaching Activities: Invited Course Instructor**

Lehigh Microscopy School, Lehigh University annually

2003 - 2009

Society of Plastics Engineering Webinar

5/09

Polymer Physics Symposium sponsored by 3M

10/95

Polymer Microscopy; Continuing Engineering Ed, University of Michigan - Ann Arbor

6/92

**RESEARCH GROUP****1.) POSTDOCTORAL RESEARCHERS (WITH CURRENT POSITION)**

Mohan Sikka	3/94 - 7/96	
Jonathan H. Laurer	1/98 - 4/99	IRC, Inc.
Andreas H. Taubert	8/00 - 12/02	Dept Chair, Chemistry, University of Potsdam, Germany
Hansoo Kim	2/04 - 1/06	
Mohammad Moniruzzaman	4/05 - 1/08	SABIC Innovative Plastics
Arun Kota	2/08 - 6/08	Ass't Professor, Colorado State University
Michelle Seitz	9/09 - 11/10	DSM
T. Jamie Ford	4/11 - 1/12	University of Pennsylvania
Philip J. Griffin	8/14 - 5/17	University of Chicago
Francisco Buitrago	2/18 - 4/19	Arkema
James Pressly	9/19 -	
Holden Lai (joint w/Osuji)	9/20 -	

**2.) DOCTORAL STUDENTS (WITH CURRENT POSITION)**

1. B. Scott Pinheiro	MSE	1996	
2. Daniel L. Polis	MSE	1999	Principal Engineer, Sierra Nevada Corporation, CO
3. Nicole N. Pellegrini	ChE	1999	
4. Lei Qiao	MSE	2001	Axalta Coating Systems, Shanghai, China
5. Brian P. Kirkmeyer	MSE	2003	Assistant Dean, Miami University, Oxford, OH
6. Reto Hagenmueller	MSE	2005	Freightliner, Portland, OR
7. Fangming Du	CBE	2005	GE Lighting, Willoughby, OH
8. Avinash Budhian	CBE	2006	Reckitt Benckise, NJ
9. Nicholas M. Benetatos	MSE	2006	Johson and Johnson, Diabetes Solutions Companies
10. Nancy C. Zhou	CBE	2007	Booz Allen Hamilton Inc.
11. Christopher Chan	CBE	2008	Dupont Experimental Station, Wilmington, DE
12. Minfang Mu	MSE	2009	Dupont, Shanghai, China
13. Sadie I. White	MSE	2010	United States Patent and Trademark Office
14. Wenqin "Sunny" Wang	MSE	2010	Dow Chemical, Spring House, PA
15. David Salas-de la Cruz	CBE	2011	Asst Prof., Chemistry, Rutgers University - Camden
16. Jae-Hong Choi	MSE	2012	Samsung SDI, Korea
17. C. Francisco Buitrago	CBE	2013	Arkema
18. Rose M. Mutiso	MSE	2013	Department of Energy
19. Michael O'Reilly	MSE	2014	Merck
20. Wei-Shao "Walter" Tung	MSE	2015	Topkey Corporation
21. Tsen-Shan Sharon Sharick	MSE	2015	W. L. Gore & Associates
22. L. Robert Middleton	MSE	2106	Exponent
23. Edward "Ted" Trigg	MSE	2018	NRC Postdoctoral Fellow, Wright Patterson Air Force
24. James F. Pressly	MSE	2019	Postdoctoral Fellow, Univ of Pennsylvania
25. Lu Yan	CBE	2019	Law student at Fordham University
26. Eric Bailey	MSE	2020	Dupont
27. Benjamin Paren	MSE	2021	Postdoc at MIT
28. Tianren Zhang	CBE	started Spring 2017	(co-advised with Rob Riggleman)
29. Jinseok Park	MSE	started Fall 2017	
30. Kaitlin Wang	MSE	started Fall 2019	
31. Eli Fastow	MSE	started Fall 2020	
32. Max Win	MSE	started Fall 2021	
33. Benjamin Ferko	MSE	started Fall 2021	

