

ELSA REICHMANIS
PROFESSOR
SCHOOL OF CHEMICAL AND BIOMOLECULAR ENGINEERING

I. EARNED DEGREES

B.S., 1972, Chemistry; Syracuse University, Syracuse, New York

Ph.D., 1975, Organic Chemistry; Syracuse University, Syracuse, New York

II. EMPLOYMENT HISTORY

2020 - Lehigh University, Bethlehem, Pennsylvania, *Carl Robert Anderson Chair in Chemical Engineering*

2017 - 2020 Georgia Institute of Technology, Atlanta, Georgia, *Pete Silas Chair in Chemical Engineering*

2014 - 2017 Georgia Institute of Technology, Atlanta, Georgia, *Brook Byers Professor of Sustainability*

2008 - 2020 Georgia Institute of Technology, Atlanta, Georgia, *Professor, Chemical and Biomolecular Engineering*

2006 - 2007 Bell Laboratories, Alcatel-Lucent, Murray Hill, New Jersey, *Director, Materials for Communications Research Department*

2001 - 2006 Bell Laboratories, Lucent Technologies, Murray Hill, New Jersey, *Director, Materials Research Department.*

1996 - 2001 Bell Laboratories, Lucent Technologies, Murray Hill, New Jersey, *Director, Polymer and Organic Materials Research Department*

1994-1995 AT&T Bell Laboratories, Murray Hill, New Jersey, *Head, Polymer and Organic Materials Research Department*

1984 - 1994 AT&T Bell Laboratories, Murray Hill, New Jersey, *Supervisor, Radiation Sensitive and Applications Group*

1978 - 1984 AT&T Bell Laboratories, Murray Hill, New Jersey, *Member of Technical Staff, Organic Chemistry Research and Development Department*

1976 - 1978 Syracuse University, Syracuse, New York, *Dr. Chaim Weizmann Fellow*

1975 - 1976 Syracuse University Postdoctoral Intern

III. HONORS AND AWARDS

2021 Elected Fellow, National Academy of Inventors

2020 Fellow, AIChE

2019 Milton Lecturer, Syracuse University

2019 Shipley Distinguished Lecturer, Clarkson University

2018 AIChE Margaret H. Rousseau Pioneer Award for Lifetime Achievement by a Woman Chemical Engineer

2018 Fellow, Materials Research Society

2018 ACS Award in the Chemistry of Materials

2013 Distinguished Woman in Chemistry and Chemical Engineering Award, International Union for Pure and Applied Chemistry

2011 Prinz Lecturer, Department of Chemistry, Syracuse University

2010 ACS Division of Polymeric Materials: Science and Engineering Distinguished Service Award

2009 Fellow, American Chemical Society

2006 ConocoPhillips/C.J. "Pete" Silas Ethics Lecturer, School of Chemical and Biomolecular Engineering, Georgia Institute of Technology

2006 Grace Hopper Lecturer, School of Engineering, University of Pennsylvania

2006 Chevron Phillips Lecturer, Virginia Polytechnic Institute

2005 George Mason Lecturer, Department of Chemical Engineering, Stanford University

2004 Elected Member, Latvian Academy of Sciences

2004 National Science Council Distinguished Lecturer, Taiwan

2004 Meek Lecturer, Department of Chemistry, Ohio State University
 2003 George Braude Award, ACS Maryland Local Section
 2002 Fellow, ACS Division of Polymeric Materials: Science and Engineering
 2001 Bayer-Stein Lecturer, University of Massachusetts, Amherst
 2001 George Arents Pioneer Medal, Syracuse University
 2001 Perkin Medalist, Society of Chemical Industry
 1999 ACS Award in Applied Polymer Science
 1998 Photopolymer Science and Technology Award
 1997 Fellow, American Association for the Advancement of Science
 1996 ASM International Engineering Materials Achievement Award
 1995 Elected, National Academy of Engineering
 1995 Fellow, AT&T Bell Laboratories
 1993 Society of Women Engineers Achievement Award
 1992 R&D 100 Award for the development of the CAMP-6 deep-UV photoresist,
 1972 Phi Beta Kappa

IV. RESEARCH, SCHOLARSHIP, AND CREATIVE ACTIVITIES

A. PUBLISHED BOOKS, BOOK CHAPTERS, AND EDITED VOLUMES

A1. Books

N/A

A2. Refereed Book Chapters

1. Wei Huang, Liangwen Feng, Gang Wang, Elsa Reichmanis*; Wearable Organic Nano-sensors, in Flexible and Wearable Electronics for Smart Clothing, in Flexible and Wearable Electronics for Smart Clothing, Wang, Huo, Wang (Eds.), Wiley/VCH (ISBN: 978-3-527-34534-2), April 09, 2020.
2. Nils Persson, Michael McBride, Elsa Reichmanis*, and Martha Grover; Machine learning approaches for extracting process-structure-property relationships from experimental data and literature. World Scientific Publishing Co, Production Department, 5 Toh Tuck Link, Singapore 596224., ISBN: 978-981-120-444-9, copyright 2020. DOI: 10.1142/11389
3. Michael McBride, Guoyan Zhang, Martha Grover, Elsa Reichmanis*; Poly(3-alkylthiophenes): Controlled Manipulation of Microstructure and its Impact on Charge Transport, Handbook of Conducting Polymers, Chapter 11, pages 39. Taylor & Francis CRC Press, Boca Raton, FL copyright 2019. March 25, 2019; eBook ISBN 9780429190520.
4. E. Reichmanis*, O. Nalamasu, "Polymer Materials for Microelectronics Imaging Applications", In *Applied Polymer Science*, C. D. Craver, C. E. Carraher, Eds., Elsevier, Oxford, 2000, pp. 635-658.
5. E. Reichmanis*, A. E. Novembre, O. Nalamasu, G. Dabbagh, "Microlithographic Applications of Organosilicon Polymers", In *Silicon-Containing Polymers: The Science and Technology of their Synthesis and Applications*, Chapman & Hall, Ltd., Kluwer Academic Publishers, Netherlands, E. Reichmanis, O. Nalamasu, F. M. Houlihan, A. E. Novembre, 2000, pp. 743-762.
6. F. M. Houlihan, A. G. Timko, R. S. Hutton, R. A. Cirelli, J. M. Kometani, E. Reichmanis*, O. Nalamasu, "193 nm Single Layer Resist Based on Poly(norbornene-alt-maleic anhydride) Derivatives: The Interplay of the Chemical Structure of Components and Lithographic Properties", *ACS Symposium Series*, 706, Ito, H., Reichmanis, E., Nalamasu, O., Ueno, T., Eds., ACS, Washington, DC, 1998, pp. 191.
7. E. Reichmanis*, T. X. Neenan, "Polymers in Electronics", in "Chemistry of Advanced Materials: An Overview", L. V. Interrante, M. Hampden-Smith, Eds, John Wiley and Sons, Inc. New York, 1997, pp. 99-141.
8. E. Reichmanis*, O. Nalamasu, "The Design of Practical Chemically Amplified Resists for Deep-UV Lithography", "The Polymeric Materials Encyclopedia", J. C. Salamone, Editor, CRC Press, Vol. 2, 1170 (1996).
9. E. Reichmanis*, O. Nalamasu, A. E. Novembre, "An Analysis of Process Issues with the Chemically Amplified Positive Resists", in *Microelectronics Technology: Polymers in Advanced Imaging and Packaging*, *ACS Symposium Series* 614, E. Reichmanis, C. K. Ober, S. A. MacDonald, T. Iwayanagi, T. Nishikubo, editors, ACS, Washington, DC, (1995), pp. 4-20.

10. S. A. Heffner, M. E. Galvin, E. Reichmanis*, L. Gerena, P. A. Mirau, "Hydrogen Bonding in Sulfone- and N-Methylmaleimide-Containing Resist Polymers with Hydroxystyrene and Acetoxystyrene: Two-Dimensional NMR Studies", *ibid.*, pp. 166-179.
11. E. Reichmanis*, L. F. Thompson "New Directions in the Design of Lithographic Resist Materials: A Case Study", *Advances in Chemistry Series*, Interrante, L. V. Ed., ACS, Washington, DC (1995), pp. 85-106.
12. E. Reichmanis*, M. E. Galvin, K. E. Uhrich, P. A. Mirau, S. A. Heffner, "New Directions in the Design of Chemically Amplified Resists", *Polymers for Microelectronics: Science and Technology*, *ACS Symposium Series 579*, H. Ito, S. Tagawa, Editors, ACS, Washington, DC, (1994), pp. 52-69.
13. E. Reichmanis, "Chemistry of Polymers for Microlithographic Applications", in *Polymers for Electronic and Photonic Applications*, C. P. Wong, Editor, Academic Press, Boston, (1992).
14. E. Reichmanis*, A. E. Novembre, R. G. Tarascon and A. Shugard "New Silicon-Containing Electron-Beam Resist Systems", in "Polymers for High Technology," M. J. Bowden and S. Turner, Eds, *ACS Symposium Series*, 346, 110 (1987).
15. E. Reichmanis*, C. W. Wilkins, Jr., "Poly(methyl methacrylate-co-3-oximino-2-butanone methacrylate-co-methacrylonitrile): A Deep-UV Photoresist", in ACS Symposium Series, No. 184, *Polymer Materials for Electronic Applications*, E. D. Feit, C. W. Wilkins, Jr., Eds, 29-43 (1982)
16. F. J. Purcell, E. Russavage, E. Reichmanis and C. W. Wilkins, Jr., "Compositional Analysis of a Terpolymer Photoresist by Raman Spectroscopy", *ibid.* 45-59.

A3. Edited Volumes

1. "Micro and Nano-Patterning Science & Technology", E. Reichmanis, O. Nalamasu, H. Ito, T. Ueno, Eds., ACS Symposium Series 706, American Chemical Society, Washington, DC, 1998.
2. "Microelectronics Technology: Polymers in Advanced Imaging and Packaging", E. Reichmanis, C. K. Ober, S. A. MacDonald, T. Iwayanagi, T. Nishikubo, Eds, *ACS Symposium Series 614*, American Chemical Society, Washington, DC, 1995.
3. "Irradiation of Polymeric Materials", E. Reichmanis, C. W. Frank, J. H. O'Donnell. Eds, *ACS Symposium Series 527*, American Chemical Society, Washington, DC, 1993.
4. "Polymers in Microlithography," E. Reichmanis, S. A. MacDonald and T. Iwayanagi, Eds, *ACS Symposium Series 412*, American Chemical Society, Washington, DC, 1989.
5. "The Effects of Radiation on High Technology Polymers," E. Reichmanis and J. H. O'Donnell, Eds, *ACS Symposium Series 381*, American Chemical Society, Washington, DC, 1989.

B. REFEREED PUBLICATIONS AND SUBMITTED ARTICLES

B1. Published and Accepted Journal Articles

1. **Zhibo Yuan, Qianyi Qu, Kyle Hamrock, Carolyn Buckley, Guoyan Zhang**, Elsa Reichmanis*, "More than another halochromic polymer: Thiazole-based conjugated polymer transistors for acid-sensing applications", *ACS Applied Polymer Materials*, 2020, DOI: 10.1021/acsapm.0c01255
2. **Hao Xiong, Giovanni DeLuca**, Udo Bach, Linqin Jiang, Qinghong Zhang, Elsa Reichmanis*, Yu Qiu*, "Synergistic Effect of N,N-Dimethylformamide and Hydrochloric Acid on the Growth of MAPbI₃ Perovskite Films for Solar Cells", *ACS Omega*, 2020, DOI: 10.1021/acsomega.0c04102
3. **Aaron Liu, Rahul Venkatesh, Michael McBride**, Elsa Reichmanis*, Carson Meredith*, Martha Grover*, "Small Data Machine Learning: Classification and Prediction of Poly(ethylene terephthalate) Stabilizers using Molecular Descriptors", *ACS Applied Polymer Materials*, 2020, DOI: 10.1021/acsapm.0c00921
4. **Brian Khau, Audrey Scholz**, Elsa Reichmanis*, "Advances and Opportunities in the Development of Deformable Organic Electrochemical Transistors", *Journal of Materials Chemistry C*, 2020, DOI: 10.1039/D0TC03118F (invited perspective)
5. **Haihua Zhou, Wencai Liu, Rui Chang**, Zhandong Huang, Xuzheng Sha, Guozhu Chen, Elsa Reichmanis*, Yanlin Song, "Ring-Patterned Perovskite Single Crystals Fabricated by the Combination of Rigid and Flexible Templates", *ACS Applied Materials and Interfaces*, 2020, 12(24), 27786-27793. DOI: 10.1021/acsemi.0c06893
6. **Ajeet Rohatgi*, Kai Zhu***, Jinhui Tong, Dong Hoe Kim, Elsa Reichmanis*, Brian Rounsaville, **Vivek Prakash**, Young-Woo Ok, "26.7% Efficient 4-Terminal Perovskite-Silicon Tandem Solar Cell Composed of a High-Performance Semi-transparent Perovskite Cell and a Doped Poly-Si/SiO_x Passivating Contact Silicon Cell", *IEEE-Journal of Photovoltaics*, 2020, 10(2), 417-422; DOI: 10.1109/JPHOTOV.2019.2963564

