

CURRICULUM VITAE

Chih-Chang (C.C.) Chu, Ph.D.

Rebecca Q. Morgan '60 Endowed Chair Professor



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[I]. EDUCATION

Florida State University, Dept. of Chemistry, Polymer Science, Ph.D, (1976).
Tamkang University, Dept. of Chemistry, B.S. (1968).

[II]. PROFESSIONAL AND/OR RESEARCH EXPERIENCE

Professor	(8/96-present) Biomedical Engineering Program, Department of Biomedical Engineering, Cornell University, Ithaca, New York
Professor	(7/94-present) Department of Fiber Science and Apparel Design, Cornell University, Ithaca, New York.
Guest Professor	(9/10-present) Chang-Chun Institute of Applied Chemistry, Chinese Academy of Science, Chang-Chun City, China.
Associate Professor	(11/84-6/94) Department of Textiles and Apparel, Cornell University, Ithaca, New York.
Assistant Professor	(8/78-10/84) Department of Design and Environmental Analysis, Cornell University, Ithaca, New York.

Visiting Research Professor	(9/92-1/93) Division of Mechanics & Materials Sci., Center of Devices and Radiological Health, FDA, Rockville, MD (Under Oak Ridge Associated Universities Faculty Research Program Award)
Editorial Board	(7/87 - 12/94) Journal of Investigative Surgery. (8/08 – present) The Open Biomaterial Journal (8/08 – present) The Open Material Science Journal (1/09 – present) Journal of Bioengineering and Biomedical Science (9/10 – present) The Journal of Bioengineering and Informatics Sci
Visiting Research Specialist	(9/84-8/85) National Science Council of the Republic of China, Institute of Medical Engineering, National Yang-Ming Medical College, Taiwan, Republic of China.
Board of Directors	(1983-1984) Society of Plastic Engineers, Medical Plastics Division.
Visiting Research Fellow	(6/82-8/82) British Science and Engineering Research Council, Department of Dental Science, The University of Liverpool, England, U.K (Host: Prof. David Williams).
Research Associate	(1976-1978) Department of Biomaterials, Medical Center, University of Alabama in Birmingham.
Visiting Assistant Professor	(1975-1976) Department of Chemistry, University of Alabama in Birmingham.

[III]. Honors/Awards

National Academy of Inventor, Fellow, Nov. 2018

Golden Eagle Award from Tamkang University, Taipei, Taiwan, Nov. 3, 2018

American Institute of Medical and Biological Engineering, College of Fellow, March 2014

State University of New York Chancellor's Award for Excellence in Scholarship and Creative
Activities, May, 2009

1st receipt of the Rebecca Q Morgan '60 endowed chair professorship, July 2008.

Tamkang Chair Lectureship Award, Tamkang University, Taiwan, ROC, April, 2008

National Textile Center Director's Award on the 13th Annual NTC Conference, March 2005

National Textile Center, 3rd place award on 12th Annual NTC Conference, Charlotte, NC, Feb.
10-12, 2004.

Oak Ridge Associated Universities Faculty Research Program Award, 1992.
National Science Council Visiting Research Specialist award, Republic of China, 1984.
British Science and Engineering Research Council Visiting Scientist award, 1982

[IV]. Research Interests and Activities

Prof. Chu's research interests are two folds: **Applied** research in the field of biomedical polymers/fibers used for human body repair and **Basic** research in polymer/fiber morphology and degradation.

In the applied research, Chu focuses on the research and development of novel biodegradable polymers/fibers for tissue regeneration like vascular grafts, wound closure and drug control/release purposes, the design, synthesis and evaluation of novel biologic active biodegradable polymers for surgical repair of injured or diseased tissues, wound closure biomaterials, wound infection and healing, drug delivery vehicles, and biodegradation mechanism. His research activities in the applied research include the synthesis of new biodegradable polymers having biologic functions for wound closure and drug control/release use; formulation of newly developed polymers into different physical forms (e.g, fibers, fabrics, hydrogels, micro/nanospheres, micelle and film) for biomedical applications, development of new sterilization techniques for those γ -irradiation sensitive biomedical polymers; design of biodegradable composite orthopaedic devices and biodegradable vascular grafts.

In the basic research, Chu focuses on the effect of morphology of polymers and fibers on degradation and the use degradation to reveal polymer/fiber morphology. His research activities in the basic research include: theoretical understanding of the effects of chemical structure on degradation through supercomputer molecular modeling, exploring both intrinsic and extrinsic factors that could affect the degradation properties and the role of free radicals in degradation.

[V.] PUBLICATIONS (*h-index*:59; Citation: 11,411 as Dec 2018)

Referred Research Papers and Book Chapters Published (Total 216)

1. Mingyu He, Luyao Sun, Xiaoling Fu, Sean P. McDonough, Chih-Chang Chu, “Biodegradable amino acid-based poly(ester amine) with tunable immunomodulating properties and their in vitro and in vivo wound healing studies in diabetic rats' wounds”, *Acta Biomater* (In Press).
2. B.V. Alapure, Y. Lu, M. He, **C. C. Chu**, H. Peng, F. Muhale, Y. L. Brewerton, B. A. Bunnell, S. Hong, “Accelerate Healing of Severe Burn Wounds by Mesenchymal Stem Cell Seeded Biodegradable Hydrogel Scaffold Synthesized from Arginine-based Poly(ester amide) and Chitosan”, *Stem Cells Dev.* 2018 Sep 14. doi: 10.1089/scd.2018.0106
3. Xinru You, Zhipeng Gu, Jun Huang, Yang Kanga, **Chih-Chang Chu** and Jun Wu, “Arginine based Poly (ester amide) Nanoparticle Platform: From Structure-Property Relationship to Nucleic Acid Delivery”, *Acta Biomaterials*, 74:180-191, (2018).

4. Y. Ji, J.H. Zhao, **C. C. Chu**, "Light-facilitated Delivery of Ovalbumin with Poly(ester amide)s Nanoparticles for MHC-I Antigen Presentation", *J. Mater Chem. Part B*, (6), 1930-1942, (2018) (IF 4.543).
5. KY Qiu, ZC Zhao, G. Haghiashtiani, SZ Guo, MY He, R Su, ZJie Zhu, DB Bhuiyan, P. Murugan, FB Meng, SH Park, **CC Chu**, BM Ogle, BR Konety, RM Sweet*, and MC McAlpine*, "3D Printed Organ Models with Physical Properties of Tissue and Integrated Sensors", *Advanced Materials Technology*, 3 (3), 2018 (DOI: 10.1002/admt.20170023)
6. Ying Ji, Shuo Shan, Mingyu He, **Chih-Chang Chu**, "Inclusion complex from cyclodextrin-grafted hyaluronic acid and pseudo protein as biodegradable nano-delivery vehicle for gambogic acid", *Acta Biomaterialia*, 62: 234-245, (2017) (IF 6.319).
7. KY Qiu, ZC Zhao, G. Haghiashtiani, SZ Guo, MY He, R Su, ZJie Zhu, DB Bhuiyan, P. Murugan, FB Meng, SH Park, **CC Chu**, BM Ogle, BR Konety, RM Sweet*, and MC McAlpine*, "3D Printed Organ Models with Physical Properties of Tissue and Integrated Sensors", *Advanced Materials Technology*, (DOI: 10.1002/admt.20170023)
8. JingLiu, Pei Wang, **Chih-Chang Chu**, Tingfei Xi, "Arginine-leucine based poly (ester urea urethane) coating for Mg-Zn-Y-Nd alloy in cardiovascular stent applications", Arginine-leucine based poly (ester urea urethane) coating for Mg-Zn-Y-Nd alloy in cardiovascular stent applications", *Colloids and Surfaces B: Biointerface*, 159: 78-88, (2017) (IF 4.152)
9. Jing Liu, Pei Wang, **Chih-Chang Chu**, and Tingfei Xi, "A novel biodegradable and biologically functional arginine-based poly(ester urea urethane) coating for Mg-Zn-Y-Nd alloy: enhancement in corrosion resistance and biocompatibility", *J. Mater Chem, Part B*, 5:1787-1802, (2017) (IF 4.543)
10. Ke-Mai Pei, **Chih-Chang Chu**, "Molecular dynamic simulations of a new family of synthetic biodegradable amino acid-based poly(ester amide) biomaterials: Glass transition temperature and adhesion behavior", *Materials Today Chemistry*. 4:90-96, (2017).
11. C. C. Chu, "Suture Materials" IN: *Kirk-Othmer Encyclopedia of Chemical Technology*, Wiley and Son, New York, March 2017, DOI: 10.1002/0471238961.1921202112052309.a01.pub3
12. Ying Ji, Shuo Shanb Mingyu He, **Chih-Chang Chu**, "A novel pseudo-protein based biodegradable nano-micellar platform for the delivery of anti-cancer drug: Photo-enhanced micellar structural stability, Unique intracellular trafficking and In vitro therapeutic effect in human colon cancer cells", *Small*, 13(1): 1-17, (2017) (IF 8.32)
13. Ying Ji, Jihui Zhao, **Chih-Chang Chu**, "Biodegradable Nanocomplex from Hyaluronic acid and Arginine based Poly(ester amide)s as the Delivery Vehicles for Improved Photodynamic Therapy of Multidrug Resistant Tumor Cells: An In Vitro Study of the Performance of Chlorin e6 Photosensitizer", *J. Biomed. Mater. Res Part A*, 105A:1487-1499, (2017) (IF 3.25).
14. Mingyu He, Lillian Ro, Jing Liu, **Chih-Chang Chu**, "Folate Decorated Arginine Based Poly(ester urea urethane) Nanoparticles As Carriers for Gambogic Acid And Effect On Cancer Cells", *J. Biomed. Mater. Res. Part A* 105A: 475-490, (2017) (IF3.25)
15. Mingyu He, Alicia Potuck, Julie C. Kohn, Katharina Fung, Cynthia A. Reinhart-King, **Chih-Chang Chu**, "Self-assembled cationic biodegradable nanoparticles from pH-responsive Amino Acid-based Poly(ester urea urethane)s and their application as a drug delivery

- vehicle”, *Biomacromolecules*, 17(2): 523-537, (2016) (Impact factor 5.583).
16. **C. C. Chu**, “Novel Synthetic Biodegradable Arginine-Rich Implantable Biomaterials And Devices For Human Body Repair And Reconstruction”, IN: *L-Arginine: Structure, Dietary Sources and beneficial Effects*, Editor Benjamin L. Soto, Nova Science Publisher, New York, Chapter 4, pp 89-126, (2016).
 17. Daniel Knecht and **C. C. Chu**, “A Novel Therapeutic for Diabetic Retinopathy: Mast Cell Stabilizer Impregnated Synthetic Biodegradable Amino Acid-Based Poly(ester amide) Rods”, IN: *Biodegradable Polymers, Volume 1: Advancement in Biodegradation Study and Applications*”, C. C. Chu (Editor), Nova Science Publisher, New York, Chapter 9, Dec. 2015.
 18. Janet L. Huie, J. Anastasia Nichols, Julien P. Fey, David Burns, Alicia Potuck and **Chih-Chang Chu**, “Novel Supercritical Carbon Dioxide Sterilization of Absorbable Sutures and New Amino Acid-based Biomaterials as Suture Coating”, IN: *Biodegradable Polymers, Volume 1: Advancement in Biodegradation Study and Applications*”, C. C. Chu (Editor), Nova Science Publisher, New York, Chapter 14, Dec. 2015.
 19. **C. C. Chu**, “An Overview of A Novel Family of Nature-Inspired Design of Biodegradable Functional Amino Acid-based Poly(ester amide) Biomaterials: New Development, Property and Biomedical Applications”, IN: *Biodegradable Polymers, Volume 2: New Biomaterial Advances and Challenges*, C. C. Chu (Editor), Nova Science Publisher, New York, Chapter 3, Dec. 2015.
 20. MingYu He and **C. C. Chu**, “The New Functional Segmented Urethanes Biomaterials for Biomedical Studies: Design for Biocompatibility, Biodegradability, Self-assembly in Nanoscale”, IN: *Biodegradable Polymers, Volume 2: New Biomaterial Advances and Challenges*, C. C. Chu (Editor), Nova Science Publisher, New York, Chapter 4, Dec. 2015.
 21. Yan Zhang, Jinhong Li, Meidong Lang, and **Chih-Chang Chu**, “Biodegradable Functionalized Aliphatic Polyester: Preparation and Biomedical Application”, IN: *Biodegradable Polymers, Volume 2: New Biomaterial Advances and Challenges*, C. C. Chu (Editor), Nova Science Publisher, New York, Chapter 9, Dec. 2015.
 22. De-Qun Wu, Jun Wu, Xiao-Hong Qin and **Chih-Chang Chu**, “From macro to micro to nano: development of a novel lysine based hydrogel platform and the enzyme triggered self-assembly of macro hydrogel into nanogel”, *J. Material Chem. Part B*, 3: 2286-2294, (2015).
 23. Alicia N. Potuck, Beth L. Weed, Cynthia A. Leifer, **C.C. Chu**, “Electrostatically Self-assembled Biodegradable Microparticles from Pseudo-Proteins and Polysaccharide: Fabrication, Characterization and Biological Properties”, *Biomacromolecules*, 16(2): 564-577, (2015).
 24. J. Liu, X.L. Liu, T.F. Xi, **C.C. Chu**, " A Novel Pseudo-Protein-based Biodegradable Coating for Magnesium Substrate: In vitro corrosion phenomena and cytocompatibility," *J. Mater. Chem, Part B* 3: 878-893, (2015).
 25. Karina A. Hernandez, Rachel Campbell Hooper, Tatiana Boyko, Alyssa J. Reiffel Golas, Michel van Harten, D.Q. Wu, Andrew Weinstein, **C.C. Chu**, Jason A. Spector, “Reduction of Suture Associated Inflammation after 28 days using Novel Biocompatible Pseudo-Protein Poly (ester amide) Biomaterials”, *J. Biomed. Mater. Res. Part B Applied Biomaterials*, 103B:457 - 463, (2015)

