

CURRICULUM VITAE

Christopher D. Batich, Ph.D.

Materials Science and Engineering Department
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Professional Experience

2010-2014 Director of Pilot Programs, Clinical and Translational Science Institute (CTSI)
2008-2010 Founding Associate Director and Chief Operating Officer, Clinical and Translational Science Institute (CTSI.ufl.edu)
2002-Present Professor (joint), Biomedical Engineering Department
1997-2002 Founding Director, UF Graduate Biomedical Engineering Program (Interim first year)
1981-Present Materials Science and Engineering Dept., University of Florida, Gainesville, FL (Professor since 1988)
1974-1981 Staff Scientist, Central Research Dept., DuPont Co., Wilmington, DE
1967-1969 Teaching Assistant, Chemistry Dept., Rutgers University, New Brunswick, NJ
1965-1967 Quality Control Chemist, White Laboratories (pharmaceutical company), Kenilworth, NJ

Education

1971-1974 University of Basel (Switzerland); Post-doctoral (physical chemistry) with Professor Edgar Heilbronner, Director of the Physical Chemistry Institute.
1967-1971 Rutgers University; Ph.D. (organic chemistry), 1974; thesis advisor, Edel Wasserman
1961-1965 The Pennsylvania State B.S. (pre-medicine), 1965

Professional Membership

American Chemical Society (ACS)
Polymer Chemistry Division
Polymeric Materials Science and Engineering Division
Society of Biomaterials
Membership Committee (1995-2000)
Awards Committee (1996-1997)
Dental Materials Special Interest Group, vice chair (2000-2005)
Faculty Advisor for Local Student Chapter (1997-2011)
American Institute of Medical and Biological Engineers (AIMBE)
Academic Council (1997-2002)
College of Fellows (1999-present)

Professional Activities and Honors

Phi Lambda Upsilon (Honorary Chemistry Group). Section Vice-President, 1970
Chairman: Organic Chemists Club (Delaware), American Chemical Society, 1978
Chairman: College-Industry Relations Committee, Delaware Section (ACS), 1979 & 1980
Chairman: North-east ESCA Users Group, Nomination Committee, 1980-1981
Member: Florida Section ACS, Public Affairs Committee, 1983

College of Engineering Sabbatical, 1990-1991; Akzo Biomedical Research Center, Obernburg, Germany

Award for Excellence in Teaching ("TIP"), F-1995

Listed in Marquis' Who's Who in Medicine and Healthcare, 1st Edition, 1996.

Listed in The Official Who's Who of American Inventors, 5th Edition, 1998-99.

Professional Excellence Program Award ("PEP"), 1998

American Institute of Medical and Biological Engineering (AIMBE) Fellow (1999)

Co-Chair, AIMBE Public Information Committee (1999 -present)

Who's Who in Science and Engineering, Millennium Edition. (2000)

College of Engineering Nominee for the 2002 Ernest L. Boyer International Award of Excellence in Teaching, Learning and Technology (2001)

AIMBE College of Fellows Selection Committee - Medical Instrumentation Subcommittee, Chair (2006-2011)

Inventors/Innovator Recognition; from UF Office of Technology Licensing: 2008, 2009, 2010, 2011, 2012, 2013, 2014 (for technology licensed previous year)

2011 Superior Accomplishment Award from UF for "Mentoring of PhD students" (April 30)

Sabbatical (2 semester) August 2011-May 2012

University Service

Graduate Student Co-Coordinator for Materials Department, 1984-1990

Faculty Senate, 1986-1988

Biomedical Engineering, curriculum co-organizer and advisor, 1984-1998

Biotechnology Patent Committee, 1984-1995

FEEDS coordinator for off-campus students, 1987-1991

Graduate Council Fellowship Selection Committee for Engineering, 1987-1990

Search Committee for UF, VP Research and Dean of Graduate School, 1993

College of Engineering, Tenure and Promotion Committee, 1991-1994

Chairman: College of Engineering Biomedical Engineering Graduate Academic Program (BEGAP), 1994-1998

Member MD/PhD Program Committee, 1994-2000

UF Advisory Board of the University of Florida's Institute for Science Policy (1998-2002)

Biomedical Engineering Department Faculty Search Committee (2002- January 2005)

Materials Science and Engineering Department Curriculum Committee (2002-4)

University of Florida Fringe Benefits Committee (2001-2003)

