CURRICULUM VITAE

2013

JEFFREY WILSON STANSBURY, PhD

PERSONAL HISTORY

Office Address: University of Colorado
School of Dental Medicine
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EDUCATION:

University of Maryland, College Park	PhD	1982-1988	Organic Chemistry
University of Maryland, College Park	BS	1973-1977	Chemistry

PROFESSIONAL EXPERIENCE:

Associate Dean for Research — January 2009 - present
University of Colorado School of Dental Medicine
Aurora, Colorado

Vice-Chair, Department of Craniofacial Biology — November 2004 – present
University of Colorado School of Dental Medicine
Aurora, Colorado

Professor, Adjunct Appointment — June 2003 – September 2007
Department of Metallurgy and Materials Engineering
Colorado School of Mines
Golden, Colorado

Professor, Courtesy Appointment — September 2000 - present
Department of Chemical and Biological Engineering
University of Colorado
Boulder, Colorado

Professor, Restorative Dentistry — July 2000 – December 2004
Director, Biomaterials Research Center

University of Colorado School of Dental Medicine
Aurora, Colorado

Research Chemist 1983-2000
Polymers Division, National Institute of Standards and Technology
Gaithersburg, Maryland

Chemist 1979-1983
Polymers Division, National Bureau of Standards (NIST)
Gaithersburg, Maryland

Quality Assurance Chemist 1978-1979
S.B. Thomas Company
Frederick, Maryland

HONORS

Fellow of the Leadership in Innovative Team Science Program at 2012
University of Colorado Denver

Fellow of the Academy of Dental Materials 2012

Omicron Kappa Upsilon Honor Society – honorary member 2010 - present

Wilmer Souder Award 2009
International Association for Dental Research Distinguished Scientist

University of Colorado Pinnacles of Inventorship Group 2005

New Inventor of the Year 2004
University of Colorado Health Sciences Center

University of Colorado Emerging Leaders Fellow 2003-2004

Department of Commerce Bronze Metal 1999

I. TEACHING ACTIVITIES

TEACHING RESPONSIBILITIES

University of Colorado School of Dental Medicine
Dental Materials I – DSRE 5504
Course Director: 2001 – 2004

Instructor: 2002 – 2005 (4-8 hours/course)
Lecturer: 2006 – 2012 (2 hours/course)
Dental Materials II – DSRE 6608
Course Director: 2002 – 2005
Instructor: 2002 – 2004 (4-8 hours/course)

University of Colorado School of Pharmacy
Nanotechnology and Drug Delivery – PHSC 7345
Instructor: 2009, 2011 (2 hours/course)

University of Colorado; Department of Chemical & Biological Engineering
Polymer Chemistry – 4450/5450
Course Co-Director and Co-Instructor: 2008 (18 hours/course)
Course Director and Instructor: 2006 (35 hours/course)
Course Co-Director and Co-Instructor: 2002 (18 hours/course)

University of Colorado; Department of Bioengineering
Polymer Chemistry – Independent Study – BIOE 5840
Course Director and Instructor 2010, 2011 (16 hours/course)

II. RESEARCH and SCHOLARLY ACTIVITIES

CURRENT RESEARCH

Polymers used in biomedical materials applications take many different forms and functions. We are designing, synthesizing, characterizing and evaluating novel polymeric materials for a wide array of dental and biomedical applications. Some of these materials, such as dental restorations, are intended for permanent placement while others, as with scaffolds for tissue engineering, may be designed to degrade and clear the body after their service is complete. Analytical efforts that couple real-time conversion measurement along with polymer property evolution, particularly mechanical property development as well as polymerization shrinkage and stress development, are directed toward a better fundamental understanding of network forming photopolymerization processes. We are advancing the controlled formation and unique properties of heterogeneous photopolymers in a variety of forms. Our basic studies of photopolymerization processes and reaction kinetics extend to the development of novel photoinitiator systems.

Current research interests: dental and biomedical polymeric materials; hybrid radical/cationic polymeric materials; photopolymerization processes; network polymers and IPN systems; nano-scale polymeric particles; hydrogels and scaffolds for biomaterial/tissue engineering applications; polymerization with minimal shrinkage and stress development; combinatorial approaches to biomaterials development and characterization; polymerization-induced phase separation; conversion-dependent polymer property evolution; degradable polymers; radical photopolymerization with extensive dark cure and shadow cure potential.

RESEARCH FUNDING (with annual direct costs)

1. Principal Investigator "Improved Dental Restorative Systems." Caulk/Dentsply, $38,700, Jan 1, 2013 – Dec 31, 2013.

2. Principal Investigator "Interactions Between Monomers and Initiators Affecting Photopolymerization Efficiency and Polymer Structure." I/UCRC Fundamentals and Applications of Photopolymerization, $25,000, January 1, 2013 – December 31, 2013.

3. Principal Investigator "Application of Nanogel-modified Resins for Improved Polymeric Dental Materials". NIH/NIDCR, $250,000, July 1, 2012 – June 30, 2017.

4. Principal Investigator "Denture Tooth Formulation and Testing". Myerson, $2500, February 1, 2012 – June 30, 2012.

5. Co-Principal Investigator (Newman, co-PI) "Methacrylate-based UV-cured Resin Systems", Esstech, $3600, October 1, 2011 – January 31, 2012.

6. Co-Principal Investigator (Bowman, Cramer, Pfeifer, co-PIs) "Improved Understanding of Polymer Property Evolution: Dynamic Measurement and Modeling". I/UCRC Fundamentals and Applications of Photopolymerization, $40,000, January 1, 2011 – December 31, 2014.

7. Principal Investigator "Improved Resin Bonded Dental Restoratives Based on Nanogel-modified Adhesives". NIH/NIDCR, $325,000, October 1, 2009 – September 30, 2011.

8. Principal Investigator "Quantitative Methods and Reference Materials for Characterizing Polymeric Dental Composites" NIST, $225,397, October 1, 2009 – September 30, 2012.

9. Principal Investigator "Processing and Material Variations to Improve Mechanical Properties of PA-LH". BioPlant R&D, $3500, June 1, 2009 – November 31, 2009.

10. Principal Investigator "Characterization of Polymeric Property Development in SDR Materials". Dentsply/Caulk, $5500, July 1, 2009 – December 31, 2009.

11. Principal Investigator "Nanogel-modified Resins and Composites". Septodont, $90,000, May 25, 2009 – June 30, 2012.

12. Co-Investigator (Christopher Bowman, PI) "Thiol-ene-methacrylate Composites for Dental Restorative Materials". NIH/NIDCR 1R01DE018233 - 01A2, $250,000, September 1, 2008 – August 30, 2012.

13. Principal Investigator "Applications of Polymerization-induced Phase Separation to Restorative Materials". NIH/NIDCR R01, $250,000, July 1, 2007 – June 30, 2013.

14. Principal Investigator "Heterogeneous Polymer Matrices from Nanogel Macromers". NIH/NIDCR R21, $175,000, March 1, 2007 – February 28, 2010.

15. Principal Investigator (Bowman, co-PI) "Controlled Formation and Practical Use of Polymer/Polymer Interfaces". NSF/IUCRC Fundamentals and Applications of Photopolymerization, $20,000, January 1, 2007 – December 31, 2008.

16. Co-Investigator (Christopher Bowman, PI) "Novel Cross-link Polymers for Dental Restorations". NIH/NIDCR R01, $250,000, April 1, 2006 – March 31, 2011.

17. Principal Investigator "Improved Materials and Characterization Techniques Applied to Dental Composite Restoratives". NIST CRADA, $140,000, October 1, 2005 – September 30, 2009.

18. Co-investigator (Kristi Anseth, PI) "3D Scaffolds for Controlled hMSC Differentiation". NIH/NIDCR R01, $250,000, May 1, 2005 – April 30, 2010.

19. Co-Principal Investigator (Scranton, co-PI) "Fundamental Characterization of Cationic Polymerizations". NSF/IUCRC Fundamentals and Applications of Photopolymerization, $20,000, January 1, 2005 – December 31, 2008.

20. Principal Investigator "Novel Surface Treatment of Fillers for Dental Composites". NIH/NIDCR R21, $150,000, April 1, 2005 – March 31, 2008.

21. Principal Investigator "Development of Hybrid Radical/cationic Resins for Dental Composites". Dentsply/Caulk, $24,000, January 1, 2005 – December 31, 2005.

22. Co-Principal Investigator (Christopher Bowman, co-PI) "Development of Novel Dental Resins and Composites". Septodont, $72,117, April 1, 2004 – January 31, 2011.

23. Co-Principal Investigator (Christopher Bowman, co-PI) "Development and Application of High-throughput Techniques for Evaluation of UV Monomer Formulations". IUCRC Photopolymerization Center, $24,000, January 1, 2004 – December 31, 2007.

24. Principal Investigator "Novel Polymer-Drug Conjugates for COPD Therapies". Colorado Tobacco Research Program, $75,000, July 1, 2002 – December 31, 2003.

25. Principal Investigator "Low Shrinkage Dental Resins from SOC Oligomers". NIH/NIDCR R01, $150,000, May 1, 2002 – April 30, 2007.

26. Principal Investigator "Development of Hybrid Radical/Cationic Resins for Dental Composites". $20,000, December 1, 2004 – November 31, 2005.

27. Co-Principal Investigator (Christopher Bowman, C0-PI) "Degradable Acrylic Acid Hydrogel Beads". Biosphere Medical, $48,000, July 1, 2001 – June 30, 2002.

28. Co-investigator (Christopher Bowman, PI) "Novel Cross-link Polymers for Dental Restorations". NIH/NIDCR R01, $200,000, April 1, 2001 – March 31, 2006.

29. Principal Investigator "Formation of Hybrid Structures by Controlled Photopolymerization". IUCRC Photopolymerization Center, $24,000, January 1, 2001 – December 31, 2002.

30. Principal Investigator "Cross-linking Photopolymerization". Sub-contract with NIST, $80,000, October 1, 2000 – September 30, 2003.

31. Principal Investigator "Studies of the Cross-linking Photopolymerization Process in Dental Resins" and "Strategies to Eliminate Polymerization Shrinkage and Stress Development in Dental Resins" contained in "Foundation for Advanced Dental and Medical Materials through Molecular Design and Measurement Science". NIDCR-NIST Interagency Agreement, $310,000 (total for projects 1+2) October 1, 1999 – September 30, 2004.

32. Principal Investigator "Dental Resins Based on Fluorinated Monomers and Oligomers" contained in "Improved Dental Restorative Materials and Adhesives through Molecular Design and Measurement Science". NIDCR-NIST Interagency Agreement, $242,000, October 1, 1996 – September 30, 1999.

33. Principal Investigator "Improvement of Polymeric Resin Systems for Dental Composites" contained in "Research for Improved Dental Restorative Materials". NIDCR-NIST Interagency Agreement, $187,000, October 1, 1993 – September 30, 1996.

PUBLICATIONS

PERIODICALS (peer reviewed)

1. Tyagi P, Barros M, Stansbury JW, Kompella U. Light activated, in situ forming gel for sustained suprachoroidal delivery of bevacizumab. Molecular Pharmaceutics (submitted).

2. Abu-Alenain D, Lewis SH, Stansbury JW. Property evolution during vitrification of dimethacrylate photopolymer networks. Dental Materials (submitted).

3. Yamasaki, LC, De Vito AGM, Barros M, Lewis S, Francci C, Stansbury JW, Pfeifer CS. Polymerization development of "low-shrink" resin composites: reaction kinetics, polymerization stress and quality of network. Dental Materials (submitted).

4. Tanaka J, Stansbury JW, Irie M, Matsumoto T. Novel fluoride-releasing compomers based on UDMA/MAA matrix resins. Dental Materials Journal (submitted).

5. Liu J, Howard GD, Lewis SH, Barros MD, Stansbury JW. Shrinkage stress reduction and mechanical properties in nanogel-modified resin systems. European Polymer Journal 2012;

48:1819–1828.

6. Szczepanski CR, Pfeifer CS, Stansbury JW. A new approach to network heterogeneity: Polymerization Induced Phase Separation in photo-initiated, free-radical methacrylic systems. Polymer 2012; 53:4694–4701.

7. Yang B, Dickens SH, Barros MD, Dunkers J, Tay F, Stansbury JW. Dentin bonding with nanogel-modified adhesives. Journal of Biomedical Materials Research B: Materials in Medicine (submitted).

8. Ye S, Azarnoush S, Smith IR, Cramer NB, Stansbury JW, Bowman CN. Using hyperbranched oligomer functionalized glass fillers to reduce shrinkage stress. Dental Materials 2012; 28:1004-1011.

9. Stansbury JW. Dimethacrylate network formation and polymer property evolution as determined by the selection of monomers and curing conditions. Dental Materials 2012; 28:13-22.

10. Moraes RR, Garcia JW, Wilson ND, Barros MD, Lewis SH, Pfeifer CS, Stansbury JW. Improved dental adhesive formulations based on reactive nanogel additives. Journal of Dental Research 2012; 91:179-184.

11. Pfeifer CS, Wilson ND, Shelton ZR, Stansbury JW. Delayed gelation through chain-transfer reactions: Mechanism for stress reduction in methacrylate networks. Polymer 2011; 52:3295-3303.

12. Morrill JA, Biggs JH, Bowman CN, Stansbury JW. Development of quantitative structure–activity relationships for explanatory modeling of fast reacting (meth)acrylate monomers bearing novel functionality. Journal of Molecular Graphics and Modelling 2011; 29:763-772.

13. Moraes RR, Garcia JW, Barros MD, Lewis SH, Pfeifer CS, Liu J, Stansbury JW. Control of polymerization shrinkage and stress in nanogel-modified monomer and composite materials. Dental Materials 2011; 27:509-519.

14. Boulden JE, Cramer NB, Schreck KM, Couch CL, Bracho-Troconis C, Stansbury JW, Bowman CN. Thiol–ene–methacrylate composites as dental restorative materials. Dental Materials 2011; 27:267-272.

15. Pfeifer CS, Shelton ZR, Braga RR, Windmoller D, Machado JC, Stansbury JW. Characterization of dimethacrylate polymeric networks: a study of the crosslinked structure formed by monomers used in dental composites. European Polymer Journal 2011; 47:162-170.

16. Cramer NB, Stansbury JW, Bowman CN. Recent advances and developments in composite dental restorative materials. Journal of Dental Research 2011; 90:402-416.

17. Ferracane JL, Stansbury JW, Burke FJT. Self-etching cements – chemistry, properties and clinical considerations. Journal of Oral Rehabilitation 2011; 38:295-314.