**3.) MASTERS STUDENTS (WITH CURRENT POSITION)**

1.	Theresa E. Derderian	MSE	1994	
2.	Maria L. Berba	MSE	1994	Johnson and Johnson Philippines, Manila, Philippines
3.	Micheala Tymichova	MSE	1996	
4.	Joyce J. Espiritu	MSE	1997	R. J. Composto co-advisor.
5.	Oyekunbi Delano	CBE	2001	
6.	Forrest Pilgrim	CBE	2002	
7.	Marcus Hsu	MSE	2003	Intel
8.	Yongsoo Kim	CBE	2004	
9.	Naiffer Romero	MSE	2005	Dow
10.	Amod Saxena	CBE	2006	
11.	Tsung-Ta “Ethan” Chan	MSE	2007	Doctoral program
12.	Lai-Ching Chou	MSE	2007	DuPont Taiwan
13.	Thomas Acchione	MSE	2008	
14.	Kristin Metkus	MSE	2009	Nova Research Inc.
15.	Xiang “Tracy” Hao	MSE	2010	
16.	Kun Sun	MSE		worked in group Fall 2012
17.	Steven T. Szewczyk	MSE	2014	University of Pennsylvania
18.	William Kyei-Manu	MSE	2013	Schlumberger, Houston TX
19.	James Borchert	MSE	2013	Innovo Dynamics
20.	Devdatt Maganty	MSE	2014	
21.	Han-Chang “Cathy” Yang	MSE	2015	
22.	Clark Shurtleff	MSE	2016	
23.	Drew Wang	MSE	2019	
24.	Miko Stulajter	MSE	2020	
25.	Junwei Xiang	CBE	2021	Changjiang Securities
26.	Valerie Ballance	MSE		(December 2021)

**4.) UNDERGRADUATE STUDENTS**(includes NSF REU students, senior design groups; **bold** indicates coauthors on peer-reviewed papers)

1992-93	Andre Sanders	<b>Laura F. Cerini</b>	
1993-94	Y. Lynn Loo		
1994-95	W. Loong Chen	Foo-Sing Wong	Heather M. Koehler
1995-96	Heather M. Koehler	Francis J. Gramkowski	
1996-97	John Nugent	Gregory Booker	Alison Olver
1997-98	Nikeva Brown	Robert D. Armitage	
1998-99	Michael D. Grubb	Jason R. Vollbracht	Anna K. Johnsen
1999-00	<b>Reto Haggemueller</b>	Neel Gandhi	
2000-01	Neel Gandhi	Nakiva Showell	Jason DeGaetano
	Tiffany Selman	Sarah Rothman	<b>Karen Sohn</b>
2001-02	Anna H. Pilipienko	Joyce Tam	
2002-03	Joyce Tam	Anthony Barsotti	Lindsey Karpowich
2003-04	<b>Robert C. Scogna</b>	Leah Henderson	Tarin Hart
	<b>Stijn Brand</b>		
2004-05	Josh Stillman	Justin Samuels	Clarinda Lim
	Thomas Acchione		
2005-06	Thomas Acchione	Zachary Williams	
2006-07	Michael Purdham	Michael Young	Bruce Hilman
	Asli Sahin	Thomas Acchione	Henry Friedman
	Jena Deng	Nicholas Smeets	



2007-08	Michael DeLiso Nicholas Smeets Scott Juang	Zachary Combs Rebecca Goldman Lea Nowar	Jason Ginsberg Patrick Curran
2008-09	Layla Houshmand Samuel Hsu Amanda Levy	Conor Donnelly David Jahnke Matt Bramson	Michael Frankel Tarun Vemulkar
2009-10	Matt Bramson Jen Ehrich	<b>Dan King</b>	Shaina Oake
2010-11	Matt Bramson Katharine Oleske Jason Bernstein	<b>Michelle Sherrott</b> <b>Michelle Sherrott</b> Alex Dolgonos	<b>Jeff Denis</b> <b>Jeff Denis</b> Michael Engber
2011-12	Angeles C. Chaparro Sneha Deshpande	Miten Mistry Maria E. Vincent	Erik ReVeal <b>Michelle Sherrott</b>
2012-13	<b>Michelle Sherrott</b> Ruben Waldman	Tyler Citek Colleen Reynolds	Eric Maltiel Kathryn Johnson
2013-14	Alexa Kuenstler	Jacob Gissinger	Eric Schwartz
2014-15	Alexa Kuenstler	<b>Eric Schwartz</b>	<b>Grace Salmon</b>
2015-16	<b>Eric Schwartz</b> <b>Gracie Salmon</b>	<b>Demi Moed</b> Sonya Kripke	<b>Noah Geller</b> Jason Woo
2016-17	<b>Demi Moed</b>	<b>Nicholas Han</b>	Neha Goswami
2017-18	<b>Demi Moed</b> <b>Lauren Hoang</b>	<b>Nicholas Han</b> Olivia Landgrover	Dakota Wallach Grant Shao
2018-19	<b>Lauren Hoang</b> Anita Yang	<b>Nicholas Han</b> <b>Arjun Kanthawar</b>	Nathan Xu
2019-20	Tia Denby Eli Newberger	<b>Arjun Kanthawar</b> Alexander Proschel	Zach Whitlock
2020-21	<b>Son Hoang</b>	Madina Arapova	Caroline Birkel
2021-22	<b>Son Hoang</b> Julia Yan	Caroline Birkel Shoshana Weintraub	Sarah Beth Gleeson

### 5.) HIGH SCHOOL STUDENTS AND TEACHER

2000-01	Samuel Berman-Freedman	
2002-03	Caroline Reilly	
2003-04	Kerry Scholz	
2004-05	Susan Schylander	Robert Stokes
2005-06	Brenda Gelinas	
2007-09	Schuyler Patton	
2011-12	Jackson Feeny	
2012-13	Jackson Feeny	

