

Curriculum Vitae

Coleen Pugh

Business: The University of Akron
Department of Polymer Science
Akron, OH 44325-3909
(330) 972-6614

Education:
1990 Ph.D., Macromolecular Science, Case Western Reserve University, Cleveland
(Advisor: V. Percec)
1985 M.S., Macromolecular Science, Case Western Reserve University, Cleveland
(Advisor: V. Percec)
1983 B.A., Chemistry, University of California, Davis
B.S., Textile Science, University of California, Davis (Advisor: Y.L. Hsieh)

Professional Experience:

2012-present *Chair or Interim Chair*; Department of Polymer Science, The University of Akron
2008-present *Professor*; Department of Polymer Science, The University of Akron
4-6/2011 *Guest Visiting Professor*, College of Chemistry and Molecular Engineering, Peking University, China
2009-present *Faculty of Integrated Bioscience Program*, The University of Akron, OH
9/07-present *Visiting Research Professor* (starting with sabbatical), Department of Medicinal Chemistry, College of Pharmacy, University of Michigan
1999-2011 Associate Editor: *Macromolecules*
1998-2008 *Associate Professor*; Department of Polymer Science, The University of Akron
2004-2009 *Founder and Director*, (NSF) REU Site for Polymer Science and Engineering at The University of Akron
2010-present *Founder and Director*, King and Friends (elementary school) Science Olympiad
1993-1998 *Assistant Professor*, Department of Chemistry, University of Michigan
Assistant Professor, Macromolecular Science and Engineering Program, University of Michigan, Ann Arbor
1995 / 5-6 *Visiting Professor*, Department of Chemistry, University of Ulm, Germany
1992 *Visiting Assistant Professor* (replacing Kris Matyjaszewski), Department of Chemistry, Carnegie Mellon University, Pittsburgh

- 1990-91 *Postdoctoral Associate*, Department of Chemistry, Massachusetts Institute of Technology, Cambridge (Mentor: R.R. Schrock)
- 1986-87 *Visiting Scientist*, Institute of Macromolecular Chem., University of Freiburg, Germany

Professional Societies:

American Association for the Advancement of Science
American Chemical Society
International Union of Pure and Applied Chemistry

Awards and Fellowships:

Best Presentation, Sustainable Polymers symp., 251st ACS National Meeting (2016)
Guest Professor of Harbin Engineering University (2012-2014)
AAAS Fellow (elected 2010)
NSF Special Creative Invention Award (2006-2010)
NSF Young Investigator Award (1994-2000)
DuPont Young Professor Grant (1995-97)
GE Junior Faculty Fellowship (1995)
Macromolecular Science Graduate Fellowship (1983-90)
Student Award of the American Association of Textile Chemists and Colorists (1983)
President's Undergraduate Research Fellowship (1982-83)
Jastro-Shields Undergraduate Research Scholarship (1982-83)
California Grant A Fellowship (1980-83)
Ida Morgen Memorial Scholarship (1980)
Doyle Scholarship (1978-80)

Research Interests:

Synthesis and characterization of novel polymeric materials, including amphiphilic organic nanoparticles, biodegradable polymers, biomaterials, cyclic polymers, fluorinated polymers and materials with arene-perfluoroarene π - π stacking interactions, glycopolymers, and liquid crystalline polymers, primarily using living chain polymerizations to produce polymers with a range of molecular architectures.

Research Group:

11 Ph.D. students, 3 M.S. student

Grant History

Present:

CenTire, "Crosslinking Combinations Involving Benzocyclobutene Chemistry" (2016-2018), \$140,000 (no IDC), PI Coleen Pugh, co-PI Sadhan Jana, ~\$92,000 my portion.

Akron Polymer Systems, Community Industrial Assistantship (2016-17), \$25,000.

3D Solutions, Community Industrial Assistantship (Winter 2016), \$8,015.

CenTire, "Surface Engineering Approach for Enhanced Filler Dispersion and Hysteresis Reduction in Rubber Compounds" (2014-2016), \$140,000 (no IDC), PI Sadhan Jana, co-PI Coleen Pugh, \$90,100 my portion.

Submitted / Under Review:

Covestro, "Novel Flame Retardants for Polyurethane" (scheduled to begin 1st quarter 2017), \$57,076.

Previous:

NSF-DMR, "Synthesis and Self-Assembly of Amphiphilic Nanoparticles Based on Block Copolymers of Functionalized Vinylbenzocyclobutenes" (2010-2016, including two one-year no-cost extensions), \$530,000.

Community Internships: Lubrizol (2013-2014), \$25,000.

NSF, CHE-1112326, "Collaborative Research: Hyperbranched Glycopolymers via Controlled Radical Polymerizations" (7/20/11 – 7/19/15, including a one-year no-cost extension), \$225,000 my portion as co-PI (A. Kasko, UCLA, PI).

NSF, SBIR Phase II, "Composites Based on High Bio-content, Low Toxicity, Green Matrix Resins" (2013-2015), PI Paula Watt of Premix, Soucek and Pugh co-PIs for UAkron portion, \$60,000 my portion.

Triangle Tire, "Materials Solutions for Improving Rolling Resistance Without Compromising Crack Resistance and Wet Skid Resistance", (4/19/12 to 4/18/13), PI Sadhan Jana, co PIs Li Jia, Gary Hamed and Coleen Pugh, \$70,729 my portion.

Ohio Soybean Board, "Development of Soybean Protein as Filler for Composite Materials" (7/1/12 to 6/31/13; extended six months), PI Paula Watt of Premix, Lu-Wang Ju and Coleen Pugh co-PIs, \$5000 supply money plus Paula Watt's salary.

Omnova Solutions gift to support graduate students, \$20,000-25,000 ea yr (2010-2013).

