

Dennis Woodrow Smith, Jr., Ph.D.

Professor & Head, Department of Chemistry | MSU Advanced Composites Institute
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CURRICULUM VITAE

EDUCATION

Ph.D. Chemistry, University of Florida, December 1992, (Prof. K.B. Wagener, Advisor)
B.S. Chemistry and Mathematics, Missouri State University, December 1988

PROFESSIONAL EXPERIENCE

Mississippi State University, 2017 – , Professor and Head, Department of Chemistry
Mississippi State University, 2018 – 2020, Director, MSU Advanced Composites Institute
The University of Texas at Dallas, 2010-2014, *Robert A. Welch Distinguished Professor of Chemistry*
The University of Texas at Dallas, 2011-2014, Professor of Material Science and Engineering (Joint Appt.)
Clemson University, 2010 -, Adjunct Professor of Chemistry
Clemson University, 2008-2010, Professor of Material Science and Engineering (Joint Appt.)
Clemson University, 2006-2010, Professor of Chemistry
ACS Division of Polymer Chemistry, 2009, Elected Chair
Center for Energy Harvesting Materials & Systems, 2011 - 2015, Director (NSF-I/UCRC)
International Union for Pure and Applied Chemistry; 2009 Member; 2011 Titular Member, 2016 Fellow
Center for Ceramic, Composite, & Optical Materials Center, 2009-2010, Director (NSF-I/URC)
Tetramer Technologies, L.L.C., 2001 - , Co-Founder and Director
Clemson University, 2001, Associate Professor of Chemistry
Center for Optical Material Science & Eng. Technologies, 2000, Co-Founder and Assoc. Director
Universität Heidelberg, Germany, 2001, Visiting Professor of Chemistry
Clemson University, 1998, Assistant Professor of Chemistry
Dow Chemical Central Research, 1996, Project Leader
Dow Chemical Central Research, 1993, Sr. Research Chemist
Dow Chemical Rheinmünster, Germany, 1993, Postdoctoral Fellow
Rhone-Poulenc, Lyon, France, 1992, Graduate Research Fellow
Missouri State University Center for Scientific Research, 1987-1988, Research Chemist
Dayco Corporation, 1986-1987, Polymer/Rubber Materials Technician

RESEARCH & TECHNOLOGY LEADERSHIP

Research & Technology Leadership interests include entrepreneurship and tech transfer around the synthesis, mechanism, structure/property relationships, and commercial driven applications of polymeric materials and composites including: (1) fluoropolymers (PFCB, FAVE, PFCA) from aromatic trifluorovinyl ethers and perfluorocycloalkenes for optical, dielectric, energy conversion, gas separation, polyelectrolytes, composites, and tailored surface applications, (2) polyarylene and inorganic hybrid networks and carbon structures from micro and nano processable intermediates via diynyl arene monomers and resins for extreme high temperature use, dielectrics, and carbon/carbon composites (3) renewable and bioabsorbable polymers based on aliphatic polyesters (e.g., PLA, PHA, and derivatives) for packaging and biomedical applications, (4) waste polymer (e.g, tire rubber, plastics) upcycling via functionalization and composite formulation and carbonization, (5) novel wound healing and carbon fiber precursor polymers based on copolymers with acrylonitrile, (6) thermally reversible crosslinkable resins for smart composites, (7) selective direct fluorination (F₂) of materials.

HONORS AND AWARDS

Fellow of the International Union of Pure and Applied Chemistry (2016)
Robert A. Welch Distinguished Professor of Chemistry (2010-2014, Welch Foundation)

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Fellow of the American Chemical Society (Elected 2010)
ACS Division of Polymer Chemistry Distinguished Leadership Award (2010)
Governor's Award for Excellence in Scientific Research (2009)
IUPAC Polymer Division, Elected Titular Member (2011), Associate Member (Elected 2009)
ACS Charles H. Stone Award "Most Outstanding Southeastern Chemist" (2008)
Missouri State University Outstanding Alumni Award (2007)
INTEL Polymer Workshop, Keynote Speaker, Intel Corp. (2007)
Polymer Bulletin (Springer Journal), Editor (2007 - 2016)
Journal of Nanomaterials & Molecular Nanotechnology (SciTechnol), Editor-in-Chief (2013 -)
ACS Division of Polymer Chemistry Chair ascension (Elected 2007)
Polymers for Advanced Technologies (Wiley Journal), Editorial Board (2006-2016)
Sigma Xi, National Research Society (Elected 2006)
Outstanding Faculty Member Award, Chemistry Graduate Student Assoc. (2004)
Clemson University Board of Trustees Award for Faculty Excellence (2001-2008)
ACS Councilor for the Division of Polymer Chemistry (Elected 2002-2005)
Cottrell Scholar of Research Corporation (2001)
Clemson University Award for Faculty Achievement in the Sciences (2000)
National Science Foundation Faculty Early CAREER Development Award (1999)
High Performance Polymers, Editorial Board (1998-)
Dow Chemical Polymer Research Award (1999)
3M Pre-Tenured Faculty Award (1999)
Invited Speaker – Gordon Conference, ACS, SPIE, OSA, SAMPE
Dow Chemical Central Research Inventor of the Year Award (1997)
Dow Chemical Special Recognition Award (1994, 1996, 1997)
ACS Phoenix Award, on behalf of Brazosport Local Section (1996)
SMSU Undergraduate Research Award (1986)

CONSULTING EXPERIENCE

Solvay Specialty Polymers, Global (2016 – 2018), fluorinated & specialty materials research.
Fish & Richardson, LLP, Minneapolis, MN (2006, 2017), polymer science, IP analysis, deposition.
Tetramer Technologies, LLC, Pendleton, SC, (2001 –), polymer science, renewable materials, organic chemistry, expert opinion.
Gas & Oil Field Testing & Consulting, LLC, Houston, TX (2011 –), analysis and opinion.
Infinity Floating, LLC, Braselton, GA (2015 – 2017), analysis and opinion.
Kilpatrick Stockton, LLP, Winston-Salem, NC (2008 – 2009), expert IP opinion, deposition.
Lehigh Technologies, Inc., Naples, FL (2007 – 2010), polymers & rubber composites.
Tremmel Law Firm, Anderson, SC (2007 – 2010), materials analysis and opinion.
Piper Rudnick, LLP, Washington DC (2006 – 2008), polymer science, IP opinion, deposition.
SEM, Inc., Charlotte, NC (2006), polymer / coating science and opinion.
Ratheon Missile Systems, (2006), material evaluation and opinion.
Dunlop Slanzenger Group, Westminster, SC (2005), materials analyses and opinion.
Michelin Corp., Spartanburg, SC, (2004 – 2008), rubber & tire technology IP development.
Piper Rudnick, LLP, Washington DC (2004–2005), polymer science, IP analysis, deposition.
Triton Systems, Inc., Chelmsford, MA. (1999 – 2003), fluoropolymers for Air Force / NASA.
Clifford Chance, LLP, New York, NY (2002 – 2003), fluoropolymer science, IP analysis, deposition, Federal Court testimony.
DuPont, Wilmington, DE, (2002), fluoropolymer science, IP analysis.
Radiant Photonics, Inc. Austin, TX, Technical Advisory Board, member, (2000 – 2001), fluoropolymer technology for optical/photonics applications.

MEMBERSHIPS

IUPAC Fellow (2016), IUPAC Polymer Division, Titular Member (Elected 2011-)

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Sigma Xi National Research Society (Elected 2006)
American Chemical Society, ACS (1988-)
 Fellow, American Chemical Society (Elected 2010)
 Division of Polymer Chemistry (1990-), Chair (2009), Chair-Elect (2008),
 Vice Chair (2007), Alt.-Councilor (2006-2007), Councilor (2002-2005)
 Division of Polymeric Materials: Science & Engineering (1990-)
 Division of Fluorine Chemistry (1998-)
 Division of Organic Chemistry (1999-)
 Division of Rubber Chemistry (2006-)
 Division of Carbohydrates and Renewable Resources (2006-)
 Division of Fuel Chemistry (2006-)
 Committee on Divisional Activities (2003-2004)
 Young Chemist Committee (1998-2000)
Materials Research Society (1996-)
Society for the Advancement of Materials Processing & Eng. (1998-)
American Physical Society (1998-)
Adhesion Society, (2000-)
SPIE, (2000-)
Optical Society of America, (2000-)

PROFESSIONAL ACTIVITIES & SERVICE

Organizer, "VII International Baekeland Symposium", Dayton, OH, (2021).
Fellow of the International Union of Pure and Applied Chemistry (IUPAC), (2016)
Fellow of the American Chemical Society (ACS), (Elected 2010)
ACS Division of Polymer Chemistry, Chair (2009), Chair-Elect (2008), Vice-Chair (Elected 2007), IUPAC Liaison (2006-), Work shops Co-Chair, (2003-), Councilor (Elected 2002-2005), Assistant Secretary (2000-2002), Publicity Chair (1999-2000)
UTD Director for the Center for Energy Harvesting Materials and Systems (NSF I/UCRC, 2011-)
IUPAC Polymer Division, Titular Member (Elected 2011), Associate Member (Elected 2009)
Editor, *Polymer Bulletin*, Springer Journal of Polymer Science (2007 -)
Editor-in-Chief, *Journal of Nanomaterials & Molecular Nanotechnology*, SciTechnol (2013-)
International Journal of Polymer Science, Editorial Board (2015-)
Annals of Material Science & Engineering, Editorial Board (2014-)
Polymers for Advanced Technologies (Wiley Journal), Editorial Board (2006-)
High Performance Polymers (Sage Journal), Editorial Board (1998-)
FLUOROPOLYMER 2000-2020, POLY ACS Conference, Founder and Chair (2000-2016)
Founder & Organizer, "Paws for Polymers", NSF/ACS sponsored outreach program (1999-2010)
Founder & Organizer, "Tiger Chemistry Road Show", student led K-6 outreach (1999-2010)
Spring 2013 ACS Meeting – Carbon Precursor Polymers Symposium, New Orleans, LA, March, 2013, co-organizer
"8th Annual Energy Harvesting Workshop and 2nd Annual CEHMS Conference", UT Dallas, Dallas, TX, January 2013, host and co-organizer
2012 Silicon-Containing Polymers and Composites Workshop, San Diego, CA, December 9-12, 2012, co-organizer
Fall 2011 ACS Meeting – Fluoropolymer Symposium, Denver, CO, August-September 2011, co-organizer
43rd IUPAC World Chemistry Congress of 2011, Polymer Chemistry Symposium - Young Polymer Scientists, San Juan, Puerto Rico, July-August 2011, co-organizer
Clemson U. Founding Site Director for the Center of Ceramic, Composite, & Optical Materials (NSF-I/UCRC, 2009-2010)
"Fluorine Containing Polymers", ACS Symp., Organizer, (2009)
IUPAC MACRO-08: International Young Scientist Symposium, Co-chair (2008)
8th European Symposium on Polyimides & High Performance Functional Polymers (STEP18), Technical Advisory

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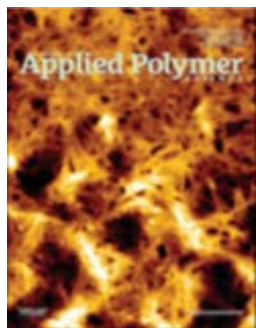
Committee, Montpellier, France (2008)

- "POLYBIENNIAL: Commercial Innovations in Polymer Science", POLY ACS Conference, Chair (2008)
- "Renewable Resource Rubber & Recycling", ACS Rubber Division Symp., Co-organizer (2007)
- "Macromolecules for Emerging Nanotechnologies II" ACS Symp., Co-organizer (2007)
- "Fluorine Containing Materials", SERMACS 2007, Chair (2007)
- "Macromolecules for a Sustainable, Safe, and Healthy World", IUPAC/ACS, Co-organizer (2007)
- "Chemical Technology Start-Ups", AIChE Symp., Co-organizer (2006)
- "Entrepreneurs in Polymer Chemistry", ACS Symp., Co-organizer (2006)
- "Fluorine Containing Polymers", ACS Symposium, Co-organizer and Chair (2005)
- "Biological and Synthetic Macromolecules for Emerging Technologies", ACS (2005)
- "Organic Thin Films for Photonics", OSA/ACS Symposium, Co-organizer (2003-06)
- ACS Committee on Divisional Activities, Appointed Member (2003)
- ACS Award in Creative Fluorine Chemistry, Steering Committee Chair (2003)
- "Advances in Macromolecular Synthesis", ACS Symposium, Co-Chair (2002)
- "Optical Science and Materials", Opto-South East, OSA Symposium, Chair (2001)
- "History of Polymers Symposium", South East Regional ACS Mtg., Chair (2001)
- ACS National Young Chemist Committee YCC (1997-1999)
- ACS Brazosport Local Section Chair (1997)
- ACS Brazosport National Chemistry Week Chair (1996)

PUBLICATIONS

Refereed Journal Publications (146 published or in press, H=45)

1. "Triphenylene Enchained Perfluorocyclobutyl (PFCB) Aryl Ether Polymers", Faradizaji, B.; Borrego, E.I.; Jazi, M.E.; Pittman, Jr., C.U.; Smith, Jr., D.W. *ACS Appl. Polym. Mater.* **2021**, submitted.
2. "Selective Click-cyclo-copolymerization of Trifluorovinyl Ethers (TFVEs) toward Perfluorocyclobutyl (PFCB) Segmented Copolymers", Park, J.; Kucukkal, T-G; Oh, J-M; Stuart, S.; Smith, Jr., D.W.; Creager, S.E. *Polymer Chemistry* **2021**, submitted.
3. "Ring-Forming Polymerization Toward Perfluorocyclobutyl and Ortho-Diynylarene-Derived Materials: From Synthesis to Practical Applications", Caldona, E.B.; Borrego, E.I.; Shelar, K.E.; Mukeba, K.M.; Smith, Jr., D.W.; *Materials* **2021**, In press.
4. "Corrosion resistance and surface characterization of a tetrafunctional epoxy-amine coating", Caldona, E.B.; Wipf, D.O.; Smith, D.W., Jr. *Prog. In Org. Coatings* **2021**, *151*, 106045.
5. "Corrosion Inhibition of Mild steel in Acidic Medium by Simple Azole-Based Aromatic Compounds", Caldona, E.B.; Zhang, M.; Liang, G.; Hollis, T.K.; Webster, C.E.; Smith, Jr., D.W.; Wipf, D.O. *J. Electroanal. Chem.* **2021**, *880*, 114858.
6. "Surface electroanalytical approaches to organic polymeric coatings" Caldona, E.; Smith, Jr., D.W.; Wipf, D. *Polymer International* **2020**, DOI 10.1002/pi.6126.
7. "Semi-Fluorinated Arylene Vinylene Ether (FAVE) Telechelic Polymers from Polycyclic Aromatic Hydrocarbon Bisphenols and Trifluorovinyl Aryl Ethers", Mukeba, K.M.; Faradizaji, B.; Shelar, K.; Pittman, Jr., C.U.; Smith, Jr., D.W. *Polymer* **2020**, *209*, 122955.
8. "Perfluorocyclohexenyl (PFCH) Aromatic Ether Polymers from Perfluorocyclohexene and Polycyclic Aromatic Bisphenols", Narayanan, G.; Faradizaji, B.; Mukeba, K.M.; Shelar, K.E.; Patrick, A.; Donnadieu, B.; Smith, Jr., D.W. *Polymer Chemistry* **2020**, *11*, 5051-5056.
9. "Protective action of semi-fluorinated perfluorocyclobutyl polymer coatings against corrosion of mild steel" Caldona, E.B.; Smith, Jr., D.W.; Wipf, D.O. *J. Mater. Sci.* **2020**, *55*, 1796–1812.



