

Dennis Woodrow Smith, Jr., Ph.D.

Professor of Chemistry & Materials Science & Engineering | Technology Transfer Activist

Tel: 864.207.0661 | dsmith@chemistry.msstate.edu | tigatorsmith@gmail.com

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 – present, Professor, Department of Chemistry

Hand Technologies, LLC, 2022 – present, Co-Founder & CTO

Mississippi State University, 2018 – 2020, Director, MSU Advanced Composites Institute (Dual Appt.)

Mississippi State University, 2017 – 2022, Professor and Dept. Head, Department of Chemistry

University of Texas at Dallas, 2011 – 2014, Professor of Material Science and Engineering (Dual Appt.)

University of Texas at Dallas, 2010 – 2014, *Robert A. Welch Distinguished Professor of Chemistry*

Clemson University, 2010 – present, Adjunct Professor of Chemistry

Clemson University, 2008 – 2010, Professor of Material Science and Engineering (Dual Appt.)

Clemson University, 2006 – 2010, Professor of Chemistry

ACS Division of Polymer Chemistry, 2009, Elected Chair ascension

Center for Energy Harvesting Materials & Systems, 2011 – 2015, Director (NSF-I/UCRC)

International Union for Pure and Applied Chemistry; 2009, 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 Principal

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 – 1998, 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 INTERESTS

Research & technology transfer interests include synthesis, mechanism, structure/property relationships, and commercial driven applications of polymeric materials and composites for optical, dielectric, energy, gas separation, composites, and tailored surface applications including: (1) semi-fluorinated aromatic ether polymers; (2) polyarylenes and their inorganic hybrid networks and carbon structures/composites; (3) renewable and bioabsorbable polymers; and (4) upcycling of polymeric waste (e.g. tire rubber).

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)

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 –)

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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, Clemson 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 – 2014)
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 & EXPERT EXPERIENCE

Banner Witcoff, LLP, Chicago, IL (2020 – 2022), fluorochemical production, catalysis, opinion.
Clark Hill | Strasburger, LLP, Houston, TX (2020 – 2021), polymer production process opinion.
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 –), technology, management opinion.
Gas & Oil Field Testing & Consulting, LLC, Houston, TX (2011 –), analysis and opinion.
Infinity Floating, LLC, Braselton, GA (2015 –), 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), 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).

PROFESSIONAL SERVICE (editor, officer, organizer)

American Journal of Polymer Science & Technology, Editorial Board (2022 –)
Research (AAAS / Science Partner Journal), Associate Editor (2018 –)
International Journal of Polymer Science (Hindawi Journal), Editorial Board (2015 –)
Annals of Material Science & Engineering, Editorial Board (2014 –)
Journal of Nanomaterials & Molecular Nanotechnology (SciTechnol), Editor-in-Chief (2013 –)
Fellow of the International Union of Pure and Applied Chemistry (IUPAC), (2016)
Fellow of the American Chemical Society (ACS), (2010)
ACS Division of Polymer Chemistry, Chair (2009), Chair-Elect (2008), Vice-Chair (Elected 2007), IUPAC
Liason (2006), Work shops Co-Chair, (2003), Councilor (Elected 2002-2005), Assistant
Secretary (2000-2002), Publicity Chair (1999-2000)
Center for Energy Harvesting Materials and Systems, UTD Director (NSF I/UCRC, 2011 – 2014)
IUPAC Polymer Division, Titular Member (Elected 2011), Associate Member (Elected 2009)

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Polymer Bulletin (Springer Journal), Editor (2007 – 2016)
High Performance Polymers (Sage Journal), Editorial Board (1998 – 2014)
FLUOROPOLYMER 2000-2022, POLY ACS Conference, Founder, and co-Chair (2000 –)
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)
Co-Organizer, Spring 2013 ACS Meeting – Carbon Precursor Polymers, New Orleans, LA, 2013
Chair and site host, “8th Annual Energy Harvesting Workshop and 2nd Annual CEHMS Conference”,
UT Dallas, Dallas, TX, January 2013
Co-organizer, 2012 Silicon-Containing Polymers and Composites, San Diego, CA, Dec. 9-12, 2012
Co-organizer, Fall 2011 ACS Meeting – Fluoropolymer Symposium, Denver, CO, 2011
Co-organizer, 43rd IUPAC World Chemistry Congress of 2011, Polymer Chemistry Symposium -
Young Polymer Scientists, San Juan, Puerto Rico, July-August 2011,
Founding Site Director, Center of Ceramic, Composite, & Optical Materials (NSF-I/UCRC, 2009-2010)
Organizer, “Fluorine Containing Polymers”, ACS Symp. (2009)
Co-chair, IUPAC MACRO-08: International Young Scientist Symposium (2008)
Technical Advisory Committee, 8th European Symposium on Polyimides & High Performance
Functional Polymers (STEP18), 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 Local Section, National Chemistry Week Chair (1996), ACS Phoenix Award

MEMBERSHIPS

American Association for the Advancement of Science (AAAS), IUPAC Fellow (2016), IUPAC Polymer Division, Titular Member (Elected 2011-). Sigma Xi National Research Society (Elected 2006). American Chemical Society, ACS (1988): *ACS Fellow* (Elected 2010); Division of Polymer Chemistry (1990-): Chair (2009) Chair-Elect (2008), Vice Chair (2007), Alt.-Councilor (2006 – 2007), Councilor (2002-2005), Publicity Chair (1999 – 2001). ACS Division memberships and other: Polymeric Materials Science & Engineering (1990-), Fluorine Chemistry (1998), Organic Chemistry (1999-), Rubber Chemistry (2006-), Carbohydrates and Renewable Resources (2006 –), Fuel Chemistry (2006-), ACS Committee on Divisional Activities (2003 – 2004), ACS 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-)

