

BioMEMS References by Year 2010-2022
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1. Tade, R.S., et al., *Graphene quantum dots (GQDs) nanoarchitectonics for theranostic application in lung cancer*. Journal of Drug Targeting, 2022. **30**(3): p. 269-286.
2. Li, J.W., *Evaluation of blood simulating solvents in extractables and leachables testing for chemical characterization of medical devices based on Abraham general solvation model*. Journal of Molecular Liquids, 2022. **345**.
3. Zhang, E.L., et al., *Antibacterial metals and alloys for potential biomedical implants*. Bioactive Materials, 2021. **6**(8): p. 2569-2612.
4. Xiao, D.L., et al., *Advances and Challenges of Fluorescent Nanomaterials for Synthesis and Biomedical Applications*. Nanoscale Research Letters, 2021. **16**(1).
5. Vazquez-Prada, K.X., et al., *Targeted Molecular Imaging of Cardiovascular Diseases by Iron Oxide Nanoparticles*. Arteriosclerosis Thrombosis and Vascular Biology, 2021. **41**(2): p. 601-613.
6. Ronavari, A., et al., *Green Silver and Gold Nanoparticles: Biological Synthesis Approaches and Potentials for Biomedical Applications*. Molecules, 2021. **26**(4).
7. Ramanavicius, S. and A. Ramanavicius, *Conducting Polymers in the Design of Biosensors and Biofuel Cells*. Polymers, 2021. **13**(1).
8. Naresh, V. and N. Lee, *A Review on Biosensors and Recent Development of Nanostructured Materials-Enabled Biosensors*. Sensors, 2021. **21**(4).
9. Lou-Franco, J., et al., *Gold Nanozymes: From Concept to Biomedical Applications*. Nano-Micro Letters, 2021. **13**(1).
10. Liu, J.J., et al., *Functional hydrogel coatings*. National Science Review, 2021. **8**(2).
11. Li, P., et al., *From Diagnosis to Treatment: Recent Advances in Patient-Friendly Biosensors and Implantable Devices*. ACS Nano, 2021. **15**(2): p. 1960-2004.
12. Li, M.C., et al., *Rheological Aspects of Cellulose Nanomaterials: Governing Factors and Emerging Applications*. Advanced Materials, 2021. **33**(21).
13. Gidwani, B., et al., *Quantum dots: Prospectives, toxicity, advances and applications*. Journal of Drug Delivery Science and Technology, 2021. **61**.
14. Csoka, I., et al., *Regulatory Considerations, Challenges and Risk-based Approach in Nanomedicine Development*. Current Medicinal Chemistry, 2021. **28**(36): p. 7461-7476.
15. Cheng, D., et al., *Design Strategy of Fluorescent Probes for Live Drug-Induced Acute Liver Injury Imaging*. Accounts of Chemical Research, 2021. **54**(2): p. 403-415.
16. Bonini, A., et al., *Advances in biosensing: The CRISPR/Cas system as a new powerful tool for the detection of nucleic acids*. Journal of Pharmaceutical and Biomedical Analysis, 2021. **192**.
17. Ansari, L., et al., *Doped-carbon dots: Recent advances in their biosensing, bioimaging and therapy applications*. Colloids and Surfaces B-Biointerfaces, 2021. **203**.
18. Zhu, H.L., et al., *Recent advances in lab-on-a-chip technologies for viral diagnosis*. Biosensors & Bioelectronics, 2020. **153**.
19. Oliveira, J., *Biomaterials- and Microfluidics-Based Tissue Engineered 3D Models*. 2020:

- Springer.
20. Ng, W.L., et al., *Deep learning for fabrication and maturation of 3D bioprinted tissues and organs*. Virtual and Physical Prototyping, 2020. **15**(3): p. 340-358.
 21. Lee, J.M., S.L. Sing, and W.Y. Yeong, *Bioprinting of Multimaterials with Computer-aided Design/Computer-aided Manufacturing*. International Journal of Bioprinting, 2020. **6**(1): p. 65-73.
