Publication List of Prof. Z. Hugh Fan

Updated in December 2025

Referred Journal Publications

1. A. Shirkhani, M. D. Jansen, M. Alipanahrostami, C. Manzanas, S. N. Shankar, W. B. Vass, C. H. Chien, M. Washeem, A. O'Connor, J. A. Lednicky, Z. H. Fan, C. Y. Wu, "Development of a Platform for in-situ Airborne Virus Detection by Interfacing RT-LAMP Assay with a Condensational Growth Collector", *Aerosol Science and Technology*, 59, **2025**, DOI: 10.1080/02786826.2025.2568690.
2. M. N. Le, D. Chen, K. A. Smith, D. D. Tran, and Z. H. Fan, "Microfluidic isolation and release of live disseminated breast tumor cells in bone marrow", *PLoS One*, **2025**, 20(3), e0319392 (21 pages), DOI: 10.1371/journal.pone.0319392.
3. W. B. Vass, A. Shirkhani, M. Washeem, S. N. Shankar, Y. Zhang, T. L. Moquin, R. L. Messcher, M. D. Jansen, J. R. Clugston, M. P. Walser, Y. Yang, J. A. Lednicky, Z. H. Fan, C. Y. Wu, "Occupational exposure monitoring of airborne respiratory viruses in outpatient medical clinics", *Aerosol Science and Technology*, 59, **2025**, 1317–1337, DOI: 10.1080/02786826.2024.2403580.
4. M. Washeem, W. B. Vass, D. W. Becker, A. Shirkhani, S. N. Shankar, Y. Zhang, M. Alipanah, Z. H. Fan, J. A. Lednicky, C. Y. Wu, "Assessment of Membrane Filters-coated with Hygroscopic Glycerol for Improved Recovery of Airborne Viable Bacteriophage MS2", *Aerosol and Air Quality*, 24, **2024**, 240182 (17 pages), DOI: 10.4209/aaqr.240182.
5. G. Adedokun, G. Sidhu, M. Alipanah, G. P. Wang, Z. H. Fan, "A Handheld HIV Detection Platform using Paper-Based Sample Preparation and Real-Time Isothermal Amplification", *Microsystems & Nanoengineering*, 10, **2024**, 181 (11 pages), DOI: 10.1038/s41378-024-00822-1.
6. W. B. Vass, S. N. Shankar, J. A. Lednicky, M. Alipanah, B. Stump, P. Keady, Z. H. Fan, C. Y. Wu, "Concentrating viable airborne pathogens using a virtual impactor with a compact water-based condensation air sampler", *Aerosol Science and Technology*, 58, **2024**, 1114-1128, DOI: /10.1080/02786826.2024.2380096.
7. G. Adedokun, M. Alipanah, Z. H. Fan, "Sample Preparation and Detection Methods in Point-of-Care Devices towards Future at-Home Testing", *Lab on a Chip*, 24, **2024**, 3626–3650, DOI: 10.1039/d3lc00943b. (Review)
8. J. Amontree, K. Chen, J. Varillas, Z. H. Fan, "A Capillary-Force-Driven, Single-Cell Transfer Method for Studying Rare Cells", *Bioengineering*, 11, **2024**, 542 (11 pages), DOI: 10.3390/bioengineering11060542.
9. M. N. Le, K. A. Smith, P. J. Dopico, B. Greer, M. Alipanah, Y. Zhang, D. W. Siemann, J. P. Lagmay, and Z. H. Fan, "Investigating surface proteins and antibody combinations for detecting circulating tumor cells of various sarcomas", *Scientific Reports*, 14, **2024**, 12374 (11 pages), DOI: 10.1038/s41598-024-61651-w.
10. Y. Zhang, S. N. Shankar, W. B. Vass, J. A. Lednicky, Z. H. Fan, D. Agdas, R. Makuch, and C. Y. Wu, "Air Change Rate and SARS-CoV-2 Exposure in Hospitals and Residences: A Meta-Analysis", *Aerosol Science and Technology*, 58, **2024**, 217–243, DOI: 10.1080/02786826.2024.2312178.
11. Z. H. Fan, D. J. Harrison, "Celebrating 30th Anniversary of a Pioneering Microfluidics Paper", *Lab on a Chip*, 23, **2023**, 4157–4159, DOI: 10.1039/d3lc90076b. (Editorial)
12. W. B. Vass, S. N. Shankar, J. A. Lednicky, Y. Yang, C. Manzanas, Y. Zhang, J. Boyette, J. Chen, Y. Chen, A. Shirkhani, M. Washeem, Z. H. Fan, A. Eiguren-Fernandez, A. Jutla, C. Y. Wu, "Detection and isolation of infectious SARS-CoV-2 omicron subvariants collected from residential settings", *Aerosol Science and Technology*, 57, **2023**, 1142–1153, DOI: 10.1080/02786826.2023.2251537.

13. M. Alipanah, C. Manzanas, X. Hai, J. A. Lednicky, A. Paniz-Mondolfi, J. G. Morris, Z. H. Fan, “Mayaro virus detection by integrating sample preparation with isothermal amplification in portable devices”, *Analytical and Bioanalytical Chemistry,* 415, **2023**, 5605–5617, DOI: 10.1007/s00216-023-04856-8.
14. V. A. Pedrosa, K. Chen, T. J. George, Z. H. Fan, “Gold Nanoparticle-based Microfluidics Chips for Capture and Detection of Circulating Tumor Cells”, *Biosensors*, 13, **2023**, 706 (9 pages), DOI: 10.3390/bios13070706.
15. H. Li, S. N. Shankar, C. T. Witanachchi, J. A. Lednicky, J. C. Loeb, M. M. Alam, Z. H. Fan, M. Lauzardo, K. Mohamed, A. Eiguren-Fernandez, A. Eiguren-Fernandez, C. Y. Wu, “Lack of SARS-CoV-2 in Environmental Samples Collected from September 2020-February 2021 in a University that Followed CDC Reopening Guidance”, *Hygiene and Environmental Health Advances*, 7, **2023**, 100061 (8 pages), DOI:10.1016/j.heha.2023.100061.
16. C. Manzanas, E. Morrison, Y. S. Kim, M. Alipanah, G. Adedokun, S. Jin, T. Z. Osborne, Z. H. Fan, “Molecular Testing Devices for on-Site Detection of *E. coli* in Water Samples”, *Scientific Reports*, 13, **2023**, 4245 (11 pages), DOI: 10.1038/s41598-023-31208-4.
17. W. B. Vass, J. A. Lednicky, S. N. Shankar, Z. H. Fan, A. Eiguren-Fernandez, C. Y. Wu, “Viable SARS-CoV-2 Delta Variant Detected in Aerosols in a Residential Setting with a Self-Isolating College Student with COVID-19”, *Journal of Aerosol Science*, 165, **2022**, 106038 (12 pages), DOI: 10.1016/j.jaerosci.2022.106038.
18. P. Dopico, M. N. Le, B. Burgess, Z. Yang, Y. Zhao, Y. Wang, T. J. George, Z. H. Fan, “Longitudinal Study of Circulating Biomarkers in Patients with Resectable Pancreatic Ductal Adenocarcinoma”, *Biosensors*, 12, **2022**, 206 (15 pages), DOI: 10.3390/bios12040206.
19. J. I. Varillas, K. Chen, P. Dopico, J. Zhang, T. J. George, Z. H. Fan, “Comparison of Sample Preparation Methods for Rare Cell Isolation in Microfluidic Devices”, *Canadian Journal of Chemistry*, 100, **2022**, 512–519, DOI: 10.1139/cjc-2021-0229.
20. H. Li, S. N. Shankar, C. T. Witanachchi, J. A. Lednicky, J. C. Loeb, M. M. Alam, Z. H. Fan, J. A. Boyette, A. Eiguren-Fernandez, C. Y. Wu, “Environmental Surveillance for SARS-CoV-2 in Two Restaurants from a Mid-scale City that Followed U.S. CDC Reopening Guidance”, *Aerosol and Air Quality Research*, 22, **2022**, 210304 (13 pages), DOI: 10.4209/aaqr.210304.
21. S. N. Shankar, C. T. Witanachchi, A. F. Morea, J. A. Lednicky, J. C. Loeb, M. M. Alam, Z. H. Fan, A. Eiguren-Fernandez, C.-Y. Wu, “SARS-CoV-2 in residential rooms of two self-isolating persons with COVID-19”, *Journal of Aerosol Science*, 159, **2022**, 105870 (12 pages), DOI: 10.1016/j.jaerosci.2021.105870.
22. C. Manzanas, M. M. Alam, J. C. Loeb, J. A. Lednicky, C. Y. Wu, Z. H. Fan, “A Valve-Enabled Sample Preparation Device with Isothermal Amplification for Multiplexed Virus Detection at the Point-of-Care”, *ACS Sensors*, 6, **2021**, 4176–4184, DOI: 10.1021/acssensors.1c01718.
23. H. Li, S. N. Shankar, C. T. Witanachchi, J. A. Lednicky, J. C. Loeb, M. M. Alam, Z. H. Fan, K. Mohamed, A. Eiguren-Fernandez, C. Y. Wu, “Environmental surveillance and transmission risk assessments for SARS-CoV-2 in a fitness center”, *Aerosol and Air Quality Research*, 21, **2021**, 210106 (14 pages), DOI:10.4209/aaqr.210106.
24. T. J. George, A. Ali, Y. Wang, J. Lee, A. M. Ivey, D. DeRemer, K. C. Daily, C. J. Allegra, S. J. Hughes, Z. H. Fan, M. E. Cameron, A. R. Judge, J. G. Trevino, “Phase II study of 5-fluorouracil, oxaliplatin plus dasatinib (FOLFOX-D) to promote inhibition of Src in first-line metastatic pancreatic adenocarcinoma”, *The Oncologist*, 26, **2021**, 1-12, DOI: 10.1002/onco.13853.
25. X. Jiang, J. C. Loeb, M. Pan, T. B. Tilly, A. Eiguren-Fernandez, J. A. Lednicky, C.-Y. Wu, Z. H. Fan, "Integration of Sample Preparation with RNA-Amplification in a Hand-Held Device for Airborne Virus Detection", *Analytica Chimica Acta*, 1165, **2021**, 338542 (9 pages), DOI: 10.1016/j.aca.2021.338542.