26. Gunjan Gakhar, Huixian Liu, Roquian Shen, Douglas Scherr, D. Q. Wu, David Nanus and **C.C. Chu**, “Anti-tumor Effect of Novel Cationic Biomaterials in Prostate Cancer”, *Anticancer Research*, 34: 3981 – 3990 (2014).
27. Xuan Pang, Jun Wu, **Chih-Chang Chu** and Xuesi Chen, “Synthesis and Characterization of Novel Cationic Hybrid Hydrogels from Pendant Functional Amino Acid-based Poly(ester amide)s”, *Acta Biomaterials*, 10 (7): 3098-3107, (2014).
28. Jun Wu, Xin Zhao, Dequn Wu, **Chih-Chang Chu**, “Development of a biocompatible and biodegradable hybrid hydrogel platform for sustained release of ionic drugs”, *J. Mater. Chem. Part B* 2(38): 6660-6668, (2014).
29. Mingyu He, Alicia Potuck; Yi Zhang, **C. C. Chu**, “Arginine based polyester amide / polysaccharide hydrogels and their biological response”, *Acta Biomaterial*, 10 (6): 2482-2494, (2014).
30. Mingyu He and **C. C. Chu**, “Dual Stimuli Responsive Glycidyl Methacrylate Chitosan-Quaternary Ammonium Hybrid Hydrogel and Its Bovine Serum Albumin Release”, *J. Appl. Polym. Sci*, 130 (5): 3736-37845, (2013).
31. D. Q. Wu, J. Wu, and **C. C. Chu**, “A novel family of biodegradable hybrid hydrogels from arginine-based poly(ester amide) and hyaluronic acid precursors”, *Soft Matter*, 9: 3965-3975, (2013)
32. Mingyu He and **C. C. Chu**, “A new family of functional biodegradable Arginine-based polymer urea urethanes: synthesis, characterization and biodegradation”, *Polymer*, 54: 4112-4125 (2013)
33. X. H. Qin, D. Q. Wu, and **C. C. Chu**, “Dual functions of polyvinyl alcohol (PVA): fabricating particles and electrospinning nanofibers applied in controlled drug release”, *J. Nanoparticle Res.*, 15: 1395 - 1409 (2013)
34. Jun Wu and **C. C. Chu**, “Water insoluble cationic poly (ester amide)s: synthesis, characterization and applications”, *J. Mater. Chem. B*, 1:353 – 360, (2013)
35. C. S. Chen, X. D. Xu, Y. Wang, J. Yang, H. Z. Jia, H. Cheng, **C. C. Chu**, R. X. Zhuo, X. Z. Zhang, “A peptide nanofibrous indicator for eye-detectable cancer cell identification”, *Small*, 9 (6): 920-926, (2013)
36. **C. C. Chu**, “Types and Properties of Surgical Sutures”, IN: Biotextiles as Medical Implants, B.S. Gupta, M. King and R. Guidoin (eds), Woodhead Publishing Series in Textiles No. 113, Cambridge, England, Part 2 Application, Chapter 10, Oct. 2013, pp 232-274.
37. **C. C. Chu**, “Materials for Absorbable and Non-absorbable Surgical Sutures”, IN: Biotextiles as Medical Implants, B.S. Gupta, M. King and R. Guidoin (eds), Woodhead Publishing Series in Textiles No. 113, Cambridge, England, Part 2 Application, Chapter 11, Oct. 2013.
38. Jun Wu Dequn Wu Martha A. Mutschler, **Chih-Chang Chu**, “Cationic Hybrid Hydrogels from Amino-Acid-Based Poly(ester amide): Fabrication, Characterization, and Biological Properties”, *Advanced Functional Materials*, 22 (18): 3815-3823 (2012).
39. Jun Wu and **Chih-Chang Chu**, “Block Copolymer of Poly (ester amide) and Polyesters: Synthesis, Characterization, and in vitro Cellular Response”, *Acta Biomaterials*, 8 (12): 4314-4323, (2012).

40. Jun Wu, Dai Yamanouchi, Bo Liu and **C. C. Chu**, “Biodegradable Arginine-based Poly(ether ester amide)s as Non-viral DNA delivery Vector and their Structure – Function Study”, *J. Mater. Chem.* 22: 18983 – 18991, (2012).
41. LA Hockaday, KH Kang, NW Colangelo, PYC Cheung, B Duan, E Malone, J Wu, LN Girardi, LJ Bonassar, H Lipson, CC Chu and JT Butcher, “Rapdi 3D printing of anatomically accurate and mechanically heterogeneous aortic valve hydrogel scaffolds”, *Biofabrication*, 4 (3): 1-12, Sept (2012).
42. Yuan-Jia Pan, Yuan-Yuan Chen, Dong-Rui Wang, Chuan Wei, Jia Guo, Da-Ru Lu, **Chih-Chang Chu**, Chang-Chun Wang, “Redox/pH dual stimuli-responsive biodegradable nanohydrogels with varying responses to dithiothreitol and glutathione for controlled drug release”, *Biomaterials* 33(27): 6570-6579, (2012).
43. K. Guo and **C. C. Chu**, “Synthesis and Characterization of Poly- ϵ -caprolactone-containing Amino Acid-based Poly(ether ester amide)s”, *J. Appl. Polym. Sci.* 125(1): 812-819, (2012).
44. H. Song and **C. C. Chu**, “Synthesis and Characterization of A New Family of Cationic Poly(ester amide)s and Their Biological Properties”, *J. Appl. Polym. Sci.* 124 (5): 3840–3853, (2012).
45. Chao Zhong and **C. C. Chu**, Biomimetic Mineralization of Acid Polysaccharide-based Hydrogels: Towards Porous 3-Dimensional Bone-like Biocomposites”, *J. Mater. Chem.*, 22(13): 6080-6087, (2012)
46. H. Xu, J. Wu, **C. C. Chu**, M. L. Shuler, “Development of disposable PDMS micro cell culture analog devices with photopolymerizable hydrogel encapsulating living cells”, *Biomed Microdevices*, 14:409-418, (2012).
47. **C. C. Chu**, “Novel Biodegradable Functional Amino Acid-based Poly(ester amide) Biomaterials: Design, Synthesis, Property and Biomedical Applications”, *J. Fiber Bioengineering and Informatics*” 5(1): 1-31, (2012)
48. **C. C. Chu**, “Biodegradable Polymeric Biomaterials: An Updated Overview”, IN: Biomaterials – Principles and Practices, Ed: Joyce Y. Wong, Joseph D. Bronzino, and Donald R. Peterson, CRC Press, Boca Raton, Fla, Dec. 6, 2012, Chapter 5.
49. J. T. Butcher, L. Hockaday, K. Kang, N. Colangelo, J. Wu and **C. C. Chu**, "High fidelity 3D tissue printing of scalable anatomically accurate living aortic valves," *Tissue Engineering Part A* 17(3-4), 545 (2011)
50. Guoming Sun, **C. C. Chu**, “Biodegradable Nanospheres Self-Assembled from Complementary Hydrophilic Dextran Macromers”, *Carbohydrate Polymers*, 86(2): 910-916, (2011).
51. E. Chkhaidze, D. Tugushi, D. Kharadze1, Z. Gomurashvili, **C. C. Chu**, R. Katsarava, “New unsaturated biodegradable poly(ester amide)s composed of fumaric acid, leucine and α,ω -alkylene diols”, *J Macromol Sci Part A - Pure & Appl Chem.* 48(7): 544 -555, (2011).
52. Mingxiao Deng, Jun Wu, Cynthia A. Reinhart-King, and **C. C. Chu**, “Biodegradable Functional Poly(ester amide)s with Pendant Hydroxyl Functional Groups: Synthesis, Characterization, Fabrication and *In Vitro* Cellular Response”, *Acta Biomaterials* 7:1504-1515, (2011).
53. Jun Wu, Martha A. Mutschler, **C. C. Chu**, “Synthesis and Characterization of Ionic Charged Water Soluble Arginine-based Poly (ester amide)”, *J. Mater. Sci. Mater in Med.* 22:469–479,

- (2011)
54. Joshua A. Horwitz, Katrina M. Shum, Josephine C. Bodle, MingXiao Deng, **C. C. Chu**, Cynthia A. Reinhart-King, “Biological performance of biodegradable amino acid-based poly(ester amide)s: Endothelial cell adhesion and inflammation *in vitro*”, *J. Biomed. Mater. Res. Part A*, 95: 371-380 (2010).
 55. Huijun Wu, Jintu Fan, **C. C. Chu** and Jun Wu, “Electrospinning of small diameter 3-D nanofibrous tubular scaffolds with controllable nanofiber orientations for vascular grafts”, *J Mater. Sci., Mater. In Med*, 21:3207-3215, (2010)
 56. Chao Zhong and **C. C. Chu**, On the Origin of Amorphous Cores in Biomimetic CaCO₃ Spherulites: New Insights into Spherulitic Crystallization”, *J. Crystal Growth and Design* 10 (12): 5043–5049, (2010).
 57. Xuan Pang, Jun Wu, Cynthia Reinhart-King, and **C. C. Chu**, “Synthesis and characterization of functionalized water soluble cationic poly(ester amide)s”, *J. Polym. Sci. Part A: Polymer Chemistry*, 48: 3758–3766. (2010).
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 59. Xuan Pang and **C. C. Chu**, “Synthesis, Characterization and Biodegradation of Poly(ester amide)s based Hydrogels”, *Polymer*, 51: 4200-4210, (2010).
 60. K. Guo and **C. C. Chu**, "Synthesis of Biodegradable Amino Acid-based Poly(ester amide) and Poly(ether ester amide) with Pendant Functional Groups", *J. Appl. Polym. Sci.* 117(6): 3386-3394, (2010).
 61. Guoming Sun and **C. C. Chu**, "Impregnation of Tubular Self-Assemblies into Dextran Hydrogels", *Langmuir*, 26(4): 2831-2838, (2010).
 62. Xuan Pang and **C. C. Chu**, "Synthesis, Characterization and Biodegradation of Functionalized Amino Acid-based Poly(ester amide)s", *Biomaterials*, 31(14): 3745-3754, (2010).
 63. Guoming Sun and C. C. Chu, "Impregnation of Tubular Self-Assemblies into Dextran Hydrogels", *Langmuir*, 26(4): 2831-2838, (2010).
 64. M.X. Deng, Jun Wu, C. Reinhart-King and **C. C. Chu**, ““Synthesis and Characterization of Biodegradable Poly(ester amide)s with Pendant Amine Functional Groups and In Vitro Cellular Response”, *Biomacromolecules*, 10(1): 14-20, (2009).
 65. Guoming Sun and **C. C. Chu**, “Self-Assembly of Chemically Engineered Hydrophilic Dextran into Microscopic Tubules”, *ACS Nano (Am Chem Soc.)*, 3(5): 1176-1182, (2009).
 66. Sinhee Kim and **C. C. Chu**, "Fabrication and Characterization of a pure biodegradable polysaccharide hydrogel with Vitamin B2 as a photoinitiator”, *J. Biomed. Mater. Res., Part B: Applied Biomaterials*, 91B: 390-400, (2009).
 67. Kai Guo and **C. C. Chu**, “Biodegradable and Injectable Paclitaxel-loaded Poly(ester amide)s Microspheres: Fabrication and Characterization”, *J. Biomed. Mater. Res. Part B. Applied Biomaterials*, 89 (2): 491-500, (2009).
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69. Lei Li and **C. C. Chu**, "Nitroxyl Radical Incorporated Electrospun Biodegradable Poly(ester amide) Nanofibrous Membranes", *J. Biomater. Sci. Polymer Ed*, 20: 341-361, (2009).
70. Sinhee Kim and **C. C. Chu**, "Visible light induced dextran-methacrylate hydrogel formation using (-)-riboflavin, vitamin B2, as a photoinitiator and L-arginine as a co-initiator", *Fibers and Polymers*, 10(1): 14 - 20, (2009)
71. D. Q. Wu and **C. C. Chu**, "Cationic poly(VCL-AETA) hydrogels and ovalbumin (OVA) release in Vitro", *J.Mater. Sci. Materials in Medicine*, 19: 3593-3601, (2008).
72. **C. C. Chu** and Dajun D. Sun, "New electrospun synthetic biodegradable poly(ester amide) drug-eluting fibrous membranes for potential wound treatment", AATCC Symposium Proceeding "Medical, Nonwovens, and Technical Textiles", Oct.. 6-7, 2008, Durham, NC, pp. 60-76.
73. Dai Yamanouchi, Jun Wu, Andrew N. Lazar, K. Craig Kent, **C. C. Chu**, Bo Liu, "Biodegradable arginine-based poly(ester-amide)s as non-viral gene delivery reagents", *Biomaterials*, 29(22): 3269-3277, (2008).
74. G. M. Sun, X. Z. Zhang and **C. C. Chu**, Effect of the molecular weight of polyethylene glycol (PEG) on the properties of chitosan-PEG-poly(N-isopropylacrylamide) physical hydrogels", *J. Mater. Sci. Materials in Medicine*, 19 (8):2865-2872, (2008).
75. Kai Guo and **C. C. Chu**, "Copolymers of Unsaturated and Saturated Poly(ether ester amide)s: Synthesis, Characterization and Biodegradation", *J. Appl. Polym. Sci.* 110 (3): 1858-1869, (2008).
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78. **C. C. Chu**, "Sutures", IN: Encyclopedia of Biomaterials and Biomedical Engineering, Second Edition, Editors: E. Wnek Gary and Gary L. Bowlin, Volume 4, pp 2562, May 28, 2008.
79. Kai Guo and **C. C. Chu**, "Synthesis, characterization and biodegradation of novel poly(ether ester amide)s based on L-phenylalanine and oligoethylene glycol", *Biomacromolecules*, 8(9): 2851-2861, (2007).
80. X. Z. Zhang and **C. C. Chu**, "Influence of polyelectrolyte on the thermosensitive property of PNIPAAm-based copolymer hydrogels", *J. Mater. Sci. Mater. in Medicine*, 18 (9):1771-1779, (2007).
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82. **C. C. Chu**, "Biodegradable polymeric biomaterials: An updated overview", IN: Biomaterials, Joyce Y. Wong and Joseph D. Bronzino (Editors), CRC Press, Boca Raton, Fla, 2007, Chapter 6, pp 6-1 to 6-22.
83. S. Namkung and **C. C. Chu**, "Partially biodegradable temperature and pH-responsive poly(N-isopropylacrylamide)/dextran-maleic acid hydrogels: Formulation and controlled