10. "Acenaphthylene Derived Perfluorocyclobutyl (PFCB) Aromatic Ether Polymers" Farajidizaji, B.; Shelar, K.E.; Narayanan, G.; Mukeba, K.M.; Donnadieu, B.; Pittman, Jr., C.U.; Sygula, A.; Smith, Jr., D.W. *J. Polym. Sci., Part A: Polym. Chem.* **2019**, *57*, 1270-1274.
11. "Semi Fluorinated Polymer Surfaces as a Surface Energy Control Layer" Cheng, G.; Spraul, B.; Smith, Jr., D.W.; Perahia, D. *Royal Soc. Chem. Adv.* **2016**, *6*, 69412-69420.
12. "Synthesis and characterization of a biphenyl perfluorocyclobutyl (BP-PFCB) polyethylene glycol (PEG) blend compatibilizer" Brown, D. K.; Cracowski, J-M.; Iacono, S. T.; Christensen, K.; Smith Jr., D. W., *Polym. Adv. Tech.* **2016**, *27*, 1389–1396.
13. "Synthesis and Characterization of Fluorinated Aromatic Diamine-based Polybenzoxazine Materials with High Char Yields and Low dielectric Constants using Octafluorocyclopentene (OFCP) as a Building Block" Wu, J.; Yang, X.; Menon, R.; Patel, Y.; Duck, J. Y.; Iacono, S. T.; Smith, Jr., D. W.; Novak, B. M. *Macromolecules* **2015**, *48*, 6087.
14. "Facile and Universal Method towards Functionalization of Partially Fluorinated Polyarylethers via Sequential Post-polymerization Modification Reactive and Functional Polymers" Wu, J.; Liou, J.-H.; Charles, S. Y.; Patel, Y.; Menon, R.; Santucci, C.; Iacono, S. T.; Smith, Jr., D. W.; Novak, B. M. *J. React. Funct. Polym.* **2015**, *38*, 93.
15. "Suzuki polycondensation and post-polymerization modification toward electro-optic perfluorocyclobutyl (PFCB) aryl ether polymers: Synthesis and characterization" Wu, J.; Lund, B.R.; Batchelor, B.; Deia, D.K.; Liff, S.M.; Smith, Jr., D.W. *J. Fluorine Chemistry* **2015**, *180*, 227-233.
16. "Utilization of a Meldrum's acid towards functionalized fluoropolymers possessing dual reactivity for thermal crosslinking and post-polymerization modification", Wu, J.; Iacono, S. T.; McCandless, G. T.; Smith Jr., D. W.; Novak, B. M., *Chem. Commun.* **2015**, *51*, 9220-9222.
17. "Preparation of segmented semifluorinated poly(aryl ether)s from aromatic trifluorovinyl ethers and oligo(ethylene glycol)s", Brown, D. K.; Cracowski, J-M.; Iacono, S. T.; Christensen, K.; Smith Jr., D. W., *Journal of Applied Polymer Science* **2015**, *132*, 41798. (**featured on cover**).
18. "Preparation of biphenyl perfluorocyclobutyl (BP-PFCB) polyethylene glycol (PEG) copolymers by the formation of fluorinated arylene vinylene ether (FAVE)", Brown, D. K.; Cracowski, J-M.; Iacono, S. T.; Christensen, K.; Smith Jr., D. W., *Polym. Bull.* **2015**, *72*, 1393-1405.
19. "Triarylamine-enriched semifluorinated perfluorocycloalkenyl (PFCA) aryl ether polymers" Sharma, B.; Faisal, M.; Liff, S.; Smith Jr., D. W. *Applied Petrochemical Research* **2015**, *5*, 35-45.
20. "Towards an Understanding of Structure-Nonlinearity Relationships in Triarylamine-based Push-Pull Electro-Optic Chromophores: The Influence of Substituent and Molecular Conformation on Molecular Hyperpolarizabilities" Wu, J.; Wilson, B.; Smith, Jr., D.W.; Nielson, S. J. *Mater. Chem. C* **2014**, *2*, 2591-2599.
21. "Coated melt-spun acrylonitrile-based suture for delayed release of nitric oxide" Lowe, A.; Deng, W.; Smith Jr., D.W.; Balkus, K.J. *Materials Letters* **2014**, *225*, 221-223.
22. "AB-type monomers for the preparation of perfluorocycloalkene (PFCA) aryl ether polymers", Campos, R.; Mansur, A. A.; Cook, C. H.; Batchelor, B.; Iacono, S. T.; Smith Jr., D. W. *Journal of Fluorine Chemistry* **2014**, *166*, 60–68.
23. "Spectroscopic evaluation of out-of-plane surface vibration bands from surface functionalization of graphene oxide by fluorination", Acik, M.; Yagneswaran, S.; Peng, W.; Lee, G.; Lund, B. R.; Smith Jr., D. W.; Chabal, Y. J. *Carbon* **2014**, *77*, 577-591.
24. "Electrochemical Oxygen Reduction at Platinum / Mesoporous Carbon / Zirconia / Ionomer Thin-Film Composite Electrodes" Jung-Min Oh; Jiyoung Park; Amar Kumbhar; Dennis W. Smith, Jr.; Stephen Creager, *Electrochimica Acta* **2014**, *138*, 278-287.

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25. "Synthesis and Characterization of Blue-Light Emissive Carbazole Containing Perfluorocyclobutyl Aryl Ether Polymers", Zhu K.; Lund B.; Stern R.; Budy S.M.; Smith, Jr. D.W. and Iacono S.T. *Journal of Polymer Science Part A: Polymer Chemistry* **2014**, *52*, 552-560.
26. "Ultra Low Dielectric, Self-cleansing and Highly Oleophobic POSS-PFCP Aryl Ether Polymer Composites" Sharma, B.; Verma, B.; Baur, C.; Bykova, J.; Mabry, J. M.; Smith Jr., D. W. *Journal of Materials Chemistry C* **2013** *1*, 7222-7227.
27. "Perfluorocyclohexenyl (PFCH) Aryl Ether Polymers via Polycondensation of Decafluorocyclohexene (DFCH) with Bisphenols" Sharma, B.; Hill, S. C.; Liff, S. M.; Pennington, W. T.; Smith Jr., D. W. *J. Polym. Sci., Part A: Polym. Chem.* **2013** *52*, 232-238.
28. "Preparation of Partially Fluorinated Aryl/Alkyl vinylene Ether Polymers", Keck, S.; Knoerzer, T.; Smith, Jr. D.W.; Iacono, S. *Polymer International*, **2013** *16*, 1485-1491.
29. "High Performance and Multipurpose Triarylamine-Enchained Semifluorinated Polymers", Dei, D.; Lund, B.; Wu, J.; Simon, D.; Ware, T.; Voit, W.; MacFarlane, D.; Liff, S.; Smith Jr., D. W., *ACS Macro Letters* **2013** *2*, 35-39.
30. "Bis-Perfluorocycloalkenyl (PFCA) Aryl Ether Monomers towards a Versatile Class of SemiFluorinated Aryl Ether Polymers", Sharma, B.; VanDerveer, D.; Liff, S.; Smith Jr., D.W., *Tetrahedron Letters* **2013**, *54*, 3609-3612.
31. "Self-initiated Graft Polymerization of Acrylates onto the Surface of Ground Rubber Tire and Composites Thereof", Yagneswaran, S.; Storer, W.J.; Tomar, N.; Chaur, M.N.; Echegoyen, L.; Smith, Jr., D.W., *Polymer Composites* **2013**, *34*, 769-777.
32. "Non-isothermal Curing Kinetics of Epoxy/ Mechanochemical Devulcanized Ground Rubber Tire (GRT) Composites", Yagneswaran S., Tomar N. and Smith, Jr., D.W., *Polymer Bulletin* **2013**, *70*, 1337-1351.
33. "A Brief Guide to Polymer Nomenclature" Hiorns, R.C.; et al.; Smith, Jr., D.W. *Polymer* **2013**, *54* (1), 3-4.
34. "Enhanced Piezoelectric Performance from Carbon Fluoropolymer Nanocomposites", Baur, C.; DiMaio, J.R.; McAllister, E.; Hossini, R.; Wagener, E.; Ballato, J.; Priya, S.; Ballato, A.; Smith Jr., D.W., *Journal of Applied Physics* **2012**, *112*, 124104.
35. "Optimized Statically Non-Wetting Hydrophobic Electrospun Fibrous Surface of Perfluorocyclobutyl (PFCB) Polymer", Verma, R.; Creager, S. E.; Ballato, J. and Smith Jr., D.W. *Polymer* **2012**, *53*, 2211-2216.
36. "Carbon Nanofiber Electrodes for Supercapacitors derived from New Precursor Polymer: Poly(acrylonitrile-co-vinylimidazole)", Jung K.-H., Deng W., Smith Jr., D.W. and Ferraris, J.P., *Electrochemistry Communications* **2012**, 149-152.
37. "Acrylonitrile-based Nitric Oxide Releasing Melt-spun Fibers for Enhanced Wound Healing", Lowe, A.; Deng, W.; Smith Jr., D.W.; Balkus Jr., K., *Macromolecules* **2012**, *45*, 5894-5900.
38. "Grafting of Chain-End-Functionalized Perfluorocyclobutyl (PFCB) Aryl Ether Ionomers onto Mesoporous Carbon Supports", Park, J.; Oh, J.-M.; Creager, S. E. and Smith Jr., D.W., *Chem. Commun.* **2012**, *48*, 8225-8227.
39. "Perfluorocyclopentenyl (PFCP) Aryl Ether Polymers via Polycondensation of Octafluorocyclopentene with Bisphenols", Cracowski, J.-M.; Sharma, B.; Brown, D.; Christensen, K.; Lund, B. and Smith Jr., D. W., *Macromolecules* **2012**, *45*, 766-771.
40. "Perfluorinated Polymer Colloids: Controlling the Size, Shape, and Surface Charge", Budy, S. M.; Suresh, S.; Foulger, S. H.; Smith Jr., D. W., *Coll. Inter. Sci.* **2012**, *371*, 42-45.

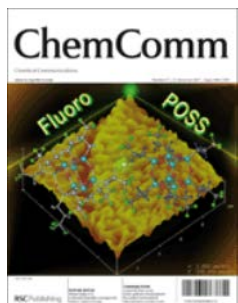
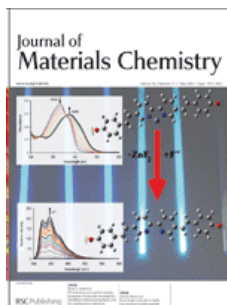
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41. "Functionalization of Used Tire Rubber by Hydrosilation" Banda, M.; Naskar, A.; Perera, K.P.; Moreland, C.; Hodge, T.; Wallace, K.; Beckham, H.; Smith Jr., D.W. *Rubber Chem. & Tech.* **2012**, *85*(1), 68-79.
42. "Surface Modified Ground Rubber Tire by Grafting Acrylic Acid for Paving Applications", Kocovski, S.; Yagneswaran, S.; Xiao, F.; Punith, V.S.; Smith Jr., D.W. and Amirkhanian, S., *Constr. Build. Mater.* **2012**, *34*, 83-90.
43. "Synthesis of Internal Fluorinated Alkenes via Facile Aryloxination of Substituted Phenols with Aryl Trifluorovinyl Ethers" Moody J.D.; VanDerveer D.; Smith Jr., D.W. and Iacono S.T., *Org. Biomol. Chem.* **2011**, *9* (13), 4842-4849.
44. "Kinetic Study of Semifluorinated Arylene Vinylene Ether Polymers" Buquoi, J. Q.; Smith Jr., D. W. and Iacono, S. T. *J. Polym. Sci., Part A: Polym. Chem.* **2011**, *40*, 4441-4447.
45. "Synthesis, Characterizations and Surface Properties of Polylactic Acid (PLA)-Perfluoropolyether (PFPE) Block Copolymers" Singh, A.; Naskar, A.; Haynes, D; Drews, M. and Smith Jr., D.W., *Polymer International* **2011**, *60*(3), 507-516.
46. "Terpolymers from Lactide and Bisphenol A Derivatives: Scale-up, Properties, and Blends" Singh, A.; Naskar, A.; Barden, J.; Drews, J. and Smith Jr., D.W., *J. Applied Polym. Sci.* **2011**, *122* (4), 2520-2528.
47. "Poly(acrylonitrile-co-1-vinylimidazole): A New Melt Processable Carbon Fiber Precursor" Deng W.; Lobovsky A.; Iacono S.T.; Wu T.; Tomar N.; Budy S.M.; Long T.; Hoffman W.P. and Smith Jr., D.W., *Polymer* **2011**, *52*, 622-628.
48. "Preparation of Composite Fluoropolymers with Enhanced Dewetting Using Fluorinated Silsesquioxanes as Drop-In Modifiers" Iacono, S.T.; Budy, S.M. and Smith Jr., D.W., *J. Mater. Chem.* **2010**, *20*, 2979-2984.
49. "Facile One-Pot" Synthesis and Thermal Cyclopolymerization of Bistrifluorovinyl Ether Aryl Derivatives Bearing Reactive Pendant Groups" Zhu, K.; Jin, J.; Iacono, S. T.; Budy, S. M. and Smith Jr., D. W., *J. Polym. Sci.* **2010**, *48*, 1887-1893.
50. "Thermal and Mechanical Analysis of Cross-linked Optical Fiber Coatings" Budy, S. Foy, P.; Mathewson, J.; Hawkins, T.; S.; Smith Jr., D.W. and Ballato, J. *J. Lightwave Tech.* **2009**, *27*(24), 5626-5630.
51. "Chromophore-derivatized Semifluorinated Polymers for Colorimetric and Turn-on Fluorescent Anion Detection" Gilliard, R. J., Jr.; Iacono, S. T.; Budy, S. M.; Moody, J.D.; Smith Jr., D.W. and Smith, R. C. *Sens. Actuators, B* **2009**, *143*, 1-5.
52. "Synthesis and Characterization of High Molecular Weight Perfluorocyclobutyl-containing Polybenzimidazoles (PFCB-PBI) for High Temperature Polymer Electrolyte Membrane Fuel Cells" Qian, G.; Smith Jr., D.W. and Benicewicz, B. *Polymer* **2009**, *50*, 3911-3916.
53. "Ultracompact AWG Using Air-Trench Bends with Perfluorocyclobutyl Polymer Waveguides" Lin, Y.; Kim, S.; Nordin, G.P.; Topping, C.; Smith Jr., D.W.; Ballato, J. *J. Light Wave Tech.* **2008**, *26*(7), 3062-3070.
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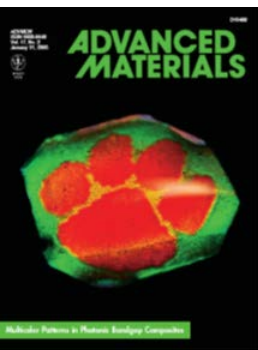
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148. "Metathesis Polycondensation Chemistry as a Route to Unsaturated Elastomers" Wagener, K.; Nel, J.; Duttweiler, R.; Hillmyer, M.; Boncella, J.; Konzelman, J.; Smith, Jr., D.W.; Puts, R.; Willoughby, L. *Rubber Chemistry and Technology* **1991**, *64*(1), 83.