26. H. O. Fasanya, P. J. Dopico, Z. Yeager, Z. H. Fan, D. W. Siemann, "Using a combination of gangliosides and cell surface vimentin as surface biomarkers for isolating osteosarcoma cells in microfluidic devices", *Journal of Bone Oncology*, 28, **2021**, 100357 (8 pages).
27. K. Sondhi, S. Avuthu, J. Richstein, Z. H. Fan, T. Nishida, "Fabrication and non-destructive characterization of Through-Plastic-Via (TPV) in Flexible Hybrid Electronics", *Flexible and Printed Electronics*, 6, **2021**, 025001 (12 pages).
28. M. N. Le, Z. H. Fan, "Exosome Isolation Using Nanostructures and Microfluidic Devices", *Biomedical Materials*, 16, **2021**, 022005 (23 pages). (a review)
29. J. A. Lednicky, M. Lauzardo, Z. H. Fan, A. Jutla, T. B. Tilly, M. Gangwar, M. Usmani, S. N. Shankar, K. Mohamed, A. Eiguren-Fernandez, C. J. Stephenson, Md. M. Alam, M. A. Elbadry, J. C. Loeb, K. Subramaniam, T. B. Waltzek, K. Cherabuddi, J. G. Morris, Jr., C-Y Wu, "Viable SARS-CoV-2 in the air of a hospital room with COVID-19 patients", *International Journal of Infectious Diseases*, 100, **2020**, 476–482. DOI: 10.1016/j.ijid.2020.09.025
30. C. S. Smith, K. Sondhi, S. C. Mills, J. S. Andrew, Z. H. Fan, T. Nishida, D. P. Arnold, "Screen-printable and stretchable hard magnetic ink formulated from barium hexaferrite nanoparticles", *Journal of Materials Chemistry C*, 8, **2020**, 12133-12139.
31. K. Chen, J. Amontree, J. Varillas, J. Zhang, T. J. George, Z. H. Fan, "Incorporation of Lateral Microfiltration with Immunoaffinity for Enhancing the Capture Efficiency of Rare Cells", *Scientific Reports*, 10, **2020**, 14210 (11 pages). DOI: 10.1038/s41598-020-71041-7
32. A. Kugimiya, A. Fujikawa, X. Jiang, Z. H. Fan, T. Nishida, J. Kohda, Y. Nakano, Y. Takano, "Microfluidic paper-based analytical device for histidine determination", *Applied Biochemistry and Biotechnology*, 192, **2020**, 812-821.
33. M. Wan, X. Jiang, J. Nie, Q. Cao, W. Zheng, X. Dong, Z. H. Fan, W. Zhou, "Phosphor powders-incorporated polylactic acid polymeric composite used as 3D printing filaments with green luminescence properties", *Journal of Applied Polymer Science*, 137, **2020**, 48644 (10 pages).
34. K. Sondhi, S.G.R. Avuthu, J. Richstein, Z. H. Fan, T. Nishida, "Characterization of Bending, Crease, Aging and Immersion Effects on Flexible Screen-printed Silver Traces", *IEEE Transactions on Components, Packaging and Manufacturing Technology*, 10, **2020**, 444-456.
35. M. Unni; J. Zhang; T. J. George; M. S. Segal, Z. H. Fan, C. Rinaldi, " Engineering magnetic nanoparticles and their integration with microfluidics for cell isolation," *Journal of Colloid and Interface Science,* 564, **2020**, 204–215.
36. R. Khnouf, D. Karasneh, E. Abdulhay, A. Abdelhay, W. Sheng, Z. H. Fan, Microfluidics-based device for the measurement of blood viscosity and its modeling based on shear rate, temperature, and heparin concentration, *Biomedical Microdevices*, 21, **2019**, 80 (10 pages).
37. K. Sondhi, N. Garraud, D. Alabi, D. P. Arnold, A. Garraud, S.G.R. Avuthu, Z. H. Fan, T. Nishida, "Flexible Screen-Printed Coils for Wireless Power Transfer Using Low-Frequency Magnetic Fields", *Journal of Micromechanics and Microengineering*, 29, **2019**, 084006 (10 pages).
38. K. Chen, P. Dopico, J. Varillas, J. Zhang, T. J. George, Z. H. Fan, "Integration of Lateral Filter Arrays with Immunoaffinity for Circulating-Tumor-Cell Isolation", *Angewandte Chemie International Edition*, 58, **2019**, 7606–7610. (inside cover page)
39. M. Pan, L. Carol, J. A. Lednicky, A. Eiguren-Fernandez, S. Hering, Z. H. Fan, C.Y. Wu, "Determination of the Distribution of Infectious Viruses in Aerosol Particles using Water-Based Condensational Growth Technology and a Bacteriophage MS2 Model", *Aerosol Science & Technology*, 53, **2019**, 583–593.
40. J. I. Varillas, J. Zhang, K. Chen, I. I. Barnes, C. Liu, T. J. George, Z. H. Fan, "Microfluidic Isolation of Circulating Tumor Cells and Cancer Stem-like Cells from Patients with Pancreatic Ductal Adenocarcinoma", *Theranostics*, 9, **2019**, 1417–1425.

41. X. Jiang, J. C. Loeb, C. Manzanas, J. A. Lednicky, Z. H. Fan, “Valve-enabled Sample Preparation and RNA Amplification in a Coffee Mug for Zika Virus Detection”, *Angewandte Chemie International Edition*, 57, **2018**, 17211–17214. DOI: 10.1002/anie.201809993
42. K. Sondhi, S. Hwangbo, Y.-K. Yoon, T. Nishida, and Z. H. Fan, “Airbrushing and surface modification for fabricating flexible electronics on polydimethylsiloxane”, *Journal of Micromechanics and Microengineering*, 28, **2018**, 125014 (13 pages).
43. M. Pan, L. Carol, J. A. Lednicky, A. Eiguren-Fernandez, S. Hering, Z. H. Fan, C.Y. Wu, “Collection of airborne bacteria and yeast through water-based condensational growth”, *Aerobiologia*, 34, **2018**, 337–348.
44. Z. H. Fan, “Exit interviews and lab-member awards (Learn from industry to build a healthy lab)”, *Nature,* 559, **2018**, 331–331. (A letter)
45. H. Yu, N. Afshar-Mohajer, A. Theodore, J. Lednicky, Z. H. Fan, C.Y. Wu, “An Efficient Virus Aerosol Sampler Enabled by Adiabatic Expansion”, *Journal of Aerosol Science*, 117, **2018**, 74–84.
46. C. L. Cassano, T. Georgiev, Z. H. Fan, “Using Airbrushes to Pattern Reagents for Microarrays and Paper-fluidic Devices," *Microsystems & Nanoengineering*, 3, **2017**, 17055 (7 pages).
47. M. Pan, T. S. Bonny, J. Loeb, X. Jiang, J. A. Lednicky, A. Eiguren-Fernandez, S. Hering, Z. H. Fan, C.Y. Wu, “Collection of Viable Aerosolized Influenza Virus and Other Respiratory Viruses in a Student Health Care Center through Water-Based Condensation Growth”, *mSphere*, 2, **2017**, e00251-17 (11 pages).
48. K. Chen, T. Georgiev, W. Sheng, X. Zheng, J. I. Varillas, J. Zhang, Z. H. Fan, “Tumor Cell Capture Patterns around Aptamer-Immobilized Microposts in Microfluidic Devices”, *Biomicrofluidics*, 11, **2017**, 054110 (16 pages).
49. J. Li, W. Haas, K. Jackson, E. Kuru, M. C. Jewett, Z. H. Fan, S. Gygi, and G. M. Church, “Co-generating synthetic parts toward a self-replicating system”, *ACS Synthetic Biology*, 6, **2017**, 1327–1336.
50. J. L. Garcia-Cordero, Z. H. Fan, “Sessile droplets for chemical and biological assays”, *Lab on a Chip*, 17, **2017**, 2150–2166. (Cover page figure, a review)
51. T. S. Bonny, M. Pan, J. C. Loeb, X. Jiang, A. Eiguren-Fernandez, S. Hering, Z. H. Fan, C-Y Wu, J. A. Lednicky, “Drifted Influenza A and B Viruses Collected by a Water-Based Condensation Growth Air Sampler in a Student Health Care Center during an Influenza Outbreak”, *Genome Announcements (American Society for Microbiology)*, 5, **2017**, e00178-17 (2 pages).
52. X. Li, H. Zhao, L. Shi, X. Zhu, M. Lan, Q. Zhang, Z. H. Fan, “Electrochemical sensing of nicotine using screen-printed carbon electrodes modified with nitrogen-doped graphene sheets”, *Journal of Electroanalytical Chemistry*, 784, **2017**, 77–84.
53. J. I. Varillas, K. Chen, J. Zhang, T. J. George, Z. H. Fan, “A Novel Microfluidic Device for Isolation of Circulating Tumor Cells from Pancreatic Cancer Blood Samples”, *Methods in Molecular Biology*, 1634, **2017**, 33-53.
54. R. Hernandez-Perez, Z. H. Fan, J. L. Garcia-Cordero, “Evaporation-driven bioassays in suspended droplets”, *Analytical Chemistry*, 88, **2016**, 7312−7317.
55. X. Jiang, M. Pan, S. Hering, J. Lednicky, C.Y. Wu, Z. H. Fan, “Use of RNA Amplification and Electrophoresis for Studying Virus Aerosol Collection Efficiency and Their Comparison with Plaque Assays”, *Electrophoresis*, 37, **2016**, 2574–2580.
56. J. Zhang, K. Chen, Z. H. Fan, "Circulating Tumor Cell Isolation and Analysis," *Advances in Clinical Chemistry*, 75, **2016**, 1–31. (Cover page figure, a review)
57. J. Lednicky, M. Pan, J. Loeb, H. Hsieh, A. Fernandez, S. Hering, Z. H. Fan, C.Y. Wu, “Highly efficient collection of infectious pandemic Influenza H1N1 virus (2009) through laminar-flow water based condensation”, *Aerosol Science and Technology*, 50 (7), **2016**, i–iv.
58. X. Jiang, Z. H. Fan, “Fabrication and Operation of Paper-based Analytical Devices”, *Annual Review of Analytical Chemistry*, 9, **2016**, 203–222. (A review)

