CURRICULUM VITAE

NAME	POSITION TITLE
Gerard L. Coté, Ph.D.	Charles H. & Bettye Barclay Professor and Head

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EDUCATION

INSTITUTION AND LOCATION	DEGREE	YEAR(s)	FIELD OF STUDY
University of Connecticut, Storrs, CT	Ph.D.	1990	Bioengineering
University of Connecticut, Storrs, CT	M.S.	1987	Bioengineering
Rochester Institute of Technology, Rochester, NY	B.S.	1986	Electrical Engineering

PROFESSIONAL EXPERIENCE

02/05-Present *Head:* Department of Biomedical Engineering, Texas A&M U., College Station, TX

09/02-Present *Professor:* Department of Biomedical Engineering, Texas A&M U., College Station, TX.

08/03-Present *Member:* Center for Microencapsulation and Drug Delivery, Texas A&M University System Health Science Center

2010-Present *Founder:* MedAutomate Diagnostics, Inc., a Dallas, TX based medical device company.

04/97-Present *Founder and Board Member:* BioTex, Inc., a Houston, TX based medical device company.

2005-Present *Founder:* Visualase, Inc., a Houston, TX based medical device company spun off from BioTex.

08/93-05/06 *Clinical Assistant Professor:* Research in the development of noninvasive optical sensors for use in the eye: Dept. of Ophthalmology&Visual Sciences U. of Texas Med. Branch, Galveston, TX.

09/97-08/02 *Associate Professor:* Biomedical Engineering Program, Texas A&M U., College Station, TX.

05/91-08/97 *Assistant Professor:* Bioengineering Program, Texas A&M Univ., College Station, TX.

08/95-08/96 *Senior Engineer*: One year leave of absence to work with a medical device company in CA.

05/93-07/93 *NASA Faculty Fellow:* Research on a noninvasive fiber optic multispectral infrared biomedical sensor for monitoring chemicals in a bioreactor: Biotech. Group, NASA-JSC, Houston, TX.

1992 *Consultant:* Research in noninvasive optical sensors: Inomet, Inc., Minneapolis, MN

1993 *Consultant:* Advice in noninvasive optical sensing technology: 3M, Inc., St. Paul, MN.

1995 *Consultant:* Research & advice in noninvasive optical sensors: Abbott Labs, Abbott Park, IL.

1997-Present *Consultant:* Multivariate calibration and optical sensor design: BioTex Inc., Bryan, TX

01/91-05/91 *Postdoctoral Researcher*. Research in Optic and fiber optic biosensors: University of Connecticut, Storrs, CT:

06/86-12/90 *Research and Teaching Assistant*. Research in Doppler Ultrasound, Biomedical Imaging, Optics, and Fiber Optics: Univ. of Connecticut, Storrs, CT.

09/83-05/86 *Industrial Co-op Experience*

Product Test and Design: Test and develop accelerometers in the inertial instruments engineering group: Bell Aerospace/Textron, Niagara Falls, NY.

Product Test and Design: Test and debug circuit boards for the Mark 48 missile guidance system: I.B.M.: Federal Systems Division, Owego, NY

Quality Control Engineering: Product tracking and quality control for computer boards: I.B.M., Boca Raton, FL

Automated System Design: Develop automated lines for industrial engineering as well as small motor development experience for mechanical engineering: G.M. Delco Products Div., Rochester, NY

HONORS & AWARDS:

Fellow of the Institute of Electrical and Electronics Engineers (IEEE)– Class of 2012.
Fellow of SPIE, the international society for optics and photonics – Class of 2012.
Fellow of the Biomedical Engineering Society (BMES) – Class of 2011.
Recipient of a Texas A&M University System Patent Award: Spring 2011
Recipient of the Association of Former Students of Texas A&M University Distinguished Achievement Award for Research: Spring 2011
Recipient of the University of Connecticut School of Engineering Academy of Distinguished Engineers: 2005 Honored as an alumni who consistently demonstrated professional achievements and success throughout their career.
Recipient of the Association of Former Students Faculty Fellow Award: 2004-2005 from Texas A&M University.
Fellow – American Institute for Medical and Biological Engineering (AIMBE), elected and inducted in Washington DC, February 2003.
Recipient of the Mary Jane Kugel Award – 2002 from the Juvenile Diabetes Research Foundation International for serving on the Medical Science Review Committee.
Recipient of the ASA Statistics in Chemistry Award - 2002 from the American Statistical Association.
Fellow – 2002: Michael E. DeBakey Institute for Comparative Cardiovascular Science and Biomedical Devices, Texas A&M U., College Station, TX.
Recipient of the Faculty Distinguished Achievement Award in Teaching - 2000 from the Association of Former Students of Texas A&M University.
Recipient of the TEES Senior Fellow Award - 2000 from Texas A&M University Texas Engineering Experiment Station, College of Engineering.
Recipient of the TEES Fellow Award - 1999 from Texas A&M University Texas Engineering Experiment Station, College of Engineering.
Recipient of the TEES Fellow Award - 1998 from Texas A&M University Texas Engineering Experiment Station, College of Engineering.
Recipient of the Outstanding Young Scientist Award - Sponsored by Johnson & Johnson and presented by the Houston Society of Engineering in Medicine & Biology (HSEMB) at the 13th Annual Houston Conference on Biomedical Engineering Research, University of Houston, Houston TX: Feb. 16, 1995.
Recipient of the Outstanding Fellows Advisor Award - 1993 from Texas A&M University Honors Program
Juvenile Diabetes Foundation-Medical Science Review Committee (MSRC) Invited to serve for a three year term commencing September 1999.

PATENTS:

Coté, G.L., Fox, M.D., and Northrop, R.B.; Optical Glucose Sensor Apparatus and Method
United States Patent #5,209,231: May 11,1993: Filed November 2, 1990
European Patent Office #92900992.6-: September 3, 1993.

Coté, G.L., Pishko, M.V., Sirkar, K., and Anderson, R.R.; Compositions and Methods for Analyte Detection
United States Patent # 6,485,703: November 26, 2002: Filed July 9, 1999.

Bosquet, G.G. and Coté, G.L., Gowda, A., McNichols, R., and Rastegar, S.; Method and apparatus for analyte detection using intradermally implanted skin port,
United States Patent Application, US 6,438,397: Aug. 20, 2002.

Baba, J.S. and Coté, G.L.; Method and apparatus for non-invasive glucose sensing through the eye,
United States Patent Application, US 6,885,882: April 26, 2005.

Ibey, B., Yadavalli, V., Rounds, R., Beier, H., Coté, G.L., Pishko, M.,; Implantable system for glucose monitoring using fluorescence quenching; (disclosure filed Sept. 28, 2005 to TAMUS) filed with USPO September 28, 2006, United States Patent #7,704,704 B2, April 27, 2010.

Beier, H., Benford, M., Chou, I., Coté, G.L., Jing, N., Kameoka, J., and Wang, M.: Nanofluidic Trapping

Device for Surface Enhanced Raman Spectroscopy. TAMUS 2672, Serial No. 12/038,700: Filed Feb. 27, 2008.

Coté, G.L., Gant, R., Grunlan, M., and Hou, Y.; A self cleaning membrane for implantable biosensors. TAMUS-2716, Disclosed April 24, 2008, Provisional filed May 5, 2008, Application filed May 1, 2009. Published March 4, 2010.

Coté, G.L., Malik, B., Thomas III, E., Pirnstill, C., Magneto-optical polarized light modulation device; Disclosed May 23, 2011; Provisional filed March 2012.

Kameoka, J., Coté, G.L., Benford, M., Marks, H., and Tsou, PH, Microfluidic Filter Chip using a Nanoporous Membrane for Robust Surface Enhanced Raman Spectroscopy (SERS), Provisional Filed October 2012, Disclosed 09/23/2011.

BOOK CHAPTERS:

Wang, M., Benford, M., Coté, G.L., and Kameoka, J., Chapter "Raman Detection in Microchips and Microchannels" Handbook of Optofluidics, edited by Aaron Hawkins and Holger Schmidt, Published by Taylor & Francis Group, Inc., March 19, 2010.

Coté, G.L., McShane, M., and Pishko, M., Chapter 11 "Fluorescence-based glucose biosensors", Glucose optical sensing and impact, edited by Valery Tuchin, Published by Taylor & Francis Group, pp. 319-352, 2009.

Coté, G.L., and Cameron B., Chapter 15 "A noninvasive glucose sensor based on polarimetric measurements through the aqueous humor of the eye", Glucose optical sensing and impact, edited by Valery Tuchin, Published by Taylor & Francis Group, pp. 457-485, 2009.

Ibey, B.L., Pishko, M.V., and Coté, G.L., Chapter 4 "Implantable Concanavalin A Based Sensors for Interstitial Fluid Glucose Sensing in Diabetes", Volume 11:Topics in Fluorescence Spectroscopy, Geddes, C., & Lackowicz, J., pp.89-111, March 2006.

Pirnstill, C., Cummins, B., Coté, G.L., and McNichols, R.J., Glucose Monitoring, in Biomedical Photonics Handbook by Tuan Vo-Dinh, CRC Press, revised version of 2003 edition submitted April 2012.

Coté, G.L., and McNichols, R.J., Glucose Diagnostics, in Biomedical Photonics Handbook by Tuan Vo-Dinh, CRC Press, January 24, 2003.

Coté, G.L., Rastegar, S., and Wang, L., Chapter 17, Biomedical Optics and Lasers, in Introduction to Biomedical Engineering by Enderle, et.al., Academic Press, San Diego, CA, Chapter 17, pp. 843-904, copyright 2000. (Second edition copyright 2005, third edition copyright 2011)

PUBLICATIONS:

I. *Refereed Journal Publications*

1. Tsou, PH, Benford, M., Marks, H., Coté, G.L., and Kameoka, J., "Silica nanofiber membrane integrated in microfluidic device for sensing using surface enhanced Raman spectroscopy" Lab-on-a-chip, submitted May 2012, in review.
2. Benford, M., Marks, H., Tsou, PH, Kameoka, J., and Coté, G.L., "Design and characterization of a nanopore optofluidic SERS device for ultrasensitive sensing" Nano Letters, submitted May 2012, in review.
3. Rahbar, E., Akl, T., Coté, G.L., Moore, J., and Zawieja, D., "Lymph transport in rat mesenteric lymphatics experiencing edemagenic stress", Microcirculation, submitted April, 2011.
4. Malik, B., Pirnstill, C., and Coté, G.L., Dual wavelength polarimetric glucose sensing in the presence of birefringence and motion artifact using anterior chamber of the eye phantoms, Journal of Biomedical Optics, Accepted June 2012, in press

5. Akl, T.J., King, T., Long, R., McShane, M.J., Ericson, M.N., Wilson, M., and Coté, G.L., "Performance assessment of an opto-fluidic phantom mimicking porcine liver parenchyma", Journal of Biomedical Optics, Accepted June 2012, in press
6. Pirnstill, C., Malik, B., Gresham, V.C., and Coté, G.L., "*In vivo* glucose monitoring using dual-wavelength polarimetry to overcome corneal birefringence in the presence of motion", Diabetes Care, V14, N9, pp. 1-9, doi:10.1089/dia.2012.0070, 2012.
7. Akl, T.J., Nagai, T., Coté, G.L., and Gashev, "Mesenteric Lymph Flow in Adult and Aged Rats", American Journal of Physiology (AJP)-Heart and Circulatory Physiology, 301, pp. h1828-h1840, August 26, 2011.
8. Akl, T.J., Long, R., McShane, M.J., Ericson, M.N., Wilson, M., and Coté, G.L., "Optimizing Probe Design for an Implantable Perfusion and Oxygenation Sensor", Biomedical Optics Express, 2, 2096-2109, 2011.
9. Long, R., Akl, T.J., Ericson, M.N., Wilson, M., Coté, G.L., and McShane, M.J., "An opto-fluidic phantom mimicking optical properties of porcine livers", Biomedical Optics Express, 2, 1877-1892, 2011.
10. Cummins, B., Lim, J., Simanek, E.E., Pishko, M.V., and Coté, G.L., "Encapsulation of Concanavalin A/ Dendrimer Glucose Sensing Assay within Microporated Poly-Ethylene Glycol Microspheres", Biomedical Optics Express, V2/N5, pp. 1243-1257, May 1, 2011.
11. Akl, T.J., Nepiyushchikh, Z.V., Gashev, A.A. Zawieja, D.C., and Coté, G.L., "Measuring contraction propagation and localizing pacemaker cells using high speed video microscopy", Journal of Biomedical Optics, V16, 026016-01 to 026016-09, Feb. 24, 2011. (Also published by AIP/APS in Virtual Journal of Biological Physics Research with permission of JBO) http://spiedigitallibrary.org/jbo/resource/1/jbopfo/v16/i2/p026016_s1?view=fulltext
12. Malik, B.H., and Coté, G.L., "Characterizing dual wavelength polarimetry through the eye for monitoring glucose", Biomedical Optics Express, V1/I5, pp.1247-1258, 2010.
13. Malik, B.H., and Coté, G.L., "Modeling the corneal birefringence of the eye towards development of a polarimetric glucose sensor", Journal of Biomedical Optics, V15/N3, pp. 037012, May/June 2010. (PMC2902536).
14. Beier, H.T., Coté, G.L., and Meissner, K.E., "Modeling whispering gallery modes in quatum dot-embedded polystyrene microspheres", J. Opt. Soc. Am. B., V27/N3, pp.536-543, March 2010.
15. Gant, R.M., Abraham, A.A., Hou, Y., Cummins, B.M., Grunlan, M.A., and Coté, G.L., "Design of a self-cleaning thermoresponsive nanocomposite hydrogel membrane for implantable biosensors", Acta Biomaterialia, 6, pp. 2903-2910, published on-line Feb. 10, 2010.
16. Malik, B.H., and Coté, G.L., "Real-Time Closed-Loop Dual Wavelength Optical Polarimetry for Glucose Monitoring", Journal of Biomedical Optics, V15(1), pp. 017002-1 to 017002-6, January/February 2010. (PMC2816994)
17. Beier, H.T., Coté, G.L., and Meissner, K.E., "Whispering gallery mode biosensors consisting of quatum dot-embedded microspheres", Annals of Biomedical Engineering, published on-line 22 May 2009, V37/N10, pp.1974-1983, October 2009.
18. Gant, R.M., Hou, Y., Grunlan, M.A., and Coté, G.L., "Development of a Self-Cleaning Sensor Membrane for Implantable Biosensors", Journal of Biomedical Materials Research. Part A, published on-line June 18, 2008, V90A/N3, pp. 695-701, Sept. 2009. http://www3.interscience.wiley.com/cgi-bin/fulltext/119879619/HTMLSTART
19. Wang, M., Benford, M., Jing, N., Coté, G.L., and Kameoka, J., "Optofluidic device for ultra-sensitive detection of proteins using surface-enhanced Raman spectroscopy" Microfluidics and Nanofluidics, V6, N3, pp. 411-414, March 2009.
20. Cowen, C., Coté, G.L., and Good, T.A., "Development of photocrosslinked sialic acid containing polymers for use in beta amyloid toxicity attenuation", Biomaterials, V29/I24-25, pp. 3408-3414, August/September 2008.