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PUBLICATIONS

Refereed Journal Publications (152 published or in press, H=49)

1. "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* **2022**, submitted.
2. "Teaching Old Polymers New Tricks. Improved Synthesis and Anomalous Crystallinity for a Lost Semi-Fluorinated Polyaryl Ether via Interfacial Polymerization of Hexafluoroacetone Hydrate and Diphenyl Ether" Munoz, G.; Chamberlain, K.; Athukorale, S.; Ma, G.; Gu, X.; Pittman, Jr., C.U.; Smith, Jr., D.W. *Macromolecular Rapid Communications* **2022**, submitted.
3. High Carbon Yielding and Melt Processable Bis-ortho-Diynylarene (BODA)-Derived Resins for Rapid Processing of Dense Carbon/Carbon Composites", Borrego, E.; Athukorale, S.; Gorla, S.; Duckworth, A.; Johnson, W.; Kundu, S.; Toghiani, H.; Farajidizaji, B.; Pittman, C.; Smith, Jr., D.W. *Composites Part B*. **2022**, *242*, 110080.
4. "Renewable Isosorbide-Containing Semi-Fluorinated Aromatic Ether Polymers", Shelar, K.; Mukeba, K.; Mills, K., Smith, Jr., D.W. *J. Polym. Sci. Part. A. Polym. Chem.* **2022**, *60*, 2500-2507.
5. "Triphenylene Containing Blue-Light Emitting Semi-fluorinated Aryl Ether Polymers with Excellent Thermal and Photostability", Shelar, K.E.; Nghia N.; Mukeba, K.M.; Dey, S.; Farajidizaji, B.; Athukorale, S.; Pittman, Jr., C.U.; Webster, C.E.; Donnadieu, B.; Caldon, E.B.; Smith, Jr., D.W. *Mater. Chem. Front.* **2022**, *6*, 1391–1404. (**featured on cover**).
6. "Semi-fluorinated Poly(aryl ether sulfone)s via Step-Growth Polymerization of Perfluorocyclohexene with Bisphenols", Mukeba, K.M.; Shelar, K.E.; Faradizaji, B.; Borrego, E.I.; Caldon, E.B.; Pittman, Jr., C.U.; Smith, Jr., D.W.; *Polymer* **2022**, 253 124937.
7. "Triphenylene-Enchained Perfluorocyclobutyl (PFCB) Aryl Ether Polymers. A Modular Synthetic Route to Processable Thermoplastics Approaching Upper Limit T_g and Photostability", Faradizaji, B.; Borrego, E.I.; Jazi, M.E.; Smith, Jr., D.W. *Macromolecules* **2021**, *54*, 7666.
8. "Superhydrophobic/Superoleophilic Surfaces by Electroless Naoparticle Deposition and Perfluorinated Polymer Modification", Caldon, E.B.; Brown, H.; Smith, D.W., Jr.; Wipf, D.O. *Ind. Eng. Chem. Res.* **2021**, *60*, 14239.
9. "Ring-Forming Polymerization Toward Perfluorocyclobutyl and Ortho-Diynylarene-Derived Materials: From Synthesis to Practical Applications", Caldon, E.B.; Borrego, E.I.; Shelar, K.E.; Mukeba, K.M.; Smith, Jr., D.W.; *Materials* **2021**, *14(6)*, 1486.
10. "Corrosion resistance and surface characterization of a tetrafunctional epoxy-amine coating", Caldon, E.B.; Wipf, D.O.; Smith, D.W., Jr. *Prog. In Org. Coatings* **2021**, *151*, 106045.
11. "Corrosion Inhibition of Mild steel in Acidic Medium by Simple Azole-Based Aromatic Compounds", Caldon, 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.
12. "Surface electroanalytical approaches to organic polymeric coatings" Caldon, E.; Smith, Jr., D.W.; Wipf, D. *Polymer International* **2021**, *70(7)*, 927-937.
13. "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.

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14. "Perfluorocyclohexenyl (PFCH) Aromatic Ether Polymers from Perfluorocyclohexene and Polycyclic Aromatic Bisphenols", Narayanan, G.; Farajidizaji, B.; Mukeba, K.M.; Shelar, K.E.; Patrick, A.; Donnadieu, B.; Smith, Jr., D.W. *Polymer Chemistry* **2020**, *11*, 5051-5056.
15. "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.
16. "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.
17. "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.
18. "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.
19. "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.
20. "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.
21. "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.
22. "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.
23. "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**).
24. "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.
25. "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.
26. "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.
27. "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.



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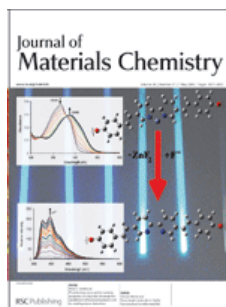
28. "AB-type monomers for the preparation of perfluorocycloalkene (PFCA) aryl ether polymers", Campos, R.; Mansur, A. A.; Cook, C. H.; Batchelor, B.; Iacono, S. T.; Smith Jr., D. W. *Journal of Fluorine Chemistry* **2014**, *166*, 60–68.
29. "Spectroscopic evaluation of out-of-plane surface vibration 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.
30. "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.
31. "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.
32. "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.
33. "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.
34. "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.
35. "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.
36. "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.
37. "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.
38. "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.
39. "A Brief Guide to Polymer Nomenclature" Hiorns, R.C.; et al.; Smith, Jr., D.W. *Polymer* **2013**, *54* (1), 3-4.
40. "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.
41. "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.
42. "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.
43. "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.

