

Julie L. P. Jessop

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Department of Chemical and Biochemical Engineering
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DEGREES

- Ph.D., Chemical Engineering, December 1999
Michigan State University, East Lansing, MI
- B.S. with High Honors, Chemical Engineering, May 1994
Michigan State University, East Lansing, MI

POSITIONS

- Associate Professor, University of Iowa, Iowa City, IA: 07/09-Present
- Assistant Professor, University of Iowa, Iowa City, IA: 8/00-06/09
- Visiting Assistant Professor, Michigan State University, East Lansing, MI: 1/00-6/00
- Graduate Research Assistant, Michigan State University, East Lansing, MI: 8/94-12/99

AWARDS AND HONORS

- 2013 Frontiers of Engineering Education Virtual Community of Practice, ASEE
- 2012 Frontiers of Engineering Education Symposium, NAE, Irvine, CA
- 2011 Faculty Excellence Award for Service, University of Iowa, College of Engineering
- 2010 Graduate College Outstanding Faculty Mentor Commendation, University of Iowa
- I-School Faculty Institute on Scholarship of Teaching & Learning, University of Iowa, 2006
- National Science Foundation CAREER Award, 2002
- nTITLE Program, University of Iowa, 2002
- Iowa Old Gold Summer Fellowship, University of Iowa, 2001 and 2002
- Engineering Education Scholars Program, Leesburg, VA, 2001
- Most Outstanding Graduate Student, Michigan State Univ., Dept. of Chemical Engineering, 1999
- Michigan State University Excellence-in-Teaching Award, 1999
- J. J. Martin Award for the most outstanding Chemical Engineering Division paper presented at the ASEE 1999 Annual Conference
- National Science Foundation Graduate Fellowship, 1996-99
- Zonta International Amelia Earhart Fellowship, 1996 and 1997
- Engineering Education Scholars Program, University of Wisconsin-Madison, July 1996

PUBLICATIONS

a. Research Manuscripts

- [1] Eom, H.S., Jessop, J.L.P., Scranton, A.B., "Photoinitiated Cationic Copolymerizations: Effects of the Oligomer Structure and Composition," Polymer, Vol. 54, 2013, 4134-4142.
- [2] Dillman, B.F., Jessop, J.L.P., "The Influence of Humidity on Surface Modulus of Photo-cured Epoxy Coatings," RadTech Reports, Vol. 27(2), 2013, 7-10.