7. **Miguel Gonzalez**, Amy Marschilok, Elsa Reichmanis*, “Perspective-enhancing active anode material performance for lithium ion batteries via manipulation of interface chemistry”, *Journal of the Electrochemical Society*, 2020, 167(5), 50507 (invited)
8. Yinghong Hu, Gede Adhyaksa, Giovanni DeLuca, Alexandr Simonov, Noel Duffy, Elsa Reichmanis*, Udo Bach, Pablo Docampo, Thomas Bein, Erik Garnett, Anthony Chesman, and Askhat Jumabekov, “Perovskite Solar Cells with a Hybrid Electrode Structure”, *AIP Advances*, 2019, 9(12); 125037/1-125037/5 published online December 23, 2019. DOI: 10.1063/1.5127275
9. **Michael McBride**, **Aaron Liu**, Elsa Reichmanis*, Martha A. Grover*, “Toward Data-enabled Process Optimization of Deformable Electronic Polymer-based Devices”, *Current Opinion in Chemical Engineering*, 2019, 27, 72-80. DOI: 10.1016/j.coche.2019.11.009
10. Moon Jong Han, **Michael McBride**, **Bailey Risteen**, **Guoyan Zhang**, **Brian Khau**, Elsa Reichmanis*, Dong Ki Yoon*, “Highly Oriented and Ordered Water Soluble Semiconducting Polymers in a DNA Matrix”, *Chemistry of Materials*, 2020, 32(2), 688-696 published online 12/24/2019 DOI: 10.1021/acs.chemmater.9b03475
11. **Guoyan Zhang**, Savannah Lee, Elizabeth Gutiérrez-Meza, Carolyn Buckley, Michael McBride, David A. Valverde-Chavez, Yo Han Kwon, Victoria Savikhin, Hao Xiong, Tim J. Dunn, Michael F. Toney, Zhibo Yuan, Carlos Silva, Elsa Reichmanis*, “Robust and Stretchable Polymer Semiconducting Networks: From Film Microstructure to Macroscopic Device Performance, *Chemistry of Materials*”, 2019; 31(17), 6530-6539; DOI: 10.1021/acs.chemmater.8b05224 (top 20 downloaded article, August 2019)
12. **Brian V. Khau**, Lisa R. Savagian, Michel de Keersmaecker, Elsa Reichmanis*, “A Carboxylic-Acid Substituted Polythiophene Yields Dually Redox Active Solvent-Resistant Organic Electrochemical Transistors”, *ACS Materials Letters*, 2019, 1, 599–605; DOI: 10.1021/acsmaterialslett.9b00373
13. **Michael McBride**, **Guillermo Bacardi**, **Carlex Morales**, **Bailey Risteen**, **Daniel Keane**, Elsa Reichmanis*, Martha A. Grover*, “Control of Nucleation Density in Conjugated Polymers via Seed Nucleation”, *ACS Applied Materials and Interfaces*, 2019, 11(41), 37955-37965. DOI: 10.1021/acsmi.9b10967
14. **Krysten Minnici**, **Yo Han Kwon**, Lisa M. Housel, Genesis D. Renderos, James F. Ponder Jr., Carolyn Buckley, John R. Reynolds, Kenneth J. Takeuchi, Esther S. Takeuchi, Amy C. Marschilok, Elsa Reichmanis*, “Tuning Semiconducting Polymers for Binder Applications in High Capacity Magnetite Anodes”, *ACS Applied Energy Materials*, 2019, 2(10), 7584-7593; DOI: 10.1021/acsaem.9b01580
15. **Krysten Minnici**, **Yo Han Kwon**, **Johnathan O’Neil**, Lei Wang, Mikaela R. Dunkin, **Miguel A. González**, Matthew M. Huie, Mark V. de Simon, Kenneth J. Takeuchi, Esther S. Takeuchi, Amy C. Marschilok, Elsa Reichmanis*, “Carboxylated Poly(thiophene) Binders for High Performance Magnetite Anodes: Impact of Cation Structure”, *ACS Applied Materials and Interfaces*, 2019, 11(47), 44046-44057; DOI: 10.1021/acsmi.9b11513
16. Ruiqi Na; **Krysten Minnici**, **Guoyan Zhang**, Nan Lu, **Miguel Gonzalez**, Guibin Wang, Elsa Reichmanis*, “Electrically conductive shell-protective layer capping on silicon surface as anode material for high performance Lithium-ion batteries”, *ACS Applied Materials and Interfaces*, 2019; 11(43), 40034-40042; DOI: 10.1021/acsmi.9b13941
17. Jun Huang, Shuo Lu, Ping-An Chen, Kai Wang, Yuanyuan Hu, Yong Liang, Ming Wang; Elsa Reichmanis*; “Rational Design of A Narrow Bandgap Conjugated Polymer Using the Quinoidal Thieno[3,2-b]thiophene-based Building Block for Organic Field-Effect Transistor Application”, *Macromolecules*, 2019, 52(12), 4749-4756.
18. **Carolyn Buckley**, Simil Thomas, **Michael McBride**, **Zhibo Yuan**, **Guoyan Zhang**, Jean-Luc Bredas, Elsa Reichmanis*, “Synergistic Use of Bithiazole and Pyridinyl Substitution for Effective Electron Transport Polymer Materials”, *Chemistry of Materials*, 2019, 31(11), 3957-3966. DOI: 10.1021/acs.chemmater.9b00208
19. **Bailey Risteen**, **Michael McBride**, **Miguel Gonzalez**, **Brian Khau**, **Guoyan Zhang**, Elsa Reichmanis*, “Functionalized Cellulose Nanocrystal-Mediated Conjugated Polymer Aggregation”, *ACS Applied Materials and Interfaces*, 2019, 11(28), 25338-25350. DOI: 10.1021/acsmi.9b06072
20. **Bailey Risteen**, Gwendoline Delepierre, Christoph Weder, Paul Russo, Elsa Reichmanis*, Justin Zoppe. “Thermally switchable liquid crystals based on cellulose nanocrystals with patchy polymer grafts”, *Small*, 2018; DOI: 10.1002/sml.201802060 (invited/selected for cover art)
21. Haihua Zhou, Zhandong Huang, Zheren Cai, Rui Zhang, Haiyan Wang, Yanlin Song, Elsa Reichmanis*, Patterning Bubbles by the Stick–Slip Motion of the Advancing Triple Phase Line on Nanostructures, *Langmuir*, 2018. DOI: 10.1021/acs.langmuir.8b03135

22. **Zhibo Yuan, Carolyn Buckley, Simil Thomas, Guoyan Zhang**, Ilaria Bargigia, Gang Wang, Boyi Fu, Carlos Silva, Jean-Luc Bredas and Elsa Reichmanis*. "A Thiazole-Naphthalene Diimide based n-Channel Donor-Acceptor Conjugated Polymer", *Macromolecules*, 2018; DOI: 10.1021/acs.macromol.8b01829
23. **Hao Xiong; Giovanni DeLuca**; Yichuan Rui; Boxin Zhang; Yaogang Li; Qinghong Zhang; Hongzhi Wang; Elsa Reichmanis*. "Modifying Perovskite Films with Polyvinylpyrrolidone for Ambient- Air-Stable Highly Bendable Solar Cells", *ACS Applied Materials & Interfaces*, 2018. DOI: 10.1021/acsami.8b04236
24. **Michael McBride, Nils Persson, Danny Keane, Guillermo Bacardi**, Elsa Reichmanis*; Martha Grover. "A Polymer Blend Approach for Creation of Effective Conjugated Polymer Charge Transport Pathways", *ACS Applied Materials and Interfaces*, 2018. DOI: 10.1021/acsami.8b13255
25. Su-Jin Ha; **Ji-Hwan Kang**; Dong Ho Choi; Seong Kyung Nam; Elsa Reichmanis*; Jun Hyuk Moon. "Upconversion-assisted Dual-band Luminescent Solar Concentrator Coupled for High Power Conversion Efficiency Photovoltaic Systems", *ACS Photonics*, 2018. DOI: 10.1021/acsphotonics.8b00498
26. **Giovanni DeLuca**, Askhat N. Jumabekov, Yinghong Hu, Alexandr N. Simonov, Jianfeng Lu, Boer Tan, Gede W. P. Adhyaksa, Erik C. Garnett, Elsa Reichmanis*, Anthony S. R. Chesman, Udo Bach. "Transparent Quasi-Interdigitated Electrodes for Semi-transparent Perovskite Back-Contact Solar Cells", *ACS Applied Energy Materials*, 2018. DOI: 10.1021/acsaem.8b01140
27. Huang, Liqiang; Wang, Gang; Zhou, Weihua; Fu, Boyi; Cheng, Xiaofang; Zhang, Lifu; **Yuan, Zhibo**; Xiong, Sixing; Zhang, Lin*; Xie, Yuanpeng; Zhang, Andong; Zhang, Youdi; Ma, Wei; Li, Weiwei; Zhou, Yinhu; Reichmanis, Elsa*; Chen, Yiwang. "Vertical Stratification Engineering for Organic Bulk-Heterojunction Devices". *ACS Nano*, 2018. DOI: 10.1021/acsnano.8b00439
28. **Kwon, Yo-Han**; Park, Jung Jin; Housel, Lisa; **Minnici, Krysten; Zhang, Guoyan; Lee, Sujin R**; Lee, Seung Woo; Chen, Zhongming; Noda, Suguru; Takeuchi, Esther; Takeuchi, Kenneth; Marschilok, Amy; Reichmanis, Elsa*. "Carbon Nanotube Web with Carboxylated Polythiophene 'Assist' for High-Performance Battery Electrodes", *ACS Nano*, 2018. DOI: 10.1021/acsnano.7b08918
29. Jiuke Mu, Gang Wang, Hongping Yan, Huayu Li, Xuemin Wang, Enlai Gao, Chenyi Hou, Anh Thi Cam Pham, Lianjun Wu, Qinghong Zhang, Yaogang Li, Zhiping Xu, Yang Guo, Elsa Reichmanis*, Hongzhi Wang, and Meifang Zhu. "Molecular-Channel Driven Actuator with Considerations for Multiple Configurations and Color Switching" *Nature Communications*, 2018. [Paper #NCOMMS-17-17021B]
30. **Kwon, Yo-Han; Minnici, Krysten**; Park, Jung Jin; **Lee, Sujin R; Zhang, Guoyan**; Takeuchi, Esther; Takeuchi, Kenneth; Marschilok, Amy; Reichmanis, Elsa*. "SWNT Anchored with Carboxylated Polythiophene Links on High-Capacity Li-Ion Battery Anode Materials", *JACS* 2018 (selected for cover art). DOI: 10.1021/jacs.8b00693
31. **Kwon, Yo-Han; Minnici, Krysten**; Park, Jung Jin; **Lee, Sujin R; Zhang, Guoyan**; Takeuchi, Esther; Takeuchi, Kenneth; Marschilok, Amy; Reichmanis, Elsa*. "SWNT Networks with Polythiophene Carboxylate Links for High-Performance Silicon Monoxide Electrodes", *ACS Applied Energy Materials*, 2018. DOI: 10.1021/acsaem.8b00522
32. **Michael McBride, Nils Persson**, Elsa Reichmanis*, Martha A. Grover. "Solving Materials' Small Data Problem with Dynamic Experimental Databases", *Processes*, 2018. DOI: 10.3390/pr6070079
33. Dongyu Xu, Michaela Burke Stevens, Yichuan Rui, **Giovanni DeLuca**, Shannon W. Boettcher, Elsa Reichmanis*, Yaohang Li, Qinghong Zhang, Hongzhi Wang. "The role of Cr doping in Ni-Fe oxide/(oxy)hydroxide electrocatalysts for oxygen evolution", *Electrochimica Acta* 2018. 265, 10-18
34. **Brian Schmatz, Zhibo Yuan, Augustus Lang, Jeff Hernandez**, Elsa Reichmanis*, John Reynolds, "Aqueous Processing in Printed Organic Electronics: Conjugated Polymers with Multistage Cleavable Sidechains", *ACS Central Science*, 2017, DOI: 10.1021/acscentsci.7b00232
35. **Mincheol Chang**, Gyun Taek Lim, Byoungnam Park, Elsa Reichmanis*, "Processing Strategies for Controlling Morphology and Charge Transport of Solution-Processed Conjugated Polymer Thin Films", *Polymer*, 2017, DOI: 10.3390/polym9060212 (published on-line 2017-06-03)
36. **Cornelia Rosu**, Christopher J. Tassone, **Ping-Hsun Chu**, Paul L. Balding, Andrew Gorman, Jeffrey Hernandez, Michael Hawkrige, Arniban Roy, Ioan I. Negulescu, Elsa Reichmanis* and Paul S. Russo, "Polypeptide-assisted organization of π -conjugated polymers into responsive, soft 3D networks", *Chemistry of Materials*, 2017, 29(12), 5058-5062. DOI: 10.1021/acs.chemmater.7b02035
37. **Nils Persson, Ping-Hsun Chu, Michael McBride**, Martha Grover, Elsa Reichmanis*, "Nucleation, Growth, and Alignment of Poly(3-hexylthiophene) Nanofibers for High-Performance OFETs", *Accounts of Chemical Research*, 2017, 50(4), 932-942; DOI: 10.1021/acs.accounts.6b00639

