

CURRICULUM VITAE
GERALD J. DIEBOLD

EMPLOYMENT:

Professor of Chemistry, 1988-present
Associate Professor of Chemistry, 1984-1987
Assistant Professor of Chemistry, Brown University, 1978-1984

EDUCATION:

Stanford University, 1977-1978 (Postdoctoral Fellow with Richard N. Zare)
Columbia University, 1976-1977 (Postdoctoral Fellow with Richard N. Zare)
Boston College, 1974-1975 (Postdoctoral Fellow with David L. McFadden)
Boston College, 1974, Ph.D., Physics, (with George J. Goldsmith)
University of Notre Dame, 1965, B.S., Physics

AWARDS:

Radlinsky Lecturer, Connecticut College, 2015
FLIR Best Paper Award, Workshop on Photoacoustic and Photothermal Phenomena, Erice, Sicily (2014)
Smith Prize from the International Photoacoustic and Photothermal Society (2011)
Distinguished Lecturer, University of Toronto, 2012
Fellowship in American Physical Society, 2011
Best Paper Award, Workshop on Photoacoustic and Photothermal Phenomena, Erice, Sicily (2010)
"Frontiers" Distinguished Lectureship, University of Leeds, Leeds, UK, 2008
Best Paper Award (with coauthors) SPIE/BIOS given by Fairway Medical, 2005
Distinguished Scholar Award, Korea Science and Engineering Foundation, 2004
Innovator Award, U.S. Army Medical Research And Materiel Command, 2002
Alcoa Foundation Research Award, 1991
NSF Graduate Traineeship

COMMITTEES, MEMBERSHIPS, LECTURES:

Organizing Committee International Conference on Photoacoustic and Photothermal Phenomena,
Moscow, Russia
Assistant Editor: International Journal of Thermophysics 2017-present
Organizing Committee International Conference on Photoacoustic and Photothermal Phenomena,
Bilbao, Spain
Assistant Editor and Member of Editorial Board, *Photoacoustics* 2012-present
Editorial Advisory Board 2012-present, *Photoacoustic Tomography*
Organizing Committee: Conference on Photoacoustic and Photothermal Theory and Applications
Warsaw, 2013
International Advisory Board, XV Conference on Photoacoustic and Photothermal Phenomena, Leuven, 2009
Army Innovator Award Panel, Reston, Virginia, 2007
Advisory Committee, International Photoacoustic and Photothermal Conference, Cairo, 2007
Session Organizer, NIST symposium on Thermophysical Properties 2006
SPIE Conference; Program Committee, 2003-2007
Director: International Photoacoustic and Photothermal Society 2001-present
Peer Review Panel: Army Medical Research and Materiel Command, 2004
Review Panel: DoD Breast Cancer Review Panel, 2003
Session Organizer, Invited Speaker: NIST symposium on Thermophysical Properties 2003
Advisory Committee: Ninth International Conference on Photoacoustic and

Photothermal Phenomena, 2000
Program Committee: SPIE/OSA Conference on Biomedical Opto-Acoustics, 2000-2006
US Dept. of Energy Review Board for Environmental Science, 1998
Editorial Board: Progress in Photothermal and Photoacoustic Science and Technology, SPIE, 1997
Steering Committee: Ninth International Conference on Photoacoustic and Photothermal Phenomena, 1996
Chairman: 1992 Gordon Conference on Photoacoustic and Photothermal Phenomena
Organizing Committee: Sixth International Conference on Photoacoustic and Photothermal Phenomena, Baltimore, 1989
Editorial Board: Progress in Photothermal and Photoacoustic Science (Elsevier) 1992

Invited Speaker (Recent Invitations):