18. Cramer NB, Couch C, Schreck KM, Boulden JE, Wydra R, Stansbury JW, Bowman CN. Properties of methacrylate-thiol-ene formulations as dental restorative materials. Dental Materials 2010; 26:799-806.

19. Lu H, Trujillo-Lemon M, Ge J, Stansbury JW. Dental resins based on dimer acid dimethacrylates: A route to high conversion with low polymerization shrinkage. Compendium of Continuing Education in Dentistry 2010; 31 (SI2):1-4.

20. Goncalves F, Pfeifer C, Stansbury JW, Braga RR. Influence of matrix composition on polymerization stress development of experimental composites. Dental Materials 2010; 26: 697-703.

21. Howard B, Wilson ND, Newman SM, Pfeifer CS, Stansbury JW. Relationships between conversion, temperature and optical properties during composite photopolymerization. Acta Biomaterialia 2010; 6:2053-2059.

22. Tanaka J, Hashimoto T, Stansbury JW, Antonucci JM, Kuzuki K. Novel fluoride-releasing compomers based on UDMA/MAA matrix resins. Dental Materials (submitted).

23. Cramer NB, Couch C, Carioscia J, Schreck KM, Boulden JE, Stansbury JW, Bowman CN. Investigation of thiol-ene and thiol-ene-methacrylate based resins as dental restorative materials. Dental Materials 2010; 26:21-28.

24. Johnson PM, Stansbury JW, Bowman CN. Photopolymerized material design based on high-throughput analysis and kinetic modeling. AIChE Journal 2010; 56:1262-1269.

25. Kilambi H, Reddy SK, Schneidewind L, Stansbury JW, Bowman CN. Influence of the secondary functionality on the radical-vinyl chemistry of novel acrylates. Journal of Polymer Science Part A: Polymer Chemistry 2009; 47: 4859-4870.

26. Johnson PM, Stansbury JW, Bowman CN. FTIR microscopy for kinetic measurements in high-throughput photopolymerization: Experimental design and application. Macromolecular Reaction Engineering 2009; 3:522-528.

27. Goncalves F, Kawano Y, Pfeifer C, Stansbury JW, Braga RR. Influence of BisGMA, TEGDMA, and BisEMA contents on viscosity, conversion, and flexural strength of experimental resins and composites. European Journal of Oral Sciences 2009; 117:442–446.

28. Kim D, Scranton AB, Stansbury JW. Effect of the electron donor structure on the shelf-life time of visible-light activated three-component initiator systems. Journal of Applied Polymer Science 2009; 114:1535-1542.

29. Kim D, Stansbury JW. A photo-oxidizable kinetic pathway of three-component photoinitiator systems containing porphrin dye (Zn-tpp), an electron donor and diphenyl iodonium salt (DPI). Journal of Polymer Science Part A: Polymer Chemistry 2009; 47:3131-3141.

30. Lee TY, Cramer NB, Hoyle CE, Stansbury JW, Bowman CN. (Meth)acrylate vinyl ester hybrid polymerizations. Journal of Polymer Science Part A: Polymer Chemistry 2009; 47:2509-2516.

31. Berchtold KA, Hacioğlu B, Nie J, Cramer N, Stansbury JW, Bowman CN. Rapid solid-state photopolymerization of cyclic acetal-containing acrylates. Macromolecules 2009; 42:2433-2437.

32. Kim D, Stansbury JW. Kinetic pathway investigations of three-component photoinitiator systems for visible-light activated free radical polymerizations. Journal of Polymer Science Part A: Polymer Chemistry 2009; 47:887-898.

33. Kim D, Scranton AB, Stansbury JW. Analysis of association constant for ground state dye-electron acceptor complex of photoinitiator systems and the association constant effect on the kinetics of visible-light-induced polymerizations. Journal of Polymer Science Part A: Polymer Chemistry 2009; 47:1429-1439.

34. Kilambi H, Cramer NB, Schneidwind LH, Shah P, Stansbury JW, Bowman CN. Evaluation of highly reactive mono-methacrylates as reactive diluents for BisGMA-based dental composites. Dental Materials 2009; 25:33-38.

35. Berchtold KA, Nie J, Stansbury JW, Bowman CN. Reactivity of monovinyl (meth)acrylates containing cyclic carbonates. Macromolecules 2008; 41:9035-9043.

36. Antonucci JM, Fowler BO, Weir MD, Skrtic D, Stansbury JW. Effect of ethyl α-hydroxymethylacrylate on selected properties of copolymers and ACP resin composites. Journal of Materials Science: Materials in Medicine 2008; 19:3263-3271.

37. Kilambi H, Stansbury JW, Bowman CN. Enhanced reactivity of monovinyl acrylates characterized by secondary functionalities towards photopolymerization and Michael addition: Contribution of intramolecular effects. Journal of Polymer Science Part A: Polymer Chemistry 2008; 46:3452-3458.

38. Stansbury JW, Bowman CN, Newman SM. Shining a light on dental composites. Physics Today 2008; 61:82-83.

39. Johnson PM, Stansbury JW, Bowman CN. High-throughput kinetic analysis of acrylate and thiol-ene photopolymerization using temperature and exposure time gradients. Journal of Polymer Science: Part A: Polymer Chemistry 2008; 46:1502-1509.

40. Johnson PM, Stansbury JW, Bowman CN. Kinetic modeling of a comonomer photopolymerization system using high-throughput conversion data. Macromolecules 2008; 41:230-237.

41. Johnson PM, Stansbury JW, Bowman CN. Alkyl chain length effects on copolymerization kinetics of a monoacrylate with hexanediol diacrylate. Journal of Combinatorial Chemistry 2007; 9:1149-1156.

42. Lemon MT, Jones MS, Stansbury JW. Hydrogen bonding interactions in methacrylate monomers and polymers. Journal of Biomedical Materials Research: Part A 2007; 83A: 734-746.

43. Tanaka J, Stansbury JW, Antonucci JM, Suzuki K. Surface treatment with N,N'-dimethacryloylcystine for enhanced bonding of resin to dental alloys. Dental Material Journal 2007; 26:514-518.

44. Kilambi H, Reddy SK, Schneidewind L, Stansbury JW, Bowman CN. Design, development, and evaluation of monovinyl acrylates characterized by secondary functionalities as reactive diluents to diacrylates. Macromolecules 2007; 40:6112-6118.

45. Carioscia JA, Stansbury JW, Bowman CN. Evaluation and control of thiol-ene/thiol-epoxy hybrid networks. Polymer 2007; 48:1526-1532.

46. Kilambi H, Reddy SK, Schneidewind L, Stansbury JW, Bowman CN. Copolymerization and dark polymerization studies for photopolymerization of novel acrylic monomers. Polymer 2007; 48:2014-2021.

47. Johnson PM, Stansbury JW, Bowman CN. Photopolymer kinetics using light intensity gradients in high-throughput conversion analysis. Polymer 2007; 48: 6319-6324.

48. Kilambi H, Reddy SK, Beckel ER, Stansbury JW, Bowman CN. Influence of secondary functionalities on the reaction behavior of monovinyl (meth)acrylates. Chemistry of Materials 2007; 19:641-643.

49. Kilambi, H, Konopka, D, Stansbury JW, Bowman CN. Factors affecting the sensitivity to acid inhibition in novel acrylates characterized by secondary functionalities. Journal of Polymer Science: Part A: Polymer Chemistry 2007; 45:1287-1295.

50. Kilambi, H, Stansbury JW, Bowman CN. Deconvoluting the impact of intermolecular and intramolecular interactions on the polymerization kinetics of ultrarapid mono(meth)acrylates. Macromolecules 2007; 40:47-54.

51. Ge J, Trujillo-Lemon M, Stansbury JW. A mechanistic and kinetic study of the photoinitiated cationic double ring-opening polymerization of 2-methylene-7-phenyl-1,4,6,9-

tetraoxa-spiro[4.4]nonane. Macromolecules 2006; 26:8968-8976.

52. Lemon MT, Ge J, Lu H, Tanaka J, Stansbury JW. Dimethacrylate derivatives of dimer acid. Journal of Polymer Science: Part A: Polymer Chemistry 2006; 44:3921-3929.

53. Calheiros FC, Kawano Y, Stansbury JW, Braga RR. Influence of radiant exposure on shrinkage stress, degree of conversion and mechanical properties of resin composites. Dental Materials 2006; 22:799-803.

54. Beckel ER, Stansbury JW, Bowman CN. Evaluation of a potential ionic contribution to the polymerization of highly reactive (meth)acrylate monomers. Macromolecules 2005; 38:9474-9481.

55. Kilambi H, Beckel ER, Berchtold KA, Stansbury JW, Bowman CN. Influence of molecular dipole on acrylate reactivity. Polymer 2005; 46: 4735-4742.

56. Johnson PM, Reynolds TB, Stansbury JW, Bowman CN. High throughput kinetic analysis of photopolymer conversion using composition and exposure time gradients Polymer 2005; 46:3300-3306.

57. Carioscia JA, Lu H, Stansbury JW, Bowman CN. Thiol-ene oligomers as dental restorative materials. Dental Materials 2005; 21:1137-1143.

58. Hu L, Carioscia JA, Stansbury JW, Bowman CN. Investigations of step-growth thiol-ene polymerizations for novel dental restoratives. Dental Materials 2005; 21:1129-1136.

59. Beckel ER, Stansbury JW, Bowman CN. Effect of aliphatic spacer substitution on the reactivity of phenyl carbamate acrylate monomers. Macromolecules 2005; 38:3093-3098.

60. Stansbury JW, Trujillo-Lemon M, Lu H, Ding X, Lin Y, Ge J. Conversion-dependent shrinkage stress and strain in dental resins and composites. Dental Materials 2005; 21:56-67.

61. Ge J, Trujillo, M, Stansbury JW. Synthesis and photopolymerization of low shrinkage methacrylate monomers containing bulky substituent groups. Dental Materials 2005; 21:1163-1169.

62. Lu H, Stansbury JW, Nie J, Berchtold K, Bowman CN. Development of highly reactive mono-(meth)acrylates as reactive diluents for dimethacrylate-based dental resin systems. Biomaterials 2005; 26:1329-1336.

63. Lu H, Stansbury JW, Newman SM, Bowman CN. Effect of curing protocols on polymerization shrinkage stress development. Journal of Dental Research 2005; 84:822-826.

64. Lin Y, Stansbury JW. The impact of water on photopolymerization kinetics of methacrylate/vinyl ether hybrid systems. Polymers for Advanced Technologies 2005;

16:195-199.

65. Beckel ER, Nie J, Stansbury JW, Bowman CN. Effect of aryl substituents on the reactivity of phenyl carbamate acrylate monomers. Macromolecules 2004; 37:4062-4069.

66. Berchtold KA, Nie J, Stansbury JW, Hacioglu B, Beckel ER, Bowman CN. Novel monovinyl methacrylic monomers containing secondary functionality for ultra-rapid polymerization: steady state evaluation. Macromolecules 2004; 37: 3165-3179.

67. Lu H, Stansbury JW, Dickens SH, Eichmiller FC, Bowman CN. Probing the origins and control of shrinkage stress in dental resin-composites: I. Shrinkage stress characterization technique. Journal of Materials Science: Materials in Medicine 2004; 15:1097-1103.

68. Lu H, Stansbury JW, Dickens SH, Eichmiller FC, Bowman CN. Probing the origins and control of shrinkage stress in dental resin-composites: II. Novel method of simultaneous measurement of polymerization shrinkage stress and conversion. Journal of Biomedical Materials Research Part B: Applied Biomaterials 2004; 71B:206-213.

69. Lu H, Stansbury JW, Bowman CN. Towards the elucidation of shrinkage stress development and relaxation in dental composites. Dental Materials 2004; 20:979-986.

70. Lin Y, Stansbury JW. NIR spectroscopic investigation of water effects on cationic photopolymerization of vinyl ether systems. Journal of Polymer Science: Polymer Chemistry 2004; 42:1985-1998.

71. Trujillo M, Newman SM, Stansbury JW. Use of near-IR to monitor the influence of external heating on dental composites. Dental Materials 2004; 20:766-777.

72. Stansbury JW, Ge J. Polymerization shrinkage and stress in resins and composites. RadTech Report May/June 2003:56-62.

73. Dickens SH, Stansbury JW, Choi KM, Floyd CJE. Photopolymerization kinetics of methacrylate dental resins. Macromolecules 2003; 36:6043-6053.

74. Lin Y, Stansbury JW. Kinetics studies of hybrid structure formation by controlled photopolymerization. Polymer 2003; 44:4781-4789.

75. Skrtic D, Stansbury JW, Antonucci JM. Volumetric contraction and methacrylate conversion in photopolymerized amorphous calcium phosphate/methacrylate composites. Biomaterials 2003, 24:2443-2449.

76. Khatri CA, Stansbury JW, Schultheisz CR, Antonucci JM. Synthesis, characterization and evaluation of urethane derivatives of Bis-GMA. Dent Mater 2003; 19:584-588.

77. Lovell LG, Lu H, Elliott JE, Stansbury JW, Bowman CN. Effect of cure rate on the

mechanical properties of dental resins. Dental Materials 2001; 17:504-511.

78. Tanaka J, Hashimoto T, Stansbury JW, Antonucci JM, Suzuki K. Polymer properties of resins composed of UDMA and methacrylates with the carboxyl group. Dental Materials Journal 2001; 20:206-215.

79. Stansbury JW, Dickens SH. Network formation and compositional drift during photo-initiated copolymerization of dimethacrylate monomers. Polymer 2001; 42:6363-6369.

80. Stansbury JW, Dickens SH. Determination of double bond conversion in dental resins by near infrared spectroscopy. Dental Materials 2001; 17:71-79.

81. Stansbury JW. Curing dental resins and composites by photopolymerization. Journal of Esthetic Dentistry 2000; 12:300-308.

82. Harris CD, Holder AJ, Eick JD, Chappelow C.C., Stansbury JW. Semiempirical and ab initio conformational analysis of 2-methylene-8,8-dimethyl-1,4,6,10-tetraoxaspiro[4.5] decane with application of GIAO-SCF methods to NMR spectrum interpretation. Journal of Molecular Graphics and Modelling 2000; 18:567-580.

83. Stansbury JW, Antonucci JM. Dimethacrylate monomers with varied fluorine contents and distributions. Dental Materials 1999; 15:166-173.

84. Lovell LG, Stansbury JW, Syrpes DC, Bowman CN. Effects of composition and reactivity on the reaction kinetics of dimethacrylate dimethacrylate copolymerizations. Macromolecules 1999; 32:3913-3921.