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44. "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.
45. "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.
46. "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.
47. "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.
48. "Surface Modified Ground Rubber Tire by Grafting Acrylic Acid for Paving Applications", Kocevski, S.; Yagneswaran, S.; Xiao, F.; Punith, V.S.; Smith Jr., D.W. and Amirkhanian, S., *Constr. Build. Mater.* **2012**, *34*, 83-90.
49. "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.
50. "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.
51. "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.
52. "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.
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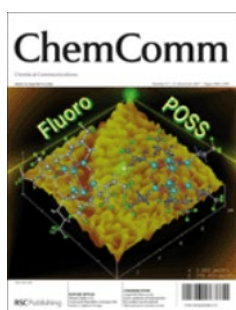


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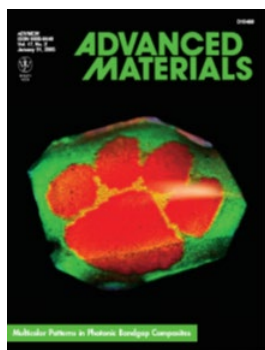
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148. "Acyclic Diene Metathesis (ADMET) Polymerization. Design and Synthesis of Unsaturated Poly(carbosiloxanes)" Smith, Jr., D.W.; Wagener, K.B. *Macromolecules* **1993**, *26*, 1633.
149. "Structure of Cyclo-1,4,1',4'-bis(1,1,3,3-tetramethyldisiloxa)dibenzene" Abboud, K.; Smith, Jr., D.; Wagener, K. *Acta Cryst.* **1993**, *C49*, 1845.
150. "Acyclic Diene Metathesis (ADMET) Copolymerization. Controlled Diene Insertion in Poly(hexamethyltrisiloxabutenylene)" Smith, Jr., D.W.; Wagener, K.B. *Macromolecules* **1993**, *26*, 3533.
151. "Solvent-Free Cyclization of Linear Dienes Using Olefin Metathesis and the Thorpe-Ingold Effect" Forbes, M.; Patton, J.; Myers, T.; Maynard, H.; Smith, Jr., D.W.; Schulz, G.; Wagener, K. *J. Am. Chem. Soc.* **1992**, *114* (27), 10978.
152. "Acyclic Diene Metathesis Polymerization. Synthesis and Characterization of Unsaturated Poly[carbo(dimethyl)silanes]" Wagener, K.; Smith, Jr. D.W. *Macromolecules* **1991**, *24*, 6073.
153. "Acyclic Diene Metathesis Depolymerization of Elastomers" Wagener, K.; Puts, R.; Smith, Jr., D.W. *Makromol. Chem. Rapid Commun.* **1991**, *12*, 419.
154. "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.

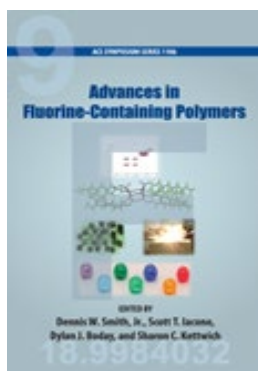
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INVENTIONS (19 US Patents issued, 12 pending)

1. "Polymer-coated Electrodes for Sensing Oil and Other Analytes in Liquid and Method of Making", Caldon, E.B.; Wipf, D.O.; Smith, D.W., Jr.; Nash, S.L., U.S. Patent Application 17/491,003, September **2021**. (Mississippi State University)
2. "Polymers and Co-Polymers for Polymer Matrix Composites and High Yield Carbon-Carbon Composite Structures Therefrom", Borggeo, E.; Smith Jr., D.W., U.S. Patent Application filed March **2022**. (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)
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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)
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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).
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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)



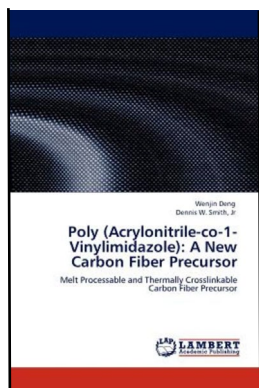
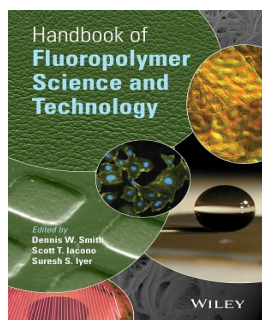
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27. "Ethyne Substituted Aromatic Compounds, Synthesis, Polymers, and Uses Thereof", US Patent 6,121,495 A, September 19, **2000**. (The Dow Chemical Company)
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29. "Polyphenylene Oligomers and Polymers" 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. "Semi-fluorinated aromatic ether polymers via step-growth polymerization of fluoroalkenes", Narayanan, G.; Farajidizaji, B.; Smith, Jr., D.W. In "Progress in Fluorine Science, Opportunities for Fluoropolymers", Eds.: Bruno Ameduri, Sergey Fomin, Ch. 1, Elsevier, **2020**.
2. "Handbook of Fluoropolymer Science and Technology" D.W. Smith, Jr.; S. Iacono, S. Yyer, 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**.
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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**)
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NON-ARCHIVED PROCEEDINGS (since 2010, >220 total, see appendix for archival proceedings)