Plenary Lecturer: Workshop on Photoacoustic and Photothermal Phenomena, Erice, Sicily (2018)
Plenary Lecturer: International Conference on Photoacoustic and Photothermal Phenomena, Bilbao, Spain 2017
Plenary Lecturer: Workshop on Photoacoustic and Photothermal Phenomena, Erice, Sicily (2016)
Radlinsky Lecturer, Connecticut College, New London, CT (2015)
Summer School on Agricultural and biological sensing and photonics, Casper WY (2015)
Workshop on the Classical-Quantum Interface, Princeton University, Princeton, NJ, (2015)
International Photoacoustic and Photothermal Conference, Novi Sad, Serbia (2015)
Workshop on Photoacoustic and Photothermal Phenomena, Erice, Sicily (2014)
CECAM Conference on Heat Transport at Small Scales, Zaragoza, Spain (2013)
Conf. on Photoacoustic and Photothermal Theory and Applications, Warsaw Poland (2013)
International Workshop on Acoustic Activation of Surface Processes, Breckenridge, CO (2013)
American Physical Society, Boston (2012)
International Conference on Photoacoustic and Photothermal Phenomena, Merida, Mexico 2011
Summer Workshop on Photoacoustic and Photothermal Phenomena, Erice, Sicily 2010
Advanced Laser Technologies 2010, Egmond aan Zee, Netherlands, 2010
Gordon Conference on Photoacoustic and Photothermal Phenomena, Ventura, CA, 2008
Frontiers in Particle Science and Technology Lecturer Leeds University, UK, 2008
International Photoacoustic and Photothermal Conference, Cairo, 2007
AIUM Conference, New York City, 2007
American Physical Society, Denver, 2007
Army Breast Cancer LINKS meeting, Baltimore, 2006
BIOS/SPIE Conference, San Jose, 2006
Korean Chemical Society, 2005
Era of Hope Conference, Philadelphia, 2005
Gordon Conference on Photoacoustic and Photothermal Science, Trieste, 2005
International Photoacoustic and Photothermal Phenomena Conference, Brazil, 2004
Gordon Conference on Photoacoustic and Photothermal Science, New Hampshire 2003
Canadian Association of Physicists, Quebec City, 2002
International Congress on Acoustics, Rome, 2001
IEEE International Ultrasonics Symposium, Toronto, 1997.
Gordon Conference on Photoacoustic and Photothermal Phenomena, 1995
American Acoustical Society Meeting, Washington, D. C. 1995
International Conference on Acoustics, Trondheim, Norway, 1995
Heraeus Foundation Conference, Bad Honnef, Germany, 1995
Moscow State University, Workshop on Nonresonant Interaction of Laser Radiation with Matter, Moscow, 1993
Lucent Technologies 2000

UFFC Topical Meeting, Boston, 1998
Seventh International Topical Meeting on Photoacoustic and Photothermal Phenomena, Doorwerth, The Netherlands, 1991
Acoustical Society of America Meeting, Baltimore, 1991
ARO Conference on Spectroscopy and Spectrometry for Biologicals, Cashiers, NC, 1991
Federation of Analytical Chemistry and Spectroscopy Societies Meeting, Cleveland, 1990
American Physical Society Meeting, St. Louis, 1989
Heraeus Foundation Conference on Photoacoustic Processes, Bad Honnef, FRG, 1988

PUBLICATIONS:

1. "Vibrational Relaxation of Fluorine by a Shock Tube Schlieren Method" with R. Santoro and G. Goldsmith, *J. Chem. Phys.*, **60**, 4170 (1974).
2. "Differential Photodiode Detector for a Shock Tube Laser Schlieren System," with R. Santoro, *Rev. Sci. Instrum.*, **45**, 773, (1974).
3. "Density Gradient Measurements of Vibrational Relaxation in He-F₂ Mixtures behind Shock Waves," with R. Santoro and G. Goldsmith, *J. Chem. Phys.*, **62**, 296 (1975).
4. "Observation of the Photoacoustic Effect in the Microwave Region," with D. McFadden, *Appl. Phys. Lett.*, **29**, 447 (1976).
5. "Kinetics of the O + F₂ Reaction: A Case of Low Reactivity of Elemental Fluorine," with R. Krech and D. McFadden, *J. Am. Chem. Soc.*, **99**, 4605 (1977).
6. "Density Gradient Measurements of Cl₂ Dissociation in Shock Waves" with R. Santoro and G. Goldsmith, *J. Chem. Phys.*, **67**, 881 (1977).
7. "Effects of A/D Converter Resolution in Signal Averaging" *Rev. Sci. Instrum.*, **48**, 1689 (1977).
8. "Chemi-Ionization of Ca, Sr, Ba, and Yb Atoms with the Halogens and Inter-halogen Molecules" with F. Engelke, H. Lee, J. C. Whitehead, and R. N. Zare, *Chem. Phys.*, **20**, 265 (1977).
9. "Laser Fluorimetry: Subpicogram Detection of Aflatoxins Using High-Pressure Liquid Chromatography" Gerald J. Diebold and R. N. Zare, *Science*, **196**, 1439-1441 (1977).
10. "Infrared Multiphoton Dissociation of SF₆ in a Molecular Beam: Observation of F Atoms by Chemi-Ionization Detection" with F. Engelke, D. L. Lubman, J. C. Whitehead, and R. N. Zare, *J. Chem. Phys.*, **67**, 5407 (1977).
11. "Density Gradient Measurements of Vibrational Relaxation in Ar-ClF Mixtures Behind Shock Waves" with R. Santoro, *J. Chem. Phys.*, **69**, 1987 (1978).
12. "Laser Fluorimetry: Detection of Aflatoxin B₁ in Contaminated Corn" with R. Zare, ACS Symposium Series 85, "New Applications of Lasers to Chemistry" (ACS Press, Washington, D.C., 1978), L. Hieftje, ed.

13. "Determination of Zearalenone in Corn by Laser Fluorimetry," with N. Karny and R. Zare, *Anal. Chem.*, **51**, 67 (1979).
14. "Noise Reduction in EPR Discharge-Flow Studies", with D. L. McFadden, *Rev. Sci. Instrum.* **50**, 157 (1979).
15. "Laser Fluorimetric Determination of Aflatoxin B₁ in Corn", with N. Karny, R. N. Zare and L. Seitz, *J. Assoc. Off. Anal. Chem.*, **62**, 562 (1979).
16. "Acoustic Wave Generation in a Periodically Photodissociated Gas", *J. Phys. Chem.*, **84**, 2213-21 (1980).
17. "A Highly Variable Optoacoustic Phase Angle within the S₀-S₁ Band of Glyoxal", with M. B. Robin, N. A. Kuebler, and K. Kaya, *Chem. Phys. Lett.* **70**, 93 (1980)
18. "Optoacoustic Detection of Chain Reactions", with J. Hayden, *Chem. Phys.*, **49**, 429 (1980).
19. "Detection of Several Electronically Metastable Atomic States by Gas Phase EPR", with I. V. Rivas, S. Shafeizad and D. L. McFadden, *Chem. Phys.*, **52**, 453 (1980).
20. "The Optoacoustic Effect in a Photodissociated Gas", Proceedings of the IEEE Ultrasonics Symposium **1**, 502 (1980).
21. "Direct Detection of Momentum Flux in Atomic and Molecular Beams", with J. G. Choi, J. Hayden, and M. T. O'Connor, *J. Appl. Phys.* **52**, 6016 (1981).
22. "Paramagnetic Resonance Spectrum of Metastable ²P Atomic Nitrogen", with D. L. McFadden, *Phys. Rev. A* **25**, 1504 (1982).
23. "Multiphoton Ionization Detection of NO Scattered from Solid Surfaces", with J. S. Hayden, *J. Chem. Phys.* **77**, 4767 (1982).
24. "Microphone Detection of Pulsed Atomic and Molecular Beams", with J. G. Choi, *Chem. Phys.*, **73**, 19 (1982).
25. "Laser Schlieren Microphone for Optoacoustic Spectroscopy", with J. G. Choi, *Appl. Optics*, **21**, 4087 (1982).
26. "Chemical Amplification of Optoacoustic Signals", with M. T. O'Connor, *Nature* **301**, 321 (1983).
27. "Total Internal Reflectance Optoacoustic Spectroscopy", with P. R. Muessig, *J. Appl. Phys.*, **54**, (8), 4251 (1983).
28. "Interference in Atomic Fluorescence Following Photodissociation of Homonuclear Diatomic Molecules", *Phys. Rev. Lett.* **51**, 1344 (1983).