85. Stansbury JW, Liu D-W, Kim SI. Polymer-supported quinuclidinyl catalysts for synthesis of cyclopolymerizable monomers via the aldehyde-acrylate coupling reaction. Macromolecules 1997; 30:4540-4543.

86. Choi KM, Stansbury JW. New families of photocurable oligomeric fluoromonomers for use in dental composites. Chemistry of Materials 1996; 8:2704-2707.

87. Stansbury JW, Dickens B, Liu D-W. Preparation and characterization of cyclopolymerizable resin formulations. Journal of Dental Research 1995; 74:1110-1115.

88. Stansbury JW. Observations related to the amine-catalyzed coupling reaction of aldehydes and acrylates. Macromolecules 1993; 26:2981-2982.

89. Stansbury JW, Antonucci JM. Evaluation of methylene lactone monomers in dental resins. Dental Materials 1992; 8:270-273.

90. Stansbury JW. Synthesis and evaluation of new oxaspiro monomers for double ring-opening polymerization. Journal of Dental Research 1992; 71:1408-1412.

91. Stansbury JW. Synthesis and evaluation of novel multifunctional oligomers for dentistry. Journal of Dental Research 1992; 71:434-437.

92. Stansbury JW. Difunctional and multifunctional monomers capable of cyclopolymerization. Macromolecules 1991; 24:2029-2035.

93. Stansbury, J.W. Cyclopolymerizable monomers for use in dental resin composites. Journal of Dental Research 1990; 69:844-848.

94. Brauer, G.M., Steinberger, D.R., Stansbury, J.W. Dependence of curing time, peak temperature, and mechanical-properties on the composition of bone-cement. Journal of Biomedical Materials Research 1986; 20:839-852.

95. Brauer, G.M., Stansbury, J.W., Flowers, D. Modification of cements containing vanillate or syringate esters. Dental Materials 1986; 2:21-27.

96. Stansbury, J.W., Brauer, G.M. Divanillates and polymerizable vanillates as ingredients of dental cements. Journal of Biomedical Materials Research 1985; 19:715-725.

97. Brauer, G.M., Stansbury, J.W. Intermediate restoratives from n-hexyl vanillate-EBA-ZnO-glass composites. Journal of Dental Research 1984; 63:1315-1320.

98. Brauer, G.M., Stansbury, J.W. Cements containing syringic acid-esters - ortho-ethoxybenzoic acid and zinc-oxide. Journal of Dental Research 1984; 63:137-140.

99. Brauer, G.M., Stansbury, J.W., Argentar, H. Development of high-strength, acrylic resin compatible adhesive cements. Journal of Dental Research 1983; 62:366-370.

100. Brauer, G.M., Stansbury, J.W., Antonucci, J.M. 4-N,N-Dialkylaminoethanols, - alkanoic acids and esters: New accelerators for dental composites. Journal of Dental Research 1981; 60:1343-1348.

MEETING PROCEEDINGS/PREPRINTS

1. Szczepanski, CR, Stansbury JW. Polymerization-induced phase separation in photoinitiated systems. Am Chem Soc, Polym Prepr 2012; 53(1):73-74.

2. Dailing, EA, Stansbury JW. Polymer network development from photoactive prepolymers. Am Chem Soc, Polym Prepr 2012; 53(1):261-262.

3. Liu JC, Stansbury JW. Comparison of shrinkage stress reduction by choosing different nanogel modified systems. Am Chem Soc, Polym Prepr 2011; 52(2):14-15.

4. Howard, G. Liu J, Lewis SH, Barros MD, Stansbury JW. Reduction of stress in reactive nanogel filled systems. Am Chem Soc, Polym Prepr 2011; 52(2): 14-15.

5. Stansbury JW, Pfeifer CS. Stress development in photopolymer networks and methods for its control. 17th Fusion UV Conference, November 2010, Tokyo and Osaka, Japan.

6. Schreck KM, Cramer NB, Couch C, Boulden JE, Stansbury JW, Bowman CN. Photopolymerized methacrylate:thiol-ene networks for dental restorative applications. Am Chem Soc, Polym Mater Sci Eng 2010; 103:270-271.

7. Pfeifer CS, Stansbury JW. Characterization of heterogeneity in polymerization-induced phase-separated all methacrylate systems: DMA and reaction kinetics. Radtech Conference, May 2010, Baltimore, MD.

8. Pfeifer CS, Lu H, Ge J, Stansbury J. Measurement and management of stress development in photopolymer networks. Radtech Conference, May 2010, Baltimore, MD.

9. Stansbury JW, Pfeifer CS. Tailoring polymethacrylate network structures through polymerization-induced phase separation. Am Chem Soc, Polym Prepr 2009; 50(1):393-394.

10. Johnson PM, Stansbury JW, Bowman CN. High throughput evaluation and formulation design for photopolymerization. Am Chem Soc, Polym Mater: Sci Eng 2008.

11. Lu H, Trujillo-Lemon M, Ge J, Newman SM, Stansbury JW. Stress development and relaxation in crosslinked dimethacrylate polymers. Am Chem Soc, Polym Mater: Sci Eng 2007; 97:838-839.

12. Shah PK, Stansbury JW. Modified filler-matrix interfaces in polymeric composites used as dental restoratives. Am Chem Soc, Polym Prepr 2007; 48(1):727-728.

13. Stansbury JW, Trujillo-Lemon M, Ding X, Newman SM. Controlled preparation of nanogel particles and their use as macromonomers. Am Chem Soc, Polym Prepr 2006; 47(2):825-826.

14. Kilambi H, Stansbury JW, Bowman CN. Mechanistic studies of enhanced polymerization characteristics of novel (meth)acrylic monomers. Am Chem Soc, Polym Prepr 2006; 47(1):30-31.

15. Shah PK, Stansbury JW. Polymer-brush modified fillers for dental composites. Am Chem Soc, Polym Prepr 2006; 47(1):494-495.

16. Crawford LR, Stansbury JW. Polymerization induced phase separation and polymerization sequence as controls of hybrid cationic/free radical photopolymerizations. Am Chem Soc, Polym Prepr 2006; 47(1):496-497.

17. Ge J, Lemon, MT, Stansbury JW. Photopolymerization of 2-methylene-7-phenyl-1,4,6,9-tetraoxaspiro[4.4]nonane. Am Chem Soc, Polym Prepr 2006; 47(1):492-493.

18. Ge J, Trujillo-Lemon M, Lu H, Stansbury JW. Investigation of alternative dimethacrylate structures in dental resins. Am Chem Soc, Polym Mater: Sci Eng 2005; 93:646-647.

19. Bowman CN, Lu H, Stansbury JW. Thiol-ene dental materials. Am Chem Soc, Polym Prepr 2004; 45(2):344-345.

20. Carioscia JA, Lu H, Stansbury JW, Bowman CN. Thiol-ene oligomers as dental restorative materials. Am Chem Soc, Polym Prepr 2004; 45(2):346-347.

21. Lin Y, Stansbury JW. Simultaneous characterizations of polymerization kinetics and volume shrinkage in dimethacrylate/divinyl ether hybrid systems. Am Chem Soc, Polym Prepr 2004; 45(2):354-355.

22. Trujillo M, Stansbury JW. Effect of external heating during photopolymerization on structure and properties of dental resins. Am Chem Soc, Polym Prepr 2004; 45(2):358-359.

23. Ding X, Stansbury JW. Polymer-brush modified fillers for dental composites. Am Chem Soc, Polym Prepr 2004; 45(2):339-340.

24. Stansbury JW, Ding X. Epoxy-brush modified fillers for dental composites. Am Chem Soc, Polym Prepr 2004; 45(2):341-342.

25. Kilambi H, Beckel ER, Stansbury JW, Bowman CN. Kinetic studies of novel (meth)acrylic monomers. Am Chem Soc, Polym Prepr 2004; 45(2):73-74.

26. Ding X, Stansbury JW, Newman S. Effect of polymer-brush modified filler on photopolymerization. Am Chem Soc, Polym Prepr 2004; 45(2):16-17.

27. Tanaka J, Stansbury JW, Antonucci JM, Suzuki K. Characteristic photo- and thermo-polymerization behavior and mechanical properties of UDMA/MAA system. Am Chem Soc, Polym Prepr 2004; 45(2):360-361.

28. Johnson P, Reynolds TB, Bowman CN, Stansbury JW. Rapid analysis of photopolymer conversion as a function of composition and exposure time. Am Chem Soc, Polym Mater: Sci Eng 2004, 90:346-347.

29. Lu H, Stansbury JW, Bowman CN. Probing the effect of curing conditions on shrinkage stress development and polymerization kinetics. Am Chem Soc, Polym Prepr 2003; 44(2):705-706.

30. Ge J, Trujillo M, Stansbury JW. Design of low shrinkage methacrylate polymers. Am Chem Soc, Polym Prepr 2003; 44(1):29-30.

31. Lin Y, Stansbury JW. *In situ* characterization of hybrid polymerization by NIR. Am Chem Soc, Polym Mater: Sci Eng 2003; 88:241-242.

32. Lin Y, Stansbury JW. Kinetics studies of hybrid structure formation by controlled photopolymerization. Am Chem Soc, Polym Prepr 2002; 43(1):254-255.

33. Lin Y, Stansbury JW. NIR spectroscopic investigation of water effects on cationic photopolymerization of vinyl ether. Am Inst Chem Eng, 2002; 3-8:646-658.

34. Lin Y, Stansbury JW. Application of FT-NIR spectroscopy for monitoring the kinetics of photoinitiated methacrylate/vinyl ether copolymerizations. Am Chem Soc, Polym Prepr 2001;42(2):809-810.

35. Dickens SH, Stansbury JW, Floyd CJE. NIR applications for measuring vinyl unsaturation and water sorption in dental dimethacrylate polymers. Am Chem Soc, Polym Prepr 2001; 42(1):275-276.

36. Stansbury JW, Tanaka J. Monitoring vinyl copolymerizations with near-infrared spectroscopy. Am Chem Soc, Polym Prepr 2001; 42(1):308-309.

37. Khatri CA, Antonucci JM, Stansbury JW, Schultheisz CR. Synthesis, characterization and evaluation of urethane derivatives of Bis-GMA. Am Chem Soc, Polym Prepr 2000; 41(2):1724-1725.

38. Antonucci JM, Stansbury JW, Fowler BO. An improved synthesis of ethyl α-hydroxymethylacrylate, a unique isomeric analog of HEMA. Am Chem Soc, Polym Prepr 2000; 41(2):1616-1617.

39. Lovell LG, Syrpes DC, Stansbury JW, Bowman CN. Dimethacrylate dental resins: the effects of comonomer on the polymerization kinetics. Am Chem Soc, Polym Prepr 1998; 39(2):260-261.

40. Antonucci JM, Fowler BO, Stansbury JW. Facile synthesis of oligomeric organofluorosilsesquioxanes. Am Chem Soc, Polym Prepr 1998; 39(2):810-811.

41. Stansbury JW, Choi KM. Homopolymerization studies of new fluorinated dimethacrylate monomers. Am Chem Soc, Polym Prepr 1998; 39(2):878-879.

42. Takahashi H, Antonucci JM, Stansbury JW, Wang FW. Relationship between the tensile and flexural strength of composite resins. Am Chem Soc, Polym Prepr 1997; 38(2):163-164.

43. Reed BB, Choi KM, Dickens SH, Stansbury JW. Effect of resin composition on kinetics of dimethacrylate photopolymerization. Am Chem Soc, Polym Prepr 1997; 38(2):108-109.

44. Antonucci JM, Fowler BO, Stansbury JW,Takahashi H. Facile syntheses of acrylic organosilsesquioxanes for dental applications. Am Chem Soc, Polym. Prepr. 1997; 38(2):118-119.

45. Stansbury JW, Choi KM, Antonucci JM. Considerations in the development of semifluorinated methacrylate dental resins and composites. Am Chem Soc, Polym Prepr 1997; 38(2):96-97.

46. Stansbury JW, Antonucci JM, Scott GL. Photocured composites based on dimethacrylate monomers of varied fluorine content. Am Chem Soc, Polym Prepr 1995; 36(1):831-832.

47. Stansbury JW, Liu D-W, Kim SI. A polymer-supported catalyst for synthesis of cyclopolymerizable monomers. Am Chem Soc, Polym Prepr 1994; 35(1):474-475.

48. Antonucci JM, Stansbury JW. Synthesis of novel polyfluorinated acrylic monomers and oligomers. Am Chem Soc, Polym Prepr 1993; 34:403-404.

49. Antonucci JM, Stansbury JW, Cheng G-W. Novel hydrophillic and hydrophobic acrylic monomers and oligomers for dental and medical applications. Am Chem Soc, Polym Prepr 1992; 33(2):522-523.

50. Stansbury JW. Ring-opening polymerization of a methacrylate-substituted spiro orthocarbonate. Am Chem Soc, Polym Prepr 1992; 33(2):518-519.

51. Antonucci JM, Stansbury JW, Reed BB. Radical ring-opening efficiency of two aryl substituted cyclic ketene acetals: composite applications. Am Chem Soc, Polym Prepr 1992; 33(1):507-508.

52. Antonucci JM, Stansbury JW, Fowler BO, Eichmiller F. Synthesis, characterization and evaluation of vinyl metallocarboxylates. Am Chem Soc, Polym Prepr 1990; 31(2):64-65.

53. Stansbury JW. Synthesis and double ring-opening polymerization of spiro orthocarbonates. Am Chem Soc, Polym Prepr 1990; 31(2):59.

54. Antonucci, J.M., Stansbury, Cheng, G.W. A facile synthesis of novel fluorinated multifunctional acrylates. Am Chem Soc, Polym Prepr 1990; 31(1):320-321.

55. Stansbury, J.W. Synthesis and polymerization of difunctional and multifunctional monomers capable of cyclopolymerization. Am Chem Soc, Polym Prepr 1990; 31(1):503-504.

56. Stansbury, J.W., Bailey W.J. Evaluation of spiro orthocarbonate monomers capable of polymerization with expansion as ingredients in dental composite-materials. Am Chem Soc, Polym Mater Sci Eng 1988; 59:402-406.

57. Antonucci, J.M., Stansbury, J.W., Venz, S. Synthesis and properties of a polyfluorinated

prepolymer multifunctional urethane methacrylate. Am Chem Soc, Polym Mater Sci Eng 1988; 59:388-396.