21. Chou, I., Benford, M., Beier, H., Wang, M., Jing, N., Good, T.A., Kameoka, J., and Coté, G.L., "Nanofluidic Biosensing for β-amyloid Detection Using Surface Enhanced Raman Spectroscopy (SERS)", Nanoletters, 8(6) pp. 1729-1735, June, 2008. On-line at http://pubs.acs.org/cgi-bin/article.cgi/nalefd/2008/8/i06/html/nl0808132.html
22. Lee, S.J., Ibey, B.L., Coté, G.L., and Pishko, M.V., "Measurement of pH and dissolved oxygen in cell culture media using a hydrogel microsensor array", Sensors & Actuators B: Chemical, V128, Issue 2, pp. 388-398, January 15, 2008. http://www.sciencedirect.com/science?_ob=ArticleURL&_udi=B6THH-4P37JG3-1&_user=952835&_coverDate=06%2F30%2F2007&_alid=620675742&_rdoc=1&_fmt=full&_orig=search&_cdi=5283&_sort=d&_docanchor=&view=c&_ct=1&_acct=C000049198&_version=1&_urlVersion=0&_userid=952835&md5=3a552d9cc6d30c94d0883d90f26c19e4# (doi:10.1016/j.snb.2007.06.027)
23. Wang, M., Jing, N., Chou, I., Coté, G.L., and Kameoka, J., "An optofluidic device for surface enhanced Raman spectroscopy", Lab Chip, Technical Note, V7, I5, pp. 630-632, May 2007 http://www.rsc.org/publishing/journals/lc/Article.asp?Type=AdvArticle (**DOI:** 10.1039/b618105h)
24. Beier, H.T., Cowan, C.B., Chou, I., Pallikal, J., Henry, J., Benford, M., Jackson, J.B., Good, T.A., and Coté, G.L., "Application of Surface Enhanced Raman Spectroscopy for Detection of Beta Amyloid Using Nanoshells", Plasmonics, V2/N2, pp. 55-64, June 2007.
25. Dixon, J.B., Gashev, A.A., Zawieja, D.C., Moore, J.E., Jr., and Coté, G.L., "Image Correlation Algorithm for Measuring Lymphocyte Velocity and Diameter Changes in Contracting Microlymphatics" Annals of BME, V35, N3, pp.387-396, March 2007.
26. Rounds, R.M., Ibey, B.L., Beier, HT., Pishko, M.V, and Coté, G.L., "Microporated PEG Spheres for Fluorescent Analyte Detection", J. of Fluorescence, V17, N1, January, 2007.
27. Dixon, J. B., Greiner, S. T., Gashev, A. A., Cote, G. L., Moore Jr., J. E., and Zawieja, D. C., "Lymph flow, shear stress, and lymphocyte velocity in rat mesenteric prenodal lymphatics", Microcirculation, 13, pp. 597-610, 2006
28. Chowdhury, M.H., Gant, V.A., Trache, A., Baldwin, A., Meininger, G., and Coté, G.L. "The use of surface enhanced Raman spectroscopy for the detection of integrins", J. Biomedical Optics, V11/N2, pp. 024004-1 to 004024-8, March/April 2006.
29. Subramanian, H., Ibey, B.L., Xu, W., Wilson, M.A., Ericson, M.N., and Coté, G.L., "Real time separation of perfusion and oxygenation signals for an implantable sensor using adaptive filtering", IEEE Transactions on Biomedical Engineering, V52, Issue 12, pp. 2016-2023, Dec. 2005.
30. Anand, A., Moreira, R., Henry, J., Chowdhury, M., Coté, G., and Good, T., "A biodetection strategy for the detection of prions in foods", LWT - Swiss Society for Food Science and Technology, published by Elsevier, Volume 38, Issue 8, pp. 849-858, December 2005.
31. Dixon, J.B., Zawieja, D.C., Gashev, A. A., and Coté, G.L., "Microlymphatic Flow Using Fast Video Microscopy", J. Biomedical Optics, V10, Issue 6, pp. 064016/1-064016/7, November 2005.
32. Ibey, B.L., Beier, H.T., Yadavalli, V.K., Rounds, R.M., Pishko, M.V., and Coté, G.L., "Competitive binding assay for glucose based on glycodendrimer- fluorophore conjugates", Analytical Chemistry, 77(21) pp 7039 – 7046, November 2005.
33. Subramanian, H., Ibey, B.L., Xu, W., Wilson, M.A., Ericson, M.N., and Coté, G.L., "An autocorrelation based time domain analysis technique for monitoring perfusion and oxygenation in transplanted organs", IEEE Transactions on Biomedical Engineering, V52, N7, pp. 1355-58, July 2005.
34. Lee, S.J., Ibey, B.L., Xu, W., Wilson, M.A., Ericson, M.N., and Coté, G.L., "Wavelet and Fast Fourier Transform Analysis of Oximeter-Based Perfusion Data", IEEE Transactions on Biomedical Engineering, V52, N7, pp. 1350-52, July 2005.
35. Humphrey, J.D., Coté, G.L., Walton, J., Meininger, G.A., Laine, G., "A new paradigm for graduate research and training in the biomedical sciences and engineering", Advances in Physiology Education, 29: 98-102, June 2005.

36. Yadavalli, V.K., Russell, R., McShane, M., Coté, G.L., and Pishko, M. "A Monte Carlo Simulation of Photon Propagation in Fluorescent Poly(ethylene glycol) Hydrogel Microsensors" Sensors and Actuators B:Chemical, 5(2), pp. 365-377, 28 March 2005.
37. Wan, Q., Dixon, J.B., and Coté, G.L., "Dual wavelength polarimetry for monitoring glucose in the eye", Journal of Biomedical Optics, 10(2), 024029:1-8, March/April 2005.
38. Chowdhury, M.H., Julian, A.M., Coates, C.J., and Coté, G.L., "Detection of differences in oligonucleotide influenced aggregation of colloidal gold nanoparticles using absorption spectroscopy", Journal of Biomedical Optics, Vol. 9, No.6, pp. 1347-1357, November/December 2004.
39. O'Neal, P., Pishko, M., Meledeo, A., Ibey, B., Gant, A., Davis, J., and Coté, G.L., "Oxygen sensor based on the fluorescence quenching of a ruthenium complex immobilized in a biocompatible polyethylene glycol hydrogel", IEEE Sensors Journal, V4/N6, pp. 1-7, December 2004.
40. Henry, J., Anand, A., Chowdhury, M., Coté, G.L., Moreira, R., and Good, T., "Development of a nanoparticle based surface modified fluorescence assay for the detection of prion proteins", Analytical Biochemistry, Vol. 334, Issue 1, pp.1-8, 1 November 2004.
41. M. N. Ericson, M.A. Wilson, G.L. Coté, J.S. Baba, W. Xu, M. Bobrek, C.L. Britton, M.S. Hileman, M.R. Moore, M.S. Emery, and R. Lenarduzzi, "Implantable sensor for blood flow monitoring after transplant surgery," *Minimally Invasive Therapy & Allied Technologies*, 13(2), pp. 87-94, April 2004 (*invited*).
42. Coté, G.L., Lec, R.M., and Pishko, M.V., "Emerging Biomedical Sensing Technologies and Their Applications", IEEE Sensors Journal, V3, N3; pp. 251-66, June 2003.
43. O'Neal, P., Motamedi, M., Lin, W.C., Chen, J., and Coté, G.L., "Feasibility Study using Surface Enhanced Raman Spectroscopy for the Quantitative Detection of Excitatory Amino Acids ", J. Biomedical Optics, V8, N1; pp. 33-39, January 2003.
44. Baba, J.S., Chung, J., DeLaughter, A.H., Cameron, B.D., and Coté, G.L., "Development and calibration of an automated Mueller matrix polarization imaging system", J. Biomedical Optics, V7, N3; pp. 341-349, July 2002.
45. Baba, J.S., Cameron, B.D., Theru, S., and Coté, G.L., "The effect of temperature, pH, and corneal birefringence on polarimetric glucose monitoring in the eye", J. Biomedical Optics, V7, N3; pp. 321-328, July 2002.
46. Baba, J.S., Chung, J., Coté, G.L., "Laser polarization noise elimination in sensitive polarimetric systems", Optical Engineering, V41, N5; pp. 938-942, May 2002.
47. Spiegelman, C., Wikander, J., O'Neal, D.P., and Coté, G.L., "A Simple Method for Linearizing Nonlinear Spectra for Calibration", J. Chemometrics and Intelligent Laboratory Systems, 60;pp. 197-209, 2002.
48. Jung, B., Lee, S., Yang, I., Good, T., and Coté, G.L., "Automated on-line noninvasive optical glucose monitoring in a cell culture system", Applied Spectroscopy, V56, N1: pp. 51-57, 2002.
49. Cameron, B.D., Baba, J.S., and Coté, G.L., "Measurement of the glucose transport time-delay between blood and aqueous humor of the eye for the eventual development of a noninvasive glucose sensor", Diabetes Technology and Therapeutics, V3, N2: pp. 201-207, Summer 2001.
50. Coté, G.L., "Noninvasive and minimally invasive optical monitoring technologies", Journal of Nutrition, 131(5):1596S-604S, May 2001.
51. McShane, M., Russell, R., Pishko, M., Cote', G.L. "Glucose Monitoring Using Implanted Fluorescent Microspheres" *IEEE Engineering in Medicine and Biology*, V19, N6: pp. 36-45, Nov/Dec 2000.
52. Lewis C.B., McNichols, R.J., Gowda, A., and Coté, G.L., "Investigation of near-infrared spectroscopy for periodic determination of glucose in cell culture media in situ", Applied Spectroscopy, v54, N10, pp. 1453-57, 2000.
53. McNichols, R.J., Coté, G.L., Wasser, J.S., and Wright, S.M., "Simultaneous Optical Fluorescence and Nuclear Magnetic Resonance Spectroscopy in vivo", IEEE TBME, V47, N9, pp. 1261-65, September 2000.

54. McShane, M.J., Rastegar, S., Pishko, M., and Coté, G.L., "Monte Carlo Modeling For Implantable Fluorescent Analyte Sensors", IEEE TBME, V47, N5, pp.624-32, May 2000.
55. Spiegelman, C.H., Bennett, J.F., Vannucci, M., McShane, M.J., and Coté, G.L., "A transparent tool for seemingly difficult calibrations: the parallel calibration method", Analytical Chemistry, V72, N1, pp. 135-140, January 1, 2000.
56. McNichols, R.J., and Coté, G.L., "Optical Glucose Sensing in Biological Fluids: An Overview", J. Biomedical Optics, Cover Page, V5, N1, pp. 1-12, January 2000.
57. McShane, M.J., Cameron, B.D., Coté, G.L., and Spiegelman, C.H., "Improving complex near-IR calibrations using a new wavelength selection algorithm", Applied Spectroscopy, V53, N12, pp. 1575-81, December 1999.
58. R. McNichols, S.M. Wright, J. Wasser, and G.L. Cote, "An Inductively Coupled, Doubly-Tuned Resonator for in-vivo NMR Spectroscopy," Review of Scientific Instruments, Vol. 70, No. 8, pp. 3454-3456, August 1999.
59. Russell, R., Gefrides, C., McShane, M., Cote, G.L., Pishko, M. "A Fluorescence-Based Glucose Biosensor Based on Concanavalin A and Dextran Encapsulated in a Poly(ethylene glycol) Hydrogel" Anal. Chem. 71(15), 3126-3132, 1999.
60. Cameron B.D., Gorde, H., Satheesan B., and Coté, G.L., "The use of polarized laser light through the eye for noninvasive glucose monitoring", Diabetes Technology and Therapeutics, V1, N2, pp. 135-43: Summer 1999.
61. Rakovic, M.J., Kattawar, G., Mehrubeoglu, M., Cameron, B.D., Wang, L.V., Rastegar, S., and Cote, G.L., "Light Backscattering Polarization Patterns from Turbid Media: Theory and Experiment", Applied Optics, V38, N15, pp.3399-3408: May 20, 1999.
62. McShane, M.J., Cameron, B.D., Coté, G.L., Motamedi, M., and Spiegelman, C.H., "Peak-Hopping Stepwise Selection Method Outperforms Genetic Algorithm Selection for Raman Spectra", Analytical Chimica Acta, Vol 388, Issue 3, pp. 251-264: May 7, 1999.
63. McShane, M.J. and Coté, G.L., "Near-Infrared Spectroscopy for Determination of Glucose, Lactate, and Ammonia in Cell Culture Media", Applied Spectroscopy, V52, N8, pp. 1073-1078: August 1998.
64. McShane, M.J., Coté, G.L., Spiegelman, C.H., "Assessment of Partial Least-Squares Calibration and Wavelength Selection for Complex Near-Infrared Spectra", Applied Spectroscopy, V52, N6, pp. 878-884: June 1998.
65. Cameron, B.D., Rakovic, M.J., Mehrubeoglu, M., Kattawar, G., Rastegar, S., Wang, L.V., and Cote, G.L., "Measurement and calculation of the two-dimensional backscattering Mueller matrix of a Turbid Medium" Optics Letters, V23, N7, pp. 485-87: April 1, 1998.
66. Spiegelman, C.H., McShane, M.J., Coté, G.L., Goetz, M.J., Motamedi, M., Yue, Q.L., "Theoretical Justification of Wavelength Selection in PLS Calibration: Development of a New Algorithm", Analytical Chemistry, V70, N1, pp. 35-44: January 1998.
67. Cameron, B.D., and Coté, G.L., "Noninvasive Glucose Sensing Utilizing a Digital Closed-Loop Polarimetric Approach", IEEE TBE; V44, N12, pp. 1221-27: December 1997.
68. McShane, M.J., Coté, G.L., and Spiegelman, C., "Variable Selection in Multivariate Calibration of a Spectroscopic Glucose Sensor", Applied Spectroscopy, V51, N10, pp. 1559-63, 1997.
69. Mehrubeoglu, M., and Coté, G.L., "Determination of Total Reducing Sugars Using Near Infrared Spectroscopy", Cereal Foods World, V42, N5, pp. 409-13: May 1997.
70. Coté, G.L., Noninvasive Optical Glucose Sensing-An Overview, J. of Clinical Engineering. V22, N4, pp. 253-59: July/August 1997.
71. Coté, G.L., and Cameron, B.D., "Noninvasive Polarimetric Measurement of Glucose in Cell Culture Media", Journal of Biomedical Optics; 2(3), pp. 275-281: July 1997.
72. Coté, G.L., Durai, R., and Zoghi, B., "Non-linear Closed-Loop Control System for Intracranial Pressure Regulation", Annals of Biomedical Engineering: V23, N6: pp. 760-771, November 1995.

73. Goetz, M.J., Jr., Coté, G.L., March, W.F., Erckens, R., and Motamedi, M. "Application of a Multivariate Technique to Raman Spectra for Quantification of Body Chemicals", IEEE Trans. on BME: V42, N7: pp. 728-31, July 1995.
74. King, T., Coté, G.L., McNichols, R., and Goetz, M., "Closed-Loop Optical Polarimetric Glucose Sensing Using a Multispectral Approach", Optical Engineering, V33, No. 8: pp. 2746-53: August 1994.
75. Coté, G.L., Fox, M.D., and Northrop, R.B., "Noninvasive Optical Polarimetric Glucose Sensing Using a True Phase Measurement Technique", IEEE Tr. Bio. Eng., V39, N7: pp. 752-56: July 1992.
76. Coté, G.L. and Fox, M.D., "Comparison of Two Mean Frequency Estimates for Doppler Ultrasound", Innovation et technologie en biologie et medecine (ITBM), V10, N1: pp. 99-114: 1989.
77. Paik, C.H., Coté, G.L., Da Ponte, J.S., and Fox M.D.,"Fast Hartley Transforms for Spectral Analysis of Ultrasound Doppler Signals", IEEE Tr. Bio. Eng.; V35, N10: pp. 885-888: 1988.
78. Coté, G.L. and Fox, M.D., "Comparison of Zero Crossing Counter to FFT Spectrum of Ultrasound Doppler", IEEE Tr. Bio. Eng., V35, N6: pp. 498-502: 1988.