- [3] Dillman, B.F., Kang, N.Y., Jessop, J.L.P., "Free-radical Photopolymerization of a Castor Oil-based Acrylate Oligomer," Polymer, Vol. 54, 2013, 1768-1774.
- [4] Hardis, R., Jessop, J., Peters, F.E., Kessler, M.R., "Cure kinetics characterization and monitoring of an epoxy resin for thick composite structures," Composites: Part A, Vol. 49, 2013, 100-108.
- [5] Dillman, B.F., Jessop, J.L.P., "Chain Transfer Agents in Cationic Photo-polymerization of a Bis-cycloaliphatic Epoxide Monomer: Kinetic and Physical Property Effects," Journal of Polymer Science Part A: Polymer Chemistry, Vol. 51, 2013, 2058-2067.
- [6] Zou, Y., Jessop, J.L.P., Armstrong, S.R., "*In-vitro* enzymatic biodegradation of adhesive resin in the hybrid layer," Journal of Biomedical Materials Research Part A, Vol. 94A(1), 2010, 187-192.
- [7] Zou, Y., Armstrong, S.R., Jessop, J.L.P., "Quantitative analysis of adhesive resin in the hybrid layer using Raman spectroscopy," Journal of Biomedical Materials Research Part A, Vol. 94A(1), 2010, 288-297.
- [8] Eom, H., Jessop, J.L.P., "Epoxide/urethane acrylate hybrid photopolymerizations to minimize atmospheric sensitivity: Understanding the interplay between viscosity and dual photoinitiator system," Chapter 4 in *Basics and Applications of Photopolymerization Reactions, Vol. 2*, edited by J.P. Fouassier and X. Allonas, 2010, pp. 39-52.
- [9] Cai, Y., Jessop, J.L.P., "Effect of Water Concentration on UV-curing Acrylate/Epoxide Hybrid Monomer Coatings," Polymer, Vol. 50(23), 2009, pp. 5406-5413.
- [10] Navarra, C.O., Cadenaro, M., Armstrong, S.R., Jessop, J.L.P., Antonioli, F., Sergo, V., Di Lenarda, R., Breschi, L., "Degree of conversion of Filtek Silorane adhesive system within the hybrid, primer and adhesive layer," Dental Materials, Vol. 25(9), 2009, pp. 1178-1185.
- [11] Wu, Y., Jessop, J.L.P., "Identifying Volatile Components Emitted from UV-Cured Materials," RadTech Report, Vol. 23(2), 2009, pp. 42-48.
- [12] Comer, Chris M., Jessop, J.L.P., "Evaluation of Novel Back-flush Filtration for Removal of Homopolymer from Starch-g-PMMA," Starch, Vol. 60(7), 2008, pp. 335-339.
- [13] Zou, Y., Jessop, J.L.P., Armstrong, S.R., "Apparent conversion of adhesive resin in the hybrid layer, part 2: *In-situ* studies of the resin-dentin bond," Journal of Biomedical Materials Research Part A, Vol. 89A(2), 2009, 355-362.
- [14] Armstrong, S.R., Jessop, J.L.P., Winn E., Tay, F.R., Pashley, D.H., "Effects of polar solvents and adhesive resin on the denaturation temperatures of demineralised dentine matrices," Journal of Dentistry, Vol. 36(1), 2008, pp. 8-14.
- [15] Zou, Y., Armstrong, S.R., Jessop, J.L.P., "Apparent conversion of adhesive resin in the hybrid layer, part 1: Identification of internal standards for Raman spectroscopy and the effects of water storage," Journal of Biomedical Materials Research Part A, Vol. 86A(4), 2008, pp. 883-891.
- [16] Cai, Y., Jessop, J.L.P., "Free Radical Photopolymerizations," Encyclopedia of Polymer Science and Technology, Concise, 3rd edition, edited by H.F. Mark, John Wiley & Sons, Inc., 2007.
- [17] Cai, Y., Jessop, J.L.P., "Decreased Oxygen Inhibition in Photopolymerized Acrylate/Epoxide Hybrid Polymer Coatings as Demonstrated by Raman Spectroscopy," Polymer, Vol. 47(19), 2006, pp. 6560-6566.
- [18] Armstrong, S.R., Jessop, J.L.P., Vargas, M.A., Zou, Y., Qian, F., Campbell, J.A., Pashley, D.H., "Effects of exogenous collagenase and cholesterol esterase on the durability of the resin-dentin bond," Journal of Adhesive Dentistry, Vol. 8(3), 2006, pp. 151-160.

- [19] Armstrong, S.R., Jessop, J.L.P., Winn, E., Tay, F.R., Pashley, D.H., “Denaturation temperatures of dentin matrices. I. Effect of demineralization and dehydration,” Journal of Endodontics, Vol. 32(7), 2006, pp. 638-641.
- [20] Cai, Y., Jessop, J.L.P., “Free Radical Photopolymerizations,” Encyclopedia of Polymer Science and Technology, Volume 10, 3rd edition, edited by J.I. Kroschwitz, John Wiley & Sons, Inc., 2004, pp. 807-837.
- [21] Jessop, J.L.P., Goldie, S.N., Scranton, A.B., Blanchard, G.J., “Spectroscopic Characterization of Acid Generation and Concentration and Free Volume in 248-nm Chemically Amplified Resists,” J. Vac. Sci. Technol. B, Vol. 20, 2002, pp. 219-225.
- [22] Jessop, J.L.P., Blanchard, G.J., Scranton, A.B., “In Situ Cure Monitoring Using Fiber Optic Fluorescence Sensors,” Radtech Report, Vol. 12(4), 1998, pp. 27-32.