 22. Kupfer, M.E., et al., *In Situ Expansion, Differentiation, and Electromechanical Coupling of Human Cardiac Muscle in a 3D Bioprinted, Chambered Organoid*. Circulation Research, 2020. **127**(2): p. 207-224.
 23. Koutsogiannis, P., et al., *Advances in fluorescent carbon dots for biomedical applications*. Advances in Physics-X, 2020. **5**(1).
 24. Kim, J., et al., *Engineering Tissue Fabrication With Machine Intelligence: Generating a Blueprint for Regeneration*. Frontiers in Bioengineering and Biotechnology, 2020. **7**.
 25. Haque, I.N., J, *Deep learning approaches to biomedical image segmentation*. Informatics in Medicine, 2020. **18**.
 26. Guzzi, E.A. and M.W. Tibbitt, *Additive Manufacturing of Precision Biomaterials*. Advanced Materials, 2020. **32**(13).
 27. Gong, Z.X., et al., *A Deep Learning Based Level Set Model for Pancreas Segmentation*. Journal of Medical Imaging and Health Informatics, 2020. **10**(11): p. 2681-2685.
 28. Gardin, C., et al., *Recent Applications of Three Dimensional Printing in Cardiovascular Medicine*. Cells, 2020. **9**(3): p. 742.
 29. FDA, *Use of International Standard ISO 10993-1, "Biological evaluation of medical devices - Part 1: Evaluation and testing within a risk management process"*, Guidance for Industry and Food and Drug Administration Staff Document issued on: September 4, 2020, FDA, Editor. 2020.
 30. Cho, I.H., D.H. Kim, and S. Park, *Electrochemical biosensors: perspective on functional nanomaterials for on-site analysis*. Biomaterials Research, 2020. **24**(1).
 31. Cesewski, E. and B.N. Johnson, *Electrochemical biosensors for pathogen detection*. Biosensors & Bioelectronics, 2020. **159**.
 32. Caballero, D., R.L. Reis, and S.C. Kundu, *Engineering Patient-on-a-Chip Models for Personalized Cancer Medicine*. Adv Exp Med Biol, 2020. **1230**: p. 43-64.
 33. Zhang, Y., B.S. Lai, and M. Juhas, *Recent Advances in Aptamer Discovery and Applications*. Molecules, 2019. **24**(5).
 34. Yang, J.C., et al., *Detection platforms for point-of-care testing based on colorimetric, luminescent and magnetic assays: A review*. Talanta, 2019. **202**: p. 96-110.
 35. Xu, M., D. Obodo, and V.K. Yadavalli, *The design, fabrication, and applications of flexible biosensing devices*. Biosensors & Bioelectronics, 2019. **124**: p. 96-114.
 36. Wongkaew, N., et al., *Functional Nanomaterials and Nanostructures Enhancing Electrochemical Biosensors and Lab-on-a-Chip Performances: Recent Progress, Applications, and Future Perspective*. Chemical Reviews, 2019. **119**(1): p. 120-194.
 37. Wang, M.H., et al., *Photoelectrochemical biosensor for microRNA detection based on a MoS₂/g-C₃N₄/black TiO₂ heterojunction with Histostar@AuNPs for signal amplification*. Biosensors & Bioelectronics, 2019. **128**: p. 137-143.
 38. Wang, J.S. and N. Hui, *Electrochemical functionalization of polypyrrole nanowires for the*

- development of ultrasensitive biosensors for detecting microRNA*. Sensors and Actuators B-Chemical, 2019. **281**: p. 478-485.
39. Sun, E.W.L., et al., *The Regulation of Peripheral Metabolism by Gut-Derived Hormones*. Frontiers in Endocrinology, 2019. **9**.
 40. Sossa, J.W.Z., W. Halal, and R.H. Zarta, *Delphi method: analysis of rounds, stakeholder and statistical indicators*. Foresight, 2019. **21**(5): p. 525-544.