Major Analytical Instrumentation Center Advisory Board (2002-present)

University Faculty Nominations Committee (2004-2008)

Institute for the Advanced Study of Emerging Pathogens Oversight Board (2004-2008)

General Clinical Research Center Scientific Advisory Committee (UF) 2005-present (renamed CRC in 2011)

Department of Surgery Research Advisory committee (UF) 2005-2011

Bioterrorism Task Force (2003-2004)

Long-range Planning Committee for MSE (2005-2011)

Endowed Chair Committee for MSE (2004-2011)

Nano-science position Search Committee for MSE (2003-2006)

Materials Science and Engineering Department Curriculum Committee (2005-2010)

Search Committee for Emerging Pathogens Institute Director (2006-April 2007)

Emerging Pathogens Institute Steering Committee (2004-2008)

Clinical and translational science awards, NIH proposal preparation committee (2005-2008)

Materials Science and Engineering Department Long-Range Planning Committee (2006-2008)

CTSI Executive Operations Committee (2008-present)

Pharmacometrics and Systems Biology Advisory Board (Lake Nona) (2011-present)

Selected Presentations (mostly invited)

- 1984 "Surface Derivatization Reactions," Tennessee Eastman Co., Kingsport, TN
 "Surface Derivatization Reactions," W.R. Grace Co., Columbia, MD
 "Surface Derivatization Reactions," Los Alamos National Laboratory, NM
 "Surface Derivatization Reactions," Sandia National Laboratory, NM
 Federation of Analytical Chemistry and Spectroscopy Society, FACSS Sept. "The Last and Next Decade in Surface Analysis"
 Kratos Users Group, Poconos, "Angular XPS Studies of Ga/As"
 "Surface Studies of Polymers," Kimberly-Clark, Roswell, GA
- 1985 "Surface Studies of Polymers," C.R. Bard, Inc., Murray Hill, NJ
 American Vacuum Society Meeting (Florida Section) -Copper/FEP Adhesion Silanes, Surfaces and Interfaces Symposium (June), Snowmass, CO
- 1986 FEP/Copper Adhesion, General Electric Solid State Meeting, Gainesville, FL
 Biomedical Applications of XPS, Spectroscopy Society of Pittsburgh (April)
 Tutorial lecture on "Surface Probes of Polymer Structure and Properties," Polymer Products Department, DuPont Co., Wilmington, DE
 Polymer Surface Studies, Johnson & Johnson, Medical Polymers Research Committee Meeting, Gainesville, FL
- 1987 Symposium on Hyphenated Techniques, Pittsburgh Conference on Analytical Chemistry Surface Analysis, Monsanto Corp., Pensacola, FL
 Department of Surgery, U. Florida Medical School "Research Projects"
 Engelhard Industries, "Surface Analysis," Woodridge, NJ
- 1988 IBM Adhesion Course, Boca Raton, FL (April)
 "Surfaces of Catheters," ASTM-F4 Meeting, Atlanta, GA
- 1989 "Surfaces of Catheters," Res. Calc. Kinetics Soc., St. Louis, MO
 "The Effect of Polymer Matrix on the Growth of Tissue," 3rd Annual Research Highlights Meeting of the Center for Surface Science and Engineering, UF, Gainesville
 "Incineration of Plastics," Center for Aeronomy, UF, Gainesville
 "Surfaces of Biomaterials," North Carolina State University, Raleigh, N.C.
- 1990 "Incineration of Plastics," Amer. Inst. of Chem. Eng. Nat'l. Meeting (March)
- 1991 "Surfaces Analysis of Biomaterials," Akzo (Arnhem, Netherlands)
 "Surfaces of Biomaterials," Max-Planck Institute for Polymer Research (Mainz, Germany)
 "Overview of Research," ARLO (Obenburg, Germany)
 "Inhibition of Oxalate Encrustation," ROCK Society Meeting (Cleveland)
- 1992 "Choosing the Right Surface Analytical Method for Polymers," Royal Society of Chemistry Annual Congress; April 14 (Manchester, UK)
 "Safe Plastics," at Treeo Center, Course on Disposal of Biomedical Waste, June 1, 1992, (Gainesville)
- 1993 Biomaterials for Tissue Regeneration, Center for Wound Healing, UF
- 1994 Silicone Toxicity Symposium, Oct. 4 (Dallas, TX)
- 1995 Immunology of Silicone Symposium, NIH/NCI, March 1995 (Bethesda, MD)
 Society For Biomaterials - pH Sensitive Polymers (March, San Francisco)
 Center for Occupational Health - Silicones (September, Detroit)
- 1996 "Tissue Regeneration," Monsanto Co. (January, St. Louis, MO)
- 1998 "pH Sensitive Drug Delivery," Pharmacology Department. Seminar, (September, University of Florida)
- 1999 "Surface Changes of Biomaterials - Needed Data," 7th Annual Symposium of the Florida Chapter of the American Vacuum Society and the 17th Annual Meeting of the Florida Society for Microscopy (March, University of Central Florida, Orlando, FL)
- 2000 "Biomedical Engineering and Biomaterials" Guest speaker for the 37th Annual Junior Science, Engineering and Humanities Symposium (JSEHS)
 "Development and In Vitro Evaluation of Sustained Release Ionomer Devices"
 "Transactions of the society of Biomaterials" Annual meeting May 2000.
 "Microspheres and Coatings of pH-sensitive Polymers for Biomedical Engineering