1. "High Temperature Fluoropolymers, Aromatic Networks, and Carbon therefrom for Advanced Composites and Energy Applications", Borrego, E.; Gorla, S.; Athukorale, Shelar, K.; Mukeba, K.; S.; Pittman, Jr., C.; Smith, Jr., D.W., 3rd International Conference on Materials Science & Engineering, (virtual) Boston, MA, April 22, **2022 (INVITED)**.
2. "High Carbon Yield Ortho-DiynylArene (ODA) Resins with Remarkable melt-Processability as mati Precursors for Carbon/Carbon Composites" Borrego, E.; Gorla, S.; Athukorale, S.; Pittman, Jr., C.; Smith, Jr., D.W., 41st High Temple Conference, Dayton, OH, Feb. 7-10, **2022 (INVITED)**.
3. "Semi-fluorinated aromatic ether polymers visa step-growth polymerization from fluoroalkenes and hexafluoracetone" Borreggo, E.; Munoz, G.; Shelar, K. Mukeba, K.; Duckworth, A.; Chamberlain, K. Athukorale; Pittman, C.; Smith, Jr., D.W., 25th Winter Fluorine Conference, ACS Div. of Fluorine Chem., Clearwater, FL, Jan. 16-21, **2022 (INVITED)**.
4. "Polynaphthalene Networks and High Yield Carbon-Carbon Composites" Smith, Jr., D.W., 2020 High Temple Workshop, UDRI, Sedona, AZ, Feb. 6, **2020**.
5. "Semi-Fluorinated Resins and Polynaphthalene Networks from Fluoroalkenes & Ene-diyne" Smith, Jr., D.W., VII International Baekeland Symposium, Tarragona, Spain, October 15-18, **2019 (INVITED)**.
6. "Polynaphthalene Networks, Carbon Precursors, and Semi-Fluorinated Resins for Advanced Composites" *High Performance Polymers and Composites*, Am. Chem. Soc., Div. Polym. Chem., Sonoma, CA, Jul. 23, **2019**.
7. "Polyaromatic hydrocarbon enchaind semi-fluorinated polymers via step-growth polymerization of fluoroalkenes" 24th Winter Fluorine Conference, Am. Chem. Soc., Div. Fluor. Chem., St. Petersburg Beach, FL, Jan. 15, **2019 (INVITED)**.
8. "A Modular Approach to Polycyclic Aromatic Core enchaind Semi-fluorinated Ether Polymers", Shelar, K.; Smith, Jr., D.W.; 13th National Graduate Research Polymer Conference (NGRPC), Twin Cities, MN, June 10 12, **2018**.
9. "Polynaphthalene Networks and semi-Fluorinated Aromatic Ether Polymers for Advanced Composites" Smith, Jr., D.W., *Thermosetting Resins 2018*, Berlin, Germany, Sept. 26, **2018**.
10. "Step-Growth Polymers from Fluoroalkenes & Ene-diyne" Smith, Jr., D.W., *Baekeland 2018. The 6th International Symposium on Network Polymers*, Shanghai, China, April 25-28, **2018 (KEYNOTE LECTURE)**.
11. "Semi-Fluorinated Aromatic Ether Polymers via Step-Growth and Modular Mechanistic Polymerization of Fluoroalkenes" Smith Jr., D.W., *International Conference on Polymers and Advanced Materials, POLYMAT 2017*, Huatulco, Mexico, Oct. 15-17, **2017 (INVITED)**.
12. "More Than a Filler – A Polymer Composite Paradigm via Self-Initiated Functionalization of Waste Tire Rubber" Yagneswaran, S.; Sharma, B.; Smith, Jr., D.W. 2016 Summer Technical Meeting of the Southern Rubber Group, St. Simons Island, GA, June 13, **2016**.
13. "Cyclopolymerization of Fluoro-olefins Toward Materials for Energy Harvesting" Smith Jr., D. W., *IUPAC World Chemistry Congress*, Istanbul, Turkey, Aug. 12, **2013 (INVITED)**.
14. "Carbon Allotropes via Polymer Precursors, Fluorinatino, and Hybrid Composites for Energy Harvesting" Smith, Jr., D.W., *Nanocarbon Forum*, Korean Carbon Society, Soul Korea, May 8, **2013 (KEYNOTE LECTURE)**.