Triangle Tire, "Low Temperature Curing of Rubbers" (4/19/12 to 10/18/13), PI Coleen Pugh and co-PI Yi Pang, \$35,350 my portion.

NSF, SBIR Phase I, "Composites Based on High Bio-content, Low Toxicity, Green Matrix Resins" (1/1/12 to 6/30/12), PI Paula Watt of Premix, Soucek and Pugh co-PIs for UAkron portion, \$24,504 my portion.

NIH supplement, "Collaborative Research: Polymeric Drug Delivery Systems and Biofilms in the Lung" (2010-2011), PI Gerald Young, \$15,000 my portion.

NSF-DMR, "Architectural Effects in the Phase Formation and Miscibility of SCLCP's Prepared by ATRP" (2003-2010, including Special Creative Invention Award 2006-2010), \$605,200.

NSF-DMR, "REU Site for Polymer Science and Polymer Engineering at UAkron" (2007-2010), \$270,000.

Ohio Board of Regents, Individual Research Challenge Matching Award for NSF grant (2007-2009), \$16,327.

NSF-DMR, "The University of Akron REU Site for Polymer Science" (2004-2007), \$270,000.

PRF, "Laterally Attached Side-Chain Liquid Crystalline Polymers Designed to Exhibit a Smectic C Mesophase" (2003-2006), \$80,000.

The Univ. of Akron's Research Committee, Faculty Projects, "Development of New Fluoropolymers" (2003), \$4,000.

NASA Glen Research Center, "Homopolyrotaxanes and Homopolyrotaxane Networks of PEO," (2000-2003), \$223,917 (excluding W.L. Mattice supplement).

Ohio Board of Regents, Individual Research Challenge Matching Award for NASA grant (2000-2001), \$20,000.

Ohio Board of Regents, Individual Research Challenge Matching Award for NASA grant (2002-2003), \$20,000.

NSF, "Limitations and Consequences of Conventional and 'Living' Radical Polymerization in the Synthesis of Side-Chain Liquid Crystalline Polymers" (1998-2001), \$246,440; REU Supplement 1999 - \$5,600, 2000 - \$6,840).

NSF, NSF Young Investigator Award, "Novel Material Synthesis" (1994-2000) \$321,315. Matching funds from Bayer, Dow Chemical, DuPont (DuPont Young Professor Grant), GE Foundation (GE Junior Faculty Fellowship), Goodyear Tire & Rubber, Pharmacia Biotech, A. Schulman, and Waters Corporation.

Matching funds NSF Young Investigator Award, "Novel Material Synthesis" (1994-2000): Bayer (1995, \$4,000), Dow Chemical (1995-1996, \$25,000), DuPont (DuPont Young Professor Grant 1995-1998, \$75,000), Pharmacia Biotech (1994-1995, \$12,000), GE Foundation (GE Junior Faculty Fellowship, 1996-1997, \$12,000) and Waters (1995, \$8,575).

Ohio Board of Regents, Individual Research Challenge Matching Award for NSF grant (1998-1999), \$19,500.

The Univ. of Akron's Research Committee, Faculty Projects, "An Amphiphilic Approach for Preparing Homopolyrotaxanes" (1999), \$8,000.

NSF, REU Supplements to Young Investigator Award (1996, \$4,950; 1997 \$4,950).

NSF, Powder Xray Diffractometer (1995) \$180,000 plus \$100,000 UM match.

PRF, "Rational Design of Polymers with a Smectic C Mesophase" (1999-2001), \$60,000.

Goodyear Tire & Rubber, "Modification of Polybutadiene with Perfluorinated Aromatic Structures" (1999-2000), \$35,000.

PRF, "Rational Design of Polymers with Predetermined Mesophases" (1995-1997) \$50,000.

PRF, "New Architectures for Side-Chain Liquid Crystalline Polymers with Smectic C Mesophases" (1993-1995) \$20,000.

NSF, "Synthesis of Poly(ethylene oxide) Rotaxane Networks" (1994-1995) \$40,000.

UM Horace H. Rackham School of Graduate Studies, Rackham Faculty Grant, "Unanswered Questions in the Structure/Property Relationships of Side Chain Liquid Crystalline Polymers," (1994-1995) \$15,000.

Meetings Attended and Invited Lectures

ACS National Meetings:

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| 10/16 | ACS Rubber Division, Pittsburgh (2 invited lectures, 2 student posters) |
| 08/16 | Philadelphia (2 invited lectures, 1 student talk) |
| 03/16 | San Diego (1 invited lecture; chaired 1 session) |
| 08/15 | Boston (1 student poster) |
| 08/14 | San Francisco (2 student posters) |
| 04/15 | Dallas (1 invited lecture) |
| 08/13 | Indianapolis (1 student talk, 9 student posters) |
| 04/13 | New Orleans (1 invited lecture, 1 student poster, 1 undergrad poster, 1 undergrad talk) |
| 03/12 | San Diego, CA (2 student posters) |
| 03/11 | Anaheim, CA (1 student poster) |
| 08/09 | Washington, D.C. (1 invited lecture) |
| 03/08 | New Orleans (1 invited lecture) |
| 08/07 | Boston (1 lecture, 1 student poster) |
| 03/07 | Chicago (1 student talk, 1 student poster) |
| 08/05 | Washington DC (1 lecture) |
| 08/04 | Philadelphia (co-organized 1 symposium) |
| 03/03 | New Orleans (1 invited lecture; co-organized 1 symposium) |
| 08/02 | Boston (1 student talk, 1 student poster) |
| 08/01 | Chicago (2 student posters, 1 student talk) |
| 08/99 | New Orleans (1 invited lecture; 3 student posters; 1 student talk; chaired 1 session) |
| 04/97 | San Francisco (1 poster, 1 student poster) |
| 03/96 | New Orleans (2 invited lectures; 4 student posters) |
| 04/95 | Anaheim (2 invited lectures; chaired 1 session) |
| 08/94 | Washington, D.C. (1 poster) |
| 03/93 | Denver (1 invited lecture; 1 invited tutorial lecture; chaired 1 session) |