II. *Refereed Conference Papers and Proceedings*

1. Malik, B., Pirnstill, C., and Coté, G.L., "Polarimetric glucose sensing in an artificial eye anterior chamber", SPIE Photonics West BIOS, 8229A-23, San Francisco, CA, Jan. 2012.
2. Cummins, B.M. and Coté, G.L., "A fluorescence polarization based assay for glucose sensing", SPIE Photonics West BIOS, San Francisco, CA, Jan. 2012.
3. Rahbar, E., Akl, T., Zawieja, D., Coté, G.L. and Moore, J., "Effects of edemagenic stress on lymph transport in the rat mesentery", Proceedings of the ASME 2011 Summer Bioengineering Conference, Famington, PA, June 22-25, 2011.
4. Cummins, B.M., Lim, J.D., Simanek, E.E., Pishko, M.V., and Coté, G.L., "Understanding the mechanism and optimizing a competitive binding fluorescent glucose sensor", SPIE Photonics West BIOS, San Francisco, CA, Jan. 2011.
5. Akl, T.J., King, T.J., Long, R., McShane, M.J., Ericson, M.N., Wilson, M., and Coté, G.L., "Optimizing Source Detector Separation for an Implantable Perfusion and Oxygenation Sensor", SPIE-BIOS, 7906A-04, San Francisco, CA, 2011.
6. Baba, J. S., Akl, T.J., Coté, G.L., Wilson, M., and Ericson, M.N., "Investigation of Source Detector Separation Optimization for an Implantable Perfusion and Oxygenation Sensor for Liver Blood Vessels", SPIE-BIOS, 7890-09, San Francisco, CA, 2011.
7. Benford, M.E., Wang, M., Kameoka, J., Good, T., and Coté, G.L., "Functionalized nanoparticles for measurement of biomarkers using a SERS nanochannel platform", SPIE Photonics West BIOS, San Francisco, CA, Jan. 2010.
8. Akl, T., Rahbar, E., Zawieja, D., Gashev, A., Moore, J., and Coté, G.L., "A fast imaging system and algorithm for monitoring microlymphatics", SPIE Photonics West BIOS, San Francisco, CA, Jan. 2010.
9. Beier, H.T., Coté, G.L., and Meissner, K.E., "Whispering-gallery mode based biosensing using quantum dot-embedded microspheres", SPIE Photonics West BIOS, San Francisco, CA, Jan. 2010.
10. Malik, B., and Coté, G.L., "Development of a real-time closed-loop dual wavelength optical polarimeter for glucose monitoring", SPIE Photonics West BIOS, San Francisco, CA, Jan. 2010.
11. Baba, J.S., Letzen, B.S., Ericson, M.N., Coté, G.L., Xu, W., and Wilson, M.A., "Development of a Multispectral Tissue Characterization System for Optimization of an Implantable Perfusion Status Monitor for Transplanted Liver", IEEE EMBS 31st Annual Conf., Minneapolis, MN, Sept. 2-6, 2009.
12. Benford, M.E., Wang, M., Kameoka, J., and Coté, G.L., "Detection of Cardiac Biomarkers in a Nanofluidic Channel-based Biosensor using Surface Enhanced Raman Scattering (SERS)", SPIE Photonics West BIOS, San Jose, CA, Jan. 2009.
13. Malik, B.H., and Coté, G.L., "Real-time Dual Wavelength Polarimetry for Glucose Sensing", SPIE Photonics West BIOS, San Jose, CA, Jan. 2009.

14. Beier, H.T., Lim, J.D., Simanek, E.E., Pishko, M.V., and Coté, G.L., "Improvement of Dendrimer Stability in a Glucose-Sensitive Fluorescent Assay", SPIE Photonics West BIOS, San Jose, CA, Jan. 2009.
15. Benford, M.E., Chou, I., Beier, H.T., Wang, M., Kameoka, J., Good, T.A., and Coté, G.L., "In Vitro Detection of Beta Amyloid Exploiting Surface Enhanced Raman Scattering (SERS) using a Nanofluidic Channel Based Biosensor", SPIE Photonics West BIOS, San Jose, CA, Jan. 2008.
16. Beier, H.T., Cowan, C.B., Good, T.A., and Coté, G.L., "A Surface Enhanced Raman Spectroscopy Platform Based on Nanoshells for Detection of β-Amyloid", SPIE Photonics West BIOS, San Jose, CA, Jan. 2008.
17. K. E. Meissner, Z. Sun, B. Nathwani, C. Needham, R.E. Beckham, W. N. Everett, X. Fan, G. L. Cote and G. A. Meininger, "Combining AFM and FRET for studies at the cellular level," SPIE Photonics West BIOS, San Jose, CA, Proceedings of the SPIE, Vol 6863, 686302 1-9 (2008).
18. Chou, I., Beier, H.T., Wang, M., Jing, N., Kameoka, J., and Coté, G.L., "Nanofluidic Channel based biosensor using surface enhanced Raman spectroscopy, SPIE BIOS, San Jose, CA, Jan. 2007
19. Beier, H.T., Ibey, B.L., Pishko, M., and Coté, G.L. "Use of glycosylated dendrimer macromolecules to fluorescently monitor glucose concentration", SPIE BIOS, Conf. 6445, San Jose, CA, Jan. 2007.
20. Wan, Q., Beier, H.T., Ibey, B.L., Good, T. and Coté, G.L., "Implantable fluorescent analyte sensors for detection of Alzheimer's disease: Monte Carlo modeling and phantom study", SPIE BIOS, Conf. 6445, San Jose, CA, Jan. 2007.
21. Rounds, R.M., Lee, S., Ibey, B.L., Pishko, M.V., and Coté, G.L., "Hydrogel microarrays for multi-analyte detection", SPIE BIOS, Conf. 6445, San Jose, CA, Jan. 2007.
22. Chowdhury, M.H., Campbell, C.J., Theofanidou, E., Lee, S.J., Baldwin, A.M., Sing, G., Yeh, A.T., Crain, J., Ghazal, P., and Coté, G.L., "Surface enhanced Raman spectroscopy (SERS) for the detection of intracellular constituents using gold nanoshells", SPIE BIOS, Conf. 6099, San Jose, CA, Jan. 2006.
23. Ibey, B.L., Beier, H.R., Rounds, R.M., Pishko, M.V., and Coté, G.L., "Dendrimer based fluorescent glucose sensor for diabetic monitoring", SPIE BIOS, Conf. 6094, San Jose, CA, Jan. 2006.
24. Lee, S.J., Ibey, B.L., Pishko, M.V., and Coté, G.L., "Hydrogel microarray for monitoring of pH and dissolved oxygen in cell culture media", SPIE BIOS, Conf. 6094, San Jose, CA, Jan. 2006.
25. Beier, H.R., Ibey, B.L., Rounds, R.M., Pishko, M.V., and Coté, G.L., "Dendrimer optimization for a glucose-sensitive fluorescent assay", SPIE BIOS, Conf. 6094, San Jose, CA, Jan. 2006.
26. Rounds, R.M., Ibey, B.L., Beier, H.R., Pishko, M.V., and Coté, G.L., "Analysis of leeching and stability of microporated PEG spheres for fluorescent analyte detection", SPIE BIOS, Conf. 6094, San Jose, CA, Jan. 2006.
27. Dixon, J. B., Moore, J Jr., Zawieja, D. C., Gashev, A. A., and Coté, G. L., "Image correlation method for measuring flow and diameter changes in contracting mesenteric microlymphatics in situ", SPIE BIOS, Session 6088, San Jose, CA, January 2006.
28. Ibey, B.L., Yadavalli, V.K., Thomas, H.R., Rounds, R.M., Pishko, M.V., and Coté, G.L., "Implantable fluorescence-based glucose sensor development", SPIE BIOS, San Jose, CA, Jan. 2005.
29. Dixon, J. B., Zawieja, D. C., Greiner, S. T., Gashev, A. A., and Coté, G. L., "Microlymphatic flow using fast video microscopy", SPIE BIOS, Session 5701-09, San Jose, CA, January 2005.
30. Chowdury, M.H., Julian, A.M., Coates, C.J., and Coté, G.L., "UV-Visible absorption spectroscopy for the detection of differences in oligonucleotide influenced aggregation of colloidal gold nanoparticles", SPIE BIOS, San Jose, CA, Jan. 2005.
31. Ibey, B.L., Subramanian, H., Ericson, M.N., Xu, W., Wilson, M.A., and Coté, G.L., "Processing of pulse oximeter signals using adaptive filtering and autocorrelation to isolate perfusion and oxygenation components", SPIE BIOS, San Jose, CA, Jan. 2005.
32. Dixon, J.B., Wan, Q., and Coté, G.L., "Motion Compensation Using Dual Wavelength Polarimetry for Glucose Detection", SPIE BIOS, San Jose, CA, Jan. 2005.

33. Lee, S.J., Ibey, B.L., Wilson, M.A., Ericson, M.N., and Coté, G.L., “Wavelet signal extraction from perfusion signal by an oximetry based perfusion sensor”, SPIE BIOS, Session 5325, San Jose, CA, Jan., 24-29, 2004.
34. Ibey, B.L., Lee, S.J., Ericson, M.N., Wilson, M.A., and Coté, G.L., “Modeling of a three-source perfusion and blood oxygenation sensor for transplant monitoring using Multi-Layer Monte Carlo code”, SPIE BIOS, Session 5325, San Jose, CA, Jan., 24-29, 2004.
35. Gant, A., Chowdhury, M., Meininger, G., and Coté, G.L., “Detection of integrins with surface enhanced Raman spectroscopy”, SPIE BIOS, Session 5325, San Jose, CA, Jan. 24-29, 2004.
36. Baba, J.S., Criscione, J.C., Hudson, K.K., and Coté, G.L., “Application of polarized microscopy for the non-stained determination of myo-lamina morphology”, SPIE BIOS, Session 5325, San Jose, CA, Jan. 24-29, 2004.
37. Ibey,B.L., Coté, G.L., Yadavalli, V., Gant, V.A., Newmyer, K., and Pishko, M.V., “Analysis of Longer Wavelength AlexaFluor Dyes for Use in a Minimally Invasive Glucose Sensor”, IEEE EMBS Meeting, Cancun, Mexico, September 17-21, 2003.
38. Baba, J.S., Criscione, J.C., Hudson, K., Coté, G.L., “The Application Of Polarization Microscopy To The Development Of A Non-Staining Technique For Measuring The Divergence Angle Of Myocardial Collagen Cleavage Planes”, IEEE EMBS Meeting, Cancun, Mexico, September 17-21, 2003.
39. Chowdhury, M., .Anand, A., Henry, J.E., Moreira, R., Good, T.A. and Coté, G.L., “The Use of Surface Enhanced Raman Spectroscopy (SERS) in a Competitive Affinity Binding Assay for the Detection of Prions”, IEEE EMBS Meeting, Cancun, Mexico, September 17-21, 2003.
40. Baldwin, A., Chung, J.R., Baba, J.S., Spiegelman, C.H., Amoss, M.S., and Coté, G.L., “Mueller Matrix Imaging For Cancer Detection”, IEEE EMBS Meeting, Cancun, Mexico, September 17-21, 2003.
41. Ibey, B.L., Meledeo A., V. Alex Gant, Yadavalli V., Pishko, M.V., and Coté, G.L., "In vivo monitoring of blood glucose using poly(ethylene glycol) microspheres", SPIE BIOS, Session 4965-01, San Jose, CA, Jan., 2003.
42. Dixon,J.B., Ibey, B.L., Ericson, M.N., Wilson, M.A., and Coté, G.L., "Monte Carlo modeling for perfusion monitoring", SPIE BIOS, Session 4965-07, San Jose, CA, Jan., 2003.
43. Baba, J., Cooper, C., and Coté, G.L., “Modeling the rabbit’s eye with the Mueller matrix for birefringent properties”, SPIE BIOS, Session 4965-17, San Jose, CA, Jan., 2003.
44. Chowdhury, M.H., Atkinson, B., Good, T., and Coté, G.L., “Surface enhanced Raman spectroscopy for the detection of DNA and proteins, SPIE BIOS, Session 4965-19, San Jose, CA, Jan., 2003.
45. Chung, J., DeLaughter, A.H., Baba, J., and Coté, G.L., “Interpretation of Mueller matrix images based on polar decomposition and statistical discriminators to distinguish skin cancer”, SPIE BIOS, Session 4961-25, San Jose, CA, Jan., 2003.
46. Ericson, M.N., B.L. Ibey, B.L., Coté, G.L., Baba, J.S., Dixon,J.B., Hileman, M.S., Britton, C.L., and Wilson, M.A., “*In vivo* application of a minimally invasive oximetry based perfusion sensor”, Proceedings of the IEEE EMBS/BMES Meeting, Houston, TX, October, 2002.
47. Baba, J.S., Coté, G.L., and Theru, S., "An investigation of rabbit corneal birefringence for the purpose of improving noninvasive polarimetric in-vivo glucose detection", Proceedings of the IEEE EMBS/BMES Meeting, Houston, TX, October, 2002.
48. Chung, J.R., Coté, G.L., DeLaughter, A. H., and Baba, J.S., "Analysis of mueller matrix images by polar de-composition", Proceedings of the IEEE EMBS/BMES Meeting, Houston, TX, October, 2002.
49. Meledeo, M.A., Ibey, B.L., O’Neal, D.P., Pishko, M.V., and Coté, G.L., “Investigation of pH and temperature effects on FRET systems for glucose sensing”, SPIE BIOS, Session 4624-07, San Jose, CA, Jan., 2002.
50. O’Neal, D.P., Meledeo, M.A., Pishko, M.V., and Coté, G.L., “Feasibility of an on-line fluorescence-based optical sensor for oxygen monitoring in cell culture media”, SPIE BIOS, Session 4624-11, San Jose, CA, Jan., 2002.