- drug delivery of Doxorubicin”, *J. Biomater. Sci. Polym. Ed.* 18 (7): 901-924, (2007).
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 88. **C. C. Chu**, “Biomedical textile-based biomaterials and their surgical applications”, Proceedings of the International Forum of Biomedical Textile Materials, DongHua University, Shanghai, China, Dec. 2007.
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[VII]. CONFERENCES WITH ORAL/POSTER, RESENTATIONS & SEMINARS

A. Technical Conferences/Symposium

1. 5th International Biomaterial Symposium, Aug 24-26, 2018, ChangChun, China, Invited speaker and session chair.
2. 2nd International Conference on Clinical Trials” August 22-24, 2016, Philadelphia, PA, USA, Invited speaker.
3. 31st Engineering and Urology Society, May 7, 2016, San Diego, CA (Abstract 57 “Patient Specific 3-D Printed Prostate with Tissue and Anatomic Fidelity, p.69)
4. Fifth Asian Biomedical Material Congress, May 6 - May 8, 2015, Taipei, Taiwan, Chair and Invited presentation.
5. Biomaterials International 2015, June 1 - June 4, 2015, Kenting, Taiwan, Invited presentation.

6. Focused Program on Biomaterials for Medical Applications, April 20-23, 2015, sponsored by the Institute for Advanced Study and Biomedical Engineering Division, Hong Kong University of Science and Technology, Organizing and contributing a presentation.
7. The 4th International Advanced Biomaterials Symposium, Chang-Chun, China, Sept. 28-30, 2013. Invited speaker and Chair a session.
8. Plastic and Reconstructive Surgery 132 (4S-1), 29, 2013, San Diego, CA, Oct. 12-14, 2013. Tatiana V. Boyko, Karina A. Hernandez, Rachel Campbell, Andrew Weinstein, Alice Harper, Da-Qing Wu, Chih-Chang Chu, Jason A. Spector, "Multiple Amino Acid Biodegradable Poly Ester-Amide (PEA) Polymer Coating Significantly Reduces Inflammation Associated with Suture Implantation",
9. The 9th World Biomaterials Congress in Cheng-Du, China, June 1-5, 2012. 12 abstracts are accepted for both oral and poster presentations.
10. 244th American Chemical Society Annual Meeting, Philadelphia, PA, Aug. 19-23, 2012, One poster presentation.
11. The 1st Annual World Congress of Advanced Materials, Beijing, China, June 6-8, 2012. Invited oral presentation in Symposium 14-1: Biomaterials in Pharmaceutical Industry.
12. International Forum on Biomedical Textile Materials in Shanghai (DongHua University): Keynote Speaker, June 9, 2012
13. The 10th China-Japan-Korea Foresight Joint Symposium on Gene Delivery and International Symposium on Biomaterials 2011, May 29 - Jun, 2, 2011, Guilin, Guangxi, China. As invited speaker and session chair for gene delivery.
14. Textile Bioengineering and Informatics Society, 2011 "International Symposium on Advanced Textiles and Fashionable Industry", Beijing, China, May 27 - 29, 2011. As invited keynote speaker.
15. The 18th International Conference on Secondary Ion Mass Spectrometry, Sept. 18-23, 2011, Trentino, Italy, Michelle D. Marchany, Ming Yu He, Timothy J. Kuchera, Chih-Chang Chu and Joseph A. Gardella Jr. "Determination of the Surface Degradation Kinetics and Protein Accumulation in Chitosan-Based Biodegradable Hydrogels"
16. BioInterface 2010 Symposium and Workshop in Atlanta, GA, October 18 - 20, 2010, as invited opening address to the Session 4: New Biomaterials
17. The International Workshop on Biomaterials, 2009, Chang-Chun, Jilin, China, Sept. 13 – 18, 2009, organized by the Chinese Academy of Science and Changchun Institute of Applied Chemistry.
18. Suzanne Schwartz, S. Demars, C. C. Chu, J. White, A. Cooper, M. Rothrock, M. Adelman and R. Yurt, "Efficacy of poly(ester amide) dressings on partial thickness wound healing", 3rd World Union of Wound Healing Societies, June 4-8, 2008, Toronto, Canada, Poster.
19. C. C. Chu, H. Song, D. Yamanouchi, Jun Wu and Bo Liu, "New biodegradable non-viral gene transfection biomaterials", 8th World Biomaterials Congress, Amsterdam, The Netherland, May 28 - June 1, 2008. Oral presentation.
20. C. C. Chu and Daniel D. Sun, "Electrospun New Biodegradable Drug-Eluting Nanofiber Membranes for Potential Wound Treatment", AATCC Medical, Nonwovens, and Technical Textiles Symposium, Durham, NC, Oct. 6-7, 2008.

21. C. C. Chu, "East Meets West: How to integrate ancient traditional Chinese medicine into western new nano biomaterial technology for a variety of therapeutic applications", an oral presentation to the 2008 Symposium on the Applications of Biomedical Materials: East Meets West, Minghsin University of Science and Technology, Hsin-Chu, Taiwan, China, April 29-30, 2008.
22. R. Wong, C. C. Chu, C. Zhong, and Y. Wang, "Dynamic Diffusion Analysis of Chitosan-based Hydrogels Using Magnetic Resonance", Proc. Intl. Soc. Mag. Reson. Med. 16, pp 1786, May 3-9 (2008), Toronto, Canada.
23. Chao Zhong and C. C. Chu, "Co-existence of calcite and amorphous calcium carbonate (ACC) in acid polysaccharide-mediated biomimetic CaCO_3 ", Materials Research Society, Dec. 1, 2008, Boston, MA, Poster.
24. 1st 2007 International Forum on Biomedical Textile Materials and Annual Meeting of Project "111", Donghua University, Shanghai, China, May 30 - June 2, 2007.
25. International Conference on Intelligent Textiles, Seoul, Korea, Nov. 12-14, 2006 (as invited keynote speaker).
26. National Textile Center, 14th Annual NTC Forum, Hilton Head, SC, Feb. 19-21 (2006). Poster presentation
27. National Textile Center, 13th Annual NTC Forum, Charlotte, NC, March 20-22 (2005). Poster presentation.
28. National Textile Center, 12th Annual NTC Forum, Charlotte, NC, Feb. 10-12 (2004). Poster presentation.
29. 7th World Biomaterials Congress, Sydney, Australia, May 17-21 (2004). As an invited Keynote speaker in the session on "Contemporary Aspects of Absorbable Polymers". Title: "Absorbable Biomaterials: Past, Present and Future".
30. 32nd Annual Conference on Thermal Analysis and Applications, North American Thermal Analysis Society (NATAS), Williamsburg, VA, Oct. 4-6 (2004). Oral presentation in the Symposium on Semi-crystalline Polymers Honorary Session for Prof. Leo Mandelkern.
31. Medical Textiles : Advances in Biomedical Textiles and Healthcare Products, Oct. 26-27 (2004), Pittsburgh, PA. As an invited speaker "Fundamental issues of suture materials and their recent developments". Organized by the Industrial Fabrics Association International (IFAI) and North Carolina State University.
32. The Fiber Society 2004 Fall Symposium on Advanced Materials and Processes, Oct. 11-13, (2004), Ithaca, NY. Oral presentation "Novel fibrous scaffold for wound management".
33. The 226th American Chemical Society Conference, Sept. 7-11 (2003), N. Y, New York, Division of Polymeric Materials: Science and Engineering. 2 poster presentations:
 - a) "Hydrophobic-hydrophilic Network and Drug Release Behavior in vitro", With D.Q. Wu, X. Z. Zhang, G. M. Sun, In: Polymeric Materials: Science & Engineering 89, 412 (2003).
 - b) "Synthesis, Characterization and Drug Release from Three-arm Poly(ϵ -caprolactone) maleic acid/Poly(ethylene glycol) diacrylate Hydrogels", With D.Q. Wu, X. Z. Zhang, In: Polymeric Materials: Science & Engineering 89, 376 (2003)
34. Biomedical Engineering in New York, Nov. 1-2, (2003), Alfred University, Alfred, NY. With Kai Guo, Poster presentation.

35. National Textile Center, 11th Annual NTC Forum, Charlotte, NC, Feb. 10-12 (2002). Poster presentation.
36. Clemson University “Medical Textiles and Biomedical Polymers and Materials” workshop, Dec. 12-13, 2000, Clemson, SC. As an invited speaker.
37. 6th Kyungpook National University Hospital International Symposium on “Biomaterials and Tissue Engineering”, Taegu, Korea, Oct. 14 (1999). As a keynote speaker.
38. Korea National Polymer Society Annual Meeting in Pusan, Korea, Oct. 15, (1999).
39. 218th National American Chemical Society meeting “Biotechnology & Society in the New Millennium”, New Orleans, LA, Aug. 22-26 (1999). “Bioactive biodegradable hydrogels for textile coating”. With S.H. Kim, Y.L. Zhang and C.Y. Won.
40. Conference Medical Textiles & Biomedical Polymers and Materials, Clemson University, Clemson, SC, Sept. 8-9 (1999). “Biologically Active Biomaterials”.
41. 5th International Scientific Workshop on Biodegradable Plastics and Polymers, “Biodegradation of regular poly(ester amide)s based on α -amino acids. *In vitro* and preliminary *in vivo* studies”, June 9-13, (1998), Stockholm, Sweden, With R. Katsarava, N. Javakhishvili, G. Tsitlanadze, L. Edilashvili, and C.Y. Won.
42. Conference Medical Textiles & Biomedical Polymers and Materials, Clemson University, Clemson, SC, Sept. 9-10 (1998). “Biologically Active Biomaterials”.
43. IUPAC Symposium on Molecular Architecture for Degradable Polymers, Stockholm, Sweden, June 10-14 (1997). “Synthesis, Properties and Applications of New Biodegradable Polymers Having Biological Activities”. (Invited speaker).
44. 5th World Biomaterials Congress, Toronto, Canada, May 28-June 2, (1996). "Novel chemical modification of biodegradable and chemical reactive polylactic acid by grafting of protected L-lysine". With C.Y. Won and K.H., Lee.
45. 5th World Biomaterials Congress, Toronto, Canada, May 28-June 2, (1996). "Electron spin resonance study of free radical properties of ultra-high molecular weight polyethylene upon γ -irradiation". With K.H. Lee, R.A. Gsell, & S. Lin,
46. 5th World Biomaterials Congress, Toronto, Canada, May 28-June 2 (1996). "Surface oxidation index & its depth profile of ultra-high molecular weight polyethylene upon γ -irradiation sterilization". With R.A. Gsell, K.H. Lee, and S. Lin.
47. 5th World Biomaterials Congress, Toronto, Canada, May 28-June 2 (1996). "Hydrolysis of absorbable polymeric biomaterials by superoxide". With K.H. Lee and C.Y. Won.
48. 5th World Biomaterials Congress, Toronto, Canada, May 28-June 2 (1996). "The role of free radicals in hydrolytic degradation of absorbable polymeric sutures". With K.H. Lee.
49. 5th World Biomaterials Congress, Toronto, Canada, May 28-June 2, (1996). "Electron spin resonance study of free radical properties of polyglycolic acid upon γ -irradiation sterilization," With K.H. Lee.
50. 5th World Biomaterials Congress, Toronto, Canada, May 28-June 2, (1996). "Fiber/matrix interface studies on totally and partially absorbable composite materials for internal fixation of bone fractures". With M.A. Slivka, & I. Adisaputro.
51. “Fundamentals of Suture Fibers and Their Recent Advancement”, In: *Medical Textiles Workshop*, Sept. 11-12, 1996, Greenville, SC, Sponsored by Clemson University.
52. The Fiber Society General Technical Conference Fall 1995, Nov 13-15 (1995), Philadelphia, PA.