ACS Regional Meetings:

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| 05/16 | CERMACS: Central Regional Meeting of the American Chemical Society [Cincinnati, OH] (1 invited lecture) |
| 06/10 | CERMACS: Central Regional Meeting of the American Chemical Society [Dayton, OH] (3 student talks) |
| 05/09 | CERMACS: Central Regional Meeting of the American Chemical Society [Cleveland, OH] (3 student talks) |
| 06/01 | Joint Central - Great Lakes Regional ACS Meeting [Grand Rapids, MI] (1 poster; 3 student talks; chaired/organized 1 session) |
| 05/98 | 30th Central Regional ACS Meeting, [Cleveland, OH] (1 invited lecture) |
| 05/96 | Great Lakes Regional ACS Meeting [Midland, MI] (1 invited lecture) |
| 05/95 | 27th Central Regional ACS Meeting, Liquid Crystal Symposium [Akron, OH] (1 invited lecture) |
| 06/94 | Joint Central - Great Lakes Regional ACS Meeting [Ann Arbor, MI] (1 poster; 1 undergraduate presentation; organized all polymer symposia; chaired 1 session) |

Gordon Conferences:

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| 07/01 | Polymers East Gordon Research Conference, Polymers (discussion leader, 2 student posters) |
| 01/01 | Polymers West Gordon Research Conference [Ventura, CA] (1 invited lecture) |
| 06/00 | Polymers East Gordon Research Conference, Polymers (discussion leader) |

06/98 Polymers East Gordon Research Conference, Polymers (1 invited lecture)
 06/97 Polymers Gordon Research Conference - Europe: Controlled Macromolecular
 Architecture and Order [Chantilly, France] (discussion leader, 1 poster)
 01/95 Polymers West Gordon Research Conference [Ventura, CA] (1 invited lecture)

Misc. Conferences:

12/16 ACS Local December meeting [Arkon, OH] (1 invited lecture)
 10/15 International Conference on Polymers and Advanced Materials POLYMAT-2013
 [Huatulco, Oaxaca, Mexico] (1 invited lecture; international advisory committee;
 chaired one session)
 07/14 Macro2014 IUPAC Symposium on Environmentally Benign Polymers [Chiang Mai,
 Thailand] (1 invited lecture; chaired 1 session)
 06/14 PC2014 International Symposium on Polymer Chemistry [Shanghai, China] (1
 invited lecture; international advisory committee; chaired 1 session)
 11/13 Pacific Polymer Conference 2013 PPC 2013 [Kaohsiung, Taiwan] (1 invited lecture)
 10/13 International Conference on Polymers and Advanced Materials POLYMAT-2013
 [Huatulco, Oaxaca, Mexico] (plenary lecture; international advisory committee;
 chaired one session)
 10/13 Akron Functional Materials Center [Akron, OH] (1 invited lecture)
 06/13 Baekeland 2013: 4th International Conference on Thermosets [Niagra Falls, Canada]
 (1 invited lecture)
 06/13 MACROFrontiers [Cleveland, OH] (1 invited lecture)
 04/13 ASPM 2103 (Austrian-Slovenian Polymer Meeting) [Bled, Slovenia] (1 invited
 lecture; judged poster session)
 09/12 Polycondensation 2012 [San Francisco, CA] (1 invited lecture; chaired 1 session)
 08/12 XXI International Materials Research Congress [Cancun, Mexico] (1 invited lecture;
 chaired 1 session)
 06/12 IUPAC World Polymer Conference [Blacksburg, VA] (4 student posters)
 06/12 PC2012 International Symposium on Polymer Chemistry [Changchun, China] (1
 invited lecture; 1 visiting scientist poster; international advisory committee; chaired
 1 session)
 10/11 International Conference on Polymers and Advanced Materials POLYMAT-2011
 [Huatulco, Oaxaca, Mexico] (invited lecture; international advisory committee;
 chaired 1 session)
 05/11 Peking University / University of Akron / Kyoto University Trilateral Conference (1
 invited lecture)
 05/11 FAPS Polymer Congress [Beijing, China] (1 invited lecture; chaired 1 session)
 12/10 Pacifichem 2010 [Honolulu, HI] (1 invited lecture)
 09/10 XIX International Materials Research Congress [Cancun, Mexico] (1 invited lecture)
 06/10 Peking University / University of Akron / Chinese National Academy of Sciences
 Trilateral Conference (1 invited lecture) [Beijing, China]