BOOK CHAPTERS

1. Antonucci JM, Stansbury JW. Molecularly designed dental polymers. In: Arshady R, ed. Desk reference of functional polymers. Washington, D.C.: American Chemical Society Books; 1997:719-738.

2. Antonucci JM, Stansbury JW, Cheng G-W. Synthesis of novel hydrophilic and hydrophobic multifunctional acrylic monomers. In "Polymers of Biological and Biomedical Significance", Shalaby, S.W., ed., American Chemical Society, Symposium Series 540, 191-201, 1994.

3. Reed BB, Stansbury JW, Antonucci JM. Ring-opening dental resin systems based on cyclic acetals. In "Polymers of Biological and Biomedical Significance", Shalaby, S.W., ed., American Chemical Society, Symposium Series 540, 184-190, 1994.

4. Stansbury JW. Ring-opening polymerization of a 2-methylene spiro orthocarbonate bearing a pendant methacrylate group. In "Polymers of Biological and Biomedical Significance", Shalaby, S.W., ed., American Chemical Society, Symposium Series 540, 171-183, 1994.

5. Stansbury JW. Free radical polymerization of expandable oxaspiro monomers. In "Expanding Monomers: Synthesis, Characterization and Applications", Sadhir, R.K., Luck, R.M., editors, Boca Raton: CRC Press, 153-185, 1992.

Other Publications

1. Pfeifer CS, Lu H, Ge J, Stansbury JW. Measurement and management of stress development in photopolymer networks. RadTech Report Spring 2011:39-42

2. Stansbury JW, Bowman CN. The progress in development of dental restorative materials. Material Matters 2010; 5:73-76.

PUBLISHED ABSTRACTS

IADR/AADR Abstracts

1. Abualenain D, Lewis SH, Barros MD, Price M, Stansbury JW. Effects of combined inorganic and nanogel fillers on composite properties. 2013 IADR Meeting Seattle, WA.

2. Lewis SH, Abualenain D, Makhija M, Barros MD, Stansbury JW. Reactive nanogels as additives in dental resin and composite materials. 2013 IADR Meeting Seattle, WA.

3. Ramirez JJ, Barros MD, Lewis SH, Stansbury JW. Polymeric nanoparticle design to control performance of resin-dispersed nanogel additives. 2013 IADR Meeting Seattle, WA.

4. Inter-particle and particle/matrix interactions involving reactive nanogel additives. Makhija M, Lewis SH, Stansbury JW. 2013 IADR Meeting Seattle, WA.

5. Barros MD, Stansbury JW. Mechanical property effects associated with quaternary ammonium-functionalized dental polymers. 2013 IADR Meeting Seattle, WA.

6. Liu J, Stansbury JW. Control of polymer property development based on photo-reactive nanogel additives. 2013 IADR Meeting Seattle, WA.

7. Pfeiffer CS, Nguyen A, Lewis SH, Stansbury JW. Thio-urethane oligomers as low-stress additives in dental composites. 2013 IADR Meeting Seattle, WA.

8. Yamasaki LC, Barros M, Lewis S, Pfeifer C, Stansbury J, Francci C. Moisture/temperature effects on cationic/radical dental composite polymerizations. 2012 IADR Meeting Iguacu Falls, Brazil.

9. Tanaka J, Irie M, Stansbury J, Antonucci J, Matsumoto T. Characteristic properties of multi-functional vinyl esters / PMMA resins. 2012 IADR Meeting Iguacu Falls, Brazil.

10. Abuelenain DA, Lewis SH, Stansbury JW. Conversion-dependent property evolution during vitrification for photocured dimethacrylate polymer networks. 2012 IADR Meeting Iguacu Falls, Brazil.

11. Pfeifer CS, Lewis SH, Stansbury JW. Thio-urethane oligomers as low-stress, tough additives in methacrylate polymerizations. 2012 IADR Meeting Iguacu Falls, Brazil.

12. Pfeifer CS, Lewis SH, Stansbury JW. Conversion-dependent shrinkage in (meth)acrylates as a function of irradiance. 2012 AADR Meeting, Tampa, FL.

13. Vraney C, Barros MD, Pfeifer CS, Stansbury JW. Methods to control composition, kinetics and properties in phase-separated resins. 2012 AADR Meeting, Tampa, FL.

14. Makhija M, Lewis SH, Stansbury JW. Studies with solvent-dispersed reactive nanogels. 2012 AADR Meeting, Tampa, FL.

15. Stansbury JW, Yi H, Lewis SH, Makhija M, Dailing EA. Development and application of water-dispersible nanogels. 2012 AADR Meeting, Tampa, FL.

16. Lewis SH, Barros MD, Makhija M, Stansbury JW. Low Tg nanogels as reactive additives in polymeric dental materials. 2012 AADR Meeting, Tampa, FL.

17. Barros MD, Stansbury JW. Acrylate/methacrylate comonomer combinations to control nanogel structural development. 2012 AADR Meeting, Tampa, FL.

18. Yang B, Dickens SH, Barros MD, Dunkers J, Antonucci JM, Stansbury JW. Effect of nanogel-modified adhesives on dentin bonding. 2011 IADR Meeting, San Diego, CA.

19. Barros MD, Lewis SH, Stansbury JW. Synthetic control of nanogel particle structure and properties. 2011 IADR Meeting, San Diego, CA.

20. Lewis SH, Stansbury JW. Effects of nanogel modulus and loading level on photopolymerization stress development. 2011 IADR Meeting, San Diego, CA.

21. Wilson ND, Szczepanski C, Pfeifer CS, Stansbury JW. Compositional drift and network formation in heterogeneous methacrylate materials. 2011 IADR Meeting, San Diego, CA.

22. Pfeifer CS, Shelton ZR, Lewis SH, Stansbury JW. Gel-point determination in methacrylate polymers formed with chain-transfer contributions. 2011 IADR Meeting, San Diego, CA.

23. Shelton ZR, Barros MD, Lewis SH, Pfeifer CS, Stansbury JW. Regiospecific polymerization based on nanogel-tethered photoinitiator. 2011 IADR Meeting, San Diego, CA.

24. Aguirre Soto HA, Stansbury JW. A three-component photoinitiator system with extensive dark cure potential. 2011 IADR Meeting, San Diego, CA.

25. Pfeifer CS, Shelton ZR, Lewis S, Stansbury JW. Heterogeneity induced by low-profile additives: stress reduction mechanism in dimethacrylates. 2010 IADR Meeting, Barcelona, Spain.

26. Tanaka J, Hashimoto Y, Takeda S, Stansbury JW, Antonnuci JM, Suzuki K. Characteristic flexural properties of thermo-polymerized divinyl adipate/PMMA paste. 2010 IADR Meeting, Barcelona, Spain.

27. Shelton Z, Pfeifer CS, Stansbury JW. Designing nano-structured methacrylate networks through polymerization-induced phase-separation (PIPS). 2010 IADR Meeting, Barcelona, Spain.

28. Wilson N, Pfeifer CS, Lewis S, Redla V, Stansbury JW. Low-stress dimethacrylate networks formed with chain-transfer agents at various concentrations. 2010 IADR Meeting, Barcelona, Spain.

29. Moraes R, Garcia J, Correr-Sobrinho L, Stansbury JW. Using crosslinked nanoparticles to address shrinkage-related challenges in dental polymers. 2010 IADR Meeting, Barcelona, Spain.

30. Grow L, Newman SM, Stansbury JW. Characterization of BPA-free monomer. 2010 IADR

Meeting, Barcelona, Spain.

31. Shah PK, Lakeman Z, Stansbury JW. Modified filler surfaces in polymeric composites used as dental restoratives. 2010 AADR Meeting, Washington, DC.

32. Pfeifer CS, Shelton ZR, Stansbury JW. Heterogeneous networks formed by TEGDMA/low-profile additives: kinetics of conversion. 2010 AADR Meeting, Washington, DC.

33. Stansbury JW, Kim D, Barros M, Pfeifer C. Visible light-activated methacrylate polymerization with unique dark cure behavior. 2010 AADR Meeting, Washington, DC.

34. Barros M, Pfeifer C, Stansbury JW. Newly synthesized aliphatic monomers: copolymerizations with BisGMA and BisEMA. 2010 AADR Meeting, Washington, DC.

35. Wilson N, Pfeifer C, Barros M, Stansbury JW. Polymerization stress reduction through delayed gelation. 2010 AADR Meeting, Washington, DC.

36. Shelton ZR, Pfeifer CS, Stansbury JW. Kinetics of conversion of cyclic enes / thiol copolymerized with BisEMA. 2010 AADR Meeting, Washington, DC.

37. Tanaka J, Hashimoto Y, Nakamura M, Stansbury JW, Antonucci JM, Suzuki K. Characteristic viscoelasticity of denture liner using vinyl ester/PEMA paste. 2009 IADR Meeting, Miami, FL.

38. Pfeifer CS, Stansbury JW. Heterogeneous methacrylate networks: characterization of reaction kinetics and optical properties. 2009 IADR Meeting, Miami, FL.

39. Gonçalves F, Pfeifer CSC, Stansbury JW, Braga RR. Effect of BisGMA:TEGDMA and UDMA:TEGDMA ratios on composite polymerization stress. 2009 IADR Meeting, Miami, FL.

40. Pfeifer CS, Shelton ZR, Greenstein L, Moraes RR, Shah PK, Stansbury JW. Iniferter effects on kinetic, mechanical and viscoelastic properties of dimethacrylates. 2009 IADR Meeting, Miami, FL.

41. Garcia JW, Moraes RR, Stansbury JW. Methods for formation of crosslinked polymeric nanoparticles. 2009 IADR Meeting, Miami, FL.

42. Wilson ND, Moraes RR, Stansbury JW. Modification of dental adhesives with reactive nano-scale polymeric particles. 2009 IADR Meeting, Miami, FL.

43. Moraes RR, Garcia JW, Stansbury JW. Shrinkage reduction in resins and composites modified with polymeric nanoparticles. 2009 IADR Meeting, Miami, FL.

44. Tanaka J, Hashimoto Y, Nakamura M, Stansbury JW, Antonucci JM, Suzuki K. Multi-

functional denture liner using divinyl sebacate/PEMA paste. 2008 IADR Meeting, Toronto, Canada.

45. Guimarães TC, Pfeifer CS, Braga RR, Stansbury JW. Conversion of resins with different amine:camphorquinone ratios and concentrations. 2008 IADR Meeting, Toronto, Canada.

46. Stansbury JW. Use of well-designed polymers and polymerization methods to address challenges in dental materials. 2008 IADR Meeting, Toronto, Canada.

47. Kim D, Stansbury JW. Radical-based visible-light initiator system with extensive dark cure potential. 2008 IADR Meeting, Toronto, Canada.

48. Garcia JW, Shah PK, Bowman CN, Stansbury JW. Effects of reaction kinetics and conversion on photopolymerization stress development. 2008 AADR Meeting, Dallas, TX.

49. Wilson ND, Newman SM, Stansbury JW. Depth-dependent photopolymerization reaction kinetics in dental composites. 2008 AADR Meeting, Dallas, TX.

50. Kleinman B, Newman SM, Stansbury JW. Varying hydrophilic resin composite matrices affects on strength versus time. 2008 AADR Meeting, Dallas, TX.

51. Abbott SM, Garcia JW, Newman SM, Stansbury JW. Conversion-dependent mechanical stress relaxation behavior in crosslinked polymers. 2008 AADR Meeting, Dallas, TX.

52. Cramer N, Kilambi H, Schneidewind L, Stansbury JW, Bowman CN. Highly reactive monomethacrylates as reactive diluents for dimethacrylate-based dental composites. 2008 AADR Meeting, Dallas, TX.

53. Stansbury JW. Real-time monitoring of conversion dependence of polymerization shrinkage and stress. 2008 AADR Meeting, Dallas, TX.

54. Howe S, Newman SM, Stansbury JW. Bond strength of thiol-ene/methacrylate composite restorative materials. 2008 AADR Meeting, Dallas, TX.

55. Musange L, Ferracane JL, Stansbury JW. Effects of photoinitiator/co-initiators on degree and rate of monomer conversion. 2007 IADR Meeting, New Orleans, LA.

56. Cramer N, Carioscia J, Stansbury J, Bowman C. Ternary thiol-ene systems as low-stress, high-Tg dental restorative materials. 2007 IADR Meeting, New Orleans, LA.

57. Howard B, Newman SM, Stansbury JW. Coupled dynamic spectroscopic characterization of composite restorative photopolymerization. 2007 IADR Meeting, New Orleans, LA.

58. Tanaka J, Hashimoto Y, Nakamura M, Stansbury JW, Antonucci JM, Suzuki K. Application of vinyl ester/PEMA paste to denture liner. 2007 IADR Meeting, New Orleans, LA.

59. Newman SM, Sheth S, Stansbury JW. Polymerization shrinkage versus conversion in commercial composites. 2007 IADR Meeting, New Orleans, LA.

60. Stansbury JW. Developing new chemistries for polymeric dental materials. 2006 IADR Meeting, Brisbane, Australia. Invited keynote talk.

61. Stansbury JW, Crawford LR. Polymerization-induced phase separation in methacrylate/vinyl ether mixtures. 2006 IADR Meeting, Brisbane, Australia.

62. Carioscia JA, Bowman CN, Stansbury JW. Free radical and anionic polymerizations of thiol-ene/thiol-epoxy hybrid systems. 2006 IADR Meeting, Brisbane, Australia.

63. Bowman CN, Lu H, Lehigh BE, Stansbury JW. Hybrid methacrylate/thiol-ene system for novel dental resins. 2006 IADR Meeting, Brisbane, Australia.

64. Tanaka J, Stansbury JW, Antonucci JW, Suzuki K. Characteristic properties of a novel compomer using UDMA/MAA matrix resin. 2006 IADR Meeting, Brisbane, Australia.

65. Lu H, Newman SM, Bowman CN, Stansbury JW. Dimer acid derived dimethacrylates for ternary dental restorative resins. 2006 AADR Meeting, Orlando, FL.

66. Cramer N, Carioscia JA, Lu H, Stansbury JW, Bowman CN. Thiol-enes as low-shrinkage, low-stress, high-tg dental restorative materials. 2006 AADR Meeting, Orlando, FL.

67. Ding X, Stansbury JW. Resin-based improvements of composites containing polymer brush-modified fillers. 2005 IADR Meeting, Baltimore, MD.

68. Trujillo-Lemon M, Lu H, Stansbury JW. Thermal effects on photopolymerization stress development. 2005 IADR Meeting, Baltimore, MD.