- "Development of a new characterization method to analyze the fiber/matrix interface of bioresorbable continuous fiber-reinforced composite materials for internal fixation of bone fractures using Laser Confocal Microscopy". With Michael A. Slivka.
53. Gordon Research Conferences on "Biodegradable polymers" in the series of "Frontiers of Science", Oxnard, CA, Feb. 19-24, (1995). As an invited speaker,
 54. Society for Biomaterials Annual Scientific Meeting, San Francisco, CA, March 18-22, (1995). "Chemical Functional Group Conversion of Synthetic Biodegradable Polyesters for Accelerated Degradation without Premature Loss of Bulk Properties". With L.M. Pratt,
 55. Society for Biomaterials Annual Scientific Meeting, San Francisco, CA, March 18-22, (1995). "Molecular Modeling of the Effect of Substituent on Degradation of Linear Aliphatic Polyester Biomaterials". With L.M. Pratt.
 56. Society for Biomaterials Annual Scientific Meeting, San Francisco, CA, March 18-22, (1995). "A Computational Study of the Hydrolysis of Biodegradable Polysaccharide Biomaterials: Substituent Effects on the Hydrolytic Mechanism". With L.M. Pratt.
 57. American Chemical Society, Polymer Division, Chicago, (1993). "Surface Characterization of Bioabsorbable Polymers Modified with Self-Assembled Monolayers." With J.J. Hickman, M.A. Testoff, D.A. Stenger, B.J. Spargo, and A.S. Rudolph.
 58. Gordon Research Conferences on "Biodegradable Polymers" in the series of "Frontiers of Science", Oxnard, CA, Feb. 19-24 (1995). "Theoretical Molecular Modeling of the Hydrolytic Degradation of Biodegradable Biomaterials". (invited speaker).
 59. Society for Biomaterials, 19th Annual and 25th International Biomaterials Symposium, Birmingham, Ala April 28-May 2 (1993). "Endothelial Cell Adhesion and Growth on Glass and Biodegradable Discs of Polyglycolic Acid Modified with Self-Assembled Monolayers of Aminosilanes." With M.A. Testoff, B.J. Spargo, D. A. Stenger, J. J. Hickman and A. S. Rudolph.
 60. 4th World Biomaterials Congress, Berlin, Germany, April 24-May 2 (1992). "Animal Implantation Study of Bicomponent Absorbable Vascular Grafts.". With J T Yu.
 61. 4th World Biomaterials Congress, Berlin, Germany, April 24- May 2 (1992). "The Effect of Macrophage Cell Media on the Degradation of Synthetic Absorbable Sutures." With Alex Hsu.
 62. 4th World Biomaterials Congress, Berlin, Germany, April 24- May 2 (1992). "Surface Chemical Modification Of Bioabsorbable Polymers By Dialkyltitanocenes." With L. M. Pratt.
 63. 4th World Biomaterials Congress, Berlin, Germany, April 24- May 2 (1992). "The Effect of Electrolytes on the *in vitro* Degradation of Synthetic Absorbable Fibers." With L. Pratt, J. Kim, A. Chu, A. Hsu, I. H. Loh, H. L. Lin.
 64. Society for Biomaterials 17th Annual Scientific Meeting and 23rd International Biomaterials Symposium, Phoenix, Az, May 1-5 (1991). "Plasma Surface Modification of Synthetic Absorbable Sutures". With I. H. Loh.
 65. Society for Biomaterials 16th Annual Scientific Meeting and 22nd International Biomaterials Symposium, Charleston, SC, May 20-23 (1990). "Morphological Study of Synthetic Absorbable Sutures (PDS)". With Hui-Ling Lin and D. T. Grubb.
 66. Gordon Research Conference in "Polymers for Biosystems", Oxnard, CA, March 19-23 (1990). "Polymeric Fibers for Wound Closure" (Invited).
 67. American Physical Society Annual Meeting of March (1990). "Crystal Structure of Poly (p-

- dioxanine)". With D. T. Grubb.
68. 3rd International Conference on Medical Textiles for Implantation, Fellbach/Stuttgart, W. Germany, June 14-16 (1989). "The Effect of Polymer Morphology on the Hydrolytic Degradation of Synthetic Absorbable Suture (Polyglycolic acid)," With Z. Kizil.
 69. 3rd International Conference on Medical Textiles for Implantation, Fellbach/Stuttgart, W. Germany, June 14-16 (1989). "*In Vitro* Evaluation of the Macrophage's Fibrogenic Activity on Thirteen Synthetic Materials." With J Ok Lim and Max J. Appel.
 70. 1st Annual Conference on Medical Textiles & Biomedical Polymers & Materials, Clemson, SC, Dec. 5-6 (1989). "Innovative Suture Design for Wound Infection Control". (Invited).
 71. American Chemical Society, Hi-Tech Textile Symposium, Miami Beach, FL, Sept. 10-15 (1989). "Recent Advancements in Synthetic Absorbable Suture Materials".
 72. 3rd World Biomaterials Congress, Kyoto, Japan, April 21-25 (1988). "Collagen Reconstruction in the Presence of Glutaraldehyde." With A. Rajaram.
 73. 3rd World Biomaterials Congress, Kyoto, Japan, April 21-25 (1988). "The Effect of Fabric Structure and Collagen Coating on the Cell Culture of Biological Cells." With T. A. Topoleski and A. Quaroni.
 74. 13th Annual Meeting of the Society for Biomaterials, June 3-7 (1987). New York, New York. "Mechanical Bonding Strength between Surgical Fabrics and Acrylic Resin". With A. Rajaram.
 75. 13th Annual Meeting of the *Society* for Biomaterials, June 3-7 (1987), New York, New. "A Vacuum Method for Preparing Acrylic Dental and Bone Cements". With A. Rajaram.
 76. American Chemical Society Fall Meeting, Chicago, IL, Sept. 9-13 (1985). "The effect of annealing treatments on the mechanical and degradative properties of polyglycolic acid suture materials". With A. Browning.
 77. 1st Annual Meeting of the Academy of Surgical Research, San Antonio, TX, Oct. 18-19 (1985). "*In Vitro* Qualitative Assessment of the Antibacterial Performance of Newly-Made Braided Nylon Sutures". With W.C. Tsai,
 78. 1st Annual Meeting of the Academy of Surgical Research, San Antonio, TX, Oct. 18-19 (1985). "Strain-accelerated hydrolytic degradation of synthetic absorbable sutures".
 79. 1st Annual Meeting of the Academy of Surgical Research, San Antonio, TX, Oct. 18-19 (1985). "Design and *in vitro* testing of newly made bicomponent fabrics for vascular surgery". With L. E. Lecaroz.
 80. Chinese Biomedical Engineering Conference, Taiwan, Republic of China, December 22 (1984). "Design and Evaluation of New Knitted Grafts for Reconstructing Injured or Diseased Blood Vessels". With L. Lecaroz. Also in ACS Symposium in "Advances in Biomedical Polymers" Chicago, IL, Sept. 9-13 (1985); Academy of Surgical Research, 1st Annual Meeting, San Antonio, TX, Oct. 18-19 (1985).
 81. Chinese Biomedical Engineering Conference, Taiwan, Republic of China, Dec 22 (1984). "The Effect of Annealing Treatments on the Mechanical and Degradative Properties of Polyglycolic Acid Suture Materials. I. Tensile Strength Evaluation." With A. Browning. also in ACS Symposium in "Advances in Biomedical Polymers," Chicago, IL, Sept. 9-13 (1985).
 82. 2nd World Biomaterials Congress, Washington, D.C., April 27-May 1 (1984). "An Alternative Means to Study the Degradation Phenomena of Polyglycolic Acid Absorbable Polymer". With May Louie.

83. 2nd World Biomaterials Congress, Washington, D.C., April 27-May 1 (1984). "The Effect of Load Cycling on the Dimensional Stability of Surgical Vascular Fabrics". With B. Pourdeyhimi
84. 2nd World Biomaterials Congress, Washington, D.C., April 27-May 1 (1984). "Theoretical Determination of Porosity in Fabrics and its Application to the Design of Woven Vascular Grafts". With B. Pourdeyhimi.
85. Society for Biomaterials 9th Annual Conference and 13th International Biomaterials Symposium, Birmingham, Alabama, April 30-May 2 (1983). "The Effect of Gamma-Irradiation on the Enzymatic Degradation of Polyglycolic Acid Sutures". With David F. Williams.
86. Society for Biomaterials 9th Annual Conference and 13th International Biomaterials Symposium, Birmingham, Alabama, April 30-May 2 (1983). "An *In-Vitro* Study of the Degradation of Poly(p-dioxanone) Synthetic Absorbable Sutures". With David F. Williams.
87. 35th Alliance Conference on Engineering in Medicine and Biology, Philadelphia, PA, Sept. 22-24 (1982). "The Adherence of Biological Cells to Synthetic Polymers". With Peter Keng and Ken Bauer.
88. Society for Biomaterials 7th Annual Conference and 13th International Biomaterials Symposium, Troy, NY, May 28-31 (1981). "Hydrolytic Degradation of Polyglycolic Acid Sutures". Vol. IV, p. 66.
89. 8th International Symposium on Controlled Release of Bioactive Materials, Ft. Lauderdale, FL, July 26-29 (1981). "Biodegradation of Polyglycolic Acid and Its Lactide Copolymer under Various pH Conditions".
90. 12th Australian Polymer Symposium, Blackheath, Australia, May 11-15 (1981). "The Evaluation of the Hydrolytic Degradation Mechanism of Polyglycolic Acid By A Microfibrillar Model." Abstract #37.
91. 64th Canadian Chemical Conference, Halifax, Canada, May 31-June 3 (1981). "Hydrolytic Degradation of Polyglycolic Acid," p. 91.
92. 27th International Symposium on Macromolecules, Strasbourg, France, July 6-9 (1981). "The Effects of Irradiation on the Biodegradation of Polyglycolic Acid Synthetic Sutures-Tensile Strength Study." Abstracts of Communications Vol. II, p. 1348-1352. With N. D. Campbell.
93. Society for Biomaterials 7th Annual Conference and 13th International Biomaterials Symposium, Vol. IV, p. 66, Troy, NY, May 28-31 (1981). "The *In Vitro* Degradation of Polyglycolic Acid Synthetic Sutures in Physiological Saline". With N. D. Campbell.
94. 1st World Biomaterials Congress, Baden, Austria, April 8-12 (1980). "The Crystallization Phenomenon of Polyglycolic Acid Suture". Abstract # P 2.40.
95. 1st World Biomaterials Congress, Baden Austria, April 8-12 (1980). "Stress Relaxation of Synthetic Suture Materials I." Abstract #4.8.4.
96. 1st World Biomaterials Congress, Baden, Austria, April 8-12 (1980). "Mechanical Behavior of Bicomponent Braids as Potential Surgical Implants". With E. Fitzgerald and D. Buchanan Abstract #P1.1.
97. 14th Middle Atlantic Regional Meeting of the Am. Chem. Soc., Valley Forge, PA, April 23-25 (1980). "Differential Scanning Calorimetric Study of the Crystallization Kinetics of Polyglycolic Acid At High Undercooling". Abstract #Poly-15.
98. Tenth Northeast Regional Am. Chem. Soc. Meeting, Potsdam, NY, June 30-July 3 (1980).

- "The Biodegradation of Polyglycolic Acid I. Effect of Buffer". Abstract #210.
99. 9th Northeast Regional American Chemical Society Meeting, , Syracuse, NY, Oct. 2-5 (1979).
 100. American Chemical Society Annual Meeting, "Growth Dimension of Linear Polyethylene Crystallized from Solution and Bulk". Miami, Fla, Sept. (1978), Abstract #40.