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| 06/10 | PC2010 International Symposium on Polymer Chemistry [Suzhou, China] (1 invited lecture) |
| 11/09 | International Conference on Polymers and Advanced Materials POLYMAT-2009 [Huatulco, Oaxaca, Mexico] (opening plenary lecture; advisory committee) |
| 11/09 | Regional NMR Users' Meeting [Akron, OH] (1 invited lecture) |
| 07/09 | 2 nd Annual Meeting of the Center for Silver Therapeutics Research [Akron, OH] (1 invited lecture; closed/confidential session) |
| 08/08 | XXII International Materials Research Congress [Cancun, Mexico] (1 invited lecture, chaired 1 session) |
| 06/08 | PC2008 International Symposium on Polymer Chemistry [Hefei, China] (1 invited lecture) |
| 11/06 | International Conference on Polymers and Advanced Materials POLYMEX-2006 [Huatulco, Oaxaca, Mexico] (1 invited lecture) |
| 10/06 | XIX Congreso Nacional de Polímeros [Saltillo, Mexico] (1 plenary lecture) |
| 10/06 | NSF-REU (DMR) Site Directors Workshop [Portland, OR] (1 invited lecture) |
| 08/06 | XX International Materials Research Congress [Cancun, Mexico] (1 invited lecture, chaired 1 session) |
| 08/05 | IXX International Materials Research Congress [Cancun, Mexico] (1 invited lecture) |
| 08/04 | XVIII International Materials Research Congress [Cancun, Mexico] (1 invited lecture, chaired 1 session) |
| 06/04 | PC2004 International Symposium on Polymer Chemistry [Changchun, China] (1 invited lecture, chaired 1 session) |
| 05/04 | International Workshop on Branched Polymers for Performance [Williamsburg, VA] (1 invited lecture) |
| 08/03 | Seventh U.S. - Germany Workshop on Polymer Science [Bayreuth, Germany] (co-organizer, 1 invited lecture) |
| 04/02 | Polymer Science: New Century Frontiers, Hearin Symposium in honor of Roger Porter [Hattiesburg, MS] (1 invited poster) |
| 10/01 | IUPAC Symposium on Ionic and Related Polymerizations [Crete] (1 invited lecture) |
| 12/00 | Pacificchem 2000 [Honolulu, HI] (1 invited lecture; co-organizer of liquid crystalline polymer symposium) |
| 08/00 | Sixth U.S. - Germany Workshop on Polymer Science [Evanston, IL] (coorganizer, 1 invited lecture) |
| 12/99 | 6th Pacific Polymer Conference [Guangzhou, China] (1 invited lecture; chaired 1 session) |
| 03/99 | Thirteenth Marvel Symposium: Polymer Chemistry Looking Toward the New Millenium, University of Arizona [Tucson, Arizon] (1 invited lecture) |
| 11/97 | Fifth Chemical Congress of North America, Liquid Crystalline Polymers Symposium [Cancun, Mexico] (1 invited lecture) |

- 10/97 International Conference on Semi-rigid Rod Polymeric Materials, Korean Polymer Society Annual Conference [Kwangju, Korea] (1 invited lecture)
- 10/96 7th U.S.–Japan Seminar on Polymer Synthesis: Macromolecular Design for Advanced Materials [Sendai, Japan] (1 of 10 invited US lectures)
- 10/96 20th Annual Symposium of The Macromolecular Science & Engineering Center, University of Michigan [Ann Arbor, MI] (1 invited lecture)
- 09/96 Fifth U.S. - Germany Workshop on Polymer Science: New Polymer Synthesis and Properties [Liepzig, Germany] (1 of 10 invited US lectures)
- 12/95 4th Pacific Polymer Conference [Kauai, Hawaii] (1 invited lecture)
- 06/95 "Frontiers in Polymers Chemistry" Symposium in honor of the 75th birthday of Professor Cristofer I. Simionescu [Jassy, Romania] (1 invited lecture)
- 05/95 ACS Workshop on New Organic Chemistry in Polymer Synthesis [Santa Fe, NM] (1 invited lecture)
- 11/94 5th SPSJ (Society of Polymer Science, Japan) International Polymer Conference [Osaka, Japan] (1 invited lecture, chaired 1 session)
- 07/94 35th IUPAC Symposium on Macromolecules [Akron, OH] (1 invited lecture)
- 11/93 6th U.S.–Japan Seminar on Polymer Synthesis: Macromolecular Design for Advanced Materials [Santa Rosa, CA] (1 of 12 invited US lectures)
- 06/93 European Polymer Federation Workshop on Molecular Engineering of Side Chain Liquid Crystalline Polymers [Yverdon-les-Bains, Switzerland] (1 invited lecture, chaired 1 session)

University and Industrial Lectures:

- 06/14 South China University of Technology (SCUT/UA Bilateral Conference of Polymer Science) [Guangzhou, China]
- 05/14 Kimberly Clark (Horizons Lecture) [Neenah, WI]
- 05/14 Bemis Innovation Center [Neenah, WI]
- 04/14 Central Michigan University (Chemistry Colloquium) [Mt. Pleasant, MI]
- 12/13 Lubrizol Advanced Materials [Brecksville, OH]
- 10/13 South China University of Technology [Guangzhou, China]
- 10/13 Ningbo University [Ningbo, China]
- 10/13 East China Science and Technology University [Shanghai, China]
- 10/13 Akron Functional Materials Center [Akron, OH]
- 10/13 Institute of Polymer Science and Polymer Engineering (Sponsor's Day) [Akron, OH]
- 04/13 Case Western Reserve University (Joint US/China Colloquium) [Cleveland, OH]
- 06/12 Harbin University (Guest Professor lecture) [Harbin, China]
- 05/12 Tsing Hua University (Chemical Engineering seminar) [Hsinchu, Taiwan]
- 05/12 National Chiao Tung University (Applied Chemistry seminar) [Hsinchu, Taiwan]
- 05/12 University of Santa Cruz (Chemistry Colloquium) [Santa Cruz, CA]
- 05/12 KSU-UA Liquid Crystal – Polymer Workshop [Kent, OH]
- 06/11 Peking University (College of Chemistry & Molecular Engineering; two lectures) [Beijing, China]
- 06/11 Northwest Polytechnic University [Xian, China]
- 06/11 Institute of Chemistry Chinese Academy of Sciences [Beijing, China]
- 05/11 Beijing University of Chemical Technology [Beijing, China]