59. M. Pan, A. Fernandez, H. Hsieh, N. Afshar-Mohajer, S. Hering, J. Lednicky, Z. H. Fan, C.Y. Wu, “Efficient Collection of Viable Virus Aerosol through Laminar-Flow, Water-Based Condensational Particle Growth”, *Journal of Applied Microbiology*, 120, **2016**, 805–815.
60. J. Zhang, Z. H. Fan, "A Universal Tumor Cell Isolation Method Enabled by Fibrin-coated Microchannels," *Analyst*, 141, **2016**, 563–566.
61. C. W. Wang, Z. H. Fan, "Multi-Sample Immunoassay Inside Optical Fiber Capillary Enabled by Evanescent Wave Detection," *Sensing and Bio-Sensing Research*, 7, **2016**, 7–11.
62. S. Augustine, P. Gu, X. Zheng, T. Nishida, Z. H. Fan, “Low-power electrically controlled thermoelastic microvalves integrated in thermoplastic microfluidic devices”, *Microfluidics and Nanofluidics*, **2015**, 19, 1385–1394.
63. K. Jackson, S. Jin, Z. H. Fan, “Optimization of a Miniaturized Fluid Array Device for Cell-Free Protein Synthesis”, *Biotechnology and Bioengineering*, 112, **2015**, 2459–2467. (Cover page of Issue 12).
64. R. Khnouf, B. Chapman, S. Jin, D. Beebe, Z. H. Fan, “Detection of Ricin in Beverages Using Cell-Free Protein Synthesis in a Microfluidic Device”, *Sensors and Actuators B: Chemical*, 221, **2015**, 723–729.
65. K. Ward, Z. H. Fan, “Mixing in Microfluidic Devices and Enhancement Methods", *Journal of Micromechanics and Microengineering*, 25, **2015**, 094001 (17 pages). (A review)
66. C. L. Cassano, A. J. Simon, W. Liu, C. Fredrickson, and Z. H. Fan, “Use of vacuum bagging for fabricating thermoplastic microfluidic devices," *Lab on a Chip*, 15, **2015**, 62–66.
67. K. Jackson, R. Khnouf, Z. H. Fan, “Cell-free protein synthesis in microfluidic 96-well plates”, *Methods in Molecular Biology*, 1118, **2014**,157-168.
68. T. J. George, O. O. Ogunwobi, W. Sheng, Z. H. Fan, C. Liu, “Tissue is the Issue”: Circulating Tumor Cells in Pancreatic Cancer," *Journal of Gastrointestinal Cancer*, 45, **2014**, S222–S225.
69. J. Zhang, W. Sheng and Z. H. Fan, "An Ensemble of Aptamers and Antibodies for Multivalent Capture of Cancer Cells", *Chemical Communications*, 50, **2014**, 6722–6725.
70. K. Jackson, Takashi Kanamori, Takuya Ueda, and Z. H. Fan, "Protein Synthesis Yield Increased 72 Times in the Cell-Free PURE System," *Integrative Biology*, 6, **2014**, 781–788.
71. C. L. Cassano, Mawatari, T. Kitamori, and Z. H. Fan, "Thermal Lens Microscopy as a Detector in Microdevices" *Electrophoresis*, 35, **2014**, 2279–2291. (A review)
72. K. Jackson, and Z. H. Fan, "Cell-Free Protein Synthesis in Miniaturized Array Devices and Effects of Device Orientation," *Journal of Laboratory Automation*, 19, **2014**, 366–374. (Cover page of Issue 4).
73. Xin Xu, Yunchao Su, Z. Hugh Fan, “Cotinine Concentration in Serum Correlates with Tobacco Smoke-Induced Emphysema in Mice”, *Scientific Reports*, 4, **2014**, 3864 (5 pages).
74. P. Gu, T. Nishida, and Z. H. Fan, "The use of polyurethane as an elastomer in thermoplastic microfluidic devices and the study of its creep properties," *Electrophoresis*, 35, **2014**, 289–297.
75. W. Sheng, O. O. Ogunwobi, T. Chen, J. Zhang, T. J. George, C. Liu, and Z. H. Fan, "Capture, release and culture of circulating tumor cells from pancreatic cancer patients using an enhanced mixing chip," *Lab on a Chip*, 14, **2014**, 89–98. (one of "2014 Most Accessed Articles" per the Journal)
76. Z. H. Fan and D. J. Beebe, "Lab on a chip and circulating tumor cells," *Lab on a Chip*, 14, **2014**, 12–13. (An editorial)
77. W. Liu, C. L. Cassano, X. Xu, and Z. H. Fan, "Laminated paper-based analytical devices (LPAD) with origami-enabled chemiluminescence immunoassay for cotinine detection in mouse serum," *Analytical Chemistry*, 85, **2013**, 10270–10276.
78. Z. H. Fan and W. Tan, "DNA Nanospheres with Microfluidics: A Promising Platform for Cancer Diagnosis?" *Nanomedicine (London)*, 8, **2013**, 1731–1733. (An editorial)

79. A. T. Georgieva, V. Pappu, V. Krishna, P. G. Georgiev, I. Ghiviriga, P. Indeglia, X. Xu, Z. H. Fan, B. Koopman, P. M. Pardalos, B. Moudgil, "Polyhydroxy fullerenes," *Journal of Nanoparticle Research*, 15, **2013**, 1690 (18 pages).
80. W. Sheng, T. Chen, W. Tan, and Z. H. Fan, "Multivalent DNA nanospheres for enhanced capture of cancer cells in microfluidic devices," *ACS Nano*, 7, **2013**, 7067–7076.
81. Z. H. Fan, "Chemical Sensors and Microfluidics", *Journal of Biosensors & Bioelectronics*, 4, **2013**, e117 (2 pages). (An editorial)
82. C. L. Cassano and Z. H. Fan, "Laminated Paper-based Analytical Devices (LPAD): Fabrication, Characterization, and Assays," *Microfluidics and Nanofluidics*, 14, **2013**, 173–181.
83. X. Xu and Z. H. Fan, "Concentration and determination of cotinine in serum by cation-selective exhaustive injection and sweeping micellar electrokinetic chromatography", *Electrophoresis*, 33, **2012**, 2570–2576.
84. W. Sheng, T. Chen, R. Kamath, X. Xiong, W. Tan, and Z. H. Fan, "Aptamer-enabled Efficient Isolation of Cancer Cells from Whole Blood Using a Microfluidic Device", *Analytical Chemistry*, 84, **2012**, 4199–4206.
85. X. Xu, K. Liu, and Z. H. Fan, "Microscale Two-dimensional Separation Systems for Proteomic Analysis", *Expert Review of Proteomics*, 9, **2012**, 135–147. (A review)
86. K. Liu, P. Gu, K. Hamaker, and Z. H. Fan. "Characterization of bonding between poly(dimethylsiloxane) and cyclic olefin copolymer using corona discharge induced grafting polymerization," *Journal of Colloid and Interface Science,* 365, **2012**, 289–295.
87. M. M. Dudek, N. J. Kent, P. Gu, Z. H. Fan, and A. J. Killard, "Development of a fluorescent method for detecting the onset of coagulation in human plasma on microstructured lateral flow platforms," *Analyst*, 136, **2011**, 1816–1825.
88. S.-Y. Teh, R. Khnouf, Z. H. Fan, and A. P. Lee, "Stable, biocompatible lipid vesicle generation by solvent extraction-based droplet microfluidics " *Biomicrofluidics,* 5, **2011**, 044113 (12 pages).
89. R. Khnouf, B. D. Chapman, and Z. H. Fan, "Fabrication Optimization of a Miniaturized Array Device for Cell-Free Protein Synthesis," *Electrophoresis*, 32, **2011**, 3101–3107.
90. K. Liu, Z. H. Fan, "Thermoplastic Microfluidic Devices and Their Applications in Protein and DNA Analysis," *Analyst*, 136, **2011**, 1288–1297. (A review)
91. P. Gu, K. Liu, H. Chen, T. Nishida, and Z. H. Fan, "Chemical-Assisted Bonding of Thermoplastics/Elastomer for Fabricating Microfluidic Valves," *Analytical Chemistry*, 83, **2011**, 446–452.
92. R. Khnouf, D. Olivero, S. Jin, and Z. H. Fan, "Miniaturized Fluid Array for High-Throughput Protein Expression," *Biotechnology Progress*, 26, **2010**, 1590–1596.
93. Q. Mei, R. Khnouf, A. Simon, and Z. H. Fan, "Protein Synthesis in a Device with Nanoporous Membranes and Microchannels," *Lab on a Chip*, 10, **2010**, 2541–2545.
94. R. Khnouf, D. Olivero, S. Jin, M. A. Coleman, and Z. H. Fan, "Cell-Free Expression of Soluble and Membrane Proteins in an Array Device for Drug Screening," *Analytical Chemistry*, 82, **2010**, 7021–7026.
95. Z. H. Fan, "Microfluidic devices with photodefinable pseudo-valves for protein separation", *Methods in Molecular Biology*, 544, **2009**, 43-52.
96. K. Pitchaimani, B. C. Sapp, A. Winter, A. Gispanski, T. Nishida, Z. H. Fan, "Manufacturable Plastic Microfluidic Valves Using Thermal Actuation," *Lab on a Chip*, 9, **2009**, 3082–3087. (Listed as "hot papers" of the issue)
97. Y. Xu, J. A. Phillips, J. Yan, Q. Li, Z. H. Fan, W. Tan, "Aptamer-based microfluidic device for enrichment, sorting, and detection of multiple cancer cells," *Analytical Chemistry*, 81, **2009**, 7436–7442.
98. H. Chen and Z. H. Fan, "Two-Dimensional Protein Separation in Microfluidic Devices," *Electrophoresis*, 30, **2009**, 758–765. (A review)