38. **Ji-Hwan Kang**, Sang Seok Lee, Josefa Guerrero, Alberto Fernandez-Nieves, Shin-Hyun Kim, and Elsa Reichmanis*, “Ultrathin Double-Shell Capsules for High Performance Photon Upconversion”, *Advanced Materials*, 2017, DOI: 10.1002/adma.201606830
39. Elsa Reichmanis* and Mahmood Sabahi, Life Cycle Inventory Assessment as a Sustainable Chemistry and Engineering Education Tool, *ACS Sustainable Chemistry and Engineering*, 2017, DOI: 10.1021/acssuschemeng.7b03144
40. **Zhang, Guoyan; McBride, Michael; Persson, Nils; Lee, Savannah;** Dunn, Tim; Toney, Michael; **Yuan, Zhibo; Kwon, Yo-Han; Chu, Ping-Hsun; Risteen, Bailey;** Reichmanis, Elsa*, A versatile interpenetrating polymer network approach to robust stretchable electronic devices, *Chemistry of Materials*, 2017, DOI: 10.1021/acs.chemmater.7b03019
41. **Nils E. Persson, Joshua Rafshoon,** Kaylie Naghshpour, Tony Fast, **Ping-Hsun Chu, Michael McBride, Bailey Risteen,** Martha Grover, Elsa Reichmanis*, “High-throughput Image Analysis of Fibrillar Materials: A Case Study on Polymer Nanofiber Packing, Alignment, and Defects in OFETs”, *ACS Applied Materials and Interfaces*, 2017, DOI: 10.1021/acsami.7b10510
42. Bailey Risteen, Alyssa Blake, **Michael A. McBride, Cornelia Rosu,** Jung Ok Park, Mohan Srinivasarao, Paul S. Russo and Elsa Reichmanis*, “Enhanced Alignment of Water-Soluble Polythiophene Using Cellulose Nanocrystals as a Liquid Crystal Template”, *Biomacromolecules*, 2017, 18(5), 1556-1562; DOI: 10.1021/acs.biomac.7b00121
43. Hao Xiong, **Giovanni DeLuca,** Yichuan Rui, Yaogang Li, Elsa Reichmanis*, Qinghong Zhang, and Hongzhi Wang, “Solvent vapor annealing of oriented PbI₂ films for improved crystallization of perovskite films in the air”, *Solar Energy Materials and Solar Cells*, 2017, 166, 167–175; DOI: 10.1016/j.solmat.2017.03.028
44. **Ji-Hwan Kang,** Shin-Hyun Kim, Alberto Fernandez-Nieves and Elsa Reichmanis*, “Amplified Photon Upconversion by Photonic Shell of Cholesteric Liquid Crystals”, *Journal of the American Chemical Society*, 2017, 139(16), 5708-5711.
45. Haihua Zhou, **Rui Chang,** Elsa Reichmanis*, Yanlin Song, “Wetting of Inkjet Polymer Droplets on Porous Alumina Substrates”, *Langmuir*, 2017, 33(1), 130-137.
46. **Zhibo Yuan, Boyi Fu,** Siyuan Zhang, **Giovanni DeLuca, Rui Chang, Lauren Lopez, Chaker Fares, Guoyan Zhang,** Elsa Reichmanis*, Unipolar electron transport polymers: a thiazole based all electron acceptor approach, *Chemistry of Materials*, 2016, 28(17), 6045-6049; DOI: 10.1021/acs.chemmater.6b01929
47. **Nils Persson, Michael McBride,** Martha Grover, Elsa Reichmanis*, Automated Analysis of Orientational Order in Images of Fibrillar Materials, *Chemistry of Materials*, 2017, 29(1), 3-14; DOI: 10.1021/acs.chemmater.6b01825 (*invited protocol*).
48. **Cornelia Rosu,** Shane Jacobeen, Katherine Park, Elsa Reichmanis*, Peter Yunker, Paul S. Russo, “Domed Silica Microcylinders Coated with Oleophobic Polypeptides and their Behavior in Lyotropic Liquid Crystals of the Same Peptide”, *Langmuir*, 2016, 32(49), 13137-13148
49. **Yo Han Kwon, Krysten Krysten,** Matthew M. Huie, Kenneth J. Takeuchi, Esther S. Takeuchi, Amy C. Marschilok, Elsa Reichmanis*, Electron/Ion Transport Enhancer in High Capacity Li-ion Battery Anodes, *Chemistry of Materials* (2016), 28(18), 6689-6697.
50. **Gang Wang, Ping-Hsun Chu, Boyi Fu,** Zhongyuan He, **Nabil Kleinhenz, Zhibo Yuan,** Yimin Mao, Hongzhi Wang, Elsa Reichmanis*, Conjugated Polymer Alignment: Synergisms Derived Microfluidic Shear Design and UV Irradiation, *ACS Applied Materials and Interfaces* (2016), 8(37), 24761-24772; DOI: 10.1021/acsami.6b07548
51. **Gang Wang,** Kerui Li, Francis Purcell, De Zhao, Wei Zhang, Zhongyuan He, Shuai Tan, Zhengguan Tang, Hongzhi Wang, Elsa Reichmanis*, “Three Dimensional Clustered Nanostructures for Microfluidic Surface Enhanced Raman Detection”, *ACS Applied Materials and Interfaces* (2016), 8(37), 24974-24981.
52. **Ping-Hsun Chu, Nabil Kleinhenz, Nils Persson, Michael McBride, Jeff L. Hernandez, Boyi Fu, Guoyan Zhang,** Elsa Reichmanis*, “Toward Precision Control of Nanofiber Orientation in Conjugated Polymer Thin Films: Impact on Charge Transport”, *Chemistry of Materials*, 2016, 28(24), 9099-9109.
53. **Guoyan Zhang,** Ho-Yee Hui, **Ping-Hsun Chu, Zhibo Yuan, Rui Chang, Bailey Risteen,** Huai Yang, Elsa Reichmanis*, “From Staple Food to Flexible Substrate to Electronics: Rice as a Biocompatible Precursor for Flexible Electronic Components,” *Chemistry of Materials*, 2016, 28(23), 8475-8479.
54. **Nils Persson, Michael McBride, Martha Grover,** Elsa Reichmanis*, “Silicon Valley Meets the Ivory Tower: Searchable Data Repositories for Experimental Materials Research”, *Current Opinion in Solid State and Materials Science*, 2016, 20(6), 338-343; DOI: 10.1016/j.cossms.2016.06.002 (*invited article*).

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13. Resist Materials, *U.S. Patent 5,200,544*, F. M. Houlihan, T. X. Neenan, E. Reichmanis, April 6, 1993.
14. Resist Materials, *U.S. Patent 5,135,838*, F. M. Houlihan, T. X. Neenan, E. Reichmanis, August 4, 1992.

15. Radiation Sensitive Materials and Devices Made Therewith, *U.S. Patent 4,996,136*, F. M. Houlihan, E. Reichmanis, L. F. Thompson, February 26, 1991.
16. Fabrication of Electronic Devices Utilizing Lithographic Techniques, *U.S. Patent 4,701,342*, A. E. Novembre and E. Reichmanis, October 20, 1987.
17. Photosensitive Element Comprising a Substrate and an Alkaline Soluble Mixture, *U.S. Patent 4,666,820*, E. A. Chandross, E. Reichmanis, C. W. Wilkins, Jr.
18. Process for Preparing Semiconductors Using Photosensitive Bodies, *U.S. Patent 4,551,416*, E. A. Chandross, E. Reichmanis and C. W. Wilkins, Jr., November 4, 1985.
19. Bilevel Resist, *U.S. Patent 4,521,274*, E. Reichmanis and C. W. Wilkins, Jr., June 4, 1985.
20. Bilevel Resist, *U.S. Patent 4,481,049*, E. Reichmanis and G. Smolinsky, November 6, 1984.
21. Process of Making Semiconductor Devices using Photosensitive Bodies, *U.S. Patent 4,400,461*, E. A. Chandross, E. Reichmanis and C. W. Wilkins, Jr., September 23, 1983.
22. Photosensitive Element Containing UV Sensitive Terpolymers, *U.S. Patent 4,382,120*, Reichmanis and C. W. Wilkins, Jr., May 3, 1983.
23. Multiple Exposure Microlithography Patterning Method, *U.S. Patent 4,373,018*, Reichmanis, B. J. Roman, K. L. Tai and C. W. Wilkins, Jr., February 8, 1983.
24. Process of Exposing and Developing Terpolymer Photosensitive Bodies, *U.S. Patent 4,343,889*, E. Reichmanis and C. W. Wilkins, Jr., September 10, 1982.

Provisional Patents, Applications, and Invention Disclosures

1. Stretchable electronic materials and devices. Michael McBride, Nils Persson, Elsa Reichmanis, Guoyan Zhang. PCT/US18/48399 (GTRC7612 PCT), filed August 28, 2018.
2. SWNT Anchoring for High-capacity Li-ion Battery Anode Materials. Yo Han Kwon, Elsa Reichmanis. U.S. Patent Application No. 62/639,339 (GTRC7854PRV), Filed: March 6, 2018.

D. Presentations (2008 – present, partial list)

D1. Keynote and Plenary Presentation

1. Elsa Reichmanis, Towards Stretchable Electronics: Polymer Fibrils and Transport Pathways, Chinese Chemical Society Meeting, Xi'an, China, October, 2019 (*keynote*)
2. Elsa Reichmanis, From Polymer Fibrils and Transport Pathways to Stretchable Optoelectronic Devices, SPIE Optics and Photonics Meeting, August, 2019, San Deigo, CA (*Plenary*)
3. Elsa Reichmanis, From silicon to plastic: materials design and process considerations, American Chemical Society Spring Meeting, New Orleans, LA, March 21, 2018. (*keynote*)
4. Elsa Reichmanis, Fibrillar Structures, Transport Pathways and Stretchable Electronics, Elsa Reichmanis, 2017 International Conference on Advanced Fibers and Polymer Materials, shanghai, China, October 8-10, 2017 (*Plenary*)
5. Elsa Reichmanis, "Polymeric Semiconductors: Molecular Ordering, Charge Transport and Macroscale Mobility", 37th Annual Meeting of the Brazilian Chemical Society, May 29, 2014 (*Plenary*)
6. Elsa Reichmanis, "Active Polymers for Devices: Achieving Requisite Performance in Additive Manufacturing," Symposium on Additive Manufacturing and Innovative Technologies, Add+it, 2015, September 10-11, 2015, Linz Austria (*Plenary*)
7. Elsa Reichmanis, "Low-Dimensional Materials: Molecular Structure and Processing Relationships that Govern Performance," "Inauguration Ceremony for the Center for Advanced Low-Dimensional Materials", October 23-26, 2015, Donghua University, Shanghai, China (*Plenary*)

D2. Invited Conference Presentations

1. Elsa Reichmanis*, Harnessing Cellulose Nanocrystals for Sustainable Devices, Exciton Science Center Workshop, Melbourne, Australia, December 10, 2019.
2. Elsa Reichmanis*, Polymer Fibrils, Transport Pathways and Stretchable Electronics, American Chemical Society National Meeting, San Deigo, CA, August, 2019
3. Elsa Reichmanis*, Utilizing the Organization of Nanocellulose and Semiconducting Polymers Towards Next Generation Bio-based Electronics, American Chemical Society National Meeting, San Diego, CA August, 2019
4. Elsa Reichmanis*, Polymer Fibrils, Transport Pathways and Stretchable Electronics, Canadian Chemical Conference and Exhibition, Quebec City, Canada, June 4, 2019
5. Carolyn Buckley, Michael McBride and Elsa Reichmanis, Towards robust semiconducting polymer inks for