06/10 Shanghai Jiao Tong University [Shanghai, China]
 06/10 Fudan University (Akron – Fudan Macromolecular Symposium) [Shanghai, China]
 06/10 Shantou University (Multidisciplinary Research Center) [Shantou, China]
 06/10 Nanjing University of Technology (State Key Laboratory of Materials-Oriented Chemical Engineering seminar) [Nanjing, China]
 10/09 Institute of Polymer Science (Sponsor's Day) [Akron, OH]
 06/09 NASA Glenn Research Center [Cleveland, OH]
 03/09 University of Michigan Student Polymer ACS Chapter [Ann Arbor, MI]
 02/09 Omnova Solutions [Akron, OH]
 01/08 University of Minnesota (Chemistry Colloquium) [Minneapolis, MN]
 12/07 University of Southern Mississippi (Polymer Science Colloquium) [Hattiesburg, MS]
 02/07 Central Michigan University (Chemistry Colloquium) [Mt. Pleasant, MI]
 02/07 University of Arkansas (Chemistry Colloquium) [Fayetteville, AR]
 01/07 Kent State University (Liquid Crystal Institute Colloquium) [Kent, OH]
 10/06 Institute of Polymer Science (Sponsor's Day) [Akron, OH]
 09/06 University of Alberta (Nanotechnology Institute) [Edmonton, Canada]
 10/05 Institute of Polymer Science (Sponsor's Day) [Akron, OH]
 10/04 Institute of Polymer Science (Sponsor's Day) [Akron, OH]
 12/03 University of Montreal (Chem. Dept. Colloquium) [Montreal, Canada]
 10/02 Institute of Polymer Science (Sponsor's Day) [Akron, OH]
 01/02 Michigan State University (Chem. Dept. Colloquium) [East Lansing, MI]
 11/01 Texas A&M University (recruiting seminar) [College Station, TX]
 02/01 University of Pittsburgh (recruiting seminar) [Pittsburgh, PA]
 01/01 Kent State University (Chem. Dept. Colloquium) [Kent, OH]
 11/00 Bayer [Pittsburgh, PA]
 11/00 Pittsburgh Polymer Group [Pittsburgh, PA]
 10/00 Carnegie Mellon University (recruiting seminar) [Pittsburgh, PA]
 10/00 Institute of Polymer Science (Sponsor's Day) [Akron, OH]
 04/00 Carnegie Mellon University (Chem. Dept. Colloquium) [Pittsburgh, PA]
 02/00 Univ. of WI, Stevens Point (Chem. Dept. Colloquium & recruiting) [Stevens Pt., WI]
 02/00 Ripon College (recruiting seminar) [Ripon, WI]
 02/00 St. Norbert College (recruiting seminar) [Cato, WI]
 02/00 University of WI, Green Bay (research and recruiting seminars) [Green Bay, WI]
 01/00 University of Connecticut (Chem. Dept. Colloquium) [Storrs, CN]
 12/99 University of Hong Kong Science and Technology [Hong Kong]
 11/99 University of Akron (Chem. Dept. Colloquium) [Akron, OH]
 10/99 Institute of Polymer Science (Sponsor's Day) [Akron, OH]
 10/99 Southern Illinois University (Chem. Dept. Colloquium) [Carbondale, IL]
 11/98 University of Arkansas (Chem. Dept. Colloquium) [Fayetteville, AR]
 11/98 The Goodyear Tire & Rubber Company [Akron, OH]
 10/98 Institute of Polymer Science (Sponsor's Day) [Akron, OH]
 10/98 Advanced Elastomers Systems [Akron, OH]
 03/98 University of Akron (Polymer Science Dept.) [Akron, OH]
 01/98 Los Alamos National Laboratory [Los Alamos, NM]
 11/97 University of North Carolina (Chem. Dept. Colloquium) [Chapel Hill, NC]
 10/97 University of Texas (Chem. Dept. Colloquium) [Arlington, TX]
 10/97 Texas Christian Univ. (Chem. Dept. Colloquium) [Fort Worth, TX]
 10/97 University of Texas (Chem. Dept. Colloquium) [Dallas, TX]

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| 10/97 | Southern Methodist University (Chem. Dept. Colloquium) [Dallas, TX] |
| 10/97 | Univ. of North Texas (Chem. Dept. Colloquium) [Denton, TX] |
| 10/97 | Korea Advanced Institute of Science and Technology (KAIST) (Center for Advanced Functional Polymers Seminar) [Taejon, Korea] |
| 10/97 | Korea Research Institute of Chemical Technology (KRICT) [Taejon, Korea] |
| 10/97 | Yonsei University (Chem. Dept. Colloquium) [Seoul, Korea] |
| 10/97 | Gustavus Adolphus College (Chem. Dept. Colloquium) [Saint Peter, MN] |
| 10/97 | St. Olaf College (Chem. Dept. Colloquium) [Northfield, MN] |
| 09/97 | University of Mass. (Polymer Sci. Dept. Colloquium) [Amherst, MA] |
| 09/97 | Grand Valley State Univ. (Chem. Dept. Colloquium) [Allendale, MI] |
| 09/97 | Bowling Green State Univ. (Chem. Dept. Colloquium) [Bowling Green, OH] |
| 05/97 | University of Akron (Polymer Science Dept.) [Akron, OH] |
| 03/97 | Case Western Reserve Univ. (Macro. Sci. Colloquium) [Cleveland, OH] |
| 11/96 | Univ. of Southern Miss. (Chem. Dept. Colloquium) [Hattiesburg, MS] |
| 11/96 | Amherst College (Chem. Dept. Colloquium) [Amherst, MA] |
| 11/96 | Smith College (Chem. Dept. Colloquium) [Northampton, MA] |
| 10/96 | Williams College (Chem. Dept. Colloquium) [Williamstown, MA] |
| 10/96 | Wellesley College (Chem. Dept. Colloquium) [Wellesley, MA] |
| 10/96 | Mount Holyoke College (Chem. Dept. Colloquium) [South Hadley, MA] |
| 05/96 | DuPont Central Research [Wilmington, DE] |
| 03/96 | University of Michigan (Organic Seminar) [Ann Arbor, MI] |
| 01/96 | Oakland University (Chem. Dept. Colloquium) [Oakland, MI] |
| 11/95 | Cornell University (Organic Chemistry Colloquium) [Ithaca, NY] |
| 11/95 | Pittsburgh ACS, Polymer Group [Pittsburgh, PA] |
| 06/95 | University of Ulm (Chemistry Department) [Ulm, Germany] |
| 05/95 | Los Alamos National Laboratory [Los Alamos, NM] |
| 04/95 | Georgia Institute of Technology (Chemistry Dept.) [Atlanta, GA] |
| 03/95 | DuPont Automotive Products [Troy, MI] |
| 02/95 | University of Michigan (Chem. Dept. Colloquium) [Dearborn, MI] |
| 12/94 | University of Detroit-Mercy (Dow Lecture in Polymer Science) [Detroit, MI] |
| 12/94 | Raychem (Science & Technology Series) [Menlo Park, CA] |
| 11/94 | Hope College (Chem. Dept. Colloquium) [Holland, MI] |
| 11/94 | Calvin College (Chem. Dept. Colloquium) [Grand Rapids, MI] |
| 10/94 | Univ. of Michigan (Materials Sci. Dept. Colloquium) [Ann Arbor, MI] |
| 09/94 | Queen's University (Chem. Dept. Colloquium) [Kingston, Ontario, Canada] |
| 08/94 | Miles Inc. [Pittsburgh, PA] |
| 05/94 | Carnegie Mellon University (Chem. Dept.) [Pittsburgh, PA] |
| 03/94 | DuPont Central Research [Wilmington, DE] |
| 02/93 | University of Michigan (Materials Chemistry Seminar Series) [Ann Arbor, MI] |
| 09/92 | Carnegie Mellon University (Research Retreat) [Camp Soles, PA] |
| 05/92 | University of Oregon (Chem. Dept. Colloquium) [Eugene, OR] |
| 05/92 | Case Western Reserve University (Dept. of Macro. Sci.) [Cleveland, OH] |
| 02/92 | Indiana University of Pennsylvania (Chem. Dept. Colloquium) [Indiana, PA] |

