ARCHIVAL PUBLICATIONS:

67. "Three-dimensional tracking of a single fluorescent nanoparticle using four-focus excitation in a confocal microscope," J.A. Germann, L.M. Davis, Optics Express, 22, 5641-5650 (2014). http://www.opticsinfobase.org/oe/abstract.cfm?URI=oe-22-5-5641&origin=search

66. "Three-dimensional anti-Brownian electrokinetic trapping of a single nanoparticle in solution," J.K. King, B.K. Canfield, L.M. Davis, Applied Physics Letters 103, 043102 (2013); DOI: 10.1063/1.4816325.
http://apl.aip.org/resource/1/applab/v103/i4/p043102_s1?ver=pdfcov

65. "Microfluidic cell sorter for use in developing red fluorescent proteins with improved photostability," L.M. Davis, J.L. Lubbeck, K.M. Dean, A.E. Palmer, R. Jimenez, Lab on a Chip 13, 2320–2327 (2013); DOI: 10.1039/c3lc50191d.
http://pubs.rsc.org/en/content/articlelanding/2013/lc/c3lc50191d

64. "Nanostructures from laser-ablated nanohole templates," W.H. Hofmeister, A.Y. Terekhov, J.L. Vasconcelos da Costa, K.S. Lansford, D. Rajput, L.M. Davis, US Patent Application, Number 13/769,575; February 18, 2013.

63. "Line-Focus for Femtosecond Laser Machining," L.M. Davis, U.S. Provisional Patent Application Number 61/639,644; filed 27 April, 2012.

62. "Ultra-high aspect ratio nanostructures from laser-ablated nanoholes," W.H. Hofmeister, A.Y. Terekhov, J.L. Vasconcelos da Costa, K.S. Lansford, D. Rajput, L.M. Davis, US Provisional Patent Application, U.S. Patent Office Serial No.: 61/599,926, filed February 16, 2012.

61. "Optically integrated microfluidic cytometers for high throughput screening of photophysical properties of cells or particles," A.E. Palmer, R. Jimenez, K.M. Dean, J.L. Lubbeck, L.M. Davis, U.S. Patent Application Number 61/437,562; 28 January, 2012.

60. "Real-time analysis of multi-laser beam fluorescence for control of laser trapping forces in a microfluidic cell-sorting device," L.M. Davis, J.L. Lubbeck, K.M. Dean, A.E. Palmer, R. Jimenez, Proceedings of SPIE 8412, 8412-40, 1-7 (2012).

59. "Ultrasensitive fluorescence correlation spectroscopy of highly parallelized microfluidic devices," B.K. Canfield, J.K. King, W.N. Robinson, W.H. Hofmeister, S.A Soper and L.M. Davis, in Single Molecule Spectroscopy and Superresolution Imaging V, ed. by Jörg Enderlein, Zygmunt K. Gryczynski, Rainer Erdmann, Felix Koberling, Ingo Gregor, Proceedings of SPIE 8228, 8228-17, 1-9 (2012).

58. "Single-nanocrystal spectroscopy of white-light emitting CdSe nanocrystals," A.D. Dukes, P.C. Samson, J.D. Keene, L.M. Davis, J.P. Wikswo, S.J. Rosenthal, J. Phys. Chem. A 115, 4076–4081 (2011); Article ASAP (February 22, 2011); dx.doi.org/10.1021/jp1109509
http://pubs.acs.org/doi/abs/10.1021/jp1109509

57. "Ligase detection reaction generation of reverse molecular beacons for near real-time analysis of bacterial pathogens using single-pair fluorescence resonance energy transfer and a cyclic olefin copolymer microfluidic chip," Z. Peng, S.A. Soper, M.R. Pingle, F. Barany and L.M. Davis,

Analytical Chemistry 82, 9727–9735 (2010); DOI: 10.1021/ac101843n. http://pubs.acs.org/doi/abs/10.1021/ac101843n

56. "Simulations for guiding the delivery and trapping of single biomolecules in a nanofluidic device," L.M. Davis and W.N. Robinson, in Photonics North 2010, ed. by Henry P. Schriemer and Rafael N. Kleiman, Proceedings of SPIE 7750, 7750-30, 1-10 (2010). http://dx.doi.org/10.1117/12.871823

55. "Simulation of single-molecule trapping in a nanochannel," W.N. Robinson and L.M. Davis, J. Biomed. Opt. 15, 045006 (2010); doi:10.1117/1.3477320. http://dx.doi.org/10.1117/1.3477320

54. "Four-focus single-particle position determination in a confocal microscope," L.M. Davis, B.K. Canfield, J.A. Germann, J.K. King, W.N. Robinson, A.D. Dukes III, S.J. Rosenthal, P.C. Samson, and J.P. Wikswo, in Single Molecule Spectroscopy and Imaging III, ed. by J. Enderlein, Z.K. Gryczynski, R. Erdmann, Proceedings of SPIE 7571, 7571-36, 1-10 (2010). http://dx.doi.org/10.1117/12.842572

53. "Cross-talk free dual-color fluorescence cross-correlation spectroscopy (FCCS) for the study of enzyme activity," W. Lee, Y.-I. Lee, J. Lee, L.M. Davis, P. Deininger, and S.A. Soper, Analytical Chemistry 82, 1401–1410 (2010); DOI: 10.1021/ac9024768 http://pubs.acs.org/doi/abs/10.1021/ac9024768

52. "Single-pair fluorescence resonance energy transfer (spFRET) for the high sensitivity analysis of low-abundance proteins using aptamers as molecular recognition elements," W. Lee, A. Obubuafo, Y.-I. Lee, L.M. Davis, and S.A. Soper, Journal of Fluorescence 20, 203-213 (2009); DOI 10.1007/s10895-009-0540-5 http://www.springerlink.com/content/329512174910t132/?p=aa86d2f7fe5145f8b349a05a43071c58&pi=0

51. "Single-molecule diffusion coefficient estimation by image analysis of simulated CCD images to aid high-throughput screening", P. Song, L.M. Davis, and G. R. Bashford, in Proceedings of the 31st Annual International Conference of the IEEE Engineering in Medicine and Biology Society, pp. 1396-1399 (2009). http://ieeexplore.ieee.org/xpl/freeabs_all.jsp?arnumber=5334157

50. "Coupling confocal fluorescence microscopy and microfluidic device for single molecule detection," G. Shen, B. Chang, B.D. Dickerson, X. Li, and L.M. Davis, in Microfluidics, BioMEMS, and Medical Microsystems VII, ed. by W. Wang, Proceedings of SPIE 7202, 7207H, 1-9 (2009). http://spie.org/x648.html?product_id=807962

49. "Triplet-state investigations of fluorescent dyes at dielectric interfaces using total internal reflection fluorescence correlation spectroscopy," H. Blom, A. Chmyrov, K. Hassler, L.M. Davis, and J. Widengren, J. Phys. Chem A, 113, 5554-5566 (2009). http://pubs.acs.org/doi/abs/10.1021/jp8110088

48. "Single-pulse ultrafast-laser machining of high aspect nano-holes at the surface of SiO2," Y.V. White, X. Li, Z. Sikorski, L.M. Davis, and W. Hofmeister, Optics Express 16, 14411-14420 (2008). http://www.opticsinfobase.org/abstract.cfm?URI=oe-16-19-14411

47. "Electrokinetic delivery of single fluorescent biomolecules in fluidic nanochannels," L.M. Davis, B.K. Canfield, X. Li, W.H. Hofmeister, I.P. Lescano-Mendoza, B.W. Bomar, J.P. Wikswo, D.A. Markov, P.C. Samson, C. Daniel, Z. Sikorski, and W. Robinson, in Biosensing, ed. by M. Razeghi and H. Mohseni, Proceedings of SPIE 7035, 70350A, 1-12 (2008). http://spie.org/x648.html?product_id=798173

46. "Femtosecond micro- and nano-machining of materials for microfluidic applications," Y.V. White, M. Parrish, X. Li, L.M. Davis, W. Hofmeister, in Nanoengineering: Fabrication, Properties, Optics, and Devices V, ed. by E.A. Dobisz and L.A. Eldada, Proceedings of SPIE 7039, 70390J, 1-10 (2008). http://spie.org/x648.html?product_id=799855

45. "Engineering the collected field for single-molecule orientation determination," Z. Sikorski and L.M. Davis, Optics Express 16, 3660-3673 (2008). http://www.opticsinfobase.org/oe/abstract.cfm?uri=oe-16-6-3660

44. "Maximum-likelihood position sensing and actively controlled electrokinetic transport for single-molecule trapping," L. Davis, Z. Sikorski, W. Robinson, G. Shen, X. Li, B. Canfield, I. Lescano, B. Bomar, W. Hofmeister, J. Germann, J. King, Y. White, and A. Terekhov, in Single-molecule spectroscopy and imaging, ed. by J. Enderlein, Z.K. Gryczynski, R. Erdmann, Proceedings of SPIE 6862, 68620P, 1-10 (2008). http://spie.org/x648.html?product_id=763833