### 6.) MISCELLANEOUS VISITORS TO PENN (WITH CURRENT POSITION)

Ken Schweizer	1/13 – 4/13	University of Illinois (LRSM Visitor)
Leticia Socal da Silva	4/13 – 12/13	Visiting scientist from Braskem (Brazilian oil company)
Connie Roth	5/14	Visiting professor, Emory University
Laurent Bernard	5/17 – 8/17	Visiting doctoral student, University of Grenoble
Laura Issartel	6/19 – 8/19	Visiting masters student, Technical University, Grenoble
Anne Ladegaard Skov	2/20 – 3/20	Visiting professor, DTU Denmark

**HONORS AND AWARDS OF STUDENTS AND ALUMS**

1992	L.F. Cerini	Nassau Grant, University of Pennsylvania
1996	D.L. Polis	Presidential Award, Microscopy Society of America
1996	J.J. Espiritu	Ford Foundation Fellowship
1997	R.D. Armitage	Nassau Grant, University of Pennsylvania
1998	D.L. Polis	Gold Medal for Graduate Student Paper, Materials Research Society
1999	D.L. Polis	Finalist, Padden Award, Division of Polymer Physics, Am. Physical Society
2002	L. Qiao	Finalist, Padden Award, Division of Polymer Physics, Am. Physical Society
2003	B.P. Kirkmeyer	Finalist, Padden Award, Division of Polymer Physics, Am. Physical Society
2003-05	N. Zhou	NSF-IGERT Fellow
2006-08	Moniruzzaman	NSERC Canadian Postdoctoral Fellowship
2006-09	S.I. White	NSF Graduate Student Fellowship
2007	N. Zhou	IBM's Employee Excellence Award
2008	M. Mu	Best Poster, Research Forum @ Penn Engineering
2008	Sr. Design Grp	Jason Ginsberg, Nicholas Smeets, Rebecca Goldman, Patrick Curran Third Prize, MSE Senior Design Competition
2008	L. Houshmand	REU Certificate of Merit for Student Paper Competition
2009	M. Mu	Finalist, Padden Award, Division of Polymer Physics, Am. Physical Society
2009	S.I. White	Geoffrey Belton Graduate Fellowship Award, Univ. of Pennsylvania
2009	Moniruzzaman	Most Valuable Players, SABIC Innovative Plastics (global competition)
2009	D.L. Polis	NASA Exceptional Engineering Achievement Medal for Materials Engineering Excellence in the Implementation of Composites for Primary Structure in NASA Human Spacecraft
2009	N. Benetatos	FDA Special Recognition Award - Drug-eluting stents and drug- coated balloon team
2010	W.Q. Wang	Finalist, Padden Award, Division of Polymer Physics, Am. Physical Society
2010	D. Salas-de la Cruz	Recipient, GRC Carl Storm Underrepresented Minority Fellowship
2010	D. Salas-de la Cruz	Recipient, Fontaine Travel Award
2010	F. Buitrago	Best Poster Award, North American Thermal Analysis Society
2011	Sr. Design Grp	Alex Dolgonos, Michael Engber, Erik Reveal Third Prize, MSE Senior Design Competition
2012	R. M. Mutiso	Geoffrey Belton Graduate Fellowship Award, Univ. of Pennsylvania
2012	M. Sherratt	Wolf-Hallac Award, University of Pennsylvania
2012	T. Citek	R. M. Brick Award, University of Pennsylvania
2014	L. R. Middleton	W. L. Gore and Associate Fellow Awards recognizes Excellence in Early Graduate Studies in Science, Technology & Engineering
2015	E. Trigg	DOE Office of Science Graduate Student Research Award
2015	L. R. Middleton	NSF Fellowship, East Asia and Pacific Summer Institutes (EAPSI) with the Japan Society for the Promotion of Science Fellowship
2015	L. R. Middleton	Milliken Graduate Research Symposium, Honorable Mention
2015-18	E. Bailey	NSF Graduate Student Fellowship
2016	E. Trigg	Geoffrey Belton Graduate Fellowship Award, Univ. of Pennsylvania
2016	D. Moed	1 <sup>st</sup> Prize Poster, Thermal Analysis Forum of Delaware Valley
2018	E. Trigg	Finalist, Padden Award, Division of Polymer Physics, Am. Physical Society

2018	D. Moed	NSF Graduate Research Fellow
2018	E. Trigg	NRC Postdoctoral Research
2018	B. Paren	VIEST Doctoral Fellow
2020	E. Bailey	Finalist, Padden Award, Division of Polymer Physics, APS
2020	J. Park	VIEST Doctoral Fellow
2021	B. Paren	Finalist, Padden Award, Division of Polymer Physics, APS
2021	B. Paren	DSM Bright Science Award for PhD Students, ACS