 41. Soler, M., C.S. Huertas, and L.M. Lechuga, *Label-free plasmonic biosensors for point-of-care diagnostics: a review*. Expert Review of Molecular Diagnostics, 2019. **19**(1): p. 71-81.
 42. Sola, L., F. Damin, and M. Chiari, *Array of multifunctional polymers for localized immobilization of biomolecules on microarray substrates*. Analytica Chimica Acta, 2019. **1047**: p. 188-196.
 43. Seidi, S., et al., *A promising design of microfluidic electromembrane extraction coupled with sensitive colorimetric detection for colorless compounds based on quantum dots fluorescence*. Talanta, 2019. **194**: p. 298-307.
 44. Schuh, J.C.L. and K.A. Funk, *Compilation of International Standards and Regulatory Guidance Documents for Evaluation of Biomaterials, Medical Devices, and 3-D Printed and Regenerative Medicine Products*. Toxicologic Pathology, 2019. **47**(3): p. 344-357.
 45. Parrilla, M., M. Cuartero, and G.A. Crespo, *Wearable potentiometric ion sensors*. Trac-Trends in Analytical Chemistry, 2019. **110**: p. 303-320.
 46. Oraie, M. and H. Latifi, *Real-time refractive-index sensing by using liquid core/liquid cladding optofluidic waveguide*. Optics and Laser Technology, 2019. **111**: p. 303-306.
 47. Motaghi, H. and M.A. Mehrgardi, *Spectrofluorometric genotyping of single nucleotide polymorphisms using carbon dots as fluorophores*. Spectrochimica Acta Part a-Molecular and Biomolecular Spectroscopy, 2019. **206**: p. 154-159.
 48. Molaei, M.J., *A review on nanostructured carbon quantum dots and their applications in biotechnology, sensors, and chemiluminescence*. Talanta, 2019. **196**: p. 456-478.
 49. Miki, H., et al., *Novel Structure of Microneedle Arrays for the Transdermal Drug Delivery Applications*. Ieee Transactions on Electrical and Electronic Engineering, 2019. **14**(1): p. 163-164.
 50. Mao, G.B., et al., *Dual-protein visual detection using ratiometric fluorescent probe based on Rox-DNA functionalized CdZnTeS QDs*. Sensors and Actuators B-Chemical, 2019. **283**: p. 755-760.
 51. Madec, M., et al., *Environment for Modeling and Simulation of Biosystems, Biosensors, and Lab-on-Chips*. Ieee Transactions on Electron Devices, 2019. **66**(1): p. 34-43.
 52. Li, P.P., et al., *Photoelectrochemical DNA biosensor based on g-C₃N₄/MoS₂ 2D/2D heterojunction electrode matrix and co-sensitization amplification with CdSe QDs for the sensitive detection of ssDNA*. Analytica Chimica Acta, 2019. **1048**: p. 42-49.
 53. Lee, K.K., M.O. Kim, and S. Cho, *A whole blood sample-to-answer polymer lab-on-a-chip with superhydrophilic surface toward point-of-care technology*. Journal of Pharmaceutical and Biomedical Analysis, 2019. **162**: p. 28-33.
 54. Lam, T., et al., *Photopolymerizable gelatin and hyaluronic acid for stereolithographic 3D bioprinting of tissue-engineered cartilage*. Journal of Biomedical Materials Research Part B-Applied Biomaterials, 2019. **107**(8): p. 2649-2657.

55. Kumar, S., et al., *Recent advances in biosensors for diagnosis and detection of sepsis: A comprehensive review*. Biosensors & Bioelectronics, 2019. **124**: p. 205-215.
56. Kitsara, M., et al., *Heart on a chip: Micro-nanofabrication and microfluidics steering the future of cardiac tissue engineering*. Microelectronic Engineering, 2019. **203**: p. 44-62.