43. "Fabrication and characterization of nanofluidics device using fused silica for single protein molecule detection," X. Li, W. Hofmeister, G. Shen, L.M. Davis, and C. Daniel, in Medical Device Materials IV (Proceedings of Materials and Processes for Medical Devices 2007) , ed. by J. Gilbert, ASM International, 2008, pp. 145-150 (2008). http://www.asminternational.org/portal/site/www/menuitem.2b9d1953d012ee1480a3c01026e110a0?vgnextoid=600ddcc513347210VgnVCM100000621e010aRCRD&itemId=cp2007mpmd145

42. "Extension of multidimensional microscopy to ultrasensitive applications with maximum-likelihood analysis," L. M. Davis and G. Shen, in Three-Dimensional and Multidimensional Microscopy: Image Acquisition and Processing XIV, ed. by J.-A. Conchello, C.J. Cogswell, T. Wilson, Proceedings of SPIE 6443, 64430N, 1-12 (2007). http://spie.org/x648.html?product_id=702217

41. "Engineering of illumination and collection field profiles for single-molecule orientational imaging," Z. Sikorski and L.M. Davis, in Complex Light and Optical Forces, ed. by D.L. Andrews, E.J. Galvez, G. Nienhuis, Proceedings of SPIE 6483, 64830K, 1-12 (2007). http://spie.org/x648.html?product_id=702272

40. "Single-molecule detection with axial flow into a micrometer-sized capillary," D.A. Ball, G. Shen, and L.M. Davis, Applied Optics 46, 1157-1164 (2007). http://www.opticsinfobase.org/abstract.cfm?uri=ao-46-7-1157

39. "Accounting for triplet and saturation effects in fluorescence correlation spectroscopy measurements," L.M. Davis and G.Q. Shen, Current Pharmaceutical Biotechnology 7, 287-301 (2006). [Invited paper] http://www.ncbi.nlm.nih.gov/pubmed/16918405

38. “Saturation effects in fluorescence correlation spectroscopy," L.M. Davis, G.Q. Shen, and D.A. Ball, paper 5700-25, in Multiphoton Microscopy in the Biomedical Sciences, ed. by A. Periasamy, P.T.C. So, Proceedings of SPIE 5700, 128-137 (2005).
http://spie.org/x648.html?product_id=591099

37. “Data reduction methods for application of fluorescence correlation spectroscopy to pharmaceutical drug discovery,” L.M. Davis, P.E. Williams, D.A. Ball, E.D. Matayoshi, and K.M. Swift, Current Pharmaceutical Biotechnology 4, 451-462 (2003); 5, 481-481 (2004). [Invited paper in Edition titled The way down from single genes, and proteins to single molecules].
http://www.ncbi.nlm.nih.gov/pubmed/14683437

36. “Dealing with reduced data acquisition times in fluorescence correlation spectroscopy for HTS applications,” L.M. Davis, D.A. Ball, P.E. Williams, E.D. Matayoshi, and K.M. Swift, in Microarrays and Combinatorial Technologies for Biomedical Applications, ed. by D.V. Nicolau and R. Raghavachari, Proceedings of SPIE 4966, 117-128 (2003).
http://spie.org/x648.html?product_id=477780

35. “Method for detection of incorporation of a nucleotide onto a nucleic acid primer,” L.M. Davis, US Patent application publication No. 10/059,754 (2002).
http://www.freepatentsonline.com/y2002/0102595.html

34. “Methods for detecting interaction of molecules with surface-bound reagents,” L.M. Davis, US Patent application publication No. 10/066,074 (2002).
http://www.freepatentsonline.com/y2002/0102596.html

33. “Multiplexed analysis using time-resolved near-IR fluorescence for the detection of genomic material,” W.J. Stryjewski, S.A. Soper, S. Lassiter, and L.M. Davis, in Biomedical Nanotechnology Architectures and Applications, ed. by D.J. Bornhop, D.A. Dunn, R.P. Mariella, Jr., C.J. Murphy, D.V. Nicolau, Sr., S. Nie, M. Palmer, R. Raghavachari, Proceedings of SPIE 4626, 201-209 (2002).
http://spie.org/x648.html?product_id=472082

32. “Imaging of single-chromophore molecules in aqueous solution near a fused-silica interface,” L.M. Davis, W.C. Parker, D.A. Ball, J.G.K. Williams, G.R. Bashford, P. Sheaff, R. Eckles, D.T. Lamb, and L.R. Middendorf, in Multiphoton Microscopy in the Biomedical Sciences, ed. by A. Periasamy, P.T.C. So, Proceedings of SPIE 4262, 301-311 (2001).
http://spie.org/x648.html?product_id=424568

31. “Increased throughput DNA sequencing by spectroscopically resolving the contributions of different fluorescent dyes,” L.M. Davis and L.R. Middendorf, US Patent application publication No. 09/688,178 (2000).

30. “Analysis of ultrasensitive fluorescence experiments,” L.M. Davis, Y. Sun, and B. Whitehead, in Advances in Fluorescence Sensing Technology IV, ed. by J.R. Lakowicz, S.A. Soper, R.B. Thompson, Proceedings of SPIE 3602, 379-390 (1999).
http://spie.org/x648.html?product_id=347537

29. “Computer simulation of gene detection without PCR by single molecule detection,” L.M. Davis, J.G.K. Williams, and D.T. Lamb, in Biomedical Sensors, Fibers, and Optical Delivery Systems, ed. by F. Baldini, N.I. Croitoru, M. Frenz, I. Lundstrom, M. Miyagi, R. Pratesi, O.S. Wolfbeis, Proceedings of SPIE 3570, 282-293 (1999).

http://spie.org/x648.html?product_id=336943

28. "Avalanche detector with ultra-clean response for time-resolved photon counting,'' A. Spinelli, M. Ghioni, S. Cova, and L.M. Davis, IEEE Journal of Quantum Electronics, 34, 817-821 (1998). http://ieeexplore.ieee.org/xpl/freeabs_all.jsp?arnumber=668769

27. "Monte Carlo simulation of a single molecule detection experiment," D.H. Bunfield and L.M. Davis, Applied Optics 37, 2315-2326 (1998). http://www.opticsinfobase.org/abstract.cfm?URI=ao-37-12-2315

26. "Counting single chromophore molecules for ultrasensitive analysis and separations on microchip devices," J.C. Fister III, S.C. Jacobson, L.M. Davis, and J.M. Ramsey, Analytical Chemistry 70, 431-437 (1998). http://pubs.acs.org/doi/abs/10.1021/ac9707242

25. "Actively quenched single photon avalanche diode for high repetition rate time-gated photon counting," A. Spinelli, L.M. Davis, and H. Dautet, Review of Scientific Instruments 67, 55-61 (1996). http://ieeexplore.ieee.org/xpl/freeabs_all.jsp?arnumber=668769

24. "Rapid and efficient detection of single chromophore molecules in aqueous solution," L.Q. Li and L.M. Davis, Applied Optics 34, 3208-3217 (1995). http://www.opticsinfobase.org/abstract.cfm?uri=ao-34-18-3208

23. "Ultrasensitive sub-nanosecond time-gated detection using a single photon avalanche diode," L.M. Davis and L.Q. Li, in Applications of Photonic Technology, ed. by G.A. Lampropoulos, J. Chrostowski, and R.M. Measures, pp. 483-488, Plenum, New York and London (1995).

22. "Interference fringes between two separate lasers – Comment," L.M. Davis and C. Parigger, American Journal of Physics 62, 951-952 (1994). http://ajp.aapt.org/resource/1/ajpias/v62/i10/p951_s1?isAuthorized=no

21. "The photophysical constants of several fluorescent dyes pertaining to ultrasensitive fluorescence spectroscopy," S.A. Soper, E.B. Shera, L.M. Davis, H.L. Nutter, and R.A. Keller, Photochemistry and Photobiology 57, 972-977 (1993). http://onlinelibrary.wiley.com/doi/10.1111/j.1751-1097.1993.tb02957.x/abstract

20. "Single photon avalanche-diode for single-molecule detection," L.Q. Li and L.M. Davis, Review of Scientific Instruments 64, 1524-1529 (1993). http://rsi.aip.org/resource/1/rsinak/v64/i6/p1524_s1?isAuthorized=no

19. "Picosecond resolved evolution of laser breakdown in gases," L.M. Davis, L.Q. Li, and D.R. Keefer, Journal of Physics D: Applied Physics 26, 222-230 (1993). http://iopscience.iop.org/0022-3727/26/2/009

18. "Evaluation of nonlinear figure of merit for organic polymers at optical frequencies," L.M. Davis, Unclassified report for The Research, Development and Engineering Center, U.S. Army Missile Command, Contract No. DAAL03-91-C-0034, TCN Number 92-379 (1992).

17. "Single molecule spectroscopy in solution," S.A. Soper, L.M. Davis, and E.B. Shera, Los Alamos Science 20, 286-296 (1992).

16. “Rapid DNA sequencing based on single-molecule detection,” L.M. Davis, F.R. Fairfield, M.L. Hammond, C.A. Harger, J.H. Jett, R.A. Keller, J.H. Hahn, L.A. Krakowski, B. Marrone, J.C. Martin, H.L. Nutter, R.R. Ratliff, E.B. Shera, D.J. Simpson, S.A. Soper, and C.W. Wilkerson, Los Alamos Science 20, 280-285 (1992).