69. Ge J, Trujillo-Lemon M, Lu H, Stansbury JW. Dimer acid-derived dimethacrylates as diluent monomers in restorative resins. 2005 IADR Meeting, Baltimore, MD.

70. Tanaka J, Hashimoto T, Stansbury JW, Antonucci JM, Suzuki K. Novel fluoride-releasing compomers based on UDMA/MAA matrix resins. 2005 IADR Meeting, Baltimore, MD.

71. Ding X, Stansbury JW. Polymer-brush modified filler for dental composites. 2004 IADR Meeting, Honolulu, HI.

72. Stansbury JW, Ding X, Trujillo M, Johnson B. Nanogels as organic fillers for resin-based dental materials. 2004 IADR Meeting, Honolulu, HI.

73. Newman SM, Stansbury JW, Bowman CN. Synthesis and photopolymerization kinetics of hydroxymethacrylates. 2004 IADR Meeting, Honolulu, HI.

74. Tanaka J, Stansbury JW, Antonucci JM, Suzuki K. Characteristic water durability behavior of UDMA/methacrylic acid resin. 2004 IADR Meeting, Honolulu, HI.

75. Lu H, Stansbury JW, Bowman CN. Filler effect on shrinkage stress and in situ polymerization kinetics. 2004 IADR Meeting, Honolulu, HI.

76. Lin Y, Stansbury JW. Simultaneous conversion and shrinkage characterization in methacrylate-vinyl ether hybrid systems. 2004 IADR Meeting, Honolulu, HI.

77. Bowman CN, Lu H, Stansbury JW. Novel investigation of thiol-ene system for future dental restorative resins. 2004 IADR Meeting, Honolulu, HI.

78. Stansbury JW, Lin Y. Controlled photopolymerization of methacrylate-vinyl ether hybrid resins. 2003 IADR Meeting, Goteborg, Sweden.

79. Hui L, Stansbury JW, Dickens SH, Eichmiller FC, Bowman CN. Effect of curing protocol on polymerization shrinkage stress development. 2003 IADR Meeting, Goteborg, Sweden.

80. Beckel ER, Hui L, Nie J, Stansbury JW, Bowman CN. Fundamental studies of novel (meth)acrylate monomers for dental restorative applications. 2003 IADR Meeting, Goteborg, Sweden.

81. Tanaka J, Chujo S, Stansbury JW, Antonucci JM, Suzuki K. Characteristic polymerization shrinkage behavior of UDMA/acidic monomer resins. 2003 IADR Meeting, Goteborg, Sweden.

82. Astroth JD, Naasz K, Berg RG, Stansbury JW. Effect of heat activation on setting times of glass ionomers. 2003 IADR Meeting, Goteborg, Sweden.

83. Stansbury JW, Trujillo M, Bowman CN. Development of pH-responsive Hydrogels as Biomaterials. 2003 AADR Meeting, San Antonio, TX.

84. Newman SM, Stansbury JW, Bowman CN, Knauss DM. Fast-reacting novel monomethacrylates. 2003 AADR Meeting, San Antonio, TX.

85. Ge J, Trujillo M, Stansbury JW. Design of low-shrinkage methacrylate polymers. 2003 AADR Meeting, San Antonio, TX.

86. Schneider M, Trujillo M, Stansbury JW. Hydrogen bonding interactions in dental resins. 2003 AADR Meeting, San Antonio, TX.

87. Trujillo M, Stansbury JW. Thermal effects on composite photopolymerization monitored by real-time NIR. 2003 AADR Meeting, San Antonio, TX.

88. Lu H, Dickens SH, Eichmiller FC, Stansbury JW, Bowman CN. Novel method of simultaneous measurement of polymerization shrinkage stress and conversion. 2003 AADR Meeting, San Antonio, TX.

89. Bowman CN, Lu H, Nie J, Stansbury JW. Development of rapidly polymerizing monomethacrylates as reactive diluents. 2003 AADR Meeting, San Antonio, TX.

90. Moss L, Rueggeberg FA, Stansbury JW. Effect of solvent type on absorption profile of camphorquinone. IADR Meeting, March 2002, San Diego, CA.

91. Kim J, Astroth J, Stansbury JW. Effect of an inert filter on physical properties of ethyl/isobutyl methacrylate. IADR Meeting, March 2002, San Diego, CA.

92. Jiro T, Stansbury JW, Antonucci JM, Suzuki K. Effect of acidic monomer structure on polymer properties of UDMA/Acidic monomer resins. IADR Meeting, March 2002, San Diego, CA.

93. Stansbury JW, Trujillo M. Preparation and applications of soluble hyperbranched polymeric particles. IADR Meeting, March 2002, San Diego, CA.

94. Astroth J, Kim J, Stansbury JW. Suitability of sapphire as a complete denture impression material. IADR Meeting, March 2002, San Diego, CA.

95. Watts D, Stansbury J, Nagel R, Kunzelmann K. Controversies in polymerization of light-activated polymer matrix composites. IADR Meeting, June 27, 2001, Chiba, Japan.

96. Tanaka J, Stansbury JW, Antonucci JM, Suzuki K. Cross-linked dental resin reinforced with noncovalent bond. IADR Meeting, June 28, 2001, Chiba, Japan.

97. Stansbury JW, Tanaka J. Effect of monomer structure and resin composition on photopolymerization. IADR Meeting, June 29, 2001, Chiba, Japan.

98. Stansbury, J.W. (2001). Modifying dental resins with monomers based on dimer acid. AADR Meeting, Chicago, IL.

99. Lefebvre, C.A., Schuster, G.S., Rueggeberg, F.A., Stansbury, J.W., Caughman, G.B. (2001). Cytotoxicity of Bis-GMA, its precursors and degredation products. AADR Meeting, Chicago, IL.

100. Stansbury, J.W., Tanaka, J., Antonucci, J.M. (2000). Photopolymerization studies and polymer properties of methacrylate/vinyl ester resins. IADR Meeting, Washington, D.C.

101. Tanaka, J., Stansbury, J.W., Antonucci, J.M. (2000). New hydrophobic diluent monomers for UDMA and Bis-GMA. IADR Meeting, Washington, D.C.

102. Antonucci, J.M., Stansbury, J.W., Fowler, B.O. (2000). Synthesis and characterization of ethyl α-hydroxymethylacrylate, a novel isomeric analog of HEMA. IADR Meeting, Washington, D.C.

103. Lovell, L.G., Lu, H., Stansbury, J.W., Bowman, C.N. (2000). The effect of cure rate on the mechanical properties of dental resins. IADR Meeting, Washington, D.C.

104. Khatri, C.A., Antonucci, J.M., Stansbury, J.W. (2000). Synthesis and characterization of urethane derivatives of Bis-GMA. IADR Meeting, Washington, D.C.

105. Skrtic, D., Antonucci, J.M., Eichmiller, F.C., Stansbury, J.W. (2000). Polymerization shrinkage and methacrylate conversion in amorphous calcium phosphate composites. IADR Meeting, Washington, D.C.

106. Hartzell, S.L., Stansbury, J.W., Schumacher, G.E. (2000). Comparison of Bis-GMA/HEMA and UDMA/HEMA adhesive resins. IADR Meeting, Washington, D.C.

107. Berchtold, K.A., Stansbury, J.W., Bowman, C.N. (2000). Structural effects on the cure characteristics of functionalized methacrylate monomers. IADR Meeting, Washington, D.C.

108. Xu, H.H.K., Smith, D.T., Schumacher, G.E., Eichmiller, F.C., Antonucci, J.M., Stansbury, J.W. (2000). Whisker-reinforced composites: effects of filler level, heat-cure temperature and time. IADR Meeting, Washington, D.C.

109. Stansbury, J.W., Dickens, S.H. (1999). Near-infrared analysis of conversion in resins and composites. IADR Meeting, Vancouver, B.C., Canada.

110. Dickens, S.H., Stansbury, J.W., Floyd, C.J.E. (1999). Effects of chemical composition on cure properties of dental resins. IADR Meeting, Vancouver, B.C., Canada.

111. Khatri, C.A., Stansbury, J.W. (1999). Investigation of alternatives to urethane dimethacrylate in dental resins. IADR Meeting, Vancouver, B.C., Canada.

112. Takahashi, H., Antonucci, J.M., Stansbury, J.W. (1999). Effect of silane coupling agent and filler on composite durability. IADR Meeting, Vancouver, B.C., Canada.

113. Stansbury, J.W., Dickens, S.H., Khatri, C.A. (1998). Compositional drift during the copolymerization of dental resins. IADR Meeting, Nice, France.

114. Stansbury, J.W., Choi, K.M., Khatri, C.A., Reed, B.B., Dickens, S.H. (1998). Photopolymerization kinetics of methacrylate dental resins. AADR Meeting, Minneapolis, MN.

115. Antonucci, J.M., Fowler, B.O., Stansbury, J.W. (1998). Facile synthesis of silanated derivatives of Bis-GMA. AADR Meeting, Minneapolis, MN.

116. Farahani, M., Stansbury, J.W., Antonucci, J.M., Phinney, C.S. (1997). The addition reaction of aryl amines with acrylic monomers: A gas chromatography-mass spectrometry study. IADR Meeting, Orlando, FL.

117. Antonucci, J.M., Fowler, B.O., Stansbury, J.W. (1997). Facile synthesis of reactive organosilsesquioxanes for dental applications. IADR Meeting, Orlando, FL.

118. Stansbury, J.W., Dermann, M.H. (1997). Radical/cationic photopolymerization of spiro orthocarbonate-modified methacrylate resins. IADR Meeting, Orlando, FL.

119. Stansbury, J.W., Antonucci, J.M., Choi, K.M. (1996). High strength hydrophobic composites from urethane-containing fluorinated resins. IADR Meeting, San Francisco, CA.

120. Antonucci, J.M., Stansbury, J.W., Kim, S.I. (1995). Effect of long chain silane coupling agent on composite strength. IADR Meeting, Singapore.

121. Stansbury, J.W., Kim, S.I., Scott, G., Antonucci, J.M. (1995). Low surface energy monomers with varied fluorine contents and distributions. AADR Meeting, San Antonio, TX.

122. Reed, B.B., Antonucci, J.M., Stansbury, J.W. (1995). Cationic polymerization of vinyl cyclic acetals by visible light. AADR Meeting, San Antonio, TX.

123. Gingreau, C., Antonucci, J.M., Stansbury, J.W. (1995). Visible light polymerization of vinyl ether-acrylic monomer systems. AADR Meeting San Antonio.

124. Stansbury, J.W., Liu, D.-W., Kim, S.I. (1994). Ring-opening polymerization with expansion and crosslink formation. IADR Meeting, Seattle, WA.

125. Reed, B.B., Antonucci, J.M., Stansbury, J.W. (1994). Synthesis of a vinyl cyclic ketal derivative of camphorquinone. IADR Meeting, Seattle, WA.

126. Liu, D.-W., Kim, S.I., Stansbury, J.W. (1994). Polymer-supported catalysts for synthesis of cyclopolymerizable monomers. IADR Meeting, Seattle, WA.

127. Stansbury, J.W., Liu, D.-W. (1993). One-step synthesis/formulation of cyclopolymerizable dental resins. IADR Meeting, Chicago, IL.

128. Antonucci, J.M.; Liu, D.-W.; Stansbury, J.W. (1993). Synthesis of hydrophobic oligomeric monomers for dental applications. IADR Meeting, Chicago, IL.

129. Stansbury, J. W.; Antonucci, J.M.; Reed, B.B. (1993). Initiator effects on the tensile strength of novel dental composites. IADR Meeting, Chicago, IL.

130. Antonucci, J.M., Stansbury, J.W., Keeny, S.M., Matsukawa, S. (1992). Effect of

aldehydes on the mechanical strength of dental composites. IADR Meeting, Glasgow, Scotland.

131. Stansbury, J.W. (1992). Spiro orthocarbonate-substituted methacrylates: New monomers for ring-opening polymerization. AADR Meeting, Boston, MA.

132. Antonucci, J.M., Stansbury, J.W., Farahani, M. (1992). Polymerization of dental resins via amine-acid interactions. AADR Meeting, Boston, MA.

133. Reed, B.B., Stansbury, J.W., Antonucci, J.M. (1992). Ring-opening dental resin systems based on cyclic acetals. AADR Meeting, Boston, MA.

134. Stansbury, J.W. (1991). Improved monomers for double ring-opening polymerization with expansion. IADR Meeting, Acapulco, Mexico.

135. Antonucci, J.M., Stansbury, J.W., Cheng, G.-W. (1991). Synthesis of novel hydrophilic and hydrophobic multifunctional monomers. IADR Meeting, Acapulco, Mexico.

136. Cheng, G.-W., Stansbury, J.W., Antonucci, J.M. (1990). Synthesis of novel highly fluorinated multifunctional vinyl monomers and oligomers. IADR Meeting, Cincinnati, OH.

137. Stansbury, J.W. (1990). Evaluation of a new multifunctional oligomer for dental composites. IADR Meeting, Cincinnati, OH.

138. Antonucci, J.M., Stansbury, J.W., Fowler, B.O., Eichmiller, F. (1990). Monomer systems based on multivalent metal monocarboxylate monomers. IADR Meeting, Cincinnati, OH.

139. Antonucci, J.M., Stansbury, J.W., Fowler, B.O. (1989). Synthesis of multivalent metal dicarboxylate monomers. IADR Meeting, Dublin, Ireland.

140. Stansbury, J.W. (1989). Synthesis and high conversion polymerization of novel difunctional monomers. AADR Meeting, San Francisco, CA.

141. Antonucci, J.M., Stansbury, J.W. (1989). Polymer-modified glass ionomer cements. AADR Meeting, San Francisco, CA.

142. Stansbury, J.W., Antonucci, J.M. (1987). Evaluation of alpha-methylene-gamma-butyrolactone as a monomer in dental resin formulations. IADR Meeting, Chicago, IL.

143. Lee, C., Brauer, G.M., Stansbury, J.W. (1986). Copolymers of 2-isocyanatoethyl methacrylate or m-isopropenyl-α,α-dimethylbenzyl isocyanate – Synthesis and adhesive properties. IADR Meeting, The Hague, The Netherlands.

144. Antonucci, J.M., Stansbury, J.W., Venz, S. (1986). Synthesis of silyl ether derivatives of Bis-GMA. AADR Meeting, Washington, D.C.

145. Stansbury, J.W., Bailey, W.J. (1986). Synthesis of monomers that polymerize with expansion in volume. AADR Meeting, Washington, D.C.

