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22. M. A. Woodmansee, J. C. Dutton, and R. P. Lucht, "Laser-Induced Perturbation Effects in High-Resolution N_2 CARS Spectra," AIAA Paper No. 2001-0418, presented at the 39th Aerospace Sciences Meeting and Exhibit, 8-11 January, 2001.
23. S. Roy, R. P. Lucht, and T. A. Reichardt, "Investigation of Short-Pulse Polarization Spectroscopy for Concentration Measurements in Reacting Flows," Paper No. 244, presented at the 2nd Joint Meeting of the U. S. Sections of the Combustion Institute, Oakland, California, 25-28 March, 2001.

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25. R. P. Lucht, "Recent Advances in Concentration, Temperature, and Pressure Measurements Using Coherent Anti-Stokes Raman Scattering," Paper No. P1, presented at the 20th European CARS Workshop, Lund, Sweden, 1-3 April, 2001. (Invited Plenary Lecture)

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29. S. F. Hanna, R. Barron-Jimenez, T. N. Anderson, R. P. Lucht, T. Walther, and J. A. Caton, "Diode-Laser-Based Ultraviolet Absorption Sensor for NO," postdeadline paper presented at the 2002 OSA Topical Meeting on Laser Applications to Chemical and Environmental Analysis, Boulder Colorado, February 7-10, 2002.

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39. S. Roy, T. R. Meyer, R. P. Lucht, V. M. Belovich, E. Corporan, and J. R. Gord, "Single-Shot Thermometry and Multiple Species Measurements Using Dual-Pump, Dual-Broadband CARS in a Liquid-Fueled CFM56 Combustor," AIAA Paper No. 2004-0711, presented at the 42nd Aerospace Sciences Meeting and Exhibit, Reno, Nevada, January 5-8, 2004.

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41. T. B. Settersten, X. Chen, B. D. Patterson, S. Roy, and R. P. Lucht, "OH Ground-State Energy Transfer Investigated Using Picosecond IR-UV Polarization Spectroscopy," Paper MF2, Proceedings of the Optical Society of America Topical Meeting on Lasers in Chemical and Environmental Analysis (LACEA 2004), Annapolis, MD, February 8-11, 2004.

42. Waruna D. Kulatilaka, Thomas L. Bougher, and Robert P. Lucht, "Development of an Injection-Seeded, Pulsed Optical Parametric Generator for High-Resolution Spectroscopy," Paper TuF6, Proceedings of the Optical Society of America Topical Meeting on Lasers in Chemical and Environmental Analysis (LACEA 2004), Annapolis, MD, February 8-11, 2004.

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47. T. N. Anderson, R. P. Lucht, S. Roy, T. R. Meyer, and J. R. Gord, "High-Speed Measurements of OH Concentration and Temperature Using a Diode-Laser-Based Ultraviolet Absorption Sensor," Paper B09, Proceedings of the Fourth Joint Meeting of the US Sections of the Combustion Institute, Philadelphia, Pennsylvania, March 20-23, 2005.

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49. T. N. Anderson and R. P. Lucht, "Development of a Diode-laser-based Ultraviolet Absorption Sensor for Real-time, *In Situ* Measurements of Atomic Mercury," Proceedings of the Twenty-Second Annual International Pittsburgh Coal Conference, Pittsburgh, Pennsylvania, September 12-15, 2005.

50. W. D. Kulatilaka, R. P. Lucht, and T. B. Settersten, "Investigation of Two-Color Polarization Spectroscopy (TC-PS) and Two-Color Six-Wave Mixing (TC-SWM) of Atomic Hydrogen," Paper 05F-3, presented and the 2005 Fall Western States Section Meeting of the Combustion Institute, Stanford, California, October 17-18, 2005.

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62. C. C. Tseng, W. D. Kulatilaka, A. H. Bhuiyan, C. L. Merkle, and R. P. Lucht, "Laser Imaging of Transient Injection and Mixing in a Simulated Rocket Chamber," AIAA Paper No. 2007-

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67. R. P. Lucht, P. J. Kinnius, S. Roy, and J. R. Gord, "Femtosecond Coherent Anti-Stokes Raman Scattering Measurement of Gas-Phase Species and Temperature," 2008 Conference on Lasers and Electro-Optics and Quantum Electronics and Laser Science Conference, Volumes 1-9, 1469-1470 (2008).

68. Dmytro M.Voytovych, Charles L. Merkle, Robert P. Lucht, "Numerical Simulation of Mixing Between Established Gas Flow and Start-up Injected Gas Inside a Chamber," 44th AIAA/ASME/SAE/ASEE Joint Propulsion Conference & Exhibit, Hartford, CT, 21 - 23 July 2008.

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69. N. Chai, A. Satija, S. V. Naik, R. P. Lucht, N. M. Laurendeau, S. Roy, and J. R. Gord, "Vibrational and Pure Rotational Electronic-Resonance-Enhanced (ERE) Coherent Anti-Stokes Raman Scattering (CARS) Spectroscopy of Nitric Oxide," Paper AIAA-2009-0526, presented at the 47th Aerospace Sciences Meeting, Orlando, Florida, January 5-8, 2008.

70. D. R. Richardson, R. P. Lucht, S. Roy, and J. R. Gord, "Single-Pulse Femtosecond Coherent Anti-Stokes Raman Scattering (CARS) Spectroscopy for Temperature Measurements at Data Rates of 1 kHz," Paper AIAA-2009-0527, presented at the 47th Aerospace Sciences Meeting, Orlando, Florida, January 5-8, 2009.