99. J. A. Phillips, Y. Xu, Z. Xia, Z. H. Fan, and W. Tan, "Enrichment of cancer cells using aptamers immobilized on a microfluidic channel," *Analytical Chemistry*, 81, **2009,** 1033–1039.
100. R. Khnouf, D. J. Beebe, and Z. H. Fan, "Cell-Free Protein Expression in a Microchannel Array with Passive Pumping," *Lab on a Chip*, 9, **2009**, 56–61. (Listed as "hot papers" of the issue; also covered in a news article entitled "Passive pumping promotes protein production" in *Chemical Biology*, 2009, Vol. 4, B2)
101. Z. Xia, R. Mei, M. Sheplak, and Z. H. Fan, "Electroosmotically-Driven Creeping Flows in a Wavy Microchannel," *Microfluidics and Nanofluidics*, *6*, **2009**, 37–52.
102. Q. Mei, Z. Xia, F. Xu, S. A. Soper, and Z. H. Fan, "Fabrication of Microfluidic Reactors and Mixing Studies for Luciferase Detection," *Analytical Chemistry,* 80, **2008**, 6045–6050.
103. D. Olivero, Z. H. Fan, "Lamination of Plastic Microfluidic Devices," *Lab on a Chip*: *Chips & Tips*, **2008**, 2 pages, http://blogs.rsc.org/chipsandtips/2008/07/30/lamination-of-plastic-microfluidic-devices/.
104. J. Zhang, C. Das, and Z. H. Fan, "Dynamic Coating for Protein Separation in Cyclic Olefin Copolymer Microfluidic Devices," *Microfluidics and Nanofluidics*, 5, **2008**, 327–335.
105. C. Walker, Z. Xia, Z. Foster, B. J. Lutz, and Z. H. Fan, "Investigation of Airbrushing for Fabricating Microelectrodes in Microfluidic Devices," *Electroanalysis*, **2008**, 20, 663–670.
106. Q. Mei, C. K. Fredrickson, A. Simon, R. Khnouf, and Z. H. Fan, "Cell-Free Protein Synthesis in Microfluidic Array Devices," *Biotechnology Progress*, 23, **2007**, 1305–1311.
107. Z. Xia, L. Cattafesta, and Z. H. Fan. "Deconvolution Microscopy for Flow Visualization in Microchannels", *Analytical Chemistry,* 79, **2007**, 2576–2582. (Covered in a news article in *Biophotonics International*, April issue of 2007, p17-19)
108. C. Das, J. Zhang, N. D. Denslow, and Z. H. Fan, "Integration of Isoelectric Focusing with Multi-channel Gel Electrophoresis by Using Microfluidic Pseudo-valves," *Lab on a Chip*, 7, **2007**, 1806–1812.
109. C. Das, C. K. Fredrickson, Z. Xia, Z. H. Fan, "Device Fabrication and Integration with Photodefinable Microvalves for Protein Separation", *Sensors and Actuators A*, 134, **2007**, 271–277.
110. Q. Mei, C. K. Fredrickson, W. Lian, S. Jin, Z. H. Fan, "Ricin Detection by Biological Signal Amplification in a Well-in-a-Well Device", *Analytical Chemistry*, 78, **2006**, 7659–7664. (Covered in a news article in *Micro-Nano*, January issue of 2007, p15)
111. C. Das, Z. H. Fan, "Effects of Separation Length and Voltage on Isoelectric Focusing in a Plastic Microfluidic Device", *Electrophoresis*, **2006**, 27, 3619–3626.
112. C. K. Fredrickson, Z. Xia, C. Das, R. Ferguson, F. T. Tavares, Z. H. Fan, "Effects of Fabrication Process Parameters on the Properties of Cyclic Olefin Copolymer Microfluidic Devices", *Journal of MicroElectroMechanical Systems*, 15, **2006**, 1060–1068.
113. A. V. Stoyanov, Z. H. Fan, C. Das, H. Ahmadzadeh, Q. Mei, S. Mohammed, "On the possibility of applying noncovalent dyes for protein labeling in isoelectric focusing", *Analytical Biochemistry*, 350, **2006**, 263–267.
114. Q. Mei, C. K. Fredrickson, S. Jin, Z. H. Fan, "Toxin Detection by Miniaturized in vitro Protein Expression Array", *Analytical Chemistry,* 77, **2005**, 5494–5500.
115. B.J. Lutz, Z. H. Fan, T. Burgdorf, B. Friedrich, "Hydrogen sensing by enzyme-catalyzed electrochemical detection", *Analytical Chemistry,* 77, **2005**, 4969–4975.
116. C. Das, Z. Xia, A. Stoyanov, Z. H. Fan, "A laser-induced fluorescence imaging system for isoelectric focusing", *Instrumentation Science and Technology*, 33, **2005**, 379–389.
117. V. Stoyanov, C. Das, C. K. Fredrickson, Z. H. Fan, "Conductivity properties of carrier ampholyte pH gradients in isoelectric focusing", *Electrophoresis*, 26, **2005**, 473–479.
118. K. Fredrickson, Z. H. Fan, "Macro-to-micro interfaces for microfluidic devices", *Lab on a chip*, 4, **2004**, 526–533. (A review)

119. G. Koh, W. Tan, M. Zhao, A. J. Ricco, and Z. H. Fan, “Integrating polymerase chain reaction, valving, and electrophoresis for bacterial detection”, *Analytical Chemistry,* 75, **2003**, 4591–4598.
120. W. Tan, Z. H. Fan, C. X. Qiu, A. J. Ricco, I. Gibbons, “Miniaturized capillary isoelectric focusing in plastic microfluidic devices”, *Electrophoresis*, 23, **2002**, 3638–3645.
121. J. Ricco, T. D. Boone, Z. H. Fan, I. Gibbons, T. Matray, S. Singh, H. Tan, T. Tian, S. J. Williams, “Application of disposable plastic microfluidic device arrays with customized chemistries to multiplexed biochemical assays”, *Biochemical Society Transactions,* Vol. 30, **2002**, 73–78.
122. T. D. Boone, Z. H. Fan, H. H. Hooper, A. J. Ricco, H. Tan, S. J. Williams, “Plastic advances microfluidic devices”, *Analytical Chemistry*, 74, **2002,** 78A–86A. (A review)
123. Z. H. Fan, S. Mangru, R. Granzow, P. Heaney, W. Ho, Q. Dong, R. Kumar, “Dynamic DNA hybridization on a chip using paramagnetic beads”, *Analytical Chemistry*, 71, **1999,** 4851–4859.
124. L. L. Shultz-Lockyear; C. L. Colyer; Z. H. Fan; K. I. Roy, D. J. Harrison, “Effects of injector geometry and sample matrix on injection and sample loading in integrated capillary electrophoresis devices”, *Electrophoresis*, 20, **1999**, 529–538.
125. Z. H. Fan, P. K. Jensen, C. S. Lee, J. King, “Monitoring the refolding pathway for a large multimetric protein using capillary zone electrophoresis”, *Journal of Chromatography A*, 769, **1997**, 315–323.
126. D. J. Harrison; K. Fluri, N. Chiem; T. Tang; Z. Fan, "Micromachining chemical and biochemical analysis and reaction systems on glass substrates", *Sensors and Actuators B,* 33, **1996**, 105–109.
127. K. Seiler; Z. H. Fan; K. Fluri; D. J. Harrison, "Electroosmotic pumping and valveless control of fluid flow within a manifold of capillaries on a glass chip", *Analytical Chemistry*, 66, **1994**, 3485–3491.
128. Z. H. Fan, D. J. Harrison, "Micromachining of capillary electrophoresis injectors and separators on glass chips and evaluation of flow at capillary intersections", *Analytical Chemistry*, 66, **1994**, 177–184.
129. D. J. Harrison, K. Fluri, K. Seiler, Z. Fan, C. S. Effenhauser, A. Manz, "Micromachining a miniaturized capillary electrophoresis-based chemical analysis system on a chip", *Science*, 261, **1993**, 895–897. (Covered in a news article in *Science News*, 144 (7), 100)
130. D. J. Harrison; Z. Fan; K. Seiler; A. Manz; H. M. Widmer, "Rapid separation of fluorescein derivatives using a micromachined capillary electrophoresis system", *Analytica Chimica Acta*, 283, **1993**, 361–366.
131. D. J. Harrison; A. Manz; Z. Fan; H. Ludi; H. M. Widmer, "Capillary electrophoresis and sample injection systems integrated on a planar glass chip", *Analytical Chemistry*, 64, **1992**, 1926–1932.
132. Z. Fan, D. J. Harrison, "Permeability of glucose and other neutral species through recast perfluorosulfonated ionomer films", *Analytical Chemistry*, 64, **1992**, 1304–1311.
133. Q. Zhong; J. Shao; Z. Fan; Z. Li, "Phase transfer catalytic N-alkylation of saccharin", *Huaxue Shiji* (in Chinese), 10, **1988**, 47–49. See Chemical Abstract, 110: 8091r.