29. "Interference in Atomic Fluorescence Excited by Photodissociation of Homonuclear Diatomic Molecules", in "Coherence and Quantum Optics V, L. Mandel and E. Wolf eds (Plenum, New York, 1984).
30. "Radiation Induced Thermal Noise in Photoacoustic Detection Cells", with R. Stewart, *J. Appl. Phys.*, **56**, 1992 (1984).
31. "Optoacoustic Detection of Photodissociation and Termolecular Recombination in Cl₂", with M. T. O'Connor, *J. Chem. Phys.*, **81**, 812, (1984).
32. "The Chemically Amplified Optoacoustic Effect: Application to Chemical Kinetics and Trace Detection". Proc. International Conference on Lasers' 84, San Francisco, 1985.
33. "Quantum Mechanical Interference in Two Photon Absorption: A Nonlinear Analog of the Hanle Effect", *Phys. Rev. A* **32**, 2739 (1985).
34. "Interference in Atomic Fluorescence Excited by Molecular Photodissociation", *Phys. Rev. A* **32**, 1458 (1985).
35. "Trace Detection Based on Chemical Amplification of the Optoacoustic Effect" with J. G. Choi, *Anal. Chem.* **57**, 2989 (1985).
36. "The Inverse Optoacoustic Effect", Proc. 4th Int. Topical Meeting on Photoacoustic, Thermal and Related Sciences", Montreal, 1985 with S. Didascalou and R. Stewart.
37. "Quantum Beats in Atomic Fluorescence Excited by Molecular Photodissociation", *J. Chem. Phys.*, **85**, 25 (1986).
38. "Relaxation of Optically Pumped Na on Impact with LiF" with P. R. Muessig, *Surface Science* **165**, L59 (1986).
39. "Photochemical Generation of the Optoacoustic Effect: An Acoustic Analog of the Method of Intermittent Activation" *J. Phys. Chem.* **90**, 711 (1986).
40. "The Inverse Optoacoustic Effect: Sound Generation Through Emission of Blackbody Radiation" with S. Didascalou and R. B. Stewart, *Optics Commun.* **58**, 103 (1986).
41. "Photochemical Generation of the Optoacoustic Effect: An Acoustic Analog of the Method of Intermittent Activation" with M. T. O'Connor and R. B. Stewart, *J. Phys. Chem.* **90**, 711 (1986).
42. "Quantum Interference in Two-Photon Absorption: Polarization and Magnetic Field Effects in Atomic Sr", *Phys. Rev. A*, **34**, 2547 (1986).
43. "A Thermal Piston Model for the Optoacoustic Effect: Sound Generation in an Optically Thick Gas", with R. B. Stewart, *Appl. Phys. Lett.*, **50**, 13 (1987).