57. Kecili, R., S. Buyuktiryaki, and C.M. Hussain, *Advancement in bioanalytical science through nanotechnology: Past, present and future*. Trac-Trends in Analytical Chemistry, 2019. **110**: p. 259-276.
58. Jie, G.T., Q. Zhou, and G.F. Jie, *Graphene quantum dots-based electrochemiluminescence detection of DNA using multiple cycling amplification strategy*. Talanta, 2019. **194**: p. 658-663.
59. Hurot, C., et al., *Highly sensitive olfactory biosensors for the detection of volatile organic compounds by surface plasmon resonance imaging*. Biosensors & Bioelectronics, 2019. **123**: p. 230-236.
60. Hong, C.J., et al., *Clinical applications of three-dimensional printing in otolaryngology-head and neck surgery: A systematic review*. Laryngoscope, 2019. **129**(9): p. 2045-2052.
61. Girigoswami, K. and N. Akhtar, *Nanobiosensors and fluorescence based biosensors: An overview*. International Journal of Nano Dimension, 2019. **10**(1): p. 1-17.
62. Firouzian, K.F., et al., *An Image-Guided Intrascalfold Cell Assembly Technique for Accurate Printing of Heterogeneous Tissue Constructs*. Acs Biomaterials Science & Engineering, 2019. **5**(7): p. 3499-3510.
63. Ferrari, E., et al., *Three-dimensional printing in adult cardiovascular medicine for surgical and transcatheter procedural planning, teaching and technological innovation*. Interactive CardioVascular and Thoracic Surgery, 2019. **30**(2): p. 203-214.
64. Fan, Y., et al., *Nanoporphyrin/CdTe quantum dots: A robust tool for effective differentiation among DNA structures*. Sensors and Actuators B-Chemical, 2019. **281**: p. 623-633.
65. Dhiman, N., et al., *On-chip anticancer drug screening - Recent progress in microfluidic platforms to address challenges in chemotherapy*. Biosens Bioelectron, 2019. **137**: p. 236-254.
66. Da Silva, K., et al., *Preprocessing of Medical Image Data for Three-Dimensional Bioprinted Customized-Neural-Scaffolds*. Tissue Engineering Part C-Methods, 2019. **25**(7): p. 401-410.
67. Chung, S.R.A.R.M.Z., *Graphene Quantum Dots and Their Applications in Bioimaging, Biosensing, and Therapy*. Adv. mat., 2019. **33**.
68. Choi, W.J., *Optical coherence tomography angiography in preclinical neuroimaging*. Biomed Eng Lett, 2019. **9**(3): p. 311-325.
69. Boguszewska, K., et al., *Review: immunoassays in DNA damage and instability detection*. Cellular and Molecular Life Sciences, 2019. **76**.
70. Beitollahi, H., M. Safaei, and S. Tajik, *Application of Graphene and Graphene Oxide for modification of electrochemical sensors and biosensors: A review*. International Journal of Nano Dimension, 2019. **10**(2): p. 125-140.
71. Barea, J.S., J. Lee, and D.K. Kang, *Recent Advances in Droplet-based Microfluidic Technologies for Biochemistry and Molecular Biology*. Micromachines, 2019. **10**(6).
72. Zou, D. and D.X. Cui, *Advances in isolation and detection of circulating tumor cells based*

- on microfluidics*. *Cancer Biology & Medicine*, 2018. **15**(4): p. 335-353.
73. Zhu, X.D., J. Chu, and Y.H. Wang, *Advances in Microfluidics Applied to Single Cell Operation*. *Biotechnology Journal*, 2018. **13**(2).
 74. Zhou, Z.X., et al., *Molecular engineering of polymeric carbon nitride: advancing applications from photocatalysis to biosensing and more*. *Chemical Society Reviews*, 2018. **47**(7): p. 2298-2321.