INVENTIONS (19 US Patents issued, 11 pending)

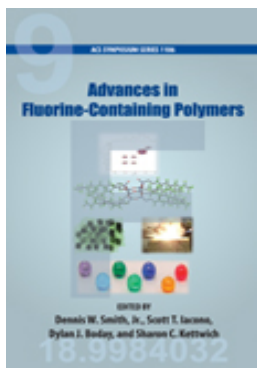
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1. "Polymer-coated Electrodes for Sensing Oil and Other Analytes in Liquid and Method of Making", Caldona, E.B.; Wipf, D.O.; Smith, D.W., Jr.; Nash, S.L., provisional application submitted, August, **2020**. (Mississippi State University)
2. "Eneidyne Resins and High Yield Carbon Composites Therefrom", Borggeo, E.; Smith Jr., D.W., disclosure submitted to MSU-OTM, November, **2019**. (Mississippi State University)
3. "Renewable Resource and Waste Material Derivatives for Oil and Gas Recovery" Smith Jr., D. W.; Sharma, US15084389, March, **2016**. (Falcon Form. & Fab., LLC)
4. "Carbon Fiber Compositions and Methods of Making" Yang, DJ; Batchelor, B.; Mahmood, S.; Smith Jr., D.W.; Deng, W.; Shin, H.; Jung, M., US Application US2015/015980, November 19, **2015**. (University of Texas at Dallas)
5. "Sulfonated Perfluorocyclopentenyl (PFCP) Polymers and Uses Thereof", Smith Jr., D.W.; Dei, D.; Ferraris, John P.; Balkus, Kenneth J.; Musselman, Inga H.; Yang, Duck J.; Kalaw, Grace J. D.; Sharma, B., US Patent US 2014/0162173 A1, **2014**. (University of Texas at Dallas)
6. "Perfluorocycloalkenyl Aromatic Ether Monomers and Homo- and Co-Polymers Derived Therefrom", US Provisional Patent Application 61/740,251, Dec. 20, **2013**. (UTD)
7. "Nitric Oxide Releasing Acrylonitrile-based Fiber as Sutures for Wound Healing", Invention Disclosure, June **2011**, US Provisional Patent Application filed. (UTD)
8. "Synthesis of Novel Monomers Containing the Trifluorovinylidene Group and the Cyanato Group and Polymers Thereof" U.S. Patent 7,674,876 B2, March 9, **2010**. (Clemson University)
9. "Halogen containing-polymer nanocomposite compositions, methods, and products employing such compositions", U.S. Patent Application Publication: US 2008/0096021 A1, April 24, **2008**. (Clemson University)
10. "Halogen containing-polymer nanocomposite compositions, methods, and products employing such compositions", U.S. Patent 7,265,174, Sept. 4, **2007**. (Clemson University) – **named #2 on the list of "Top 10 Nanomaterials Patents of 2007" by *Nanotechnology Law and Business***.
11. Copolymers of Fullerenes", U.S. Provisional Patent Application Filed, July 30, **2007**. (Clemson University, CXU-514-P)
12. "Fluorinated Lactide Based Copolymers", U.S. Provisional Patent Application Filed, March 9, **2007**. (Clemson University, CXU-513-P)
13. "Silicon Modified Crumb Rubber Compositions", U.S. Patent 2007/0060711 A1, March 15, **2007**. (Michelin Corporation)
14. "Fluorovinylene Aromatic Ether Polymers", Provisional Patent Application Filed, March 9, **2007**. (Clemson University, CXU-516-S)
15. "Composite Polymeric Materials from Renewable Resources", U.S. Provisional Patent Application Filed, December, **2006**. (Tetramer Technologies, L.L.C.)
16. "A Composition Containing a Cross-Linkable Matrix Precursor and a Poragen, and a Porous Matrix Prepared Therefrom", US Patent 7109249, September 19, **2006**. (The Dow Chemical Company)
17. "Synthesis of Novel Monomers Containing the Trifluorovinylidene Group and the Cyanato Group and Polymers Therefrom", European Patent EP1726581 A1, EP20060114524, and US Patent US7674876 Nov. 29, **2006**. (Fraunhofer-Gesellschaft and Clemson University)
18. "Electroactive Polymeric Composite Materials and Products Incorporating Same", U.S. Patent Filed May 31, **2006**. (Clemson University)
19. "Novel Copolymers from Lactide", U.S. Provisional Patent Filed, Nov. 15, **2005**. (Clemson University).
20. "Polylactic Acid Natural Fiber Composites and Uses Thereof", U.S. Provisional Filed, April **2006**. (Clemson University).
21. "Terpolymers from Lactide", U.S. Patent 7071288 B2, July 4, **2006**. (Clemson University)
22. "Fluoropolymer Compositions, Optical Devices and Methods for Fabricating Optical Devices", U.S. Patent 6,953,653 B2, October 11, **2005**. (Clemson University)
23. "Chemical Compositions Comprising Crystalline Colloidal Arrays", U.S. Patent 6,946,086 B2, September 20, **2005**. (Clemson University)

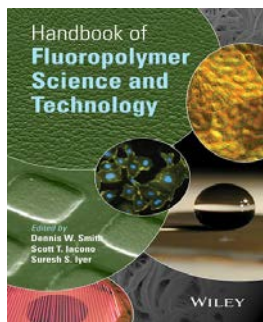
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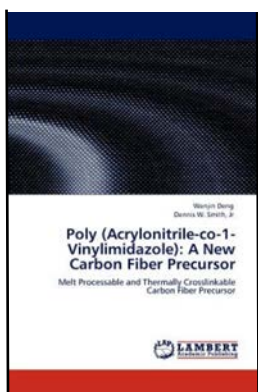


24. "Random Copolymer Compositions" US Patent 6,696,534 B2, Feb. 24, **2004**. (Clemson University)
25. "Diffraction Devices and Methods" US Patent 6,689,855 B2, Feb. 10, **2004**. (Clemson University)
26. "Fluoropolymers and Methods of Applying Fluoropolymers in Molding Processes" US Patent 6,649,715 B1, Nov. **2003**. (Clemson University)
27. "Ethyne Substituted Aromatic Compounds, Synthesis, Polymers, and Uses Thereof", US Patent 6,121,495 A, September 19, **2000**. (The Dow Chemical Company)
28. "A Composition Containing a Cross-Linkable Matrix Precursor and a Poragen, and a Porous Matrix Prepared Therefrom", US Patent 9962822, **1999**. (The Dow Chemical Company)
29. "Polyphenylene Oligomers and Polymers" US Patent 5,965,679 A, October 12, **1999**. (The Dow Chemical Company)
30. "Crosslinkable Thermoplastic and Crosslinked Thermoset Nonlinear Optical Polymeric Compositions Derived from Aromatic Dihydroxy Compounds", US Patent 5,776,374 A, July 7, **1998**. (The Dow Chemical Company)
31. "Manufacture and Polymerization of Ortho Diacetylene Aromatic Compounds and their Use As Coatings", World Patent, WO9710193, CAN 126:293737, **1998**. (The Dow Chemical Company).

Book Authorship's (2), Editorship's (3), Chapters (6), and other Feature Publications



1. Narayanan, G.; Farajidizaji, B.; Smith, Jr., D.W. "Chapter 1 - Semi-fluorinated aromatic ether polymers via step-growth polymerization of fluoroalkenes", In "Progress in Fluorine Science, Opportunities for Fluoropolymers", Eds.: Bruno Ameduri, Sergey Fomin, Elsevier, **2020**.
2. "Handbook of Fluoropolymer Science and Technology" D.W. Smith, Jr.; S. Iacono, S. Iyer, Eds., John Wiley & Sons, **2014**.
3. "Novel Semi-Fluorinated Polycycloalkenyl (PFCA) Aryl Ether Polymers" Sharma, B. and Smith Jr., D.W., LAP Lambert Academic Publishing, **2016**.
4. "Poly (Acrylonitrile-co-1-Vinylimidazole): A New Melt Processable and Thermally Crosslinkable Carbon Fiber Precursor" Deng, W. and Smith Jr., D.W., LAP Lambert Academic Publishing, **2012**.
5. "Advances in Fluorine Containing Polymers", D.W. Smith, Jr.; S. Iacono, S.; Boday, D.; Ketteich, S. Vol 1106, American Chemical Society, **2012**.
6. "Recent Advances in Partially Fluorinated Arylene Vinylene Ether (FAVE) Polymers" Ketteich, S.; Lund, B.; Smith Jr., D. W.; Iacono, S.; Book Chapter in "Advances in Fluorine Containing Polymers", ACS Symposium Series, **2012**, Vol. 1106, Chapter 2, pp. 9-28.
7. "Polyhedral Oligomeric Silsesquioxane-Functionalized Perfluorocyclobutyl Aryl Ether Polymers", Iacono, S., Mabry, J., Boday, S., Smith Jr., D.W.; Book Chapter in "Advances in Silicones and Silicone-Modified Materials", ACS Symposium Series, **2010**, Vol. 1051, Chapter 16, pp. 195-209.
8. "Fluoropolymers in Biomedical Applications" Glassar, S.; Smith, D.W., Jr. *Encyclopedia of Biomaterials and Biomedical Engineering* **2004**, Marcel Dekker: New York.
9. "Fluoropolymer 2000, Current Frontiers and Future Trends" D.W. Smith, Jr., Ed., EPS Publishing, Hattiesburg, MS, **2001**.
10. "From Fuel Cells to Photonics – A Versatile Family of Fluoropolymers" Micaela Brown, *High Tech Materials Alert*, John Wiley & Sons, **2000**, November 17 (interview).
11. "Isothermal and Non-Isothermal Cure Kinetics of Polynaphthalene Networks from Bis-Ortho-Diynylarene (BODA) Monomers" Shah, H.; Babb, D.; Smith, Jr., D.W. *NATAS Notes (N. Amer. Thermal Anal. Soc.)* **1999**, 31(3), 11. **(INVITED FEATURE ARTICLE)**
12. "Acyclic Diene Metathesis Polymerization. Synthesis of Unsaturated Polycarbo(dimethyl)silanes" Wagener, K.; Smith, Jr., D.W., highlighted in *Chemical & Engineering News*, April 29, **1991**, p.19.



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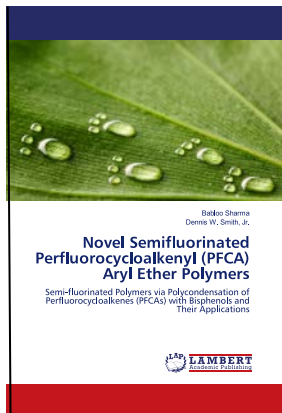
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13. "The Spontaneous Reversibility of Acyclic Diene Metathesis Polymerization." Wagener, K.; Nel, J.; Smith, Jr., D.; Boncella, J., highlighted in *Chemical & Engineering News*, September 10, 1990, p. 26.

STUDENT ADVISING

Doctoral Students (22 graduates to date)

1. Prasanna Perera (Ph.D., organic), "Synthesis and Polymerization of Bis-*Ortho*-Diynyl Arene (BODA) Monomers", (2002). Currently with Invista, Inc., Camden, SC.
2. Huseyin Zengin (Ph.D., physical), "Synthesis and Polymerization of Bis-*Ortho*-Diynyl Arene (BODA) Monomers & Polymers", (2002). Currently Professorat Gaziantep University, Turkey.
3. Nilmini Abayasinghe (Ph.D., physical), "Renewable Resource Biodegradable Polylactic acid Derivatives", (2003). Currently R&D Director for Mermet, Inc., Spartanburg, SC
4. Ping Jiang (Ph.D., organic), "Novel Matricies for Crystalline Colloidal Arrays", (2004), co-advised with Dr. S. Foulger. Currently employed at Adv. Technology Materials, Inc., Danbury, CT.
5. Jack Jin (Ph.D., organic), "Perfluorocyclobutyl Polymers. From Fundamentals to Function" (2005). Professor of Chemistry, University of Auckland, New Zealand.
6. Bryan Spraul (Ph.D., organic) "Synthesis and Polymerization of Trifluorovinyl Compounds" (December, 2005). Currently employed at Walex Products Company, Inc., Wilmington, NC.
7. Ying Yurong (Ph.D., MSE co-advised with Dr. S. Foulger), "Photonic Band Gap Composites", (2006).
8. Clark Ligon (Ph.D., organic) "Advanced Hybrid Fluoropolymers from Trifluorovinyl Ether Monomers" (August, 2006). Currently with the University of Innsbruck.
9. Mark Perpall (Ph.D., organic), "Polyarylenes and Glassy Carbon Structures" (May 2007). Currently with Hentzen Aerospace, Greenville, SC.
10. Scott Iacono (Ph.D., organic, Cpt. U.S. Air Force), "Advances in Hybrid Fluoropolymers via Thermal Polymerization of Aryl Trifluorovinyl Ethers", (May 2008) – currently Professor of Chemistry at the US Air Force Academy, Colorado Springs, CO.
11. Akilesh Singhe (Ph.D., Mater. Sci. & Eng.), "Renewable Resource Polymers for Fiber Applications" (May 2008). Currently employed with Green Tweed, Inc, Phillidelphia, PA.
12. Andrew Nielson (Ph.D., organic), "A Modular Approach to Light Emission in Fluoropolymers", (May 2008). Currently employed with Nalco Corp., Houston, TX.
13. Dahlia Hanes (Ph.D., organic), "Renewable Resource Copolymers", (December 2008). Currently employed with SC Johnson, Racine, WI.
14. Wenjin Deng (Ph.D., organic), "New Carbon Fiber Precursor Polymers", (December 2010). Currently employed with Monsanto Corp., St. Louis, MO.
15. Dakarai Brown (Ph.D., organic), "Semifluorinated Polyaryl Ether Polymers Segmented with Polyethyleneglycol (PEG)", (June 2011). Currently employed with Ullman Optical, Madison, WI.
16. Sriram Yagneswaran (Ph.D., organic), "Recyclable Ground Rubber Tire Based Polymer Composite Material", (2012). Currently employed with Saint-Gobain S.A., India.
17. Jiyoung Park (Ph.D., organic), "Sulfonated Fluoropolymer Electrolyte Membranes" (2013). Currently employed with 3M Company, St. Paul, MN.
18. Babloo Sharma (Ph.D., organic), "Polymerization of Perfluorocycloalkenes and Bisphenols", (2013). Currently employed with the University of Arkansas, Fayetteville, AK.
19. Rajness Verma (Ph.D., organic), "Surface Properties of Electrospun Fluoropolymers and Composites" (2013). Currently with Tohono O'Odham Community College, Pima, AZ.
20. Jingbo Wu (Ph.D., organic), "Electro-Optic Monomers and Polymers", (2014).
21. Eugene Caldona (Ph.D., analytical) "Semi-Fluorinated Corrosion Coatings", (2020).
22. Ketki Shelar (Ph.D., organic) "PAH enchaind semi-fluorinated polymers", (2017 – present).
23. Karl Mukeba (Ph.D., organic) "Aryl Sulfone Enchaind Semi-Fluorinated Polymers", (2017 – present).
24. Ernesto Borrgo (Ph.D., organic) "BODA Composites", (2018– present).



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25. Gustavo Muñoz (Ph.D., organic) "Advanced Fluoropolymers", (2019 – present).
26. Dexin Liu (Ph.D., physical organic) "Supramolecular Fluoropolymers", (2020 – present).