44. "A Helmholtz Resonator Optoacoustic Detector for Gas Chromatography" with J. G. Choi, *Anal. Chem.*, **59**, 519 (1987).
45. "Chemical Kinetics in Dilute Solution: Photoacoustic Detection of Small Absorbance Changes in Chemical Reactions". with V. E. Anderson, H. Z. Cheng, A. Mahmood, and D. A. Sweigart, *J. Am. Chem. Soc.*, **109**, 6191 (1987).
46. "An Interferometric Microphone for Optoacoustic Spectroscopy", with S. M. Park, *Rev. Sci. Instrument*, **58**, 772 (1987).
47. "Interference in Two-Photon Absorption at High Field Crossings" with R. Stewart in "Atomic and Molecular Processes with Short Intense Laser Pulses", (Plenum, New York, 1988). A. Bandrauk, ed.
48. "Pressure and Velocity Profiles Generated by Laser-Heated Spherical Droplets" with X. Hu in "Photoacoustic and Photothermal Phenomena", (Springer-Verlag, Heidelberg, 1988), P. Hess and J. Pelzl, eds.
49. "Optoacoustic Measurement of Isotope Effects in the H₂-Cl₂ Reactions", with S. Wyers, "Photoacoustic and Photothermal Phenomena", (Springer-Verlag, Heidelberg, 1988). P. Hess and J. Pelzl, eds.
50. "Numerical Calculation of the Photoacoustic Signal Generated by a Droplet" AIP Conf. Proc. **172**, 747 (1988).
51. "The Photoacoustic Effect Generated by a Spherical Droplet in a Fluid", G. J. Diebold, and P. J. Westervelt, *J Acoust. Soc. Am.* **84**, 2245 (1988)
52. "The Effects of Optical Pumping on Laser Enhanced Electron Impact Ionization" with S. M. Park, *Optics Commun.* **69**, 253 (1989).
53. "Photoacoustic Generation of Anisotropic Pressure Waves Through Photodissociation of Cl₂", with S. M. Park, and M. I. Khan, *Opt. Lett.* **15**, 771, 1990
54. "Photoacoustic Waveforms from Laser Heated Particulate Matter", with P. Karcher, and S. M. Park, in Photoacoustic and Photothermal Phenomena II, (Springer-Verlag, Heidelberg, 1990) J. C. Murphy, J. W. Maclachlan-Spicer, L. C. Aamodt, and B. S. H. Royce, eds.
55. Selective Ionization of Ba and Sr Isotopes based on a Two-Photon Interference Effect", with S. M. Park, *Phys. Rev. A* **42**, 417, (1990)
56. "Production of Anisotropic Photoacoustic Pressure Waves by Photodissociation of Molecular Chlorine", with S. M. Park, and M. I. Khan.(Springer-Verlag, Heidelberg, 1990) J. C. Murphy, J. W. Maclachlan-Spicer, L. C. Aamodt, and B. S. H. Royce, eds.

57. "Photoacoustic 'Signatures' of Particulate Matter: Optical Production of Acoustic Monopole Radiation", with M. I. Khan, and S. M. Park, *Science* **250**, 101 (1990)
58. "Photoacoustic Effect in Strongly Absorbing Fluids", with S. M. Park, M. I. Khan, and H. Z. Cheng, *Ultrasonics* **29**, 63, (1991)
59. "Photoacoustic Monopole Radiation in One, Two, and Three Dimensions", G.J. Diebold, T. Sun and M. I. Khan, *Phys. Rev. Lett.* **67**, 3384 (1991)
60. "Photoacoustic Waveforms Generated by Fluid Bodies" with T. Sun and M. I. Khan, in "Photoacoustic and Photothermal Phenomena", Springer-Verlag, Heidelberg, 1992, D. Bicanic, ed.)
61. "Generation of Ultrasonic Waves from a Layered Photoacoustic Source" with T. Sun, *Nature* **355**, 806 (1992)
62. "Investigation of Viscosity and Heat Conduction Effects on the Evolution of a Transient Picosecond Photoacoustic Grating" with T. Sun, J. Morais, and M. B. Zimmt, *J. Chem. Phys.* **97**, 9324 (1992)
63. "Photoacoustic Waves Generated by Absorption of Laser Radiation by Optically Thin Layers" with M. I. Khan and T. Sun, *J. Acoust. Soc. Am.* **93**, 1417 (1993)
64. "Photoacoustic Waves Generated by Absorption of Laser Radiation in Optically Thin Cylinders" with M. I. Khan and T. Sun. *J. Acoust. Soc. Am.* **94**, 931 (1993).
65. "Properties of Photoacoustic Waves in One, Two, and Three Dimensions" with T. Sun, *Acustica* **80**, 339 (1994)
66. "Distributed Source Photoacoustic Generation of Ultrasound" with T. Sun and H. Chen, *Ultrasonics* **32**, 265 (1994).
67. "Thermally Launched Photoacoustic Waves", with Y. N. Cao, H. X. Chen, T. Sun, and M. B. Zimmt, *Journal De Physique* **C7**, 713 (1994).
68. "The Photoacoustic Effect Generated by an Isotropic Solid Sphere" with M. I. Khan, *Ultrasonics* **33**, 265 (1995).
69. "Thermally Generated Photoacoustic Gratings", with H. X. Chen Proc. 15'th Int. Congress on Acoustics, Trondheim, Vol. I, 337 (1995).
70. "Chemical Generation of Acoustic Waves: A 'Giant' Photoacoustic Effect, with H. X. Chen, *Science* **270**, 963 (1995).
71. "The Photoacoustic Effect Generated by Laser Irradiation of an Isotropic Solid Cylinder" With M. I. Khan *Ultrasonics* **34**, 19 (1996)