51. Baba, J.S. and Coté, G.L., "Dual-detection polarimetry for compensation of motion artifact in a glucose sensing system", SPIE BIOS, Session 4624-09, San Jose, CA, Proceedings of the SPIE 4624 V3, N16, 2002.
52. Chung, J., Baba, J.S., DeLaughter, A., and Coté, G.L., "Development and use of a novel automated Mueller matrix polarization imaging system in vivo imaging of lesions", SPIE BIOS, Session 4613-19, San Jose, CA, Jan., 2002.
53. O'Neal, D.P., McShane, M., Pishko, M.V., and Coté, G.L., "Implantable biosensors: An analysis of fluorescent light propagation through skin", SPIE International Symposium on Biomedical Optics, BIOS 2001, Session BO33, San Jose, CA, January 20-26, 2001.
54. Baba, J.S., Cameron, B.D., and Coté, G.L., "Investigation of pH and Temperature on Optical Rotatory Dispersion for Glucose Monitoring", SPIE International Symposium on Biomedical Optics, BIOS 2001, Session BO33, San Jose, CA, January 20-26, 2001.
55. Gowda, A., McNichols, R.J., Fossum, T.W., Rastegar, S., and Coté, G.L., "Development of an implantable skin port sensor for use as an in vivo optical glucose sensing platform", SPIE International Symposium on Biomedical Optics, BIOS 2001, Session BO33, San Jose, CA, January 20-26, 2001.
56. Hill, A., Cameron, B.D., Chung, J., Baba, J.S., and Coté, G.L., "Development and Calibration of an Automated Mueller Matrix Polarization System for Skin Lesion Differentiation", SPIE International Symposium on Biomedical Optics, BIOS 2001, Session BO14, San Jose, CA, January 20-26, 2001.
57. McShane, M.; O'Neal, D.; Russell, R.; Pishko, M.; Cote, G. "Progress toward implantable fluorescence-based sensors for monitoring glucose levels in interstitial fluid" *Proceedings-SPIE* **2000***, 3923,* 78-87.
58. O'Neal, D.P., Motamedi, M., Chen, J., and Coté, G.L., "Surface-enhanced Raman spectroscopy for the near real-time diagnosis of brain trauma in rats", Proceedings of the SPIE International Symposium on Biomedical Optics, San Jose, CA.: Optical Diagnostics of Biological Fluids V3918; January 22-28, 2000.
59. Cameron, B.D., and Coté, G.L., "Development of an optical polarimeter for noninvasive in-vivo glucose monitoring", Proceedings of the SPIE International Symposium on Biomedical Optics, San Jose, CA.: Optical Diagnostics of Biological Fluids V3923; January 22-28, 2000.
60. Lewis, C.B., and Coté, G.L., "pH influence on near-infrared spectra of glucose", Proceedings of the SPIE International Symposium on Biomedical Optics, San Jose, CA.: Optical Diagnostics of Biological Fluids V3923; January 22-28, 2000.
61. McShane, M., Russell, R., Pishko, M., Rastegar, S., and Coté, G.L., "Optical system for implantable analyte sensors", Proceedings of the 1st Joint BMES/EMBS Conference (21st International Conference of the IEEE EMBS), pp. 804, Atlanta, GA, Oct 13-16, 1999.
62. Satheesan, B., and Coté, G.L., "Characterization of Birefringence in a Rabbit Cornea", Proceedings of the 1st Joint BMES/EMBS Conference (21st International Conference of the IEEE EMBS), pp. 782, Atlanta, GA, Oct 13-16, 1999.
63. Jung, B., and Coté, G.L., "A solid-block FT-NIR spectrometer for the measurement of analytes in cell culture media", Proceedings of the 1st Joint BMES/EMBS Conference (21st International Conference of the IEEE EMBS), pp. 824, Atlanta, GA, Oct 13-16, 1999.
64. Cameron, B.D., Gorde, H., and Coté, G.L., "Development of an optical polarimeter system for in-vivo glucose monitoring", Proceedings of the SPIE International Symposium on Biomedical Optics, San Jose, CA.: Optical Diagnostics of Biological Fluids V3599; pp. 43-49, January 23-29, 1999.
65. McShane, M.J., Rastegar, S., and Coté, G.L., "Probe design for implantable fluorescence-based sensors", Proceedings of the SPIE International Symposium on Biomedical Optics, San Jose, CA.: Optical Diagnostics of Biological Fluids V3599; pp. 93-100, January 23-29, 1999.
66. McShane, M.J., Cameron, B.D., Coté, G.L., and Spiegelman C., "Peak-hopping stepwise wavelength selection algorithm for spectroscopic applications", Proceedings of the SPIE International Symposium on Biomedical Optics, San Jose, CA.: Optical Diagnostics of Biological Fluids V3599; pp. 101-109, January 23-29, 1999.

67. O'Neal, D.P., Motamedi, M., Chen, J., and Coté, G.L., "Surface-enhanced Raman spectroscopy for in-vitro and ex-vivo detection of excitatory amino acids", Proceedings of the SPIE International Symposium on Biomedical Optics, San Jose, CA.: Biomedical Applications of Raman Spectroscopy V3608; pp. 211-216, January 23-29, 1999.
68. McShane, M., Rastegar, S., and Coté, G.L., "Fluorescence-based implantable biosensors: Monte Carlo modeling for optical probe design", Proceedings of the 20th International Conference of the IEEE EMBS, Hong Kong, Oct 29 – Nov 1, 1998.
69. Russell, R., Pishko, M., Gefrides, C., and Coté, G.L., "A fluorescent glucose assay using poly-l-lysine and calcium alginate microencapsulated tritc-succinyl-concanavalin A and FITC-Dextran", Proceedings of the 20th International Conference of the IEEE EMBS, Hong Kong, Oct 29 – Nov 1, 1998.
70. Cooney, K.M., Coté, G.L., Gossage, K., McShane, M.J., van der Breggen, E., Motamedi, M., and Coté, G.L., "Development of an optical system for the detection of oral cancer using near-infrared spectroscopy", Proceedings of the 20th International Conference of the IEEE EMBS, Hong Kong, Oct 29 – Nov 1, 1998.
71. Cooney, K.M., Coté, G.L., Gossage, K., McShane, M.J., Motamedi, M., and van der Breggen, E., "Detection of spectral differences between normal and cancerous oral tissue using near-infrared spectroscopy", Proceedings of the OSA Spring Topical Meetings, Orlando, Florida; March 8-11, 1998.
72. Mehrubeoglu, M., N. Kehtarnavaz, G. L. Coté, S. Rastegar, and L. V. Wang, "Diffuse reflectance polarization images of turbid media affected by glucose," Biomedical Optical Spectroscopy and Diagnosis, Orlando, FL, pp. 168-172, March 9-11, 1998.
73. Cameron, B.D., Coté, G.L., Rakovic, M.J., Kattawar, G., Mehrubeoglu, M., Rastegar, S., and Wang, L.V., "Diffusely backscattered polarized light Mueller matrix Imaging of turbid media", Proceedings of the OSA Spring Topical Meetings, Orlando, Florida; March 8-11, 1998.
74. Coté, G.L., Gorde, H., Janda, J., and Cameron, B., "Multispectral polarimetric system for glucose monitoring", Proceedings of the SPIE International Biomedical Optics Conference, San Jose, CA.: Biomedical Sensing and Imaging Technologies V3253; January 24-30, 1998.
75. Jung, B., McShane, M., Coté, G.L., and Rastegar, S., "Effect of temperature in the near-infrared spectroscopic measurement of glucose", Proceedings of the SPIE International Biomedical Optics Conference, San Jose, CA.: Biomedical Sensing and Imaging Technologies V3253; January 24-30, 1998.
76. McShane, M.J., Coté, G.L., "Determination of cell culture medium components with overlapping NIR absorbance peaks and evaluation of wavelength selection for complex spectra", Proceedings of the SPIE International Biomedical Optics Conference, San Jose, CA.: Infrared Spectroscopy: New Tool in Medicine V3257; January 24-30, 1998.
77. Rastegar, S., and Coté, G.L., "An Interdisciplinary Combined Research-Curriculum in Biomedical Optics", ASEE Annual Conference, Milwaukee, WI, June 1997.
78. McShane, M.J., and Coté, G.L., "Variable Selection for Quantitative Determination of Glucose Concentration with Near Infrared Spectroscopy", Presented at SPIE International Biomedical Optics Conference, San Jose, CA.: SPIE V2982; pp 189-197: Feb. 8-14, 1997.
79. Cameron, B.D., and Coté, G.L., "Polarimetric Detection of Chiral Chemicals in Biological Fluids", Presented to the SPIE International Biomedical Optics Conference, San Jose, CA., SPIE V2982; pp 308-313: Feb. 8-14, 1997.
80. Cameron, B.D., and Coté, G.L., Polarimetric glucose sensing in aqueous humor utilizing digital closed-loop control, Proceedings of the 18th International Conference of the IEEE EMBS, 1996.
81. Motamedi, M., Erckens, R., Goetz, Jr., M.J., Wicksted, J.P., Coté, G.L., and March, W.F., "Raman Scattering for Real Time Monitoring of Metabolites", Invited paper presented at the SPIE International Biomedical Optics Conference, San Jose, CA.: Feb. 5-10, 1995.

82. Goetz, Jr., M.J., Coté, G.L., and Motamedi, M., "Detection of Glucose Using Raman Spectroscopy", Paper for presentation at the 16th International IEEE EMBS Conf., Baltimore, MD: Nov. 3-6, 1994. (Won first place, for this region, in the student paper competition)
83. Allain, K.M., and Coté, G.L., "Computer Classification of Stellate Carcinomas and Fibroadenomas Using Digitized Mammograms", 15th Ann. International Conf. IEEE-EMBS, San Diego, CA.: Oct. 28-31,1993.
84. McNichols, R.J., Coté, G.L., Goetz, M.J., and King, T.W., "Linear Superposition of Specific Rotation for the Detection of Glucose", 15th Ann. International Conf. IEEE-EMBS, San Diego, CA.: Proc. IEEE 5(3): pp. 1549-50, Oct. 28-31,1993.
85. King, T.W., and Coté, G.L., "Closed Loop Polarimetric Glucose Sensing Using the Pockels Effect", Presented at the 14th Annual International Conference of the IEEE EMBS, Paris, France: Oct. 29 -Nov. 1, 1992 (Won first place, for this region, in the student paper competition)
86. Zoghi, B., Coté, G.L., and Rastegar, S., " An optically based implantable sensor for intracranial pressure measurement", Presented at the SPIE International Biomedical Optics Conference, Los Angeles, CA.: Jan. 1992.
87. Coté, G.L., Fox, M.D. and Northrop R.B., "Laser Polarimetry for Glucose Monitoring", Invited to present at the 12th Ann IEEE EMBS Conf., Phil., PA: 1990.
88. Coté, G.L. and Fox, M.D.,"Differentiation of Mammographic Tumor Types Using The Binary Joint Transform Correlator", Presented, IEEE EMBS 11th Ann. Conf., Seattle, WA.: 1989.
89. Coté, G.L. and Fox, M.D.,"Volumetric Rendering for Visualization of Ultrasound Images", Presented, The 74th Ann. Meeting of the RSNA, Chicago, Ill: 1988.
90. Coté, G.L. and Fox, M.D., "Zero Crossing Counter vs FFT Spectrum of Ultrasound Doppler", Student paper competition supplement to the 9th Ann. Conf. of IEEE EMBS in Boston, MA; pp. 14-15: 1987. (Placed 3rd in the graduate student paper competition)

III. *Presentations and Conference Abstracts*

1. Cummins, B.M., Lim, J., Simanek, E.E., Pishko, M.V., and Coté, G.L., "Aggregation Profile dynamics for Concanavalin A/Glycosylated Dendrimer Glucose Sensing Chemistry", Poster at the Biomedical Engineering Society Annual Meeting, Hartford, CT, Oct. 12-15, 2011.
2. Abraham, A., Fei, R., Shelton, R., Applegate, B., Grunlan, M., and Coté, G.L., "Dimensional changes of a thermoresponsive biosensor membrane via optical tomography and microscopy", Poster at the Biomedical Engineering Society Annual Meeting, Hartford, CT, Oct. 12-15, 2011.
3. Akl, T.J., Xu, W., Ericson, M.N., Wilson, M., and Coté, G.L., "*Ex Vivo* Validation Studies of an Implantable Perfusion and Oxygenation Sensor ", Poster at the Biomedical Engineering Society Annual Meeting, Hartford, CT, Oct. 12-15, 2011.
4. Gashev, A.A., Thangaswamy, S., Nagai, T., Akl, T.J., Chatterjee, V., and Coté, G.L., "Aging and lymph flow: status, reserves, mechanisms", 23rd International Congress of Lymphology, Malmo, Sweden, Sept. 19-23, 2011.
5. Gashev, A.A., Coté, G.L., Bohlen, H.G., Nagai, T., and Akl, T.J., "Aging-Associated Alterations of Function of Mesenteric Lymphatic Vessels", The Gerontological Society of America's 64th Annual Scientific Meeting, Nov. 18-22, 2011.
6. Gashev, A.A., Nagai, T., Akl, T.J., Thangaswamy, S., Chatterjee, V., Coté, G.L., and Bridenbaugh, E.A., "Signs of aging-related inflammation and adaptive reserves of aged mesenteric lymphatic vessels", Experimental Biology, Washington, DC, April 9-13, 2011.
7. Gashev, A.A., Akl, T.J., Nagai, T., and Coté, G.L., "Contractility and flow in aged mesenteric lymphatic vessels", Experimental Biology, Washington, DC, April 9-13, 2011.

8. Malik, B.H. and Coté, G.L., "Characterization of corneal birefringence towards the development of a polarimetric glucose monitor", Biomedical Engineering Society Annual Meeting, Austin, TX, Oct. 6-10, 2010.
9. Benford, M., Reinemund, B., Hong, S., Good, T., Kameoka, J., and Coté, G.L., "Cardiac marker detection using a nanofluidics, a competitive immunoassay, and whole blood filtering", Biomedical Engineering Society Annual Meeting, Austin, TX, Oct. 6-10, 2010.
10. Reinemund, B., Benford, M., Hong, S., Kameoka, J., and Coté, G.L., "Preliminary design of a blood filtration device", Biomedical Engineering Society Annual Meeting, Austin, TX, Oct. 6-10, 2010.
11. Akl, T.J., Rahbar, E., Nepiyushchikh, Z.V., Moore Jr., J.M., Gashev, A.A., Zawieja, D.C., and Coté, G.L., "Imaging Tools to study the lymphatic system", Biomedical Engineering Society Annual Meeting, Austin, TX, Oct. 6-10, 2010.
12. Rahbar, E., Akl, T.J., Zawieja, D.C., Coté, G.L., and Moore Jr., J.M., "Lymph transport in rat mesenteric lymphatics experiencing edemagenic stress", Biomedical Engineering Society Annual Meeting, Austin, TX, Oct. 6-10, 2010.
13. King, T.J., Akl, T.J., Long, R., McShane, M.J., Ericson, M.N., Wilson, M., and Coté, G.L., "A Phantom That Mimics Optical and Flow Properties of Liver for Developing a Perfusion Sensor", Biomedical Engineering Society Annual Meeting, Austin, TX, Oct. 6-10, 2010.
14. Abraham, A.A., Fei, R., Cummins, B.M., Grunlan, M.A., and Coté, G.L. "Optimizing the design of a self-cleaning thermoresponsive hydrogel membrane for glucose sensing", Biomedical Engineering Society Annual Meeting, Austin, TX, Oct. 6-10, 2010.
15. Cummins, B.M., Pishko, M.V., Simanek, E.E., and Coté, G.L., "Encapsulation of a Con-A/Glycodendrimer Glucose Sensing Assay using Microporated PEG Spheres", Biomedical Engineering Society Annual Meeting, Austin, TX, Oct. 6-10, 2010.
16. Abraham, A.A., Gant, R.M., Fei, R., Hou, Y., Grunlan, M.A., and Coté, G.L. "Enhancement of an implantable self-cleaning thermoresponsive nanocomposite hydrogel for biosensors," presented at the Society for Biomaterials (SFB) Biomaterials Day at Texas A&M University Meeting, College Station, TX, United States, February 22, 2010 [poster].
17. Cummins, B.M., Beier, H.T., Pishko, M.V., and Coté, G.L., "Optimization of a glycodendrimer-based glucose sensing assay", Poster PS 8A-93, Biomedical Engineering Society Annual Meeting, Pittsburgh, PA, Oct. 7-10, 2009.
18. Abraham, A.A., Gant, R.M., Hou, Y., Grunlan, M.A., and Coté, G.L., "Optimization of an implantable self-cleaning thermoresponsive nanocomposite hydrogel sensor membrane", Poster PS 8A-138, Biomedical Engineering Society Annual Meeting, Pittsburgh, PA, Oct. 7-10, 2009.
19. Akl, T.J., Rahbar, E., Zawieja, D., Moore, J., Gashev, A., and Coté, G., "Measuring lymph flow in rat mesentery using a combination of PIV and PTV", Poster PS 8B-89, Biomedical Engineering Society Annual Meeting, Pittsburgh, PA, Oct. 7-10, 2009.
20. Gant (Rounds), R.M., Hou, Y., Grunlan, M.A., and Coté, G.L., "A self-cleaning thermoresponsive nanocomposite hydrogel sensor membrane for implantable biosensors", Biomedical Engineering Society Annual Meeting, St. Louis, MO, Oct. 2-4, 2008.
21. Malik, B.H., and Coté, G.L., "Noise Reduction in an Optical Polarimeter for Glucose Monitoring", Biomedical Engineering Society Annual Meeting, St. Louis, MO, Oct. 2-4, 2008.
22. Beier, H.T., Pang, S., Coté, G.L. and Meissner, K.E., "Biological sensing using whispering-gallery modes in quantum dot-embedded microspheres", Biomedical Engineering Society Annual Meeting, St. Louis, MO, Oct. 2-4, 2008.
23. Rahbar, E., Moore, J., Jr., Zawieja, D., Gashev, A., and Coté, G.L., "Developing Computational Flow Models For The Lymphatic Vasculature", 2008 Summer Bioengineering conference, Marco Island Florida, June 25-29, 2008.