Masters Students (8 graduates to date)

1. Raul Hernandez (M.S., organic), "PFCB Fuel Cell Polymers", (2008) – currently employed with Tetramer Technologies, LLC.
2. Madan Banda (M.S., physical), "Recycled Rubber Functionalization", (2007).
3. Erik J. Nelson (M.S., organic), "Liquid Crystalline Semifluorinated Polymers", (July, 2001) – Received the Ford Travel Grant for ACS National Meeting paper, currently employed with DuPont-Tejin Films.
4. Shuya Xing (M.S., Material Science & Engineering program), "Polymer Carbon Nanotube Composites", (2002), co-advised with Dr. D. Carroll.
5. Shenrong Chen (M.S., organic), "Active PFCB Optical Materials", (2002). Currently employed at Tetramer Technologies, LLC
6. Jennifer Gordon (M.S., MSE co-advised with Prof. J. Ballato), "Rare Earth Doped Polymers for Optical Applications" (December 2004). Currently employed at Lexmark, Inc.
7. Solomon Tesfaye (organic) "PAH enchainned semi-fluorinated polymers", (2018 – 2020). Currently with University of South Florida.
8. Kieth Cobb (organic) "Thermal degradation kinetics" (2019 – 2021).

Post Doctoral (PD) & Research Professor (RP) Advising (21 to date)

1. Hiren V. Shah, PD, "Thermomechanical, Opto-Electronic, and Carbon Processing of Polynaphthalenes Prepared from Bis-*Ortho*-Diyanyl Arene (BODA) Monomers", (1998-2000). Currently employed at Optical Coatings Laboratory / JDS Uniphase, Santa Rosa, CA.
2. Lixin Wu, PD, "Optical and Mechanical Properties of Polymers and Nano-composites", (2000). Currently postdoctoral associate at UCSD.
3. Suresh Kumar, PD, "Synthesis of BODA and PFCB Derivatives", (12/2000 – 9/2001). Currently employed at Xenoport Pharmaceuticals, San Jose, CA.
4. Chris Topping, RP, "Synthesis of PFCB Monomers", (07/2001- 2003). Currently employed with Tetramer Technologies, L.L.C., Pendelton, SC.
5. William Zhou, PD, "Polymer Science", (11/2001 – 12/2003). Currently employed at Formosa Plastics Corp., Corpus Christi, TX
6. Suresh Iyer, RP, "Organic Synthesis", (02/2002 – 01/2006). Currently Sr. Technical Manager at 3M Company, St. Paul, MN.
7. Sibylle Glasser, PD, "Polymer Science", (05/2003 – 08/2004), private industry, Germany.
8. Nilmini Abayasinghe (PD), "Renewable Resource Polymers", (2003-2004), Currently R&D Director for Mermet, Inc., Spartanburg, SC
9. Jack Jin (Ph.D., organic), "Perfluorocyclobutyl Polymers", (2005). Currently Professor at Aukland University, New Zealand.
10. Presanna Perera, RP, "Organic / Polymer Synthesis", (05/2003 – 11/2005). Currently employed with Invista, Corp., Willmington, DE.
11. Arno Rettenbacher, PD, "BODA and Fluorinated Fuel Cell Materials", (08/2005 – 12/2007). Currently at Swarovski, Innsbruck, Austria.
12. Amit Sanke, PD, "Polymer Science for Fuel Cells", (02/2006 – 03/2007). Currently employed with Green Tweed, Inc., Philadelphia, PA.
13. Amit Naskar, PD, "Renewable Resource Polymers", (02/2006 – 09/2006). Currently employed with Oakridge National Laboratory.
14. Kaizeng Zhu, PD, "Perfluorocyclobutyl Polymers for Optical Applications", (11/2006 - 8/2007).
15. Neetu Tumar, PD, "Recycled Rubber Composites", (12/2007 – 06/2011). Currently with Nalco Champion, an Ecolab, Pune, India.
16. Monika Mujkic, PD, "Metal activation of aromatic trifluorovinyl ethers", (5/2008 - 2010). Currently employed with Tetramer Technologies, L.L.C., Pendelton, SC.

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17. Jean-Marc Cracowski PD, "New Polymers from Trifluorovinyl Ethers", (9/2009 – 5/2010). Currently employed with University of Strasburg.
18. Daniel Dei, PD, (6/2010 – 8/2012). Currently employed with National Oilwell Varco in Houston, TX.
19. Wenjin Deng, PD, "New Carbon Fiber Precursor Polymers", (1/2011-1/2012). Currently employed with Monsanto Corp., St. Louis, MO.
20. Benjamin Lund, PD, (6/2010 - 2014). Currently employed with UTD, Dallas, TX.
21. Babloo Sharma, PD, (9/2013 – 2014). Currently employed with the University of Arkansas, Fayetteville, AK.
22. Ganesh Narayanan, PD, (10/2017 – 2019). Currently with Deloitte.
23. Behzad Farajidizaji, PD, (3/2018 – 2020). Currently employed with Volochem, Inc., Union City, CA.

Undergraduate Research Advising

> 55 undergraduates in addition to 20+ high school students (not listed)

Foreign Student / Visiting Scientist Research Advising

1. Veronique Mellon, ESCPE Lyon, FRANCE, "EPR Studies of BODA polymerization", (2001)
2. Nicolas Mifsud, ESCPE Lyon, FRANCE, "EPR Studies of PFCB polymerization", (2001)
3. Dirk Ewald, Fachhochschule Gelsenkirche, GERMANY, "Fluorovinylene Aromatic Poly Ethers" (Diploma Thesis accomplished at Clemson), (2006)
4. Dennis Siepmann, Fachhochschule Gelsenkirche, GERMANY, "Polylactide Copolymers and Composites" (Diploma Thesis accomplished at Clemson), (2006) Chrisitan Dreyer, Fraunhofer-Gesellschaft zur Förderung der angewandten Forschung e.V., GERMANY, "Synthesis of Novel Monomers Containing the Trifluorovinylidene Group and the Cyanato Group and Polymers Therefrom" (2005-2006)

Teacher Research Advising (NSF RET Program, Clemson U.)

1. Ellen Zielinski, "Renewable Polymers", (2007)
2. Jennifer Jones, "Rubber Composites", (2008)

SPONSORED RESEARCH (individual credit)

PI or Co-PI on over \$31 Million in funded research.

1. "Effects of New Jet Fuel Exposure & Post-Crash Frie Forensic Analysis on Aerospace Composites", Co-PI, \$500,000 (2018-2019).
2. "Advanced Composites Institute Collaborative Research", Boeing Corporation, PI, \$200,000 (2018-2019).
3. "Study of Carbon Fiber Preparation from AN/VIN* Copolymer Fiber Made by Melt-Spinning: Synthesis, Melt Spinning and Carbonization", Jeonju Institute of Machinery and Carbon Composites, Korea, Co-PI, \$405,000 (2011-2014).
4. "POSS Fluoropolymer Composites" Air Force Research Lab, Edwards AFB, PI, \$50,000 (2012-2014).
5. "Center for Energy Harvesting & Materials Systems, NSF-I/UCRC", Co-PI and Site Director, with Virginia Tech. University, \$25,000 organizer grant and not listed industry funds (2011-2014).
6. "Robert A. Welch Distinguished Professor of Chemistry", Welch Foundation, PI (2010-2014).
7. "A New Modular Approach to Thermal Stability and Efficient Electro-Optic Polymer and Chromophore Design for CMOS Compatible Optical Modulators" Intel, PI (\$300,000), (2010-2014).
8. "Laboratory for Synthetic Polymer Chemistry & Polymeic Materials Science & Engineering", University of Texas at Dallas, Texas STARS, PI (\$1,200,000), (2010-2014).
9. "Center for Ceramic, Composite, & Optical Materials Center, NSF-I/UCRC", Co-PI and Site Director, with Rutgers University, \$25,000 organizer grant and not listed industry funds (2009-2010).
10. "New fluoroionomer electrolytes with high conductivity and low SO₂ crossover for use in electrolyzers being developed for hydrogen production from nuclear power plants – DOE Laboratory Partnership" Department of Energy, PI, \$500,000 (\$500,000), (2008-2011).
11. "Fluoropolymer Electrolytes, Composites, and Electrodes" DOE, Co-PI, \$750,000 (2008-2011).

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12. "Thermally Reversible Networks for Coatings, Prosthetics, and Orthotics", Department of Defense through SCRA, PI, \$200,000 (200,000), (2007-2010).
13. "High Performance PEM Membranes" Department of Energy, Co-PI, \$750,000 (\$250,000), (2008-2011).
14. "Laboratory for Advanced Photonic Composites" Defense Advanced Research Projects (DARPA through SPAWARSYSCEN), Co-PI, \$500,000 (\$140,000), (2008-2009).
15. "Responsive Coating Technology Phase I" U.S. Army (ARDI), Co-PI, \$521,220 (\$100,000), (2006).
16. "Functional Polyarylene Networks" National Science Foundation, PI, \$315,000 (\$315,000), (2005-2008).
17. "High Performance PEM Membranes" Department of Energy, Co-PI, \$750,000 (\$250,000), (2005-2008).
18. "3D Test Systems: New tools for the Unlocking the Mysteries of Breast Cancer" U.S. Army, Co-PI, ca. \$2,500,000 (ca. \$200,000), (May 2005 – May 2010).
19. "Natural Fiber Reinforced Renewable Resource Biodegradable Polymer Composites" Gaia, Inc. and The Institute for Nutraceutical Research, PI, \$28,000 (\$28,000), (2005)
20. "Fluoropolymer Nanoparticle Composites" U.S. Army, Co-PI, \$100,000 (\$50,000), (2005-06).
21. "Laboratory for Advanced Photonic Composites" Defense Advanced Research Projects (DARPA through SPAWARSYSCEN), Co-PI, \$5,543,490 (\$1,000,000), (2005-07).
22. "Rubber Recycling: Depolymerization and Modification of Unsaturated Polymers in Rubber" Michelin Corp., PI, \$150,000 (\$150,000), (2005-07).
23. "Poly(lactic acid) Derived Fibers with Enhanced Performance" National Textiles Center, U.S. Commerce Department, PI, \$528,000, (2004-06).
24. "New Fuel Cell Electrodes from Carbon Aerogels with Internally Grafted Fluoropolymer Electrolytes" National Science Foundation, Nanoscience Exploratory Research (NER), Co-PI, \$100,000 (\$25,000), (2003-04).
25. "Rubber Recycling: Depolymerization and Modification of Unsaturated Polymers in Rubber" Michelin Corp., PI, \$107,780 (\$107,780), (2003-05).
26. "Space Durable Multi-Functional Fluoropolymers and Nanocomposites" South Carolina Space Grant / NASA EPSCoR, PI, \$60,000 (\$50,000), (2002-05).
27. "Lactide Derived Copolymers for Film and Packaging" Cryovac Sealed Air Corporation, PI, \$60,000 (\$60,000), (2002-03).
28. "Lactide Derived Copolymers for Film and Packaging" Center for Advanced Engineering Fiber and Film, NSF-ERC, Clemson University, \$75,000, (2002-04).
29. "Novel Multifunctional Space Durable Fluoropolymers and Resins" Air Force Office of Scientific Research, STTR Phase II, Co-PI with Triton Systems, Inc., \$500,000 (\$150,000), (2002-04).
30. "Laboratory for Advanced Photonic Composites" Defense Advanced Research Projects (DARPA through SPAWARSYSCEN), Co-PI, \$2,800,000 (\$560,000), (2001-04).
31. "Synthesis and Fabrication of Novel Fluoropolymers for Photonics Applications" Cottrell Scholars Award, Research Corporation, Principal Investigator, \$75,000 (\$75,000), (2001).
32. "New Solid Polymer Membranes or Rechargeable Lithium Batteries", NASA via Naval Air Warfare Center, \$390,000 (\$210,000), (2001-03).
33. "Novel Polymer Optical Fibers, Fiber Amplifiers, and Lasers" National Textiles Council, \$600,000 (\$200,000), (2001-04).
34. "Efficient Emitters Based on the Incorporation of Photoluminescent Polymers with Photonic Bandgap Composites", South Carolina Commission on Higher Education, \$65,550 (\$13,110), (2001-02).
35. "Novel Multifunctional Space Durable Fluoropolymers and Composites" Air Force Office of Scientific Research, STTR Co-PI with Triton Systems, Inc., \$100,000 (\$20,000), (2000-01).
36. "CAREER: Polyarylene Networks and Hybrid Molecular Composites - An Inter-disciplined Approach to Polymer Research and Education", National Science Foundation Early Faculty CAREER Award, Principal Investigator, \$370,000 (\$370,000), (2000-05).
37. "Hybrid Polyarylene Networks and Carbon Microstructures" Army Research Office (DOD-EPSCoR), Principal Investigator, \$225,000(\$225,000), (2000-03).

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38. "Renewable Resource Derived Biodegradable Fiber and Film Based on Polylactic Acid", South Carolina Commission on Higher Education, Principal Investigator, \$76,036 (\$76,036), (2000-01).
39. "Acquisition of an Extensional Rheometer for Materials Research and Education" National Science Foundation, Co-PI, \$62,181, (\$12,436), (2000-01).
40. "Novel Fluoropolymers and Carbon Nanotube Composites for Space Applications" NASA / South Carolina Space Grant Consortium, Principal Investigator, \$70,454, (2000-01).
41. "A Proposal to Develop an Infrastructure in Computational Biology and Computational Chemistry" Innovation Fund Committee, Clemson University, Co-PI, \$18,564, (2000).
42. "Mesoscopically Periodic Photonic-Crystal Materials: Tunable Optical Switches", South Carolina Commission on Higher Education, Co-PI, \$148,761, (\$49,587), (2000-01).
43. Dow Chemical Polymer Research Award, \$10,000, (1999-unrestricted).
44. "Fluoropolymer Fuel-Cell Membranes", 3M Corporation, Co-PI, \$5,500, (summer support 1999).
45. 3M Pre-Tenured Faculty Award, \$10,000, (1999-unrestricted).
46. "Alternative Carbon Fiber Precursors" Center for Advanced Engineering Fiber and Film, Clemson University, \$20,000, (2000).
47. "Renewable Resource Biodegradable 'Green Plastics' Based on Commercial Polylactic Acid", Clemson University Research Grant Committee, Principal Investigator, \$2,750, (1999-2000).
48. "Synthesis and Polymerization of Bis(*ortho*-Diyne) Aromatic Compounds", Petroleum Research Fund, Principal Investigator, \$25,000, (1999-00).
49. Start-Up Funds, Department of Chemistry and College of Engineering & Science, Clemson University, \$161,000, (1998-01).