15. “Detection and identification of single molecules in solution,” S.A. Soper, L.M. Davis, and E.B. Shera, Journal of the Optical Society of America B: Optical Physics 9, 1761-1769 (1992). http://www.opticsinfobase.org/abstract.cfm?uri=josab-9-10-1761

14. “Use of streak camera for time resolved photon counting fluorimetry,” L.M. Davis and C. Parigger, Measurement Science & Technology 3, 85-90 (1992). http://iopscience.iop.org/0957-0233/3/1/012

13. “Rapid sequencing of DNA based on single molecule detection,” S.A. Soper, L.M. Davis, F.R. Fairfield, M.L. Hammond, C.A. Harger, J.H. Jett, R.A. Keller, B.A. Marrone, J.C. Martin, H.L. Nutter, E.B. Shera, and D.J. Simpson, in Optical Methods for Ultrasensitive Detection and Analysis: Techniques and Applications, ed. by B.L. Fearey, Proceedings of SPIE 1435, 168-178 (1991). http://spie.org/x648.html?product_id=44241

12. “Rapid DNA sequencing based upon single molecule detection,” L.M. Davis, F.R. Fairfield, J.H. Hahn, C.A. Harger, J.H. Jett, R.A. Keller, L.A. Krakowski, B.A. Marrone, J.C. Martin, H.L. Nutter, R.L. Ratliff, E.B. Shera, D.J. Simpson, and S.A. Soper, Genetic Analysis – Biomolecular Engineering 8, 1-7 (1991). http://www.ncbi.nlm.nih.gov/pubmed/2043380

11. “Laser treatment,” J.R. Forwood and L.M. Davis, U.S. Patent 07/551,100 Granted by U.S. Dept of Commerce (1991).

10. “Detection of single fluorescent molecules,” E.B. Shera, N.K. Seitzinger, L.M. Davis, R.A. Keller, and S.A. Soper, Chemical Physics Letters 174 (6), 553-557 (1990). http://linkinghub.elsevier.com/retrieve/pii/000926149085485U

9. “Picosecond laser measurements in non-linear optical materials,” L.M. Davis, Unclassified report for Department of the Army Scientific Services Program, DAAL03-86-D-001, 1039, (1989).

8. “Einstein-Podolsky-Rosen and Bell's inequality experiments using time and frequency,” L.M. Davis, Physics Letters A 140, 275-279 (1989).

7. “Atomic response to bichromatic crossed beam fields,” W.M. Ruyten, L.M. Davis, C. Parigger, and D.R. Keefer, in Advances in Laser Sciences-III, ed. by A.C. Tam, J.O. Gole, W.C. Stwalley. American Institute of Physics Proceedings 172, 155-157 (1988).

6. “Interference between resolvable wavelengths with single photon resolved detection,” L.M. Davis, Physical Review Letters 60, 1258-1261 (1988).

5. “An experimental investigation of the probe volume of a laser velocimeter,” L.M. Davis, L.M. Smith, and D.R. Keefer, in High Speed Photography, Videography and Photonics V, ed. by H. Johnson, Proceedings of SPIE 832, 83-87 (1987).

4. "An in situ method for detection of lipid peroxidation effects," T. Alvager and L.M. Davis, in Prostaglandin and Lipid Metabolism in Radiation Injury, ed. by T.L. Walden Jr., H.N. Hughes, pp. 387-391, Plenum Press, New York (1987).

3. "Electron-donor properties of the anti-tumor drug amsacrine as studied by fluorescence quenching of DNA-bound ethidium," L.M. Davis, B.C. Baguley, and J.D. Harvey, Chemico- Biological Interactions 62, 45-58 (1987).

2. "Rate-equation simulation of a synchronously pumped dye-laser," L.M. Davis, J.D. Harvey, and J.M. Peart, Optics Communications 50, 49-55 (1984).

1. "Thermal hysteresis in acoustic resonators," L.W. Casperson, L.M. Davis, and J.D. Harvey, Journal of the Acoutical Society of America 71, 1412-1416 (1982).

CONFERENCE PRESENTATIONS:

153. "Microfluidic cell-sorter measures fluorescence lifetime, photobleaching, and brightness for use in developing improved red fluorescent proteins," L.M. Davis, KM. Dean, P. Manna, J.L. Lubbeck, A.E. Palmer, R. Jimenez, 9th International Weber Symposium on Innovative Fluorescence Methodologies in Biochemistry and Medicine, Lihue, HI, June 15–20, 2014.

152. "Microfluidic flow cytometer for multiparameter screening of fluorophore photophysics," KM. Dean, L.M. Davis, J.L. Lubbeck, P. Manna, A.E. Palmer, R. Jimenez, Conference on Lasers and Electro Optics (CLEO), San Jose, CA, June 8–13, 2014.

151. "Single-molecule fluorescence in micro-/nano-fluidic devices & femtosecond laser microfabrication," L.M. Davis, iBME Annual Meeting, University of Tennessee Knoxville, TN, April 21–22, 2014.

150. "Feedback-driven tracking and trapping of a single fluorescent nanoparticle in a confocal microscope," L.M. Davis, J.A. Germann, J.K. King, and B.K. Canfield, Annual Meeting of American Physical Society, Denver, CO, March 3–7, 2014.

149. "Exceptionally high aspect ratio micromachining with single femtosecond laser pulses," B.K. Canfield, T.S. Bowman, A. Terekhov, L. Costa, D. Rajput, W.H. Hofmeister, and L.M. Davis, Annual Meeting of American Physical Society, Denver, CO, March 3–7, 2014.

148. "Imaging and pump-probe studies of femtosecond laser ablation of fused silica," T.S. Bowman, B.K. Canfield and L.M. Davis, Annual Meeting of American Physical Society, Denver, CO, March 3–7, 2014.

147. "Capabilities for measuring the diffusivity of a single molecule by recycling it in a nanochannel," B. Wang and L.M. Davis, Annual Meeting of American Physical Society, Denver, CO, March 3–7, 2014.

146. "Three-dimensional tracking and trapping of single emitters in a confocal fluorescence microscope," J.A. Germann, J.K. King, B.K. Canfield and L.M. Davis, Invited Presentation, The 17th Annual Southeast Ultrafast Conference (SEUFC), Baton Rouge, LA, January 9-10, 2014.

145. “Using single femtosecond laser pulses to micromachine exceptionally high aspect ratio features,” B.K. Canfield, T.S. Bowman, A. Terekhov, W.H. Hofmeister, and L.M. Davis, The 17th Annual Southeast Ultrafast Conference (SEUFC), Baton Rouge, LA, January 9-10, 2014.

144. “Studies of temporal dynamics of single-pulse femtosecond laser materials interactions in fused silica,” T.S. Bowman, B.K. Canfield and L.M. Davis, The 17th Annual Southeast Ultrafast Conference (SEUFC), Baton Rouge, LA, January 9-10, 2014.

143. “Single-molecule recycling in a nanochannel,” B. Wang and L.M. Davis, The 17th Annual Southeast Ultrafast Conference (SEUFC), Baton Rouge, LA, January 9-10, 2014.

142. “Ultrasmall quantum dots as a potential source of white-light single photons,” L.M. Davis, N.J. Orfield, S. Rosenthal, Single PhotonWorkshop 2013, Oak Ridge National Laboratory, Oak Ridge, TN, October 15-18, 2013.

141. “Multiparametric Microfluidic Flow Cytometry,” KM. Dean, L.M. Davis, J.L. Lubbeck, P. Manna, R. Jimenez, A.E. Palmer, at “Seeing Is Believing—Imaging the Processes of Life”, EMBO/EMBL Symposia, European Molecular Biology Laboratory, Heidelberg, Germany, October 3-6, 2013. (The European Molecular Biology Laboratory is Europe's flagship laboratory for basic research in molecular biology. It is supported by 20 European countries and Australia as associate member state.)

140. “Anti-Brownian Electrokinetic Trapping of Single Nanoparticles in Solution,” J.K. King, J.A. Germann, L.M. Davis, TN-SCORE Annual Conference, Nashville Airport Marriott, Nashville, TN, June 10-11, 2013.

139. “Ultrasensitive spectroscopy of ultrasmall quantum dots for energy conversion and lighting applications,” L.M. Davis, N.J. Orfield, S. Rosenthal, Annual Meeting of American Physical Society, Baltimore, MD, March 18–22, 2013.

138. “Femtosecond laser fabrication of micro/nano-channel array devices for parallelized fluorescence detection,” B.K. Canfield, W.H. Hofmeister, L.M. Davis, Annual Meeting of American Physical Society, Baltimore, MD, March 18–22, 2013.

137. “Electrokinetic device for three-dimensional trapping of single fluorescent emitters,” J.K. King, B.K. Canfield, L.M. Davis, Annual Meeting of American Physical Society, Baltimore, MD, March 18–22, 2013.

136. “Sub-diffraction position determination with four laser diodes for tracking/trapping a single molecule,” J.A Germann, B.K Canfield, J.K King, L.M Davis, Annual Meeting of American Physical Society, Baltimore, MD, March 18–22, 2013.

135. “Pump-probe experiments of single-pulse femtosecond laser plasma-channel formation in fused silica,” T. Bowman, B. Canfield, L.M. Davis, Annual Meeting of American Physical Society, Baltimore, MD, March 18–22, 2013.