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15. "Direct Fluorination of Recycled Ground Rubber Tire Particles: X- Ray Spectroscopy Study" Yagneswaran, S.; Lund, B. R.; Smith Jr., D. W., *IUPAC World Polymer Congress*, Blacksburg, VA, June 24-29th, **2012**.
16. "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., *IUPAC World Polymer Congress*, Blacksburg, VA, June 24-29th, **2012**.
17. "Facile Synthesis of Perfluorocycloalkenyl (PFCA) Aryl Ether Polymers", Sharma, B.; Liff, S.; Smith, Jr., D. W., *IUPAC World Polymer Congress*, Blacksburg, VA, June 24-29th, **2012**.
18. "Poly(acrylonitrile-co-vinylimidazole)-derived Carbon Nanofibers for Supercapacitors" Jung, K.-H.; Ferraris, J.; Smith, D. W., 2nd Annual CEHMS Conference and IAB Meeting, Virginia Tech, Blacksburg, VA, August 8-9, **2012**.
19. "PVDF Nanocomposite Piezoelectric Materials", Baur C.; McAllister E.; Priya S.; Smith D.W., 2nd Annual CEHMS Conference and IAB Meeting, Virginia Tech, Blacksburg, VA, August 8-9, **2012**.
20. "Biomedical Testing of Vaginal Prolapse Tissue for Modeling towards Corrective Mesh Design", Aghyarian S.; Manz C.; Lund B.; Tibbals H.; Zimmermann P.; Eberhart R.; Smith Jr., D. W.; Voit W. Abstracts of Papers, World Polymer Congress, Blacksburg, VA, June 24-29, **2012**.
21. Biomedical Testing of Human Tissue for Modeling towards Regenerative Mesh Design Aghyarian S.; Manz C.; Lund B.; Tibbals H.; Zimmermann P.; Eberhart R.; Smith Jr., D. W.; Voit W. 244th ACS Fall National Meeting: Materials in Health and Medicine, August 19-24, **2012**.
22. "Resolving the Decomposition Profiles of Polycarbodiimides", Batchelor, B.; DeSousa, J.D.; Novak, B.M.; Smith Jr., D.W., World Polymer Congress, Blacksburg, VA, June 24-29, **2012**.
23. "Synthesis and Characterization of Poly (acrylonitrile-co-1-vinylimidazole-co-isoprene) Terpolymer." Mahmood, S. F., Deng, W., Batchelor, B., Lowe, A., Balkus Jr, K. J., Yang, Smith Jr, D. W.; World Polymer Congress, Blacksburg, VA, June 24 – 29, **2012**.
24. "Continuous Melt Extrusion and Characterization of Poly(Acrylonitrile-1-Vinylimidazole) for Carbon Fiber", Batchelor, B.; Deng, W.; Yang, D.J.; Smith Jr., D.W., Abstracts of Papers, 11th US-Korea Joint Symposium of Nanotechnology, Grapevine, TX, May 1-4, **2012**.
25. "Direct Fluorination of Solid-State Fabricated Carbon Nanotubes Sheets and Yarns by Fluorine Gas at Room Temperature", Yagneswaran, S; Fang, S.; Li, N.; Dei, D.; Baughman, R.; Smith Jr., D.W., Abstract of Papers, 11th US- Korea Joint Symposium of Nanotechnology, Grapevine, TX, May 1-4, **2012**.
26. "Effect of Surface Modification on the Properties of Recycled Ground Rubber Tire Powder (GRT) Filled Epoxy Composites", Yagneswaran, S.; Lund, B.; Storer, W.; Smith Jr., D.W., 10th National Graduate Research Polymer Conference, Cleveland, OH, May 23- 24, 2012; Hosted by the Macromolecular Science and Engineering Department at Case Western Reserve University, **2012**.
27. "Melt Processable Poly (Acrylonitrile-Co-1-Vinylimidazole) Fiber and Their Applications as Carbon Fiber Precursors, Nitric Oxide Releasing Enhanced Wound Healing Suture and Supercapacitors", Mahmood, S. F., Deng, W., Batchelor, B., Lowe, A., Jung, K., Balkus Jr., K. J., Yang, D. J., Ferraris, J. P., Smith Jr., D. W., 10th National Graduate Research Polymer Conference, Cleveland, OH, May 23 - 24, **2012**.
28. "Biomedical Testing of Vaginal Prolapse Tissue for Modeling towards Corrective Mesh Design", Aghyarian, S.; Manz, C.; Ortega, D.; Lund, B. R.; Zimmermann, P.; Tibbals, H.; Eberhart, R.; Smith Jr., D.W.; Voit, W. E., 10th National Graduate Research Polymer Conference, Cleveland, OH, May 23-24, **2012**.

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29. "Functional FluoroPOSS Compounds: Novel Building Blocks for Hybrid Polymers and Nanocomposites", Campos, R., Ramirez S. M., Mabry, J. M., Smith Jr., D. W., *10th National Graduate Research Polymer Conference*, Cleveland, OH, May 23-24, **2012**.
30. "Carbon Nanofiber Electrodes for Supercapacitors Derived from New Polymer Precursor: Poly(acrylonitrile-co- vinylimidazole)", Jung, K.-H.; Deng, W.; Smith Jr., D.W.; Ferraris, J.P.; *ACS Meeting of the Dallas-Fort Worth Local Section*, Fort Worth, TX, January 28th, **2012**.
31. "Semi-Fluorinated Polymers as Versatile Photo-Conversion Matrices", Sharma, B.; Wu, J.; Dei, D.; Lund, B.; Smith, Jr., D. W. *IWMPA - 6th Annual Energy Harvesting Workshop*, Roanoke, VA, August 7-11th, **2011**.
32. "Preparation and Characterization of Novel Triarylamine Enchained Perfluorocyclobutyl (PFCB) Aryl Ether Ester Polymer", Wu, J.; Lee, D.; Lund, B. R.; Dei, D.K.; Smith Jr., D. W., *67th Southwest Regional Meeting of the ACS*, Austin, TX, November 9-12, **2011**.
33. "High Temperature Electro-Optic Chromophores and Fluoropolymer Composites Thereof", Wu, Jingbo; Lund, Benjamin R.; Smith, Dennis W., Jr., *Joint 66th Southwest and 62nd Southeast Regional Meeting of the ACS*, New Orleans, LA, United States, December 1-4, **2010**.
34. "Highly Conductive and Cross-Linked Sulfonated Perfluorocyclobutyl (S-PFCB) Polyelectrolytes and Their Applications" Park, J.; Tomar, N.; Jayasinghe, R.; Colon-Mercado, H.; Elvington, M.; Hobbs, D. and Smith, Jr. D.W., *20th Annual Meeting of the North American Membrane Society*, Washington, DC, July 17-22, **2010**.