b. Pedagogical Manuscripts

- [1] Jessop, J.L.P., “When the biological clock is ticking faster than the tenure clock...,” ASEE 2006 National Conference Proceedings, CD-ROM edition, June 2006.
<<http://www.asee.org/acPapers/code/getPaper.cfm?paperID=10838>>
- [2] Jessop, J.L.P., Peeples, T.L., “Engineering Problem Solving Design Project: Emergency/Homeless Shelter Design,” ASEE 2005 National Conference Proceedings, CD-ROM edition, June 2005.
<http://www.asee.org/acPapers/2005-357_Final.pdf>
- [3] Brus, C., Zhao, L., Jessop, J., “Visual-Spatial Ability in First-Year Engineering Students: A Useful Retention Variable?,” ASEE 2004 National Conference Proceedings CD-ROM edition, June 2004.
<http://www.asee.org/acPapers/2004-1802_Final.pdf>
- [4] Valentine, R., Hornbuckle, K., Stoner, J., Jessop, J., “Engineering Problem Solving I,” ASEE 2003 North Midwest Regional Conference Proceedings CD-ROM edition, October 2003.
- [5] Jessop, J.L.P., “How to Grow Your Graduate Students: Mentoring Tips for New Professors,” ASEE 2003 National Conference Proceedings CD-ROM edition, June 2003.
<http://www.asee.org/acPapers/2003-680_Final.pdf>
- [6] Jessop, J.L.P., “Expanding Our Students’ Brainpower: Idea Generation and Critical Thinking Skills,” IEEE Antennas and Propagation Magazine, Vol. 44(6), 2002, pp. 140-144.
- [7] Jessop, J.L.P., “Helping Our International Students Succeed in Communication,” ASEE 2002 National Conference Proceedings CD-ROM edition, June 2002.
<http://www.asee.org/acPapers/2002-921_Final.pdf>
- [8] Jessop, J.L.P., “Expanding Our Students’ Brainpower: Idea Generation and Critical Thinking Skills,” ASEE 2002 National Conference Proceedings, CD-ROM edition, June 2002.
<http://www.asee.org/acPapers/2002-947_Final.pdf>
- [9] Scranton, A.B., Russell, R.M., Basker, N., Jessop, J.L.P., Scranton, L.C., “Teaching Material and Energy Balances on the Internet,” ASEE National Conference Proceedings CD-ROM edition, June 1999.
<<http://www.asee.org/acPapers/99conf484.PDF>>
- [10] Jessop, J.L.P., Briedis, D.M., “Engaging Middle-Schoolers With Engineering Demos,” North Central Section ASEE Conference Proceedings, Dearborn, MI, April 1998, pp. 301-305.