134. “FPGA for single-molecule recycling in a nanochannel,” S. Behery, B. Wang, B. Canfield, L.M. Davis, Annual Meeting of American Physical Society, Baltimore, MD, March 18–22, 2013.

133. "Single emitter localization using a four-focus confocal fluorescence microscope," J.A. Germann, B.K. Canfield, L.M. Davis, Annual Meeting of the South East Section of the American Physical Society, Tallahassee, FL, November 14–17, 2012.
http://hadron.physics.fsu.edu/SESAPS12/SESAPS-2012_Bulletin.pdf

132. "Electrokinetic trapping of a single fluorescent nanobead," J.K. King, B.K. Canfield, L.M. Davis, Annual Meeting of the South East Section of the American Physical Society, Tallahassee, FL, November 14–17, 2012.
http://hadron.physics.fsu.edu/SESAPS12/SESAPS-2012_Bulletin.pdf

131. "Single-pulse femtosecond laser fabrication of high-aspect sub-micron structures in transparent substrates," L.M. Davis, B.K. Canfield, L. Costa, D. Rajput, W. Hofmeister, A. Terekhov, Japan Society of Applied Physics-Optical Society of America Joint Symposium 2012, Ehime University / Matsuyama University, Japan, September 11-14, 2012.
http://www.gakkai-web.net/gakkai/jsap/pro/english/index.html

130. "Counteracting Brownian diffusion in three dimensions for prolonged observations of freely diffusing single fluorescent nanoparticles," L.M. Davis, J.A. Germann, J.K. King, B.K. Canfield, Japan Society of Applied Physics-Optical Society of America Joint Symposium 2012, Ehime University / Matsuyama University, Japan, September 11-14, 2012.
http://www.gakkai-web.net/gakkai/jsap/pro/english/index.html

129. "Femtosecond Laser Micro-/Nano-machining of Holes and Lines in Fused Silica," B.K. Canfield, L. Costa, D. Rajput, A. Terekhov, W.H. Hofmeister and L.M. Davis, 2012 Center for Nanophase Materials Science User Meeting, Chestnut Ridge Campus of Oak Ridge National Laboratory, Oak Ridge, Tennessee, September 14, 2012.
http://cnms.ornl.gov/workshops/2012/AbstractBook_CNMS2012.pdf

128. "Ultrasensitive microscope for nanoparticle studies," L.M. Davis, TN-SCORE Annual Conference, Vanderbilt Marriott, Nashville, TN, June 15, 2012.

127. "Real-time analysis of multi-laser-beam fluorescence for timed control of laser tweezers in a microfluidic cell-sorting device," L.M. Davis, J.L. Lubbeck, K.M. Dean, A.E. Palmer, R. Jimenez, International Conference on Application of Photonic Technology, Photonics North, Montreal, Canada, June 6–8, 2012.

126. "Spectroscopy on cells: an instrument for directed evolution of the excited-state dynamics of fluorescent proteins," J.L. Lubbeck, K.M. Dean, L.M. Davis, A.E. Palmer, R. Jimenez, 8-th Asia-Pacific Laser Symposium, Huangshan City, China, May 27–30, 2012.(Invited)
http://apls2012.siom.ac.cn/dct/page/65580

125. "Three-dimensional Tracking and Trapping of Fluorescent Particles," Jason King, James Germann, Brian Canfield, Lloyd M. Davis, Poster Presentation at Huntsville Electro-Optical Society annual meeting ($500 1st prize for student posters), Huntsville, AL, April 20, 2012.

124. "Microfluidic cytometer for simultaneous high-throughput screening of fluorescent proteins on the basis of fluorescence lifetime, photostability, and brightness," J.L. Lubbeck, K.M. Dean, L.M. Davis, A.E. Palmer, R. Jimenez, Biophysical Society 56th annual meeting, San Diego, CA, February 25–29, 2012;

http://www.abstractsonline.com/Plan/ViewAbstract.aspx?sKey=cce919a1-a8bd-46d8-aa80-4bf67fedea50&cKey=1b18c094-928e-4cbb-87e9-67d80c749d4f&mKey=%7b5B4BAD87-5B6D-4994-84CE-B3B13E2AEAA3%7d

123. "Ultrasensitive fluorescence correlation spectroscopy of highly parallelized microfluidic devices," B.K. Canfield, J.K. King, W.N. Robinson, W.H. Hofmeister, S.A Soper and L.M. Davis, SPIE BIOS 2012, International Symposium on Biomedical Optics, San Jose, CA, January 21–26, 2012; Proceedings of SPIE 8228, 8228-17, 1-9 (2012).

122. "Rapid fabrication of long nanochannels with a single femtosecond laser pulse focused to a line," L.M. Davis, A. Terekhov, K. Lansford, J. Bradfield, C. Rohde, M.C. Simpson, B. Wright, Annual Meeting of the South East Section of the American Physical Society, Roanoke, Virginia, October 19-22, 2011.
http://indico.phys.vt.edu//contributionDisplay.py?sessionId=29&contribId=128&confId=1

121. "Three-dimensional flow measurements with a four-focus microscope," J.A. Germann, B.K. Canfield, J.K. King, A. Terekhov, L.M. Davis, Annual Meeting of the South East Section of the American Physical Society, Roanoke, Virginia, October 19-22, 2011.
http://bearcat.phys.vt.edu/indico/contributionDisplay.py?sessionId=29&contribId=127&confId=1

120. "Microfluidic device for three-dimensional electrokinetic manipulation of single fluorescent molecules," J.K. King, B.K. Canfield, L.M. Davis, W.H. Hofmeister, Annual Meeting of the South East Section of the American Physical Society, Roanoke, Virginia, October 19-22, 2011.
http://bearcat.phys.vt.edu/indico/contributionDisplay.py?sessionId=29&contribId=124&confId=1

119. "Highly parallelized detection of single fluorescent molecules: simulation and experiment," B.K. Canfield, J.K. King, W.N. Robinson,W.H. Hofmeister, L.M. Davis, Annual Meeting of the South East Section of the American Physical Society, Roanoke, Virginia, October 19-22, 2011.
http://bearcat.phys.vt.edu/indico/contributionDisplay.py?sessionId=29&contribId=122&confId=1

118. "Nanochannels, Nanoholes, and Nanowires," L.M. Davis, W.H. Hofmeister, L. Costa, A. Terekhov, B.K. Canfield, J.K. King, and D. Rajput, 2011 Center for Nanophase Materials Science User Meeting, Chestnut Ridge Campus of Oak Ridge National Laboratory, Oak Ridge, Tennessee, September 19-20, 2011.
http://cnms.ornl.gov/workshops/2011/usermtg2011.shtm

117. "Rapid fluorescence detection of single molecules in highly parallelized microfluidic devices," B.K. Canfield, J.K. King, W.H. Hofmeister, L.M. Davis, [NIH 100-102], 7-th Inter-Institute Workshop on Optical Diagnostics and Biophotonic Methods from Bench to Bedside, National Institutes of Health, Bethesda, Maryland, September 15-16, 2011.

116. "Machining of high-aspect micro/nano-channels with a single femtosecond laser pulse focused to a line," L.M. Davis, J.W. Bradfield, C.A. Rohde, and M.C. Simpson, IQEC/CLEO International Quantum Electronics Conference and Conference on Lasers and Electro-Optics, Asia/Pacific, Sydney, Australia, August 28–September 1, 2011.

115. "Directed evolution of the red fluorescent protein: Microfluidic cell sorter for dark-state conversion and photobleaching," J.L. Lubbeck, K.M. Dean, L.M. Davis, A.E. Palmer, R. Jimenez, 242nd American Chemical Society National Meeting, Denver, CO, August 28–September 1, 2011.

114. “Three-dimensional flow manipulation in a microfluidic device for single-molecule trapping and characterization using four-beam fluorescence cross-correlation,” L.M. Davis, B.K. Canfield, J.A. Germann, J.K. King, W.N. Robinson, 8th International Weber Symposium on Innovative Fluorescence Methodologies in Biochemistry and Medicine, Lihue, Hawaii, June 12–17, 2011.

113. “Directed evolution of new imaging probes: A microfluidic cell sorter based on dark-state conversion and photobleaching of fluorescent proteins,” J.L. Lubbeck, K.M. Dean, L.M. Davis, A.E. Palmer, R. Jimenez, Janelia Conference: Multiphoton Imaging: The Next 6×1023 Femtoseconds; Janalia Farm, Chevy Chase, MD, April 3–6, 2011.

112. “A microfluidic cell sorter for directed evolution of fluorescent proteins based on darkstate conversion and photobleaching,” J.L. Lubbeck, K.M. Dean, L.M. Davis, A.E. Palmer, R. Jimenez, Biophysical Society 55th annual meeting, Baltimore, MD, March 5–9, 2011; Biophysical Journal 100, Abstracts Issue, 964-Plat (2011); Biophysical Journal, DOI: 10.1016/j.bpj.2010.12.1176 http://jila.colorado.edu/jimenez/sites/default/files/pdf/microfluidic_cell_sorter.pdf

111. “Comparison of particle trapping in two dimensions using feedback from two illumination techniques,” W.N. Robinson and L.M. Davis, 14th Annual Southeast Ultrafast Conference (SEUFC), Oak Ridge, TN, January 13-14, 2011.