- Uses,” 2000 Florida Inter-Research Experience for Undergraduates (NSF Funded) July 2000.
- 2001 American Institute of Medical and Biological Engineering (AIMBE) Annual Meeting, PR needs in Biomedical Engineering
- 2003 Testimony before: “General and Plastic Surgery Devices Panel of the FDA Medical Devices Advisory Committee,” October 15, 2003, Gaithersburg, MD.
- 2006 “Iron-Containing Deposits and Neurodegeneration,” Aging & Rehabilitation Research Seminar Series, March 20, 2006. (UF)
 “Alternative Drug Delivery Methods,” South East Regional interdisciplinary Symposium, University of Florida AAPS Student Chapter, May 19-21, 2006, Gainesville, FL.
 “Reducing MRSA infections,” 21st Century Health Care Caucus (Sam Rayburn Office Bldg.), June 6-7, 2006, Washington, DC.
- 2007 “Engineering in Dentistry,” UF College of Dentistry Research Day (opening lecture to Dental Faculty), April 2007. (UF)
- 2008 “Iron Imaging and Analysis in Neurodegenerative Diseases,” Mark Davidson, Joanna F. Collingwood, Saurav Chandra, Albina Mikhaylova, Thomas Eskin, Jon Dobson, John Forder , and Christopher Batich, invited talk presented at the Conference on Computational Neuroscience 2008, February 20-21, 2008, University of Florida, Gainesville, Florida
 “Engineering Capabilities for Research,” Christopher Batich, presentation at Brain Tumor Workshop, April 30, 2008, University of Florida, Gainesville, Florida
- 2009 “The Clinical and Translational Science Institute” presented at the Jacksonville Shands Hospital Celebration of Research Day. May 21.
- 2010 “Opportunities for Partnerships with the Florida CTSA” BioFlorida meeting (Boca Raton, FL)
- 2011 “The UF CTSA” invited talk at the NIH MLPCN Steering Committee Meeting (March 8; Orlando). “Molecular Library Probes Construction Network”
- 2014 “Labile and Immobilized Iron in Neurodegeneration” 3rd International Conference and Exhibition on Neurology & Therapeutics; September 08-10, 2014 Philadelphia, USA (invited for keynote)
- 2015 Testing leading to a “de novo” (i.e., no predicate) FDA cleared antimicrobial wound dressing Chris Batich, Greg Schultz, William Toreki, Bernd Liesenfeld, Jerry Olderman, David Moore, Bruce Mast, David Mazingo Society for Biomaterials Annual Meeting (April 18 2015).
- 2015 “Developing and marketing biomaterial devices”. Chris Batich, at the “From Bench to Branding: bringing research discoveries to life” at the 19th annual Research Symposium of the UF Center for Vision Research (November 2, 2015).