c. Conference Proceedings Papers

- [1] Dillman, B., Jessop, J.L.P., "Chain Transfer Agents in Cationic Epoxide Polymerizations: Kinetic and Physical Effects," RadTech 2012 UV/EB Technology Conference Proceedings, on-line edition, May 2012.
- [2] Ajiboye, G., Jessop, J.L.P., "Plasticizing Effect of Acrylates in Hydroxyl-Containing Acrylate Hybrid Photopolymerization," RadTech 2012 UV/EB Technology Conference Proceedings, on-line edition, May 2012.
- [3] Mineart, K., Dillman, B., Jessop, J.L.P., "Search for Dual-Initiator Synergy in UV-Initiated Acrylate-Epoxy Hybrid Polymerization Systems," Polym. Mat. Sci. and Eng., Vol. 104, 2011, pp. 53-54.
- [4] Dillman, B., Mineart, K., Jessop, J.L.P., "Accelerating cationic epoxide photopolymerizations by the addition of mono- and di-functional hydroxyl-bearing compounds," Polym. Mat. Sci. and Eng., Vol. 104, 2011, pp. 443-444.
- [5] Kang, N., Eom, H., Jessop, J.L.P., "Effect of dual photoinitiator on kinetics of acrylate/epoxide hybrid photopolymerizations," Polymer Preprints, Vol. 51(1), 2010, pp. 661-662.
- [6] Dillman, B., Jessop, J.L.P., "Spectroscopic Quantification of Kinetic Rate Constants for Epoxy-Acrylate Hybrid Photopolymerization," RadTech 2010 UV/EB Technology Conference Proceedings, on-line edition, May 2010.
- [7] Eom, H., Jessop, J.L.P., "The Effects of Acrylate Secondary Functionalities on The Kinetics of Epoxide during Epoxide-Acrylate Hybrid Photopolymerizations," RadTech 2010 UV/EB Technology Conference Proceedings, on-line edition, May 2010.
- [8] Comer, C., Aurand, G.A., Jessop, J.L.P., "Synthesis of Difuran Derivatives by Photolytic Coupling for Use as Biorenewable Monomers," RadTech 2008 UV/EB Technology Conference Proceedings, CD-ROM edition, April 2008.
- [9] Eom, H., Jessop, J.L.P., "Kinetics of Urethane Acrylate Oligomer/Epoxide Hybrid Photopolymerizations," RadTech 2008 UV/EB Technology Conference Proceedings, CD-ROM edition, April 2008.
- [10] Comer, C.M., Aurand, G.A., Jessop, J.L.P., "Photocatalytic synthesis of difuran derivatives for use as biorenewable heat-resistant monomers," Polymer Preprints, Vol. 48(2), 2007, pp. 877-878.
- [11] Cai, Y., Jessop, J.L.P., "Investigation of Inhibition Effects in Acrylate/Epoxide Hybrid Systems Using Raman Confocal Microscopy," RadTech 2006 e|5 Technology Conference Proceedings, CD-ROM edition, April 2006.
- [12] Comer, C., Jessop, J.L.P., "Photoinitiated Emulsion Graft Polymerization of Synthetic Monomers to Starch," RadTech 2006 e|5 Technology Conference Proceedings, CD-ROM edition, April 2006.
- [13] Kim, D., Jessop, J.L.P., "The role of water in photoinitiated cationic ring-opening photopolymerization of cyclohexane epoxides," RadTech 2006 e|5 Technology Conference Proceedings, CD-ROM edition, April 2006.
- [14] Zou, Y., Armstrong, S.R., Jessop, J.L.P., "Using Raman spectroscopy to determine adhesive distribution in hybrid layer of dental bonding," RadTech 2006 e|5 Technology Conference Proceedings, CD-ROM edition, April 2006.
- [15] Cai, Y., Jessop, J., "Effect of Water Concentration on Photopolymerized Acrylate/Epoxides Hybrid Monomer System by Raman Spectroscopy," Polymer Preprints, Vol. 47(1), 2006, pp. 490-491.