146. Antonucci, J.M., Stansbury, J.W., Venz, S. (1985). Synthesis of a polyfluorinated prepolymer multifunctional urethane methacrylate. IADR Meeting, Las Vegas, NV.

147. Brauer, G.M., Stansbury, J.W. (1985). Color changes of composites on exposure to various energy sources. IADR Meeting, Las Vegas, NV.

148. Stansbury, J.W., Brauer, G.M. (1985). Properties of vanillate and syringate cements containing various fluorides. IADR Meeting, Las Vegas, NV.

149. Brauer, G.M., Stansbury, J.W. (1984). Modification of cements containing vanillate or syringate esters. IADR Meeting, Dallas, TX.

150. Stansbury, J.W., Brauer, G.M. (1984). Bonding of vanillate and syringate cements to various substrates. IADR Meeting, Dallas, TX.

151. Antonucci, J.M., Venz, S., Dudderar, D.J., Stansbury, J.W. (1984). Non-aqueous polycarboxylate cements based on dimer and trimer acids. IADR Meeting, Dallas, TX.

152. Brauer, G.M., Stansbury, J.W. (1983). Intermediate restoratives from n-hexyl vanillate EBA-ZnO-glass composites. IADR Meeting, Sydney, Australia.

153. Brauer, G.M., Stansbury, J.W. (1983). Dental cements containing hexyl syringates. AADR Meeting, Cincinnati, OH.

154. Stansbury, J.W., Brauer, G.M., Antonucci, J.M. (1983). Divanillates and polymerizable vanillates as ingredients of dental cements. AADR Meeting, Cincinnati, OH.

155. Antonucci, J.M., Venz, S., Brauer, G.M., Duddarar, D. (1983). Formulation and evaluation of fluorine-containing composite resins. AADR Meeting, Cincinnati, OH.

156. Brauer, G.M., Stansbury, J.W. (1981). Peroxy esters and hydroperoxides as initiators for composite resins. IADR Meeting, Chicago, IL.

157. Stansbury, J.W., Argentar, H., Brauer, G.M. (1981). Cements from 2,5-dimethoxyphenol and zinc oxide. IADR Meeting, Chicago, IL.

158. Brauer, G.M., Stansbury, J.W. (1980). Derivatives of p-N,N-dialkylaminophenylalkanoic acid: New accelerators for dental composites. IADR Meeting, Osaka, Japan.

Lunch and Learning Presentations at AADR/IADR

1. Iguacu Falls, Brazil IADR for DMG (6/12) The chemistry and photochemistry of resin composites.

Other Published Abstracts

1. Aguirre Soto A, Hwang A, Stansbury JW. Probing photopolymerization reactions with real-time UV/Vis/near-IR spectroscopy. October 2012, Academy of Dental Materials, Orlando, FL.

2. Anderson RK, Morrill JA, Bowman CN, Stansbury JW. Experimental investigation of the polymerization reactivity of novel acrylate monomers bearing carbamate functionality. March 2011, Division of Chemical Education, American Chemical Society, Anaheim, CA.

3. Stansbury JW, Moraes RR, Garcia JW, Barros MD, Lewis SH, Pfeifer CS. Nanogel-modified composite materials: route to low shrinkage and stress. October 2010, Academy of Dental Materials, Trieste, Italy.

4. Pfeifer CS, Wilson ND, Lewis SH, Shelton ZR, Stansbury JW. Delayed gelation through chain-transfer reactions: stress reduction in methacrylate networks. October 2010, Academy of Dental Materials, Trieste, Italy.

5. Kim D, Barros M, Pfeifer C, Knigge K, Stansbury JW. Radical photopolymerizations with extensive dark cure potential. Pacific Polymer Conference 11, Cairns, Australia, December 9, 2009.

6. Shah PK, Garcia JW, Plaseied A, Newman SM, Stansbury JW. Conversion-dependent stress relaxation in dental resins and composites. April 2009, Society for Biomaterials Meeting, San Francisco, CA.

7. Gozalo DJ, Stansbury JW, Baker KP. The effect of implant design on primary stability. February 2009, University of Colorado School of Dental Medicine Research Day, Aurora, CO.

8. Shah PK, Stansbury JW. Conversion dependent evolution of shrinkage, modulus and stress: filler effects. October 2008, Academy of Dental Materials Meeting, Wurzburg, Germany.

9. Pfeifer CS, Stansbury JW, Newman SM. Simultaneous evaluation of degree of conversion and modulus development of an unfilled resin. October 2008, Academy of Dental Materials Meeting, Wurzburg, Germany.

10. Kim D, Pfeifer CS, Jozsa A, Stansbury JW. Three-component radical photoinitiator system: improving methacrylate conversion in the dark. February 2009, University of Colorado

School of Dental Medicine Research Day, Aurora, CO.

11. Kim S, Cramer NB, Stansbury JW. Comparing mechanical properties of chain-growth dimethacrylate and step-growth thiol-ene network polymers. February 2008, University of Colorado School of Dental Medicine Research Day, Aurora, CO.

12. Shah PK, Stansbury JW. Effect of particulate filler content on the simultaneous development of shrinkage, modulus and shrinkage stress, as a function of conversion, for a visible light cured composite. February 2008, University of Colorado School of Dental Medicine Research Day, Aurora, CO.

13. Guimarães TC, Pfeifer CS, Braga RR, Stansbury JW. Conversion of resins with different amine:camphorquinone ratios and concentrations. February 2008, University of Colorado School of Dental Medicine Research Day, Aurora, CO.

14. Garcia JW, Shah PK, Stansbury JW. Effects of reaction kinetics and conversion on photopolymerization stress development. February 2008, University of Colorado School of Dental Medicine Research Day, Aurora, CO.

15. Wilson N, Newman SM, Stansbury JW. Depth-dependent photopolymerization reaction kinetics in dental composites. February 2008, University of Colorado School of Dental Medicine Research Day, Aurora, CO.

16. Schreck KM, Boulden JE, Hetzel AK, Cramer NB, Stansbury JW, Bowman CN. Methacrylate-thiol-ene compositions for dental restorative materials. February 2008, University of Colorado School of Dental Medicine Research Day, Aurora, CO.

17. Johnson, P., Bowman, C.N., Stansbury, J.W. Production of light intensity gradients for photopolymer conversion analysis. February 2007, University of Colorado School of Dentistry Research Day, Aurora, CO.

18. Shah PK, Stansbury JW. Modified filler-matrix interfaces in polymeric composites used as dental restoratives. February 2007, University of Colorado School of Dentistry Research Day, Aurora, CO.

19. Musanje L, Ferracance JL, Stansbury JW. Effects of photoinitiator/co-initiators on degree and rate of monomer conversion. February 2007, University of Colorado School of Dentistry Research Day, Aurora, CO.

20. Howard B, Newman SM, Stansbury JW. Coupled dynamic spectroscopic characterization of composite restorative photopolymerization. February 2007, University of Colorado School of Dentistry Research Day, Aurora, CO.

21. Trujillo-Lemon, M., Bowman, C.N., Anseth, K.S., Stansbury, J.W. Development of novel polymers for applications in bioengineering. March 2005, NanoTech Meeting, San Diego,

CA.

22. Johnson, P., Bowman, C.N., Stansbury, J.W. High-throughput analysis of photopolymer kinetics. March 2005, CSU Bioengineering Student Research Forum, Fort Collins, CO.

23. Ge J, Lemon MT, Stansbury JW. Photopolymerization of 2-methylene-7-phenyl-1,4,6,9-tetraoxaspiro[4.4]nonane. February 2006, University of Colorado School of Dentistry Research Day, Aurora, CO.

24. Shah PK, Stansbury JW. Polymer-brush modified fillers for dental composites. February 2006, University of Colorado School of Dentistry Research Day, Aurora, CO.

25. Crawford LR, Stansbury JW. Polymerization induced phase separation and polymerization sequence as controls of hybrid cationic/free radical photopolymerizations. February 2006, University of Colorado School of Dentistry Research Day, Aurora, CO.

26. Johnson P, Bowman CN, Stansbury JW. High-throughput analysis of photopolymer kinetics. February 2005, University of Colorado School of Dentistry Research Day, Denver, CO.

27. Ge J, Trujillo-Lemon M, Lu H, Stansbury JW. Dimer acid-derived dimethacrylates as diluent monomers in restorative resins. February 2005, University of Colorado School of Dentistry Research Day, Denver, CO.

28. Trujillo-Lemon M, Lu H, Stansbury JW. Thermal effects on photopolymerization stress development. February 2005, University of Colorado School of Dentistry Research Day, Denver, CO.

29. Lu H, Trujillo-Lemon M, Ge J, Stansbury JW. Developing novel dental resin formulations with dimer acid-derived dimethacrylate. February 2005, University of Colorado School of Dentistry Research Day, Denver, CO.

30. Carioscia J, Bowman CN, Stansbury JW. Network formation of thiol-ene oligomer polymerizations. February 2005, University of Colorado School of Dentistry Research Day, Denver, CO.

31. Ding X, Judd J, Trujillo-Lemon M, Stansbury JW. Resin-based improvements of composites containing polymer brush-modified fillers. February 2005, University of Colorado School of Dentistry Research Day, Denver, CO.

32. Lin Y, Stansbury JW. Impact of photopolymerization kinetics on volumetric shrinkage and phase behaviors of dimethacrylate/divinyl ether hybrid systems. November 2004, MRS Meeting, Boston, MA.

33. Johnson, P., Bowman, C.N., Stansbury, J.W. Rapid analysis of conversion and material properties using photopolymer property gradients. November 2004, AIChE Meeting, San

Antonio, TX.

34. Ge, J., Stansbury, J.W. (2004). Investigation of polymerization induced phase separation effect on polymerization shrinkage. November 2004, AIChE Meeting, San Antonio, TX.

35. Lin, Y., Stansbury, J.W. (2004). In situ characterization of conversion and polymerization shrinkage simultaneously in photo-cured hybrid systems. May 2004, RadTech Meeting, Charlotte, NC.

36. Beckel E, Nie J, Stansbury JW, Bowman CN. Monomers effect of aryl substitution on the polymerization rate of novel monovinyl acrylate. November 2003, AIChE Meeting, San Francisco, CA.

37. Stansbury JW, Trujillo M, Bowman CN. Development of pH-responsive hydrogels as biomaterials. February 2003, University of Colorado School of Dentistry Research Day, Denver, CO.

38. Stansbury JW, Trujillo M, Bowman CN. Controlled swelling and degradation of pH-responsive hydrogels. Colorado Alliance for Bioengineering, BioExpo, December 4, 2002, Aurora, CO.

39. Lin Y, Stansbury JW. Formation of hybrid structure by controlled photopolymerization. February 2002, University of Colorado School of Dentistry Research Day, Denver, CO.

40. Berchtold KA, Beckel ER, Nie J, Hacioglua B, Stansbury JW, Bowman CN. Development of novel (meth)acrylate monomers for ultrarapid polymerization and enhanced polymer properties. February 2002, University of Colorado School of Dentistry Research Day, Denver, CO.

41. Syrpes DC, Stansbury JW. Monomer reactivity and polymeric network formation in composite dental restoratives. February 2002, University of Colorado School of Dentistry Research Day, Denver, CO.

42. Berchtold KA, Nie J, Stansbury JW, Bowman CN. Structural effects on the cure characteristics of functionalized methacrylate monomers. Society for Biomaterials Meeting, April 26, 2001, St. Paul, MN.

43. Berchtold KA, Nie J, Elliott JE, Hacioglu B, Luo N, Trotter AJN, Stansbury JW, Bowman CN. Structural effects on the cure characteristics of functionalized methacrylate monomers. RadTech Europe 2001, Conference Proceedings, Basel, Switzerland, October 2001.

44. Stansbury, J.W., Antonucci, J.M. (2000). Ethyl α-hydroxymethylacrylate: an isomeric analog of HEMA. Colorado Alliance for Bioengineering Meeting, Aurora, CO.

45. Tesk, JA, Stansbury, JW, Litsky AS. Cyclopolymerizable monomers for use as acrylic

biomaterials. Society for Biomaterials Meeting, San Diego, CA, April 1998.

46. Reed, B.B., Stansbury, J.W., Antonucci, J.M. (1991). Radical ring-opening characteristics of cyclic vinyl monomers. Amer. Chem. Soc. Meeting, Div. Organic Chem., New York, NY.

47. Antonucci, J.M., Stansbury, J.W., Reed, B.B. (1991). Radical reactivity of cyclic acetals. Amer. Chem. Soc. Meeting, Div. Organic Chem., New York, NY.

PATENTS

1. Stansbury JW. Water compatible nanogel compositions. Application No. 40281.0029USP1, filed March 22, 2012.

2. Kim D, Stansbury JW. Methods for extensive dark curing based on visible-light initiated, controlled radical polymerization. Application No. 40281.0024USP1, filed July 1, 2008.

3. Bowman CN, Carioscia J, Lu H, Stansbury JW. Reactive oligomeric thiol and ene materials as dental restorative mixtures. US 2007/0185230 A1, issued August 9, 2007. Application optioned to Confi-Dental Products.

4. Stansbury JW, Trujillo M, Ding X. Novel nanogel materials and methods of use thereof. Application No. 40281.0005USU1, filed April 28, 2005. Continuation in part filed November 2008 and optioned by Septodont.

5. Stansbury JW, Trujillo M, Ding X. Novel functionalized nanogel materials and methods of manufacture thereof. Application No. 40281.0005USU2, filed April 28, 2005.

6. Stansbury JW, Trujillo M, Ding X. Novel nanogel materials for use as dental fillers. Application No. 40281.0005USU3, filed April 28, 2005.

7. Ding Z, Stansbury JW. Polymer brush modified fillers for composites. Application No. 40281.0003USU1, filed March 10, 2005.

8. Stansbury JW, Trujillo M, Bowman CN. Dimer acid-derived dimethacrylates and use in dental restorative compositions. Application No. 04815826.5-2318, filed December 29, 2004. Application licensed to Confi-Dental Products/Septodont.

9. Bowman CN, Lu H, Stansbury JW. Photopolymers and use in dental restorative materials. Patent No US 7,838,571 B2, granted November 33, 2010. Application optioned by Septodont/Confi-Dental Products Division.

10. Bowman CN, Stansbury JW, Berchtold KA. (Meth)acrylic and (meth)acrylamide monomers comprising cyclic acetal/thioacetal groups, polymerizable compositions, and polymers obtained. Application No. 2002.114B, filed February 20, 2004.