- flexible electronics , Materials Research Society Spring Meeting, April, 2019
6. Guoyan Zhang, Michael McBride, Elsa Reichmanis. “Polymer Fibrils, Transport Pathways and Stretchable Electronics”, American Chemical Society Fall Meeting, Boston, MA, August 19-22, 2018.
 7. Opportunities for nanomaterials in storage applications: the importance of surfaces and interfaces, Elsa Reichmanis, American Chemical Society Fall Meeting, Boston, MA, August 19-22, 2018.
 8. Valerie Kuck: scientist, mentor and mom, Elsa Reichmanis, American Chemical Society Fall Meeting, Boston, MA, August 19-22, 2018.
 9. Fundamentals and Challenges for a Sustainable Chemical Enterprise, Mahmood Sabahi, Elsa Reichmanis, American Chemical Society National Meeting, San Francisco, CA, April 2-6, 2017.
 10. Approaches to sustainable materials and processes for flexible electronics, Guoyan Zhang, Bailey Risteen, Ping-Hsun Chu, Elsa Reichmanis, American Chemical Society National Meeting, San Francisco, CA, April 2-6, 2017
 11. Polymer molecular design and processing for efficient macroscale charge transport pathways, Elsa Reichmanis, American Chemical Society National Meeting, San Francisco, CA, April 2-6, 2017
 12. Active Polymer Materials for Flexible Electronics: Molecular Design and Processing for Efficient Macroscale Charge Transport Pathways, Elsa Reichmanis, 2017 AIChE Annual Meeting, Minneapolis, MN. October 30, 2017
 13. Perspectives in polymers for electronics: from photopolymers to active materials, Elsa Reichmanis, ACS National Meeting, Spring, 2016, San Diego, CA
 14. Structure – Process - Property Relationships Governing Solution Processed Semiconductor Performance, Nils Persson, Mike McBride, Martha Grover, Elsa Reichmanis, Synthetic Metals Conference, June 26 – July 1, 2016, Guangzhou, China
 15. Active Organic and Polymer Materials for Flexible Electronics, in “Beyond Silicon: New Materials for 21st Century Electronics, Elsa Reichmanis, American Association for the Advancement of Science Annual Meeting, San Jose, CA February 12-16, 2015
 16. Hybrid active organic/inorganic materials: impact of molecular ordering on charge transport, Elsa Reichmanis, Division of Inorganic Chemistry, American Chemical Society Fall National Meeting, Boston, MA, August 16-20, 2015.
 17. “Molecular Structure vs. Processing: Relationships that Govern Electronic Polymer Performance,” Elsa Reichmanis, Frontiers in Polymer Science and Engineering, 5th ACS-PMSE/CCS-PD Joint Symposium on Polymers, October 20, 2015, Suzhou, China
 18. “Molecular Structure vs. Processing: Relationships that Govern Electronic Polymer Performance,” Elsa Reichmanis, 5th ACS-PMSE/CCS-PD Joint Symposium on Polymers, October 22, 2015, Zhejiang University, Hangzhou, China
 19. “Materials Chemistry and Technology for a Sustainable Future”, Elsa Reichmanis, Workshop on Sustainability of the Chemical Industry: Challenges and Opportunities”. Memphis, TN November 7, 2015. (invited)
 20. “Excursions in research – a path to a balanced portfolio” Elsa Reichmanis, AIChE National Meeting, November 8-12, 2015, Salt Lake City, UT
 21. “Molecular to Macroscale Organization of Conjugated Polymer Assemblies”, Dalsu Choi, Gang Wang, Nils Persson, Nabil Kleinhenz, Elsa Reichmanis, “Pacific Polymer Conference, Kauai, Hawaii, December 9-13, 2015.
 22. “Flexible Polymeric Devices: Molecular Ordering, Charge Transport and Macroscale Mobility”, Elsa Reichmanis, 6th Meeting of the Symposium on Polymers for Microelectronics, Wilmington, DE, May 6-8, 2014
 23. “Coupling Molecular and Process Parameters for High Performance Electronic Polymers”, Elsa Reichmanis, IUPAC MACRO, Chiang Mai, Thailand, July 6-11, 2014
 24. “Materials Chemistry and Technology for a Sustainable Future”, Elsa Reichmanis, Workshop on Sustainability in the Chemical Industry: Challenges and Opportunities, Baton Rouge, LA, October 23, 2013
 25. “Towards Efficient Solution Processed Organic Photovoltaic Devices,” Elsa Reichmanis, AVS 61st International Symposium & Exhibition, Baltimore, MD, November 9-14, 2014
 26. “Poly(benzothiadiazole-sexithiophene-diketopyrrolopyrrole) polymeric semiconductors: synthesis, characterization and charge transport properties”, Boyi Fu, Elsa Reichmanis, ACS National Meeting, Dallas, TX, March 16-20, 2014 (*in excellence in graduate polymer research symposium*)

27. "Science and Policy Challenges for Nanostructured Materials in Advanced Energy Applications", [Elsa Reichmanis](#), American Chemical Society Fall Meeting, September, 8-12, 2013, Indianapolis, IN.
28. "Captain Charlie's keys to 21st Century STEM career success", [Elsa Reichmanis](#), Southeast Regional American Chemical Society Meeting, November 11-15, 2013, Atlanta, GA
29. "Polymeric semiconductors: the impact of molecular ordering", [Elsa Reichmanis](#), Boyi Fu, Nabil Kleinhenz, Karthik Nayani, Jung Ok Park, Mohan Srinivasarao, Southeast Regional American Chemical Society Meeting, November 11-15, 2013, Atlanta, GA
30. "Charge transport and polymeric semiconductors: the role of molecular ordering", Boyi Fu, Nabil Kleinhenz, Karthik Nayani, Mincheol Chang, Jung Ok Park, Mohan Srinivasarao, [Elsa Reichmanis](#), IUPAC World Chemical Congress, August 11-16, 2013, Istanbul, Turkey
31. "Approaches to Achieve More Efficient Photovoltaic Devices", [Elsa Reichmanis](#), American Chemical Society Spring Meeting, April 7-11, 2013, New Orleans, LA
32. "Molecular Ordering and Macroscale Mobility: Design Concepts for Polymer Based Semiconductors", Boyi Fu, Nabil Kleinhenz, Dalsu Choi, Karthik Nayani, Jung Ok Park, Mohan Srinivasarao, [Elsa Reichmanis](#), American Chemical Society Spring Meeting, April 7-11, 2013, New Orleans, LA
33. "Polymers in Electronics: The Coupling of Molecular and Process Parameters for High Performance", [Elsa Reichmanis](#), American Chemical Society Spring Meeting, April 7-11, 2013, New Orleans,
34. "Towards Enhanced Macroscale Mobility in Polymeric Semiconductors: Control of Structure, Process, Property Relationships", Avishek Aiyar, Boyi Fu, Karthik Nayani, Min Sang Park, Jung Ok Park, Mohan Srinivasarao, [Elsa Reichmanis](#), IUPAC MACRO2012, June 24-29, 2012, Blacksburg, VA
35. "Conjugated Polymer Semiconductors: Insights Towards Enhanced Ordering, Charge Transport and Macroscale Mobility", Avishek Aiyar, Min Sang Park, Jung Ok Park, Mohan Srinivasarao, [Elsa Reichmanis](#), SPIE Conference on Organic Field Effect Transistors X, August 12-16, 2012, San Diego, CA
36. "Polymers in Electronics: The Coupling of Molecular and Process Parameters for High Performance", [Elsa Reichmanis](#), American Chemical Society Fall Meeting, August 19-23, 2012, Philadelphia, PA
37. "Molecular Ordering, Charge Transport and Macroscale Mobility Relationships in Polymer Based Semiconductors", Boyi Fu, Avishek Aiyar, Karthik Nayani, Min Sang Park, Jung Ok Park, Mohan Srinivasarao, [Elsa Reichmanis](#), Fall Materials Research Society Meeting, November 2012, Boston, MA
38. "Regioregularity and Intra-Chain Ordering: Impact on the Nanostructure and Charge Transport in Two Dimensional Assemblies of Poly(3-hexyl)thiophene", A. R. Aiyar, J.-I. Hong, [E. Reichmanis](#), ICSM 2012, July 8-13, 2012, Atlanta, GA
39. "Molecular Synthesis, Characterization and Application of Oligo-Thiophene Benzothiadiazole Based Low Bandgap D-A π -Conjugated Copolymers", B. Fu (presenter), [E. Reichmanis](#), American Chemical Society Fall Meeting, August 19-23, 2012, Philadelphia, PA (selected as *Finalist* in the Polymer Materials Science and Engineering Division *AkzoNobel Student Award in Applied Polymer Science Symposium*)
40. "STEM Education: Fostering an Environment of Interest and Enthusiasm", [Elsa Reichmanis](#), American Chemical Society Spring Meeting, March 21-24, 2011, Anaheim, CA.
41. "Advanced Organic Electronic Materials", Elsa Reichmanis, High Polymer Research Conference, Pott Shrigley, UK, May 2010
42. "Advanced Polymeric Materials for Electronic Applications", [Elsa Reichmanis](#), ACS National Meeting, San Francisco, CA March 2010
43. "Advanced Organic Electronic Materials: *the impact of molecular structure on the performance of sacrificial, passive and active materials*", [Elsa Reichmanis](#), MACRO 2008, Taipei, Taiwan, July 2008.

D3. Conference Presentations (2008 – present; partial list)

1. "Effect of Counterion Exchange on Conjugated Polyelectrolytes in Organic Electrochemical Transistors", [Brian Khau](#), Elsa Reichmanis, 2018 MRS Fall Meeting, Boston, MA, Nov 25-30, 2018.
2. "DPP-Pyridine All-Acceptor Conjugated Polymer for Fullerene-Alternative Materials in OPVs", [Carolyn Buckley](#), Elsa Reichmanis, 2018 Clean Energy and Empowerment (C3E) Initiative Symposium: Palo Alto, CA, December, 2018 (*semi-finalist*)
3. "Tuning Semi-Conducting Polymers for Binder Applications in Fe₃O₄ Li-Ion Battery Anodes." Polymers in Batteries, [Krysten Minnici](#), Yo Han Kwon, Elsa Reichmanis. American Institute of Chemical Engineers 2018 Annual Meeting, Pittsburgh, PA, Nov. 1, 2018.

4. "Engineering Polymer-Nanoparticle Systems Towards Sustainable Devices and Sensors". Bailey Risteen, Justin O. Zoppe, Mohan Srinivasarao, Paul Russo, Elsa Reichmanis. American Institute of Chemical Engineers 2018 Annual Meeting, Pittsburgh, PA, Nov. 1, 2018.
5. "Patchy" Grafting of a Thermoresponsive Polymer from Cellulose Nanocrystals for a Bio-derived, Switchable Liquid Crystal". Bailey Risteen, Gwenn Delepierre, Justin Zoppe, Mohan Srinivasarao, Paul Russo, Elsa Reichmanis. Gordon Research Conference on Polymer Physics, Mount Holyoke, MA, July 2018.
6. "Ion Exchanged Polymeric Binders for High Capacity Fe₃O₄ Li-ion Battery Anodes", Krysten Minnici, Yo Han Kwon, Elsa Reichmanis. Gordon Research Conference on Polymer Physics, Mount Holyoke, MA, July 22, 2018
7. "Ion Exchanged Polymeric Binders for High Capacity Fe₃O₄ Li-ion Battery Anodes", Krysten Minnici, Yo Han Kwon, Elsa Reichmanis. Georgia Tech Student Polymer Network, Atlanta, GA. Mar. 9, 2018. (*1st Place Poster Award*)
8. "Life cycle inventory assessment as a sustainable chemistry and engineering education tool", Sabahi, Mahmood; Reichmanis, Elsa, Spring Meeting of the American Chemical Society, New Orleans, LA, March 18-22, 2018
9. "Sustainable polymeric materials: Education, research and development, and commercialization", Mahmood Sabahi and Elsa Reichmanis, Spring Meeting of the American Chemical Society, New Orleans, LA, March 18-22, 2018
10. Low-hanging fruit for machine learning in materials science: Imaging. Persson, Nils; McBride, Michael; Grover, Martha; Reichmanis, Elsa, Spring Meeting of the American Chemical Society, New Orleans, LA, March 18-22, 2018
11. Controlled assembly of poly(3-hexylthiophene): From fundamental understanding of conjugated polymer assembly process towards stretchable electronics, Choi, Dalsu; Lee, Sungho; Reichmanis, Elsa, Spring Meeting of the American Chemical Society, New Orleans, LA, March 18-22, 2018
12. "'Patchy' Modification of CNCs with a Thermoresponsive Polymer for a "Switchable" Liquid Crystal". Bailey Risteen, Gwenn Delepierre, Mohan Srinivasarao, Christoph Weder, Paul Russo, Elsa Reichmanis, Justin Zoppe. TAPPI Nano, Madison, WI, June 2018.
13. "Conjugated Polymers for High Capacity Fe₃O₄ Li-ion Battery Anodes", Krysten Minnici, Yo Han Kwon, Elsa Reichmanis. National Graduate Research Polymer Conference. Minneapolis, MN, June 11, 2018.
14. "Polypeptide-induced organization of semiconducting polymers into hybrid electroactive materials with enhanced photo-physical properties", Rosu, Cornelia; Russo, Paul; Reichmanis, Elsa, Spring Meeting of the American Chemical Society, New Orleans, LA, March 18-22, 2018
15. "Quantitation and optimization of process-structure-property relationships in polymer organic electronics", Persson, Nils; McBride, Michael; Reichmanis, Elsa; Grover, Martha, Spring Meeting of the American Chemical Society, New Orleans, LA, March 18-22, 2018
16. "Quantitation and optimization of process-structure-property relationships in polymer organic electronics", Persson, Nils; McBride, Michael; Reichmanis, Elsa; Grover, Martha, Spring Meeting of the American Chemical Society, New Orleans, LA, March 18-22, 2018
17. "Design, synthesis and characterization of Thiazole-based conjugated polymers and its applications", Yuan, Zhibo; Thomas, Simil; Buckley, Carolyn; Zhang, Guoyan; Bredas, Jean-Luc E.; Reichmanis, Elsa, Spring Meeting of the American Chemical Society, New Orleans, LA, March 18-22, 2018 (poster)
18. "Self-organized interpenetrating polymer network in semiconducting films for stretchable electronics", Zhang, Guoyan; Reichmanis, Elsa, Spring Meeting of the American Chemical Society, New Orleans, LA, March 18-22, 2018