- [16] Alcantar, J., Cai, Y., Jessop, J., "The effects of temperature, initiation light intensity, and photoinitiation systems on acrylate/epoxide hybrid photopolymerizations using Raman spectroscopy," *Polymer Preprints*, Vol. 47(1), 2006, pp. 585-586.
- [17] Cai, Y., Jessop, J.L.P., "Real-time and Microscopic Investigations of Hybrid Photopolymerizations Using Raman Spectroscopy," *Polym. Mat. Sci. and Eng.*, Vol. 92, 2005, pp. 668-669.
- [18] Zou, Y., Armstrong, S.R., Jessop, J.L.P., "Determination of Adhesive Distribution in Dentin-Adhesive Bond Using Raman Microscopy," *Polymer Preprints*, Vol. 45(2), 2004, pp. 327-328.
- [19] Cai, Y., Jessop, J.L.P., "Characterization of Hybrid Resin Systems Based on Epoxy and Acrylate Functionalities," RadTech 2004 e|5 Technology Conference Proceedings CD-ROM edition, May 2004.
- [20] Jessop, J.L.P., Armstrong, S.R., Zou, Y., "Raman Spectroscopy of Adhesive Resin in Dental Composites Bonded to Dentin," *Polym. Mat. Sci. and Eng.*, Vol. 88, 2003, pp. 243-244.
- [21] Jessop, J.L.P., Goldie, S.N., Scranton, A.B., Blanchard, G.J., "Spectroscopic characterization of acid mobility in 248-nm chemically amplified resists," *Polym. Mat. Sci. and Eng.*, Vol. 82, 2000, pp. 48-49.
- [22] Jessop, J.L.P., Goldie, S.N., Scranton, A.B., Blanchard, G.J., Rangarajan, B., Okoroanyanwu, U., Subramanian, R., Templeton, M.K., "Spectroscopic Characterization of Acid Mobility in Chemically Amplified Resists," *Advances in Resist Technology and Processing XVII*, Vol. 3999, 2000, pp. 161-170.
- [23] Jessop, J.L.P., Goldie, S.N., Scranton, A.B., Blanchard, G.J., Rangarajan, B., Capodiecchi, L., Subramanian, R., Templeton, M.K., "Characterizing Acid Mobility in Chemically Amplified Resists via Spectroscopic Methods," *Advances in Resist Technology and Processing XVI*, Vol. 3678, 1999, pp. 914-922.
- [24] Jessop, J.L., Scranton, A.B., Blanchard, G.J., "*In-situ* Cure Monitoring of a Vinyl Ester Polymer Using Fiber Optic Fluorescence Sensors," *Polym. Mat. Sci. and Eng.*, Vol. 72, 1995, pp. 58-59.
- d. Conference Proceedings Abstracts** (excluding those listed above, which have papers)
- [1] Dillman, B., Jessop, J.L.P., "Grafting epoxides: Using the activated monomer mechanism to decorate acrylate polymers," 245th ACS National Meeting and Exposition, New Orleans, LA, 04/09/13.
- [2] Talungchit, S., et al., Ethanol-wet Bonding Enhances Infiltration of Hydrophobic Monomers into Demineralized Dentin, IADR/AADR General Session, Seattle, Washington, 03/22/13.
- [3] Ajiboye, G., Jessop, J.L.P., "Conversion Control in Acrylate-Epoxy Hybrid Photopolymerizations with Hydroxyl-Containing Acrylates," AIChE 2011 Annual Meeting Conference Proceedings CD-ROM edition, October 2011.
- [4] Dillman, B., Jessop, J.L.P., "Dual Photo and Thermal Polymerizable Monomers Derived From Methyl Esters of Vegetable Oils," AIChE 2011 Annual Meeting Conference Proceedings CD-ROM edition (Biobased Materials III: Value-added Coproducts), October 2011.
- [5] Dillman, B., Jessop, J.L.P., "Dual Photo and Thermal Polymerizable Monomers Derived From Methyl Esters of Vegetable Oils," AIChE 2011 Annual Meeting Conference Proceedings CD-ROM edition (Structure & Properties in Polymers III: Networks & Gels II), October 2011.
- [6] Jessop, J.L.P., "Don't be so sensitive! Characterization and Optimization of Epoxy-Acrylate Hybrid Resin Systems," Photopolymerization Fundamentals 2011 Abstract Book, June 2011.