72. "Production of the Photoacoustic Effect and Transient Gratings by Molecular Volume Changes", with H. X. Chen, *J. Chem. Phys.* **104**, 6730 (1996).
73. "Effects of Heat Conduction and Viscosity on Photoacoustic Waves from Droplets", with Y. N. Cao, *Opt. Eng.* **36**, 417 (1997)
74. Laser Chemistry in suspensions: New Products and Unique Reaction Conditions for the Carbon-steam Reaction", with H. X. Chen, and T. E. McGrath *Angew. Chem. Int. Ed. Engl.* **36**, 163 -166 (1997)
75. "Generation of the Photoacoustic Effect through Heat Diffusion: Transient Grating Measurements in Reverse Micellar Solutions", with Y. N. Cao, H. X. Chen, T. Sun and M. B. Zimmt, *J. Phys. Chem.*, **101**, 3005 (1997)
76. "Transient Grating Studies of Ultrasonic Attenuation in Reverse Micellar Solutions" with Y. N. Cao, and M. B. Zimmt, *Chem. Phys. Lett.* **276**, 388 (1997)
77. "Chemical Generation of Sound Waves: Shock Waves and A "Giant" Photoacoustic Effect" with H. X. Chen, T. E. Mc Grath, and A. C. Beveridge, Proc. IEEE Conference on Ultrasonics, Toronto, **1**, 719, 1997
78. "Theory of Thin Layer Photoacoustic Cells for Determination of Volume Changes in Solution", *J. Phys. Chem.* **102**, 5404 (1998)
79. "Sonoluminescence Initiated by Laser Irradiation of Carbon Suspensions", with T. E. McGrath and A. C. Beveridge, *Appl. Phys. Lett.* **73**, 1029 (1998)
80. "Sonoluminescence and Voltage Generation in Laser Irradiated Colloidal Suspensions", with T. E. Mc Grath and A. C. Beveridge, Proc. X Int. Conf. on Photoacoustic and Photothermal Phenomena, Rome, 1998
81. "Diffraction of Light from Phase Gratings at Large Modulation Depths: Experimental Results in Liquids Using High Power Lasers" with H. X. Chen, *Optics Lett.*, **24** 211 (1999)
82. "Laser Induced "Regeneration" of Colloidal Particles: The Effects of Thermal Inertia on the Chemical Reactivity of Laser Heated Particles" with T. E. McGrath and A. C. Beveridge, *Angew. Chemie* **38**, 3353 (1999)
83. "Photoacoustic Shock Generation in Carbon Suspensions" with A. C. Beveridge, T. E. McGrath, and A. A. Karabutov, *Appl. Phys. Lett.* **75**, 4204 (1999)
84. "The Photoacoustic Effect Generated by Heat Diffusion" with I. Calasso and W. Craig, *Analytical Sciences* **17**, 249, (2001)