110. “Microfluidic device for use in single molecule trapping,” J.K. King, B.K. Canfield and L.M. Davis, 14th Annual Southeast Ultrafast Conference (SEUFC), Oak Ridge, TN, January 13-14, 2011.

109. “Three-dimensional flow measurements using FCCS,” J. Germann, L.M. Davis, B.K. Canfield and A. Terekhov, 14th Annual Southeast Ultrafast Conference (SEUFC), Oak Ridge, TN, January 13-14, 2011.

108. “Rapid, ultrasensitive fluorescence readout from multichannel microfluidic devices,” B.K. Canfield, L.M. Davis, W.H. Hofmeister, and S.A. Soper, 14th Annual Southeast Ultrafast Conference (SEUFC), Oak Ridge, TN, January 13-14, 2011.

107. “Single-nanocrystal spectroscopy of white-light emitting CdSe nanocrystals,” Albert D. Dukes III, Phillip C. Sampson, Joseph D. Keene, Lloyd M. Davis, John P. Wikswo, and Sandra J. Rosenthal, 11th Annual Nanoscience and Nanotechnology Forum (2nd place in Nanoscience Poster Competition) Nashville, TN, October 27, 2010.

106. “Simulations for Guiding the Delivery and Trapping of Single Biomolecules in a Nanofluidic Device,” Lloyd M. Davis and W.N. Robinson, Invited presentation at Photonics North, Niagara, Canada, June 1–3, 2010.

105. “Four-focus single-particle position determination in a confocal microscope,” L.M. Davis, B.K. Canfield, J.A. Germann, J.K. King, W.N. Robinson, A.D. Dukes III, S.J. Rosenthal, P.C. Samson, and J.P. Wikswo, SPIE BIOS 2010, International Symposium on Biomedical Optics, San Francisco, CA, January 23–28, 2010; Proceedings of SPIE 7571, 7571-36, 1-10 (2010).

104. “Microfluidic device for the 3-D electrokinetic manipulation of single molecules,” J.K. King, L.M. Davis, B.K. Canfield, P.C. Samson, and W.H. Hofmeister, Frontiers in Optics, Optical Society of America Annual Meeting, San Jose, CA, October 11-15, 2009

103. “Single-molecule diffusion coefficient estimation by image analysis of CCD images to aid high-throughput screening,” P. Song, L.M. Davis, and G.R. Bashford, 31st Annual International IEEE EMBS Conference of the IEEE Engineering in Medicine and Biology Society, Minneapolis, MN, September 2-6, 2009.

102. “Detection and electrokinetic trapping of single fluorescent molecules in fused silica nanochannels,” B.K. Canfield, L. M. Davis, American Physical Society March meeting, Pittsburg, PA, March 16-20, 2009.

101. “Microfluidic device for the electrokinetic manipulation of single molecules,” J.K. King, L.M. Davis, B.K. Canfield, P.C. Sampson, W.H. Hofmeister, American Physical Society March meeting, Pittsburg, PA, March 16-20, 2009.

100. “Capabilities of high-sensitivity spectral fluorescence-lifetime imaging for resolving spectroscopically overlapping species,” J. Crawford, L.M. Davis, B.K. Canfield, American Physical Society March meeting, Pittsburg, PA, March 16-20, 2009.

99. “Single-molecule detection of near-infrared phthalocyanine dyes,” Y. Li, B.K. Canfield, L.M. Davis, American Physical Society March meeting, Pittsburg, PA, March 16-20, 2009.

98. “Monte Carlo simulation of single-molecule trapping via electrophoresis,” W.N. Robinson, L.M. Davis, American Physical Society March meeting, Pittsburg, PA, March 16-20, 2009.

97. “Three-dimensional position determination of nanoparticles using a two-photon microscope,” J.A. Germann, L.M. Davis, B.K. Canfield, A. Terekhov, American Physical Society March meeting, Pittsburg, PA, March 16-20, 2009.

96. “Single-pulse fabrication of deep vertical nano-holes with a microjoule femtosecond laser,” L.M. Davis, Y.V. White, X. Li, Z. Sikorski, W. Hofmeister, American Physical Society March meeting, Pittsburg, PA, March 16-20, 2009.

95. “Ultrafast laser structuring of hard and soft materials,” Y.V. White, M. Parrish, L. Costa, L.M. Davis, W. Hofmeister, International Congress on Applications of Lasers and Electro Optics (ICALEO) 2008, Temecula, CA, October 20–23, 2008; Proceedings on CD-ROM, Laser Institute of America.

94. “Femtosecond laser micro-patterning of diamond films for device fabrication,” M. Parrish, Y. White, L.M. Davis, Z. Sikorski, R. Thompson, W. Hofmeister, International Congress on Applications of Lasers and Electro Optics (ICALEO) 2008, Temecula, CA,, October 20–23, 2008; Proceedings on CD-ROM, Laser Institute of America.

93. “Actively-controlled electrokinetic delivery of single fluorescent biomolecules in fluidic nanochannels,” B. Canfield, L.M. Davis, X. Li, W. Hofmeister, I.P. Lescano-Mendoza, B. Bomar, Z. Sikorski, W. Robinson, J. King, J. Germann, G. Shen, J. Wikswo, D. Markov, P. Samson, and C. Daniel, Center for Nanoscale Materials Sciences User Meeting, Oak Ridge, TN, September 24–26, 2008.

92. “Actively-controlled electrokinetic delivery of single fluorescent biomolecules in fluidic nanochannels,” B. Canfield, L.M. Davis, X. Li, W. Hofmeister, I.P. Lescano-Mendoza, B. Bomar, Z. Sikorski, W. Robinson, J. King, J. Germann, G. Shen, J. Wikswo, D. Markov, P. Samson, and C.

Daniel, 8th Annual Southeast Multiphoton Confocal User Group Meeting & Workshop, Sponsored by Zeiss, Coherent and Emory University, Atlanta, GA, August 21–22, 2008.

91. "Maximum-likelihood multi-dimensional photon-counting microscopy," J. Crawford, L.M. Davis, B. Canfield, and G. Shen, 8th Annual Southeast Multiphoton Confocal User Group Meeting & Workshop, Sponsored by Zeiss, Coherent and Emory University, Atlanta, GA, August 21–22, 2008.

90. "4-foci fluorescence microscope and maximum-likelihood analysis," J. Germann, L.M. Davis, B.K. Canfield, and A. Terekhov, 8th Annual Southeast Multiphoton Confocal User Group Meeting & Workshop, Sponsored by Zeiss, Coherent and Emory University, Atlanta, GA, August 21–22, 2008.

89. "Microfluidic device for 3-D electrophoretic trap," J.K. King, B.K. Canfield, L.M. Davis, W. Hofmeister, Z. Sikorski, D.A. Markov, and P. Samson, 8th Annual Southeast Multiphoton Confocal User Group Meeting & Workshop, Sponsored by Zeiss, Coherent and Emory University, Atlanta, GA, August 21–22, 2008.

88. "Use of diode laser for detection of near-infrared phthalocyanine dyes," Y. Li, L.M. Davis, and B.K. Canfield, 8th Annual Southeast Multiphoton Confocal User Group Meeting & Workshop, Sponsored by Zeiss, Coherent and Emory University, Atlanta, GA, August 21–22, 2008.

87. "Numerical simulations of single-molecule trapping," W. Robinson, L.M. Davis, and Z. Sikorski, 8th Annual Southeast Multiphoton Confocal User Group Meeting & Workshop, Sponsored by Zeiss, Coherent and Emory University, Atlanta, GA, August 21–22, 2008.

86. "Femtosecond laser machining of transparent materials for microfluidic devices," Y.V. White, L.M. Davis, M. Parrish, X. Li, and W. Hofmeister, 8th Annual Southeast Multiphoton Confocal User Group Meeting & Workshop, Sponsored by Zeiss, Coherent and Emory University, Atlanta, GA, August 21–22, 2008.

85. "Femtosecond micro- and nano-machining of materials for microfluidic applications," Y.V. White, M. Parrish, X. Li, L.M. Davis, W. Hofmeister, SPIE Optics and Photonics, Symposium on Nanofabrication, NanoScience and Engineering, San Diego, CA, August 10-14, 2008; Proceedings of SPIE 7039, 70390J, 1-10 (2008).

84. "Electrokinetic delivery of single fluorescent biomolecules in fluidic nanochannels," L.M. Davis, B.K. Canfield, X. Li, W.H. Hofmeister, I.P. Lescano-Mendoza, B.W. Bomar, J.P. Wikswo, D.A. Markov, P.C. Samson, C. Daniel, Z. Sikorski, and W. Robinson, SPIE Optics and Photonics, Symposium on Biosensing, NanoScience and Engineering, San Diego, CA, August 10–14, 2008; Proceedings of SPIE 7035, 70350A, 1-12 (2008).

83. "Actively-controlled electrokinetic delivery of single fluorescent biomolecules in fluidic nanochannels," L.M. Davis, B. Canfield, X. Li, W. Hofmeister, I. Lescano, B. Bomar, Z. Sikorski, W. Robinson, J. King, J. Germann, G. Shen, J. Wikswo, D. Markov, P. Samson, and C. Daniel, 7th International Weber Symposium on Innovative Fluorescence Methodologies in Biochemistry and Medicine, Kauai, Hawaii, June 6–12, 2008.