Selected Courses Taught (* indicates videotaped course)

Introduction to Polymer Science*

Polymer Physics

Instrumental Methods of Polymer Analysis*

Vacuum Science and Technology (AVS short course, 1983, 1984)

Surface Analysis (MAIC short course, 1984-1987)

Biomaterials*

Tissue Engineering

Polymer Composites (33%)

Thin Film Adhesion (AVS short course, San Jose, March 1986; Meadowlands, NJ, September 1987)

2002 Scaffolds for tissue engineering (part of class on stem cells at the UF Health Center), also 2003-2008

Publications/Reviewed (excluding patents, * indicates invited paper)

1. "Mass Spectral Evidence for Catenanes Formed via a Mobius-Strip Approach," D. Ben-Effraim, C. Batich, and E. Wasserman, *J. Amer. Chem. Soc.*, **92**, p. 2123 (1970).
2. "The Photoelectron Spectra of Cyclooctatetraene and its Hydrogenated Derivatives," C. Batich, P. Bischof, and E. Heilbronner, *J. Electron Spectrosc.*, **1**, p. 33 (1972).
3. "Photoelectron Spectra of Phosphabenzene, Arsabenzene, and Stibabenzene," C. Batich, E. Heilbronner, V. Hornung, A. J. Ashe III, D. T. Clark, U. T. Cobley, D. Kilcast, and I. Scanlan, *J. Amer. Chem. Soc.*, **95**, p. 928 (1973).
4. "Ionisationspotentiale verformter π -Bindungen" Christopher Batich¹, Otto Ermer², Edgar Heilbronner¹ and Prof. Dr. John R. Wiseman³ (Article first published online: 17 JAN 2006) DOI: 10.1002/ange.19730850707 *Angewandte Chemie* Volume 85, Issue 7, pages 302–303, April 1973
- 4.a "Ionization Potentials of Deformed Pi-Bonds," C. Batich, O. Ermer, E. Heilbronner, and J. Wiseman, *Angew. Chem., Int. Ed. Eng.*, **12**, p. 312 (1973).
5. "Bemerkung zur Gleichheit der Aufspaltung I (zwischen den ersten beiden Pi-Ionisationspotentialen) und E zwischen den entsprechenden r - Uebergangsenergien) des Spiro (4,4) nonatetraens," C. Batich, E. Heilbronner, and M. Semmelhack, *Helvetica Chimica Acta*, **56**, p. 2110 (1973).
6. "The Photoelectron Spectra of Alkyl Peroxides," C. Batich and Waldemar Adam, *Tet. Lett.*, p. 1467 (1974).
7. "The Ionization Energies of Bridged <1A> Annulenes and of Dicyclohepta <cd,gh> Pentalene," C. Batich, E. Heilbronner, and E. Vogel, *Helvetica Chimica Acta*, **57**, p. 2288 (1974).
8. "Equivalence of the Energy Gaps I (1,2) and E (1,2) Between Corresponding Bands in the Photoelectron (I) and Electronic Absorption (E) Spectra of Spiro <4,4> nonatetraene. An Amusing Consequence of Spiro Conjugation," C. Batich, E. Heilbronner, E. Rommel, M. Semmelhack and J. S. Foos, *J. Amer. Chem. Soc.*, **96**, p. 7662 (1974).
9. "The Electronic Structure of Vinyl Ethers and Sulfides with Interrupted Conjugation Examined by Photoelectron Spectroscopy," C. Batich, E. Heilbronner, C. B. Quinn, and J. Wiseman, *Helvetica Chimica Acta*, **59**, p. 512-522 (1976).
10. "Photoelectron Spectroscopy of Bis (-allyl) Nickel and Its Methyl Substituted Derivatives: Support for the Near Validity of Koopmans' Theorem," C. Batich, *J. Amer. Chem. Soc.*, **98**, p. 7585-7590 (1976).
11. "Surface Characterization of Acid- and Base-treated Chromosorb W by Electron Spectroscopy for Chemical Analysis," M.A. Kaiser and C. Batich, *J. of Chromatography*, **175**, p. 174-177 (1976).
12. "Radical Cation States of 2,3,5,6-Tetramethylene-norborane, 2,3,5,6-Tetramethylenebicyclo <2.2.2> Octane and of Related Compounds," M. Mohraz, C. Batich, E. Heilbronner, P. Vogel, and P. A. Carrupt, *Recl. Trav. Chem. Pavs-Bas*, **95**, p. 362-367 (1978).
13. "Electronic Structure of Metalorganic Compounds 6. The Photoelectron Spectra of Ni, Pd, Pt-diallyl," M. Bohm, R. Gleiter, C. Batich, *Helvetica Chim. Acta*, **63** (4), p. 990-1005 (1980).
- 14.* "Chemical Labels to Distinguish Surface Functional Groups Using X-ray Photoelectron Spectroscopy (ESCA)," C. Batich and R. Wendt, *ACS Symposium Series No. 162* p. 221-235. "Photon, Electron and Ion Probes of Polymer Structure and Properties," D. Dwight, T. Farbish, and H. R. Thomas, ed. (1981).
15. "X-ray Photoelectron Spectroscopy Study of the Effect of Ozone on Various Styrene/Butadiene Co-polymers," K. Stephens, M. Ammons, C. Batich, C. Beatty, and W. Swartz, *ACS Symposium Series No. 229*, "The Effects on Hostile Environments as Coatings and Plastics," pp. 279-290 (1983).
16. "X-ray Photoelectron Spectroscopy of Nitroso Compounds," C. Batich and D. Donald, *J. Amer. Chem. Soc.*, p. 2758 (1984).
17. "Surface Studies of Calculi Deposition on Foley Catheter Materials," C. Batich, C. Cheng, C. Johnson, V. Rodriguez, and S. Batich, *Biomaterials Transactions*, Volume VII, p. 31 (1984).
18. "Matrix Mineral Configuration in Whewellite Kidney Stones: Ultrastructural Analysis,"