OTHER SPONSORED ACTIVITY

1. Carbon Fiber Composites Research, South Carolina Research Authority, \$22,000, (2008).
2. Rubber Analysis, Lehigh Technologies, \$12,000, (2008).
3. Custom materials synthesis, U.S. Air Force, Edwards AFB, \$45,000, (2005-unrestricted).
4. "Paws for Polymers – A K-6 Teacher Training Workshop" National Science Foundation (\$5,000), EPSCoR (\$2,500), IPEC (\$2,500), COMSET (\$1,000), CAEFF (\$2,000), PI, (2003).
5. Custom monomer synthesis, W.L. Gore, \$1,600, (2003-unrestricted).
6. Custom monomer synthesis, U.S. Air Force, Edwards AFB, \$10,000, (2003-unrestricted).
7. "Paws for Polymers – A K-6 Teacher Training Workshop" National Science Foundation (\$4,000), EPSCoR (\$2,000), IPEC (\$5,000), COMSET (\$1,000), CAEFF (\$2,000), PI, (2002).
8. Clemson University Award for Faculty Achievement in the Sciences, \$2,000, (2000-unrestricted).
9. Governor's School student researcher supplies, South Carolina Governors School for Science & Mathematics, \$350, (2000).
10. Contract Sample Analysis, Triton Systems, Inc., \$3,500, (2000).
11. Custom monomer synthesis, 3M Corporation for polymer optical waveguide development, \$2,500, (2000-unrestricted).
12. "Synthesis of Malondialdehyde-1,3-D₂", US Army Cooperative Research and Development Agreement, Principal Investigator, ca. \$14,500 in equipment and supplies, (1999).
13. Donation of chemicals, The Dow Chemical Company, est. \$100,000, (1998-).
14. Donation of chemicals and supplies, BP/Amoco, est. \$50,000, (1999-).
15. Donation of research chemicals, Huntsman Chemical, est. \$1,000, (1999-).
16. Space Materials Development, NASA Langley Research Center, \$1,142, unrestricted support (1998).
17. Travel Support, The Dow Chemical Company, \$2,000, (1998).

COURSE INSTRUCTION

Courses Taught (Beginning Fall 1998)

MSU Professional Paths for Majors (2019 –)
MSU Frontiers in Polymer Chemistry (2018 –)

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UTD Polymer Chemistry (2013 – 2014)
UTD NS&M Freshman Seminar (Fall 2012)
UTD Organic Chemistry II (2011 – 2014)
Perspectives in Polymer Research, Physikalisch-Chemisches Institut,
Universität Heidelberg, Germany (visiting professor, summer 2001)
CU Frontiers in Polymer Chemistry (1999 – 2010)
CU Organic Chemistry I/II (1998 – 2010)
CU/UTD/MSU Undergraduate Research (since 1998)
CU/UTD/MSU Graduate Research (since 1998)
CU Special Topics in Organic Chemistry (1999)

New Course Development

“Frontiers in Polymer Chemistry” debuted Spring 2000 as a special topics course (CH 920), approved Fall 2000 as a new course (CH 451/651) for advanced undergraduate and graduate credit.

Guest Lecture

Polymer related courses in the School of Materials Science & Engineering
General Engineering Seminar on Chemistry Degrees and Departments
Careers Day presentations to K-12 Schools

UNIVERSITY & PROFESSIONAL SERVICE

University Service

Mississippi State University
I2AT Executive Steering Committee (2018 --)

University of Texas at Dallas:
Appointed Chair, Tenure and Promotion (2012)
Appointed Chair, Faculty Search Committee (2011-2012)
Appointed Member, Advisory Committee on Research (2011- 2013)
Appointed Member, Dean Search Committee (2011)

College of Engineering and Science (CoES), Clemson University:
Elected, Dean Search and Screen Committee (2005-2006)
Appointed Member, CoES Task Force – Characteristics of Next Dean (2004)
Elected Senator, University Faculty Senate (2004-)
Policy Committee (2004-2005)
Research Committee (2005-2006)
Chair, Research Committee (2006-2007)
Appointed Member, College Endowed Chair Committee (2003)
Appointed Member, Deans Faculty Advisory Committee (2002-)
Appointed Member, Chemistry Building Committee (2002)
Appointed Chairman, Award for Faculty Achievement in the Sciences
Selection Committee (2002)
Elected Member, Associate Dean Search and Screening Committee (2001)
Appointed Member, Chemistry Department Chair Search and Screening Committee (2000)
Appointed Member, Chemistry Department Space Task Force (2000)

Center for Optical Materials Science & Engineering (COMSET):
Founding Member (2001)
Associate Director (2005)

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Center for Advanced Engineering Fiber and Film:

Appointed Member, Building Committee (2001)

Chemistry Department Appointments:

Chair, Organic Faculty Search Committee (2004-2006)

Chair, Facilities Committee (2004-2005)

Member, Graduate Recruiting Committee (2000- 2004)

Member, Seminar Committee (1999-2000)

Member, Curriculum Committee (1998-1999)

Member, Scholarships & Awards Committee (1998-2003)

Other University Service

1. "How to Write a Successful Proposal", New Faculty Orientation, (2002-2006)
2. General Engineering Seminar on Chemistry Degrees and Departments, Clemson, SC, (2003)
3. NSF Summer Research Program in Solid State Chemistry invited lecture, Clemson, SC, (2002)
4. New CES Faculty Orientation Speaker on "The Funding Game", Clemson, SC, (2002)
5. NSF Summer Research Program in Solid State Chemistry invited lecture, Clemson, SC, (2001)
6. New CES Faculty Orientation Speaker on "The Funding Game", Clemson, SC, (2001)
7. Primarily responsible for obtaining a gift of \$1000 from Fisher Scientific to establish the Department's Fisher Scientific Distinguished Lecture series, (2000)
8. Primarily responsible for obtaining a gift of \$500 from IRIX Pharmaceuticals to establish the Department's IRIX Pharmaceutical Lecture series, (2000)
9. Western Carolinas Section of the ACS invited speaker, (2000)
10. Graduate Thesis Committees, ten former and twelve current, (1998-)
11. Mettler-Toledo Thermal Analysis Station (TGA/DSC) Administrator, (1999-2000)
12. School of Textiles, Fiber & Polymer Science 1999 Faculty Search Committee, (1999)
13. Chemistry graduate recruitment coordinator for IRIX Pharmaceuticals (two graduates hired by IRIX, (2000-)
14. Clemson ACS Student Affiliates invited speaker, (1998)

MISCELLANEOUS

Short Courses / Workshops / Special Conferences

ACS Leadership conference, Dallas, TX, (2008)
ACS Division Summit, Tampa, FL (2007)
"Cottrell Scholar's Conference", Research Corporation, Tucson, AZ, (2002-2007)
"Combinatorial Materials Science: A National Dialogue", NIST, (2000)
"Problem-Based Learning", Clemson University, (1999)
"Proposal Writing for Faculty and Researchers", RAMS-FIE, (1998)
"Low-Dielectric-Constant Materials for BEOL Integrated Circuits", MRS, (1997)
"Low Dielectric Constant Materials and Interconnects", Sematech, (1996)
"Practical Integrated Circuit Fabrication", ICE, Corp., (1996)
"Chemical Engineering for Chemists", ACS, (1995)
"Modern Electronic Structure Methods (*Spartan*)", Wavefunction, Inc., (1994)

APPENDIX (may or may not be included)

Archived & non-archived conference proceedings (>300) including invited and keynote lectures (>200).

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CURRICULUM VITAE – APPENDIX

Archived & non-archived conference proceedings (>300) including invited and keynote lectures (>200).

Archived Conference Proceedings (>158 published)

1. "Corrosion protection of fluorinated polymeric materials and simple triazole- and imidazole-based aromatic compounds" Caldana, E. B.; Brown, H. O.; Zhang, M.; Hollis, T. K.; Webster, C. E.; Smith, Jr., D. W.; Wipf, D. O. *Pittcon Conference and Exposition*, Chicago, IL, March **2020**.
2. "Step-growth Polymerization of Fluoroalkenes toward Polyaromatic Hydrocarbon Enchained Semi-fluorinated Polymers" Shelar, K.; Farajidizaji, B.; Narayanan, G.; Mukeba, K.; Sygula, A.; Pittman, C.; Smith, Jr., D.W., *257th ACS National Meeting and Exposition*, Orlando, FL, March 31st- April 4th, **2019**.
3. "Corrosion inhibition of mild steel in acidic medium by simple triazole- and imidazole-based aromatic compounds" Caldana, E. B.; Zhang, M.; Hollis, T. K.; Webster, C. E.; Smith, Jr., D. W.; Wipf, D. O. *257th American Chemical Society National Meeting and Exposition*, Orlando, FL, April **2019**.
4. "Synthesis and characterization of Perfluorocyclohexenyl Aryl Ether (PFCH) polymers with divergent glass transition temperatures" Narayanan, G.; Farajidizaji, B.; Shelar, K.; Mukeba, K.; Sygula, A.; Pittman, C.; Smith, Jr., D.W. *257th American Chemical Society National Meeting and Exposition*, Orlando, FL, April **2019**.
5. "Polycyclic Aromatic Core-enchained Perfluorocyclobutyl (PFCB) Aryl Ether Polymers derived from Phenanthrenequinone" Farajidizaji, B.; Narayanan, G.; Shelar, K.; Mukeba, K.; Sygula, A.; Pittman, C.; Smith, Jr., D.W. *257th American Chemical Society National Meeting and Exposition*, Orlando, FL, April **2019**.
6. "Semifluorinated Poly (Ether Sulfones) and Fluorinated Arylene Vinyl Ether Polymers: Synthesis and characterization" Mukeba, K.; Narayanan, G.; Farajidizaji, B.; Shelar, K.; Sygula, A.; Pittman, C.; Smith, Jr., D.W. *257th American Chemical Society National Meeting and Exposition*, Orlando, FL, April **2019**.
7. "Fluoropolymers, Polyarylene Networks, and Sustainable Materials Chemistry for Energy, Information, Bio/Renewable & Advanced Composite Technologies", *256th American Chemical Society National Meeting and Exposition*, Boston, MA, Aug. 21, **2018**. (**INVITED**)
8. "Self-initiated functionalization of waste tire rubber networks and new composite applications" Caldana, E. B.; Rosenmayer, T.; Smith, Jr., D. W. *255th American Chemical Society National Meeting and Exposition*, New Orleans, LA, March **2018**.
9. "A Modular Approach to Semi-fluorinated Aromatic Ether Polymers via Step-growth polymerization of Fluoroalkene" Shelar, K.; Mukeba, K.; Sygula, A.; Smith, Jr., D.W., *255th ACS National Meeting and Exposition*, New Orleans, LA, March 19, **2018**.
10. "Step Growth Polymerization of Fluoro-olefins and Tetraynes Toward High Performance Cyclopolymers – A Gator Tradition" Smith, Jr. D.W., *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **2013**, 54(2). (**INVITED, MARK AWARDS SYMPOSIUM for KB Wagener**).
11. "New poly (acrylonitrile-co-1-vinylimidazole) copolymer: Applications and investigations on solvent and initiator affects" Mahmood, S. F., Deng, W., Batchelor, B., Lund, B., Verma, R., Lowe, A., Jung, K-H., Balkus, K. J., Ferraris, J. P., Yang, D. J., Smith Jr., D. W. *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **2013**, 54(1).
12. "Carbon fiber for the masses: From synthesis to low temperature thermal extrusion" Batchelor, B., Lund, B., Mahmood, S. F., Verma, R., Smith Jr., D. W. *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **2013**, 54(1).
13. "New poly (acrylonitrile-co-1-vinylimidazole) copolymer as a melt processable carbon fiber precursor and for nitric oxide releasing enhanced wound healing and supercapacitors" Mahmood, S. F., Deng, W., Batchelor, B., Lund, B., Verma, R., Lowe, A., Jung, K-H., Balkus, K.

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- J., Ferraris, J. P., Yang, D. J., Smith Jr., D. W. *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **2013**, 54(1).
14. "Semi-fluorinated polyamide polymers" Sharma, B., Shawna, L., Smith Jr., D. W. *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **2013**, 54(1).
 15. "Improved piezoelectric performance from fluoropolymer carbon nanocomposites" Baur, C., McAllister, E., DiMaio, J. R., Smith Jr., D. W. *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **2013**, 54(1).
 16. "AB-type monomers for the synthesis of perfluorocycloalkene (PFCA) aryl ether polymers" Campos, R., Smith Jr., D. W. *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **2013**, 54(1).
 17. "Direct Fluorination of Poly(3-hydroxybutyrate-co)-hydroxyhexanoate." Mahmood, S. F., Yagneswaran, S., Lund, B., Smith Jr, D. W.; *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **2012**, 53(2), 354-355.
 18. "Perfluorocycloalkenyl (PFCA) Aryl Ether Polymers", Sharma, B., Liff S. and Smith Jr., D.W. *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **2012**, 53 (2), 234.
 19. "Synthesis of Triarylamine Fluoropolymer Platforms for Optical Applications", Dei, D. K.; Wu, J.; Sharma, B.; Simon, D.; Ware, T.; Lund, B. R.; Voit, W. E.; MacFarlane, D. L.; Liff, S. M.; Smith, Jr., D. W., *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **2012**, 53(2), 145.
 20. "PVDF Nanocomposites for Enhanced Piezoelectric Performance", Baur, C.; DiMaio, J.; Hossini, R.; McAllister, E.; Wagener, E.; Lund B. R.; Priya, S.; Smith, Jr., D.W., *PMSE Preprint* **2012**, 53(2), pp .
 21. "Mixed Triarylamine Chromophore Perfluorocyclobutyl (PFCB) Copolymers for Nonlinear Optics", Wu, J.; Dei, D. K.; Lund, B. R.; Liff, S. M.; Smith, Jr., D. W., *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **2012**, 53(1), 140-141.
 22. "Functional FluoroPOSS Compounds: Novel Building Blocks for Hybrid Polymers and Nanocomposites", Campos, R.; Ramirez, S. M.; Mabry, J. M.; Smith Jr., D.W., *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **2012**, 53(2), 187-188.
 23. "Direct Fluorination of Mechanochemical Devulcanized Ground Rubber Tire Using Elemental Fluorine", Yagneswaran, S.; Lund, B. R.; Batchleor, B.; Vakhitov, K.; Tomar, N.; Smith Jr., D. W., *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **2011**, 52(2), 745-746.
 24. "Optically Active, Robust Triarylamine Fluoropolymers", Dei, D. K.; Wu, J.; Lund, B.; Smith Jr., D. W., *Polymer Preprints (American Chemical Society, Division of Polymer Chemistry)* **2011**, 52(2), 740-741.
 25. "Perfluorocyclopentenyl (PFCP) Aryl Polymers", Sharma, B. and Smith Jr., D.W. *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **2011**, 52 (2), 982.
 26. "Synthesis and Characterization of Cross-linked Sulfonated PFCB Aryl Ether Membranes for Hydrogen Production", Tomar, N.; Park, J.; Jayasinghe, R.; Colon-Mercado, H.; Elvington, M.; Hobbs, D.; Creager, S.E.; and Smith, Jr. D.W. *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **2011**, 52 (1), 178.
 27. "Sulfonated Perfluorocyclobutyl (S-PFCB) Aryl Ether Polymers for Proton Exchange Membranes", Park, J.; Tomar, N.; Jayasinghe, R.; Colon-Mercado, H.; Elvington, M.; Hobbs, D.; Smith, R.C.; and Smith, Jr. D.W. *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **2011**, 52 (1), 109.
 28. "Bi Component System of Perfluorocyclobutyl Aryl (PFCB) Ether Polymers for Functional Materials", Verma, R.; Tomar, N.; Sharif, I.; Hongsirikarn, K.; Creager, S.; Desmarteau, D.; Smith, Jr, D.W. *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **2011**, 52 (1), 140.
 29. "Modification of Ground Rubber Tire Surfaces and Their Characterization", Yagneswaran, S.; Tomar, N.; Lund, B.R.; Smith, Jr., D.W. *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **2011**, 52(1), 38.
 30. "Perfluorocyclopentenyl (PFCP) Aryl Ether Polymers", Sharma, B. Cracowski, J-M.; and Smith, Jr. D.W. *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **2011**, 52 (1), 172.