 75. Zheng, W.F. and X.Y. Jiang, *Synthesizing Living Tissues with Microfluidics*. *Accounts of Chemical Research*, 2018. **51**(12): p. 3166-3173.
 76. Zhao, X., et al., *Powering Motion with Enzymes*. *Accounts of Chemical Research*, 2018. **51**(10): p. 2373-2381.
 77. Zhang, M., et al., *A 3D human lung-on-a-chip model for nanotoxicity testing*. *Toxicol Res (Camb)*, 2018. **7**(6): p. 1048-1060.
 78. Zhang, H., Y.F. Zhu, and Y.Q. Shen, *Microfluidics for Cancer Nanomedicine: From Fabrication to Evaluation*. *Small*, 2018. **14**(28).
 79. Zhang, B., et al., *Advances in organ-on-a-chip engineering*. *Nature Reviews Materials*, 2018. **3**(8): p. 257-278.
 80. Yesil-Celiktas, O., et al., *Mimicking Human Pathophysiology in Organ-on-Chip Devices*. *Advanced Biosystems*, 2018. **2**(10).
 81. Yang, R., et al., *Techniques to stimulate and interrogate cell-cell adhesion mechanics*. *Extreme Mech Lett*, 2018. **20**: p. 125-139.
 82. Yang, H.Y., S. Nishitani, and T. Sakata, *Potentiometric Langmuir Isotherm Analysis of Histamine-Selective Molecularly Imprinted Polymer-Based Field-Effect Transistor*. *Ecs Journal of Solid State Science and Technology*, 2018. **7**(7): p. Q3079-Q3082.
 83. Yang, H. and M.A.M. Gijs, *Micro-optics for microfluidic analytical applications*. *Chemical Society Reviews*, 2018. **47**(4): p. 1391-1458.
 84. Yang, C.Y., et al., *Hepatocellular Carcinoma Diagnosis by Detecting alpha-Fucosidase with a Silicon Nanowire Field-Effect Transistor Biosensor*. *Ecs Journal of Solid State Science and Technology*, 2018. **7**(7): p. Q3153-Q3158.
 85. Wu, W.M., *A pressure-driven gas-diffusion/permeation micropump for self-activated sample transport in an extreme micro-environment*. *Analyst*, 2018. **143**(20): p. 4819-4835.
 86. Wu, J., et al., *A Passive Mixing Microfluidic Urinary Albumin Chip for Chronic Kidney Disease Assessment*. *ACS Sens*, 2018. **3**(10): p. 2191-2197.
 87. Wu, J., et al., *Lab-on-chip technology for chronic disease diagnosis*. *npj Digital Medicine*, 2018. **1**(1).
 88. Wang, Y., et al., *Tumor-on-a-chip platforms for assessing nanoparticle-based cancer therapy*. *Nanotechnology*, 2018. **29**(33): p. 332001.
 89. Wang, S.H., et al., *Skin electronics from scalable fabrication of an intrinsically stretchable transistor array*. *Nature*, 2018. **555**(7694): p. 83-+.
 90. Vysotskyi, B., et al., *Nonlinear electrostatic energy harvester using compensational springs in gravity field*. *Journal of Micromechanics and Microengineering*, 2018. **28**(7).
 91. Upadhyay, J., et al., *Pharmacotherapy of type 2 diabetes: An update*. *Metabolism-Clinical and Experimental*, 2018. **78**: p. 13-42.
 92. Ul Alam, A., et al., *Polymers and organic materials-based pH sensors for healthcare*

- applications*. Progress in Materials Science, 2018. **96**: p. 174-216.
93. Uhl, C., W. Shi, and Y. Liu, *Organ-on-Chip Devices Toward Applications in Drug Development and Screening*. Journal of Medical Devices, 2018. **12**(4).
 94. Tran, D.P., et al., *CMOS-Compatible Silicon Nanowire Field-Effect Transistor Biosensor: Technology Development toward Commercialization*. Materials, 2018. **11**(5).