Impacts:
The total citations of these journal publications are more than **8,800**, according to Clarivate Analytics’ Web of Science (formerly *Institute of Scientific Information*).
The total citations of all publications are more than **16,200**, according to Google Scholar (http://scholar.google.com/citations?user=Oj0nFcAAAAAJ&hl=en&oi=ao).

Patents
1. Z. H. Fan, K. Chen, “Lateral Filter Array Microfluidic Device”, U.S. patent, 12,297,417, **2025**.

2. T. Nishida, C. Anderson, Z. H. Fan, “A fully screen-printed process for the fabrication and integration of flexible microcavity structures into multi-functional flexible hybrid electronics”, U.S. provisional patent application, serial No. 63/685,908, **2024**.
3. Z. H. Fan, X. Jiang., T. B. Tilly, J. Lednicky, C-Y. Wu, “Apparatus and Method for Performing Microorganism Detection”, U.S. patent, 12,071,610, **2024.**
4. Z. H. Fan, C. Manzanas, Elise Morrison, Todd Osborne, “Portable Devices and Methods for *In Situ* Nucleic Acid Detection in Water Samples”, WO2024/118366 A1, **2024**
5. Z. H. Fan, M. Alipanahrostami, J. Lednicky, “Assays for Detection of Mayaro Virus and Methods of Detection Thereof”, WO2024/059501 A1, **2024**
6. Z. H. Fan, C. Manzanas, M. Alipanahrostami, J. Lednicky, C-Y. Wu, “Multiplex Devices and Methods for Pathogen Detection”, PCT/US2022/76456, US2024/0181444 A1, **2024**
7. C. Y. Wu, X. Jiang, M. Pan, J. Lednicky, A. D. Theodore, Z. H. Fan, N. Afshar-Mohajer, “Bioaerosol detection systems and methods of use”, U.S. Patent 11,845,997, **2023**.
8. H.O. Fasanya, P. Dopico, Z. H. Fan, D.W. Siemann, “Use of Ganglioside 2 and 3 for Circulating Sarcoma Cell Detection”, PCT/US2020/053479, **2020**
9. C. Y. Wu, X. Jiang, M. Pan, J. Lednicky, A. D. Theodore, Z. H. Fan, N. Afshar-Mohajer, “Bioaerosol detection systems and methods of use”, U.S. Patent 10,859,473, **2020**.
10. Z. H. Fan, J. Zhang, “Antibody and aptamer ensemble for cell isolation and enrichment”, *U.S. Patent* 10,466,243, **2019**.
11. Z. H. Fan, K. Jackson, "Apparatuses and methods for high-throughput protein synthesis", *US Patent* 10,214,713, **2019**. (licensed to Covitect Inc.)
12. Z. H. Fan, W. Sheng, T. Chen, W. Tan, “Devices and Methods for Isolating Cells”, PCT/US2014/040649, U.S. Patent 2016/0091489 A1, **2016**.
13. Z. H. Fan, T. Nishida, “Microfluidic array device and system for simultaneous detection of multiple analytes”, PCT/US2008/058392, **2008**.
14. Z. H. Fan, S. Jin, Q. Mei, “Miniaturized in vitro protein expression array”, PCT/US2006/026752, **2006**.
15. Z. H. Fan, B. J. Lutz, B. Friedrich, T. Burgdorf, “Hydrogen sensor using enzyme-catalyzed reaction”, U.S. Patent Office application no. 60/662,504, PCT/US2006/009495, **2006**.
16. S. C. Cherukuri; R.R. Demers; Z. H. Fan; A. W. Levine; S. E. McBride; P. J. Zanzucchi; “Device for selective distribution of liquids”, *US Patent 6,331,439*, **2001**. (Licensed to Orchid Cellmark Inc. that was later acquired by Laboratory Corp. of America in 2011)
17. S. E. McBride; S. C. Cherukuri; R. Kumar; J. A. Ladd; Z. H. Fan; B. L. Bentz; P. J. Zanzucchi; “Apparatus for separating molecules”, *US Patent 6,296,752*, **2001**. (Licensed to Orchid Cellmark Inc. that was later acquired by Laboratory Corp. of America in 2011)
18. T. L. Fare; Z. H. Fan; P. J. Heaney, “Flow control in microfluidics devices by controlled bubble formation”, *US Patent 5,992,820*, **1999**. (Licensed to Orchid Cellmark Inc.)
19. S. C. Cherukuri; R. R. Demers; Z. H. Fan; A. W. Levine; S. E. McBride; P. J. Zanzucchi, “Method and system for inhibiting cross-contamination in fluids of combinatorial chemistry device”, *US Patent 5,980,704*, **1999**. (Licensed to Orchid Cellmark Inc.)
20. P. J. Zanzucchi; S. C. Cherukuri; S. E. McBride; R. R. Demers; A. W. Levine; B. J. Thaler; R. L. Quinn; P. L. Braun; W. Chiang; Z. H. Fan; S. A. Lipp; J. R. Matey, “Liquid distribution system”, *US Patent 5,846,396*, **1998**. (Licensed to Orchid Cellmark Inc.)
21. Z. H. Fan; A. W. Levine; S. C. Cherukuri; S. A. Lipp, “Field-assisted sealing”, *US Patent 5,747,169*, **1998**. (Licensed to Orchid Cellmark Inc.)
22. S. C. Cherukuri; R. R. Demers; Z. H. Fan; A. W. Levine; S. E. McBride; P. J. Zanzucchi, “Method and system for inhibiting cross-contamination in fluids of combinatorial chemistry device”, *US Patent 5,603,351*, **1997**. (Licensed to Orchid Cellmark Inc.)

Book

Z. Hugh Fan (Ed.), “Circulating Tumor Cells: Isolation and Analysis”, John Wiley & Sons, Inc.

(http://www.wiley.com/WileyCDA/WileyTitle/productCd-1118915534.html), ISBN: 978-1-118-91553-0, **2016,** 464 pages.

Book Chapters

1. Y. Zhang, J. P. Lagmay, and Z. H. Fan, “Highly Efficient Capture of Sarcoma Cells in Microfluidics Devices”, in *Circulating Tumor Cells – Methods and Protocols, Second Edition (Methods in Molecular Biology),* edited by Mark J. Magbanua, Springer Science+Business Media, LLC, **2025**, in press.
2. M. N. Le, K. A. Smith, M. Alipanahrostami, K. Chen, J. P. Lagmay, and Z. H. Fan, “Microfluidics-Enabled Isolation and Single-Cell Analysis of Circulating Tumor Cells”, in *Single-Cell Assays: Microfluidics, Genomics and Drug Discovery (Methods in Molecular Biology, vol. 2689),* edited by Paul C.H. Li and Angela Wu, Springer Science+Business Media, LLC, **2023**, chapter 7, 71–93, DOI: 10.1007/978-1-0716-3323-6_7.
3. K. Chen, T. J. George, Jr., Z. H. Fan, "Lateral Filter Array Microfluidic Devices for Detecting Circulating Tumor Cells," in *Microfluidic Systems for Cancer Diagnosis (Methods in Molecular Biology, vol. 2679),* edited by Jose Garcia-Cordero and Alexander Revzin, Springer Science+Business Media, LLC, **2023**, chapter 1, 1-13, DOI: 10.1007/978-1-0716-3271-0_1.
4. J. I. Varillas, K. Chen, J. Zhang, T. J. George, Jr., Z. H. Fan, " A Novel Microfluidic Device for Isolation of Circulating Tumor Cells from Pancreatic Cancer Blood Samples," in *Circulating Tumor Cells – Methods and Protocols (Methods in Molecular Biology),* edited by John M. Walker, Springer Science+Business Media, LLC, **2017**, chapter 3, 33-53.
5. J. I. Varillas, Z. H. Fan, “Circulating Tumor Cell Glossary”, in *Circulating Tumor Cells: Isolation and Analysis (Chemical Analysis, Vol. 184)*, edited by Z. Hugh Fan, John Wiley & Sons Inc., **2016,** chapter 20, 403–421.
6. J. Zhang, Z. H. Fan, “Aptamer-enabled Tumor Cell isolation”, in *Circulating Tumor Cells: Isolation and Analysis (Chemical Analysis, Vol. 184)*, edited by Z. Hugh Fan, John Wiley & Sons Inc., **2016,** chapter 13, 287–300.
7. K. Chen, Z. H. Fan, “Introduction to Microfluidics”, in *Circulating Tumor Cells: Isolation and Analysis (Chemical Analysis, Vol. 184)*, edited by Z. Hugh Fan, John Wiley & Sons Inc., **2016,** chapter 2, 33–50.
8. K. Jackson, R. Khnouf, Z. H. Fan, "Cell-Free Protein Synthesis in Microfluidic 96-Well Plates," in *Cell-Free Protein Synthesis: Methods and Protocols (Methods in Molecular Biology, Vol. 1118)*, edited by Kirill Alexandrov and Wayne A. Johnston, Springer Science+Business Media, LLC, **2014,** chapter 10, 157–168.
9. Z. H. Fan, Q. Mei, S. Jin, "A Microfluidic Sensor Array for Ricin Detection," in *Nanoscience and Nanotechnology for Chemical and Biological Defense*, edited by R. Nagarajan, W. Zukas, T. A. Hatton, S. Lee, Oxford University Press, **2010,** chapter 15, p195–204.
10. Z. H. Fan, “Microfluidic devices with photodefinable pseudo-valves for protein separation”, in *Micro and Nano Technologies in Bioanalysis: Methods and Protocols (Methods in Molecular Biology, Vol.* 544*)*, edited by James W. Lee and Robert S. Foote, Humana Press, **2009**, chapter 4, 43–52.
11. Z. H. Fan, C. Das, H. Chen, "Two-Dimensional Electrophoresis in a Chip," in *Lab-on-a-Chip Technology (Vol. 2): Biomolecular Separation and Analysis*, edited by A. Rasooly and K. Herold, Hethersett, UK: Caister Academic Press, (ISBN: 978-1-904455-47-9)**, 2009,** Chapter 1, p3–12.
12. Z. H. Fan, A. J. Ricco, “Integrated Plastic Microfluidic Devices for Bacterial Detection”, in *Integrated Biochips for DNA Analysis*, edited by R. Liu and A. Lee, Landes Bioscience, TX, **2007**, p78–89.
13. Z. H. Fan, A. J. Ricco, “Plastic microfluidic devices for DNA and protein analyses”, in *BioMEMS and Biomedical Nanotechnology: Vol. 2 Micro/Nano-Technology for Genomics and*