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31. "Thermal Stabilization of Poly (acrylonitrile-co-1-vinylimidazole) Melt-spun Fiber", Deng, W.; Lobovsky, A.; Tomar, N.; Wu, T.; Iacono, S.T.; Budy, S.M.; Long, T.; Hoffman, W.P. and Smith, D.W. Jr. *Polym. Prepr.* **2010**, *51(2)*, 258.
32. "Advanced Thermally Reversible Cross-linkable ASA Polymers", Sharma, B.; Tomar, N.; Deng, W.; Norfolk, C.W. and Smith, D.W. Jr., *Polym. Prepr.* **2010**, *51(2)*, 571.
33. "Surface Modification of Ground Rubber Tire with Acrylic Acid and Its Characterization", Yagneswaran, S.; Tomar, N.; Cellura, J.R. and Smith, D.W. Jr. *Polym. Prepr.* **2010**, *51(2)*, 494.
34. "Preparation and Characterization of Sulfonated Perfluorocyclobutyl (S-PFCB) Aryl Ether Polymers for Hydrogen Production", Park, J.; Tomar, N.; Jayasinghe, R.; Colon-Mercado, H.; Elvington, M.; Hobbs, D. and Smith, D.W. Jr. *Polym. Prepr.* **2010**, *51*, 495.
35. "Phase Separation of TFVE Base Block Copolymers and Their Applications " Brown D. K.; Park, J.; Verma, R.; Tomar, N.; Jayasingh, R. ; Colon-Mercado, H.; Elvington M.; Hobbs, D.; Sharif, I.; Creager, S.; DesMarteau, D.; Smith, Jr., D. W. *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **2010**, *51(1)*, 626.
36. "Semifluorinated Polymers Mediated Nanoparticle Assemblies" Ratnaweera, D.; Shrestha, U.; Smith, D. W., Jr.; Perahia, D.; Iacono, S. T.; Mabry, J. M. *Bull. Am. Phys. Soc. (American Physical Society)* **2010**, *2(55)*, V19.00009.
37. "Functionalized Semifluorinated Aryl Ether Polymers" Iacono, S. T.; Brown, D.; Smith, D. W., Jr. *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **2010**, *51(1)* 155.
38. "Fluorinated Polyhedral Oligomeric Silsesquioxanes (F-POSS)" Iacono, S. T.; Vij, A.; Peloquin, A. J.; Yandek, G. R.; Smith, D. W., Jr.; Mabry, J. M. *SAMPE* **2010**, Seattle, WA, May 17–20, 2010.
39. "Kinetics of Base-catalyzed Semifluorinated Arylene Ether Polymerization" Iacono, S. T.; Smith, D. W., Jr. *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **2009**, *50(2)*, 153.
40. "Optically Transparent, Omniphobic Fluoropolymer Coatings Modified with Octasilsesquioxanes" Iacono, S. T.; McGee, S. A.; Hunt, W. D.; Smith, D. W., Jr.; Mabry, J. M. *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **2009**, *50(2)*, 840.
41. "Thermally Reversible Crosslinked Acrylate Terpolymer." Deng, W.; Tomar, N.; Smith, Jr, D. W. *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **2009**, *50(2)*, 714.
42. "PFCB Polymer Electrolytes: A Promising Material for Hydrogen Production" Park, J.; Tomar, N.; Colon-Mercado, H.; Hobbs, D.; Smith, Jr., D. W. *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **2009**, *50(2)*, 559.
43. "Segmented Semifluorinated Poly(aryl ether)s from Aromatic Trifluorovinyl Ether Monomers." Brown D. K.; Iacono, S. T.; Smith, Jr., D. W. *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **2009**, *50(2)*, 626.
44. "Thermally Crosslinkable Poly(acrylonitrile-co-1-vinylimidazole) as Melt-processible Carbon Fiber Precursor." Deng, W.; Lobovsky, A.; Iacono, S. T.; Hoffman, W. P.; Smith, Jr, D. W. *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **2009**, *50 (1)*, 237.
45. "Semi-Fluorinated Polymer System with Ionic Liquid" Verma, R.; Tomar, N. Smith, D.W.; Jr. *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **2009**, *50(1)*, 235.
46. "Use of Mechanochemical Devulcanized Ground Rubber Tire (GRT) as a Functional Filler in Epoxy Composites." Yagneswaran, S.; Tomar, N.; Wallace, G.; Cellura, J. R.; Smith, Jr., D. W. *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **2009**, *50(1)*, 234.
47. "Synthesis and Structure Characterisics of Perfluorocyclobutane (PFCB) and Polyethylene Glycol (PEG) Block Polymers." Brown, D. K.; Smith, Jr., D. W. *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **2008**, *49(2)*, 828.
48. "Semifluorinated Aryl Ether Network Polymers." Tackett, K. N., Iacono, S. T.; Smith, Jr., D. W. *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **2008**, *49(2)*, 801.
50. "Preparation of Chromophore Enriched Semifluorinated Aryl Ether Polymers." Iacono, S. T., Neilson, A. R., Zhu, K., Budy, S. M.; Smith, Jr., D. W. *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **2008**, *49(2)*, 1007.

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51. "Morphological and Surface Properties of Electrospun Perfluorocyclobutyl (PFCB) Polymers." Verma, R., Iacono, S. T., Tomar, N.; Smith, Jr., D. W. *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **2008**, 49(2), 749.
52. "Thermally Reversible Crosslinked Polymers: Coatings with Self-healing Applications." Budy, S. M.; Smith, Jr., D. W. *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **2008**, 49(1), 980.
53. "Polymeric Sensor Materials from Renewable Resource Poly(Lactic acid)" Haynes, D. H.; Iacono, S. T.; Neilson, A. R.; Smith, D. W., Jr. *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **2008**, 49(1), 260.
54. "Silsequioxane Functionalized Perfluorocyclobutyl Aryl Ether Polymers" Iacono, S. T.; Budy, S. M.; Mabry, J. M.; Smith, D. W., Jr. *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **2008**, 49(1), 585.
55. "Perfluorocyclobutyl (PFCB) Linked Oligo(fluorine) Derivatives: Modular High Performance Electroluminescent Polymer System." Neilson, A. R.; Budy, S. M.; Smith, Jr., D. W.; Ballato, J. *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Mater.: Sci. & Eng.)* **2008**, 98, 135.
56. "Specialty High Performance Coatings for Optical Fiber Applications via Perfluorocyclobutyl (PFCB) Aryl Ether Polymers" Budy, S. M.; Iacono, S. T.; Hawkins, W.; Foy, P.; Ballato, J.; Smith, Jr., D. W. *Large-Area Processing and Patterning for Active Optical and Electronic Devices*, edited by V. Bulovae, S. Coe-Sullivan, I. Kymissis, J. Rogers, M. Shtein, T. Someya (*Mater. Res. Soc. Symp. Proc.* Volume 1030E, Warrendale, PA, **2007**, 1030-G03-09).
57. "Photoluminescent Studies of New Conjugated Fluorinated Aryl Ether Polymers" Iacono, S. T.; Budy, S. M.; Moody, J. D.; Smith, D. W., Jr. *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **2007**, 48, 89.
58. "Facile Preparation of Fluorinated Conjugated Polymers Possessing Tunable Photoluminescence and Chemical Sensing" Iacono, S. T.; Budy, S. M.; Moody, J. M.; Smith, R. C.; Smith, D. W., Jr. *Polym. Mater. Sci. Eng. Prepr.* **2007**, 97, 244. (INVITED)
59. "Synthetic Versatility of Trifluorovinyl Aromatic Ether Monomers and Intermediates" Smith, D. W., Jr.; Neilson, A. R.; Iacono, S. T.; Budy, S. M.; Topping, C. M.; Hernandez, R. S. *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **2007**, 48(2), 1021.
60. "High Performance Optical Fiber Coatings Based on Perfluorocyclobutyl (PFCB) Aryl Ether Polymers" Budy, S. M.; Iacono, S. T.; Hawkins, W.; Foy, P.; Smith, Jr., D. W.; Ballato, J. *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **2007**, 48(2), 239.
61. "Thermally Reversible Crosslinked Polymers: Polyurethanes for Coating Applications" Budy, S. M.; Smith, D. W., Jr. *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **2007**, 48(1), 639.
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85. "Renewable Resource Lactide Derived Polymers for Commodity Applications" Singh, A.; Haynes, D.; Naskar, A. K.; Drews, M. J.; Smith, D. W. Jr. *Fluoropolyme 2006, Am. Chem. Soc., Div. Polym. Chem.*, Charleston, SC, Oct 15-18, **2006**.
86. "Versatility, Processability, and Performance of Perfluorocyclobutyl Aryl Ether Polymers" Iacono, S. T.; Smith, D. W., Jr. *58th Southeastern Regional Meeting of the American Chemical Society*, Augusta, GA, Nov 1–4, **2006**.
87. "Novel Fluorinated Poly(lactic acid) as a Low Surface Energy Ductile Plastic" Singh, A.; Haynes, D.; Naskar, A. K.; Drews, M. J.; Smith, D. W. Jr. *58th Southeast Regional Meeting of the American Chemical Society*, Augusta, GA, Nov 1–4, **2006**.
88. "Perfluorocyclobutyl Polymers for Integrated Photonics" *Organic Thin Films for Photonics Symposium, National Meeting of the American Chemical Society* San Francisco, CA, September, **2006 (TUTORIAL, Organizer)**.
89. "New Step-Growth Chemistry from Fluoroolefins" *Polycondensation (Am. Chem. Soc. Div. Polym. Chem.)*, Istanbul, Turkey, September, **2006 (INVITED)**.
90. "New Developments in the Synthesis and Polymerization of Aromatic Trifluorovinyl Ethers" *18th International Symposium on Fluorine Chemistry*, Bremen, Germany, July, **2006 (INVITED)**.
91. "Polymer Education and Polymer Societies in the USA" *World Polymer Congress MACRO 2006, 41st International Symposium on Macromolecules*, Rio De Janeiro, Brazil, July, **2006 (INVITED)**.

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92. "Fluorine Containing Polymers for Passive and Active Photonics" 2006 Biennial Polymer Conference: Polymer Innovation at Emerging Boundaries of Science & Engineering" Key Biscayne, FL, May, 2006 (INVITED).
93. "Step Growth Ring Forming and Ring Opening Polymerization Toward Fluoropolymers, Polyarylenes, and Renewable Resource Materials" Pacific Polymer Conference IX, Maui, Hawaii, December, 2005 (INVITED).
94. "Integration of Perfluorocyclobutyl (PFCB) Polymers for Photonics" Pacific Polymer Conference IX, Maui, Hawaii, December, 2005 (INVITED).
95. "Design and Integration of Fluoropolymers for Photonics" Smith, Jr., D.W., Suresh. S.; Jin, J.; Spraul, B.; Neilson, A. *Organic Thin Films for Photonics Symposium (Optical Soc. Am. Nat. Mtg.)*, Tuscon, AZ, October, 2005 (INVITED).
96. "Radical Copolymerization of Polyarylene and Fullerene C60 for Photovoltaic Materials" Perpall, M.; Elliott, B.; Rettenbacher, A.; Echegoyen, L.; Smith, Jr., D.W. *Optics in the Southeast (SPIE, Optical Soc. Am.)*, Atlanta, GA, October 6, 2005.
97. "Synthesis and Properties of Perfluorocyclobutyl Polymers for Light Emission" Neilson, A.; Spraul, B.; Suresh, S.; Ballato, J. Smith, Jr., D.W. *Optics in the Southeast (SPIE, Optical Soc. Am.)*, Atlanta, GA, October 6, 2005.
98. "Optical Properties of Silsesquioxane Perfluorocyclobutyl Polymer Hybrid Nanocomposites" Iacono, S.; Ligon, S.; Mabry, J.; Smith, Jr., D.W. *Optics in the Southeast (SPIE, Optical Soc. Am.)*, Atlanta, GA, October 6, 2005.
99. "New Aromatic Perfluorocyclobutyl (PFCB) Polymer Colloids for Optical Devices" Budy, S.; Suresh, S.; Liu, J.; Foulger, S.; McHugh, M.; Smith, Jr., D.W. *Optics in the Southeast (SPIE, Optical Soc. Am.)*, Atlanta, GA, October 6, 2005.
100. "Introduction of Optically Active Moieties into PFCB Polymers" Spraul, B.; Suresh, S.; Sassa, T.; Ángeles Herranz, M.; Echegoyen, L.; Wada, T.; Perahia, D.; Smith, Jr., D.W. *Optics in the Southeast (SPIE, Optical Soc. Am.)*, Atlanta, GA, October 6, 2005.
101. "Fluoropolymer Functionalization of Carbon Nanofoams" Perpall, M.; Mei, H.; Liu, B.; Desmarteau, D.; Creager, S.; Smith, Jr., D.W. *Polymers in Batteries and Fuel Cells 2 (ECS)*, Las Vegas, NV, June 13, 2005.
102. "Imide Containing Perfluorocyclobutyl (PFCB) Polymers" Smith, Jr., D.W.; Wagener, E.W.; Suresh, S.; Jin, J. *International Polyimide Conference (STEP17)*, Montpellier, France, May 2005 (KEYNOTE LECTURE).
103. "Fluoropolymers for Integrated Optics" Smith, Jr. D.W. *Am. Chem. Soc. Div. Polym. Mater. Sci. & Eng. (PMSE), 229th National ACS Meeting*, San Diego, CA, March, 2005 (INVITED, PMSE Awards Symposium honoring Prof. James McGrath).
104. "Step Growth Terpolymers from Lactide and Bisphenol-A Derivatives: Introducing Renewable Resource Monomers into Commodity Thermoplastics" Abayasinghe, N.; Haynes, D.; Suresh, S.; Pererra, K.P.U.; Smith, Jr. D.W. *Polycondensation (Am. Chem. Soc. Div. Polym. Chem.)*, Roanoke, VA, September, 2004 (INVITED).
105. "Functionalized Nanostructured Carbons for Fuel Cell Electrodes" Perpall, M.W.; Shaban, I.; Mei, H.; Creager, S.; DesMarteau, D.; Smith, Jr., D.W. *Am. Chem. Soc. Div. Fuel Chem (FUEL), 228th National ACS Meeting*, Philadelphia, PA, August, 2004.
106. "Fluorinated Sulfonimide Electrolytes Grafted onto Carbon: A Potential Route to High-Performance PEM Fuel Cell Electrodes" Creager, S.; W.; Shaban, I.; Mei, H.; Perpall, M.; DesMarteau, D.; Smith, Jr., D.W. *Am. Chem. Soc. Div. Fuel Chem (FUEL), 228th National ACS Meeting*, Philadelphia, PA, August, 2004.
107. "International Programs of the ACS Division of Polymer Chemistry", 40th IUPAC international Symposium on Macromolecules (MACRO 2004), Paris, France, July 4, 2004 (INVITED).
108. "Fluorinated Materials Technology" XIVth European Symposium on Fluorine Chemistry, Poznan, Poland, July 11, 2004 (KEYNOTE LECTURE).
109. "TEOS and benzimidazole chemistry in perfluorocyclobutyl (PFCB) polymerization" Stanbro, J.K.; Jin, J.; Smith, Jr., D.W. *Am. Chem. Soc. Div. Chem. Ed. (CHED), 227th National ACS Meeting*, Anaheim, CA, April, 2004.