85. "The Photoacoustic Point Source" with I. G. Calasso and W. Craig, *Phys. Rev. Lett.* **86**, 3550 (2001)
86. "Transient Grating Studies of Laser Induced 1A_g O₂ Production By Photodynamic Therapy Agents" with A. C. Beveridge, B. A. Bench, I. G. Calasso, and S. S. Gorun, Proc. SPIE 4265, (Biomedical Optoacoustics II) 167 (2001)
87. "Photoacoustic Evaluation of Photodynamic Therapy Agents" with Andrew C. Beveridge, Barbara A. Bench, Irio G. Calasso, and Sergiu M. Gorun, Proc ICA 2001
88. "Introduction of Bulky Perfluoroalkyl Groups at the Periphery of Zinc Perfluorophthalocyanine: Chemical, Structural, Electronic, and Preliminary Photophysical, and Biological Effects" with Barbara Bench, Andrew Beveridge, Wesley M. Sharman, Johan E. van Lier, and Sergiu Gorun, *Angew. Chemie Int. Eng. Ed.* **41**, 747, (2002)
90. "Laser Initiated Chemical Reactions in Carbon Suspensions" with T. E. McGrath, D. Bartels, and R. Crowell, *J. Phys. Chem.* **106**, 10072 (2002)
91. "The Photoacoustic Effect Generated by an Incompressible Sphere" with A. C. Beveridge and T. Hamilton, *J. Acoust. Soc. Am.* **112**, 1780 (2002)
92. "The Photoacoustic Effect at Reflecting Interfaces", Gerald J. Diebold, *Rev. Sci. Instrum.*, **74**, 801 (2003)
93. "Internally Excited Acoustic Resonator for Photoacoustic Trace Detection", with S. Danworaphong, I. G. Calasso, A. Beveridge, C. Gmachl, F. Capasso, D. L. Sivco, and A. Y. Cho, *Appl Opt.* **27**, 5561 (2003).
94. "Evaluation of Photodynamic Therapy Agents through Transient Grating Measurements" with A. C. Beveridge, B. A. Bench, and S. M. Gorun, *J. Phys. Chem. A* **107**, 5138 (2003)
95. "Thermal Diffusion in a Sinusoidal Temperature Field" Walter L. Craig, Sorasak Danworaphong and Gerald J. Diebold, *Phys. Rev. Lett.*, **92**, 125901/4 (2004).
96. "Quantities, Terminology and Symbols in Photothermal and Related Spectroscopies" IUPAC Physical Chemistry Division, Pure and Applied Chemistry with M. Terazima, N. Hirota, S. Braslavsky, A. Mandelis, S. Bialkowski, R. J. D. Miller, D. Fournier, R. Palmer, and A. Tam. IUPAC **76**, 1083-1118 (2004)
97. "Vibration Potential Imaging: Theory and Preliminary Results", with A. C. Beveridge, S. Wang, and V. Gusev, Proc SPIE 2004; 5320: 95-100
98. "Resonant Microphone based on Laser Beam Deflection", with K. Roark, *J. Appl. Phys.* **96**, 864 (2004)