B. Seminars/Lectures

1. Tamkang University, Department of Chemistry, Nov. 5, 2018, Taipei, Taiwan.
2. BioGend, LLC, Taipei, Taiwan, Nov. 6, 2018.
3. DongHua University, Shanghai, China, Dec. 11 & 13, 2018.
4. Wen-Zhou Medical University, Wen-Zhou, China, Nov. 7, 2016.
5. East China University of Science and Technology, College of Material Science, Shanghai, China, Nov. 4, 2016.
6. Shanghai Tech University, School of Physical Science and Technology, Shanghai, China, Nov. 4, 2016.
7. New York University Shanghai Campus, Shanghai, China, Oct. 31 and Nov. 1, 2016.
8. Jiang-Nan University, School of Biotechnology, WuXi, China, Oct. 27, 2016
9. Xiamen University, College of Material Science, Xiamen, China, Oct. 21, 24, and 25, 2016.
10. Jiangsu Feng Yuan Medical Devices Ltd, Suzhou, China, Oct. 19, 2016.
11. DongHua University, College of Chemistry, Chemical Engineering and Biotechnology, Shanghai, China, Oct. 11, 12, and 14, 2016.
12. Hong Kong Baptist University, "A faculty inventor's perspective and experience of patent process in a major American research univeristy: From lab bench to bedside", Feb. 9, 2015, Seminar
13. Hong Kong Baptist University, Feb 16, 2015, Seminar.
14. Chiang Mai University, Chiang Mai, Thailand, Feb. 23, 2015, Seminar
15. Mahidol University, Bangkok, Thailand, Feb. 24, 2015, Seminar.
16. Chulalongkorn University, Bangkok, Thailand, Feb. 27, 2015, Seminar.
17. FuDan University, Shanghai, China, March 12 , 2015, Lecture.
18. FuDan University, Shanghai, China, March 17, 2015, Lecture.
19. East China University of Science and Technology, Shanghai, China, March 18, 2015, Lecture.
20. East China University of Science and Technology, Shanghai, China, March 19, 2015, Lecture.
21. East China University of Science and Technology, Shanghai, China, March 20, 2015, Seminar.
22. New York University Shanghai, China, March 20, 2015, Lecture.
23. New York University Shanghai, China, March 26, 2015, Seminar.
24. East China University of Science and Technology, Shanghai, China, March 26, 2015, Lecture.
25. Hong Kong University of Science and Technology, April 20-23, 2015, Organized and presented Focus Program on Biomaterials.
26. National Yang-Ming University, Taipei, Taiwan, May 7, 2015, Seminar
27. National Yang-Ming University, Taipei, Taiwan, May 14, 2015, Seminar.
28. National Taiwan University of Science and Technology, Taipei, Taiwan, May 15, 2015, Seminar.
29. Tamkang University, Taipei, Taiwan, May 18, 2015, Seminar.

30. Zhe-Jiang University, Hang-Zhou, China, May 25, 2015, Seminar.
31. Sir Run Shaw Hospital, Institute of Translational Medicine, Zhe-Jiang University, May 29, 2015, Seminar.
32. Kaohsiung Medical University, Kaohsing, Taiwan, June 5, 2015, Seminar.
33. St. John Fisher College, “The Loss Family Lecture”, Rochester, NY, Oct. 15, 2014.
34. ZheJiang University, Department of Polymer Science and Engineering, China, Sept. 27, 2013
35. Wuhan University, College of Chemistry and Molecular Science, China, Oct. 4, 2013
36. Sichuan University, College of Polymer Science and Engineering, Cheng-Du, China, Oct. 8, 2013
37. Peking University, Center for Biomedical Materials and Tissue Engineering, Beijing, China, Nov. 5, 2012
38. Peking University, College of Chemistry and Molecular Engineering, Dept. of Polymer Science and Engineering, Beijing, China, Nov. 6, 2012.
40. SooChow University, Su-Zhou, China, Nov. 19, 2012
41. National Cheng-Kong University, Institute of Biomedical Engineering, Tainan, Taiwan, China, Nov. 14, 2012
42. Chong-Yuan Christian University, Dept. of Chemical Engineering, Taiwan, Nov. 15, 2012
43. Beijing Institute of Fashion and Technology, Beijing, China, June 5, 2012
44. FuDan University, Shanghai, China under FuDan University Key Laboratory Senior Visiting Scholarship Program, June 8, 2012.
45. Chang-Chun Institute of Applied Chemistry, Chinese Academy of Science, Chang-Chun City, Jilin, China, Sept. 23, 2010
46. Sichuan University, College of Polymer Science and Engineering, , Cheng-Du, Sichuan, China, Sept. 25, 2010
47. Chinese University of Hong Kong Institute of Chinese Medicine, School of Biomedical Science, , Sept. 27, 2010
48. University of Tennessee, Knoxville, TN, Dept of Materials Science and Engineering, Oct. 13, 2009.
49. Northeast Norm University, Dept. of Chemistry, ChangChun, Jilin, China, Sept. 18, 2009.
50. Johnson and Johnson, Advanced Technologies and Regenerative Medicine, Somerville, NJ, May 28, 2009.
51. Three Lectures to East China University of Science and Technology, School of Materials Science and Engineering, Shanghai, China during the period of April – May, 2008.
52. Three Lectures to Tamkang University, Dept. of Chemistry, Taipei, Taiwan, China during the period of April – May, 2008
53. State University of New York, Stony Brook, Dept. of Biomedical Engineering, April, 11, (2007).
54. East China University of Science and Technology, School of Materials Science and Engineering, Shanghai, China, Oct. 27, (2006).
55. DongHua University, School of Materials Science and Engineering, Shanghai, China, Oct. 28, (2006).

56. DongHua University, College of Textiles and Institute of Biological Science and Biotechnology, Shanghai, China, Oct. 30, (2006).
57. Wuhan University, Dept. of Chemistry, Nov. 4, (2006).
58. Peking University, Dept. of Chemistry, Nov. 6, (2006).
59. Chinese Academy of Science, Institute of Chemistry, Beijing, China, Nov. 7, (2006).
60. Seoul National University, Dept. of Biosystems and Biomaterials Science and Engineering, Seoul, Korea, Nov. 14, (2006).
61. Syracuse University, Dept. of Biomedical and Chemical Engineering,, Syracuse, NY, June 19, (2006).
62. U. of Texas in Austin, Division of Textiles and Apparel, Dept. of Human Ecology, "Absorbable polymers and fibers for human body repair," March 24 (2005).
63. Cornell University, Annual Bioengineering EXPO Undergraduate Research Poster Competition & Speaker Symposium Sponsored by The Institute of Biological Engineering (IBE), Seminar title "Human Spare Parts: Even Celebrities May Need Them," March 9 (2005).
64. Singapore Institute of Materials Research and Engineering, Singapore, June (2002).
65. China Textile Academy, Beijing, China, June (2002).
66. Tamkang University, Dept. of Chemistry, Taipei, Taiwan, China. Deliver 3 lectures, June (2002).
67. Cornell University, Dept. of Textiles and Apparel, Seminar Series, Feb. 3, (2000).
68. Gyeong-Sang National University College of Medicine, Chinju, Korea "New LCSM technique and materials for orthopaedic and general medical applications" Oct. 13 (1999).
69. Kyungpook National University Hospital, Department of Orthopaedic Surgery, Taegu, Korea "Resorbable composites and new biodegradable hydrogels for orthopaedic applications," Oct. 12 (1999).
70. China National Council of Light Industry, Institute of Plastics Processing and Application, Beijing, China, Dec. 6-12, (1998). 3 Lectures.
71. Johnson & Johnson Inc. "Three New Technology for Biomedical Use", , N.J., Oct. 8, (1996).
72. Sherwood Medical Inc. "Three New Technology for Biomedical Use", , St. Louis, MO., Jan. 30, (1997).
73. Presentation to Alpha Epsilon Delta at Cornell University, National Pre-Medical Honor Society, April 17, (1994).
74. FDA, Center for Devices and Radiological Health, Division of Mechanics and Materials Science, Office of Science and Technology, Rockville, MD, "The Effect of γ -Irradiation and Irradiation Temperature on the Hydrolytic Degradation Properties of Synthetic Biodegradable Fibers," Sept. (1992).
75. Naval Research Labs, Center for Biomolecular Science and Engineering, Washington, D.C., "Factors Influencing the Degradation for Synthetic Biodegradable Polymers and Fibers," Sept. 27 (1991).
76. University of Lowell, Department of Chemistry, Lowell, MA, "Future Challenge to the Design of Ideal Synthetic Absorbable Fibers for Wound Closure," March 8 (1990).
77. American Cyanamid, Davis & Geck, Medical Product Division, Danbury, CT, "Recent Progress in Wound Closure Biomaterials," May 25 (1989).

78. China-US Biomaterials Workshop (Sponsored by the National Science Council of the Republic of China, National Yang-Ming Medical College, Institute of Industrial Research & Development, and National Tsing-Hua University), Taipei, Taiwan, Republic of China, Seminar title: "Degradation and Biocompatibility of Synthetic Wound Closure Biomaterials," April 27-28 (1988).
79. Dartmouth College, Thayer School of Engineering, Hanover, NH, "An Unconventional Application of Fibrous Materials - Saving Our Lives," Nov. 21 (1985).
80. Rose-Hulman Institute of Technology, Terre Haute, IN, "An Overview of Recent Development in Suture Materials," Sept. 6 (1985).
81. National Tsing-Hua University, Institute of Chemical Engineering, Taiwan, Republic of China, "The Role of Biodegradable Polymers in the Design of Synthetic Vascular Grafts," April (1985).
82. Tri-Military General Hospital, Taiwan, Republic of China, "Surgical Implants and Wound Closure Biomaterials," March (1985).
83. National Yang-Ming Medical College, Institute of Biomedical Engineering, Taiwan, Republic of China, "Polymers in Medicine and Surgery," Nov. 2 (1984).
84. Chung-Yuan Christian University, Department of Biomedical Engineering, Taiwan, Republic of China, "Biodegradation Phenomena of Synthetic Surgical Polymers," Dec. 29 (1983).
85. National Taiwan University, Department of Surgery, Taiwan, Republic of China, "Biodegradation Phenomena of Synthetic Absorbable Sutures," December 29 (1983).
86. Tankang University, Department of Chemistry, Taiwan, Republic of China "Polymeric Materials - Reconstructing the Human Body," December 27 (1983).
87. Chung-Yuan Christian University, Department of Biomedical Engineering, Taiwan, Republic of China, "The Design Criteria of New Vascular Graft Materials," Dec.23 (1983).
88. Chung-Yuan Christian University, Department of Biomedical Engineering, Taiwan, Republic of China, "Survey of Clinically Important Suture Materials," Dec. 22 (1983).
89. National Tsing Hua University, Polymer Research Institute, Taiwan, Republic of China, "The Role of Enzymes in the Degradation of Synthetic Absorbable Polymers," Dec. 20 (1983).
90. National Taiwan Institute of Technology, Department of Textiles, Taiwan, Republic of
91. China, "Medical Application of Synthetic Fibers," December 19 (1983).
92. Biomedical Engineering Conference, Taiwan, Republic of China, "Plastic Materials in Surgery," December 18 (1983).
93. Howmedica, Inc., a subsidiary of Pfizer, Groton, CT, "A Review of the Biodegradation Mechanism of Synthetic Absorbable Sutures" Oct. 6 (1982).
94. Philadelphia College of Textiles and Science, Textile Engineering Society, Philadelphia, PA, "Biodegradable Fibers," Sept. 21 (1982).
95. University of Maryland, Department of Textiles and Consumer Economics, College Park, Maryland, to faculty and graduate students, "Medical Uses of Textiles," Sept. 20 (1982).
96. University of Maryland, Department of Textiles and Consumer Economics, College Park, Maryland, as a guest lecture in Textile 355, "How Textile Materials Could Save Human Life" Sept. 20 (1982).
97. Design and Environmental Analysis, Cornell University, "Biomedical Textile Materials" for DEA 637 seminar, Sept. 14, (1982).

98. Macquarie University, School of Chemistry, Sydney, New South Wales, Australia, "Biomedical Applications of Polymers - A General Outlook", May 18th (1981).
99. 12th Australian Polymer Symposium, Blackheath, Australia, "The Evaluation of the Hydrolytic Degradation Mechanism of Polyglycolic Acid by a Microfibrillar Model", May 11-14, (1981).
100. University of New South Wales, Centre for Bioengineering, Sydney, Australia, "The Frontier in Textile Science Surgical Implants of Textiles Nature" May (1981).
101. Design and Environmental Analysis, Cornell University, Graduate Seminar DEA 637, "A Survey of Clinically Important Wound Closure Biomaterials" Sept. 13, (1981).
102. Design and Environmental Analysis, Cornell University, Graduate Seminar DEA 637, "'In-Vitro Degradation of Synthetic Absorbable Sutures," Dec. 9, (1980).
103. *Howmedica, Inc.*, a subsidiary of Pfizer, Groton, CT "The In-Vitro Degradation of Synthetic Absorbable Sutures," Nov. 11 (1980).
104. *Ethicon, Inc.*, a division of Johnson and Johnson, Somerville, New Jersey, "Current Research Activities in Suture Materials," Oct. (1979).