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110. "Microfabrication and Electro-optic Characterization of Perfluorocyclobutyl Polymers" Smith, D.W., Jr., Suresh, S.; Chen, S.; Jin, J.; Spraul, B.; Ballato, J. *Mater. Res. Soc. Spring Mtg.*, San Francisco, CA, February **2004**.
111. "Perfluorocyclobutyl Polymers for Integrated Photonics" Smith, Jr. D.W.; Sursh, S.; Shengrong, C.; Ballato, J.; Topping, C.; *Organic Thin Films for Photonics Symposium, Optical Soc. Am.* Tuscon, AZ, October, **2003 (INVITED)**.
112. "Nanoporous carbon electrodes for use in PEM fuel cells", Creager, S.; Smith, Jr., D.W.; DesMarteau, D., Gordon Research Conference on Fuel Cells, Bristol, RI, August **2003**.
113. "Synthesis and In Situ Characterization of Polyarylenes, Fluoropolymers, and Novel Lactide Derived Materials" Smith, Jr., D.W.; Perera, P.; Abayasinghe, N.; Suresh, S.; Ballato, J. *Polymers in Advanced Technology, ACD Div. Polym. Chem. Symp.*, Ft. Lauderdale, FL, **2003 (INVITED)**.
114. "First Separation and Characterization of *cis* and *trans* 1,2-bisaryloxy perfluorocyclobutanes" Ligon, S.C.; Kraiec, M.; Kitaygorodiskiy, A. Smith, Jr., D.W. *National ACS Mtg., Div. Organic Chem.*, New Orleans, LA, **2003**.
115. "Trifluorovinyl Aromatic Ether Cyclopolymerization" *Winter Fluorine Conference (Am. Chem. Soc. Div. Fluorine Chem.)*, St. Petersburg, FL, January **2003, (INVITED)**.
116. "Recent Advances in Perfluorocyclobutyl Chemistry" *Fluorine In Coatings Conference*, Orlando, FL, January **2003 (INVITED)**.
117. "Perfluorocyclobutyl Copolymers for Low Loss Electro-Optics" *Photonics West*, San Jose, CA, January **2003 (INVITED)**.
118. "Crown Ether Containing perfluorocyclobutyl (PFCB) Polymers for Lithium Battery Membranes" Topping, C.; Jin, J.; Ligon, C.; Patil, A.; Smith, Jr., D.W.; Fallis, S.; Irvin, J.; DesMarteau, D. *11th International Meeting on Lithium Batteries*, Monterey, CA, June, **2002**.
119. "Recent Advances in Thermal Step-Growth Cyclopolymerization of Aromatic Trifluorovinyl Ethers and *Ortho*-diynes" Smith, Jr., D.W. *Am. Chem. Soc. National Meeting, Div. Polym. Chem.*, April, **2002, (INVITED, Prof. James McGrath Awards Symposium)**.
120. "Highly Processable and Property Tunable Perfluorocyclobutyl (PFCB) Copolymers for Low Loss Optical Waveguiding" Smith, D.W., Jr., Kumar, S.; Chen, S.; Jin, J.; Ligon, C.; Ballato, J.; Foulger, S. *Mater. Res. Soc. Fall Mtg.*, Boston, MA, October **2001 (INVITED)**.
121. "Dynamic Mechanical Spectroscopy of Photonic Bandgap Composites" Foulger, S.H.; Jiang, P.; Ying, Y.; Lattam, A.; Ballato, J.; Smith, D.W., Jr. *Mater. Res. Soc. Fall Mtg.*, Boston, MA, October **2001**.
122. "Low Loss and Highly Processable Fluoropolymers for Optical Waveguiding" Smith, D.W., Jr., Kumar, S.; Chen, S.; Jin, J.; Ballato, J.; Foulger, S. *Optical Soc. Am. Mtg.*, Long Beach, CA, November **2001 (INVITED)**.
123. "Photonic Bandgp Composites" Foulger, S.H.; Lattam, A.; Ballato, J.; Smith, D.W., Jr. *OptoSoutheast (Optical Soc. Am.)*, Clemson, SC, October **2001**.
124. "Highly Processable Perfluorocyclobutyl (PFCB) Copolymer Solutions and Thermosets for Optical Applications" Smith, D.W., Jr.; Kumar, S.; Chen, S.; Ballato, J.; Jin, J.; Ligon, C.; Foulger, S. *OptoSoutheast (Optical Soc. Am.)*, Clemson, SC, October **2001 (INVITED)**.
125. "A Bergman-Cyclization Polymer as Carbon Precursor for Inverse Opal Photonic Bandgap Materials" Perpall, M.; Pererra, P.; Ballato, J.; Smith, D.W., Jr. *OptoSoutheast (Optical Soc. Am.)*, Clemson, SC, October **2001**.
126. "Property Tunable Perfluorocyclobutyl (PFCB) Copolymers for Low Loss Optical Waveguiding" Chen, S.; Kumar, S.; Jin, J.; Ligon, C.; Ballato, J.; Foulger, S.; Smith, D.W., Jr. *OptoSoutheast (Optical Soc. Am.)*, Clemson, SC, October **2001**.
127. "Phenylphosphine Oxide (PPO) Containing perfluorocyclobutane (PFCB) Polymers for Potential Space Applications" Jin, J.; Kumar, M.; Smith, Jr., D.W.; Foulger, S.; Mojazza, B.; Go, P.; Huaibing, L. *American Chemical Society Southeast Regional Mtg.*, Savannah, GA, September **2001**.
128. "Bis-*o*-diynylarene (BODA) Polymerization as a Novel Route To Carbon Fiber and Microstructures" Zengin, H.; Smith, Jr., D.W. *American Chemical Society Southeast Regional Mtg.*, Savannah, GA, September **2001**.

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129. "A Bergman-Cyclization Polymer as Carbon Precursor For Inverse Opal Photonic Bandgap Materials" Perpall, M.; Perera, P.; Dimaio, J.; Ballato, J.; Smith, Jr., D.W. *American Chemical Society Southeast Regional Mtg.*, Savannah, GA, September **2001**.
130. "Use of ¹⁹F NMR in Characterization of Perfluorocyclobutyl (PFCB) Polymers and Precursors" Ligon, C.; Smith, Jr., D.W. *American Chemical Society Southeast Regional Mtg.*, Savannah, GA, September **2001**.
131. "Highly Processable and Property Tunable Perfluorocyclobutyl (PFCB) Copolymers for Low Loss Optical Waveguiding" Chen, S.; Kumar, S.; Jin, J.; Ligon, C.; Ballato, J.; Foulger, S.; Smith, Jr., D.W. *American Chemical Society Southeast Regional Mtg.*, Savannah, GA, September **2001**.
132. "Novel Polylactide Derivatives: Catalysis and Copolymers" Abayasinghe, N.; Smith, Jr., D.W. *American Chemical Society Southeast Regional Mtg.*, Savannah, GA, September **2001**.
133. "Aqueous and Non-Aqueous Encapsulation Routes To Photonic Bandgap Composites" Jiang, P.; Lattam, A.; Ying, Y.; Ballato, J.; Smith, Jr., D.W.; Foulger, S. *American Chemical Society Southeast Regional Mtg.*, Savannah, GA, September **2001**.
134. "Perfluorocyclobutane (PFCB) Polymer/Carbon Nanotube Composites" Jin, J.; Zzing, S.; Carroll, D.; Foulger, S.; Smith, Jr., D.W. *American Chemical Society Southeast Regional Mtg.*, Savannah, GA, September **2001**.
135. "Synthesis and Characterization of Hetero Atom Terminated BODA Monomers and Polymers" Perera, P.; Smith, Jr., D.W. *American Chemical Society Southeast Regional Mtg.*, Savannah, GA, September **2001**.
136. "A Nobel Walk Through Polymer Chemistry" Smith, Jr., D.W. *American Chemical Society Southeast Regional Mtg.*, Savannah, GA, September **2001 (INVITED)**.
137. "Encapsulated Self-Assembled Colloidal Spheres: An AFM and SEM Study" Jiang, P.; Luzinov, I.; Smith, Jr., D.W.; Foulger, S.H. *National ACS Mtg., Div. of Colloid & Surface Chem.*, Chicago, IL, **2001**.
138. "Opical Properties of Swollen Encapsulated Crystalline Colloidal Arrays" Kotha, S.; Lattam, A.; Foulger, S.; Jiang, P.; Smith, Jr., D.W.; Ballato, J. *Am. Chem. Soc., Div. of Physical Chem.*, San Diego, CA, **2001**.
139. "Opical Properties of Encapsulated Crystalline Colloidal Arrays Under Mechanical Stress" Foulger, S.; Jiang, P.; Lattam, A.; Ballato, J.; Smith, Jr., D.W. *Am. Chem. Soc., Div. of Physical Chem.*, San Diego, CA, **2001**.
140. "Effect of Low Surface Energy Materials on Bulk Properties of Liquid Crystal Composites: Structure and Thermal Analysis" Traiphol, R.; Smith, Jr., D.W.; Perahia, D. *American Physical Society*, Seattle WA, March **2001**.
141. "Capillary Waves in Low Surface Tension Semi-Fluorinated Liquid Crystals" Traiphol, R.; Smith, Jr., D.W.; Perahia, D. *American Physical Society*, Seattle WA, March **2001**.
142. "Interfacial Effects in Semi-Fluorinated Polymeric Liquid Crystals" Traiphol, R.; Smith, Jr., D.W.; Perahia, D. *National ACS Mtg., Div. of Colloid & Surface Chem.*, San Diego, CA, **2001**.
143. "Recent Progress in Perfluorocyclobutane Polymer Technology" Shah, H.V.; Nelson, E.J.; Ballato, J.M.; Foulger, S.H.; Smith, Jr., D.W. *Fluoropolymer 2000 (Am. Chem. Soc. Div. Polym. Chem.)*, October 15-18, **2000**, Savannah, GA.
144. "Random Perfluorocyclobutyl Copolymers with Controlled Optical Properties" Shah, H.V.; Nelson, E.J.; Ballato, J.M.; Langhoff, C.; Smith, Jr., D.W. *Fluoropolymer 2000 (Am. Chem. Soc. Div. Polym. Chem.)*, October 15-18, **2000**, Savannah, GA.
145. "Semifluorinated Lyotropic Liquid Crystalline Polymers: A Mechanistic Tool to Control Surface Orientation of LC" Perahia, D.; Traiphol, R.; Shah, H.; Smith, Jr., D.W. *Fluoropolymer 2000 (Am. Chem. Soc. Div. Polym. Chem.)*, October 15-18, **2000**, Savannah, GA.
146. "Synthesis and Characterization of Semi-Fluorinated Polylactide" Abayasinghe, N.; Smith, Jr., D.W. *Fluoropolymer 2000 (Am. Chem. Soc. Div. Polym. Chem.)*, October 15-18, **2000**, Savannah, GA.
147. "Semi-Fluorinated Epoxy Thermoplastics Containing the α -Methyl Stilbene Linkage" Nelson, E.J.; Foulger, S.H.; Smith, Jr., D.W. *Fluoropolymer 2000 (Am. Chem. Soc. Div. Polym. Chem.)*, October 15-18, **2000**, Savannah, GA.

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148. "Bulk and Interfacial Studies of a Novel Semifluorinated Lyotropic Liquid Crystalline Polymer" Traiphol, R.; Shah, H.; Smith, Jr., D.W.; Felcher, G.; Perahia, D. *Fluoropolymer 2000 (Am. Chem. Soc. Div. Polym. Chem.)*, October 15-18, **2000**, Savannah, GA.
149. "Optical Properties of Fluoropolymer Nanotube Composites" Iyer, P.; Czerw, R.; Shah, H.; Carroll, D.; Ballato, J.; Smith, Jr., D.W. *OPTO Southeast, Regional Meeting on Optoelectronics, Photonics, and Imaging (Opt. Soc. Am. & SPIE)*, September 18-19, **2000**, Charlotte, NC.
150. "Perfluorocyclobutyl Polyaryl Ethers for Optical Waveguides and Submicron Diffractive Elements" Shah, H.; Ballato, S.; Smith, Jr., D.W. *OPTO Southeast, Regional Meeting on Optoelectronics, Photonics, and Imaging (Opt. Soc. Am. & SPIE)*, September 18-19, **2000**, Charlotte, NC.
151. "Random Perfluorocyclobutyl Polyaryl Ethers with Controlled Optical Tunability" Shah, H.; Ballato, J.; Hoeglund, A.; Smith, Jr., D.W. *OPTO Southeast, Regional Meeting on Optoelectronics, Photonics, and Imaging (Opt. Soc. Am. & SPIE)*, September 18-19, **2000**, Charlotte, NC.
152. "Effects of low Surface Energy Polymeric Thin Films on the Orientation of LC Molecules" Traiphol, R.; Smith, Jr., D.W.; Perahia, D. *National ACS Mtg., Div. of Colloid & Surface Chem.*, Washington DC, August **2000**.
153. "Two Concomittant Polymorphs of Bis(trifluoromethyl) Derivative of Bis-*o*-diynylarene and Related Bis-*o*-diynylarenes" Krawiec, M.; Perera, K.P.U.; Smith, Jr., D.W.; Abboud, K.A. *American Crystallographic Association Mtg.*, July 22-27, **2000**, St. Paul, MN.
154. "Perfluorocyclobutyl Copolymers with Controlled Optical Properties" Hoeglund, A.; Shah, H.; Ballato, J.; Langhoff, C.; Macha, S.; Limbach, P.; Smith, Jr., D.W. *4th National Graduate Student Research Polymer Conference (Am. Chem. Soc. Div. Polym. Chem.)*, June 18-21, **2000**, Hattiesburg, MS.
155. "Synthesis and Characterization of Fluorinated Polylactide" Abayasinghe, N.; Smith, Jr., D.W. *4th National Graduate Student Research Polymer Conference (Am. Chem. Soc. Div. Polym. Chem.)*, June 18-21, **2000**, Hattiesburg, MS.
156. "Bergman Cyclopolymerization of Bisphenol-A Derived Tetraynes" Perera, K.P.U.; Abboud, K.A.; Smith, Jr., D.W.; *4th National Graduate Student Research Polymer Conference (Am. Chem. Soc. Div. Polym. Chem.)*, June 18-21, **2000**, Hattiesburg, MS.
157. "Semi-Fluorinated Phenoxy Thermoplastics Containing the Alpha-Methyl Stilbene Linkage" Nelson, E.; Foulger, S.; Smith, Jr., D.W. *4th National Graduate Student Research Polymer Conference (Am. Chem. Soc. Div. Polym. Chem.)*, June 18-21, **2000**, Hattiesburg, MS.
158. "New Sulfonimide Acid Containing Perfluorocyclobutane (PFCB) Aromatic Polyethers for Potential Use in Fuel Cell Applications" Ford, L.; Smith, Jr., D.W.; DesMarteau, D. *4th National Graduate Student Research Polymer Conference (Am. Chem. Soc. Div. Polym. Chem.)*, June 18-21, **2000**, Hattiesburg, MS.
159. "Novel Polymer Matrices for Encapsulation of Crystalline Colloidal Arrays for Photonic Bandgap Applications" Jiang, P.; Kotha, S.; Sweryda-Krawiec, B.; Baughman, T.; Ballato, J.; Foulger, S.; Smith, Jr., D.W. *4th National Graduate Student Research Polymer Conference (Am. Chem. Soc. Div. Polym. Chem.)*, June 18-21, **2000**, Hattiesburg, MS.
160. "Low Surface Energy Novel Semi-Fluorinated Main Chain Liquid Crystalline Polymer" Traiphol, R.; Smith, Jr., D.W.; Perahia *American Physical Society*, St. Paul, MN, March **2000**.
161. "Synthesis and Characterization of Novel Liquid Crystalline Poly(hydroxy ether)s and Perfluorocyclobutane Polymers for Optical and Electronic Applications" Shah, H.; Hoeglund, A.; Nelson, E.; Smith, Jr., D.W. *Adhesion Society 23rd Annual Mtg.*, Feb. 20-23, **2000**, Myrtle Beach, SC.
162. "Fluoropolymer Nanotube Composites" Shah, H.; Czerw, R.; Carroll, D.; Goldner, L.; Hwang, J.; Ballato, J.; Smith, Jr., D.W. *Materials Res. Soc.*, San Francisco, April, **2000**.
163. "Synthesis and Polymerization of Bis-*ortho*-diynylarene (BODA) Monomers to Polynaphthalene Networks" Smith, Jr., D.W.; Perera, P.; Shah, H. *American Chemical Society Southeast Regional Mtg.*, Knoxville, TN, October **1999**.