99. "Vibration Potential Imaging" with V. Gusev, A. C. Beveridge, and S. Wang, Proc. NIST Conf. on Thermophysical Properties, Boulder, 2004
100. "Imaging based on the Ultrasonic Vibration Potential" with A. C. Beveridge and S. Wang, *Appl. Phys. Lett.* **85**, 5466 (2004)
101. "Acoustic Radiation Pressure: a "Phase Contrast" Agent for X-ray Phase Contrast Imaging, C. Bailat, T. Hamilton, C. Rose-Petruck, and Gerald J. Diebold *Appl. Phys. Lett.* **85** 4517-4519 (2004)
102. "Acoustically Modulated X-Ray Phase Contrast Imaging" T. Hamilton, and C. Bailat, C. Rose-Petruck, and Gerald J. Diebold, *Phys. Med. Bio.* **49**, 4985-4996 (2004)
103. "Imaging with the Ultrasonic Vibration Potential: A Theory for Current Generation" with V. E. Gusev *Ultrasound in Med. and Biol.* **31**, 273 (2005)
104. "The Theory of Ultrasonic Vibration Potential Imaging" A. C. Beveridge, S. Wang, and V. E. Gusev, *Journal de Physique IV* **125**, 69 (2005)
105. "Acoustically Modulated X-Ray Phase Contrast and Vibration Potential Imaging" with a. C. Beveridge, C. J. Bailat, T. J. Hamilton, S. Wang, C. Rose-Petruck, and V. E. Gusev Proceedings of the SPIE **5697**, 90-98 (2005) Selected as the best conference paper
106. "Thermal Diffusion Shock Waves" Sorasak Danworaphong, Walter Craig, and Vitalyi Gusev, and Gerald J. Diebold *Phys. Rev. Lett.* **94**, 095901/4 (2005) selected for *Virtual Journal of Nanoscale Science and Technology* 21 March 2005
107. "Mathematical Analysis of Thermal Diffusion Shock Waves", with V. Gusev, R. LiVoti, and S. Danworaphong, *Phys. Rev. E* **72**, 041205/1-7, (2005)
108. "Transient Gratings Generated by Particulate Suspensions: The Uniformly Irradiated Sphere and the Point Source" with C. Frez, I. G. Calasso *J. Chem. Phys.* **124**, 034905 (2006)
109. "Determination of Thermophysical Properties of Room Temperature Ionic Liquids by the Transient Grating Technique", with C. Frez, C. D. Tran and S. Yu *J. Chem. Eng Data.* **51**, 1250 (2006)
110. "Ultrasonically Modulated X-ray Phase Contrast and Vibration Potential Imaging", Theron J. Hamilton, Guohua Cao, Shougang Wang Cuong K. Nguyen, Shengqiong Li, Stephan Gehring, Jack Wands, and Christoph Rose-Petruck, *Prog. in Biomed Opt. and Imag.* **7**, 6086, 608601/1-10 (2006)
111. "Ultrasonically Modulated X-ray Phase Contrast Imaging", with Theron J. Hamilton, Guohua Cao, Shougang Wang, Cuong K. Nguyen, Shengqiong Li, Stephan Gehring, Jack Wands, and Christoph Rose-Petruck, Proc. Proc. 2006 IEEE Symp. on Biomedical Imaging: Macro to Nano **10818**,1108-1111 (2006).

112. "Frequency Domain Vibration Potential Imaging: Objects with Symmetry in One Dimension", A. Beveridge, Shengqiong Li, C. Nguyen, and G. J. Diebold, *Appl. Phys. Lett.* **89**, 243902/1-3 (2006)
113. "X-ray Phase Contrast Imaging: Transmission Functions Separable in Cartesian Coordinates", G. Cao, T. Hamilton, C. Rose-Petruck, and G. J. Diebold, *J. Opt. Soc. Am. A.*, **24**, 1201-1208 (2007)
114. "Ultrasonic Vibration Potential Imaging: Theory and Experiments" S. Wang, C. Nguyen, and G. J. Diebold, *Progress in Biomedical Optics and Imaging, Photons Plus Ultrasound: Imaging and Sensing 2007*, **8** 64370N, (2007).
115. "Photothermal Modification of X-ray Phase Contrast Images" C. Laperle, G. Cao, T. J. Hamilton, C. Rose-Petruck, and G. J. Diebold, *Progress in Biomedical Optics and Imaging, Photons Plus Ultrasound: Imaging and Sensing 2007*, **6437**, 64371N1-5, (2007)
116. "Propagation based differential phase contrast imaging and tomography of murine tissue with a laser plasma x-ray source", Xiaodi Li, Brian Ahr, Christopher M. Laperle, Philip Wintermeyer, Daxin Shi, Mark Anastasio, Jack Wands, Gerald J. Diebold, and Christoph Rose-Petruck, *Appl. Phys. Lett* **91**, 173901-3 (2007) also *Virtual Journal of Biological Physics Research*.
117. "Laser Generation of Gas Bubbles: Photoacoustic and Photothermal Effects Recorded in Transient Grating Experiments", C. Frez and G. J. Diebold, *J. Chem. Phys.* **129**, 184506 (2008) also *Virtual Journal of Ultrafast Science*, December 2008.
118. "A Search for Laser Heating of a Sonoluminescing Bubble" G. Cao, S. Danworaphong, and G. J. Diebold, *Eur. Phys. J.* **153**, 215-221 (2008).
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