19. "Synthesis of DPP-Pyridine All-Acceptor Unipolar Conjugated n-Channel Copolymer for Enhanced Device Performance in Organic Field Effect Transistors", Carolyn Buckley, Elsa Reichmanis, Materials Research Society Spring Meeting & Exhibition, Phoenix, AZ, April 2-6, 2018
20. "Amplification of chirality lyotropic chromonic liquid crystals confined to capillaries", Sujin R. Lee, Rui Chang, Elsa Reichmanis, Jung Ok Park, and Mohan Srinivasarao, American Physical Society March Meeting, Los Angeles, CA, March 5-9, 2018
21. "Cellulose nanocrystals confined to cylinders.", Sujin R. Lee, Elsa Reichmanis, Jung Ok Park, and Mohan Srinivasarao, American Physical Society March Meeting, Los Angeles, CA, March 5-9, 2018 (poster)
22. "Salt effects on transition temperatures and orientational order of lyotropic chromonic liquid crystals". Rui Chang, Jung Ok Park, Elsa Reichmanis, Mohan Srinivasarao, American Physical Society March Meeting, Los Angeles, CA, March 5-9, 2018 (poster)
23. "Chiral configurations from racemic lyotropic polymer liquid crystals under cylindrical confinement". Rui Chang, Jung Ok Park, Elsa Reichmanis, Mohan Srinivasarao, American Physical Society March Meeting, Los Angeles, CA, March 5-9, 2018.
24. "The intersection of natural fungal proteins, bio-derived products and semiconducting polymers: a sustainable path to advanced organic electronics", Cornelia Rosu, Paul Russo, Elsa Reichmanis, International Conference on Nanomaterials from Renewable Materials, Grenoble, France, June 13-16, 2016
25. "Cellulose Nanocrystals as Structure-directing Agents for Enhanced Alignment of Semiconducting Polymers", Bailey Risteen, Cornelia Rosu, Paul Russo, Elsa Reichmanis, Conference on Organic Electronics, Croatia, September 22-24, 2016
26. "Polypeptides: Bioderived templates for thermoreversible semiconducting gels", Cornelia Rosu, Ping-Hsun Chu, Elsa Reichmanis, Paul Russo, American Chemical Society National Meeting Philadelphia, PA, United States, August 21-25, 2016
27. "Long range ordering of poly(3-hexylthiophene) in fluids and films: Effects of self-assembly techniques on liquid crystallinity, material properties and device performance", Nabil Kleinhenz, Nils Persson, Zongzhe Xue, Ping-Hsun Chu, Gang Wang, Zhibo Yuan, Dalsu Choi, Mincheol Chang, Elsa Reichmanis, Elsa, American Chemical Society National Meeting, San Diego, CA, United States, March 13-17, 2016
28. "Effect of Transporting Enhancer in Fe₃O₄ Li-Ion Battery Anodes", Yo Han Kwon, Krysten Minnici, Matthew Huie, Kenneth Takeuchi, Esther Takeuchi, Amy Marschilok, Elsa Reichmanis, American Institute of Chemical Engineers Meeting, San Francisco, CA, November 14-17, 2016.

29. "Approaches to Solution Processable n-Channel π -Conjugated Donor-Acceptor Co-Polymers and Device Applications", Zhibo Yuan, Boyi Fu, Elsa Reichmanis, American Institute of Chemical Engineers Meeting, San Francisco, CA, November 14-17, 2016.
30. "Solution Shearing of Conjugated Polymer with Highly Aligned Nanofibrillar Structures for Organic Field Effect Transistors", Ping-Hsun Chu, Nabil Kleinhenz, Nils Persson, Mike McBride, Jeff Hernandez, Jung Ok Park, Mohan Srinivasarao, Elsa Reichmanis, American Institute of Chemical Engineers Meeting, San Francisco, CA, November 14-17, 2016.
31. "Sorting out the Process-Structure-Property Relationship in Polymer Organic Electronics", Nils Persson, Mike McBride, Elsa Reichmanis, Martha Grover, American Institute of Chemical Engineers Meeting, San Francisco, CA, November 14-17, 2016.
32. "Automated Analysis of Orientational Order from Images of Fibrillar Thin Films", Nils Persson, Mike McBride, Elsa Reichmanis, Martha Grover, American Institute of Chemical Engineers Meeting, San Francisco, CA, November 14-17, 2016.
33. "From staple food to calligraphic substrate to electronics: Rice as a biocompatible precursor for flexible electronic components", Zhang, Guoyan; Hui, Ho Yee; Chu, Ping Hsun; Yuan, Zhibo; Chang, Rui; Risteen, Bailey; Yang, Huai; Reichmanis, Elsa, Materials Research Society Fall Meeting, Boston, MA, November 29-December 1, 2016.
34. "Toward Precision Control of Nanofiber Orientation in Conjugated Polymer Thin Films: Impact on Charge Transport", Ping-Hsun Chu, Kleinhenz, Nabil; Persson, Nils; McBride, Michael; Hernandez, Jeff; Fu, Boyi; Zhang, Guoyan ; Reichmanis, Elsa, Materials Research Society Fall Meeting, Boston, MA, November 29-December 1, 2016.
35. "Aqueous delivery of π - π conjugated polymer solutions through a network formed by a fungal Janus-like surfactant", Cornelia Rosu, Nabil Kleinhenz, Dalsu Choi, Paul S.Russo, and Elsa Reichmanis, American Chemical Society Annual Meeting, Denver, CO, March 22-26, 2015.
36. "Approaches to solution processable n-channel π -conjugated donor-acceptor co-polymers and device applications", Zhibo Yuan, Boyi Fu, Yundi Jiang, Mincheol Chang, Ping-Hsun Chu, David Collard, Elsa Reichmanis, Pacificchem 2015, Honolulu, HA December 14-21, 2015
37. "Quantification of the structure-property relationship in polymeric semiconductors: An algorithmic, Big-Data approach", Nils Persson, Dalar Nazarian, Elsa Reichmanis, Pacificchem 2015, Honolulu, HA December 14-21, 2015
38. "Connecting Chemistry to Society: A student's perspective on safety in the academic lab," Nils Persson, Elsa Reichmanis, Pacificchem 2015, Honolulu, HA December 14-21, 2015
39. "Synergistic Effect of Regioregular and Regiorandom Poly(3-hexylthiophene) Blends for Flexible Organic Field Effect Transistors," Ping-Hsun Chu, Boyi Fu, Jung Ok Park, Mohan Srinivasarao and Elsa Reichmanis, Materials Research Society Fall Meeting, Boston, MA, November 30-December 3, 2015.
40. "Encapsulation of pi-conjugated polymers by a fungal Janus surfactants", Cornelia Rosu, Nabil Kleinhenz, Dalsu Choi, Paul S.Russo, and Elsa Reichmanis, 2015 TAPPI International Conference on Nanotechnology and Renewable Materials, Atlanta, GA, June 22-25, 2015.
41. "Synergistic Effect of Regioregular and Regiorandom Poly(3-hexylthiophene) Blends for Flexible Organic Devices", Ping-Hsun Chu, Boyi Fu, Jung Ok Park, Mohan Srinivasarao and Elsa Reichmanis, American Institute of Chemical Engineers Annual Meeting, Salt Lake City, UT, November 8-12, 2015.
42. "A Blend Approach to P3HT Based Field Effect Transistor Performance Enhancement via Inclusion of 2,5-bis(3-dodecylthiophen-2-yl)thieno[3,2-b]thiophene", Ping-Hsun Chu, Lei Zhang, Jung Ok Park, Mohan Srinivasarao and Elsa Reichmanis, American Physical Society March Meeting, San Antonio, TX, March 2-6, 2015.
43. "Double helix configuration of lyotropic chromonic liquid crystals in cylindrical capillaries with homeotropic anchoring", Rui Chang, Karthik Nayani, Jinxin Fu, Elsa Reichmanis, Jung Ok Park, Mohan Srinivasarao, American Physical Society March Meeting, San Antonio, TX, March 2-6, 2015.
44. "Confinement and jamming: The result of merging the complex world of conjugated polymers, fungal Janus surfactants and colloids", Cornelia Rosu, Nabil Kleinhenz, Dalsu Choi, Christopher Tassone, Jinxin Fu, Mohan Srinivasarao, Paul Russo, Elsa Reichmanis, Pacificchem 2015, Honolulu, HA December 14-21, 2015
45. "Self-assembly of spherical and anisotropic polymer composite particles in bioderived cholesteric liquid crystal matrices," Cornelia Rosu, Jinxin Fu, Elsa Reichmanis, Paul Russo, Pacificchem 2015, Honolulu, HA December 14-21, 2015

46. "Air Stable, High Performance N-Type Polymer Semiconductor Field-Effect Transistors Processed From Non-Halogenated Solvents", Boyi Fu and [Elsa Reichmanis](#), AIChE National Meeting, November 17-20, 2014
47. "P3HT nanostructure dimension control and its impact on semiconductor charge carrier transport characteristics", Dalsu Choi, Elsa Reichmanis, MRS Spring Meeting, San Francisco, CA, April 2014
48. "A Blend Approach to P3HT Based Field Effect Transistor Performance Enhancement via Inclusion of 2,5-bis(3-dodecylthiophen-2-yl)thieno[3,2-b]thiophene", Ping-Hsun Chu, Lei Zhang, Jung Ok Park, Mohan Srinivasarao, Alejandro L. Briseño, Elsa Reichmanis, MRS Spring Meeting, San Francisco, CA, April 2014.
49. "Cosolvent Effects on the Nanoscale Morphology and Charge Transport in Organic Field Effect Transistors", Mincheol Chang, Dalsu Choi, Boyi Fu, Elsa Reichmanis, Spring Materials Research Society Meeting, April 2013, San Francisco, CA
50. "Energy Transfer Enhancement of Photon Upconversion Systems for Low-Threshold Photonic Applications", Ji-Hwan Kang and Elsa Reichmanis, Spring Materials Research Society Meeting, April 2013, San Francisco, CA
51. "Morphological Control and Characterization of Liquid Crystalline Materials for Organic Electronics Applications", Nabil Kleinhenz, Karthik Nayani, Min Sang Park, Avishek Aiyar, Jung Ok Park, Mohan Srinivasarao and Elsa Reichmanis, American Physical Society March Meeting, March, 2013, Baltimore, MD
52. "Liquid Crystallinity in P3HT Solutions", Nabil Kleinhenz, Karthik Nayani, Mincheol Chang, Jung Ok Park, Mohan Srinivasarao, Elsa Reichmanis, Gordon Research Conference on Liquid Crystals, June 16-21, 2013
53. "Undulation instability in drop-cast poly(3-hexylthiophene) film originated from self-assembly", M. S. Park (presenter), A. Aiyar, E. Reichmanis, M. Srinivasarao, APS March Meeting, 2012
54. "Self-assembly induced instability in drop-cast poly(3-hexylthiophene) films: design implications for polymer semiconducting materials and processes", M. S. Park, K. Nayani, A. Aiyar, N. Kleinhenz, J. O. Park, E. Reichmanis, M. Srinivasarao, Fall Materials Research Society Meeting, November 2012, Boston, MA
55. "Evaporative Self-Assembly and Formation of the Lyotropic Liquid Crystalline Phase of Poly(3-hexylthiophene)", *Min Sang Park*, Avishek Aiyar, Elsa Reichmanis, Mohan Srinivasarao, American Physical Society Spring Meeting, March 21-25, 2011, Dallas, Texas.