- L Ogbugi, C. Batich, and B. Finlayson, Urolithiasis and Related Clinical Research, edited by P. O. Schwille, L. H. Smith, W. G. Robertson, and W. Vahlensieck (Plenum Pub. Corp.), pp. 711-714 (1984).
- 19.* "Ultrastructure of Whewellite Kidney Stones: Electron-analytical Investigation," L Ogbugi, C. Batich, and B. Finlayson, J. Ultrastructural Research, 90, p. 1-8 (1985).
 20. "Polymers as Moisture Barriers to Maintain Seed Quality," S. West, S. Loftin, M. Wahl, C. Batich, and C. Beatty, Crop Sci., 25, p. 941-945 (1985).
 - 21.* "XPS Studies of Polymeric Surfaces and Interfaces," C. Batich, Surfaces Silanes and Interfaces, ed. D. Lyden, Gordon and Breach Science Pub., NY, pp. 215-234 (1986).
 22. "Custom-made Vaginal Balloons for Strengthening Circumvaginal Muscle Strength," R. Abrams, C. Batich, M. Dougherty, P. McKey, Y. C. Un, and H. Parker, Biomaterials, Medical Devices and Artificial Organs, 14, pp. 239-248 (1986).
 23. "Surface Modification: I, Graft Polymerization of Acrylamide Onto LDPE by Ce⁴⁺ Induced Initiation," C. Batich and A. Yahiaoui, J. Polym. Sci., Polym. Chem. Ed., 25, p. 3479-3488 (1987).
 24. "Surface Segregation and Low Temperature Oxidation of Ni-Cr Alloys," S. Jeng, P. Holloway, C. Batich, and S. Hofmann, J. Vac. Sci. Tech., A5 (4), p. 650-651 (1987) (summary abstract).
 25. "The Effect of Exercise on the Circumvaginal Muscles: Pilot Study Results," M. Dougherty, R. Abrams, C. Batich, P. McKey, and R. Thomas, Florida Nursing Review, 2, pp. 12-13 (1987).
 26. "Effect of Exercise on the Circumvaginal Muscles (CVM)," M. Dougherty, R. Abrams, C. Batich, K. Bishop, and P. Gimotty, Neurology and Urodynamics, 6, pp. 189-190 (1987) (extended abstract).
 27. "New Attachment Formation Following Controlled Tissue Regeneration Using Biodegradable Membranes," I. Magnusson, C. Batich, and B. Collins, J. Periodontology, 59, pp. 1-6 (1988).
 28. "Water and Abrasive Effects on 3-body Wear of Dental Composites," D. Sarrett, K-J. Solderholm, and C. Batich, J. Dental Research, 67, p. 362 (1988) (reviewed abstract).
 - 29.* "Chemical Derivatization Surface Analysis," C. Batich, J. Applied Surface Science, 32, pp. 57-73 (1988).
 30. "The Dynamic Characteristics of the Circumvaginal Muscles (CVM) in Non-parturient and Parturient Women," J. Samples, M. Dougherty, R. Abrams, and C. Batich, JOGNN, May issue, pp. 194-201 (1988).
 - 31.* "Co-combustion in Community Waste to Energy Systems," A. Green, et al., in Co-Combustion, ed. A. Green, pp. 13-28 (1988). Joint Power Generation Conference, Philadelphia, PA, September 1988.
 32. "Variation in the Apparent Coefficient of Friction of Wheat on Galvanized Steel," S. A. Thompson, R. A. Bucklin, C. D. Batich, and I. J. Ross, Am. Soc. Agri. Engr., 31, p. 1518-1524 (1988).
 33. "Toxic Hydrolysis Product from a Biodegradable Foam Implant," C. Batich, R. King, and J. Williams, J. Biomed. Mater. Res.: Applied Biomaterials, 23 pp. 311-319 (1989).
 34. "Polyaniline via Schiff Base Chemistry," C. Batich, P. H. Gebert, D. B. Tanner, and S. L. Herr, Synthetic Metals, 29, pp. E371-376 (1989).
 - 35.* "The Effect of Exercise on the Circumvaginal Muscles in Postpartum Women," M. C. Dougherty, K. R. Bishop, R. M. Abrams, C. D. Batich, and P. A. Gimotty, J. of Nurse-Midwifery, 1, p. 8-14 (January/ February 1989).
 36. "Apatite Deposition on Urinary Catheter Materials," B. Piper and C. Batich, Transactions of the Society of Biomaterials, 12, p. 221 (1989).
 37. "Chain Propagation/Step Propagation Polymerization. III. An XPS Investigation of Poly(oxyethylene)-b-Poly(pivalolactone) Telechelomer," K. Wagener, C. Batich, B. Kirsch, and S. Wanigatunga, J. Polym Sci.: A: Polym. Chem., 27, pp. 2625-2631 (1989).
 38. "Surface Passivation of Ni/Cr Alloy at Room Temperature," S. Jeng, P. Holloway, C. Batich, Surface Science, 227, p. 278 (1989).
 39. "Chromatic Changes in Polyaniline Films," C. Batich, H. Laitinen, and H. Zhou, J. Electrochem. Soc., 137, pp. 883-885 (1990).
 40. "Surface Morphology Study of Foley Catheter Balloon After Inflation," C. Batich, and B.