 95. ter Schiphorst, J., et al., *Light-responsive polymers for microfluidic applications*. Lab on a Chip, 2018. **18**(5): p. 699-709.
 96. Takayama, Y., et al., *Developing a MEMS Device with Built-in Microfluidics for Biophysical Single Cell Characterization*. Micromachines, 2018. **9**(6).
 97. Syu, Y.C., W.E. Hsu, and C.T. Lin, *Review-Field-Effect Transistor Biosensing: Devices and Clinical Applications*. Ecs Journal of Solid State Science and Technology, 2018. **7**(7): p. Q3196-Q3207.
 98. Stucki, J.D., et al., *Medium throughput breathing human primary cell alveolus-on-chip model*. Scientific Reports, 2018. **8**.
 99. Sposito, A.J., et al., *Application of nanotechnology in biosensors for enhancing pathogen detection*. Wiley Interdisciplinary Reviews-Nanomedicine and Nanobiotechnology, 2018. **10**(5).
 100. Sochol, R.D., et al., *3D printed microfluidics and microelectronics*. Microelectronic Engineering, 2018. **189**: p. 52-68.
 101. Shklyayev, O.E., H. Shum, and A.C. Balazs, *Using Chemical Pumps and Motors To Design Flows for Directed Particle Assembly*. Accounts of Chemical Research, 2018. **51**(11): p. 2672-2680.
 102. Scholten, K. and E. Meng, *A review of implantable biosensors for closed-loop glucose control and other drug delivery applications*. International Journal of Pharmaceutics, 2018. **544**(2): p. 319-334.
 103. Sarangadharan, I., et al., *Review-High Field Modulated FET Biosensors for Biomedical Applications*. Ecs Journal of Solid State Science and Technology, 2018. **7**(7): p. Q3032-Q3042.
 104. Santhanam, N., et al., *Stem cell derived phenotypic human neuromuscular junction model for dose response evaluation of therapeutics*. Biomaterials, 2018. **166**: p. 64-78.
 105. Sanjay, S.T., et al., *Recent advances of controlled drug delivery using microfluidic platforms*. Advanced Drug Delivery Reviews, 2018. **128**: p. 3-28.
 106. Sakuta, Y., et al., *Development of a Microfluidic System Comprising Dialysis and Secretion Components for a Bioassay of Renal Clearance*. Anal Sci, 2018. **34**(9): p. 1073-1078.
 107. Sakolish, C., et al., *Technology Transfer of the Microphysiological Systems: A Case Study of the Human Proximal Tubule Tissue Chip*. Scientific Reports, 2018. **8**.
 108. Ronaldson-Bouchard, K. and G. Vunjak-Novakovic, *Organs-on-a-Chip: A Fast Track for Engineered Human Tissues in Drug Development*. Cell Stem Cell, 2018. **22**(3): p. 310-324.
 109. Rodriguez-Ruiz, I., et al., *Protein separation under a microfluidic regime*. Analyst, 2018. **143**(3): p. 606-619.
 110. Raj, A., P.P.A. Suthanthiraraj, and A.K. Sen, *Pressure-driven flow through PDMS-based flexible microchannels and their applications in microfluidics*. Microfluidics and Nanofluidics, 2018. **22**(11).

111. Rado, J., et al., *3D force sensors for laparoscopic surgery tool*. *Microsystem Technologies-Micro-and Nanosystems-Information Storage and Processing Systems*, 2018. **24**(1): p. 519-525.
112. Quinones, V.A.B., et al., *Origami Biosystems: 3D Assembly Methods for Biomedical Applications*. *Advanced Biosystems*, 2018. **2**(12).
113. Quesada-Gonzalez, D. and A. Merkoci, *Nanomaterial-based devices for point-of-care diagnostic applications*. *Chemical Society Reviews*, 2018. **47**(13): p. 4697-4709.