[VIII]. AWARDS

A. Research Grants Received:

1. Vince Woo Foundation, "East Meets West: A Revolutionized Nanotechnology Approach to Modernize the Delivery of Chinese Medicine for Vast Improved Cancer Therapeutic Efficacy", Dec. 1, 2017 – Nov. 30, 2020, \$300,000, PI
2. NIH R01 "PROHEALING LIPID AUTOCRINES/PARACRINES OF MACROPHAGES AND NERVES IN DIABETIC WOUND RE-INNERVATION", \$217,492 total (CU share: \$31,400) for 1 yr, July 1, 2018 – June 30, 2019. As a co-investigator (Louisiana State University as PI).
3. NIH R01 "New Mechanisms of Prohealing Lipid Autocrines/paracrines of Macrophages and Nerves in Diabetic Wound Re-innervation", \$420,980 total (CU share: \$62,000) for 2 yrs, July 1, 2017 – June 30, 2019. As a co-investigator (Louisiana State University as PI).
4. NIH-SBIR Phase 2, 2 R44 GM096573-02 "Feasibility of Supercritical Carbon Dioxide Sterilization for Absorbable Suture" (\$1,108,031/2 yrs with Cornell share: \$242,049/2 yrs), June 2012 – July 2014, Co-PI.
5. Cornell University Clinical and Translation Science Center (CTSC), "Novel Biomaterial Coating for Medical Devices to Solve Inflammation Problem", \$75,000, June 1, 13 – May 31, 14. PI.
6. The Becky Q. Morgan Foundation, "An Unconventional and Novel Multidisciplinary Approach for the Optimization of Wound Healing in Patients with Congenital Giant Melanocytic Nevi", \$947,222 from Jan. 1, 2012 – Dec. 31, 2016, PI.
7. NIH SBIR Phase 1, "Kinetically controllable therapeutic topical delivery of nitric oxide through novel biodegradable "pseudo-protein" biomaterials", \$69,900 (Cornell share \$20,753), co-investigator via iFyber, LLC, Feb. 1, 2011 - July 31, 2011, Co-PI.
8. NIH SBIR Phase 1, "Feasibility of Supercritical Carbon Dioxide Sterilization for Absorbable Suture", \$100,000 (Cornell share \$30,000), co-investigator via NovaSterilis, LLC, Jan. 1 – Aug. 31, 2011, Co-PI.

9. Metropolitan Development Association, "Feasibility Study of Supercritical CO₂ Sterilization and Pore Generation of Biodegradable Biomaterials", \$201,230/12 months, Sept. 2009 – Aug. 2010 (collaborated and shared with NovaSterilis, LLC)
10. Cornell University Intercampus Collaboration on Prostate Cancer Program, \$25,000/12 months, "New Synthetic Cationic Polymers with Diagnostic and Therapeutic Capabilities: Selective Targeting of Prostate Cancer", PI (collaborated with Weill Cornell Medical College), July 1, 2009 – June 30, 2010.
11. Cornell University Morgan Tissue Engineering Program, "Novel Biodegradable Scaffolds for Tissue Engineering of Blood Vessels", \$115,000/18 months, Aug. 1, 07 – Dec. 31, 08; PI (B. Liu, C. Kent, and C. Reinhart-King as co-PIs).
12. Cornell University Morgan Tissue Engineering Program, "A novel growth factor and matrix mimetic-enhanced biodegradable scaffolds for skin tissue engineering", \$115,000/18 months; Aug. 1, 07 – Dec. 31, 08; as co-PI (M. S. Jin as PI).
13. Cornell University Seed Grant Program, "Novel biodegradable biomaterials as non-viral gene transfer systems", \$50,000/12 months; March 1, 07 – Feb. 08, as co-PI (B. Liu as PI)
14. National Institutes of Health, "Hydrogel-based cytokine carrier for oral cancer therapy", \$1,456,114 (Cornell share: \$338,365 via New York University), July 1, 2004 – June 30, 2007, Co-investigator (F.A. Chen of NYU as PI).
15. Cornell University Seed Grant Program to promote collaboration between Ithaca and Weill Medical Campuses, "Therapeutic biodegradable biomaterials for wound management of burn victims", \$50,000, April 1, 2005 – March 31, 2006, PI, (Roger Yurt of Cornell Weill Medical as co-investigator).
16. National Textile Center, "Biologically active bioabsorbable fibers for biomedical uses", \$502,070, May 1, 2003 – April 30, 2006, PI.
17. National Textile Center, "Biodegradable hydrogel-textile hybrid for tissue engineering", \$367,493, May 1, 2001 – April 30, 2004, PI.
18. Afmedica, Inc. "Biodegradable polymers as Rapamycin carrier for *in vitro* and *in vivo* trials", \$94,975, Dec. 1, 2002 – Nov. 30, 2003, PI.
19. MediVas, LLC, "Research of elastomeric biodegradable polymers Having Nitric Oxide Function", \$288,192, July 1, 1998 – June 30, 2000, PI.
20. Boston Scientific, Inc. "Tissue response to retrieved biodegradable suture materials" \$5,900, August 1, 1999 – Feb. 28, 2000, PI.
21. US Civilian Research and Development Foundation, "New bioresorbable materials for biomedical engineering use", \$12,750, Dec. 1, 1996 – Nov. 30, 1998, co-investigator.
22. Cornell Office of Technology Access and Business Assistance (COTABA), "Implementing nitric oxide-incorporated biodegradable biomaterials on stainless steel stents for treating restenosis of arteries", \$14,909, Jan. 1, 1998 – Dec. 31, 1998. PI.
23. Advanced Renal Technologies Inc., "Biodegradation of PDS sutures", \$6,000, March 1998 – August 1998. PI.
24. Sherwood Medicals, Inc., "Graduate student supports", \$18,000, Jan. 1997 – Dec. 1997. PI.
25. National Institutes of Health, "New characterization method for biodegradable implants", \$37,110, Sept. 30, 1994 – Sept. 25, 1996, PI.

26. National Research Council of the Republic of China, "Arterial tissue regeneration on biodegradable fabric substrates", \$33,600, Sept. 1, 1995 – Feb. 31, 1997, Co-investigator. (T. J. Yu of Veteran General Hospital, Taipei, Taiwan as PI).
27. Cornell Research Foundation, "Graduate student support", \$3,000, March 1997, PI.
28. National Institutes of Health, Small Business Innovation Research Program, "Plasma surface modification of absorbable polymers for controlling cellular functions", \$50,000 (CU share \$15,000), June 1993 – May, 1994, Co-investigator (I. H. Loh of AST, Inc. as PI).
29. Food and Drug Administration, "Testing synthetic absorbable polymers using laser confocal microscopy", \$4,000, April 1993 – Dec. 1993, PI.
30. Zimmer, Inc., "Preliminary study of a new γ -irradiation sterilization method for ultra-high molecular weight polyethylene orthopaedic components", \$3,750, Sept. 1994 – August, 1995, PI.
31. National Institutes of Health, Small Business Innovation Research Program, "Total synthetic absorbable composite bone plates", \$50,000 (CU share \$11,552), March 1992 – August, 1992, Co-investigator (I. H. Loh of AST, Inc. as PI).
32. ABS Life Science Inc., "Fabrication and evaluation of synthetic anterior crucial ligament", \$5,000, July 1991 – June 1992, PI.
33. National Institutes of Health, "A novel concept for degradation of absorbable polymers", \$39,228, August, 1990 – July 1992, PI.
34. National Science Foundation, "Feasibility study of a new concept for regulating the biodegradation of absorbable synthetic polymers and fibers", \$25,000, July 1990 – June 1992, PI.
35. Cornell University, "Matching NSF grant "Feasibility Study of a new Concept for Regulating the Biodegradation of Absorbable Synthetic Polymers & Fibers", \$3,000, August 1990 – June 1992, PI.
36. US Surgical, Inc., "Synthetic absorbable medical fibers", \$16,845, Sept. 1990 – August 1991, PI.
37. DuPont, Inc., "Feasibility of a new concept for regulating the biodegradation of resorbable synthetic polymers and fibers", \$8,000, January 1991 – Dec. 1991, PI.
38. Meadox Medicals, Inc., "Feasibility of a new concept for regulating the biodegradation of resorbable synthetic polymers and fibers", \$5,000, January 1991 – Dec. 1991, PI.
39. 3M, Inc., "Knitting of bioabsorbable fibers for vascular grafts and their subsequent *in vitro* characterization", \$5,500, Dec. 1990 – Dec. 1991, PI.
40. National Science Foundation, "Research experience for undergraduates", \$24,000, April 1991 – March 1992, Co-investigator (P. Schwartz as PI, and S. Obendorf, A. Lemley and A. Netravali as co-investigators).
41. Cornell Biotechnology Program, "*In vitro* study of the effect of electric current on the release of fibroblast growth factor of alveolar macrophage", \$54,950, July 1989 – June 1990, PI (M Appel and J. Marsh as co-investigators).
42. National Institutes of Health, Small Business Innovation Research Program, "Plasma surface modification of synthetic absorbable sutures", \$50,000 (CU share \$15,000), Sept. 1989 – March 1990, Co-investigator (I. H. Loh of AST, Inc. as PI).

43. National Science Foundation, "Research experience for undergraduates", \$34,600, June 1989 – May 1990, Co-investigator (P. Schwartz as PI, and S. Obendorf, A. Lemley and A. Netravali as co-investigators).
44. Tectra, Inc., "Fiber morphology of synthetic absorbable sutures", \$3,000, July 1998 – Dec. 1998, PI.
45. National Science Foundation, "Research experience for undergraduates", \$32,150, June 1988 – May 1989, Co-investigator (P. Schwartz as PI, and S. Obendorf, A. Lemley and A. Netravali as co-investigators).
46. College of Human Ecology, Cornell University, "In vitro evaluation of newly made bicomponent fabrics for vascular surgery", \$5,850, July 1987 – June 1988, PI.
47. American Heart Association, New York Chapter, "The development of bicomponent synthetic vascular grafts", \$20,418, July 1986 – June 1987, PI.
48. Whitaker Foundation, "Design and evaluation of a new graft for reconstructing injured or diseased blood vessels", \$45,000, Sept. 1985 – Oct. 1986, PI.
49. National Science Council of the Republic of China, "In vitro and in vivo evaluation of suture materials having antibacterial capability", NT \$403,000, Sept. 1984 – August 1985, PI (W. C. Tsai of National Yang-Ming Medical College as co-investigator).
50. National Science Council of the Republic of China, "Research and development of newly developed bicomponent vascular grafts", NT \$654,584, Dec. 1984 – Nov. 1985, Co-PI (T.J. Yu and K.C. Cheng of Veteran General Hospital, Taipei, Taiwan as co-PI).
51. National Science Council of the Republic of China, "Tissue ingrowth capability of porous surgical fabrics", NT \$389,700, Dec. 1984 – Nov. 1985, Co-PI (S.N. Ko and Y.Y. Lay of Veteran General Hospital, Taipei, Taiwan as co-PI).
52. American Heart Association, New York Chapter, "The development of bicomponent synthetic vascular grafts", \$24,020, July 1983 – June 1984, PI.
53. Whitaker Foundation, "Design and evaluation of a new graft for reconstructing injured or diseased blood vessels", \$46,758, January 1983 – Dec. 1984, PI.
54. College of Veterinary Medicine, Cornell University, "Suture-induced urinary stone formation animals", \$4,570, July 1, 1982 – June 30, 1983, PI.
55. J.M. Foundation, "Development of bicomponent braids as potential surgical implants", \$25,000, Jan. 1981- Dec. 1981, PI (R. Dueland as co-investigator).
56. Scientific Research Society of North America, Sigma Xi, Grant-in-Aid, "The effect of carbon filaments on the crystallization of linear polyethylene used in joint prostheses", \$240, July 1979 – Dec. 1980, PI.
57. Cornell University Research Foundation, "Wettability of surgical implants and their relations to cell property – A preliminary study", \$5,050, May 1979 – April 1980, PI.
58. College of Human Ecology, Cornell University, "An In Vitro Study of Synthetic Suture Materials on Exposure to Tissue Fluids", \$2,500, May 1979 – Dec. 1980, PI.

B. Technical awards

1. Director's Award of the 13th Annual National Textile Forum, Charlotte, NC, March 20-22 (2005).

2. Third place award of the 12th Annual National Textile Center Forum, Charlotte, NC, Feb. 10-12 (2004).
3. Second place award of the 11th Annual National Textile Center Forum, Charlotte, NC, Feb. 10-12 (2002).