OTHER NON-ARCHIVED INVITED LECTURES (since 2010, >100)

1. "High Temperature Aromatic Networks & Fluoropolymers for Advanced Composites & Energy Applications", Department of Chemistry, Texas State University, virtual, Jan. 24, **2022**.
2. "Fluoropolymers and Carbon Precursor Polymers, and Opportunities for Graduate Research at MSU", virtual seminar, Cameron University, Lawton, OK, April 6, **2021**.
3. "High Temperature Aromatic Networks and Fluoropolymers for Advanced Composites & Energy Applications", University of North Georgia, Undergraduate Seminar, Sept. 11, **2020**.
4. "The Polymer Age. A Nobel Walk through the History of Polymer Science", Mississippi Local Section of the Am. Chem. Soc., March 8, **2019**.
5. "Semi-Fluorinated Polymers from Step-Growth Polymerization of Fluoroalkenes", University of South Florida, Tampa, FL, Sept. 20, **2018**.
6. "Fluoropolymers, Polyarylene Networks, and Sustainable Materials Chemistry for Energy, Information, Bio/Renewable & Advanced Composite Technologies", University of Mississippi, Oxford, MS, Aug. 30, **2018**.
7. "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**.
8. "Step-Growth Polymers from Fluoroalkenes and Ene-ynes", Shanghai Institute of Organic Chemistry, Chinese Academy of Science, Shanghai, China, April 24, **2018**.
9. "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**.
10. "Materials Chemistry for InfoTech, EnergyTech, & Bio/SustainableTech" Mississippi State University, Starkville, MS, January 17, **2017**.
11. "Enable the Market – Materials Chemistry for InfoTech, EnergyTech, & Bio/SustainableTech" University of Alabama in Huntsville, Huntsville, AL, November 11, **2016**.
12. "Fluoropolymer R&T – Current Trends & Future Frontiers" Solvay Specialty Polymers, S.p.A., Bolate (Milan), Italy, September 12, **2016**.

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13. "Enable the Market – Materials Chemistry for InfoTech, EnergyTech, & Bio/SustainableTech" University of North Georgia, Dalongega, GA, September 2, **2016**.
14. "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**.
15. "New Fluoropolymer Chemistry from Fluoro-Olefins, Carbon Materials, Acrylonitrile Copolymers for Wound Healing, and Renewable Resource Materials" *Exponent, Inc.*, San Jose, CA, November **2015**.
16. Auburn University, Department of Polymer & Fiber Engineering, Auburn, AL, December **2013**.
17. "8th Annual Energy Harvesting Workshop and 2nd Annual CEHMS Conference", UT Dallas, Dallas, TX, January **2013**.
18. "Polycondensation 2012", San Francisco, CA, September **2012**.
19. "7th Annual Energy Harvesting Workshop and 2nd Annual CEHMS Conference", Virginia Tech, Blacksburg, VA, August **2012**.
20. 3M – St. Paul, MN, July **2012**.
21. 44th IUPAC World Chemistry Congress of 2012, Blacksburg, VA, June **2012**.
22. Virginia Energy Summit, Virginia Tech, Blacksburg, VA, January **2012**.
23. KOC University, Istanbul, Turkey, January **2012**.
24. University of Texas at San Antonio, San Antonio, TX, November **2011**.
25. University of South Florida, Tampa, FL, October **2011**.
26. University of North Texas at Denton, Denton, TX, September **2011**.
27. US Air Force Academy, Colorado Springs, CO, August **2011**.
28. 6th Annual Energy Harvesting Workshop, Virginia Tech, Blacksburg, VA, August **2011**.
29. 43rd IUPAC World Chemistry Congress of 2011, San Juan, Puerto Rico, July-August **2011**.
30. Air Force Research Lab, Edwards AFB, Edwards, CA, July **2011**.
31. Texas Tech University, Lubbock, TX, February **2011**.
32. Intel Corporation, Phoenix, AZ, January **2011**.
33. Southern Methodist University Special Meeting for Young Faculty (sponsored by the ACS local section), Dallas, TX, January **2011**, (**Keynote Speaker**).
34. Winter Fluorine 2011, St. Pete, FL, January **2011**.
35. International Symposium on High-Tech Polymer Materials (HTPM-VI), Xiamen City, China, November **2010**, (**Keynote Speaker**).
36. University of Texas, Arlington, TX, October **2010**.
37. IUPAC World Polymer Conference, Glasgow, UK, July **2010**.
38. Fluoropolymer 2010, Meze, France, June **2010**.
39. University of Innsbruck, Austria, June **2010**.
40. Solvay Solexis Symposium Series on Fluorine Chemistry, Milan, Italy, June **2010** (**KEYNOTE LECTURE**).

STUDENT ADVISING

Doctoral Students (23 graduates to date)

1. Prasanna Perera (Ph.D., organic), "Synthesis and Polymerization of Bis-*Ortho*-Diyanyl Arene (BODA) Monomers", (2002). Currently with Invista, Inc., Camden, SC.
2. Huseyin Zengin (Ph.D., physical), "Synthesis and Polymerization of Bis-*Ortho*-Diyanyl Arene (BODA) Monomers & Polymers", (2002). Currently Professor at 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.

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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. Jiyong 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 Caldon (Ph.D., analytical) "Semi-Fluorinated Corrosion Coatings", (2020). Currently Assistant Professor at North Dakota State University, Fargo, ND.
22. Ketki Shelar (Ph.D., organic) "PAH enchaind semi-fluorinated polymers", (2022). Currently employed at Intel Corp., Portland, OR.
23. Karl Mukeba (Ph.D., organic) "Aryl Sulfone Enchaind Semi-Fluorinated Polymers", (2022). Currently employed at Intel Corp., Portland, OR.
24. Ernesto Borrgeo (Ph.D., organic) "BODA Composites", (2018– present).
25. Gustavo Muñoz (Ph.D., organic) "Advanced Fluoropolymers", (2019 – 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

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- 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.
- Solomon Tesfaye (organic) "PAH enchainned semi-fluorinated polymers", (2018 – 2020). Currently with University of South Florida.
- Kieth Cobb (organic) "Thermal degradation kinetics" (2019 – 2021).