D4. Other Seminars (2008 – present; invited; partial list)

1. Elsa Reichmanis, Harnessing Nanocellulose for Sustainable Devices, ACS on Campus, Lanzhou, China, October, 2019
2. Elsa Reichmanis, Harnessing Cellulose Nanocrystals for Sustainable Devices, ACS on Campus, Xi'an, China, October, 2019
3. Elsa Reichmanis, Polymer Fibrils, Transport Pathways and Stretchable Electronics, Department of Chemical Engineering, University of Wisconsin, Madison, March 5, 2019
4. Elsa Reichmanis, From Silicon to Plastic: it's all about surfaces, interfaces and materials chemistry, Shipley Distinguished Lecturer, Clarkson University, Clarkson NY, April 4, 2019
5. Elsa Reichmanis, Polymer Fibrils, Transport Pathways and Stretchable Electronics, Shipley Distinguished Lecturer, Clarkson University, Clarkson NY, April 5, 2019
6. Elsa Reichmanis, Polymer Fibrils, Transport Pathways and Stretchable Electronics, Department of Chemistry, Syracuse University, Syracuse, NY, September 24, 2019
7. Elsa Reichmanis, Meanderings along a chemistry oriented career; the importance of diversity, Milton Lecturer, Syracuse University, Syracuse, NY, September 24, 2019
8. Elsa Reichmanis, Polymer Fibrils, Transport Pathways and Stretchable Electronics, Nanotechnology Lecture Series, Stevens University, Hoboken, NJ, November 6, 2019
9. Elsa Reichmanis, From Silicon to Plastic: materials design and process considerations, Department of Chemical and Biological Engineering, Princeton University, Princeton, NJ, February 10, 2019
10. Polymer Materials Design and Process Considerations for Flexible Devices, Elsa Reichmanis, College of Materials Science and Engineering, Donghua University, Shanghai, China, June 8, 2018.
2. From Silicon to Plastic: A Path to Stretchable Devices, Elsa Reichmanis, Institute of Chemistry of the Chinese Academy of Sciences, Beijing, China, May 25, 2018.
3. From Silicon to Plastic: A Path to Stretchable Devices, Elsa Reichmanis, Clean Energy Institute, University of Washington, Seattle, Washington, May 2, 2018.
4. From Silicon to Plastic: A Path to Stretchable Devices, Elsa Reichmanis, Konica-Minolta, Tokyo, Japan, February 22, 2018.

5. From the snows of Syracuse to the warmth of Atlanta: a meandering path to organic electronics, Elsa Reichmanis, University of Montreal, Departments of Chemistry and Physics, Diversity Colloquium, March 17, 2017.
6. Active Organic and Polymer Materials for Flexible Electronics: a path to sustainable systems, Elsa Reichmanis, CSACS/CQMF lecture series, McGill University and INRS, Montreal Canada, January 3-6, 2017.
7. Approaches to sustainable materials and processes for flexible electronics, Elsa Reichmanis, UT Austin, Department of Materials Science and Engineering, September 20, 2017
8. Structure – Process - Property Relationships Governing Solution Processed Semiconductor Performance, Elsa Reichmanis, University of Washington, Department of Chemical Engineering, January, 4, 2016. (invited)
9. Polymeric Semiconductors: Molecular Ordering, Charge Transport and Macroscale Mobility, Elsa Reichmanis, Department of Chemistry, University of Nevada at Reno, January, 23, 2015
10. Protein-Assisted Functional Active Packaging for Safety and Security, Elsa Reichmanis, Paul Russo, Cornelia Rosu, Bailey Risteen, RBI Annual Executive Conference, Atlanta, GA, March 10-11, 2015
11. “Flexible Polymeric Devices: Molecular Ordering, Charge Transport and Macroscale Mobility”, Elsa Reichmanis, Department of Chemical Engineering, LSU, Baton Rouge, LA, October 24, 2014.
12. “The Evolution of Thin-Film Structure in pi-Conjugated Systems: Implications for Devices”, Elsa Reichmanis and Mohan Srinivasarao, Organic Materials Chemistry Portfolio Review, AFOSR, Arlington, VA, October 27-31, 2014.
13. “Formation and Characterization of Lyotropic Liquid Crystal Phase in Poly(3-hexylthiophene) Solutions”, Nabil Kleinhenz, Karthik Nayani, Jung Ok Park, Paul Russo, Mohan Srinivasarao, Elsa Reichmanis, Spring APS Meeting, March 2014, Denver, CO
14. “Polymeric Semiconductors: Molecular Ordering, Charge Transport and Macroscale Mobility”, Elsa Reichmanis, GaTech IEN Nanotechnology Seminar, January 28, 2014
15. “Coupling Molecular and Process Parameters for High Performance Electronic Polymers”, Elsa Reichmanis, University of Massachusetts, Amherst, January 31, 2014
16. “Charge Transport and Polymeric Semiconductors: The Role of Molecular Ordering”, Elsa Reichmanis, University of Michigan, February, 27, 2014
17. “Coupling Molecular and Process Parameters for High Performance Electronic Polymers” (University Lecturer), Elsa Reichmanis, Saint Joseph’s University, Philadelphia, PA, March 26, 2014
18. “Flexible Polymeric Devices: Molecular Ordering, Charge Transport and Macroscale Mobility”, Elsa Reichmanis, Chemistry Division, Naval Research Laboratories, Alexandria, VA, November 21, 2014.
19. “Conjugated Polymer Semiconductors: Insights into Ordering at the Nano- Through Macro-scales”, Elsa Reichmanis, Mini-Symposium on Soft Matter Science: Liquid Crystals, Elastomers and Complex Fluids, July 13-14, 2012, Atlanta, GA
20. “Conjugated Polymer Semiconductors: Insights into Ordering at the Nano- Through Macro-scales”, Elsa Reichmanis, DOE Materials Division PI Meeting, July 15-18, 2012, Annapolis, MD
21. “Coupling Molecular and Process Parameters for High Performance Electronic Polymers”, Elsa Reichmanis, University of California, Los Angeles, Department of Chemistry invited seminar, December 10, 2012.
22. “The Use and Storage of Methyl Isocyanate at Bayer CropScience”, Elsa Reichmanis, Society of Chemical Manufacturers and Affiliates Safety and Security Committee, November 14, 2012, Washington, DC
23. “Coupling Molecular and Process Parameters for High Performance Electronic Polymers”, Elsa Reichmanis, ACS Georgia Local Section Meeting, October, 16, 2012, Atlanta, GA
24. “Advanced Polymeric Materials for Electronic Applications”, Elsa Reichmanis, Albemarle, May 10, 2011.
25. “Advanced Polymeric Materials for Electronic Applications”, Elsa Reichmanis, Department of Chemical Engineering, University of Houston, March 11, 2011.
26. “Advanced Organic Electronic Materials”, Elsa Reichmanis, Department of Materials Science and Engineering, University of California, Riverside, CA, April, 2010
27. “Advanced Polymeric Materials for Electronic Applications”, Elsa Reichmanis, ACS Virginia Section Meeting, Fredericksburg, VA, November 2010
28. “Advanced Polymeric Materials for Electronic Applications”, Elsa Reichmanis, School of Physics, Georgia Tech, November 2010
29. “Advanced Polymeric Materials for Electronic Applications”, Elsa Reichmanis, Department of Chemistry, University of Texas at Austin, October, 2010

30. "Advanced Organic Electronic Materials", Elsa Reichmanis, Department of Chemical Engineering, Carnegie Mellon University, Pittsburgh, PA, March, 2010
31. "Advanced Polymeric Materials for Electronic Applications", Elsa Reichmanis, Department of Chemistry, University of Michigan, Ann Arbor, MI, February, 2010
32. "Advanced Organic Electronic Materials", Elsa Reichmanis, Department of Materials Science and Engineering, University of Wisconsin, Madison, October, 2008
33. "What Constitutes Publishable Science", Elsa Reichmanis, Tsinghua University, Beijing, China, June 2008
34. "What Constitutes Publishable Science", Elsa Reichmanis, Peking University, Beijing, China, June 2008
35. "Advanced Organic Electronic Materials", Elsa Reichmanis, Institute of Chemistry, Chinese Academy of Sciences, June 2008
36. "Advances in Macromolecular Materials Chemistry at the Electronics/Photonics Interface", Elsa Reichmanis, Department of Chemistry, Georgetown University, February 2008

E. Grants and Contracts

E1. As Principal Investigator

Project Title: *EAGER: Intrinsically Ferromagnetic Functional Cellulose Nanocrystals in Confinement*

Contract or Grant Period: 08/19-07/22

Principal Investigator(s): E. Reichmanis (PI)

Funding Source: NSF

Total Funding Awarded and For Your Portion of the Project: \$262,478

Project Title: *DMREF: Collaborative Proposal: Achieving Multicomponent Active Materials through Synergistic Combinatorial, Informatics-enabled Materials Discovery*

Contract or Grant Period: 08/2019-08/2023

Principal Investigator(s): E. Reichmanis (PI), with co-PIs Martha Grover, Carson Meredith

Funding Source: NSF

Total Funding Awarded and For Your Portion of the Project: \$1,222,429

Project Title: *Probing and controlling meso-structures in polymer electrolytes for solid-state Li-ion batteries*

Contract or Grant Period: 01/19-01/20

Principal Investigator(s): E. Reichmanis (PI), Nian Liu, Martha

Funding Source: Ford

Total Funding Awarded and For Your Portion of the Project: \$100,000

Project Title: *Interplay of Molecular Structure and Solution Behavior in High Performance*

Contract or Grant Period: 06/15/2018-06/14/2021

Principal Investigator(s): E. Reichmanis

Funding Source: NSF

Total Funding Awarded and For Your Portion of the Project: \$360,000

Your Role if Not Principal Investigator: PI

Project Title: *Efficient, Robust and Soluble Electron Transport Donor-Acceptor Polymers*

Contract or Grant Period: 06/15/2015-06/14/2018

Principal Investigator(s): E. Reichmanis

Funding Source: NSF

Total Funding Awarded and For Your Portion of the Project: \$320,487

Project Title: *EAGER: TDM solar cells: Next Generation Perovskite-Silicon Tandem Solar Cells*

Contract or Grant Period: 04/15/2017-10/14/2019

Principal Investigator(s): E. Reichmanis (PI), A. Rohatgi, A. Wilkinson

Funding Source: NSF

Total Funding Awarded and For Your Portion of the Project: \$350,000

Project Title: *Morphology and Mobility Control for Functional Robust Flexible Electronics and Photovoltaics*

Contract or Grant Period: 08/15/13-08/14/17

Principal Investigator(s): E. Reichmanis (PI), M. Grover

Source of Funding: NSF

Amount of Funding Requested (Total/Your Portion): \$399,000/199,500

Project Title: *The Evolution of Thin-Film Structure in π -Conjugated Systems: Implications for Devices*
Contract or Grant Period: 05/15/12-05/14/15
Principal Investigator(s): E. Reichmanis (PI), M. Srinivasarao
Funding Source: AFOSR
Total Funding Awarded and For Your Portion of the Project: \$540,000/270,000

Project Title: *Extending the π -Conjugation Length of Soluble Semiconducting Polymers to Effect Efficient Charge Transport*
Contract or Grant Period: 05/15/12-05/14/15
Principal Investigator(s): E. Reichmanis
Funding Source: NSF
Total Funding Awarded and For Your Portion of the Project: \$308,714

Proposal Title: *IGERT: Nanostructured Materials for Energy Storage and Conversion*
Contract or Grant Period: 9/1/2011-8/31/18
Principal Investigator(s): Elsa Reichmanis (Director and PI), Gleb Yushin, Samuel Graham, Marilyn Brown and Steven Usselman
Funding Source: NSF
Total Funding Awarded and For Your Portion of the Project: \$3,133,646 total (4 months summer salary plus student funding)

Project Title: *A Graft Semiconductor Approach to Novel Materials for Photovoltaic Applications*
Contract or Grant Period: 8/1/09-7/31/11
Principal Investigator(s): Elsa Reichmanis
Funding Source: ACS-PRF
Total Funding Awarded: \$100,000