24. Grunlan, M.A.; Hou, Y.; Rounds, R.; Coté; G.L. "Thermoresponsive composite hydrogels with cell-releasing properties," poster presentation at the Spring 2008 Material Research Society (MRS) Meeting, San Francisco, CA, United States, March 24-28 (2008).
25. Wang, M., Jing, N., Kameoka, J., Benford, M.E., Chou, I., Beier, H.T., and Coté, G.L., "Optofluidic device for Surface Enhanced Raman spectroscopy (SERS)", MicroTAS, San Diego, October 2008.
26. Beier, H.T., Cowan, C.B., Chou, I., Benford, M.E., Jackson, J.B., Good, T.A., and Coté, G.L., "Surface Enhanced Raman Spectroscopy Using Nanoshells for Detection of β-amyloid", Biomedical Engineering Society Annual Meeting, Los Angeles, CA, Sept. 26-29, 2007.
27. Gant (Rounds), R.M., Hou, Y., Grunlan, M.A., and Coté, G.L., "Development of a thermoresponsive nanocomposite hydrogel for minimizing biosensor host response", Biomedical Engineering Society Annual Meeting, Los Angeles, CA, Sept. 26-29, 2007.
28. Lee, S., Lessard, C., Coté, G.L., and Meissner, K., "Development of a virtual microscope and spectrophotometer for advanced placement biology classes", Biomedical Engineering Society Annual Meeting, Los Angeles, CA, Sept. 26-29, 2007.
29. Benford, M.E., Chou, I., Beier, H.T., Wang, M., Kameoka, J., Good, T.A., and Coté, G.L., "Use of Nanofluidic channel based biosensor for Surface Enhanced Raman spectroscopy (SERS)", Nano Summit 2007, Poster, "The Rising Stars of Texas", College Station, Texas, August 7-8, 2007.
30. Beier, H.T., Cowan, C.B., Good, T.A., and Coté, G.L., "A Surface Enhanced Raman Spectroscopy Platform Based on Nanoshells", Poster, Nano Summit 2007, "The Rising Stars of Texas", College Station, Texas, August 7-8, 2007.
31. Wang, M., Jing, N., Kameoka, J., Ta (Baldwin) A., and Coté, G.L., "Nanocondenser for Surface Enhanced Raman Spectroscopy", The 10th International Conference on Miniaturized Systems for Chemistry and Life Sciences (μTAS2006), Tokyo International Forum, Tokyo, Japan, Nov. 5-9, 2006.
32. Dixon, J. B., Cote, G. L., Gashev, A. A., Moore Jr., J. E., and Zawieja, D. C., "Estimating wall shear stress in contracting mesenteric microlymphatics", *5th World Congress of Biomechanics*, Munich, Germany, July 29th – August 4th, 2006
33. Ibey, B.L., Beier (Thomas), H.R., Rounds, R.M., Pishko, M.V., and Coté, G.L., "Glucose sensitive fluorescent quenching based assay", 5th Annual Diabetes Technology Meeting, San Francisco, CA, Nov. 10-12, 2005.
34. Chowdhury, M.H., Gant, V.A., Trache, A., Baldwin, A., Meininger, G.A., and Coté, G.L., "Detection Of Two Forms Of Human Integrin Using Surface Enhanced Raman Spectroscopy (SERS)", Biomedical Engineering Society Annual Fall Meeting, Baltimore, M.D., Sept. 28-Oct. 1, 2005.
35. Rounds, R.M., Ibey, B.L., Thomas, H.R., Pishko, M.V., and Coté, G.L., "Microporated PEG Spheres For Fluorescent Analyte Detection", Biomedical Engineering Society Annual Fall Meeting, Baltimore, M.D., Sept. 28-Oct. 1, 2005.
36. Thomas, H.R., Ibey, B.L., Rounds, R.M., Pishko, M.V., and Coté, G.L., "Development Of A Chemical Assay For Detection Of Glucose Concentration", Biomedical Engineering Society Annual Fall Meeting, Baltimore, M.D., Sept. 28-Oct. 1, 2005.
37. Dixon, J.B., Gashev, A.A., Greiner, S., Zawieja, D.C., Moore, J., and Coté, G.L., "Image Correlation Method For Measuring Flow In Contracting Mesenteric Microlymphatics", Biomedical Engineering Society Annual Fall Meeting, Baltimore, M.D., Sept. 28-Oct. 1, 2005.
38. Dixon, J.B., Cote, G.L., Gashev, A., Greiner, S., Moore, J., and Zawieja, D., "Measurement of flow in contracting mesenteric microlymphatic vessels in situ", Abstract # 756, ", XXXV International congress of physiological sciences, Abstract #4735, San Diego, CA: March 31-April 5, 2005
39. Dixon, J.B., Cote, G.L., Gashev, A., Greiner, S., Zawieja, D., and Moore, J.,, "Estimation of shear stress in contracting microlymphatic vessels", ASME Summer Bioengineering Conference, Vail Cascade Resort & Spa, Vail, Colorado, June 22-26, 2005.
40. Chowdhury, M.H., Gant, V.A., Trache, A., Baldwin, A., Henry, J., Campbell, C.J., Theofanidou, E., Lee, S.J., Sing, G., Crain, J., Ghazal, P., O'Neal, D.P., Jackson, J., Meininger, G., Good, T., and Coté,

G.L., The use of metal nanoparticles as Surface Enhanced Raman Spectroscopy (SERS) substrates for biosensing, poster presentation, Nano Summit Research Conference, Nanotechnology Foundation of Texas, July 28, 2005.

41. Ibey, B., Yadavalli, V., Thomas, H., Schengrund, C.L., Pishko, M., Coté, G.L., "Development of a implantable blood glucose monitor using a competitive binding fluorescent assay in poly(ethylene) glycol microspheres", Poster presentation at the 4th Annual Diabetes Technology Meeting, October 28-30, 2004.
42. Trache, A., Trzeciakowski, J.P., Gant, A., Coté, G.L., Sun, Z., Wilson, E., and Meininger, G.A., "Influence of cell stiffness on adhesion force between a5b1 integrin and fibronectin in intact cells using atomic force microscopy", 48th Annual Meeting of the Biophysical Society, Baltimore, MD, February 14-18, 2004.
43. Chowdhury, M., Anand, A., Henry, J., Moreira, R., Good, T., and Coté, G.L., "Implementation and optimization of a SERS based affinity binding assay for the detection of prions", BMES Annual Fall Meeting, Nashville, TN, October 1-4, 2003.
44. Ericson, M.N., Coté, G.L., Wilson, M.A., Britton, C.L., Johnson, C., Hileman, M.S., Xu, W., "A photonics-based implantable sensor for tissue perfusion monitoring", BMES Annual Fall Meeting, Nashville, TN, October 1-4, 2003.
45. Johnson, C., Britton, C.L., Ericson, M.N., Coté, G.L., and Wilson, M.A., "Capacitive communications for implanted sensor systems", BMES Annual Fall Meeting, Nashville, TN, October 1-4, 2003.
46. Hudson, K.K., Baba, J.S., Coté, G.L., and Criscione, J.C., "Development of histology methods to quantify heart microstructure", BMES Annual Fall Meeting, Nashville, TN, October 1-4, 2003.
47. Coté, G.L., "Biomedical Imaging and Sensing Laboratories & Technologies at Texas A&M University", UK-Texas Partnering Biosciences Workshop, Hinxton, England, July 14-15, 2003.
48. Coté, G.L. and Pishko, M.V., "Progress toward an implantable fluorescence glucose sensor", Pittsburgh Conference, Orlando, FL, March 10-13, 2003.
49. Coté, G.L., and Pishko, M.P., "Subcutaneous fluorescence glucose sensing using a competitive binding assay", 224th National ACS Meeting, Boston, MA, August 18th, 2002.
50. Coté, G.L., "Perspectives on optical sensing technologies for active disease management", Invited talk and panel at the NIH BECON Meeting on Sensors for Biological Research and Medicine, Active Disease Management Session, June 24-25, 2002.
51. Baba, J.S., Hill, A., Chung, J-R., and Coté, G.L., "A method for reducing laser noise in sensitive polarimetric systems", Presentation at the 19th Annual Houston Conference on Biomedical Engineering Research, University of Houston, Houston TX: February 8-9, 2001.
52. Meledeo, A., O'Neal, D.P., Davis, J., Pishko, M., and Coté, G.L., "Development of a fluorescence-based polymer sensing system for glucose monitoring", Presentation at the 19th Annual Houston Conference on Biomedical Engineering Research, University of Houston, Houston TX: February 8-9, 2001.
53. Chung, J-R., Baba, J.S., Hill, A., Cameron, B.D., and Coté, G.L., "Development of an automated Mueller matrix polarization system for skin cancer detection", Presentation at the 19th Annual Houston Conference on Biomedical Engineering Research, University of Houston, Houston TX: February 8-9, 2001.
54. Jung, B., and Coté, G.L., "A solid-block FT-NIR spectrometer for noninvasive monitoring of glucose in cell culture media", Presentation at the 19th Annual Houston Conference on Biomedical Engineering Research, University of Houston, Houston TX: February 8-9, 2001
55. Baba, J., Cameron, B.D., and Coté, G.L., "Optical Rotatory Dispersion Determination for Aqueous Humor Analytes", Abstract #6033, World Congress on Medical Physics and Biomedical Engineering, Chicago, IL, July 23-28, 2000.
56. O'Neal, D.P., Russell, R., Rastegar, S., Pishko, M., and Coté, G.L., "Analysis of Fluorescence Light Propagation Through Skin for Biosensing", Abstract #5444, World Congress on Medical Physics and Biomedical Engineering, Chicago, IL, July 23-28, 2000.

57. Coté, G.L., Russell, R., O'Neal, D.P., and Pishko, M.V., "Glucose sensing using dermally implantable fluorescent polymer spheres", Noninvasive Blood Analytes, for Advanced Technology Applications to Combat Casualty Care (ATACCC 2000) Meeting, Jointly sponsored by the US Army and Navy Combat Casualty Care Research Programs, Ft. Walton Beach, FL and Eglin AFB: September 25-29, 2000. (Invited)
58. Coté, G.L., "Optical Approaches toward glucose measurement", Innovative Non- or Minimally Invasive Technologies for Health Monitoring and Nutritional Status in Mothers and Young Children, sponsored by the USDA Childrens Nutrition Research Center, Baylor College of Medicine, Houston, TX: August 7^{th}-8^{th}, 2000. (Invited)
59. Russell, R.J., Pishko, M.V., McShane, M.J., Coté, G.L., and Rastegar, S., "Monte Carlo simulations of photon propagation in poly(ethylene glycol) hydrogel-based fluorescent biosensors", American Chemical Society Spring National Meeting, San Francisco, CA, March 26-30, 2000.
60. Russell, R.J., Pishko, M.V., McShane, M.J., Coté, G.L., and Rastegar, S., "Monte Carlo simulations of photon propagation in poly(ethylene glycol) hydrogel-based fluorescent biosensors", American Chemical Society Spring National Meeting, San Francisco, CA, March 26-30, 2000.
61. Spiegelman, C.H., Rock, J.C., Rumgyart, F., Bennett, J., Lee, S.-J., Vannucci, M., McShane, M., and Coté, G.L., "Issues in Spectrographic Calibration", Invited Paper presented at the National Consortium for Plutonium, Amarillo, TX, 1999.
62. Spiegelman, C.H., Rock, J.C., Rumgyart, F., Bennett, J., Lee, S.-J., Vannucci, M., McShane, M., and Coté, G.L., "Issues in Spectrographic Calibration", Invited Paper presented to Los Alamos Nat. Labs, Div. TA1, Los Alamos, NM, 1999.
63. Spiegelman, C.H., Bennett, J.F., Vannucci, M., McShane, M.J., and Coté, G.L., "The Parallel Calibration Method," Special Invited Paper presented at the International Envirometrics Meeting, Athens, Greece, 1999.
64. Coté, G.L., "Overview of noninvasive optical measurements with a focus on glucose sensing applications", Biomedical Engineering Society Annual Meeting, Cleveland Ohio, Oct. 10-13, 1998.
65. Cameron, B.D., Gorde, H., and Coté, G.L., "Development of a multi-spectral polarimeter for glucose sensing using a digital closed-loop approach", Biomedical Engineering Society Annual Meeting, Cleveland Ohio, Oct. 10-13, 1998.
66. McShane, M.J., Coté, G.L. and Spiegelman, C.H., "Variable selection with PLS calibration: Comparison of techniques," Invited Paper presented at the International Diffuse Reflectance Conference, Wilson College, Chambersburg, PA, August 8-14, 1998.
67. Spiegelman, C.H., McShane, M.J., Cameron, B.D, and Coté, G.L., "Preprocessing Calibration Data: Mean Centering, Scaling, Background Correcting, and Variable Selection in Spectroscopic Calibrations," Invited Paper presented at the Federation of Analytical Chemistry and Spectroscopy Societies Conference, Austin, TX, 1998.
68. Spiegelman, C.H., McShane, M.J. and Coté, G.L., "Variable selection with PLS calibration: Comparison of techniques," Invited Paper presented at the American Statistical Society Conference, Dallas, TX, 1998.
69. O'Neal, P., Motamedi, M., Lin, W.C., Chen, J., and Coté, G.L., "Surface Enhanced Raman Spectroscopy for the Detection Amino Acids Following Head Injury", Presentation at the 16th Annual Houston Conference on Biomedical Engineering Research, University of Houston, Houston TX: April 2-3, 1998.
70. Cooney, K.M., Coté, G.L., Motamedi, M., and van der Breggen, E., "Investigation of Infrared Fourier-Transform Spectroscopy for Oral Cancer Detection", Presentation at the 16th Annual Houston Conference on Biomedical Engineering Research, University of Houston, Houston TX: April 2-3, 1998.
71. Mehrubeoglu, M., Kehtarnavaz, N., A.J., Coté, G.L., Rastegar, S., Wang, L., "Detecting Changes in Optical Properties of Turbid Media with Different Glucose Concentrations, Using Diffuse Reflectance Polarimetry", Presentation at the 16th Annual Houston Conference on Biomedical Engineering Research, University of Houston, Houston TX: April 2-3, 1998.