82. "Electrokinetic control of single molecules in fused-silica fluidic nanochannels," B.K. Canfield, X. Li, W. Hofmeister, and L.M. Davis, Conference on Lasers and Electro-Optics/Quantum Electronics and Laser Science Conference and Photonic Applications Systems Technologies, San Jose, CA, May 4–10, 2008; in Conference on Lasers and Electro-Optics/Quantum Electronics and Laser

Science Conference and Photonic Applications Systems Technologies, OSA Technical Digest (CD) (Optical Society of America, 2008), paper CThZ7;
http://www.opticsinfobase.org/abstract.cfm?URI=CLEO-2008-CThZ7

81. "Single-Molecule Spectroscopy in Nano-fluidic Devices," L.M. Davis, G. Shen, X. Li, and W. Hofmeister, Joint Meeting of the Biophysical Society 52nd Annual Meeting and 16th International Biophysics Congress, Long Beach, CA, February 2–6, 2008; Biophysical Journal 94, Issue 1, Part 2, 2541 (2008).

80. "Maximum-likelihood position sensing and actively controlled electrokinetic transport for single-molecule trapping," L. Davis, Z. Sikorski, W. Robinson, G. Shen, X. Li, B. Canfield, I. Lescano, B. Bomar, W. Hofmeister, J. Germann, J. King, Y. White, and A. Terekhov, SPIE BIOS 2008, International Symposium on Biomedical Optics, San Jose, CA, January 19–24, 2008; Proceedings of SPIE 6862, 68620P, 1-10 (2008).

79. "Effects of ultrafast laser nano/micro-machining in SiO2," Y. White, X. Li, Z. Sikorski, A. Terekhov, L. Davis, and W. Hofmeister, International Congress on Applications of Lasers and Electro Optics (ICALEO) 2007, Orlando, CA, October 29–November 1, 2007.

78. "Numerical modeling of single-molecule detection and trapping in a nanochannel," W.N. Robinson, Z. Sikorski, L. M. Davis, 74th Annual Meeting of the Southeastern Section of the American Physical Society, Nashville, TN, November 8–10, 2007;
http://meetings.aps.org/Meeting/SES07/Event/73371

77. "Effects of laser excitation saturation in measurements of biomolecule binding by FCS," Y. Li, G. Shen, and L.M. Davis, 74th Annual Meeting of the Southeastern Section of the American Physical Society, Nashville, TN, November 8–10, 2007;
http://meetings.aps.org/Meeting/SES07/Event/73449

76. "Characterization of 4-foci pulse-interleaved two-photon fluorescence confocal microscope for particle tracking and trapping," J. Germann, A. Tekerov, G. Shen and L.M. Davis, 74th Annual Meeting of the Southeastern Section of the American Physical Society, Nashville, TN, November 8–10, 2007; http://meetings.aps.org/Meeting/SES07/Event/73451

75. "Polarization engineering of collected fluorescence for improved determination of the molecular emission dipole orientation in single-molecule spectroscopy," Z. Sikorski and L. Davis, 74th Annual Meeting of the Southeastern Section of the American Physical Society, Nashville, TN, November 8–10, 2007; http://meetings.aps.org/Meeting/SES07/Event/73454

74. "Characterization of single-photon avalanche diodes for time-resolved single-molecule spectroscopy," J. King, G. Shen, and L. Davis, 74th Annual Meeting of the Southeastern Section of the American Physical Society, Nashville, TN, November 8–10, 2007;
http://meetings.aps.org/Meeting/SES07/Event/73455

73. "16-channel digital correlator and hardware simulator for fluorescence correlation spectroscopy, dynamic light scattering and multichannel photon time stamping," I.P. Lescano and L.M. Davis, 74th Annual Meeting of the Southeastern Section of the American Physical Society, Nashville, TN, November 8–10, 2007;
http://meetings.aps.org/Meeting/SES07/Event/73456

72. "Nanofluidics device in fused silica for single protein molecule trapping," X. Li, W. Hofmeister, G. Shen, L. Davis, and C. Daniel, Center for Nanoscale Materials Sciences User Meeting, Oak Ridge, TN, October 10–11, 2007.

71. "Fabrication and characterization of nanofluidics device using fused silica for single protein molecule detection," X. Li, W. Hofmeister, G. Shen, L. Davis, and C. Daniel, Materials and Processes for Medical Devices Conference, Palm Desert, CA, September 23–25, 2007; in Medical Device Materials IV (Proceedings of Materials and Processes for Medical Devices 2007), ed. by J. Gilbert, ASM International, pp. 145-150 (2008).

70. "SPARTAN: Single protein actuation by real-time transduction of affinity in nanospace," J.P. Wikswo, R. Mernaugh, D. Markov, P. Samson, D. Li, L. Davis, W. Hofmeister, Z. Sikorsky, X. Li, Y. White, G. Shen, W. Robinson, A. Ellington, G. Georgiou, B. Iverson, D. Makarov, G. Marriott, C. Petchprayoon, R. Perrins, C. Daniel, V. Chellaboina, and B. Hamel, Defense Nanomaterials Conference 2007, San Diego, CA, April 23–26, 2007.

69. "The photoluminescence (PL) and imaging with a custom-built fluorescence microscope of porous SiC (PSC) prepared from SiC," K.-H. Lee, K.-S. Jeon, D.A. Ball, G. Shen, and L.M. Davis, The 99th Annual Meeting of the Korean Chemical Society, COEX, Seoul, South Korea, April 19–20, 2007; Program and Abstracts 2007.

68. "The physics graduate program and research opportunities at the University of Tennessee and UT Space Institute," L.M. Davis, SPS/TAAPT Annual Meeting, Murfreesboro, TN, March 31, 2007.

67. "SPARTAN: Single Protein Actuation by Real-Time Transduction of Affinity in Nanospace: Single-molecule spectroscopy and optical control," L.M. Davis, DARPA Control of Protein Conformations, Contractors Workshop, San Francisco, CA, February 2, 2007.

66. "Engineering of illumination and collection field profiles for single-molecule orientational imaging," Z. Sikorski and L.M. Davis, SPIE BIOS 2007, International Symposium on Biomedical Optics, San Jose, CA, January 20–25, 2007; Proceedings of SPIE 6483, 64830K, 1-12 (2007).

65. "Extension of multidimensional microscopy to ultrasensitive applications with maximum-likelihood analysis," L.M. Davis and G. Shen, SPIE BIOS 2007, International Symposium on Biomedical Optics, San Jose, CA, January 20–25, 2007; Proceedings of SPIE 6443, 64430N, 1-12 (2007).

64. "Ultrasensitive multi-dimensional fluorescence spectroscopy," L.M. Davis and G. Shen, Coherent 10th Annual Southeast Ultrafast Conference (SEUFC), Nashville, TN, January 11–12, 2007.

63. "Maximum-likelihood multi-dimensional photon-counting microscopy," L.M. Davis, G. Shen, D.A. Ball, J. Aiken, Y.V. White, Z. Sikorski, W.N. Robinson, and D.W. Piston, SPIE Optical Imaging 2006, Fifth Inter-Institute Workshop on Optical Diagnostic Imaging from Bench to Bedside at the National Institutes of Health, Bethesda, MD, September 25–27, 2006.

62. "Nanoscale emitters and single-molecule detection in nanochannels," W.H. Hofmeister, L.M. Davis, J. Davidson, W.P. Kang, D. Li and J.P. Wikswo, Nanomaterials for Defense Applications 2006, Virginia Beach, VA, May 1–4, 2006;
http://www.usasymposium.com/nano/06nano/default.htm

61. "Time-resolved spectral imaging at low signal levels," G. Shen and L.M. Davis, Biophysical Society annual meeting, Salt Lake City, UT, February 18–22, 2006; Biophysical Journal 90, Issue 1, Part 2, 1414-pos (2006).

60. "Multi-channel imaging capabilities at low signal levels," L.M. Davis and G. Shen, Frontiers in Optics/Laser Science, Optical Society of America, Tucson, AZ, October 16–20, 2005; in Frontiers in Optics, OSA Technical Digest Series (Optical Society of America, 2005), paper JWA36; http://www.opticsinfobase.org/abstract.cfm?URI=FiO-2005-JWA36

59. "Dynamic properties of photoluminescence from porous silicon," K.-H. Lee, K.-S. Jeon, D.A. Ball, G. Shen, and L.M. Davis, The 96th Annual Meeting of the Korean Chemical Society, Yeonsei University, Wonju, South Korea, October 21–22, 2005; Program and Abstracts 2005.

58. "Monte Carlo simulations for single-molecule fluorescence applications," L.M. Davis, 15 years of Single-Molecule Detection, Pittcon 2005, Orlando, FL, February 27–March 4, 2005.

57. "Scanning fluorescence fluctuation spectroscopy for molecular brightness assays," L.M. Davis, G. Shen, and D.A. Ball, Biophysical Society annual meeting, Long Beach, CA, February 12–15, 2005; Biophysical Journal 88, Issue 1, Part 2, 373A-373A (2005).

56. "Single-molecule detection and imaging," D.A. Ball, L.M. Davis, and G. Shen, Annual UT/ORNL Chemical Physics Workshop, Knoxville, TN, February 10–12, 2005.