E2. As Co-Principal Investigator

Project Title: *Data Mining and Material Informatics for High Throughput Screening of 3D-Printable Thermoplastic Polymers*
Contract or Grant Period: 07/18-06/20
Principal Investigator(s): Martha Grover (PI), Carson Meredith, E. Reichmanis
Funding Source: Kolon Industries
Total Funding Awarded and For Your Portion of the Project: \$200,000
Your Role if Not Principal Investigator: co-PI

E3. As Investigator

Project Title: *EFRC: Center for Mesoscale Transport Properties*
Contract or Grant Period: 08/18-07/22
Principal Investigator(s): Esther Takeuchi (Stonybrook)
Funding Source: DOE
Total Funding Awarded and For Your Portion of the Project: \$750,000 for my portion/\$10M total
Your Role if Not Principal Investigator: Senior Participant

Project Title: *EFRC: Center for Mesoscale Transport Properties*
Contract or Grant Period: 08/14-07/18
Principal Investigator(s): Esther Takeuchi (Stonybrook)
Funding Source: DOE
Total Funding Awarded and For Your Portion of the Project: \$650,000 for my portion, \$10M total
Your Role if Not Principal Investigator: Senior Participant

Project Title: *Towards Understanding the Impact of Materials Structure, Morphology and Processing on Organic Electronic Materials Performance*
Contract or Grant Period: 8/1/08-7/31/12
Principal Investigator(s): Seth Marder
Funding Source: NSF - CMDITR
Total Funding Awarded and For Your Portion of the Project: \$149,000

Your Role if Not Principal Investigator: participant in the STC

F. OTHER SCHOLARLY AND CREATIVE ACCOMPLISHMENTS

N/A

G. SOCIETAL AND POLICY IMPACTS

Internationally recognized in the design and development of polymer/organic/hybrid materials and processes for advanced electronics and photonics, including flexible devices and materials and processes for alternative energy applications. Research efforts are at the interface of chemical engineering, chemistry, materials science, optics and electronics, and span from fundamental concept to technology development. She frequently serves on National Academies of Sciences, Engineering and Medicine (NASEM) Boards and study committees that are charged with providing advice to our Federal Government. She is a Member of the NASEM Committee on Human Rights.

H. OTHER PROFESSIONAL ACTIVITIES

N/A

V. EDUCATION

A. COURSES TAUGHT

Semester, Year	Course Number	Course Title	Number of Students
Fall, 2020	CBE 179	Professional Development	38
Spring, 2020	ChBE 4742/6723	Sustainable Chemical Enterprise	60
Fall, 2019	ChBE 4535	Chemical Product Design	36
Spring, 2019	ChBE 4803/8803// CHE 8833	Sustainable Chemical Enterprise	53
Fall, 2018	ChBE 4535	Chemical Product Design	45
Spring, 2018	ChBE 4803/8803// CHE 8833	Sustainable Chemical Enterprise	47
Fall 2017	ChBE 4535	Chemical Product Design	55
Fall 2017	ChBE 4801/8801	Energy Technology and Policy	9
Spring, 2017	ChBE 4803/8803// CHE 8833/4833	Sustainable Chemical Enterprise	25
	ChBE 2130	Intro to Thermodynamics	75
Fall 2016	ChBE 4535	Chemical Product Design	73
Fall 2016	ChBE 4801/8801	Energy Technology and Policy	11
Spring 2016	ChBE 2130	Intro to Thermodynamics	78
Fall 2015	ChBE 4535	Chemical Product Design	54
Fall 2015	ChBE 4801/8801	Energy Technology and Policy	13
Spring 2015	ChBE 2130	Intro to Thermodynamics	60
Fall 2014	ChBE 4535	Chemical Product Design	52
Fall 2014	ChBE 4801/8801	Energy Technology and Policy	7
Spring 2014	ChBE 2130	Intro to Thermodynamics	44
Fall 2013	ChBE 4535	Chemical Product Design	43
Fall 2013	ChBE 4801/8801	Energy Technology and Policy	7
Spring 2013	ChBE 2130	Intro to Thermodynamics	59

B. INDIVIDUAL STUDENT GUIDANCE

B1. PH.D. STUDENTS

B.1.a. Graduated

1. *Avishek Aiyar*, ChBE. **Ph.D.** (2012) Project: "Controlling Structure and Morphology in Poly(3-Hexylthiophene) Thin Films for Optoelectronic Device Applications". Current position: Research Engineer, Illumina, Inc.
2. *Mincheol Chang*, ChBE. **Ph.D.** (2014) Project: "Hybrid Organic/Inorganic Nanostructures for Optoelectronic Applications". Current position: Assistant Professor, Chonham University, Korea
3. *Boyi Fu*, ChBE. **Ph.D.** (2015) Project: "Design, Synthesis and Characterization of Polythiophene Analogs for Photovoltaic Applications". Current position: Research Engineer, Apple, Inc.

4. *Dalsu Choi*, ChBE **Ph.D.** (2015) Project: “Additive Effects on the Supramolecular Assembly/alignment of poly(3-hexylthiophene) and Analysis of Phenomena Based upon Hansen Solubility Parameters.” Current position: Postdoctoral Fellow, KIST, Korea
5. *Nabil Kleinhenz*, CHEM, **Ph.D.** (2016) Project: “Long Range ordering in poly(3-hexylthiophene) Fluids and films: Implications for Organic Electron”. Current position: Education Consultant
6. *Ji-Hwan Kang*, ChBE **Ph.D.** (2017). Project: “The Characterization of Semiconducting Polymer Blends for Plastic Optoelectronic Applications”. Current position: Postdoctoral Fellow, UMass, Amherst
7. *Ping-Hsun Chu*, ChBE, **Ph.D.** (2017) Project: “The Study of Controlling Morphology and Molecular Ordering in Conjugated Polymers and Their Impact on Charge Transport for Flexible Organic Field-Effect Transistors. Current position: Research Engineer, Intel Corp
8. *Nils Persson*, ChBE. **Ph.D.** co-advised with Martha Grover (2017) Project: “Analysis of Fibrillar Structures for the Engineering of Polymeric Transistors”. Current position: NRC Postdoctoral Fellow, NIST
9. *Jeff Hernandez*, CHEM, **Ph.D.** co-advised with John Reynolds (2017) Project: “Solvent Effects on Organic Photovoltaic Performance”. Current position: Research Engineer, Solvay, Atlanta, GA.
10. *Yo Han Kwon*, ChBE **Ph.D.** (2018), Project: “Hybrid Nanocomposites for High-Performance Li-Ion Battery Electrodes: Carboxylated Polythiophene-Based Electrodes”. Current position: Research Engineer, LG Chem
11. *Zhibo Yuan*, CHEM **Ph.D.** (2018), Project: “Design, Synthesis and Characterizations of Tahizole-Based Conjugated Polymers and Their Applications to N-Channel Organic Electronics.” Current position: Research Engineer, Applied Materials
12. *Giovanni Deluca*, CHEM **Ph.D.** (2018) Project: “Optimization Of Perovskite Solar Cells Through Interfacial, Architectural, And Solution-Based Modifications.” Current Position: Research Scientist, Monash University, Australia
13. *Rui Chang*, ChBE **Ph.D.** (2018) Co-Advised with Mohan Srinivasarao. Project: “Chiral Configurations from Achiral Lyotropic Chromonic Liquid Crystals Under Confinement”. Current position: Research Engineer, Corning, Inc.
14. *Bailey Risteen*, ChBE **Ph.D.** (2019) Project: “Engineering Polymer-Nanoparticle Systems towards Sustainable Devices and Sensors”. Current position: BASF Leadership Development Program
15. *Michael McBride*, ChBE **Ph.D.** (2019) co-advisor with Martha Grover., Project: “Controlled Assembly of Solution Processable Polymers and their Applications. Current position: Postdoctoral Fellow, Los Alamos National Laboratory
16. *Krysten Minnici*, ChBE **Ph.D.** (2019) Project: “Understanding and Improving Fe₃O₄ as an Active Material with Conjugated Polymeric Binders for High Capacity Li-ion Battery Anodes.” Current position: Research Scientist, Arkema
17. *Carolyn Buckley*, CHEM **Ph.D.** (2019) Project: “Design and Processing of Charge Transport Polymer Semiconductors and Their Applications in N-Channel Organic Field Effect Transistors.” Current Position: Member of Technical Staff, Sandia National Laboratories

B.1.b. In Process

1. *Sujin Lee*, CHEM **Ph.D.** co-advisor with Mohan Srinivasarao. Advisement began: Fall 2016, Project: “TBD”.
2. *Audrey Scholz*, CHEM **Ph.D.** Advisement began: Fall 2016, Project: “Organic Semiconducting Polymers for Use in Solar Cells.”
3. *Brian Khau*, ChBE **Ph.D.** Advisement began: Fall 2016, Project: “Design and Optimization of Organic Electrochemical Transistors utilizing Carboxylated Polythiophenes.”
4. *Helen Wong*, ChBE **Ph.D.** Advisement began: Fall 2017, Project: “TBD.”
5. *Caria Evans*, CHEM **Ph.D.** Advisement began: Fall 2018, Project: “TBD.”
6. *Yulong Zhang*, CHEM **Ph.D.** co-advisor with Carlos Silva. Advisement began: Fall 2018, Project: “TBD”
7. *Miguel Gonzalez*, ChBE **Ph.D.** Advisement began: Fall 2018, Project: “TBD.”
8. *Aaron Liu*, ChBE **Ph.D.** co-advisor with Martha Grover and Carson Meredith. Advisement began: Fall 2018, Project: “TBD”
9. *Rahul Venkatesh*, ChBE **Ph.D.** co-advisor with Martha Grover and Carson Meredith. Advisement began: Fall 2019, Project: “TBD”

B2. M.S. STUDENTS (Indicate thesis option for each student)

B2.a. Graduated with M.S.

1. *Vivek Prakash*, ChBE **M.S.** (2018, thesis) Project: “Design and development of Silicon-Perovskite Tandem Solar Cells”.
2. *Bradford Swain*, ChBE **M.S.** (2017, non-thesis)
3. *Ashwin Ravi Sankar*, ChBE **M.S.** (2013 with thesis) Project: “Molecular weight effects of PBT-6 polymeric semiconductor on charge carrier mobility”. Current position: Evonik
4. *Jiho Lee*, ChBE **M.S.** (2013 with thesis) Project: “Impact of Process Parameter Modification on Poly(3-Hexylthiophene) Film Morphology and Charge Transport”. Current position: graduate student Seoul National University

B3. Undergraduate Students

My labs provide research opportunities for several undergraduate students per semester, a representative group is presented below for 2017-2020. Unless otherwise noted, the student is in ChBE at Georgia Tech.

1. *Alexandria Jenkins*, 2020
2. *Pooja Mehta*, 2019-2020
3. *Yongjun Kwon*, 2019
4. *Campbell Viersen* (Chem), 2019
5. *Aarti Mathur*, 2016-2019
6. *Youjung Kim*, 2017-2018
7. *Guilherme Molina Pinto*, 2017-2018
8. *Luke Roeber*, 2018-2019
9. *Savannah Lee*, 2016-2018
10. *Qianyi Qu*, 2017-2018
11. *Guillermo Bacardi*, 2017-2018
12. *Kenneth. Crane-Moskowitz*, 2018
13. *Avery Jones*, 2018
14. *Jenny Ahn*, 2017
15. *Alicia Hampton*. 2018
16. *Eloise Yount*, 2017-2018
17. *Kyle Hamrock*, 2018
18. *Johnathan O’Neil*, ChBE – Clemson University, REU - 2018
19. *Christian O. Villa Santos*, ChBE – University of Puerto Rico, REU - 2017
20. *Carlex Morales*, ChBE – University of Puerto Rico, REU - 2017
21. *Andreina Mendoza Franco*, 2017
22. *Jacob Dvorstyn*, 2016-2017
23. *Chaker Fares*, 2015-2017
24. *Taylor Gherardi*, 2016-2017
25. *Tushar Ladha*, 2017
26. *Sarah Margan*, 2017
27. *Rahul Topiwala*, 2016-2017
28. *Zong Han*, 2017
29. *Mark DeSimon*, 2016-2017
30. *Sweny Kania*, 2017
31. *Laura Bernart*, Physics, 2017
32. *Pallavi Garg*, 2017
33. *Joseph Hubbard*, 2017
34. *Kristina Marquardt*, 2017
35. *Myles Mugo*, 2017
36. *Zongxhe Xue*, 2014-2016
37. *Clara Ciutara*, 2016
38. *Nikhil Dhawan*, 2016
39. *Ruoyi Jiang*, 2014-2016
40. *Harrison Kreaflle*, 2014-2016
41. *Emily Beck*, 2015-2016

42. *Amanda Tonnauer*, REU-2016
43. *Cooper Thome*, REU-2016
44. *Rrahul Topiwala*, 2016
45. *Chaker Fares*, 2016
46. *Neal Patel*, 2016-high school student intern
47. *Yundi Jiang*, 2013-2015
48. *Lauren Lopez*, 2015
49. *Akash Patel*, 2014-2015
50. *Zhenguan Shen*, 2015
51. *Pranit Kedarisetty*, 2015
52. *Ayush Thapa*, REU-2015
53. *Rafaela Teixeira*, 2015 – Brazil Science Intern *Eugenia Kim*, 2014
54. *Jamilah Middlebrooks*, 20132014
55. *Orayne Mullings*, 2013-2014
56. *Nathan Bates*, 2013-2014
57. *Brianna Jackson*, 2014 *Ahn Ho*, 2014
58. *Kate Richardson*, 2014-High School student intern
59. *Tania Ruffin*, REU-2013
60. *W. Bailey*, REU-2013

B4. Service on thesis or dissertation committees

B4.a. Internal

I regularly serve on graduate student thesis committees from the Schools of Chemical and Biomolecular Engineering, Chemistry and Biochemistry, Materials Science and Engineering, Electrical and Computer Engineering and Mechanical Engineering. Over the past 6 years, I have participated in approximately 8 student defenses per year.