11. Bowman CN, Stansbury JW, Berchtold KA, Nie J. (Meth)acrylic and (meth)acrylamide monomers, polymerizable compositions, and polymers obtained. Application No. WO 2004/077511 A2, filed February 20, 2004.

12. Stansbury JW, Antonucci JM, Choi KM. High strength polymeric networks derived from (meth)acrylate resins with organofluorine contents and process for preparing same. US Patent No. 6,184,399, issued February 6, 2001.

13. Antonucci JM, Stansbury JW, Fowler BO. Silylated resins and the synthesis thereof. US Patent No. 6,177,534, issued January 23, 2001.

14. Antonucci JM, Stansbury JW, Cheng G-W. Novel multifunctional acrylates and the synthesis thereof. US Patent No. 5,380,901, issued January 10, 1995.

15. Stansbury JW. Monomers for double ring-opening polymerization with expansion. U.S. Patent No. 5,463,008, issued October 31, 1995.

16. Stansbury JW. Improved monomers for double ring-opening polymerization with expansion. US Patent No. 5,362,889, issued November 8, 1994.

17. Stansbury, JW. Synthetic dental compositions formed from cyclopolymerizable bis-acrylate and multi-functional oligomer and bonding method. U.S. Patent No. 5,145,374, issued September 8, 1992.

18. Brauer GM, Stansbury JW. Biocompatible cementitious dental compositions. U.S. Patent No. 4,486,179, issued December 4, 1984.

19. Brauer GM, Argentar H, Stansbury JW. Cementitious dental compositions which do not inhibit polymerization. U.S. Patent No. 4,362,510, issued December 7, 1982.

THESIS DIRECTED

1. James Wydra (co-advised with Christopher Bowman) – "Property Evolution in Photopolymer Systems", PhD program in Chemical and Biological Engineering, 2011 – present.

2. Alan Aguirre – "Radical Dark Cure in Three-component Photoinitiator Systems", PhD program in Chemical and Biological Engineering, 2010 – present.

3. Caroline Szczepanski – "Design of Heterogeneous Polymer Structures", PhD program in Chemical and Biological Engineering, 2010 – present.

4. Eric Dialing (co-advised with Kristi Anseth), "Nanogels applied to tissue engineering", PhD program in Chemical and Biological Engineering, 2010 – present.

5. Dianabasi Etuk (co-advised with Atousa Plaseied), Department of Mechanical Engineering, University of Colorado Denver, "Processing and Compositional Variations to Improve Mechanical Properties of Polyanhydride-Based Implant Materials"; 2010 – present.

6. Winsean Lin (co-advised with Atousa Plaseied), Department of Mechanical Engineering, University of Colorado Denver, "Fracture Toughness of Dental Resins and Composites Modified with Polymeric Crosslinked Nanoparticles"; graduated with thesis MS.

7. JianCheng Liu, "Nanogel Preparation and Applications", PhD program in Chemical and Biological Engineering, 2009 – present.

8. Abby Tyler (co-advised with Christopher Bowman and Charles Musgrave), Chemical and Biological Engineering, "Computational Approaches to Self-Replicating Polymers", 2009 (withdrawn).

9. Rafael Moraes, co-advised at University of Colorado Denver during 2008 – 2009 within a dental materials graduate program at Piracicaba School of Dentistry, UNICAMP, Brazil. Graduated with PhD. Faculty at University of Pelotas School of Dentistry, Brazil.

10. Parag Shah, PhD program in Chemical and Biological Engineering, "Polymer Brush Treatment of Fillers used in Dental Restoratives", 2005 – 2012, Graduated with PhD, post-doc at University of Colorado.

11. Laura Crawford, Chemical and Biological Engineering, "Applications of Cationic Photopolymerization to Biomaterials", 2005 – 2006, Graduated with MS (non-thesis), National Renewable Energy Laboratory, Golden, CO.

12. Peter Johnson (co-advised with Christopher Bowman), Chemical and Biological Engineering, "Highly Parallel Methods for Polymerization Process Design and Polymer Characterization", 2003 – 2007 Graduated with PhD, NRC post-doc at the National Institute of Standards and Technology, Gaithersburg, MD.

13. Junhao Ge, Chemical and Biological Engineering, "Development of Low Shrinkage, Low Stress Polymeric Materials", 2002 - 2006, Graduated with PhD, Ophthonix in San Diego, CA.

14. Yan Lin, Chemical and Biological Engineering, "Formation of Hybrid Structures by Controlled Photopolymerization", 2001 – 2005, Graduated with PhD, post-doc at Tufts University with Pam Yelick. Faculty at Emmanuel College, Boston, MA.

POST-DOCTORAL RESEARCH ASSOCIATES ADVISED

1. Dr. Bin Yang, 2010 – 2011; Prosthodontics residency training at University of Rochester, NY.
2. Dr. Carmem Pfeifer, 2008 – 2009. Faculty at University of Colorado School of Dental Medicine 2009-2011; faculty at Oregon Health & Science University.
3. Dr. Dongkwan Kim, 2007 – 2010; LG Hausys, Korea.
4. Dr. Hui Lu, 2004-2006. Currently at Dentsply/Caulk, Milford, DE.
5. Dr. Marianela Trujillo, February 2001 – 2005. Currently at Confi-Dental Products Co., Louisville, CO.
6. Dr. Xingzhe Ding, February 2003 – 2004; Danville Materials, Orange, CA.
7. Dr. Cathrine Gingreau 1993-1995; BASF.
8. Dr. Kyung M. Choi 1996-1998; Lucent/Bell Labs.
9. Dr. Chetan Khatri 1998-2000; NIST.
10. Dr. Michael Weir 2000-2002; University of Maryland Dental School.
11. Dr. Sheherazad Hartzell 1998-1999; US Navy.

INDEPENDENT STUDY STUDENTS

Whitney Setterberg Fall 2012, "Acid-Functionalized Nanogels as Precursors for High-Strength, Water-Compatible Polymer Networks"
Albert Hwang Fall 2012, "Real-time Coupling of UV-Vis and FT-NIR Spectroscopy"
Kristin Knigge, Summer 2009, "Factors Affecting Radical Dark Cure Behavior with Three-Component Photoinitiators"
Zach Lakeman, Spring 2008, "Surface Modification of Particulate Fillers"
Rami Foster, Fall 2007, "Interphase Characterization in Filled Polymer Composites"
Jeff Arthur, Fall 2001, "Monitoring Gelation and Phase Separation in Photopolymerizations".
Qiaowei Chu, Fall 2000, "Effect of Polymerizable Co-initiators on Photopolymerization".
Yan Lin, Fall 2000, "Studies of Water Sorption in Monomer and Its Effect on Photopolymerization Using NIR Spectroscopy".

FACULTY ADVISOR FOR SCHOOL OF DENTAL MEDICINE SUMMER RESEARCH FELLOWSHIP PROGRAM

Jacob Ramirez - 2012
Han Yi, Darin Johnston, Chelsea Vraney - 2011
Zach Shelton - 2010
Andrew Foster - 2009
Nicholas Wilson - 2007

REU (Research Experiences for Undergraduates) ADVISOR

Kyle Lampe (co-sdvised with Kristi Anseth), Summer 2003, "Degradable Photopolymers"

PRESENTATIONS *(no published abstract)*

1. How resin chemistry and composite formulation affect the photocuring process. First Annual International Symposium on Light Sources in Dentistry, Dalhousie University, Halifax, Canada, October 11, 2012.

2. Functional nanogels as photopolymer modifiers and as precursors to polymeric networks, European Symposium of Photopolymer Science, Torino, Italy, September 5, 2012.

3. Nanogels as a basis for network construction. Polymer Networks Group, Jackson Hole, WY, August 14, 2012.

4. Alteration of photopolymers through prepolymer inclusion. Photopolymerization Fundamentals Conference, Breckenridge, CO, June 29, 2011.

5. Recent progress in photopolymerization of dental materials. Dentsply/Caulk, Milford, DE, March 29, 2011.

6. Kinetics of radical-based photopolymerizations: A consideration of the conversion-dependent evolution of polymer properties. CooperVision, Pleasanton, CA, September 8, 2010.

7. New developments for control of polymerization shrinkage and stress. 46th Meeting of the Brazilian Dental Materials Group, Buzios, Rio de Janeiro, Brazil, July 29, 2010.

8. Fundamentals of photopolymerization. 46th Meeting of the Brazilian Dental Materials Group, Buzios, Rio de Janeiro, Brazil, July 29, 2010.

9. Novel denture tooth materials. Ivoclar, Amherst, NY, February 8, 2010

10. Design and characterization of low shrinkage, low stress dental restoratives. Department of Endodontics, Prosthodontics and Operative Dentistry, University of Maryland Dental School, Baltimore, MD, December 1, 2009.

11. Overview of dimer acid chemistry: Low polymerization shrinkage and shrinkage stress. Septodont Mindshare Meeting, Miami, FL, November 6, 2009.

12. Selection of monomers and photo-processing conditions to control the structure and properties of heterogeneous polymers. Photopolymerization Fundamentals Conference,

Breckenridge, CO, June 22, 2009.

13. Nanogels as prepolymer fillers and reactive macromers. Confi-Dental/Septodont, Lewisville, CO, October 14, 2008.

14. New developments of materials and characterization techniques applied to photopolymerization. 3M/ESPE Seefeld, Germany, October 6, 2008.

15. Use of well designed polymers and polymerization methods to address challenges in dental materials. Keynote talk in Dental Materials/Polymer Chemistry session at IADR Meeting, Toronto, Canada. July 3, 2008.

16. Recent advances in polymer design and polymer characterization techniques. Beijing University of Chemical Technology, Beijing, China, June 20, 2008.

17. Structural control of heterogeneous polymers prepared by photopolymerization-induced phase separation. PC2008 Conference, Hefei, China, June 18, 2008.

18. Advances in resin composite materials and bonding techniques. University of Colorado School of Dental Medicine, Faculty Development Seminar. Aurora, CO, June 12, 2008.

19. New analytical and materials science approaches to dental composite materials. LSU Dental School, New Orleans, LA April 17, 2008.

20. Controlled formation of polymer/polymer interfaces: Nanogels/macromers from free radical polymerizations. 3M, St Paul, MN April 15, 2008.

21. Optical property monitoring during photopolymerization of composites and phase separating polymers. NIST/CU Research Symposium, Westminster, CO, March 2007.

22. Compositionally heterogeneous networks formed by photopolymerization-induced phase separation. Photopolymerization Fundamentals Conference, Breckenridge, CO, June 25, 2007.

23. New CU chemistry in dental composite restoratives. Alpha-Omega Winter Meeting, Denver, CO, March 7, 2007.

24. Benefits of combined dynamic characterization techniques applied to photopolymerization reactions. American Dental Association Health Foundation at NIST, Gaithersburg, MD, March 11, 2007.

25. Developing new chemistries for polymeric dental materials. Keynote talk in Dental Materials/Polymer Chemistry session at IADR Meeting, Brisbane, Australia. June 30, 2006.

26. Degradable tissue engineering scaffolds with heterogeneous polymeric morphologies. Seminar for ADA/NIST Biomaterials Group, Gaithersburg, MD, October 2005.

27. Manipulation of polymer structure and properties based on photoprocessing controls. Photopolymerization Fundamentals Conference, Breckenridge, CO, June 28, 2005.

28. Evaluation of polymerization shrinkage strain and stress in resin-based dental restoratives. Dentsply/Caulk Summer Clinician Fellowship, Lake George, NY, August 13, 2004.

29. New materials and characterization techniques for dental resins and composites. Portland Composites Symposium, Oregon Health and Science University, Portland, OR, June 17, 2004.

30. Photocurable dental composites: new materials approaches and characterization techniques. Henkel Technologies, Radiation Curing Workshop, Rocky Hill, CT, March 31, 2004.

31. Biomaterials research at the University of Colorado Dental School. University of Connecticut School of Dental Medicine, Farmington, CT, March 30, 2004.

32. Design and analysis of photocurable biomaterials. Department of Chemical Engineering, University of Iowa, Iowa City, Iowa, February 6, 2003.

33. Photopolymerization kinetics from a molecular perspective. Controversies in polymerization of light-activated polymer matrix composites symposium. International Association for Dental Research Meeting, Chiba, Japan, June 27, 2001.

34. New polymers designed for use as dental materials. Korean Academy of Conservative Dentistry, Seoul National University, April 17, 2001.

35. Development of expanding monomers for dental restoratives. College of Dentistry, Seoul National University, Seoul, Korea, April 17, 2001

36. More stable dental polymers through minimized polymerization shrinkage and reduced water sorption. Japanese Society for Dental Materials and Devices, Tokyo, Japan, April 27, 2000.

37. Effect of monomer structure on reactivity. Fukuoka Dental College, Fukuoka, Japan, April 24, 2000.

38. Near infrared spectroscopy for the analysis of dental polymers. Tokyo Medical and Dental University, Tokyo, Japan, April 20, 2000.

39. Structure-property evaluation of photocured homopolymers from commercial and experimental dimethacrylates. International Symposium on Advanced Materials with Biomedical Applications, National Institute of Standards and Technology, Gaithersburg,

MD, June 8, 1999.

40. Homopolymerization studies of new fluorinated dimethacrylate monomers. Fluoropolymers Symposium. American Chemical Society, Division of Polymer Chemistry, Boston, MA, August, 1998.

41. Considerations in the development of semi-fluorinated dental resins and composites. Dental Polymers, Composites and Adhesives Symposium, American Chemical Society, Division of Polymer Chemistry, Las Vegas, NV, September 10, 1997.

42. Evaluation of cross-linkable double ring-opening monomer and oligomer systems. The Science of Adhesion; Gordon Conference, Tilton, NH, August, 1996.

43. Current Dental Materials Research at NIST. American Society of Mechanical Engineers, Applied Mechanics Division and Materials Division Meeting at Johns Hopkins University, Biomaterials Symposium, June, 1996.

44. Dental resins based on alternative monomers and polymerization pathways. Advances in Materials Science: New Approaches and Developments Symposium. International Association for Dental Research Meeting, San Francisco, CA, March, 1996.

45. Photocured composites based on dimethacrylate monomers of varied fluorine content. Macromolecular Secretariat Composites Symposium, American Chemical Society, Division of Polymer Chemistry, Anaheim, CA, April, 1995.

46. Ring-opening polymerization and its use in dentistry. Lunch and Learn Seminar at the American Association for Dental Research Meeting, San Antonio, TX, March, 1995.

47. Polymers and cyclopolymers from highly fluorinated monomers and oligomers. American Chemical Society, Division of Polymer Chemistry, Biennial Symposium, San Juan, Puerto Rico, November, 1994.