- Piper, Transactions of the Society of Biomaterials (1990 meeting) 13, p. 117 (1990).
41. "Synthesis and Applications of a Vinylsilazane Pre-ceramic Polymer," Wm. Toreki, C. Batich, M. Sacks, A. Morrone, *Ceram. Eng. Soc. Proc.*, 11 (9-10), pp. 1371-1386 (1990).
 42. "Oxalate Degradation by Alginate Microencapsulation of Oxalobacter Formigene," F. Vaghefi, C. Batich, C. Shevock, Transactions of the Society of Biomaterials (1990 meeting) 13, p. 102 (1990).
 43. "Toxic Products from Co-Combustion of Institutional Waste," A. Green, C. Batich, D. Powell, and et al., 83rd Annual Meeting of the Air and Waste Management Association, Forum 90, June 24-29, 1990, Pittsburgh, Pennsylvania.
 44. "The Polymerization of a Functionalized Aniline Monolayer," H. Zhou, R. Stern, C. Batich and R. Duran, *Makromol. Chem. Rapid Commun.* 11, 409 (1990).
 45. "Water and Abrasive Effects on Three-Body Wear of Composites," D.C. Sarrett, K.J.M. Soderholm, C.D. Batich, *J. Dental Research*, 70, pp. 1074-1081 (1991).
 46. "TEM Microstructural Analysis of Ceramic Powders Derived from the Pyrolysis of Polyvinylmethylsilazane," A.A. Morrone, Wm. Toreki and C.D. Batich, *Materials Letters* 11, (1,2), pp. 19-25 (1991).
 - 47.* "Materials Used in Breast Implants: Silicones and Polyurethanes," C. Batich and D. DePalma; *J. of Long-Term Effects of Medical Implants*, 1, pp. 255-268 (1992).
 - 48.* "Substitutes for Chlorinated Plastics," K. Wagener, C. Batich and A. Green, pp. 155-169 in "Pollution Prevention and Medical Waste Incineration," A. Green, editor; Reinhold van Nostrand, Pub. N.Y., NY (1992).
 49. "Polymer-Derived Silicon Carbide Fibers with Improved Thermomechanical Stability," W. Toreki, C. Batich, M.D. Sacks, M. Saleem, and G. Choi, pp. 761-769 in "Better Ceramics Through Chemistry V," edited by M.J. Hampden-Smith, W.G. Klemperer, and C.J. Brinker, *Mat. Res. Soc. Symp. Proc.*, Vol. 271, Materials Research Society, Pittsburgh, PA (1992).
 50. "Polymer-Derived Silicon Carbide Fibers with Low Oxygen Content," W. Toreki, G.J. Choi, C. Batich, M.D. Sacks, and M. Saleem in *Ceram. Eng. Sci. Proc.*, 13 (9-10), pp. 198-208 (1992).
 51. "Swelling Behavior of pH-Sensitive Copolymers Based on Styrene and 4- (or 2-) Vinylpyridine," C. Batich, Y. Jun, C. Bucaria, and M. Elsabee, *Macromolecules*, 126, pp. 4675-4681 (1993).
 52. "Environmental Stability of Polymers," Tom Atkins and Chris Batich, *MRS Bulletin*, 18, pp. 40-44 (1993).
 53. "Synthesis and Polymerization of 2-Alkylanilines," R. Bodalia, R. Stern, C. Batich, and R. Duran, *J. Polym. Sci.: A: Polym. Chem.*, 31, pp. 2123-2127 (1993).
 54. "Polymer-Derived Silicon Carbide Fibers with Low Oxygen Content and Improved Thermomechanical Stability," W. Toreki, C.D. Batich, M.D. Sacks, M. Saleem, G.J. Choi, and A.A. Morrone, *Journal of Composites Science and Technology*, 51, 145-159 (1994).
 55. "Surface Changes in "Silicone" Elastomer Upon Exposure to Saline," J. Marotta, D. DePalma, C. Batich, Transactions of the Society of Biomaterials (1994 meeting) 20, p. 148 (1994).
 56. "High Sensitivity Measurement of Swelling of Microspheres," J. Wironen, C. Batich, Y. Jun, C. Shen, Transactions of the Society of Biomaterials (1994 meeting), 20, p. 157 (1994).
 57. "Stochastic Modeling of Controlled Release From Poly-styrene-co-4-vinylpyridine Microspheres," C. Shen, P. Rao, C. Batich, J. Moorhead, J. Yan; *J. Cont. Rel.*, 32, 139-146 (1994).
 58. "System for pH-Dependent Release of a Dye in Model Dental Restoration," C. Shen, D. Sarrett, C. Batich, K. Anusavice, *J. Dent. Res*, 73, 1833-1840 (1994).
 59. "Preparation of the Poly(Styrene-Co-N,N-Dimethylaminoethyl Methacrylate) Beads for pH-Sensitive Controlled Release," L. Wei, C. Batich, *Soc. for Biomat., Trans.*, 18, p. 142 (1995).
 60. "Effect of Buffer Type on Swelling Behavior of the pH-Sensitive Beads," L. Wei, C. Batich, *Soc. for Biomat., Transact.*, 18, p. 189 (1995).
 61. "In Vitro Measurement of Silicone Bleed From Breast Implants; L. Yu, J. Marotta, N.