Courses Taught

The University of Akron:

Polymer 9871-601-080 (Polymer Chemistry), F 2016

Polymer 9871-601-080 (Polymer Concepts), sole instructor since 2011 with expansion of the course to 4 credits and coverage of the previous year-long sequence; instructor of record 2000-2010; team-taught F 1998-2010, except 2007 (sabbatical)

Polymer 9871-602-080 (Synthesis & Chemical Behavior of Polymers), team-taught S 1999 – 2004, 2007 (new section)

Polymer 9871-705-001 (Free Radical Polymerizations), S 2007 (new course); co-taught with Prof. W. Brittain as literature course S 2005, instructor of record

Polymer 9871-711-001 (Cyclic Polymers), F 2003

Polymer 9871-711-001 (Hyperbranched Polymers and Dendrimers), F 2001

Polymer 9871-711-001 (Mechanistic Polymer Chemistry), F 1999

University of Michigan:

Chemistry 210 (Structure and Reactivity – organic lecture) W 1997

Chemistry 211 (Investigations in Chemistry – organic lab) W 1995, W 1996

Chemistry 215 (Structure and Reactivity – organic lecture) W 1998

Chemistry 538 (Organic Chemistry of Macromolecules) F 1993 – F 1997

Chemistry 734 (Special Topics in Organic Chemistry: Cationic Polymerizations) W 1993

Carnegie Mellon University:

Chemistry 09502 (*undergraduate* Organic Chemistry of Polymers) S 1992

Chemistry 09741 (*graduate* Organic Chemistry of Polymers) S 1992

Professional Service

International:

Co-organizer: International Materials Research Congress – polymer symposium, Cancun, Mexico, 3-yr term beginning with the 2017 conference

Section Editor, Condensation Polymerizations, *Encyclopedia of Polymeric Nanomaterials* (ISBN: 978-3-642-36199-9), eds. S. Kobayashi and K. Müllen, Springer Berlin Heidelberg 2015

Co-organizer: 7th U.S. - Germany Workshop on Polymer Science, Bayreuth, 2003

Co-organizer: Pacifichem 2000, Symposium on Liquid Crystalline Polymers, Honolulu, Hawaii, 2000

Co-organizer: 6th U.S. - Germany Workshop on Polymer Science, Illinois, 2000

International Advisory Committee for the following conferences:

International Conference on Polymers and Advanced Materials POLYMAT-2011, 2013, 2015 [Huatulco, Oaxaca, Mexico]

PC2012, PC2014, PC2016 International Symposium on Polymer Chemistry [Changchun, Shanghai, & Changchun, China, respectively]

National:

Associate Editor: *Macromolecules* (1999-2011)

Editorial Advisory Boards: *Macromolecules* (1997-1999), *Journal of Polymer Science, Polymer Chemistry Edition* (1999-2013)

Ad-hoc Advisory Board of NSF's Polymer Division (1997)

NSF Panelist: CCI once, DMR Career proposals twice, DMR REU Sites once, MRSEC site visit once, MRSEC reverse site once, NIRT proposals once, PREM proposals once, MSN Chem twice, NMR Chem CRIF proposals once.