48. Recent advances in the ring-opening polymerization of spiro orthocarbonates. Advances in Polymerization and High Performance Materials; 16th Biennial Symposium of American Chemical Society, Division of Polymer Chemistry, Palm Springs, CA, November, 1992.

49. Ring-opening polymerization of a methacrylate-substituted spiro orthocarbonate. Polymers of Biological and Biomedical Significance Symposium, American Chemical Society, Division of Polymer Chemistry, Washington, DC, August, 1992.

50. Synthesis and polymerization of difunctional and multifunctional monomers capable of cyclopolymerization. William J. Bailey Memorial Symposium, American Chemical Society, Division of Polymer Chemistry, Washington, DC, August 26, 1990.

51. Evaluation of spiro orthocarbonate monomers capable of polymerization with expansion as ingredients in dental composite-materials. Progress in Biomedical Polymers Symposium, American Chemical Society, Division of Polymeric Materials: Science and Engineering, Los Angeles, CA, September 27, 1988.

52. Measuring and managing photopolymerization shrinkage, Photopolymerization Fundamentals 2002 Meeting, Breckenridge, CO, June 7, 2002

53. Development of fluorinated resins as matrix materials for improved composites. National Institute of Standards and Technology, Polymers Division Seminar, October 3, 1996.

54. Overview of research in the Dental and Medical Materials Group at NIST. American Association for Dental Research, Open House for Dental Students, National Institute of Standards and Technology, March, 1995.

55. Control of polymerization shrinkage with unconventional monomers: Ring opening of spiro orthocarbonates and cyclopolymerization. National Institute of Standards and Technology, Polymers Division Seminar, November, 1993.

56. Polymerization studies of methacrylate-substituted spiro orthocarbonate monomers. Volume change during polymerization symposium at the South East Regional Meeting-Mid-Atlantic Regional Meeting, American Chemical Society, Crystal City, VA, December, 1992.

57. New polymers to chew on; Improved dental composites. University of Colorado School of Dentistry Student Research Group, UCDHSC, Aurora, CO, December 2, 2005.

58. Advances in dental biomaterials. CU Bioengineering Center-NIST Bioengineering Teleconference, UCDHSC Denver, CO, December 1, 2005.

59. Hybrid resins for dental composites: Nano-scale heterogeneous polymers. Dentsply-Caulk, Milford, DE. November 18, 2005.

60. Development of new resins for dental restoratives. Confi-Dental Products, Westminster, CO, November 2, 2005.

61. Polymeric biomaterials from degradable hydrogels to permanent dental filling materials. University of Connecticut School of Dental Medicine, Farmington, CT, March 30, 2004.

62. Controlled swelling and degradation of pH-responsive hydrogels. Colorado Alliance for Bioengineering, BioExpo, Aurora, CO, December 4, 2002.

63. Biomaterials program at University of Colorado School of Dentistry. Fitzsimons Redevelopment Authority, Fitzsimons Fourteeners, Aurora, CO, February 28, 2002.

64. Designing new polymers for biomaterials applications. University of Colorado Health Sciences Center, School of Dentistry, Research Day presentation, February 7, 2001.

65. Ethyl α-hydroxymethylacrylate: an isomeric analog of HEMA. Colorado Alliance for Bioengineering, BioExpo, Aurora, CO, December 6, 2000.

66. Designing polymers to address needs in biomaterials. University of Colorado, Department of Chemical Engineering, Boulder, CO, October 19, 2000.

67. Development of dental resins based on expanding monomers. University of Missouri Dental School, Kansas City, MO, April 14, 1998.

68. New polymers for use in dental materials. University of Colorado, Department of Chemical Engineering Department, Boulder, CO, March 9, 1998.

69. New monomers for dental material applications. Esstech, Essington, PA, May 16, 1997.

70. Alternative polymers for use in dental materials. Institute of Materials Science, University of Connecticut, Storrs, CT, March 28, 1997.

71. Designing monomers to minimize polymerization shrinkage. AT&T Bell Labs/Lucent Technologies, Murray Hill, NJ, February 3, 1997.

72. Photoinitiated cyclopolymerization of polyfunctional acrylic monomers. Hercules Research Center, Wilmington, DE. October, 1994.

73. Use of double ring opening and cyclopolymerization techniques to improve dental materials. Department of Polymer Science, University of Southern Mississippi, June, 1994.

74. Reduced polymerization shrinkage through monomer design. Institute of Polymer Science, University of Akron, April, 1994.

75. Synthesis and ring-opening polymerization of spiro orthocarbonates. 3M Dental Product Laboratory, St. Paul, MN, September, 1993.

COMMITTEE APPOINTMENTS

Dental School

2011 - present	Dean's Review Committee (chair)
2011	Search committee for Department of Craniofacial Biology Grants Manager (member)
2010	Search committee for Chair Craniofacial Biology (chair)
2010	Search committee for Associate Dean for Finance, Budget and Strategic Projects (member)

March 2008 – 2011	(member)
May 2007 - 2009	Accreditation Committee - Research Programs (member)
2006	Craniofacial Biology Faculty Search Committee (chair)
2003 -2005	Facilities and Administrative Costs Waiver Committee (member)
2002 - present	Research Committee (chair as of 1/09)

Chemical & Biological Engineering

2011	Graduate student preliminary exam committees (member on 6)
2010-2011	Building move committee (member)
2010	Graduate student preliminary exam committees (member on 3, chair on 3)
2009	Bioengineering Degree Committee (member)
2009	Graduate student preliminary exam committees (member on 4)
2008	Graduate student preliminary exam committees (member on 5)
2008	Graduate recruitment committee (member)
2007	Faculty Search Committee (member)
2007	Graduate student preliminary exam committees for 8 students (7 as member; 1 as chair)
2006	Graduate student preliminary exam committees (member on 3)
2005	Graduate student preliminary exam committees (member on 2)
2001– present	Graduate student thesis committees

University

2009 – present	CAPT Center Executive Board (member)
2008 – present	Clinical Research Resources and Facilities Oversight Committee
2007 -2008	Discovery, Creativity and Innovation Task Force (member)
2002 - 2008	Research Park Advisory Committee (member)
2002	Advisory Board for Strategic Planning and Intellectual Property Policy
2001 – 2006	Bioengineering Steering Committee (member)

National/International

2010-2014	IADR Souder award committee
2010	External evaluator, Graduate Program in Dental Materials at Ohio State University College of Dentistry
2010	Program Chair, International Association for Dental Research, Dental Materials Group, Polymeric Materials – Properties and Performance
2007- present	Abstract reviewer, American/International Association for Dental Research, Dental Materials Group, Polymer Chemistry Section
2004, 2006	Co-organizer and Chair for Polymer Chemistry Division symposia at the American Chemical Society: Polymers in Dental Materials (Fall 2004) and Polymeric Dimensional Change and Residual Stress (Spring 2006)

2002, 2006, 2008, 2009, 2011 Program Chair, International Association for Dental Research, Dental Materials Group, Polymeric Materials - Polymer Chemistry Section

Department of Chemical and Biological Engineering (CU Boulder) graduate thesis committee member for:
Navakanth Gandavarapu (advisor – Kristi Anseth)
Devatha Nair (advisor – Christopher Bowman/Robin Shandas) Graduated with PhD, 2011
Sheng Ye (advisor – Christopher Bowman) Graduated with PhD, 2011
Heeyoung Park (advisor – Christopher Bowman) Graduated with PhD, 2011
Megan Cole (advisor – Christopher Bowman)
Brian Adzima (advisor – Christopher Bowman) Graduated with PhD, 2011
Raveesh Shenoy (advisor – Christopher Bowman)
Cole DeForest (advisor – Kristi Anseth) Graduated with PhD, 2011
Neven Steinmetz (advisor – Stephanie Bryant) Graduated with PhD, 2011
Mark Tibbitt (advisor – Kristi Anseth)
Alex Aimetti (advisor - Kristi Anseth) Graduated with PhD, 2010
McKinley Lawson (advisor – Kristi Anseth/Christopher Bowman) Graduated with PhD, 2008
Jeff Arthur (advisor – Kristi Anseth)
Idalis Villanueva (advisor – Stephanie Bryant) Graduated with PhD, 2009
Vaibhav Khire (advisor – Christopher Bowman) Graduated with PhD, 2008
April Kloxin (advisor – Kristi Anseth/Christopher Bowman) Graduated with PhD, 2010
Chelsea Salinas (advisor – Kristi Anseth) Graduated with PhD, 2007
Ben Fairbanks (advisor – Kristi Anseth) Graduated with PhD, 2010
Jacquelyn Carioscia (advisor – Christopher Bowman) Graduated with PhD, 2006
Amber Rydholm (co-advised by Christopher Bowman and Kristi Anseth) Graduated with PhD, 2006
Harini Kalambi (advisor - Christopher Bowman) Graduated with PhD in 2006
Andrew Watkins (advisor – Kristi Anseth) Graduated with PhD in 2006
Sirish Reddy (advisor - Christopher Bowman) Graduated with PhD in 2006
Charles Nuttelman (advisor – Kristi Anseth) Graduated with PhD, 2005
Hui Lu (advisor - Christopher Bowman), Graduated with PhD, 2004
Eric Beckel (advisor - Christopher Bowman), Graduated with PhD, 2004
Penny Martens (advisor - Kristi Anseth) Graduated with PhD, 2003
Stephanie Bryant (advisor - Kristi Anseth) Graduated with PhD, 2003
Allison O'Brien (advisor - Christopher Bowman) Graduated with PhD, 2002
Tara Lovestead (advisor - Christopher Bowman) Graduated with PhD, 2002
Kathryn Berchtold (advisor - Christopher Bowman) Graduated with PhD, 2001
Lale Lovell (advisor - Christopher Bowman), Graduated with PhD, 2000

Department of Bioengineering University of Colorado Denver
Graduate thesis committee member for:
Amin Famili (advisor – Robin Shandas)
Kiran Dyamenahalli (advisor – Robin Shandas)

Department of Mechanical Engineering University of Colorado Denver
Graduate co-advisor (with Atousa Plaseied) for Winsean Lin; Graduated with MS, 2011
Graduate co-advisor (with Atousa Plaseied) for Dianabasi Etuk

Department of Chemistry, University of Colorado Denver
Graduate thesis committee member for Setareh Azarnoush; graduated with MS, 2011

Awards to dental student advisees (CU School of Dental Medicine)
Demitrios Syrpes: runner up, 2002 ADA/DENTSPLY Student Clinician Research Program for "Monomer Reactivity and Polymeric Network Formation in Composite Dental Restoratives".

Rafael Moraes: DDS/PhD student from Piracicaba School of Dentistry in Brazil doing the research portion of his PhD at CU; winner of the 2009 Unilever/Hatton Senior Basic Science South American Divisional Award.

Nicholas Wilson: runner up, 2009 ADA/DENTSPLY Student Clinician Research Program for "Dimethacrylate Network Development in the presence of Chain-Transfer Agents"; Sue Kintzele Scholar 2009-2010 from the Colorado Chapter of ARCS; 2010 National Best Student Table Clinic Award from the Academy of Operative Dentistry.

Christopher Walker: third place, 2011 ADA/DENTSPLY Student Clinician Research Program for "Modifications in Dental Adhesives by the Addition of Nanoscale Polymeric Particles".

SOCIETY/PROFESSIONAL ORGANIZATIONS

2007 – present	American Dental Education Association
2005 - present	Academy of Dental Materials
2000 - present	American Association for Dental Research - Colorado Section President 2002-2005; 2007 - 2010 Councilor 2005-2006; 2010-2012
2000 – present	American Chemical Society - Colorado Section
2000 - 2005	Colorado Alliance for Bioengineering Executive Board Member
1998 – present	IADR Dental Materials Group
1991-2000	American Association for Dental Research - Washington, DC Section Councilor 1997-2000 President 1996-1997
1994 – present	American Chemical Society Division of Polymeric Materials: Science and Engineering
1987 - present	American Chemical Society Division of Polymer Chemistry
1983 - present	International Association for Dental Research (IADR)
1983 - 2000	American Chemical Society - Washington, DC Section
1980 - present	American Chemical Society

ACADEMIC REVIEW ACTIVITIES

Editoral Board Member, Dental Materials	2010-present
Editorial Board Member, Polymers for Advanced Technologies	2000-present
Editorial Board Member, Journal of Applied Oral Science	2007-present
Reviewer for Dept of Defense, DEPSCoR program	2008
Reviewer, Wellcome Trust	1999-2000
Reviewer/Member (ad hoc), NIH Oral, Dental and Craniofacial Sciences (formerly: Oral Biology and Medicine)	1997-present
Reviewer, NIH Small Business Innovation Research	1996-2002
Reviewer, NIST Advanced Technology Program	1992-2000
Reviewer, National Science Foundation	1988-1998

Manuscript Reviewer for:

- Acta Biomaterialia
- Biomaterials
- Carbohydrate Polymers
- Chemistry of Materials
- Composite Science and Technology
- Critical Reviews in Oral Biology and Medicine
- Dental Materials, Encyclopedia of Polymer Science and Technology
- European Journal of Oral Science
- European Polymer Journal
- Journal of Applied Polymer Science
- Journal of Biomaterials Science
- Journal of Biomedical Materials Research
- Journal of Combinatorial Chemistry
- Journal of Composite Materials
- Journal of Dental Research
- Journal of Dentistry
- Journal of Materials Science
- Journal of Photochemistry and Photobiology
- Journal of Polymer Research
- Journal of Polymer Science
- Journal of Prosthodontics
- Journal of Rheology
- Macromolecular Chemistry and Physics
- Macromolecular Materials and Engineering
- Macromolecular Reaction Engineering
- Macromolecules
- Nuclear Instruments and Methods in Physics Research
- Polymer

Polymer International
Polymers for Advanced Technologies
Reactive and Functional Polymers
Soft Matter
Vibrational Spectroscopy

CONSULTANTSHIPS

University of South Dakota School of Mines and Technology for development of dental resins (Hao Fong, PI; NIDCR)	2009-present
SLS Hybrid Ceramic for development of improved dental materials	2007-present
Envisiontec, Inc. for development of photolithographic materials and suitable analytical characterization techniques	2005-2008
Bioplant R&D for development of delivery devices for in-situ curable degradable polymeric biomaterials	2005-present
University of Oregon Health and Science University for synthesis and characterization of degradable polymers on an R21 (Mitchell, PI)	2005-2011
American Dental Association Health Foundation Center of Excellence for Materials Science Research	1994-1999