Proteomics, edited by M. Ozkan, M. Heller, and M. Ferrari, Springer, Netherlands, **2006**, 311-328.

14. Z. H. Fan, R. Kumar; "Biological applications of paramagnetic particles in chips", *Biochip Technology*, edited by L. Kricka and J. Cheng, Harwood Academic Publishers GmbH, **2000**, chapter 15, p291–307.
15. Z. H. Fan, P. York, S. Cherukuri, "Chip fabrication for combinatorial chemistry", in *Microstructures and microfabricated systems III*, edited by P. J. Hesketh; G. Barna; H.G. Hughes, The Electrochemical Society, Inc., **1997**, p86–93.
16. D. J. Harrison; F. Moussy; S. Jakeway; Z. Fan; R. V. Rajotte, "Multilayered coatings of Nafion and poly(phenylenediamine) for the protection of glucose sensors *in vivo*", *Interfacial Design and Chemical Sensing*, Edited by T. E. Mallouk and D. J. Harrison, American Chemical Society, **1994**, p255–263.
17. D. J. Harrison; Z. Fan; K. Seiler; K. Fluri, "Miniaturized chemical analysis systems and their fabrication: an alternative to chemical sensors", *Chemical Sensors II,* edited by M. Butler; A. Ricco; N. Yamazoe, The Electrochemical Society, Inc., **1993**, p546–552.

Referred Proceedings

1. Y. Zhang, K. Chen, M. L. Chubb, J. P. Lagmay, and Z. H. Fan, "Immunoaffinity and filtration for microfluidic isolation of cancer cells", *The 23rd International Conference on Solid-State Sensors, Actuators, and Microsystems (Transducers'2025)*, Orlando, FL, USA, June 29 – July 3, **2025**, p223-226. DOI: 10.1109/Transducers61432.2025.11111445.
2. G. Adedokun, G. Sidhu, G. P. Wang, Z. H. Fan, "Integrating mini-valves with electronics/optics in a portable device for virus detection at the point-of-care", *The 23rd International Conference on Solid-State Sensors, Actuators, and Microsystems (Transducers'2025)*, Orlando, FL, USA, June 29 – July 3, **2025**, p902-905, DOI: 10.1109/Transducers61432.2025.11110832.
3. Y. Zhang, K. Chen, M. L. Chubb, B. Greer, J. P. Lagmay, and Z. H. Fan, "Immunoaffinity-enhanced lateral filtration microdevices for rare cell isolation", in *Proceedings of the ASME 2024 International Mechanical Engineering Congress and Exposition (IMECE2024),* November 17- November 21, **2024**, Portland, OR*,* IMECE2024-142865, 6 pages.
4. C. Anderson, Z. H. Fan, J. Richstein, M. Sussman, T. Nishida, "Fabrication of 3D Screen-Printed Micro-Cavities Towards Sweat Sensors for Integrated Flexible Hybrid Electronics", in *Proceedings of IEEE Sensors 2024,* Oct. 20 - 23, **2024**, Kobe, Japan*,* 4 pages.
5. M. Alipanah, J. A. Lednicky, J. G. Morris, Z. H. Fan, "A point-of-care device integrating sample preparation with isothermal amplification for detection of Mayaro virus", in *Proceedings of the ASME 2023 International Mechanical Engineering Congress and Exposition (IMECE2023), October 29 - November 2, **2023**, New Orleans, LA,* IMECE2023-114292, 6 pages.
6. G. Adedokun, G. Sidhu, G. P. Wang, Z. H. Fan, "Development of Paper-Based RNA Amplification Devices for Point-of-Care Detection of HIV", in *Proceedings of the ASME 2023 International Mechanical Engineering Congress and Exposition (IMECE2023), October 29 - November 2, **2023**, New Orleans, LA,* IMECE2023-113172, 5 pages.
7. C. Anderson, Z. H. Fan, J. Richstein, M. Sussman, T. Nishida, "A Comparison of Relative Seebeck Coefficients for Screen Printed Flexible Thermocouples Using Commercially Available Conductive Inks", in *Proceedings of the IEEE International Conference on Flexible, Printable Sensors and Systems (FLEPS 2023), July 9 - 12, **2023**, Boston, Massachusetts,* 4 pages.
8. M. Alipanah, C. Manzanas, J. A. Lednicky, C.-Y. Wu, Z. H. Fan, "Integration of Mini-valves with RNA Amplification Device for Simultaneous Detection of SARS-CoV-2 and Influenza Viruses", in *Proceedings of the ASME 2022 International Mechanical Engineering Congress and Exposition (IMECE2022), October 30 - November 3, **2022**, Columbus, OH,* IMECE2022-96831, 5 pages.

9. M. N. Le, D. Chen, K. A. Smith, D. D. Tran, and Z. H. Fan, "Microfluidic Devices for Isolating and Releasing Disseminated Tumor Cells in Bone Marrow", in *Proceedings of the ASME 2022 International Mechanical Engineering Congress and Exposition (IMECE2022), October 30 - November 3, **2022**, Columbus, OH,* IMECE2022-94554, 6 pages.
10. G. Adedokun, C. Manzanas, M. Alipanah, J. A. Lednicky, C.-Y. Wu, Z. H. Fan, "Point-of-Care Devices for Detecting Mosquito-Borne and Airborne Viruses", in *Proceedings of the 26th International Conference on Miniaturized Systems for Chemistry and Life Sciences (μTAS'2022)*, Oct. 23-27, **2022**, Hangzhou, China, p616-617.
11. Z. H. Fan, P. J. Dopico, Z. Yang, K. Chen, Y. Wang, T. J. George, "Longitudinal Study of Circulating Tumor Cells and DNA in Pancreatic Cancer Patient", in *Proceedings of the 26th International Conference on Miniaturized Systems for Chemistry and Life Sciences (μTAS'2022)*, Oct. 23-27, **2022**, Hangzhou, China, p170-171.
12. C. Manzanas, M. M. Alam, J. C. Loeb, J. A. Lednicky, C.-Y. Wu, Z. H. Fan, "Valve-Enabled Sample Preparation and Isothermal Amplification for SARS-COV-2 Detection at the Point-of-Care", in *Proceedings of the ASME 2021 International Mechanical Engineering Congress and Exposition (IMECE2021), November 1-5, **2021**, online,* IMECE2021-69303, 5 pages.
13. M. N. Le, D. Chen, K. A. Smith, D. D. Tran, Z. H. Fan, "Microfluidic Isolation and Release of Triple-Negative Breast Cancer Cells in Bone Marrow", in *Proceedings of the 25th International Conference on Miniaturized Systems for Chemistry and Life Sciences (μTAS'2021)*, Oct. 10-14, **2021**, Palm Springs, CA, p631-632.
14. C. Manzanas, M. M. Alam, J. C. Loeb, M. Alipanah, J. A. Lednicky, C.-Y. Wu, Z. H. Fan, "Valve-Enabled Sequential Reagent Delivery and Paper-Based Enrichment for Simultaneous Detection of SARS-CoV-2 and Influenza Viruses", in *Proceedings of the 25th International Conference on Miniaturized Systems for Chemistry and Life Sciences (μTAS'2021)*, Oct. 10-14, **2021**, Palm Springs, CA, p837-838.
15. M. Alipanah, X. Jiang, C. Manzanas, J. C. Loeb, M. Pan, T. B. Tilly, J. A. Lednicky, C.-Y. Wu, Z. H. Fan, "Integration of Sample Preparation with RNA Amplification Device for Influenza Virus Detection", in *Proceedings of the 25th International Conference on Miniaturized Systems for Chemistry and Life Sciences (μTAS'2021)*, Oct. 10-14, **2021**, Palm Springs, CA, p37-38.
16. C. Manzanas, X. Jiang, J. A. Lednicky, Z. H. Fan, "Development of Ball-Enabled Miniaturized Valves for Sample Preparation and Microheaters for Pathogen Detection", in *Proceedings of the ASME 2020 Fluids Engineering Division Summer Meeting (FEDSM2020)*, Jul. 12-16, **2020**, Orlando, FL, FEDSM2020-20379 (5 pages).
17. K. Sondhi, S. Avuthu, N. Richards, Z. H. Fan, T. Nishida, "Effect of a Backing Material on the Bendability of Flexible Substrates with Passive SMD components", in *Proceedings of IEEE 70th Electronic Components and Technology Conference (ECTC)*, May 26-29, **2020**, Lake Buena Vista, Florida, USA, 6 pages.
18. C. S. Smith, K. Sondhi, B. Jimenez, Z. H. Fan, T. Nishida, D. P. Arnold, "Screen-Printed Inductive Silver Ink Strain Sensor on Stretchable TPU Substrate", in *Proceedings of IEEE 70th Electronic Components and Technology Conference (ECTC)*, May 26-29, **2020**, Lake Buena Vista, Florida, USA, 4 pages.
19. K. Mohamed, C. Das, S. Jin, Z. H. Fan, "Cell-Free High-Throughput Protein Synthesis Using Meso-Scale Devices", in *Proceedings of the 23rd International Conference on Miniaturized Systems for Chemistry and Life Sciences (μTAS'2019)*, Oct. 27-31, **2019**, Basel, Switzerland, p1540-1541.
20. P. J. Dopico, K. Chen, J. Varillas, V. Pedrosa, T. J. George, Z. H. Fan, "Circulating Tumor Cell Isolation from Clinical Samples Utilizing a Lateral Filter Array Microfluidic Device", in *Proceedings of the 23rd International Conference on Miniaturized Systems for Chemistry and Life Sciences (μTAS'2019)*, Oct. 27-31, **2019**, Basel, Switzerland, p1514-1515.
21. C. Manzanas, X. Jiang, J. C. Loeb, J. A. Lednicky, Z. H. Fan, "Use of Miniaturized Devices and Isothermal Amplification for Pathogen Detection in the Field", in *Proceedings of the 23rd*