Co-organizer, Symposium on Polymer Science of Everyday Things, ACS National meetings Spring 2002, Fall 2004

Organizer, Symposium on Synthesis and Characterization of Polymers with Different Topologies, ACS Joint Central/Great Lakes Regional Meeting, 6/01

Organizer, Polymer Division's Symposia, ACS Joint Central/Great Lakes Regional Mtg, 6/94

Correspondent Reviewer: NSF, ACS PRF, COBASE, IUPAC, NRC CAST

Referee for the following Scientific Journals:

Chem. Mater.; *J. Am. Chem. Soc.*; *J. Macromol. Sci.-Pure Appl. Chem.*; *J. Polym. Sci., Polym. Chem. Ed.*; *Macromol. Chem. Phys.*; *Macromolecules*; *Polymer*; *Polym. Bull.*; *Science*; *Trends Polym. Sci.*

University and Departmental:

All departmental committees since 2013 as Department Chair

Chair, (UAkron) Admissions and Recruiting, '00-'01

Chair, (UAkron) Department of Polymer Science Lecture Series, '98-'99, '02-'03

Chair, (UAkron) Milkovich Lecture Series, '98-'99

Chair, (UAkron) Seminar Evaluations, 1998-2000

Chair, (UMichigan) Macromolecular Science Colloquium, '94-'95

Chair, (UMichigan) Materials Chemistry Seminar Series, '94-'95

Chair, (UMichigan) Moses Gomberg Lecture Series, '95-'96

Chair, Polymer Symposia, Central/Great Lakes ACS Regional Conference, 6/1-3/94

Co-chair, (UAkron) Admissions and Recruiting, '99-'00

Co-chair, (UMichigan) Materials Chemistry seminar series, '93-'94

Committee, (UAkron) Ad-hoc, Revision of Laboratory Classes, '06-present

Committee, (UAkron) Ad Hoc College level Curriculum Review Process, 2010

Committee, (UAkron) Admissions and Recruiting, '98-'99

Committee, (UAkron) Cumulative Exams, '03 - present

Committee, (UAkron) Curriculum DPS, '01 - present

Committee, (UAkron) Search, Donovan Endowed Chair of Engineering, '08 - '09

Committee, (UAkron) Evaluation of Dean Frank Kelley, '03

Committee, (UAkron) Faculty Advisory Committee to the President, '02 - '03

Committee, (UAkron) Faculty Searches, '05 - '07, '08-'09

Committee, (UAkron) Graduate Faculty Membership Committee of Graduate Council, '05-'07

Committee, (UAkron) Long Range Planning, '00-'01

Committee, (UAkron) '05PSCI Space, '00-'01

Committee, (UAkron) Space, '02 - present

Committee, (UAkron) Science Library Focus Group, '93

Committee, (UAkron) University Curriculum, '02 - '04

Committee, UAkron Conference on Undergraduate and Graduate Student Research (Planning, Program), '05 - present

Committee, (UMichigan) Development, '93-'97

Committee, (UMichigan, LS&A) Student Recognition Awards Selection, '95
 Committee, (UMichigan) Macromolecular Science Comprehensive Exam, 5/94, 5/95, 1/96
 Committee, (UMichigan) Macromolecular Science Symposium, '93, '96
 Committee, (UMichigan) Moses Gomberg Lecture Series, '93-'97
 Committee, (UMichigan) New Equipment, '93-'95
 Committee, (UMichigan) Recruiting, '96-'98
 Committee, (UMichigan) Student Leader Award selection (College of LS&A; undergraduates)
 Director, University of Akron REU Site for Polymer Science, 2004 - present
 Faculty (UMichigan) Advisor, FEAST, '94-'95
 Faculty Marshall, (UMichigan) LS&A Spring Commencement, '94
 Faculty Mentor, (UMichigan) University Mentorship Program, '93-'96
 Reviewer: (UMichigan) OVPR Proposals
 Representative (UC Davis), (UMichigan) Presidential Inauguration, 9/19/97

Publication List (undergraduate students marked with asterisk)

- 1) Hsieh, Y.L.; *Pugh, C.; Ellison, M.S. "The Effects of Selected Organic Solvents on the Polymerization of Acrylic Acid to Poly(ethylene terephthalate) by Glow Discharge," *J. Appl. Polym. Sci.* **1984**, 29, 3547-3560.
- 2) *Pugh, C.; Hsieh, Y.L. "Improvement of the Hydrophilicity of Polypropylene by Liquid-Phase Mutual Irradiation of Acrylics," *J. Appl. Polym. Sci.* **1984**, 29, 3641-3649.
- 3) Pugh, C.; Percec, V. "Synthesis and Group Transfer Polymerization and Copolymerization of *p*-Vinylbenzyl Methacrylate," *Polym. Bull.* **1985**, 14, 109-116.
- 4) Pugh, C.; Percec, V. "Miscible Blends from Poly(2,6-dimethyl-1,4-phenylene oxide) and Poly(epichlorohydrin) Containing Pendant Electron-Donor and Electron-Acceptor Groups," *Macromolecules* **1986**, 19, 65-71.
- 5) Pugh, C.; Rodriguez-Parada, J.M.; Percec, V. "The Influence of Molecular Weight on the Solid-State Behavior of Interchain EDA Complexes," *J. Polym. Sci., Polym. Chem. Ed.* **1986**, 24, 747-758.
- 6) Pugh, C.; Percec, V. "Synthesis of Thermotropic Side-Chain Liquid Crystalline Polymers Containing a Poly(2,6-dimethyl-1,4-phenylene oxide) Main Chain," *Polym. Bull.* **1986**, 16, 513-520.
- 7) Pugh, C.; Percec, V. "Synthesis of Liquid Crystalline Poly(epichlorohydrin) and Copolymers," *Polym. Bull.* **1986**, 16, 521-528.
- 8) Percec, V.; Pugh, C. "Oligomers" in *Encyclopedia of Polymer Science and Engineering*, eds., H.F. Mark, N.M. Bikales, C.G. Overberger, G. Menges and J. Kroschwitz, 2nd ed., vol. 10, John Wiley & Sons Inc., **1987**, pp. 432-463.
- 9) Percec, V.; *Schild, H.G.; Rodriguez-Parada, J.M.; Pugh, C. "Interchain Electron-Donor and Electron-Acceptor Complexes. Determination of Equilibrium Constant and Thermodynamic Parameters in the Solid State," *J. Polym. Sci., Polym. Chem. Ed.* **1988**, 26, 935-951.