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164. "Liquid Crystal Epoxy Networks Containing Alpha-Methylstilbene and Polyoxypropylene Segments" Smith, Jr., D.W.; Baughman, T.; Nelson, E. *American Chemical Society Southeast Regional Mtg.*, Knoxville, TN, October **1999**.
165. "Liquid Crystal Epoxy Fluoropolymers" Smith, Jr., D.W.; Nelson, E. *American Chemical Society Southeast Regional Mtg.*, Knoxville, TN, October **1999**.
166. "Copolymerization of Trifluorovinyl Ethers to Perfluorocyclobutane (PFCB) polymer for Optical Fibers and Waveguides" Smith, Jr., D.W.; Hoeglund, A.; Ballard, E.; Shah, H. *American Chemical Society Southeast Regional Mtg.*, Knoxville, TN, October **1999**.
167. "Novel Liquid Crystalline Fluoropolymers" Traiphol, R.; Shah, H.; Smith, Jr., D.W.; perahia, D. *American Physical Society*, Atlanta, GA, March **1999**.
168. "Electrical and Optical Properties of new Polynaphthalene Networks" Shah, H.; Smith, Jr., D.W. *American Physical Society*, Atlanta, GA, March **1999**.
169. "Perfluorocyclobutane (PFCB) Polyaryl Ethers. A Versatile Coatings Material" Smith, Jr., D.W.; Radler, M.; Babb, D.; Boone, H. *Fluorine in Coatings III*, Orlando, FL, January **1999**.
170. "Perfluorocyclobutane and Polynaphthalene Networks by Thermal Step Growth Addition Polymerization" *Polycondensation'98 (Am. Chem. Soc., Div. Polym. Chem.)*, Annapolis, MD, September **1998**.
171. "Advanced Fluoropolymers and Polyarylenes for Matrix Composite Resins" Smith, Jr., D.W., *Gordon Research Conference on Composites*, Ventura, CA, January **1998**.
172. "New Monomers And Polymers Based On Trifluorovinyl Ether Functionalized Organosilanes And Siloxanes", *30th International Organosilicon Conference*, Ontario Canada, May **1997**.
173. "Synthesis and Characterization of New Trifluorovinyl Ether Derivatives of Phosphorus and Silicon" Ji, J.; Narayan, S.; Neilson, R.H.; Smith, Jr., D.W. *American Chemical Society National Meeting (Div. Inorganic Chem.)*, San Francisco, CA, April **1997**.
174. "Synthesis and Characterization of New High Molecular Weight Processible Ether-Containing Polyamide-imides" Mohite, S.; Smith, Jr., D.W.; Thaemlitz, C.; Thompson, C. *III International Polyimide Conference*, Ellenville, NY, November **1988**.
175. "Synthesis and Characterization of Processible Ether-Containing Polyamide-imides" Mohite, S.; Thaemlitz, C.; Smith Jr., D.W. *44th Southwest Regional Am. Chem. Soc. Mtg.*, Corpus Christi, TX, December **1988**.
176. "A Study of the Synthetic Utility of Aliphatic Vinylogous Epoxy-ketones" Smith Jr., D.W.; Jahnke, T. *22nd Southwest Regional Am. Chem. Soc. Mtg.*, Wichita, KS, November **1987**.

Other Invited Lectures (>100)

1. High Temperature Aromatic Networks and Fluoropolymers for Advanced Composites & Energy Applications", University of North Georgia, Undergraduate Seminar, Sept. 11, **2020**.
2. "The Polymer Age. A Nobel Walk through the History of Polymer Science", Mississippi Local Section of the Am. Chem. Soc., March 8, **2019**.
3. "Semi-Fluorinated Polymers from Step-Growth Polymerization of Fluoroalkenes", University of South Florida, Tampa, FL, Sept. 20, **2018**.
4. "Fluoropolymers, Polyarylene Networks, and Sustainable Materials Chemistry for Energy, Information, Bio/Renewable & Advanced Composite Technologies", University of Mississippi, Oxford, MS, Aug. 30, **2018**.
5. "Fluoropolymers, Polyarylene Networks, and Sustainable Materials Chemistry for Energy, Information, Bio/Renewable & Advanced Composite Technologies", College of Chemistry, Sichuan University, Chengdu, China, Jul. 20, **2018**.
6. "Step-Growth Polymers from Fluoroalkenes and Ene-ynes", Shanghai Institute of Organic Chemistry, Chinese Academy of Science, Shanghai, China, April 24, **2018**.
7. "Materials Chemistry for Information, Energy, & Bio/Renewable Technologies. MSU ChemDog Highlights & Future Frontiers" Jawaharlal Nehru University, Indian Institute of Technology, and Solvay India, New Delhi, India, Feb. 25-28, **2018**.

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8. "Materials Chemistry for InfoTech, EnergyTech, & Bio/SustainableTech" Mississippi State University, Starkville, MS, January 17, **2017**.
9. "Enable the Market – Materials Chemistry for InfoTech, EnergyTech, & Bio/SustainableTech" University of Alabama in Huntsville, Huntsville, AL, November 11, **2016**.
10. "Fluoropolymer R&T – Current Trends & Future Frontiers" Solvay Specialty Polymers, S.p.A., Bolate (Milan), Italy, September 12, **2016**.
11. "Enable the Market – Materials Chemistry for InfoTech, EnergyTech, & Bio/SustainableTech" University of North Georgia, Dalongega, GA, September 2, **2016**.
12. "More Than a Filler - A Polymer Composite Paradigm via Self-Initiated Functionalization of Waste Tire Rubber" *Southern Rubber Group*, St. Simons Island, GA, June **2016**.
13. "New Fluoropolymer Chemistry from Fluoro-Olefins, Carbon Materials, Acrylonitrile Copolymers for Wound Healing, and Renewable Resource Materials" *Exponent, Inc.*, San Jose, CA, November **2015**.
14. Auburn University, Department of Polymer & Fiber Engineering, Auburn, AL, December **2013**.
15. "8th Annual Energy Harvesting Workshop and 2nd Annual CEHMS Conference", UT Dallas, Dallas, TX, January **2013**.
16. "Polycondensation 2012", San Francisco, CA, September **2012**.
17. "7th Annual Energy Harvesting Workshop and 2nd Annual CEHMS Conference", Virginia Tech, Blacksburg, VA, August **2012**.
18. 3M – St. Paul, MN, July **2012**.
19. 44th IUPAC World Chemistry Congress of 2012, Blacksburg, VA, June **2012**.
20. Virginia Energy Summit, Virginia Tech, Blacksburg, VA, January **2012**.
21. KOC University, Istanbul, Turkey, January **2012**.
22. University of Texas at San Antonio, San Antonio, TX, November **2011**.
23. University of South Florida, Tampa, FL, October **2011**.
24. University of North Texas at Denton, Denton, TX, September **2011**.
25. US Air Force Academy, Colorado Springs, CO, August **2011**.
26. 6th Annual Energy Harvesting Workshop, Virginia Tech, Blacksburg, VA, August **2011**.
27. 43rd IUPAC World Chemistry Congress of 2011, San Juan, Puerto Rico, July-August **2011**.
28. Air Force Research Lab, Edwards AFB, Edwards, CA, July **2011**.
29. Texas Tech University, Lubbock, TX, February **2011**.
30. Intel Corporation, Phoenix, AZ, January **2011**.
31. Southern Methodist University Special Meeting for Young Faculty (sponsored by the ACS local section), Dallas, TX, January **2011**, (**Keynote Speaker**).
32. Winter Fluorine 2011, St. Pete, FL, January **2011**.
33. International Symposium on High-Tech Polymer Materials (HTPM-VI), Xiamen City, China, November **2010**, (**Keynote Speaker**).
34. University of Texas, Arlington, TX, October **2010**.
35. IUPAC World Polymer Conference, Glasgow, UK, July **2010**.
36. Fluoropolymer 2010, Meze, France, June **2010**.
37. University of Innsbruck, Austria, June **2010**.
38. Solvay Solexis Symposium Series on Fluorine Chemistry, Milan, Italy, June **2010** (**KEYNOTE LECTURE**).
39. Hitachi Chemical, Tokyo, Japan, October **2009**.
40. University of Texas at Dallas, Dallas TX, September **2009**.
41. "Charles Stone Award Lecture", Carolina-Piedmont ACS Local Section, Charlotte, NC, November **2008**.
42. Savannah River National Laboratory, Aiken, SC, October **2008**.
43. Waseda University, Tokyo, Japan, September **2008**.
44. Intel Corporation, Portland, OR, August **2008**.
45. Toyobo Corporation, Kyoto, Japan, December **2007**.
46. Osaka University, Osaka Japan, December **2007**.

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47. "Perfluorocyclobutyl Polymers" INTEL Polymer Workshop, Pheonix, AZ, October 25, **2007 (KEYNOTE LECTURE)**.
48. PolyMaterials, AG, Munich, Germany, July **2007**.
49. Lehigh Technologies, Inc., Atlanta, GA, June **2007**.
50. "Fluoropolymers for Integrated Optics" DARPA Morph Program Review, Seattle, WA, August **2006**.
51. "Nanoscience & Technology Research Opportunities with Clemson University" *Battelle Nanotechnology Alliance Network*, Oakridge National Laboratory, February **2006**.
52. 3M Corporation, St. Paul, MN, February **2006**.
53. Georgia Institute of Technology, Atlanta, GA, January **2006**.
54. Invista Corporation, Spartanburg, SC, October **2005**.
55. SEM, Inc., Charlotte, NC, October **2005**.
56. Membrane Technology & Research, Inc., Palo Alto, CA, September **2005**.
57. Paxuxent River Naval Air Station, Paxuent, MD, August **2005**.
58. "Perfluorocyclobutyl (PFCB) Polymer Technology for Fuel Cell Membranes", *Alternative Propulsion Laboratory, General Motors Corp.*, Rochester, NY, July **2005**.
59. "Nanoscience & Technology Research Opportunities with Clemson University" *Boeing-Battelle-Chinese Academy of Science Nanotechnology Alliance Network*, Boeing China, Beijing, China, June **2005**.
60. Edwards Air Force Base, Propulsion Directorate, Edwards, CA, April **2005**.
61. Battelle Memorial Institute, Columbus, OH, April **2005**.
62. Rensselaer Polytechnic University, NYS Center for Polymer Synthesis, Troy, NY, November **2004**.
63. *American Institute of Chemical Engineers Annual Mtg*, Austin, TX, November **2004**.
64. 14th European Symposium on Fluorine Chemistry, Poznan, Poland, July **2004**.
65. *Macro2004*, IUPAC Conference, Paris, France, July **2004**.
66. Ecole National Superior Chimie, Montpellier, France, May **2004**.
67. Case Western Reserve University, Cleveland, OH, February **2004**.
68. Cargill Dow Polymers, Minneapolis, MN, January **2004**.
69. Proctor & Gamble, Cincinnati, OH, December **2003**.
70. Virginia Tech., Department of Chemistry and Macromolecular Science Program, Blacksburg, VA, December **2003**.
71. Wright Patterson Air Force Base, Materials Directorate, Dayton, OH, December **2003**.
72. Laboratory for Physical Sciences, National Security Agency / University of Maryland, College Park, MD, December **2003**.
73. Ohio ACS Local Section, Columbus, OH, October **2003**.
74. University of Akron, Polymer Science, Akron, OH, October **2003**.
75. Bob Jones University, Greenville, SC, September **2003**.
76. W.L. Gore & Associates, MD, DE, December **2002**.
77. University of North Carolina at Charlotte, UNCC Optoelectronics Center, October **2002**.
78. University of Missouri Department of Physics, September 27, **2002**
79. ETH Department of Polymer Science, Zurich, April **2002**.
80. Fraunhofer IZM, Teltow, Germany, April **2002**.
81. Texas A&M University, Department of Chemistry, February 7, **2002**.
82. Georgia State University, Department of Chemistry, January 18, **2002**.
83. Air Force Office of Scientific Research, Durint Program Kickoff and Project Review, "Microstructure, Processing and Mechanical Performance of Polymeric Nanocomposites", Nov. 28-30, **2001**, MIT, Cambridge, MA.
84. University of Tennessee, Department of Chemistry, October 8, **2001**.
85. University of Florida, Department of Chemistry, September 21, **2001**.
86. "Organic Thin Films for Photonic Applications (OTF)" Symposium, OSA and ACS Sponsored, October 15, **2001**.
87. "Design, Manufacturing, and Testing of Optical Waveguide Devices" Symposium, SPIE Annual Meeting, San Diego, CA, August **2001**.

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88. Universität of Bayreuth, Makromolekular Chemie, June **2001**.
89. Universität Heidelberg, Institute Physical Chemistry, June – July **2001**, Heidelberg, Germany.
90. Air Force Office of Scientific Research, STTR (with Triton Systems, Inc.) Project Review, May 11, **2001**, Long Beach, CA.
91. Wright-Patterson Air Force Research Laboratory, STTR (with Triton Systems, Inc.) Project Review, April 25, **2001**.
92. Department of Chemistry, University of South Florida, Tampa, FL, January 19, **2001**.
93. Western Carolina Local Section of the American Chemical Society, January **2001**.
94. Radiant Photonics, Inc., Austin, TX, December 19, **2000**.
95. Air Force Office of Scientific Research (AFOSR), Dr. Charles Lee, Program Manager, Chemistry and Life Sciences, Arlington, VA, November **2000**.
96. Department of Chemistry, University of Georgia, Athens, GA, October **2000**.
97. Triton Systems, Inc., Chelmsford, MA, July **2000**.
98. National Institute of Standards and Technology (NIST), Polymer Research Group, Gaithersburg, MD, May **2000**.
99. Corning Corporation, Polymer Technology Group, Corning, NY, April **2000**.
100. Alcoa Fujikura, Greenville, SC, January **2000**.
101. NASA Space Grant Workshop, Columbia, SC, February **2000**.
102. Department of Chemistry, University of Missouri at Rolla, Rolla, MO, February **2000**.
103. Department of Chemistry, Missouri State University, Springfield, MO, February **2000**.
104. Department of Chemistry, University of Florida, Gainesville, FL, November **1999**.
105. Department of Chemistry, University of Alabama at Birmingham, Birmingham, AL, November **1999**.
106. NASA Langley Polymer and Composites Group, Hampton, VA, December **1998**.