72. Jung, B., McShane, M.J., Rastegar, S., and Coté, G.L., “Temperature Effect on PLS Calibration Models for NIR Spectroscopic Glucose Measurement”, Presentation at the 16th Annual Houston Conference on Biomedical Engineering Research, University of Houston, Houston TX: April 2-3, 1998.
73. McNichols, R.J., Coté, G.L., Wright, S.M., Wasser, J.S., Bankson, J.A., and Gefrides, C.C., "Development of a Probe for Simultaneous Collection of ^{31}P NMR and INDO-1 Optical Fluorescence Spectra for *in vivo* Investigations", Presented at the Annual International Society of Magnetic Resononance in Medicine (ISMRM) Conference, Vancouver, April 1997.
74. McShane, M.J. and Coté, G.L., "Near-infrared chemical sensing in cell culture media," Invited Paper presented at the Federation of Analytical Chemistry and Spectroscopy Societies Conference, Providence, RI, 1997.
75. Coté, G.L., “An Overview of Optical and Multimodal Sensing”, Presentation at the 15th Annual Houston Conference on Biomedical Engineering Research, U. of Houston, Houston TX: Feb. 13-14, 1997.
76. Mehrubeoglu, M., Wyly, K.M., Hebert, A.J., Kehtarnavaz, N., Coté, G.L., Rastegar, S., Wang, L., “Polarized Reflectometry of Turbid Media”, Presentation at the 15th Annual Houston Conference on Biomedical Engineering Research, University of Houston, Houston TX: Feb. 13-14, 1997.
77. McShane, M.J., and Coté, G.L., “Noninvasive Measurement of Cell Culture Medium Components”, Presentation at the 15th Annual Houston Conference on Biomedical Engineering Research, U. of Houston, Houston TX: Feb. 13-14, 1997.
78. McNichols, R.J., Bankson, J.A., Gefrides, C.C., Coté, G.L., Wright, S.M., and Wasser, J.S., “Simultaneous Collection of Optical and NMR Spectra”, Presentation at the 15th Annual Houston Conference on Biomedical Engineering Research, U. of Houston, Houston TX: Feb. 13-14, 1997.
79. Robinson, S.H., Coté, G.L., McShane, M.J., and Spiegelman, C.L., “Wavelength Selection For Optimal Determination of Glucose Concentration in Biological Media”, Presentation at the 15th Annual Houston Conference on Biomedical Engineering Research, U. of Houston, Houston TX: Feb. 13-14, 1997.
80. Michael M. and Coté, G.L., " Noninvasive Glucose Sensing Using a Multispectral Polarimetric Approach", Poster presentation at the 13th Annual Houston Conference on Biomedical Engineering Research, University of Houston, Houston TX: Feb. 16-17, 1995.
81. Coté, G.L., Van Hyfte, J., and Beatty, S., "Optical Model for Analyte Sensing Through the Eye", Poster presentation at the Annual Fall Meeting of the Biomedical Engineering Society, ASU, Tempe, Arizona: Oct. 14-16, 1994.
82. King, T.W., and Coté, G.L., "Optical Polarimetric Glucose Sensing Using the Pockels Effect", Presented at the Annual Fall Meeting of the Biomedical Engineering Society, Salt Lake City, Utah: Oct. 16-18, 1992 (Won first place overall in the student paper competition)
83. Goetz, M., King, T.W., and Coté, G.L., " Multispectral Polarimetric Approach to Noninvasive Glucose Sensing", Presented at the Eleventh Annual Houston Conference on Biomedical Engineering Research, University of Houston, Houston TX: Feb. 11-12, 1993.
84. Galvan, M., Coté, G.L., and Motamedi, M., " Glucose Sensing Using the Evanescent Field", Presented at the Eleventh Annual Houston Conference on Biomedical Engineering Research, University of Houston, Houston TX: Feb. 11-12, 1993.
85. Durai, R., and Coté, G.L., " Near Infrared Glucose Sensing Using Titanium Sapphire Laser", Presented at the Eleventh Annual Houston Conference on Biomedical Engineering Research, University of Houston, Houston TX: Feb. 11-12, 1993.
86. Zoghi, B., Coté, G.L., and Rastegar, S., " Development of an ICP implantable sensor using an optics approach", Presented at the 8th Optical Fiber Sensors Conference, Monterey, CA.: Jan. 29-31, 1992.
87. Coté, G.L., "Optical Polarimetric Approach to Noninvasive Glucose Sensing", Presented at the Tenth Annual Conference on Biomedical Engineering Research in Houston, University of Houston, Houston TX: March 19-20, 1992.

88. Coté, G.L., Fox, M.D., and Northrop, R.B., "Glucose Sensor Development Using an Optics Approach", Presented at the 16th Ann. Northeast Bio. Conf, IEEE EMBS, Penn State Univ, University Park, PA: 1990.
89. Coté, G.L. and Fox, M.D., "Three-Dimensional Visualization of Ultrasound Images", Poster session, The Fifth Ann. Meeting of the WFUMB: 1988.
90. Coté, G.L. and Fox, M.D., "Processing of Doppler Ultrasound Spectral Images", Presented at Electronic Imaging '87, International Electronic Imaging Exposition and Conf., Boston, MA., V1; pp. 512-17: 1987.
91. Coté, G.L. and Fox, M.D., "Digital Analysis of Doppler Velocity Waveforms", Presented at The 13th Northeast Ann IEEE Conf., Phil., PA; V1; pp 120-122: 1987

POPULAR PRESS

1. BioOptics World, Inside Instrumentation: The many approaches and applications of biosensing, Mike May, May 1, 2011, http://www.optoiq.com/index/biophotonics/display/bow-article-display/6895259534/articles/biooptics-world/volume-4/issue-3/features/inside-instrumentation-the-many-approaches-and-applications-of-biosensing.html
2. Readers Digest, Glucose Monitoring 24/7, March 2008.
3. Checking transplant health, sensors on-line, http://www.sensorsmag.com/articles/0104/10/, January 2004.
4. MACHINEDESIGN.COM, "Lifesaving sensors – perfusion monitoring", April 22, 2003 http://www.machinedesign.com/ASP/viewSelectedArticle.asp?strArticleId=55632&strSite=MDSite&Screen=CURRENTISSUE
5. MENS HEALTH, Edited by Brian Good, April 2003. http://www.menshealth.com/health2/index.shtml
6. BBC News World Edition, "Tattoo to monitor Diabetes", http://news.bbc.co.uk/2/hi/health/2225404.stm Sunday, 1 September, 2002, 23:02 GMT 00:02 UK
7. Fox News, November 10, 2002.
8. News 14, Carolina: Headline News article 5/18/04 http://rdu.news14.com/content/headlines/?ArID=47541&SecID=2

EDITOR POSITIONS

Associate Editor – Spectroscopy: Appointed June 2001 to present
Associate Editor - IEEE Sensors Journal: Appointed August 2000 to August 2003
Guest Editor – Special issue on Tissue Polarimetry, Journal of Biomedical Optics, Society of Photo-Optical Instrumentation Engineers, 2001-2002.
Guest Editor – Special issue on Biosensors, IEEE Sensors Journal, V3, N2, June 2003.

TRACK & SESSION CHAIR POSITIONS AT SCIENTIFIC MEETINGS

1. Track Chair – Optical Diagnostics and Sensing XII: Toward Point-of-Care Diagnostics, which included multiple sessions for the SPIE International Symposium on Biomedical Optics, BiOS 2010, San Francisco, CA, Jan, 2012
2. Track Chair – Optical Diagnostics and Sensing XI: Toward Point-of-Care Diagnostics, which included multiple sessions for the SPIE International Symposium on Biomedical Optics, BiOS 2012, San Francisco, CA, Jan, 2011
3. Track Chair – Optical Diagnostics and Sensing X: Toward Point-of-Care Diagnostics, which included multiple sessions for the SPIE International Symposium on Biomedical Optics, BiOS 2011, San Francisco, CA, Jan, 2010

4. Track Chair – Optical Diagnostics and Sensing IX, which included multiple sessions for the SPIE International Symposium on Biomedical Optics, BiOS 2009, San Jose, CA, Jan, 2009
5. Track Chair – Optical Diagnostics and Sensing VIII, which included multiple sessions for the SPIE International Symposium on Biomedical Optics, BiOS 2008, San Jose, CA, Jan, 2008
6. Track Chair – Optical Diagnostics and Sensing VII, which included multiple sessions for the SPIE International Symposium on Biomedical Optics, BiOS 2007, San Jose, CA, Jan., 2007
7. Track Chair – Optical Diagnostics and Sensing VI, which included multiple sessions for the SPIE International Symposium on Biomedical Optics, BiOS 2006, San Jose, CA, Jan., 2006
8. Track Chair – Optical Diagnostics and Sensing V, which included multiple sessions for the SPIE International Symposium on Biomedical Optics, BiOS 2005, San Jose, CA, Jan., 2005
9. Workshop Chair: Texas-United Kingdom Workshop on Biomedical Sensing and Imaging to the Nano-scale, Held at Texas A&M University, College Station, TX October 25th-26th, 2004. This collaborative workshop included 25 presentations from UK faculty ranging from Oxford, Cambridge, Edinburg, New Castle, Imperial College, and several others as well as faculty from 10 Texas Universities including Texas A&M, U. Texas, Rice, and Baylor, among others.
10. Track Chair – Optical Diagnostics and Sensing IV, which included five sessions with 29 presentations (Track 5325) for the SPIE International Symposium on Biomedical Optics, BiOS 2004, San Jose, CA, Jan. 24-29, 2004
11. Track Co-Chair – Bioinstrumentation and Biosensors for the BMES Annual Fall Meeting, Nashville, TN, October 1-4, 2003, which included six sessions and roughly 30 papers.
12. Track Chair – Optical Diagnostics and Sensing III, which included seven sessions with 32 presentations (Track 4965) for the SPIE International Symposium on Biomedical Optics, BiOS 2003, January 28-29, 2003.
13. Program Chair - ASEE-Biomedical Engineering Division for the June 2002 meeting in Montreal, Canada. Included organizing 5 technical sessions, 3 professional sections, and the Whitaker funded travel grant for 10 young faculty.
14. Track Chair – Optical Diagnostics and Sensing of Biological Fluids and Cholesterol Monitoring II, which included five sessions with 24 presentations (Track 4624) for the SPIE International Symposium on Biomedical Optics, BiOS 2002, January 24, 2002.
15. Track Chair – Optical Diagnostics and Sensing of Biological Fluids and Cholesterol Monitoring, which included five sessions with 32 presentations (Track 4263) for the SPIE International Symposium on Biomedical Optics, BiOS 2001, January 22-23, 2001.
16. Track Chair –Bioinstrumentation and Biosensors, which included organizing 26 separate oral and poster sessions within the track with over 125 papers for the World Congress on Medical Physics and Biomedical Engineering, Track 22. Chicago, IL: July 23-28, 2000.
17. Session Chair – Optical Sensors, 25th Annual International Conference of the IEEE EMBS, Cancun, Mexico, 17-21 September 2003.
18. Session Chair – Optical Sensing and Monitoring of Glucose I (4624-01) for the SPIE International Symposium on Biomedical Optics, BiOS 2002, January 24, 2002.
19. Session Chair – Optical Sensing and Monitoring of Glucose II (4624-02) for the SPIE International Symposium on Biomedical Optics, BiOS 2002, January 24, 2002.
20. Session Chair – Optical Sensing and Monitoring of Glucose In vitro and In vivo (4263-01) for the SPIE International Symposium on Biomedical Optics, BiOS 2001, January 22, 2001.
21. Session Chair – Noninvasive Blood Analytes, for Advanced Technology Applications to Combat Casualty Care (ATACCC 2000) Meeting, Jointly sponsored by the US Army and Navy Combat Casualty Care Research Programs, Ft. Walton Beach, FL and Eglin AFB: September 25-29, 2000.
22. Session Chair –Biochemical and Optical Sensors and Biosensors (22.02), for the World Congress on Medical Physics and Biomedical Engineering, Chicago, IL: July 23-28, 2000.

23. Session Chair – Lasers and Optics I for the 17th Annual Houston Conference on Biomedical Engineering Research, Houston, TX: February 11-12, 1999.
24. Session Chair - Sensors (4.2.1) for the IEEE - Engineering in Medicine and Biology Society 20th Annual International Conference, Hong Kong, China: Oct. 29 – Nov. 1, 1998.
25. Session Chair – Chemical and Optical Devices for Medical Diagnostics for the Biomedical Engineering Society 1998 Annual Meeting, Cleveland, Ohio: October 10-13, 1998.
26. Session Chair – Textbooks for Biomedical Engineering Curricula for the ASEE Annual Conference in Seattle, WA: June 28-July 1, 1998.
27. Session Chair - Optical Sensing Session for the IEEE - Engineering in Medicine and Biology Society 15th Annual International Conference, San Diego, CA.: Oct. 28 - 31, 1993.
28. Session Chair - Biomedical Sensing Session for the Eleventh Annual Houston Conference on Biomedical Engineering Research, University of Houston, Houston TX: Feb. 11-12, 1993.
29. Session Chair - Panel Discussion - The Use of Optical Fibers in Medicine for the 39th Annual Conference of the American Society for Artificial & Internal Organs, New Orleans, LA.: April 29- May 1, 1993.

PROFESSIONAL SOCIETIES / COMMITTEE ACTIVITIES

I. National & International

1. Biomedical Engineering Society (BMES) Board of Directors Member, 2010-2012.
2. American Institute for Biological and Medical Engineering (AIMBE) Academic Council, Member, 2005-Present
3. Biomedical Engineering Council of Chairs, Member, 2005-present
4. Biomedical Engineering Council of Chairs, Secretary, February 2008- February 2009
5. IEEE-Sensors Council- ADCOM: 1999-2003
6. ASEE-Biomedical Engineering Division—Past Chair and Chair of the nominating committee: 2004.
7. ASEE-Biomedical Engineering Division—Chair: 2003.
8. ASEE-Biomedical Engineering Division—Program Chair: 2002.
9. ASEE-Biomedical Engineering Division – Vice-Chair, Career Development and Awards: 1998-1999.
10. IEEE-Engineering in Medicine and Biology Society (EMBS) – VP Member & Student Activities EXCOM, Elected Office: 01/98 – 12/99
11. IEEE-Engineering in Medicine and Biology Society (EMBS) – Chair Member & Chapter Activities Committee, Appointed Office: 12/97 – 12/99
12. IEEE-Engineering in Medicine and Biology Society (EMBS) - Region 5 Representative to ADCOM Elected Office: 09/95 – 12/97
13. IEEE-Engineering in Medicine and Biology Society (EMBS) - Chair of the Student Activities Committee, Chairman of the Student Paper Competition: Appointed International Office: 01/97 12/97
14. IEEE-Engineering in Medicine and Biology Society (EMBS) – Vice-Chair of the Student Activities Committee, Chair of the Student Paper Competition: Appointed Office: 01/93 - 12/96
15. Biomedical Engineering Society (BMES) - Chairman of the Student Affairs Committee: Appointed National Office: 10/93 - 12/95
16. IEEE-Engineering in Medicine and Biology Society (EMBS) - Member of the 16th International Conference Program Committee: Appointed as the Student Paper Competition coordinator: June 24-26, 1994

Memberships

IEEE Fellow: 2012-Present (Member:1983, Senior Member: 1998-2011)
Member: IEEE - EMBS - Engineering in Medicine and Biology Society
Member: IEEE - LEOS - Lasers and Electro-Optics Society
SPIE Fellow- The Biomedical Optics Group: Member: 1993-Present
BMES Fellow: 2011 - Present
AIMBE Fellow: 2003 - Present
OSA: Member: 1998-2000
ASEE: Member: 1997-Present

II. Local University Activities

1. Texas Institute for Preclinical Studies Building, Imaging committee – 2006-present
2. Department of Biomedical Engineering Department Head – 2005-present
3. College of Medicine Leadership in Medicine Program: Faculty Advisor: 1992-present
4. Life Sciences Building Committee – COE Representative – 2005-2006
5. Department of Biomedical Engineering: Graduate Advisor – 1997 to 2005
6. Department of Biomedical Engineering: Member, Faculty Search Committee – 2002 to 2005
7. Department of Biomedical Engineering: Member, Department P&T – 2003 to 2005
8. Department of Biomedical Engineering: Member, EFAC Representative – 2003 to 2004
9. Engineering Scholars Program: Faculty Advisor for the Bioengineering Program:1992-93, 1996-2005
10. Society of Biomedical Engineering at Texas A&M: Faculty Advisor: 1992-1995, 1996-May 2001
11. College of Engineering Representative for the Texas A&M Institutional Review Committee (IRB) - Human Subjects in Research: 1993-1995
12. College of Engineering TEAMS project: Faculty Advisor for the Bioengineering Program: 1992-1993
13. Department Awards Committee: Member: Spring 1994.