- Hardt, G. Latorre, C. Batich, *Plast. Recong. Surg.*, 97, 756-764 (1996).
62. "High Precision Measurement of the Swelling of Microspheres," J. Wironen, C. Shen, J. Yan, C. Batich, *J. Appl. Polym. Sci.*, 59, 825-830 (1996).
 63. "Development of a Digitally-Monitored High Flow Rate System for Embolic Materials Testing Used in Arteriovenous Malformation Therapy," S.J. Zambo, K.L. Gage, E.S. Rogers, and C.D. Batich, *Trans. 5th World Biomaterials Congress*, p. 590 (1996).
 64. "Effect of Buffer Type on pH-Sensitive Controlled Release," L. Wei, C. Shen, C.D. Batich, and J. Yan, *Trans. 5th World Biomaterials Congress*, p. 773 (1996).
 65. "Surface Properties of Foley Catheters: Relationship to Bacteriuria and Fouling," J. Wironen, J. Marotta, E. Beem, and C. Batich, *Trans. 5th World Biomaterials Congress*, p. 175 (1996).
 66. "Measurement of Silicon in Tissue Sites Both Adjacent to and Distant From Ruptured and Intact Silicone Breast Implants," J. Marotta, G. LaTorre, C. Batich, N. Sisson Hardt, and L. Yu, *Trans. 5th World Biomaterials Congress*, p. 299 (1996).
 67. "Measurement of Gel Bleed from Silicone Breast Implants," J. Marotta, G. LaTorre, C. Batich, N.S. Hardt, W. Yu, *5th World Biomaterials Congress*, p. 303 (1996).
 68. "Effectiveness of Antifungal Agent Containing Microspheres for Controlling Oral Candidiasis," C. Shen, N. Grimado, D. Marsh, L. Wei, and C. Batich, *Proc. Intern. Symp. Cont. Rel. Bioact. Mater.*, 23 (1996).
 - 69.* "Materials Used in Urological Devices," J. Wironen, J. Marotta, M. Cohen, C. Batich, J. Long-Term Effects of Medical Implants, 7(1):1-28 (1997).
 70. "Hydroperoxide-Initiated Grafting of Poly(styrene-*stat*-acrylonitrile) onto Ultra-High Modulus Polyethylene Fibers," J.J. Arnold, M.P. Zamora, C.D. Batich, A.B. Brennan, *J. Adhesion Sci. Technol.*, 11(10):1343-1358 (1997).
 71. "Fluoride Release From pH Sensitive Microspheres," C.D. Batich and L. Wei., *Trans. Soc. Biomat.*, 24, p. 183, (1998).
 - 72.* "Development and In Vitro Evaluation of Sustained Release Ilomastat Devices," A. R. Hadba, J. D. Talton, G. S. Scultz and C. D. Batich, *Transactions of the Society of Biomaterials*. (2000).
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Reviewer For