- [7] Kang, N.Y., Dillman, B., and Jessop, J.L., "Sustainable Polymeric Materials Prepared by Ultrafast Photo-Polymerization of Chemically Modified Vegetable Oils," AICHE 2011 Spring Meeting Conference Proceedings CD-ROM edition, March 2011.
- [8] Eom, H., Jessop, J.L.P., "Influence of Acrylate Secondary Functionalities on Epoxide Reactivity During Acrylate/Epoxide Hybrid Photopolymerizations," 2010 US-Korea Conference, Seattle, WA, August 2010.
- [9] Eom, H., Jessop, J.L.P., "Structure-Property Relationships for Epoxide/Acrylate Hybrid Polymers Produced by Photopolymerizations," AICHE 2009 Annual Meeting Conference Proceedings CD-ROM edition, November 2009.
- [10] Eom, H., Jessop, J.L.P., "The Kinetics of Hybrid Photopolymerizations for Urethane Acrylate/epoxide Hybrid Mixture Systems as a Function of Water Content and Temperature," AICHE 2008 Annual Meeting Conference Proceedings CD-ROM edition, November 2008.
- [11] Talungchit, S., Armstrong, S., Cobb, D.S., Geraldeli, S., Jessop, J., Qian, F., Pashley, D.H., "Effect of ethanol-wet bonding and chlorhexidine on resin-dentin bond durability," IADR 86th General Session & Exhibition, Toronto, CAN, 2008.
- [12] Navarra, C.O., Cadenaro, M., Antonioli, F., Armstrong, S., Jessop, J., Di Lenarda, R., Breschi, L., "Conversion of Filtek Silorane Adhesive determined by Raman spectroscopy," IADR 86th General Session & Exhibition, Toronto, CAN, 2008.
- [13] Comer, C., Aurand, G.A., Jessop, J.L.P., "Synthesis of difuran derivatives by photolytic coupling for use as biorenewable monomers," Abstracts of Papers of the American Chemical Society, Vol. 235, ORGN Part #, 2008, Abstract #291.
- [14] Kim, D., Jessop, J.L., Stansbury, J.W., "Effects of Water on the Cationic Ring-opening Photopolymerizations of Epoxycyclohexane Monomers," AICHE 2007 Annual Meeting Conference Proceedings CD-ROM edition, November 2007.
- [15] Weber, D., Comer, C., Jessop, J., "Starch-g-copolymers from emulsion photopolymerization," AICHE 2007 Annual Meeting Conference Proceedings CD-ROM edition, November 2007.
- [16] Comer, C., Weber, D., Jessop, J.L.P., "Comparison of Soxhlet Extraction and Back-Flush Filtration for Removal of Homopolymer from Starch-g-PMMA Synthesized with and without Photoinitiator," AICHE 2006 Annual Meeting Conference Proceedings CD-ROM edition, November 2006.
- [17] Alcantar, J.J.G., Cai, Y., Jessop, J.L.P., "Effects of Temperature and UV Light Intensity on Acrylate/Epoxide Hybrid Photopolymerization Using Raman Spectroscopy," AICHE 2006 Annual Meeting Conference Proceedings CD-ROM edition, November 2006.
- [18] Jessop, J.L.P., "How to Grow Your Graduate Students (Mentoring Tips)," AICHE 2005 Annual Meeting Conference Proceedings CD-ROM edition, November 2005.
- [19] Cai, Y., Jessop, J.L.P., "Investigation of Chemical Composition and Physical Properties of Photopolymerized Hybrid Resin Coatings," AICHE 2005 Annual Meeting Conference Proceedings CD-ROM edition, November 2005.
- [20] Comer, C., Jessop, J.L.P., "Synthesis of Poly(butyl acrylate)-g-starch and Poly(styrene)-g-starch by Emulsion Photopolymerization to Produce Biodegradable Copolymers from Corn Starch," AICHE 2005 Annual Meeting Conference Proceedings CD-ROM edition, November 2005.