COURSES TAUGHT AT TEXAS A&M UNIVERSITY (1991-2012) AND SHORT COURSES

Graduate Level

Optical Diagnostics & Monitoring Principles (Developed Course)
Biomedical Optics Laboratory (Co-developed Course)
Instrumentation & Measurement in Biological Systems
Biomedical Imaging Systems (Developed Course)
Experimentation
Graduate Seminars
Special Problems - Individual Student Development
Case Studies in BME (Developed course)

Undergraduate Level

Optical Diagnostic Monitoring Principles (Developed Course)
Biomedical Optics Laboratory (Co-developed Course)
Principles & Analysis of Biological Control Systems (Re-vamped entire Course)
Theoretical Analysis (Num Methods)
Biomedical Optics Design
Intro. to Biomedical Optics
Bioinstrumentation
Biosignal Processing
Clinical Engineering
Case Studies in Biomedical Engineering (Developed the course)

Short Courses Taught

Coté, G.L., Optical Diagnostics and Sensing, Short Course taught at the OSA CLEO meeting Long Beach, CA, May 2002.

Coté, G.L., Optical Diagnostics and Sensing, Short Course taught at the OSA CLEO meeting Baltimore, MD, June 2003.

Coté, G.L., Spectroscopic sensing, monitoring and diagnostics with an emphasis on glucose, Short Course taught at the U. of Rochester, June 2003.

Coté, G.L., Spectroscopic sensing, monitoring and diagnostics with an emphasis on glucose, Short Course taught at the U. of Rochester, June 2004.

GRADUATE STUDENT ADVISEES (1993-PRESENT)

A. Doctorate (16 graduated)

1. Ph.D., Behbood Zoghi, A novel optically-based approach to intracranial pressure measurement, December 1993. (Co-chair), (Zoghi@entc.tamu.edu), Professor in Engineering Technology at Texas A&M
2. Ph.D., Roger McNichols, Design and testing of a probe for simultaneous collection of optical fluorescence and 31P nuclear magnetic resonance spectra in vivo, December 1998. (roger@mail.biotexmedical.com), Vice-President and Chief Scientist for BioTex Medical
3. Ph.D., Michael McShane, Design of an optical probe and signal processing for an implantable fluorescence-based glucose sensor, August 1999. Associate Professor, in BME at Texas A&M.
4. Ph.D., Marcel Goetz, Jr., Quantitative Raman spectroscopy, December 1999. Medical Device Industry (originally with Sunshine Medical then Amira Medical).
5. Ph.D., Brent Cameron, The application of polarized light to biomedical diagnostics and monitoring, May 2000. (bcameron@eng.utoledo.edu) Associate Professor of BME at University of Toledo.
6. Ph.D., Byungjo Jung, "Optical noninvasive on-line monitoring and controlling system based on NIR absorption spectroscopy for glucose measurement of cell culture media in rotary cell culture system", December 2001. (bjung@dragon.yonsei.ac.kr), Assistant Professor of BME at Yonsei University
7. Ph.D., Dennis P. O'Neal, "The application of fluorescence spectroscopy for biosensing applications", December 2001. (dponeal@latech.edu), Assistant Professor, BME at Louisiana Tech University
8. Ph.D., Jung Rae Chung, "A novel automated Mueller matrix polarization imaging system for skin cancer detection", May 2003. Postdoctoral researcher at Beckman Labs with Dr. Nelson in southern California.
9. Ph.D., Justin Baba, "The use of polarized light for Biomedical Applications", August 2003. (babajs@ornl.gov), Engineer at Oak Ridge National Lab.
10. Ph.D., Mustafa Chowdhury, "The use of Surface Enhanced Raman Spectroscopy (SERS) for biomedical applications", December 2005. Postdoctoral researcher at UMBC with Dr. Lackowitz.
11. Ph.D., J. Brandon Dixon, "A biomedical engineering approach to investigating flow and wall shear stress in contracting lymphatics", May 2006. Postdoctoral researcher with Dr. Swartz at the Ecoles Polytechniques fédérale De Lausanne (EPFL) in Switzerland.
12. Ph.D., Seung Joon Lee, "Dissolved oxygen and pH monitoring within cell culture media using a hydrogel microarray sensor", December 2006. Postdoctoral researcher within BME at Texas A&M University. Postdoctoral Research Associate at Oak Ridge National Laboratory.
13. Ph.D., Bennett Ibey, "Enhancement of a fluorescent sensor for monitoring glucose concentration in diabetic patients", December 2006. (BennettIbey@gmail.com), Engineer/Scientist AFRL-HEDR in San Antonio, TX.
14. Ph.D., Rebecca Rounds, "Development of a 'self-cleaning' encapsulation technology for implantable glucose monitoring", December 2009. (beckygant@gmail.com)

15. Ph.D., Hope Thomas Beier, "Whispering-gallery modes in quantum dot embedded microspheres for sensing applications", December 2009. (hopebeier@gmail.com) Engineer AFRL in San Antonio, TX.
16. Bilal Malik, Dual wavelength polarimetry for glucose sensing in the anterior chamber of the eye, December 2011. Post-doc with Dr. Kristen Maitland, Texas A&M, College Station, TX
17. Melodie Benford, Expected completion in August 2012.
18. Tony Akl, Expected May 2013
19. Brian Cummins, Expected May 2013
20. Alex Abraham, Expected May 2013
21. Casey Pirnstill, Expected May 2015
22. Brian Walton, Expected May 2015
23. Daniel Grundan, Expected May 2016
24. Javier Garza
25. Haley Marks

B. Masters (25 graduated)

1. M.S., Timothy King, In vitro development of a noninvasive optically-based glucose sensor using a polarimetric approach, August 1993.
2. M.S., Mark Galvan, Near infrared spectroscopy for the measurement of glucose in an integrated rotating wall vessel, August 1994.
3. M.S., Richard Durai, Development of a non-linear closed-loop control system for intracranial pressure regulation, May 1995.
4. M.S., Mehrube Mehrubeoglu, Measurement of moisture and total reducing sugars in potatoes using near infrared spectroscopy, August 1995.
5. M.S., Mathew Michael, Multi-spectral glucose sensing using a polarimetric differencing technique, December 1995.
6. M.S., Brent Cameron, Polarimetric glucose sensing utilizing a digital closed loop control system, August 1996.
7. M.S., Stewart Robinson, Wavelength selection for optimal determination of glucose concentration in biological media, December 1996.
8. M.S., John VanHyfte, T2-weighted magnetic resonance imaging used to detect coagulative necrosis in tissue, August 1997.
9. M.S., Byungjo Jung, Effects of temperature on near-infrared spectroscopic measurement of glucose, May 1998.
10. M.S., Kevin Cooney, Investigation of infrared Fourier-transform spectroscopy for oral cancer detection, August 1998.
11. M.S., Jean Merchant, Optical low coherence reflectometry for the measurement of collagen thickness, August 1998.
12. M.S., Harshal Gorde, Multispectral polarimetric sensor for glucose monitoring utilizing a digital closed-loop control system, December 1998.
13. M.S., Dennis P. O'Neal, The application of surface-enhanced Raman spectroscopy for the detection of excitatory amino acids, May 1999.
14. M.S., Christopher Lewis, Investigation of near-infrared spectroscopy for periodic in situ cell culture media determination of glucose and lactate, December 1999.
15. M.S., Bhavana Satheesan, Development of an automated optical system for corneal birefringence characterization, August 2000.

16. M.S., Sangeeta Theru, Modeling of the corneal layer of the rabbit's eye using Mueller matrix analysis, August 2002
17. M.S., Meledeo, M. Adam, Fluorescence based optical glucose sensing, August 2002
18. M.S., Hill (Delaughter), Aimee, The use of polarized light for skin cancer detection, August 2002
19. M.S., Julian, Andrea, Use of bioinformatics to investigate and analyze transposable element insertions in the genomes of Caenorhabditis elegans and Drosophila melanogaster and into the target plasmid pGDV1, December 2003
20. M.S., Baldwin, Angela, Mueller matrix imaging for skin cancer detection, May 2004.
21. M.S., Subramanian, Hariharan, Real time perfusion monitoring using an implantable optical sensor, December 2004.
22. M.S., Qiujie Wan, Dual wavelength polarimetry for monitoring glucose in the presence of varying birefringence, December 2004.
23. M.S., Alex Gant, Detection of Integrins Using Surface Enhanced Raman Spectroscopy and Related Applications, August 2005.
24. M.S., I-Hsien Chou, Nanofluidic biosensing for β-Amyloid detection using surface enhanced Raman spectroscopy, December 2007.
25. M.S., Travis King, Optical perfusion and oxygenation characterization in a liver phantom, December 2011
26. M.S., Andrea Locke, Expected May 2013

UG Students that continued their education beyond the B.S. (from over 30 that have worked in my lab)

1. David Orlando Paex Melo (B.S. in Chemical Engineering from Universidad de los Andes Uniandes, Bogata, Columbia, South America), Graduate School, Ph.D., Texas A&M (Hispanic)
2. Scott Blasczyk (2011) – Graduate School, Ph.D., Texas A&M
3. Javier Garza (2010) – Graduate School, Ph.D., Texas A&M (Hispanic)
4. Sarah Jeffords (2007, 2006) – Graduate School, in the Ph.D. Texas A&M (Female – USRG Poster Award Winner 2007)
5. Melodie Benford (2005, 2004) – Graduate School, in the Ph.D. Texas A&M (African American Female)
6. Alexis Crawley (2006) – Medical School, Houston Medical Center (Female)
7. Josh McKay(2005) – Medical School, Houston Medical Center
8. Hope (Thomas) Beier (2004) – Graduate School, in the Ph.D. at Texas A&M (Female - USRG Award for Best Poster)
9. Califf Cooper (2002) – Law School, Passed the Texas State Bar
10. James Brandon Dixon (2001) – Graduate School, Completed the Ph.D. at Texas A&M
11. Bennett Ibey (2001) – Graduate School, Completed the Ph.D. at Texas A&M
12. Justin Davis (2000) - Medical School at the Houston Medical Center
13. Adam Meledeo (1999) – Graduate School, Completed M.S. at Texas A&M, Enrolled in Ph.D. at Johns Hopkins University
14. Christopher Lewis (1998) – Graduate School, Completed M.S. at Texas A&M
15. Kirk Gossage (1997) – Graduate School, Completed M.S. at UT Austin, Completed Ph.D. at U. Arizona
16. Joseph Janda (1997)– Graduate School, Stony Brook University
17. John Van Hyfte (1994) – Graduate School, Completed M.S. at Texas A&M (Hispanic)
18. Mark Galvan (1992) – Graduate Student, Completed the M.S. at Texas A&M (Hispanic)

PROFESSIONAL DEVELOPMENT AND TEACHING ENHANCEMENTS

1. QPR - Suicide Prevention Gatekeeper training at Texas A&M Student Counseling Service, November 30th, 2006.

2. Diversity Retreat at Texas A&M University – Lead by Dr. Joe Feagan, Ella McFadden Chair and Professor of Sociology, May 15th, 2006.
3. Good Laboratory Practice Workshop (21 CFR, Part 58), Two day workshop at Texas A&M offered by Debra Bridges from the Texas A&M College of Veterinary Medicine, August 29th and 31st, 2006.
4. Whitaker Academic Leadership Program, Sponsored by the Whitaker Foundation, February 27th-March 2nd, 2003.
5. Workshop, Designing More Effective Conversations, Sponsored by NSF Gender Equity Project at Texas A&M University, January 8-9, 2003.
6. Workshop, "Assessment/Evaluation and Learning Styles/Cycles", Sponsored by the Foundation Coalition, Texas A&M Univ. 05/01/97.
7. Workshop sponsored by the Center for Teaching Excellence, Texas A&M Univ. "Great Teachers, Great Motivators", 08/29/91.
8. Engineering Education Convocation, Texas A&M University, "Vision 2020 - Undergraduate Education in Engineering", August 25-27, 1991.

REVIEW OF JOURNAL PAPERS AND/OR RESEARCH PROPOSALS

Reviewer for the following Journals:
Physics in Medicine & Biology
Analytical Chemistry
Journal of Biomedical Optics
Applied Optics Journal
Optical Engineering Journal
Optics Letters Journal
Applied Spectroscopy Journal
Diabetes Technology & Therapeutics
IEEE Transactions on Biomedical Engineering
IEEE Sensors
Annals of Biomedical Engineering Book Reviews

Reviewer for the following grant organizations:
NSF – National Science Foundation
NIH – National Institutes of Health
CDC – Center for Disease Control
NASA – National Aeronautics and Space Administration
JDF – Juvenile Diabetes Foundation (Member of Panel Review January 1999, Chair – Panel Review June 1999, Chair – Panel Review November 2000)
The Whitaker Foundation
USDA
Oklahoma University Internal Grants Program

FUNDED RESEARCH

I. Proposals - Pending (in review)

"Point of care optofluidic nanotechnology platform using aptamers for cardiac biomarker detection "

1. Source of support: NIH-STTR with BioTex, Inc.
2. Appointment: co-PI, (PI, Dr. Kameoka, EE, Texas A&M, Bill Jackson, BioTex)
3. Dates of entire project period: 01/01/12-12/31/2012
4. Total Award if funded: $112,024 (TAMU portion)

II. Current Active Support

"Robust surface enhanced Raman biosensor using a novel optofluidic platform technology"

1. Source of support: NSF
2. Appointment: co-PI (collaborators: co-PI: Dr. Kameoka, TAMU-EE, consultant: Dr. Good, UMBC/NSF)
3. Dates of entire project period: 09/01/11-08/31/2014.
4. Total Award: $ 340,000.

"Implantable System for Tissue Perfusion Monitoring"

1. Source of support: Univ. of Pittsburgh, NIH-BRP (5RO1-GM077150)
2. Appointment: Co-I (PI: Dr. Wilson, U. Pittsburg, Co-I: Dr. Ericson, ORNL)
3. Dates of entire project period: 05/01/08-02/01/2013.
4. Total Award: $2,749,755 ($404,771-TAMU portion).