[IX]. Teaching

A. Graduate Students Thesis Completed and In Progress

1. **Ying, Ji, PhD**, Textiles, Chair (Completed Dec. 2016)
2. **Alicia Potuck, PhD**, Chemistry and Chemical Biology, Chair (Completed Dec. 2014)
3. **Laura Hockaday, PhD**, Biomedical Engineering, Minor member (Completed June 2014)
4. **Natasha Udpa, PhD**, Biomedical Engineering, Minor member (Completed in Dec. 2013)
5. **MingYu He, PhD**, Synthesis and Characterization Of Chitosan-based Derivatives, Their Hydrogels, and Hybrids, and A New Family Of Arginine-based Polyester urea urethane, Chair (Completed in May 2013)
6. **Jun-Hao Shawn Tan, PhD**, Biomedical Engineering, Minor member, Completed, May 2012
7. **Kai-Yan Qiu, PhD**, Textiles, Minor member, Completed, May 2012
8. **Jun Wu, PhD**, L-Arginine and L-Phenylalanine based Poly(ester amide)s, Their Synthesis, Characterization, Formulations, and Application as Gene Delivery Vectors and Tissue Engineering Scaffolds:, Biomedical Engn, Chair, Jan. 2011
9. **Nicole Kosina, Master of Engineering**, Completed Spring 2010
10. **Chao Zhong, PhD**, Synthetic polysaccharide-mediated biomimetic syntheses of inorganic materials”, Textiles, Chair, Completed, August, 2009
11. **Jong Bum Lee, PhD**, “DNA with zip codes: addressable DNA molecules and their applications”, Biological and Environmental Engn, Minor member, Completed, May 2009.
12. **Shardul Varma, Master of Engineering**, “Cationic polymers as antimicrobial agents”, Bioengineering, Chair, Completed May 2008.
13. **Georgette Tzatzalos, Master of Engineering**, “Cationic polymers and their nanospheres as markers for tumor cells”, Bioengineering, Chair, Completed, May 2008.
14. **Hua Song, PhD**, “L-arginine-based biodegradable poly(ester amide)s, their synthesis, characterization, fabrications and applications as drug and gene carriers”, Textiles, Thesis chair, Completed May (2007).
15. **Guoming Sun, PhD**, “Self-assembly of chemically engineered dextran derivatives into micro- and nanostructured biomaterials and their application as drug carriers”, Textiles, Thesis chair, Completed August (2007).
16. **Soong Ho Um, PhD**, “DNA Nanoarchitectures”, Biological and Environmental Engn, Minor member, Completed July (2007).
17. **XiaoFeng Liang, Master of Engineering**, “Cationic poly [2-

- (Acryloxy)ethyl]trimethylammonium chloride] as non-viral DNA carrier”, Chair, Completed (2007).
18. **Daniel Sun, Master of Engineering**, “Drug-eluting electrospun biodegradable poly(ester amide) membranes for treating burn victims”, Bioengineering, Chair, Completed May (2006).
 19. **Tak Jong Kim, Master of Engineering**, Bioengineering, Chair, Completed (2006).
 20. **Ann M. Kim, Master of Engineering**, “Characterizing Material and Cell Interactions in Response to Material Surface Wettability”, Bioengineering, Chair, December (2005).
 21. **Anita Tong, Master of Engineering**, “Encapsulation of proteins by poly(ester amide) nanofibers”, Bioengineering, Chair, Completed (2005).
 22. **Kai Guo, PhD**, “Biodegradable unsaturated poly(ester-amide)s and their hydrogels: Synthesis, characterization, biodegradation and biomedical applications as drug carriers”, Textiles, Thesis chair, Completed December (2004).
 23. **Guoming Sun, MS**, “Polysaccharide-based biomaterials as drug carriers”, Textiles, Thesis chair Completed (2004).
 24. **Patti Lewis, MS**, “Novel fibrous scaffold for wound management”, Textiles, Thesis chair, Completed (2004).
 25. **Rani Roy, PhD**, “Non-Enzymatic Glycation for Cartilage Tissue Engineering”, Biomedical Engn, Minor member, Completed (2005).
 26. **Sunny Namkung, MS**, “Synthesis and characterization of partially biodegradable hydrogels as a drug delivery system”, Textiles, Thesis chair, Completed (2004).
 27. **Conrad James, PhD**, “Electrophysiological studies on the reconstructed neuronal cell networks using micro-fabrication techniques”, Engineering and Applied Physics, Minor member, Completed (2002).
 28. **Yeli Zhang, PhD**, “Synthesis, Characterization, and Property Study of Hydrophilic-Hydrophobic Biodegradable Hydrogels as a Controlled Drug Delivery System”, Textiles, Thesis chair, Completed (2000).
 29. **Sinhee Kim, PhD**, “Synthesis of Dextran-Based Hydrogels, their Characterization, Structural Study, and Drug Control Release Property”, Textiles, Thesis chair, Completed (1999).
 30. **Chee Youb Won, PhD**, “Synthesis and Chemical Modification of Biodegradable Polymers for Biomedical Applications”, Textiles, Thesis chair, Completed (1998).
 31. **Robert Hoy, Master of Engineering**, “Confocal microscopic examination of pores of PMMA bone cements”, Agricultural Biological Engn, Chair, Completed (1998).
 32. **Keun-Ho Lee, PhD**, “The Role of Free Radicals in Biodegradable Polymeric Biomaterials”, Textiles, Thesis chair, Completed (1997).
 33. **Mike A. Slivka, MS**, “Fiber/Matrix Interface Studies on Totally and Partially Bioabsorbably Composite Materials for Internal Fixation of Bone Fractures: A New Visual Characterization Method Using Laser Scanning Confocal Microscopy”, Textiles, Thesis chair, Completed (1996).
 34. **Larry Pratt, PhD**, "The effects of chemical structure and environmental factors on the rate of hydrolysis of synthetic absorbable biomaterials: Theory and Experiment",

- Textiles, Thesis chair, Completed (1993).
35. **Linda Zhang, MS**, "Effect of two-step treatment on the degradation of synthetic biodegradable sutures," Textiles, Thesis chair, Completed (1993).
 36. **M'hamed Ibnabddjalil, PhD**, "The Effect of Plasma Treatment On the Chemical, Physical Morphological and Mechanical Properties of Absorbable CaP fibers and Polyglycolide Acid Matrix For Use In Internal Fixation Devices." Theoretical and Applied Mechanics, Minor member, Completed (1993).
 37. **Michele H.L. Lin, MS**, "Morphological Study of A Synthetic Biodegradable Suture (PDS)", Textiles, Thesis chair, Completed (1990).
 38. **Jeong OK Lim, MS**, "*In Vitro* Evaluation of the Effects of Macrophages and Synthetic Materials on the Fibroblast Proliferation and Collagen Synthesis", Textiles, Thesis chair, Completed (1988).
 39. **Tammy Topolaski, MS**, "The Biological Effect of a Protein Coating for Synthetic Vascular Grafts", Textiles, Thesis chair (1987).
 40. **Lorenza E. Lecaroz, MS**, "The Development of a Bicomponent Knitted Vascular Graft", Textiles, Thesis chair, Completed (1985).
 41. **Janice Yee, MS**, "The Design of a New Suture with Antibacterial Properties", Textiles, Thesis chair, Completed (1985).
 42. **Abigail Browning, MS**, "Annealing and its Effect on the Hydrolytic Degradation of Poly(glycolic acid) Absorbable Sutures *In Vitro*", Textiles, Thesis chair, Completed (1984).
 43. **Leonora M. Langan, MS**, "Pressure of Menswear on the Neck in Relation to Visual Performance", Textiles, Minor member, Completed (1984).
 44. **Gret Atkin, MS**, "Body Movement Analysis as the Basis for Designing Rainwear for People Confined to Wheelchairs", Textiles, Minor member, Completed (1980).
 45. **N. D. Campbell, MS**, "A Study of the Effects of Gamma Irradiation on the Biodegradation of Polyglycolic Acid Synthetic Sutures in Physiological Saline", Textiles, Thesis chair, Completed (1980).
 46. **E. Fitzgerald, MS**, "Mechanical Behavior of Bicomponent Braids as Potential Surgical Implants," Textiles, Thesis chair, Completed (1979).

B. Undergraduate Research Supervised under FSAD 401 (Independent Empirical Research with credits)

1. Sarah Myers (FSAD), Spring 2015
2. Sarah Myers (FSAD), Fall 2015
3. Lisa Awaitey (Chemistry and Chemical Biology), Fall 2014
4. Nicholas Pino (Chemistry and Chemical Biology), Fall 2014
5. Preeti Phanse (Biological and Environmental Engn), Fall 2014
6. Lillian Ro (Biological and Environmental Engn), Fall 2014
7. Colleen Higgins (Material Sci/Engn), Fall 2014
8. Stephanie Cheng (Biological Engn), Fall 2013 and Spring 2014
9. Christan M.W. Choi (CHE), Fall 2013 and Spring 2014

10. Mary T. Condosta (Engn), Fall 2013 and Spring 2014
11. Kelly E. Gearan (Mechanical Engn), Fall 2013 and Spring 2014
12. Kevin Hua (Biological Engn), Fall 2013, Spring and Fall 2014
13. Beth L. Weed (Biological Engn), Fall 2013 and Spring 2014
14. Sarah R. Meyers (CHE), Fall 2013, Spring and Fall 2014
15. Connie Li, (Chem Engn), Fall 2012, Spring 2013
16. Justin Kim (Chem Engn), Fall 2012, Spring 2013
17. Molly Hullert (CHE), Fall 2012, Spring 2013
18. Beth Weed (Engn), Fall 2012, Spring 2013
19. Ashley Weiner (FSAD, CHE) Fall 2011 and Spring 2012
20. Joanna Chen (Human Biology, Health and Society, CHE) Fall 2011 and Spring 2012.
21. Sherry Zhao (Chemical Engn), Fall 2009 and Spring 2010
22. Adam Pihokken (Chemical Engn), Fall 2009
23. PuiYan Chan (Chemical Engn), Sprng and Fall 2008, Spring and Fall 2009,
24. Cheng Cheng (Materials Sci and Engn), Fall 2007
25. Paula Huang (Materials Sci and Engn), Fall 2007
26. Andrea Gaul (Human Ecology), Fall 2007
27. Danielle Green (Chem Engn), Fall and Spring 2006, Spring 2007
28. Nithya Jesuraj (Chem Engn), Fall 2006.
29. Jennie. Huo (Chem Engn), Fall 2005 and Spring 2006
30. Miriam Gladstone (Chem Engn) Fall 2005
31. Georgette Tzatzalos (Chem Engn) Fall 2005 and 2006, Spring 2007
32. Amara Snangananan (Chem Engn) Fall 2005
33. Anita C. Tong (Biological and Environmental Engn) Spring 2004, Spring 2005
34. Brad E. Kligman (Human Ecology) Spring 2004
35. Marlene Cole (TXA) Spring 2002
36. Ellan Spero (Presidential Research Scholar), "Biodegradable hydrogels as substrates for tissue engineering", Spring 2000.
37. Lynn Aridgides (Agricultural Biological Engn) Fall 1999.
38. Seana Richardson (Materials Sci & Engn) Fall 1999
39. Jeffrey I. Goldberg (Biology & Society) Spring & Fall 1998
40. Lisa Long (Chem Engn) Spring 1998
41. Richard Kang (Chemistry) Fall 1995, Spring 1996, Fall 1996.
42. Stephen Kao (Mechanical Engn) Spring 1997 (Under MA&E 690)
43. Amitha P. Reddy, (Chem Engn), Fall 1996 and Spring 1997
44. Chu-Young Kim (Chemistry) Fall 1995.
45. Matthew Fred (Materials Sci. & Engn), Fall 1995.
46. Stephanine Lessig (Arts and Science) Fall 1994 & Spring 1995.
47. Richard Yuen (Chemistry) Fall 1995
48. Mathew S. Tata (Ag. Biol. Engn.) Fall 1994.
49. Minna Kim (Human Ecology), Fall 1994.
50. John Awad (Materials Sci. Engn.) Fall 1993 & Spring 1994
51. Mike Slivka (Mechanical Engn.) Senior Engn. Design Project, Spring 1994.

52. Caryn Chu, (Chemical Engn) Fall 1992 and Spring 1993
53. Angelina Rodriguez (Mechanical Engn), Fall & Spring 1992.
54. Jeremy J. Rawlinson (Mechanical Engn) Spring 1992
55. Allison Waxberg (Individual) Spring 1992
56. Stephanie I. Hochman (Biological Science) Fall 1991 & Spring 1992
57. Dana Bauer (Design and Environmental Analysis) Spring 1991
58. Chi-Yong J. Kim (Human Ecology) Fall 1990 and Spring 1991.
59. Andrew D. Shumate (TXA) Spring 1990
60. Shantaram Rangappa (Human Ecology) Spring 1989
61. Pei Lee Lin (TXA) Fall 1989
62. Linda Alston (TXA) Spring 1988
63. Peter H. Lee (Materials Sci. & Engn) Spring 1988
64. May C. Louie (Chemistry) Spring & Fall 1983
65. Joan Jobinsky (Design and Environmental Analysis) Spring 1983
66. Tamara Topoleski (Agriculture and Life Sci.) Fall 1983
67. Leon D. Smart (Healthcare Administration) Fall 1983
68. B. Flyer (Biology) Fall 1982
69. Gayle Moncrief (Mechanical Engn) Spring 1981
70. Laurett A. Welch (Design and Environmental Analysis) Fall 1981
71. Robin Garner (Design and Environmental Analysis), Fall 1980
72. Abigail Browning (Design and Environmenal Analysis), Fall 1980 & Spring 1981
73. M. Matejka (Design and Environmenal Analysis), Fall 1980

C. Postdoctors/Research Associates/Visiting Scholars Supervised

1. Dr. MingYu He (Feb. 2014 – present)
2. Dr. Yi Zhang (Jan. 2013 – Dec. 2013)
3. Dr. DeQuin Wu (Feb. 12, 2010 – June 2013)
4. Dr. X. Pang (Feb. 08 – Feb. 2010)
5. Dr. Kai Guo (Jan. 2005 – Dec. 2007)
6. Dr. M. X. Deng (Nov 2005 – April 2009)
7. Dr. Lei Li (June 29, 06 – March 28, 07)
8. Dr. D. Q. Wu (August 2001- Oct. 2005)
9. Dr. X. Z. Zhang (Sept. 2001 - Sept. 2004)
10. Dr. M. D. Lang (1998 - 2001)
11. Dr. Tamar Kartvelishvili (Summer 2001)
12. Dr. A. Rajaram (1986-1987)
13. Dr. B. Pourdeyhimi (1983-1985)
14. Prof. Feng Hong (Oct 2016-Sept. 2017)
15. Prof. Xueyan Mu (Aug 2016-Feb 2017)
16. Prof. K.M. Pei (Aug. 15 – July 16)
17. Prof. Yue Tang (Sept. 14 – Aug. 15)
18. Prof. JiHui Zhao (Sept. 13 – Oct. 14)
19. Prof. Ji-Hui Zhao (Oct. 2013 – Sept. 2014)