55. "Saturation effects in fluorescence correlation spectroscopy," L.M. Davis, G. Shen, and D.A. Ball, SPIE BIOS 2005, International Symposium on Biomedical Optics, San Jose, CA, January 22–27, 2005; Proceedings of SPIE 5700, 128-137 (2005).

54. "Confocal fluorescence microscopy for the detection of single molecules in biology," G. Shen, D.A. Ball, and Lloyd M. Davis, Tennessee Mouse Genome Consortium Meeting, Fall Creek Falls, TN, November 18–20, 2004.

53. "Single-molecule detection in micron-sized capillaries," D.A. Ball, G. Shen, and L.M. Davis, 71st Annual Meeting of the Southeastern Section of the American Physical Society, Oak Ridge, TN, November 11–13, 2004; http://flux.aps.org/meetings/YR04/SES04/baps/abs/S280004.html

52. "Photophysical and instrumental effects in fluorescence correlation spectroscopy," G. Shen, D.A. Ball, and L.M. Davis, 71st Annual Meeting of the Southeastern Section of the American Physical Society, Oak Ridge, TN, November 11–13, 2004; http://flux.aps.org/meetings/YR04/SES04/baps/abs/S330006.html

51. "4-channel single-photon avalanche diode and timeharp-200 for in-vitro drug-binding measurements," D.A. Ball, G. Shen, L.M. Davis, K.M. Swift, and E.D. Matayoshi, 10th International Workshop on Single Molecule Detection and Ultrasensitive Analysis in Life Sciences, Berlin, Germany, September 22–24, 2004.

50. "Improved understanding of fluorescence microscopy experiments by use of simulations," L.M. Davis, G.Q. Shen, and D.A. Ball, Focus on Microscopy 2004, Philadelphia, PA, April 4–8, 2004; http://www.focusonmicroscopy.org/2004/index.html

49. "Triplet state effects in the application of FCS to binding equilibria," K.M. Swift, S. Beretta, E.D. Matayoshi, D.A. Ball, P.E. Williams, and L.M. Davis, Biophysical Society annual meeting, February 14–18, 2004, Baltimore, MD; Biophysical Journal 86, Issue 1, Part 2, 159A-159A (2004).

48. "Comparison of various data analysis methods for 2-color high-throughput drug-binding measurements," L.M. Davis, D.A. Ball, P.E. Williams, E.D. Matayoshi, and K.M. Swift, 9th International Workshop on Single Molecule Detection and Ultra Sensitive Analysis in the Life Sciences, Berlin, Germany, September 24–26, 2003.

47. "Dealing with reduced data acquisition times in fluorescence correlation spectroscopy for HTS applications," L.M. Davis, D.A. Ball, P.E. Williams, K.M. Swift, and E.D. Matayoshi, SPIE BIOS 2003, International Symposium on Biomedical Optics, San Jose, CA, January 25–31, 2003; Proceedings of SPIE 4966, 117-128 (2003).

46. "Fluorescence correlation spectroscopy and single-molecule detection for pharmaceutical drug discovery and high throughput screening," L.M. Davis, D.A. Ball, P.E. Williams, K.M. Swift, and E.D. Matayoshi, Optical Society of America, Optics in the South East (OISE) Conference, Biomedical Optics symposium, Huntsville, AL, October 24–25, 2002; http://www.osa.org/meetings/topicals/OISE/program/

45. "Fluorescence correlation spectroscopy data reduction and application to peptide binding studies with Bcl-xL," L.M. Davis, D.A. Ball, P.E. Williams, K.M. Swift, and E.D. Matayoshi, 5th International Weber Symposium on Innovative Fluorescence Methodologies in Biochemistry and Medicine, Kaua'i, HI, June 25–29, 2002.

44. "Data reduction methods for application of FCS to high-throughput pharmaceutical drug screening," L.M. Davis, D.A. Ball, P.E. Williams, E.D. Matayoshi, and K.M. Swift, 6th International Carl Zeiss Workshop on Fluorescence Correlation Spectroscopy & Related Methods, St. Louis, MO, May 21–22, 2002.

43. "Single-molecule detection and applications," L.M. Davis, University of Tennessee/Oak Ridge National Laboratory Bioinformatics Summit, Paris Landing, TN, March 22–23, 2002.

42. "Multiplexed analysis using time-resolved near-IR fluorescence detection for DNA sequencing," W.J. Stryjewski, S.A. Soper, S. Lassiter, and L.M. Davis, SPIE BIOS'02, International Symposium on Biomedical Optics, San Jose, CA, January 19–25, 2002; Proceedings of SPIE 4626, 201-209 (2002).

41. "Comparison of fluorescence correlation spectroscopy and other single-molecule data analysis methods for assay of protein-ligand interactions," L.M. Davis, P.E. Williams, H.M. Cain, D.A. Ball, C.G. Parigger, E.D. Matayoshi, and K.M. Swift, 46-th Annual Meeting of the Biophysical Society, San Francisco, CA, February 23–27, 2002; Biophysical Journal 82, Issue 1, Part 2, 43A-43A, 212 (2002).

40. "Imaging single molecules in solution near a fused-silica interface," L.M. Davis, W.C. Parker, D.A. Ball, J.G.K. Williams, G. Bashford, D.L. Grone, R.D. Eckles, and L.R. Middendorf, Biophysical Society annual meeting, February 17–21, 2001, Boston, MA; Biophysical Journal 80, Issue 1, Part 2, 160A-160A, 656.09 (2001).

39. "Imaging of single-chromophore molecules in aqueous solution near a fused-silica interface," L.M. Davis, W.C. Parker, J.G.K. Williams, L.R. Middendorf, and G. Bashford, SPIE BIOS 2001, International Symposium on Biomedical Optics, San Jose, CA, January 20–26, 2001; Proceedings of SPIE 4262, 301-311 (2001).

38. "Maximum entropy analysis of multiplexed DNA electropherogram bands," L.M. Davis, J. L. Amen, D.L. Draney, L.R. Middendorf, and R.A. Peterson, Optical Society of America Annual Meeting, Providence, RI, October 22–26, 2000.

37. "Single-molecule imaging in solution with total internal reflection excitation," W. Parker, L.M. Davis, J.G.K. Williams, L.R. Middendorf, and G. Bashford, Conference on Lasers and Electro-Optics, San Francisco, May 7–12, 2000; Conference on Lasers and Electro Optics (CLEO 2000) Technical Digest, Postconference Edition, TOPS Vol. 39.

36. "Time-resolved photon counting for multiplexed DNA electrophoresis separations," L.M. Davis, J. L. Amen, D.L. Draney, L.R. Middendorf, and R.A. Peterson, Optical Society of America Topical Meeting in Laser Applications to Chemical and Environmental Analysis, Santa Fe, NM, February 11–13, 2000; Technical Digest, Topical Meeting on Laser Applications to Chemical and Environmental Analysis (Optical Society of America, Washington, D.C.), pp. 8-10 (2000); in Laser Applications to Chemical and Environmental Analysis, T. Li, ed., Vol. 36 of OSA Trends in Optics and Photonics Series (Optical Society of America, 2000), paper FA4; http://www.opticsinfobase.org/abstract.cfm?URI=LACEA-2000-FA4

35. "Ultrasensitive fluorescence detection,'' L.M. Davis, American Physical Society Centennial Conference, paper XC-1701, Atlanta, GA, March 20–26, 1999; http://flux.aps.org/meetings/YR99/CENT99/abs/S8850001.html

34. "Analysis of ultrasensitive fluorescence experiments," L.M. Davis, Y. Sun, and B. Whitehead, SPIE BIOS 1999, International Symposium on Biomedical Optics, San Jose, CA, January 23–29, 1999; Proceedings of SPIE 3602, 379-390 (1999). [Invited Presentation]

33. "Computer simulation of gene detection without PCR by single molecule detection,'' L.M. Davis, J.G.K. Williams, and D.T. Lamb, Europe BIOS'98, International Symposium on Biomedical Optics, Stockholm, Sweden, September 8–10, 1998; Proceedings of SPIE 3570, 282-293 (1999).

32. "Efficient counting of single molecules with sub-100 microsecond transit times," L.M. Davis, 64th Annual Meeting of the South-Eastern Section of the American Physical Society, Nashville, TN, November 6–8, 1997; http://flux.aps.org/meetings/YR97/BAPSSES97/abs/S700.html

31. "Monte Carlo simulation for design of single-molecule counting experiment," L.M. Davis and D.H. Bunfield, Picoquant 3rd International Workshop on Single Molecule Detection: Basics and Applications in Life Sciences, Berlin, Germany, September 24–26, 1997.

30. "Spectroscopic identification of individually detected fluorescent molecules," L.M. Davis and D.H. Bunfield, Vth International Conference on Methods and Applications of Fluorescence Spectroscopy, Berlin, Germany, September 21–24, 1997; Book of Abstracts, ed. by W. Rettig, Verlag, Berlin, p. 27 (1997).

29. "High sensitivity detection on microchips," J.C. Fister III, L.M. Davis, S.C. Jacobson, and J.M. Ramsey, Optical Society of America Topical Meeting on Laser Applications to Chemical Analysis, Orlando, FL, March, 1996; Optical Society of America 1996 Technical Digest Series, 3, 58-60 (1996).