International Conference on Miniaturized Systems for Chemistry and Life Sciences (μTAS'2019), Oct. 27-31, **2019**, Basel, Switzerland, p831-832.

22. C. S. Smith, K. Sondhi, Z. H. Fan, T. Nishida, D. P. Arnold, "Effect of Mechanical Cycling on the Magnetic Properties of Permalloy Films Electroplated on Stretchable Substrates", *IEEE International Flexible Electronics Technology Conference,* Aug. 11-14, **2019**, Vancouver, Canada, 978-1-7281-1778-2/19, 3 pages.
23. J. Amontree, K. Sondhi, S. Hwangbo, S. G. R. Avuthu, Y. Yoon, T. Nishida, Z. H. Fan, "Reliability of Passive Printed Dipole Antennas Under Extreme Environments", *6th IEEE International Conference on Wireless for Space and Extreme Environments (WiSEE),* Dec. 11-13, **2018**, Huntsville, AL, USA, pp119-124, DOI: 10.1109/WiSEE.2018.8637322
24. K. Sondhi, N. Garraud, D. P. Arnold, A. Garraud, Z. H. Fan. T. Nishida, "Flexible screen-printed coils for wireless power transfer using low-frequency magnetic fields", PowerMEMS Conference, Dec 4-8, **2018**, Daytona Beach, FL, USA, 5 pages.
25. K. Chen, J. Amontree, Z. H. Fan, "Integration of lateral filter arrays with antibodies for isolation of circulating tumor cells", in *Proceedings of the 22nd International Conference on Miniaturized Systems for Chemistry and Life Sciences (μTAS'2018)*, Kaohsiung, Taiwan, Nov. 11-15, **2018**, 3 pages.
26. J. Amontree, K. Chen, J. Varillas, Z. H. Fan, "Capillary force driven single-cell spiking apparatus for studying circulating tumor cells", *Proceedings of the ASME 2018 International Mechanical Engineering Congress and Exposition (IMECE2018), November 9-15, **2018**, Pittsburgh, Pennsylvania, USA,* IMECE2018-87109, 6 pages.
27. K. Sondhi, J. Amontree, S. Hwangbo, S. G. R. Avuthu, Y. Yoon, Z. H. Fan. T. Nishida, "Airbrushed dipole RF Strain Sensor Antenna on a Stretchable Polyurethane Substrate", *IEEE Sensors'2018*, New Delhi, India, Oct. 28-31, **2018**, 4 pages.
28. K. Chen, T. Georgiev, Z. H. Fan, "Interactions between Circulating Tumor Cells and Aptamer-Functionalized Microposts in a Flow", *Proceedings of the ASME 2017 International Mechanical Engineering Congress and Exposition (IMECE2017), Tampa, FL, USA*, *November 3-9, **2017**,* IMECE2017-70342, 6 pages
29. P. Dopico, C. Wang, C. Rinaldi, T. J. George, M. Segal, Z. H. Fan, "Dialysis-Like Tumor Cell Removal Using Capillary Bundles", in *Proceedings of the 21st International Conference on Miniaturized Systems for Chemistry and Life Sciences (μTAS 2017)*, Savannah, GA, USA, Oct. 22-26, **2017**, 852-853.
30. J. Zhang, M. Unni, T. J. George, M. Segal, C. Rinaldi, Z. H. Fan, "Capture of Cancer Cells Using Magnetic Field Enhanced Microfluidic Devices", in *Proceedings of the 21st International Conference on Miniaturized Systems for Chemistry and Life Sciences (μTAS 2017)*, Savannah, GA, USA, Oct. 22-26, **2017**, 850-851.
31. X. Jiang, M. Pan, J. Loeb, S. Hering, A. Eiguren-Fernandez, J. A. Lednicky, C.Y. Wu, Z. H. Fan, "Flu Virus Aerosol Collection and Paper-based Viral RNA Detection", in *Proceedings of the 21st International Conference on Miniaturized Systems for Chemistry and Life Sciences (μTAS 2017)*, Savannah, GA, USA, Oct. 22-26, **2017**, 583-584.
32. Z. Hugh Fan, Jose I. Varillas, Jinling Zhang, Kangfu Chen, and Thomas J. George, Jr., "Tumor Cell Isolation in Microfluidic Devices for Cancer Treatment Monitoring", in *Proceedings of the 30th IEEE International Conference on Micro Electro Mechanical Systems (MEMS 2017)*, Las Vegas, NV, USA, Jan. 22-26, **2017**, 4 pages.
33. Z. H. Fan, S. Augustine, C. Wang, P. Gu, X. Zheng, and T. Nishida, "Electrically Controlled Thermoelastic Valve Array for Multiplexed Immunoassay", in *Proceedings of the 20th International Conference on Miniaturized Systems for Chemistry and Life Sciences (μTAS 2016)*, Dublin, Ireland, Oct. 9-13, **2016**, 1332-1333.
34. Chun-Wei Wang, Shancy Augustine, Toshi Nishida, and Z. Hugh Fan, "Low-Power Electrically Controlled Thermoelastic Microfluidic Valve Array for Multiplexed Immunoassay", in *Technical*

Digest of 2016 Solid-State Sensors, Actuators and Microsystems Workshop, Hilton Head Island, South Carolina, Jun. 5-9, **2016**, 332-335.

35. Z. Hugh Fan, Christopher L. Cassano, Teodor Georgiev, Corey E. Walker, "Airbrush for Maskless Reagent Patterning", in *Proceedings of the 19th International Conference on Miniaturized Systems for Chemistry and Life Sciences (μTAS 2015)*, Gyeongju, Korea, Oct. 25-29, **2015**, 1478–1480.
36. S. Augustine, P. Gu, X. Zheng, T. Nishida, and Z. H. Fan, "Development of All-Plastic Microvalve Array for Multiplexed Immunoassay", in *Proceedings of the ASME 2014 International Mechanical Engineering Congress and Exposition (IMECE2014), Montreal, Quebec, Canada*, *November 8-13, **2014**,* IMECE2014-38154, 6 pages.
37. Jose I. Varillas, Weian Sheng, Thomas J. George, Chen Liu, and Z. Hugh Fan, "Capture of Rare Cancer Cells in Microfluidic Devices for Treatment Monitoring", in *Proceedings of the 18th International Conference on Miniaturized Systems for Chemistry and Life Sciences (μTAS 2014)*, San Antonio, Texas, October 26 - 30, **2014**, 576–578.
38. Jingling, Zhang, Weian Sheng, Z. Hugh Fan, "Ensemble of Aptamers and Antibodies for Multivalent Capture of Cancer Cells", in *Proceedings of the 18th International Conference on Miniaturized Systems for Chemistry and Life Sciences (μTAS 2014)*, San Antonio, Texas, October 26 - 30, **2014**, 585–587.
39. Weian Sheng, Tao Chen, Weihong Tan, Z. Hugh Fan, "Rapid capture of rare cancer cells using a high-performance microfluidic chip", in *Proceedings of the ASME 2013 International Mechanical Engineering Congress and Exposition,* San Diego, CA, November 15-21, **2013**, IMECE2013-62952, 7 pages.
40. Z. Hugh Fan, Christopher L. Cassano, Wei Liu "Fabrication of laminated paper-based analytical devices (LPAD) for cotinine detection", in *Proceedings of the 17th International Conference on Miniaturized Systems for Chemistry and Life Sciences (μTAS 2013)*, Freiburg, Germany, Oct. 27-31, **2013**, 931–933.
41. Kirsten Jackson, Z. Hugh Fan, "Cell-free protein synthesis in vertically-oriented microreactor array devices", in *Proceedings of the 17th International Conference on Miniaturized Systems for Chemistry and Life Sciences (μTAS 2013)*, Freiburg, Germany, Oct. 27-31, **2013**, 1239–1241.
42. Z. Hugh Fan, Weian Sheng, Tao Chen, Weihong Tan, "Efficient isolation of tumor cells in whole blood using aptamers immobilized in a device", in *Proceedings of the 16th International Conference on Miniaturized Systems for Chemistry and Life Sciences (μTAS 2012)*, Okinawa, Japan, Oct. 28 – Nov. 1, **2012,** 1675–1677.
43. Z. Hugh Fan, Ke Liu, Imran Shaik, "Two-dimensional protein separation enabled by microvalve arrays" in *Proceedings of the 16th International Conference on Miniaturized Systems for Chemistry and Life Sciences (μTAS 2012)*, Okinawa, Japan, Oct. 28 – Nov. 1, **2012,** 1756–1758.
44. Z. H. Fan, P. Gu, S. Augustine, K. Liu, H. Freitag, T. Nishida, "Microfluidic Valve Arrays in Thermoplastic Devices," in *Proceedings of the ASME 10th International Conference on Nanochannels, Microchannels and Minichannels*, Puerto Rico, USA, July 8-12, **2012**, ICNMM2012-73021, 6 pages.
45. R. Khnouf, D. Olivero, S. Jin, & Z. H. Fan, "Miniaturized Fluid Array Device for High-Throughput Drug Screening", in *Proceedings of the Fifteenth International Conference on Miniaturized Chemical and Biochemical Analysis Systems (μTAS 2011)*, Seattle, WA, USA, 2 - 6 October, **2011,** p1466–1468.
46. Weian Sheng, Rahul Kamath, Tao Chen, Weihong Tan and Z. Hugh Fan, "Aptamer-facilitated High-efficiency Cancer Cell Sorting in a Micropost-based Microfluidic Device", in *Proceedings of the Fifteenth International Conference on Miniaturized Chemical and Biochemical Analysis Systems (μTAS 2011)*, Seattle, WA, USA, 2 - 6 October, **2011,** p1897–1899.