Post Doctoral (PD) & Research Professor (RP) Advising (25 to date)

- Hiren V. Shah, PD, "Thermomechanical, Opto-Electronic, and Carbon Processing of Polynaphthalenes Prepared from Bis-*Ortho*-Diylnyl Arene (BODA) Monomers", (1998-2000). Currently employed at Optical Coatings Laboratory / JDS Uniphase, Santa Rosa, CA.
- Lixin Wu, PD, "Optical and Mechanical Properties of Polymers and Nano-composites", (2000). Currently postdoctoral associate at UCSD.
- Suresh Kumar, PD, "Synthesis of BODA and PFCB Derivatives", (12/2000 – 9/2001). Currently employed at Xenoport Pharmaceuticals, San Jose, CA.
- Chris Topping, RP, "Synthesis of PFCB Monomers", (07/2001- 2003). Currently employed with Tetramer Technologies, L.L.C., Pendelton, SC.
- William Zhou, PD, "Polymer Science", (11/2001 – 12/2003). Currently employed at Formosa Plastics Corp., Corpus Christi, TX
- Suresh Iyer, RP, "Organic Synthesis", (02/2002 – 01/2006). Currently Sr. Technical Manager at 3M Company, St. Paul, MN.
- Sibylle Glasser, PD, "Polymer Science", (05/2003 – 08/2004), private industry, Germany.
- Nilmini Abayasinghe (PD), "Renewable Resource Polymers", (2003-2004), Currently R&D Director for Mermet, Inc., Spartanburg, SC
- Jack Jin (Ph.D., organic), "Perfluorocyclobutyl Polymers", (2005). Currently Professor at Aukland University, New Zealand.
- Presanna Perera, RP, "Organic / Polymer Synthesis", (05/2003 – 11/2005). Currently employed with Invista, Corp., Willmington, DE.
- Arno Rettenbacher, PD, "BODA and Fluorinated Fuel Cell Materials", (08/2005 – 12/2007). Currently at Swarovski, Innsbruck, Austria.
- Amit Sanke, PD, "Polymer Science for Fuel Cells", (02/2006 – 03/2007). Currently employed with Green Tweed, Inc., Philadelphia, PA.
- Amit Naskar, PD, "Renewable Resource Polymers", (02/2006 – 09/2006). Currently employed with Oakridge National Laboratory.
- Kaizeng Zhu, PD, "Perfluorocyclobutyl Polymers for Optical Applications", (11/2006 - 8/2007).
- Neetu Tumar, PD, "Recycled Rubber Composites", (12/2007 – 06/2011). Currently with Nalco Champion, an Ecolab, Pune, India.
- Monika Mujkic, PD, "Metal activation of aromatic trifluorovinyl ethers", (5/2008 - 2010). Currently employed with Tetramer Technologies, L.L.C., Pendelton, SC.
- Jean-Marc Cracowski PD, "New Polymers from Trifluorovinyl Ethers", (9/2009 – 5/2010). Currently employed with University of Strasburg.
- Daniel Dei, PD, (6/2010 – 8/2012). Currently employed with National Oilwell Varco in Houston, TX.
- Wenjin Deng, PD, "New Carbon Fiber Precursor Polymers", (1/2011-1/2012). Currently employed with Monsanto Corp., St. Louis, MO.
- Benjamin Lund, PD, (6/2010 - 2014). Currently employed with UTD, Dallas, TX.
- Babloo Sharma, PD, (9/2013 – 2014). Currently employed with 3M Corp., St. Paul, MN.
- Ganesh Narayanan, PD, (10/2017 – 2019). Currently with Deloitte.
- Behzad Farajidizaji, PD, (3/2018 – 2020). Currently employed with Volochem, Inc., Union City, CA.
- Saidulu Gorla, PD, (5/2021 – 5/2022). Synthetic ODA Resin Technology for C3. Currently employed with Rainbow Pharmaceuticals, Brevard, NC.
- Sumudu Athukorale, PD, (8/2020 – current). Analytical ODA Resin Technology for C3.

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Undergraduate Research Advising

> 70 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 (PI or Co-PI on over \$31 Million in funded research)