28. "Increasing the rate of detection of single molecules in solution," L.M. Davis, L.E. Schneider, and D.H. Bunfield, Optical Society of America Topical Meeting on Laser Applications to Chemical Analysis, Orlando, FL, March, 1996; Optical Society of America 1996 Technical Digest Series, 3, 24-26 (1996).

27. "Efficient detection and quantitative fluorescence measurements of single molecules in an aqueous flow stream," L.M. Davis, L.Q. Li, and L.E. Schneider, Optical Society of America Annual Meeting, Portland, OR, September 10–15, 1995. [Invited Presentation]

26. "Efficient detection of single fluorophores in ultradilute solution," L.M. Davis and L.Q. Li, Annual Meeting of the American Association for the Advancement of Science, Science Innovation, Atlanta, GA, February 20, 1995.

25. "Performance of SPAD in single-molecule detection experiments," L.M. Davis and L.Q. Li, International Conference on Applications of Photonic Technology, Toronto, Canada, June 21–23, 1994; in Applications of Photonic Technology, ed. by G.A. Lampropoulos, J. Chrostowski, and R.M. Measures, pp. 483-488, Plenum, New York and London (1995). [Invited Presentation]

24. "Monte Carlo model of a single-molecule counting experiment," L.M. Davis and L.Q. Li, Optical Society of America Topical Meeting on Laser Applications to Chemical Analysis, Jackson Hole, WY, March 8–11, 1994; Digest of Topical Meeting on Laser Applications to Chemical Analysis, Optical Society of America, 5, 206-207 (1994).

23. "Single molecule detection for analytical applications," L.Q. Li and L.M. Davis, Optical Society of America Annual Meeting, Toronto, Canada, October 1993; Optical Society of America Technical Digest 16, 1 (1993).

22. "Single photon avalanche diode for single molecules detection," L.Q. Li, L.M. Davis, S.I. Soltesz, and C.J. Trottier, Optical Society of America Annual Meeting, Alburquerque, NM, September 20–25, 1992; Optical Society of America Technical Digest 23, 137 (1992).

21. "Spectroscopic measurements on single molecules in solution," L.M. Davis, S.A. Soper, and E.B. Shera, Optical Society of America Annual Meeting, Alburquerque, NM, September 20–25, 1992; Optical Society of America Technical Digest 23, 44 (1992). [Invited presentation]

20. "Quantitative ultra-sensitive detection for bioscience applications," L.M. Davis and L.Q. Li, The Whitaker Foundation Annual Conference, Utah, July 30–August 1, 1993.

19. "Photon statistics for the detection of single molecules in solution," L.M. Davis, L.Q. Li, E.B. Shera, A. Castro, and S.A. Soper, OSA Quantum Electronics and Laser Science Conference, Anaheim, CA, May 10–15, 1992; Optical Society of America Technical Digest 13, 70-72 (1992).

18. "Spectroscopic measurements on single molecules in solution," E.B. Shera, S.A. Soper, and L.M. Davis, Optical Society of America Topical Meeting on Laser Applications to Chemical Analysis (III), Salt Lake City, UT, January 27–31, 1992; Technical Digest, Topical Meeting on Laser

Applications to Chemical Analysis (Optical Society of America, Washington, D.C.), 2, 177-178 (1992).

17. "Simultaneous single molecule detection and identification of two fluorescent dyes," S.A. Soper, L.M. Davis, and E.B. Shera, Pittcon 92, New Orleans, March 9–13, 1992.

16. "Picosecond time-resolved fluorescence measurements of Poly-dA-Poly-dT at room temperature," S. Gheorgio, G. Ge, G.R. Phillips, C. Parigger, and L.M. Davis, Quantum Electronics Laser Science Conference, Baltimore, MD, May 12–17, 1991; Optical Society of America Technical Digest 11, 44–5 (1991).

15. "Fluorescence detection of single molecules in solution," E.B. Shera, L.M. Davis, N.K. Seitzinger, and S.A. Soper, Quantum Electronics Laser Science Conference, Baltimore, MD, May 12–17, 1991; Optical Society of America Technical Digest 11, 162 (1991).

14. "Picosecond resolved evolution of laser breakdown in gases," L.M. Davis, L.Q. Li, D.R. Keefer, and Q. Zhang, Conference on Lasers and Electro-Optics, Baltimore, MD, May 12–17, 1991; Optical Society of America Technical Digest 10, 462-463 (1991).

13. "Single-molecule detection," E.B. Shera, L.M. Davis, N.K. Seitzinger, and S.A. Soper, American Physical Society Meeting, Washington, D.C., April 15–17, 1991.

12. "Detection of single fluorescent molecules," N.K. Seitzinger, E.B. Shera, L.M. Davis, R.A. Keller, and S.A. Soper, 200th American Chemical Society National Meeting, Washington, D.C., August 29–September 2, 1990; Abstracts of papers of the American Chemical Society 200, 136-anyl (1990).

11. "High-speed DNA sequencing-An approach based upon fluorescence detection of single molecules," L.M. Davis, F.R. Fairfield, M.L. Hammond, C.A. Harger, J.H. Jett, R.A. Keller, J.H. Hahn, L.A. Krakowski, B. Marrone, J.C. Martin, H.L. Nutter, R.R. Ratliff, E.B. Shera, D.J. Simpson, S.A. Soper, and C.W. Wilkerson, 200th American Chemical Society National Meeting, Washington, D.C., August 29–September 2, 1990; Abstracts of papers of the American Chemical Society 200, 75-anyl (1990).

10. "Single-molecule detection in flowing sample streams as an approach to DNA sequencing," J.H. Jett, L.M. Davis, J.H. Hahn, R.A. Keller, L. Krakowski, B. Marrone, J.C. Martin, R. Ratliff, N.K. Seitzinger, and E.B. Shera, Optical Society of America Topical Meeting on Laser Applications to Chemical Analysis (II), Incline Village, NV, February 5–8, 1990; Technical Digest, Topical Meeting on Laser Applications to Chemical Analysis (Optical Society of America, Washington, D.C.), 2, 127-128 (1990).

9. "Measurements of rotation and fluorescence lifetimes for optimizing the detection of single fluorescinated bases," L.M. Davis, N.K. Seitzinger, E.B. Shera, and R.A. Keller, Optical Society of America Topical Meeting on Laser Applications to Chemical Analysis (II), Incline Village, NV, February 5–8, 1990; Technical Digest, Topical Meeting on Laser Applications to Chemical Analysis (Optical Society of America, Washington, D.C.) 2, 131-132 (1990).

8. "Photon counting fluorimetry of low repetition rate pulsed plasmas," C. Parigger and L.M. Davis, Optical Society of America Annual Meeting, Orlando, FL, October 15–20, 1989; Optics News, 15, A72 (1989).

7. “Towards a Bell's inequality experiment using time and energy,” L.M. Davis, International Symposium on Quantum Optics, Hamilton, New Zealand, February 13–17, 1989.

6. “E-P-R and Bell's inequality experiments using energy and time,” L.M. Davis, Optical Society of America Annual Meeting, Santa Clara, CA, October 31–November 4, 1988; Optical Society of America Technical Digest 11, 47 (1988).

5. “Interference between resolvable wavelengths,” L.M. Davis, Optical Society of America Annual Meeting, Rochester, NY, October 18–23, 1987; Optics News, 13, 115 (1987).

4. “Subpicosecond pulse evolution within a cavity-dumped hybrid mode-locked dye laser,” L.M. Davis, Optical Society of America Annual Meeting, Rochester, NY, October 18–23, 1987; Optics News, 13, 155 (1987).

3. “Fiber-optic microprobe,” L.M. Davis and T. Alvager, Optical Society of America Topical Meeting on Laser Applications to Chemical Analysis, Lake Tahoe, NV, January 26–29, 1987; Technical Digest, Topical Meeting on Laser Applications to Chemical Analysis (Optical Society of America, Washington, D.C.) 5, 16–19 (1987).

2. “Measurement of composite exponential fluorescence decay profiles to characterize quenching by Forster transfer,” L.M. Davis and J.D. Harvey, Third International New Zealand Quantum Optics and Laser Physics Symposium, Waikato University, New Zealand, February 10–14, 1986.

1. “Rate equation simulation of a synchronously pumped dye laser,” J.M. Peart and L.M. Davis, New Zealand Institute of Physics Biannual Conference, Auckland, New Zealand, May 10–13, 1983.

While technical papers are generally considered to be "non-archival" and journal papers "archival", I couldn't find a clear statement about papers that appear in conference proceedings. Does it matter in which for the proceedings are published, e.g. only online, on CD/USB drive, or printed with/without ISBN? Refereed Publications: Archival Journals. h-index = 45; m-index = 1.55; 210 items; total citations = 5,791 (ISI Web of Science; SCI-Expanded database; Sands T OR Sands TD; refined by subject; August 13. th.Â Lett. 98 (2011) 243504. 176. Z. Liang, I.H. Wildeson, R. Colby, D.A. Ewoldt, T. Zhang, T.D. Sands, E.A. Stach, B. Benes and R.E. GarcÃa, â€œBuilt-In Electric Field Minimization in (In,Ga)N Nanoheterostructures,â€ accepted for publication in Nano Letters (2011).