B4.b. External

Gang Wang, MSE Ph.D. (2015) Donghua University, Shanghai, China, advisor: Prof. Hongzhi Wang

B5. Mentorship of postdoctoral fellows or visiting scholars

B5.a. Postdoctoral Fellows

1. *Dr. Byoungnam Park* (07/07/08 - 7/30/10)
2. *Dr. Zhaokang Hu* (07/15/09 – 05/31/11)
3. *Dr. Cornelia Rosu* (2/1/2014 – 6/1/2016)
4. *Dr. Guoyan Zhang* (10/1/2015 – 6/30/2019)
5. *Dr. Sarah Marques* (8/2019 – present)

B5.b. Visiting Scholars (faculty)

1. *Professor Byoungnam Park*, Hongik University, 2019-2020
2. *Professor Guibin Wang*, Jilin University, 2019
3. *Professor Dong Ki Yoon*, KAIST, 2018
4. *Professor Haihua Zhou*, Institute of Chemistry, Chinese Academy of Sciences, 2016
5. *Dr. Nam Ho You*, KIST, 2015

B5.b. Visiting Scholars (students)

1. *Moon Jong Han*, KAIST, 2018
2. *Ruiqi Na*, Jilin University, China 2018-present
3. *Shuo Chen*, Donghua University, China 2018-present
4. *Hao Xiong*, Donghua University, China 2018
5. *Chengcan Xiao*, Jilin University, China 2017
6. *Jung Jin Park*, KAIST, 2016
7. *Gang Wang*, Donghua University, China 2013-2015

C. EDUCATIONAL INNOVATIONS AND OTHER CONTRIBUTIONS

Course development: Working with retired Albemarle Exec. Dr. Mahmood Sabahi, I developed a *multidisciplinary* course related to sustainability in the chemical enterprise. The course provides chemists, chemical engineering and other interested students an opportunity to work together to better understand

challenges faced by industry and become better prepared to contribute to the long-term sustainability of the enterprise. The project-based course offers students with an opportunity to work in multidisciplinary teams to collaboratively solve complex problems, using a life cycle inventory approach. Several industrial scientists/engineers have been invited to present their company's perspectives and engage with students. Companies that were represented include ExxonMobil, BASF, Albemarle, Dow, Solvay, Pepsico, Kimberly Clark and P&G. With the focus on sustainability, the course is also aligned with the Georgia Tech *Serve-Learn-Sustain (SLS) initiative*. I have also worked with the School of Chemistry and Biochemistry to develop appropriate laboratory experiments to demonstrate the principles of green chemistry and engineering, which provide a foundation for sustainability. In another *SLS* activity, I worked with Hannah Markley, Marion L. Brittain Postdoctoral Fellow in the *School of Literature, Media, and Communication* to develop a chemical engineering/chemistry focused module for 3 sections of the required English composition class for all incoming 1st year students.

Mentoring: In the past reporting period, I have also worked with Martha Grover (ChBE) and Wendy Kelly (CHEM) to establish a mentoring lunch for a group of female chemical engineering and chemistry graduate students. This initiative aims to build a trusting relationship and environment for the graduate students to discuss experiences and approaches to addressing challenges they face either in the workplace or their personal lives. I have also volunteered to serve as an ombudsperson for the School of Chemistry and Biochemistry.

VI. SERVICE

A. PROFESSIONAL CONTRIBUTIONS

2021-present	Member, American Institute for Chemical Engineers Board of Directors
2019-present	Member, American Chemical Society Governing Board for Publishing
2019-present	Director, State Key Laboratory for Modification of Chemical Fibers and Polymer Materials (SKLFPM) International Advisory Committee, Donghua University, China
2019-present	Member, American Chemical Society Division Activities Committee
2018-present	Member, American Institute for Chemical Engineers Institute Awards sub-Committee
2018	Chair, NAE Materials Section Search Committee
2018	Chair, NRL Materials Chemistry Division External Evaluation Committee
2018-present	Member, International Scientific Advisory Committee of the Australian Research Council Centre of Excellence in Exciton Science
2017	Member, Cornell Center for Nanofabrication Annual Review
2017	Vice-Chair, NAE Materials Section Search Committee
2017-present	Executive Editor, <i>Chemistry of Materials</i>
2017-present	Member, Institute of Materials Science of Barcelona Scientific Advisory Committee
2017-present	Member, Gordon Research Conferences - Board of Trustees and Conference Evaluation Committee
2017-2018	Consultant, ACS Committee on International Activities
2016	Member, Simon Fraser University Department of Chemistry External Evaluation Committee
2016-present	Chair, International Advisory Committee, Center for Advanced Low-Dimensional Materials, Donghua University, China
2016-present	Member, Sponsors Committee, Atlantic Basin Chemistry Conference
2014-present	Member, Blavatnik Award Jury
2014	Member, NRL Chemistry Division External Evaluation Committee
2014-2017	Chair, ACS Award in Industrial Chemistry Canvassing Committee
2013-2015	Member, NSF Advisory Committee on Environmental Research and Education
2013-2016	Member, ACS Fellows Award Oversight Committee
2012	Member, Committee of Visitors for the DOE-BES Materials Sciences and Engineering Division
2012	Member, Georgetown University Department of Chemistry External Review Committee
2010	NSF Chemistry Division Committee of Visitors
2010-2015	Member, Pacificchem 2015 Organizing Committee; Finance Chair, Pacificchem 2015
2010-2012	ACS Fellows Award Selection Committee
2010	Member, UNC Department of Chemistry Review Committee
2009	NSF STC Site Visit, Case Western Reserve University
2007-2008	Chair, NAE Materials Section Peer Committee

2006-2008 Member, NAE Materials Section Peer Committee
 2006-2015 Member Accounts of Chemical Research Editorial Advisory Board
 2006-2009 Member, Chemical Heritage Foundation Board of Directors
 2003 President, American Chemical Society
 2002-2005 Member, Journal of the American Chemical Society Editorial Advisory Board
 2000-2001 Chair, ACS Committee on Science
 1997-2002 Member, ACS Committee on Science
 1997-1998 Seton Hall University, Department of Chemistry External Advisory Board
 1996-1997 University of Connecticut, Polymer Science Program Advisory Board
 1996-2017 Associate Editor, Chemistry of Materials
 1996-1998 Member, ACS Committee on Publications
 1995-1997 Member, Chemistry of Materials Advisory Board
 1995 Chair, ACS Division of Polymeric Materials: Science and Engineering
 1994-1995 Associate Member, ACS Committee on Publications
 1994 Chair-Elect, ACS Division of Polymeric Materials: Science and Engineering
 1993 Vice-Chair, ACS Division of Polymeric Materials: Science and Engineering
 1991-1992 Secretary, ACS Division of Polymeric Materials: Science and Engineering

B. PUBLIC AND COMMUNITY SERVICE

2020 Chair, NASEM Panel on Review of the Material Measurement Laboratory at the National Institute of Standards and Technology
 2018-2020 Member, American Association for the Advancement of Science Chemistry Division Electorate Nomination Committee
 2017-2020 Member, NRC Postdoctoral Fellowship Selection Committee
 2017 Chair, NRC Panel on Review of the Material Measurement Laboratory at the National Institute of Standards and Technology
 2017-2018 Member, NRC Committee on Frontiers of Materials Research: A Decadal Survey
 2016 Member, NRC Panel on Review of the Center for Nanoscience and Technology at the National Institute of Standards and Technology
 2015-present Member, National Academy of Sciences Committee on Human Rights
 2014-present Chair, NRC Committee on National Institute of Standards and Technology Technical Programs
 2013 NSF Proposal Review Panel for Broadening Participation Research Initiation Grants in Engineering – Materials
 2011-2012 Member, NRC Panel on “Review of Best Practices in Peer Assessment of R&D Organizations.”
 2011-2012 Member, NRC Committee on “Triennial Review of the National Nanotechnology Initiative: Phase II”
 2011-2012 Chair, NRC Committee on Inherently Safer Chemical Processes: The Use of MIC at Bayer CropScience
 2009-2014 Member, NSF Math and Physical Sciences Advisory Committee
 2009-present Member, NRC Laboratory Assessments Board
 2009-2010 Member, Dow Women’s Advisory Committee
 2008-2017 University of Akron, College of Polymer Science and Polymer Engineering Advancement Council
 2008 NSF Proposal Review Panel for Interfacial Processes and Thermodynamics
 2007 Co-organizer, NSF Workshop on Interdisciplinary, Globally-Leading Polymer Science and Engineering
 2007-2010 Member, NIST Visiting Committee on Advanced Technologies
 2006 Co-Chair, NRC Board on Chemical Sciences and Technology
 2005 Member, NRC Committee on Policy Implication of International Graduate Students and Postdoctoral Scholars in the United States
 2005-2013 Member, NRC US National Committee for IUPAC
 2005-2013 Bureau Member, International Union of Pure and Applied Chemistry

2004-2006 Member, NRC Board on Chemical Sciences and Technology
 1998-2002 Member, Air Force Scientific Advisory Board
 1993-1998 Member, NRC National Materials Advisory Board
 1987 Member, Committee to Survey Materials Research Opportunities and Needs for the Electronics Industry sponsored by the National Research Council
 1986 Member, Japanese Technology Evaluation Program Panel on Advanced Materials sponsored by the National Science Foundation

C. INSTITUTE CONTRIBUTIONS

C1. Institute Committee Service

2018-2020 Faculty Volunteer, Georgia Tech Title IX Hearing Panelist
 2017-2018 Chair, GRA Eminent Scholar in Energy Sustainability Search Committee
 2015-2016 Member, Institute Research Faculty Promotions Committee
 2011-2017 Member, GT Faculty Status and Grievance Committee
 2011-present Member, GT Conflict of Interest Review Committee
 2009-2012 Member, General Faculty Assembly and Academic Senate

C2. College Committee Service

2018-present Member, College of Engineering Research Faculty Promotions Committee
 2010-2011 Member, Engineering Dean Advisory Search Committee
 2010-2013 Member, Hightower Chair in Biopolymers Search Committee; School of Materials Science and Engineering
 2009-2010 Member, Woodruff Chair Search Committee for the School of Mechanical Engineering

C3. School Committee Service

2018-present Member, School of Chemical and Biomolecular Engineering Faculty Search Committee
 2015-present Member, School of Chemical and Biomolecular Engineering RPT Committee
 2012-present Member, School of Chemical and Biomolecular Engineering Newsletter Committee
 2008-present Member, School of Chemical and Biomolecular Engineering Awards Committee
 2008-present Member, School of Chemical and Biomolecular Engineering Safety Committee
 2014 Chair, School of Chemistry and Biochemistry Chair Search Committee

C4. Program Development: Research

2018-2020 co-Director, Georgia Tech Polymer Network
 2016-2020 Member, Center for Science and Technology of Advanced Materials and Interfaces Management Committee
 2013-2018 Associate Director, Georgia Tech Polymer Network
 2010 Co-chair, Committee for Initiative on Grand Challenge: Education and Research Clusters (GaTech Materials Council)

C5. Other Institute Service Contributions

2006-2007 Member, Bell Laboratories Graduate Research Program for Women Award Selection Committee
 1994 Chair, Bell Laboratories Graduate Research Program for Women Award Selection Committee
 1992-1994 Member, Bell Laboratories Graduate Research Program for Women Award Selection Committee