47. Z. Hugh Fan, R. Khnouf, Q. Mei, S. Jin, " A Fluid Array Device for High-Throughput Protein Synthesis," in *Proceedings of the Fourteenth International Conference on Miniaturized Chemical and Biochemical Analysis Systems (μTAS 2010)*, Groningen, Netherlands, 3 - 7 October, **2010,** p761–763.
48. P. Gu, K. Pitchaiman, K. Liu, T. Nishida, and Z. H. Fan, "Thermally Actuated Plastic Microfluidic Valves," in *Proceedings of International Mechanical Engineering Congress and Exposition*, Vancouver, Canada, November 12-18, **2010**, IMECE2010-38041, 5 pages.
49. Z. Hugh Fan, Q. Mei, and S. Soper, "Microfluidic reactors for bioluminescence detection," in *Proceedings of International Mechanical Engineering Congress and Exposition*, Orlando, Florida, **2009,** pp. IMECE2009-12464, 6 pages.
50. Z. Hugh Fan, Q. Mei, R. Khnouf, and S. Jin, "Microfluidic Protein Synthesis Array for Toxin Detection", *15th International Conference on Solid-State Sensors, Actuators, and Microsystems (Transducers)*, Denver, Colorado, USA, June 21 - 25, **2009**, p940–942.
51. R. Khnouf, D. J. Beebe, and Z. Hugh Fan, "Protein Expression in Array Devices with Passive Pumpin," in *The Proceedings of μTAS 2008 Conference*, Edited by L. E. Locascio, M. Gaitan, B. M. Paegel, D. J. Ross, W. N. Vreeland, San Diego, CA, Oct. 12-16, **2008**, p1740–1742.
52. Z. H. Fan, C. Das, C. Moreira, D. Olivero, and H. Chen, "Microfluidic Devices for Rapid Protein Separation," in *Proceedings of MicroNano2008*. Hong Kong: The American Society of Mechanical Engineers, **2008**, pp. MicroNano2008-70208, 4 pages.
53. Z. Xia, L. Cattafesta, M. Sheplak, R. Mei, and Z. H. Fan, "Fluid Mixing in Channels with Microridges," in *Proceedings of International Mechanical Engineering Congress and Exposition*, Seattle, Washington, **2007,** pp. IMECE2007-43052, 4 pages.
54. Z. H. Fan, C. Das, and J. Zhang, "Two-Dimensional Protein Separation in a Plastic Device with a Microvalve Array," in *The Proceedings of μTAS 2007 Conference*, vol. 2, J. Viovy, P. Tabeling, S. Descroix, and L. Malaquin, Eds. Paris: the Chemical and Biological Microsystems Society, **2007**, p1447–1449.
55. Q. Mei, C. K. Fredrickson, A. Simon, and Z. H. Fan, "Fabricating a Plastic Microfluidic Device for Protein Synthesis," in *Proceedings of International Mechanical Engineering Congress and Exposition*. Chicago, IL, **2006**, IMECE2006-14122 (5 pages).
56. Z. H. Fan, Q. Mei, A. Simon, C. K. Fredrickson, W. Lian, S. Jin, "Protein synthesis in a plastic device for toxin detection", in *Micro Total Analysis Systems*, edited by T. Kitamori, H. Fujita, and S. Hasebe, Society of Chemistry and Micro-Nano Systems, Tokyo, Japan, **2006**, p1026–1028. (The acceptance rate for an oral presentation is 8%.)
57. C. K. Fredrickson, C. Das, R. Ferguson, F. T. Tavares, Z. Xia, Z. H. Fan, "Fabricating plastic microfluidic devices with photodefinable microvalves for protein separations", *Proceedings of 2005 ASME International Mechanical Engineering Congress and Exposition*, November 5-11, **2005**, Orlando, FL, USA, IMECE2005-79229 (5 pages).
58. C. Das, A. Stoyanov, C. Fredrickson, R. Tran-Son-Tay, Z. H. Fan, "Laser-induced fluorescence imaging system for protein separations in microfluidic devices", *Proceedings of Systems and Technologies for Clinical Diagnostics and Drug Discovery II*, SPIE Vol. 3603, Philadelphia, PA, Jan 24-25, **2004**, 192–197.
59. Z. H. Fan, A. J. Ricco, W. Tan, M. Zhao, C. G. Koh, "Integrating multiplexed PCR with CE for detecting microorganisms", in *Micro Total Analysis Systems*, edited by M. A. Northrup, K. F. Jensen, and D. J. Harrison, Transducer Research Foundation, **2003**, p849–852. (The acceptance rate for an oral presentation is 13%.)
60. Z. H. Fan, W. Tan, H. Tan, X. C. Qiu, T. D. Boone, P. Kao, A. J. Ricco, M. Desmond, S. Bay, K. Hennessy, "Plastic microfluidic devices for DNA sequencing and protein separations", in *Micro Total Analysis Systems*, edited by J. M. Ramsey and A. van den Berg, Kluwer Academic Publishers, Netherlands, **2001**, p19–21.
61. T. D. Boone, Z. H. Fan, I. Gibbons, A. J. Ricco, A. Sassi, S. Singh, D. Slomski, H. Tan, S. J. Williams, V. Xiao, and Q. Xue, "Disposable plastic microfluidic arrays for applications in

biotechnology", *11th International Conference on Solid-State Sensors and Actuators (Transducers)*, Munich, Germany, Jun 10-14, **2001**, p1146–1149.
62. D. M. Fishman; T. L. Fare; Q. Dong; Z. H. Fan; T. J. Davis; R. Kumar, "Biological assays in microfabricated structures", *Proceedings of Systems and Technologies for Clinical Diagnostics and Drug Discovery II*, SPIE Vol. 3603, San Jose, CA, Jan 24-25, **1999**, 192–197.
63. Z. H. Fan; R. Kumar; G. Deffley; Q. Dong; P. Stabile; T. Fare, "Oligonucleotide ligation reactions on a chip using magnetic particles", *Technical Digest of 1998 Solid-State Sensor and Actuator Workshop*, Hilton Head Island, South Carolina, Jun. 8-11, **1998**, p97–100. (The acceptance rate for an oral presentation at this conference is ~10%.)
64. D. J. Harrison; K. Fluri, N. Chiem; T. Tang; Z. Fan, "Micromachining chemical and biochemical analysis and reactions systems on glass substrates", *Digest of Technical Papers in the 8th International Conference on Solid-state Sensors and Actuators (Transducers' 95),* Stockholm, Sweden, June 25-29, **1995**, Vol 1, p752–756.
65. D. J. Harrison; K. Fluri; Z. Fan; K. Seiler, "Integration of analytical systems incorporating chemical reactions and electrophoretic separations", *Micro Total Analysis Systems*, edited by A. van den Berg, Kluwer Academic Publishers, Netherlands, **1994**, p105–115.
66. D. J. Harrison; Z. Fan; K. Fluri; K. Seiler, "Integrated electrophoresis systems for biochemical analyses", *IEEE Solid-state Sensor and Actuator Workshop*. South Carolina, Jun. 13-16, **1994**, p21–24.
67. D. J. Harrison; Z. Fan; K. Seiler; K. Fluri, "Miniaturized chemical analysis systems based on electrophoretic separations and electroosmotic pumping", *Digest of Technical Papers in the 7th International Conference on Solid-state Sensors and Actuators (Transducers' 93),* Yokohama, Japan, June 7-10, **1993**, p403–406.
68. D. J. Harrison; A. Manz; K. Seiler; Z. Fan, "Chemical analysis and electrophoresis systems integrated on glass and silicon chips", *IEEE Solid-state Sensor and Actuator Workshop,* South Carolina, June 22-25, **1992**, p110–113.