20. Prof. Yan Zhang (Aug 2012 – July 2013)
21. Prof. Sinhee Kim (Jan. 07 – Feb. 08; Aug. 2010 – May 2013)
22. Prof. Q. H. Qin (Aug. 2010 – July 2011)

D. Courses Taught

1. BME 5390 – Biomaterials and Medical Devices for Human Body Repair
2. ENGRG 605-Fundamentals of Biomedical Engineering: Biomaterials
3. ENGRG 606-Fundamentals of Biomedical Engineering: Artificial Organs
4. DEA 335 (TXA433)-Structure and Property of Textile Materials.
5. TXA 336-Fundamentals of Color and Dyeing
6. FSAD 4360-Fiber Chemistry
7. FSAD 4390-Biomedical Materials and Devices for Human Body Repair
8. FSAD 6260-Fundamentals of Textile Finishes and Dyeing
9. TXA 635-Degradation Property of Synthetic Fibers

[X]. SERVICE & Citizenship

A.1 University

Cornell University Technology Transfer Advisory Committee (2008 – 2012)
 New York State Start-Up Faculty Committee (Feb 2014 – Present)

A.2 College

Academic Status Committee (Jan. 2010 – present)
 Human Ecology Dean Search Committee, (2007)
 Chair of a Ad-Hoc Committee for promotion to full professor, Human Ecology (2005)
 Faculty member to interview candidates for Director of Office of Sponsored Program,
 Cornell University (2005)
 Faculty member of Human Ecology Master Plan Committee (2004)
 Member of Ad-Hoc Committees for tenure/promotion, College of Engineering (2001)
 and College of Veterinary Medicine (1998)
 Academic Status Committee, College of Human Ecology
 Member of the Health Administration Governing Board, College (1989)
 Education Policy Committee, Human Ecology, Chair in 1991 (1980, 1988-1991)
 Health Program Committee, Human Ecology (1980)

A.3 Department

Faculty senate (2003 – 2006)
 Director of Graduate Studies (2001 – 2007, 2015 - Present)
 Honor Program Coordinator, TXA (91- present)
 Chair of Faculty Search Committee (2004-05)
 Mentoring Committee for several junior faculties, TXA (90-present)
 Undergraduate advising coordinator, TXA (8/90-2/91)

Faculty Reappointment Review Committees, TXA (1990,1989)
 Search Committee for Apparel Design, TXA (1990)
 Tenure Review Committee, TXA (1989)
 Graduate Faculty Representative, TXA (1/89-7/89)
 Admission Committee, Biology & Society (1989)
 Admission Committee, TXA (1986, 1997-2000)
 Resource Center Advisory Committee, DEA (1983-4)
 Committee of Advisors, Biology & Society (1983)
 Textile Summer Research Fellowship Committee, DEA (1983)
 Department Council, DEA (1980)
 Chair of search committee for research technician IV (1978)

B. Other Services at University, College, Department and Local Community

1. Invited presentation of my research to Greene Central Middle School, 8th grade Life Science/Chemistry 35 students on 10/3/91 & 10/21/93.
2. Cornell's Observance of National Science & Technology Week to high schools, (University), Four presentations on 4/27/89; 4/24/90; 4/23/91; 4/27/93).
3. HumExplorations in Science, Human Ecology, Cornell University. Presentation and demonstration of New Human Body Parts from Synthetic Materials, 2/13/92 & 4/7/93.
4. Invited presentation to a premedical major club at Cornell about the current status of medical devices, April, 1992.
5. Presentation of the use of computational chemistry in biomedical materials to Digital Equipment Corporation External Research Program Review, Cornell University, 3/20/92.
6. Expanding Your Horizons in Math, Science and Engineering Conference, Cornell University, Deliver 2 workshops on 11/2/91.
7. Department Representation for the College Open House, (10/18/86; 8/20/88; 10/29/88; 8/26/89; 11/11/89; 8/26/91, 8/15/05).
8. Human Ecology Pre-Freshmen Summer Program. Representative of Biology & Society Major and gave presentations on 6/27/90 & 7/16/91.
9. Health Careers in Human Ecology, Admission Office, One presentation on 5/23/91.
10. College Fair for senior undergraduates, Human Ecology, 4/12/91 & 4/19/91.
11. Hosting Program for minorities accepted to Human Ecology, College (4/24/81; 4/23/82; 4/22/88; 10/28/88; 4/21/89; 4/19/90; 4/18/91).
12. President's Campus Visit Program for Human Ecology, Human Ecology (4/6/91)
13. New York State 4H Congress TXA Workshop, 2 presentations, 6/27/89.
14. Spring Conference of the NY Association of Collegiate Emergency Service, Cornell University, One lecture on Heart Physiology on 3/7/87.
15. Minority graduate & undergraduate student recruitment (12/9/78, 2/6-9/79 & 3/2-6/79).
16. Undergraduate recruitment for Human Ecology, 12/9/78, New York City.

**C. Research Presentations to Cornell Board of Trustees, Alums via Cornell Clubs
(Invitation only)**

1. A member of the Cornell Alumni Federation Speaker Series and New Life Sciences Initiative Speakers Bureau, Cornell University (2004 – present).
2. Present a research talk to Cornell Presidential Silicon Valley Event, March 14, 2012.
3. Present a research talk to Cornell Club in Seattle, WA, March 15, 2013.
4. Present a research talk to Cornell Engineering Alumni Association, “At the Leading Edge: Improving Lives through Biomedical Engineering”, Philadelphia, PA, Nov. 19, 2009.
5. Present a research talk to Cornell Club of Greater Hartford, NH, March 27, 2008
6. Present a research talk to Coastal Connecticut Cornell Club, Old Saybrook, NH, March 28, 2008.
7. Present a research talk to The Greater Hartford Academy of Mathematics and Science (GHAMS), 15 Vernon Street, Hartford, NH, March 28, 2008.,
8. Faculty participant to the Big Red in Big Apple New York City Cornell Campaign Celebration Jan. 25, 2008.
9. Faculty speaker (with Dr. Roger Yurt of Weill Cornell Medical) “Closer to Clinical Reality: Newly Invented Biomaterials for Wound Repair and Disease Treatment” to the 9th Annual Cornell Silicon Valley Presidential Event “From Bench to Bedside”, April 8, 2008, Palo Alto, CA;
10. Faculty speaker “Novel Biodegradable Biomaterials for Delivery of Biologics, Genes and as Templates for Tissue Engineering” to the 2008 Entrepreneurship@Cornell Celebration Conference, Cornell University, Ithaca, NY, April 10-11, 2008.
11. Present a research talk to Cornell Women Club Cortland County, Cortland, NY, May 30, 2008
12. Present a research talk to Cornell Alumni Association of Binghamtom, NY April 26, 2007.
13. Present a research talk to Cornell Alumni Association of Lancaster, PA, May 17, 2007.
14. Present a research talk to Cornell Alumni Association of Wilmington, Delaware, May 15, 2007.
15. Present a research talk to Cornell Alumni Association of Baltimore, MD, May 16, 2007.
16. Present a research talk to Cornell Presidential Parent Week, Ithaca, NY, April 28, 2007.
17. Presenting a research talk to Human Ecology Emeritus Faculty Luncheon, Ithaca, NY, Aug. 15, 2007.
18. Presenting a research talk to Cornell Life Sciences Advisory Board, New York, NY, Jan. 24, 2007.
19. Presenting a keynote research talk to NYSTAR-sponsored Regional Technology Development Centers, Center, Watervliet, NY, April 8-9, 2007.

20. Presenting a research talk to Cornell Emeritus Faculty in Kendall, Ithaca, NY, Oct. 24, 2007.
21. Featured speaker to the Cornell University Library Advisory Council, New York, NY, Nov. 16, 2007.
22. Present a research talk to Cornell Alumni Association of Fairfield County, CT, May 21, 2006.
23. Present a research talk to Cornell Alumni Association of Long Island, NY, May 22, 2006.
24. Present a research talk to Cornell Alumni Association of Charlotte, NC, April 6, 2006.
25. Present a research talk to Cornell Alumni Association of Greater Miami and the Florida Keys, April 4, 2006.
26. Present a research talk to Cornell Alumni Association of Eastern Florida, April 5, 2006.
27. Present a research talk to Cornell Joint Board of Overseers and Board of Trustees Meeting, New York, NY, Jan. 20, 2006.
28. Present a research talk to Cornell University Capital Campaign launch, New York, NY, Oct. 26, 2006.
29. Present a research talk to Cornell Alumni Association of Central New York/Cornell Women's Club of Syracuse, Syracuse, NY, Nov. 14, 2005.
30. One of two faculties to present a research talk under "Cornell Life Sciences Forum", Chicago, Ill, June 1, 2005.
31. One of two faculties to present a research talk under "Cornell Life Science Program", Cornell Club, New York, NY, Sept. 28, 2005.
32. Present a research talk to Hitachi, Inc. April, 19, 2005, sponsored by Cornell University Alum Office.
33. Present a research talk to Johnson and Johnson, Oct. 3, 2005, sponsored by Cornell University Development Office.
34. Present 4 research talks to Cornell Clubs in Tulsa, OK (3/21/05), Albuquerque, NM (3/22/05), Denver, CO (3/23/05), Austin, TX (3/24/05) sponsored by Cornell University Alumni Affairs and Development and local Cornell Clubs.
35. One of the three invited faculty to present a research talk "Engineering better lives" to *Cornell University Board of Trustees/Board of Overseers of Weill Medical College*, in New York, NY, January 27, 2004.
36. One of the two faculty invited by President J. Lehman to present a research talk at *New Century Drivers: Advancing Business, Improving Lives*, a Cornell Silicon Valley Program in San Francisco, CA in April 28, 2004 co-sponsored by Cornell University Alumni of Northern CA and Cornell Silicon Valley.
37. Present a research talk under "World Class & World Reaching – Undergraduate Education at Cornell" at the annual Parents Campus Visit Program sponsored by Cornell University Alumni Affairs and Development, May 1, 2004.

38. Invited to present a research talk for Land Grant committee of Cornell Board of Trustees, August 20, 2004.
39. Present a research talk at the “Lynch/Weiss Family Campus Visit” sponsored by Cornell University Alumni Affairs and Development, Nov. 6, 2004.

D. Professional Services:

1. Editorial boards for the Open Biomaterials Journal, Open Material Science Journal, and Open Macromolecules Journal, J of Fiber Bioengineering and Informatics, J of Bioengineering and Biomedical Sci. since 2008.
2. Hong Kong Research Grant Council, Biology and Medical Panel (2009.-2013)
3. Hong Kong Research Grant Council, Collaborative Research Fund Committee (2014 – present)
4. Review manuscripts for J. Appl. Biomaterials,, J. Polym. Sci., J. Biomed. Mater. Res., Biomaterials, Journal of Computational Chemistry, Journal of Investigative Surgery, Journal of Molecular Structure, Surgery, Gynecology and Obstetrics, American Journal of Surgery, and Scanning Microscopy International.
5. Review 3 book proposals for CRC Press, Boca Raton, Fla. "Degradation and Biocompatibility of Synthetic Degradable Polymers" by Jeffrey O. Hollinger (1992); "Biomedical Applications of Composite" (1989); and "Sustained Release Systems for the Delivery of Drugs and Other Biomolecules" by Robert Langer (1979).
6. Proposal Review panels of NSF and NIH.
7. Organize and Conduct Workshop "Medical Textiles" for the Society for Biomaterials, Co-Chair with S.L. Weinberg, Charleston, S.C. May 19, 1990.
8. Two external reviews of tenure/promotion of faculty in the University of California in Davis (1988), and University of Tennessee in Knoxville (1989).
9. Member of the Editorial Board of the Journal Investigative Surgery (1988 - 1994).
10. Member of Scientific/Technical Committee of the Industrial Fabrics Association International (IFAI)/NCSU Medical Textiles Conference, Pittsburgh, PA on October 26-27, 2004
11. Review of proposal for South Carolina EPSCoR and BRIN Programs (Michael A. Matthews as PI “Ultrastructural morphology of bacterial spores: Investigation of the mechanism of high pressure gas sterilization”), Jan. 2003
12. Reviewer for the Kentucky Science and Engineering Foundation, Oct. 2007.
13. As an external reviewer for a tenured promotion of the Institute of Textiles and Clothing, The Hong Kong Polytechnic University, May 2010.
14. Reviewer for Cornell Clinical and Translational Science Center proposal (CTSC Seed Funding Awards Committee, March 2011
15. Reviewer for the research proposal of the Maryland Industrial Partnerships Program, University of Maryland, 2011