"Mechanisms of age related alterations in lymphatic pumping"

1. Source of support: subcontract from NIH (RO1-AG030578)
2. Appointment: co-I, (PI, Dr. Gashev, TAMUS-HSC, Co-I: Dr. Muthuchamy, TAMUS-HSC, Co-I, Dr. Zawieja, TAMUS-HSC, Co-I, Dr. Davis, U. Missouri-Columbia) 4.1%
3. Dates of entire project period: 08/15/08 – 07/31/13
4. Total Award: $1,493,485

"Glucose monitoring using polarized light"

1. Source of support: NIH (R01-DK076772)
2. Appointment: PI (16%)
3. Dates of entire project period: 08/06/2007 – 12/31/2012.
4. Total Award: $ 836,174

III. Previously Funded Support

"Self-cleaning sensor membranes to improve glucose monitoring in vivo"

1. Source of support: subcontract from NIH (R21-DK082930)
2. Appointment: co-I, (PI, Dr. Grunlan, TAMU, co-I: Dr. Pishko, TAMU) 0%
3. Dates of entire project period: 06/01/09 – 05/31/12
4. Total Award: $378,010

"Lipoprotein density profiling for clinical studies"

1. Source of support: subcontract from NIH (RO1-HL068794)
2. Appointment: Collaborator, (PI, Dr. R. MacFarlane, TAMU-Chemistry) 4%
3. Dates of entire project period: 04/01/08 – 03/31/12
4. Total Award: $1,141,891

"Advanced biomaterials as implantable chemical sensors"

1. Source of support: subcontract from a small medical device company from DARPA
2. Appointment: PI, (co-I: Dr. Pishko, TAMU, Dr. Simanek, TCU)

3. Dates of entire project period: 04/15/11 – 12/14/11
4. Total Award: $750,000 ($80,082 - TAMU portion)

"Evaluation of lymph flow and function "

1. Source of support: NIH (R21-HL085659)
2. Appointment: Co-I (PI: Dr. Zawieja, TAMU-HSC, Co-PI: Dr. Moore, TAMU-BME) 5%
3. Dates of entire project period: 07/01/08-06/30/2009.
4. Total Award: $388,136.

"An Atomic Force-Multioptical Imaging Microscope for Study of Cell Biomechanics"

1. Source of support: University of Missouri, NIH (R21-EB005840)
2. Appointment: Co-I (PI: G. Meininger, Co-I: K. Meissner) 0%
3. Dates of entire project period: 12/01/06-11/31/2009.
4. Total Award: $254,994.

"Development of Virtual Instrumentation: Optical Microscope and Spectrophotometer"

1. Source of support: O'Donnell Foundation
2. Appointment: Co-I (PI:K. Meissner, Co-I: C. Lessard) 0%
3. Dates of entire project period: 12/01/06-12/31/2008.
4. Total Award: $65,760.

"Detection and Treatment of Alzheimer's by Sialic Acid Conjugated Dendritic Polymers"

a. Source of support: subcontract from UMBC (NIH: R21-NS050346-01A1)
b. Appointment: co-PI, (PI, T. Good)
c. Dates of entire project period: 07/01/05 – 06/30/07
d. Total Award: $311,365 ($140,899 TAMU portion)

"MRI: Acquisition of a Combined Raman and Infrared Microscope with Nano-scale Spatial Resolution"

1. Source of support: NSF (Equipment Grant-BES-0421409)
2. Appointment: co-PI, (PI, A. Holzenburg, D. Lagoudas)
3. Dates of entire project period: 09/01/04 – 07/31/06
4. Total Award: $361,549

"STTR Phase I: Nanoshell-based detection of beta-amyloid for alzheimer's disease"

1. Source of support: Nanospectra Biosciences, Inc. (NIH-STTR- 1R41AG025586-01)
2. Appointment: co-PI, (Co-PI's, D.P. O'Neal, T. Good)
3. Dates of entire project period: 10/01/2004-05/31/2007.
4. Total Award: $119,985 (TAMU Portion).

"Microfabricated optical biosensor arrays for in situ bioreactor monitoring"

1. Source of support: Penn State (NASA).
2. Appointment: PI-TAMU, 1 mo. (PI, M. Pishko, Penn State)
3. Dates of entire project period: 10/01/2003-09/31/2006.
4. Total Award: $192,517.

"A special opportunity in optical micro-scale biosensing and imaging at Texas A&M University"

1. Source of support: The Whitaker Foundation
2. Appointment: PI
3. Dates of entire project period: 01/01/05-08/31/2006.
4. Total Award: $460,000.

" Implantable micro-instrumentation system for real-time tissue perfusion monitoring "

1. Source of support: Oak Ridge National Lab (DOE#83189)
2. Appointment: Co-PI (Co-PIs: N. Erickson, Oak Ridge National Lab, M. Wilson, Univ. of Pittsburgh)
3. Dates of entire project period: 10/01/04-09/31/2005.
4. Total Award: $20,000

" Implantable micro-instrumentation system for real-time tissue perfusion monitoring "
1. Source of support: Oak Ridge National Lab (DOE#83189)
2. Appointment: Co-PI (Co-PIs: N. Erickson, Oak Ridge National Lab, M. Wilson, Univ. of Pittsburgh)
3. Dates of entire project period: 10/01/01-09/31/2004.
4. Total Award: $250,000

"A special opportunity in optical micro-scale biosensing and imaging at Texas A&M University"
1. Source of support: The Whitaker Foundation
2. Appointment: PI
3. Dates of entire project period: 01/01/03-12/31/2004.
4. Total Award: $400,000.

"Glucose detection using polarimetry"
1. Source of support: Wyle Laboratories
2. Appointment: PI
3. Dates of entire project period: 10/25/2004-2/28/2005.
4. Total Award: $12,000.

"NIST Boulder Summer Undergraduate Research Fellowship"
1. Source of support: NIST
2. Appointment: PI (Michelle Garst supported)
3. Dates of entire project period: 06/01/2004-08/31/2004.
4. Total Award: $6,281.

"Development of an Implantable Optical Glucose Sensor"
1. Source of support: NSF (BES-9908439)
2. Appointment: PI (Co-PI: Mike Pishko) 1.5 Summer months
3. Dates of entire project period: 08/01/99-07/31/2004.
4. Total Award: $362,045.

Supplement - Development of an Implantable Optical Glucose Sensor entitled,
“Use of fluorescence polarization in the detection of bacteria and other pathogenic organisms”
1. Source of support: NSF (BES-9908439)
2. Appointment: PI (Co-PI: Mike Pishko) 1.5 Summer months
3. Dates of entire project period: 10/02/02-08/31/2004.
4. Total Award: $49,792.

"UG Student Supplement - Development of an Implantable Optical Glucose Sensor"
1. Source of support: NSF (BES-9908439)
2. Appointment: PI (Co-PI: Mike Pishko) Funding two UG students
3. Dates of entire project period: 08/01/03-07/31/2004.
4. Total Award: $6,000.

"UG Student Supplement - Development of an Implantable Optical Glucose Sensor"
1. Source of support: NSF (BES-9908439)
2. Appointment: PI (Co-PI: Mike Pishko) Funding two UG students
3. Dates of entire project period: 08/01/99-07/31/2004.
4. Total Award: $20,000.

"UG Student Supplement - Development of an Implantable Optical Glucose Sensor"
1. Source of support: NSF (BES-9908439)
2. Appointment: PI (Co-PI: Mike Pishko) Funding two UG students
3. Dates of entire project period: 08/01/99-07/31/2004.
4. Total Award: $6,000.

"Investigation of neuronal physiology in simulated microgravity using smart fluorescent microcarriers and bulk near-infrared sensors"

1. Source of support: NASA (NCC-8-169)
2. Appointment: PI: (Co-PI's: M. Pishko, T. Good) 10%
3. Dates of entire project period: 03/1/99- 11/30/2003
4. Total Award: $521,000.

"Implantable micro-instrumentation system for real-time tissue perfusion monitoring"

1. Source of support: Oak Ridge National Lab (DOE#83189)
2. Appointment: Co-PI (Co-PIs: N. Erickson, Oak Ridge National Lab, M. Wilson, Univ. of Pittsburg)
3. Dates of entire project period: 08/01/01-05/31/2003.
4. Total Award: $150,000 (Total from DOE $1M)

"Implantable Microparticles for Intracellular and Extracellular Glucose Sensing"

1. Source of support: Texas Higher Education Coordinating Board-Advanced Res. Prog
2. Appointment: Co-PI (PI: Mike Pishko) 1.0 Summer Month
3. Dates of entire project period: 01/01/00-08/31/2002.
4. Total Award: $171,486.

"Noninvasive Glucose Sensing Using a Novel Optical Technique"

1. Source of support: National Medical Technology Test Bed (USAMC)
2. Appointment: PI, One graduate student
3. Dates of entire project period: 03/01/2001 – 02/28/2002.
4. Total Award: $15,000.

"Acquisition of a Diode Laser Spectrometer"

1. Source of support: NSF (CTS-9977649)
2. Appointment: Co-PI, (Co-PI's: J. Bevan, R. Lucchese)
3. Dates of entire project period: 07/01/99 - 2001.
4. Total Award: $100,000.

"Noninvasive Glucose Sensing Using a Novel Optical Technique"

1. Source of support: National Medical Technology Test Bed (USAMC)
2. Appointment: PI, One graduate student
3. Dates of entire project period: 03/01/2000 – 02/28/2001.
4. Total Award: $33,800.

"Noninvasive Glucose Sensing Using a Novel Optical Technique"

1. Source of support: National Medical Technology Test Bed (USAMC)
2. Appointment: PI, 10%
3. Dates of entire project period: 08/06/1998 – 08/05/1999.
4. Total Award: $135,000.

"A Multidisciplinary Program in Biomedical Optics"

1. Source of support: NSF-Combined Research in Curriculum Development (EEC-9527784)
2. Appointment: Co-PI: (Co-PI - Sohi Rastegar) 30% sum., 12.5% acad.; 1 graduate student.
3. Dates of entire project period: 01/01/96 - 12/31/99.
4. Total Award: $ 300,000.

"Noninvasive Near-Infrared Sensor for Continual Cell Glucose Measurement"

1. Source of support: NASA (NAG9-821)
2. Appointment: PI: 50% Summer, 25% Academic, 1 graduate student
3. Dates of proposed project period: 09/01/95 - 08/31/99.
4. Total Award: $ 368,000.

"Spectroscopy for the Measurement of Body Chemicals"

1. Source of support: Whitaker Foundation (RG94-328)
2. Appointment: PI: 20%, 1 graduate student
3. Dates of proposed project period: 09/01/94 – 12/31/98.

4. Total Award: $ 179,758.

"Optical Spectroscopy for Body Chemical Measurements"

1. Source of support: Whitaker Foundation
2. Appointment: PI: (Co-PI: M. Pishko)
3. Dates of proposed project period: 09/01/99 – 12/31/99.
4. Total Award: $ 70,000.

"Acquisition of Micro Laser Raman Spectrometer"

1. Source of support: NSF- Major Research Instrumentation Program (BES-9724331)
2. Appointment: Co-PI : (Co-PI's – L. Archer, T. Good, W. Bradley) 0%.
3. Dates of entire project period: 09/01/97-08/30/98
4. Total Award: $120,123.

"Dual Action Laser Catheter - MRI Guided Laser Therapy"

1. Source of support: ATP-University of Texas Medical Branch
2. Appointment: PI: (Co-PI's - Sohi Rastegar - Bio.Eng., Steve Wright - EE) 1 grad stud 50%
3. Dates: 10/01/94 - 09/30/96
4. Total Award: $ 22,400

"Noninvasive Glucose Determination Using an Optical Polarimetric Approach"

1. Source of support: NSF-RIA
2. Appointment: PI : 25% time for summer months; 1 graduate student.
3. Dates of entire project period: 09/01/93 - 08/31/96.
4. Total Award: $ 99,342.

"Student Supplement - Noninvasive Glucose Determination Using an Optical Polarimetric Approach"

1. Source of support: NSF-REU
2. Appointment: PI : Undergraduate student (Allison Rhodes)
3. Dates of entire project period: 01/01/95 - 12/31/96.
4. Total Award: $ 6,725.

"Student Supplement - Noninvasive Glucose Determination Using an Optical Polarimetric Approach"

1. Source of support: NSF-REU
2. Appointment: PI : Undergraduate students
3. Dates of entire project period: 10/01/93 - 08/31/96.
4. Total Award: $ 12,450.

"Industry Sensor Research Project"

1. Source of support: Industry sponsor who prefers to remain confidential.
2. Appointment: PI : 1 graduate student.
3. Dates of entire project period: 02/01/94 - 12/31/94.
4. Total Award: $ 25,000.

"Noninvasive Optical Detection of Cell Culture Media"

1. Source of support: NASA/JSC
2. Appointment: PI : 1 graduate student.
3. Dates of entire project period: 09/01/93 - 08/31/94.
4. Total Award: $ 15,933.

"Smart Transurethral Catheter for Treatment of Prostate Hyperplasia"

1. Source of support: ATP-University of Texas Medical Branch
2. Appointment: PI : 1 graduate student.
3. Dates of entire project period: 09/01/93 - 05/31/94.
4. Total Award: $ 9,100.

"A High-Field Superconducting Magnet for Development of Combined MRS/Optical Sensors for In-Vivo Biologic Spectroscopy"

1. Source of support: Interdisciplinary Research Initiatives Program - TAMU

2. Appointment: Co-PI , (Co-PI's Steve Wright - EE & Jeremy Wasser - VET/MED)
3. Dates of entire project period: 06/01/94 - .
4. Total Award: $ 24,950.

"Tunable Infrared Laser System Development"

1. Source of support: Texas A&M PUFBF Equipment Funds Competition
2. Appointment: PI : Equipment Only
3. Dates of entire project period: 10/01/91 - 12/31/93.
4. Total Award: $ 60,000.

"Implantable Optically based system for ICP measurement"

1. Source of support: Texas A&M Minigrant Competition
2. Appointment: PI : Equipment Only
3. Dates of entire project period: 09/01/91 - 12/31/91
4. Total Award: $ 800.

IV. Other Previous Support

NASA Summer Faculty Fellow - Hired directly to work on Noninvasive Optical Detection of Glucose in Cell Culture Media

1. Source of support: NASA Summer Faculty Fellow Program
2. Appointment: PI : 50% 2 months summer; 2 graduate students 3 month summer.
3. Dates of entire project period: 05/93 - 07/93.
4. Total Amount to PI and students: $ 19,000

University of Texas Medical Branch (UTMB) - Hired directly to work on the Optical Characteristics of Noninvasive Near Infrared Glucose Detection

1. Source of support: University of Texas Medical Branch (UTMB)
2. Appointment: PI : 50% 1 months summer; 1 graduate student 3 month summer.
3. Dates of entire project period: 06/01/93 - 08/31/93.
4. Total Award to PI and students: $ 6,000

Industrial Equipment Donation

1. Source of support: Optex Biomedical Inc., Houston, TX
2. Award: Donated Fluorescence Spectrometer & two Lock-in amplifiers
3. Dates of award: 1994.
4. Total Estimated Value of Award: $ 74,000

Industrial Equipment Donation

1. Source of support: Optex Biomedical Inc., Houston, TX
2. Award: Donated Optic and Fiber Optic Supplies
3. Dates of award: 1995.
4. Total Estimated Value of Award: $5,000