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Engineered Materials Handbook (ASM)
J. American Ceramics Society

Curriculum Vitae - C. Batich

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 J. Industrial and Engineering Science
 J. Organic Chemistry
 J. Physical Chemistry
 J. Surface and Interfacial Science
 J. Vacuum Science and Technology
 Macromolecules
 National Institutes of Health (research resources, small business grants/SBIR, Cancer therapeutics)
 National Science Foundation
 Scanning Electron Microscopy
 Petroleum Research Fund
 J. Applied Biomaterials
 J. Biomedical Materials Research
 National Institutes of Health (research resources, small business grants)
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Recent NIH Reviewing Activities (does not include past NIH/SBIR or NSF activities)

October 20, 2006 - Special Emphasis Panel on "Polymers and Probes" - ZRG1 BST-A(02)
 (Role: Member)
 July 16, 2008 – Special Emphasis Panel on "Neurodevices and Bioengineering" - ZRG1 ETTN-A(03) (Role: Chair)
 June 12-13, 2008 – Oncological Sciences Integrated Review Group for Developmental Therapeutics Study Section (Role: member)
 July 2009 – Challenge Grant Reviewing Panels (2)
 September 23-24, 2010; Special Emphasis Panel/Scientific Review Group 2011/01 DT (Novel Therapeutics for cancer treatment)
 February 2012; NIH Special Emphasis Panel/Scientific Review Group (Novel Therapeutics for cancer treatment) using R15 mechanism
 March 2012, NIH Review Panel on Microphysiological Systems (joint program with DARPA)
 October 2012, NIH Review Panel ZRG1-OTC-X. Cancer Therapeutics AREA grant applications.
 May 2013; NIH Review Group ZRG1-OTC-X(90) for Cancer Therapeutics AREA Grant Applications.

Editorial Board

Journal of Hepatology (2009)
 International Journal of Polymer Science (2010 – present)

Panel Member For

Polymer Principles in the Undergraduate Curriculum, Florida ACS meeting, panel discussion (1986).
 National Institute for Trial Advocacy, (course requiring expert witness, 1985-1994).
 Materials Research Society, Spring 1988 meeting, co-organizer of Adhesion Symposium.

Other Meeting Activities:

Co-chair, "Surface Analysis" session of Soc. for Biomat. Meeting (San Francisco, 1995).
 Co-chair, "Silicones" session of World Biomat. Congress Meeting (Toronto, 1996).

Co-chair, "Modification of Biomaterials Surfaces" session of Soc. for Biomat. Meeting (New Orleans, 1997).

Co-chair, "Progress in Drug Delivery" session of Soc. for Society of Biomaterials Meeting (St. Paul, Minn., 2001)

Chair, "Dental Materials" session for Society of Biomaterials Meeting (Tampa, FL 2002)

Moderator for session at "Regeneration One" meeting at Amelia Island (Dec 2007)

"Testing leading to a "de novo" (i.e., no predicate) FDA cleared antimicrobial wound dressing";
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