- [21] Zou, Y., Jessop, J., Armstrong, S., Vargas, M.A., “Adhesive infiltration and stability in hybrid layer after long-term storage,” J. Dental Research, Vol. 83, Special Issue A, 2004, Abstract #1850.
- [22] Campbell, J., Vargas, M.A., Armstrong, S., Laffoon, J., Jessop, J., “Ultramorphology of resin-dentin interface after long-term saliva storage,” J. Dental Research, Vol. 83, Special Issue A, 2004, Abstract #485.
- [23] Armstrong, S., Jessop, J., Vargas, M.A., Dawson, D., Larsen, M., Qian F., Laffoon, J., “Biodurability of resin-dentin bond after long-term saliva storage,” J. Dental Research, Vol. 83, Special Issue A, 2004, Abstract #3945.
- [24] Soliman, M.M., Jessop, J., Khera, S., Koheil, S., “Ormocer: Study of Some Clinically Critical Properties,” J. Dental Research, Vol. 83, Special Issue A, 2004, Abstract #644.
- [25] Jessop, J.L.P., “It All Started With a Few Bright Ideas...,” AICHe 2003 Annual Meeting Conference Proceedings CD-ROM edition, November 2003.
- [26] Jessop, J.L.P., “Investigations of Hybrid Photopolymerizations Using Raman Spectroscopy,” AICHe 2003 Annual Meeting Conference Proceedings CD-ROM edition, November 2003.
- [27] Winn, E., Armstrong, S.R., Jessop, J.L.P., Pashley, D.H., “Effect of Adhesive Solvents on the Denaturation Temperature of Dentin Collagen,” J. Dental Research, Vol. 82, Special Issue A, 2003, Abstract #1624.
- [28] J.L.P. Jessop, “Investigations of the Resin-dentin Bond in Dental Composites using Raman Spectroscopy,” AICHe 2002 Annual Meeting Conference Proceedings, November 2002.
- [29] Winn, E., Armstrong, S.R., Jessop, J.L.P., Pashley, D.H., Vargas, M.A., “Dentin Collagen Thermal Stability: A Preliminary Study,” J. Dental Research, Vol. 81, Special Issue A, 2002, p. A-236, Abstract #2598.
- [30] Scranton, A.B., Jessop, J.L.P., Padon, K.S., Nelson, E.W., “Spectroscopic Methods for Characterizing Photo-induced Reactions in Polymer Systems,” Abstracts of Papers of the American Chemical Society, Vol. 218, ANYL Part 1, 1999, Abstract #139.
- [31] J.L.P. Jessop, S.N. Goldie, A.B. Scranton, and G.J. Blanchard, “Characterizing Acid Mobility in Chemically Amplified Resists via Spectroscopic Methods,” AICHe 1999 Annual Meeting Conference Proceedings, November 1999.

INVENTIONS AND PATENTS

- [1] Blanchard, G.J., Jessop, J.L., Scranton, A.B., "Apparatus for in situ, non-invasive polymer cure determination," US Patent #5707587, January 13, 1998.
- [2] Blanchard, G.J., Jessop, J.L., Scranton, A.B., "Method and apparatus for in situ, non-invasive polymer cure determination," US Patent #5633313, May 27, 1997.

PROFESSIONAL ACTIVITIES AND OFFICES

- AMERICAN SOCIETY FOR ENGINEERING EDUCATION, member since 1997
Reviewer and Moderator for NEE Division, 2002 and 2003
ASEE Summer School for Chemical Engineering Faculty, Boulder, CO, 2002
Workshop on Junior Faculty Development, Milwaukee, WI, 1997
- AMERICAN CHEMICAL SOCIETY, member since 1995
Science Coach, 2013-present
Councilor, Division of Polymeric Materials: Science & Engineering, 2013-present
Past Chair, Division of Polymeric Materials: Science & Engineering, 2011-present
Chair, Div. of PMSE, 2010
Chair-elect, Div. of PMSE, 2009
Vice Chair, Div. of PMSE, 2008
Member, Strategic Planning Comm., Div. of PMSE, 2006-2007
Secretary, Div. of PMSE, 2005-2007
Member-at-Large, Div. of PMSE, 2003-2004
Symposium Chair for Div. of PMSE, 2003/2008/2009
- AMERICAN INSTITUTE OF CHEMICAL ENGINEERS, member since 1994
Session Organizer and Chair for MESD, 2002-2006
- PROJECT LEAD THE WAY, affiliate professor since 2007
Instructor for POE STI, 2008/2011
Instructor for CEA STI, 2012/2013
- RADTECH INTERNATIONAL, member since 2001
Member, Technical Conference Review Committee, 2001-present
Session Chair, 2002/2004/2006/2008/2012/2014
- TAU BETA PI, member
Chief faculty advisor for UI chapter, 2002-present
- OMEGA CHI EPSILON, member
Faculty advisor for UI chapter, 2001-2004