- 10) Pugh, C.; Percec, V. "The Effect of the Polymer Backbone on the Thermotropic Behavior of Side-Chain Liquid Crystalline Polymers" in *Reactions on Polymers*, eds. J.L. Benham and J.F. Kinstle, ACS Symp. Ser. **364**, Washington D.C., **1988**, pp. 97-118.
- 11) Höpken, J.; Pugh, C.; Richtering, W.; Möller, M. "Melting, Crystallization and Solution Behavior of Chain Molecules with Hydrocarbon and Fluorocarbon Segments," *Makromol. Chem.* **1988**, 189, 911-925.
- 12) Percec, V.; Pugh, C.; Nuyken, O.; Pask, S.D. "Oligomers, Macromonomers and Telechelic Polymers" in *Comprehensive Polymer Science*, eds. G. Allen and J.C. Bevington, vol. 6, Pergamon Press: Oxford, **1989**, pp. 281-357.
- 13) Percec, V.; Pugh, C. "Molecular Engineering of Predominantly Hydrocarbon Based LCPs" in *Side Chain Liquid Crystal Polymers*, ed. C.B. McArdle, Chapman and Hall: New York, **1989**, pp. 30-105.
- 14) Percec, V.; Tomazos, D.; Pugh, C. "Influence of Molecular Weight on the Thermotropic Mesophases of Poly{6-[4-methoxy-(4'-oxy)-a-methylstilbene]hexyl methacrylate}," *Macromolecules* **1989**, 22, 3259-3267.
- 15) Pugh, C.; Percec, V. "Phase Transfer Pd(0) Catalyzed Polymerization Reactions. 1. Synthesis of 1,2-(4,4'-Dialkoxyaryl)acetylene Monomers and 1,4-Bis[2-(4',4"-dialkoxyphenyl)ethynyl]benzene Derivatives by Phase Transfer Pd(0)/Cu(I) Catalyzed Coupling Reactions," *J. Polym. Sci., Polym. Chem. Ed.* **1990**, 28, 1101-1126.
- 16) Pugh, C.; Percec, V. "Phase Transfer Pd(0) Catalyzed Polymerization Reactions. 2. Thermal Characterization of Liquid Crystalline 1,2-(4,4'-Dialkoxyaryl)acetylene Derivatives," *Mol. Cryst. Liq. Cryst.* **1990**, 178, 193-217.
- 17) Pugh, C.; Percec, V. "Phase Transfer Pd(0) Catalyzed Polymerization Reactions. 4. Thermal Characterization of 1,4-Bis[2-(4',4"-dialkoxyaryl)ethynyl]benzene Derivatives and their Electron-Donor-Acceptor Complexes with *p*-Chloranil," *Polym. Bull.* **1990**, 23, 177-184.
- 18) Pugh, C.; *Tarnstrom, C.; Percec, V. "Phase Transfer Pd(0) Catalyzed Polymerization Reactions. 5. Synthesis and Thermal Characterization of 1,2-{4,4'-di[*S*(-)-2-methylbutyloxy]phenyl}acetylene and 1-(4-*n*-alkoxyphenyl)-2-{4'-[*S*(-)-2-methylbutyloxy]phenyl}acetylene Monomers," *Mol. Cryst. Liq. Cryst.* **1991**, 195, 185-197.
- 19) Pugh, C.; Percec, V. "Phase Transfer Pd(0) Catalyzed Polymerization Reactions. 6. Synthesis and Thermotropic Behavior of Mono- and Difluorinated 1,2-(4,4'-di-*n*-alkoxyphenyl)acetylene Monomers," *Chem. Materials* **1991**, 3, 107-115.
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- 21) Pugh, C.; *Andersson, S.K.; Percec, V. "Phase Transfer Pd(0) Catalyzed Polymerization Reactions. 7. Synthesis and Thermotropic Behavior of 1,4-Bis[2-(3',3"-difluoro-4',4"-di-n-alkyloxyphenyl)ethynyl]benzene Dimers," *Liq. Cryst.* **1991**, *10*, 229-242.
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- 23) Pugh, C.; Percec, V. "Cyclic Trimers of Disubstituted Acetylenes with Columnar Mesophases," *J. Mater. Chem.* **1991**, *1*, 765-773.
- 24) V. Percec, C.G. Cho, C. Pugh and D. Tomazos, "Synthesis and Characterization of Branched Liquid Crystalline Polyethers Containing Cyclotetraeratrlyene-Based Disclike Mesogens," *Macromolecules* **1992**, *25*, 1164-1176.
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- 26) Komiya, Z.; Pugh, C.; Schrock, R.R. "Synthesis of Side Chain Liquid Crystal Polymers by Living Ring Opening Metathesis Polymerization. 1. Influence of Molecular Weight, Polydispersity and Flexible Spacer Length ($n=2-8$) on the Thermotropic Behavior of the Resulting Polymers," *Macromolecules* **1992**, *25*, 3609-3616.
- 27) Komiya, Z.; Pugh, C.; Schrock, R.R. "Synthesis of Side Chain Liquid Crystal Polymers by Living Ring Opening Metathesis Polymerization. 2. Influence of Molecular Weight, Polydispersity and Flexible Spacer Length ($n=9-12$) on the Thermotropic Behavior of the Resulting Polymers," *Macromolecules* **1992**, *25*, 6586-6592.
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- 37) (a) Pugh, C.; Kiste, A.L. "Molecular Engineering of Side-Chain Liquid Crystalline Polymers by Living Polymerizations," *Prog. Polym. Sci.* **1997**, 22, 601-691; (b) reproduced in *Handbook of Liquid Crystals*, Eds. D. Demus, J.W. Goodby, G.W. Gray, H.W. Spiess and V. Vill, vol. 3, VCH: Weinheim, **1998**, Chapter 3, pp. 123-206.
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