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73. N. Chai, A. Satija, S. V. Naik, R. P. Lucht, N. M. Laurendeau, S. Roy, and J. R. Gord, "Vibrational and Pure Rotational Electronic-Resonance-Enhanced (ERE) Coherent Anti-Stokes Raman Scattering (CARS) Spectroscopy of Nitric Oxide," Paper 32A2, presented at the 6th U. S. National Combustion Meeting, Anna Arbor, Michigan, May 17-20, 2009.

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75. A. K. Patnaik, S. Roy, J. R. Gord, R. P. Lucht, and T. B. Settersten, "Parametric Study on the Effects of Collisions on Electroni-Resonance-Enhanced Coherent Anti-Stokes Raman Scattering (ERE-CARS) of NO," Paper NFB1, presented at the Optical Society Topical Meeting on Nonlinear Optics, Honolulu, Hawaii, July12-17, 2009.

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80. A. H. Bhuiyan, S. V. Naik, R. P. Lucht, B. DeBlauw, and G. Elliott, "High-Spectral-Resolution PLIF of Compressible Flows and Plasmas," Paper AIAA-2010-1408, presented at the 48th Aerospace Sciences Meeting, Orlando, Florida, January 4-7, 2010.

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82. A. Satija, D. S. Bangar, S. V. Naik, N. M. Laurendeau, R. P. Lucht, S. Roy, and J. R. Gord, "Combustion Measurements in a Counter-Flow Burner and Progress Towards Vibrational ERE CARS Measurements in High-Pressure Flames," Paper AIAA-2011-935, presented at the 49th Aerospace Sciences Meeting, Orlando, Florida, January 4-7, 2011.

83. R. P. Lucht, D. R. Richardson, W. D. Kulatilaka, S. Roy, and J. R. Gord, "Concentration Measurements in CO/N2 and Ar/N2 Gas Mixtures Using Femtosecond Coherent Anti-Stokes Raman Scattering," Paper AIAA-2011-933, presented at the 49th Aerospace Sciences Meeting, Orlando, Florida, January 4-7, 2011.

84. M. P. Thariyan, A. H. Bhuiyan, S. V. Naik, R. P. Lucht, and J. P. Gore, "Temperature and CO2 Concentration Measurements in a High-Pressure, Lean Direct Injector Combustor using Dual-Pump Coherent Anti-Stokes Raman Scattering (DP-CARS)," Paper 2E-15, presented at the 7th US National Combustion Meeting, Atlanta, Georgia, March 20-23, 2011.

85. Kevin Y. Cho, Trevor D. Hedman, A;. Satija, R. P. Lucht, S. F. Son, T. L. Pourpoint, "High Repetition Rate OH Planar Laser Induced Fluorescence of Gelled Propellant Droplet," Paper 3D-06, presented at the 7th US National Combustion Meeting, Atlanta, Georgia, March 20-23, 2011.

86. A. Satija, P. P. Panda, Y. Wagh, S. V. Naik, J. P. Gore, and R. P. Lucht, " Characterization of Counter-flow Methane-Air and Hydrogen-Air Flames using Stereo Particle Image Velocimetry (SPIV) and Coherent Anti-Stokes Raman Scattering (CARS)," Paper 2E-18, presented at the 7th US National Combustion Meeting, Atlanta, Georgia, March 20-23, 2011.

87. R. P. Lucht, D. R. Richardson, D. Bangar, A. H. Bhuiyan, A. Satija, and S. V. Naik, "Recent Progress in Nonlinear Optical Techniques for Species and Temperature Measurements," presented at the Sixth Australian Conference on Laser Diagnostics in Fluid Mechanics and Combustion Canberra, Australia, 5–7 December, 2011.

Conference Papers in Proceedings - 2012

88. R. P. Lucht, D. R. Richardson, W. D. Kulatilaka, S. Roy, and J. R. Gord, "Advances in Single-Laser-Shot Femtosecond Coherent Anti-Stokes Raman Scattering Concentration and Temperature Measurements," Paper AIAA-2012-0992, presented at the 50th Aerospace Sciences Meeting, Nashville, TN, 9-12 January, 2012.

89. D. R. Richardson, D. Bangar, and R. P. Lucht, "Nonresonant Background Suppression in FemtosecondCoherent Anti-Stokes Raman Scattering for Flame Thermometry at 5000 Hz," Paper LW3B.6, presented at the 2012 Laser Applications to Chemical, Security and Environmental Analysis (LACSEA) Topical Meeting, San Diego, CA, 29 January-1 February, 2012.

90. A.H. Bhuiyan, A. Satija, S.V. Naik, and R.P. Lucht, "High-Spectral-Resolution Two-Photon Pump Polarization Spectroscopy Probe Technique for H-atom Detection," Paper LW5B.6, presented at the 2012 Laser Applications to Chemical, Security and Environmental Analysis (LACSEA) Topical Meeting, San Diego, CA, 29 January-1 February, 2012.

Conference papers acknowledging support from U.S. Department of Energy, Division of Chemical Sciences, Geosciences and Biosciences under Grant No. DE-FG02-03ER15391 are highlighted with red font and with the symbols ***** at the end.

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91. W. Lamont, A. Satija, M. Roa, and R. P. Lucht, "Dual-Pump Coherent Anti-Stokes Raman Scattering System for Temperature and H_2/N_2 Measurements in a Reactive Flow Field," Paper AIAA-2013-0334, presented at the 51st Aerospace Sciences Meeting, Grapevine, TX, 7-10 January, 2013.

92. D. Bangar, D. R. Richardson, and R. P. Lucht, "Flame Thermometry and Concentration Measurements at 5 kHz Using Femtosecond Coherent Anti-Stokes Raman Scattering," Paper AIAA-2013-0336, presented at the 51st Aerospace Sciences Meeting, Grapevine, TX, 7-10 January, 2013.

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