1. "Advanced Resins for C3 Manufacture: Phase I", Battelle Memorial Institute, PI, \$150,000 (2021-2021).
2. "Advanced Carbon-Carbon Composites for Aerospace Structures", NASA SBIR-Phase I, Co-PI sub-contract to M4 Eng., Inc., \$165,000 (2021-2021).
3. "Effects of New Jet Fuel Exposure & Post-Crash Frie Forensic Analysis on Aerospace Composites", Co-PI, \$500,000 (2018-2019).
4. "Advanced Composites Institue Collaborative Research", Boeing Corporation, PI, \$200,000 (2018-2019).
5. "Study of Carbon FiberPreparation 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).
6. "POSS Fluoropolymer Composites" Air Force Research Lab, Edwards AFB, PI, \$50,000 (2012-2014).
7. "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).
8. "Robert A. Welch Distinguished Professor of Chemistry", Welch Foundation, PI (2010-2014).
9. "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).
10. "Laboratory for Synthetic Polymer Chemistry & Polymeic Materials Science & Engineering", University of Texas at Dallas, Texas STARS, PI (\$1,200,000), (2010-2014).
11. "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).
12. "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).
13. "Fluoropolymer Electrolytes, Composites, and Electrodes" DOE, Co-PI, \$750,000 (2008-2011).
14. "Thermally Reversible Networks for Coatings, Prosthetics, and Orthotics", Department of Defense through SCRA, PI, \$200,000 (200,000), (2007-2010).
15. "High Performance PEM Membranes" Department of Energy, Co-PI, \$750,000 (\$250,000), (2008-2011).
16. "Laboratory for Advanced Photonic Composites" Defense Advanced Research Projects (DARPA through SPAWARSYSCEN), Co-PI, \$500,000 (\$140,000), (2008-2009).
17. "Responsive Coating Technology Phase I" U.S. Army (ARDI), Co-PI, \$521,220 (\$100,000), (2006).
18. "Functional Polyarylene Networks" National Science Foundation, PI, \$315,000 (\$315,000), (2005-2008).

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19. "High Performance PEM Membranes" Department of Energy, Co-PI, \$750,000 (\$250,000), (2005-2008).
20. "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).
21. "Natural Fiber Reinforced Renewable Resource Biodegradable Polymer Composites" Gaia, Inc. and The Institute for Nuetraceutical Research, PI, \$28,000 (\$28,000), (2005)
22. "Fluoropolymer Nanoparticle Composites" U.S. Army, Co-PI, \$100,000 (\$50,000), (2005-06).
23. "Laboratory for Advanced Photonic Composites" Defense Advanced Research Projects (DARPA through SPAWARSYSCEN), Co-PI, \$5,543,490 (\$1,000,000), (2005-07).
24. "Rubber Recycling: Depolymerization and Modification of Unsaturated Polymers in Rubber" Michelin Corp., PI, \$150,000 (\$150,000), (2005-07).
25. "Poly(lactic acid) Derived Fibers with Enhanced Performance" National Textiles Center, U.S. Commerce Department, PI, \$528,000, (2004-06).
26. "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).
27. "Rubber Recycling: Depolymerization and Modification of Unsaturated Polymers in Rubber" Michelin Corp., PI, \$107,780 (\$107,780), (2003-05).
28. "Space Durable Multi-Functional Fluoropolymers and Nanocomposites" South Carolina Space Grant / NASA EPSCoR, PI, \$60,000 (\$50,000), (2002-05).
29. "Lactide Derived Copolymers for Film and Packaging" Cryovac Sealed Air Corporation, PI, \$60,000 (\$60,000), (2002-03).
30. "Lactide Derived Copolymers for Film and Packaging" Center for Advanced Engineering Fiber and Film, NSF-ERC, Clemson University, \$75,000, (2002-04).
31. "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).
32. "Laboratory for Advanced Photonic Composites" Defense Advanced Research Projects (DARPA through SPAWARSYSCEN), Co-PI, \$2,800,000 (\$560,000), (2001-04).
33. "Synthesis and Fabrication of Novel Fluoropolymers for Photonics Applications" Cottrell Scholars Award, Research Corporation, Principal Investigator, \$75,000 (\$75,000), (2001).
34. "New Solid Polymer Membranes or Rechargeable Lithium Batteries", NASA via Naval Air Warfare Center, \$390,000 (\$210,000), (2001-03).
35. "Novel Polymer Optical Fibers, Fiber Amplifiers, and Lasers" National Textiles Council, \$600,000 (\$200,000), (2001-04).
36. "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).
37. "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).
38. "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).
39. "Hybrid Polyarylene Networks and Carbon Microstructures" Army Research Office (DOD-EPSCoR), Principal Investigator, \$225,000(\$225,000), (2000-03).
40. "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).
41. "Acquisition of an Extensional Rheometer for Materials Research and Education" National Science Foundation, Co-PI, \$62,181, (\$12,436), (2000-01).
42. "Novel Fluoropolymers and Carbon Nanotube Composites for Space Applications" NASA / South Carolina Space Grant Consortium, Principal Investigator, \$70,454, (2000-01).
43. "A Proposal to Develop an Infrastructure in Computational Biology and Computational Chemistry" Innovation Fund Committee, Clemson University, Co-PI, \$18,564, (2000).

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44. "Mesoscopically Periodic Photonic-Crystal Materials: Tunable Optical Switches", South Carolina Commission on Higher Education, Co-PI, \$148,761, (\$49,587), (2000-01).
45. Dow Chemical Polymer Research Award, \$10,000, (1999-unrestricted).
46. "Fluoropolymer Fuel-Cell Membranes", 3M Corporation, Co-PI, \$5,500, (summer support 1999).
47. 3M Pre-Tenured Faculty Award, \$10,000, (1999-unrestricted).
48. "Alternative Carbon Fiber Precursors" Center for Advanced Engineering Fiber and Film, Clemson University, \$20,000, (2000).
49. "Renewable Resource Biodegradable 'Green Plastics' Based on Commercial Polylactic Acid", Clemson University Research Grant Committee, Principal Investigator, \$2,750, (1999-2000).
50. "Synthesis and Polymerization of Bis(*ortho*-Diyne) Aromatic Compounds", Petroleum Research Fund, Principal Investigator, \$25,000, (1999-00).
51. 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 –)
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)

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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 Committee (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)

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)

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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)

Archival conference proceedings (>350) including national and regional meetings by ACS, etc.

Non-archival conference proceedings (>220) including lecture/seminar at universities, government facilities, and corporations.