114. Qian, K., et al., *New method of lung cancer detection by saliva test using surface-enhanced Raman spectroscopy*. *Thorac Cancer*, 2018. **9**(11): p. 1556-1561.
115. Qian, C., et al., *Clinical significance of circulating tumor cells from lung cancer patients using microfluidic chip*. *Clin Exp Med*, 2018. **18**(2): p. 191-202.
116. Pulikkathodi, A.K., et al., *A Comprehensive Model for Whole Cell Sensing and Transmembrane Potential Measurement Using FET Biosensors*. *Ecs Journal of Solid State Science and Technology*, 2018. **7**(7): p. Q3001-Q3008.
117. Prantil-Baun, R., et al., *Physiologically Based Pharmacokinetic and Pharmacodynamic Analysis Enabled by Microfluidically Linked Organs-on-Chips*, in *Annual Review of Pharmacology and Toxicology, Vol 58*, P.A. Insel, Editor. 2018. p. 37-64.
118. Pollard, B.S. and H.B. Pollard, *Induced pluripotent stem cells for treating cystic fibrosis: State of the science*. *Pediatric Pulmonology*, 2018. **53**: p. S12-S29.
119. Pinkert, M.A., et al., *Imaging the Cardiac Extracellular Matrix*, in *Cardiac Extracellular Matrix: Fundamental Science to Clinical Applications*, E.G. Schmuck, P. Hematti, and A.N. Raval, Editors. 2018. p. 21-44.
120. Pena, R., et al., *Printing Strain Gauges on Intuitive Surgical da Vinci Robot End Effectors*, in *2018 IEEE/Rsj International Conference on Intelligent Robots and Systems*, A.A. Maciejewski, et al., Editors. 2018. p. 806-812.
121. Patra, J.K., et al., *Nano based drug delivery systems: recent developments and future prospects*. *Journal of Nanobiotechnology*, 2018. **16**.
122. Pandey, C.M., et al., *Microfluidics Based Point-of-Care Diagnostics*. *Biotechnology Journal*, 2018. **13**(1).
123. Ozbolat, V., et al., *3D Printing of PDMS Improves Its Mechanical and Cell Adhesion Properties*. *Acs Biomaterials Science & Engineering*, 2018. **4**(2): p. 682-693.
124. Olanrewaju, A., et al., *Capillary microfluidics in microchannels: from microfluidic networks to capillary circuits*. *Lab on a Chip*, 2018. **18**(16).
125. Nishitani, S. and T. Sakata, *Potentiometric Adsorption Isotherm Analysis of a Molecularly Imprinted Polymer Interface for Small-Biomolecule Recognition*. *Acs Omega*, 2018. **3**(5): p. 5382-5389.
126. Nikolic, M., T. Sustersic, and N. Filipovic, *In vitro Models and On-Chip Systems: Biomaterial Interaction Studies With Tissues Generated Using Lung Epithelial and Liver Metabolic Cell Lines*. *Frontiers in Bioengineering and Biotechnology*, 2018. **6**.
127. Niemeyer, B.F., et al., *Advanced Microengineered Lung Models for Translational Drug Discovery*. *Slas Discovery*, 2018. **23**(8): p. 777-789.
128. Nazempour, R., et al., *Biocompatible and Implantable Optical Fibers and Waveguides for Biomedicine*. *Materials*, 2018. **11**(8).
129. Nauck, M.A. and J.J. Meier, *Incretin hormones: Their role in health and disease*. *Diabetes*

- Obesity & Metabolism, 2018. **20**: p. 5-21.
130. Musah, S., et al., *Directed differentiation of human induced pluripotent stem cells into mature kidney podocytes and establishment of a Glomerulus Chip*. Nat Protoc, 2018. **13**(7): p. 1662-1685.
 131. Mishra, R., et al., *Glassy carbon microneedles-new transdermal drug delivery device derived from a scalable C-MEMS process*. Microsystems & Nanoengineering, 2018. **4**.
 132. Mishra, R., T.K. Matti, and T.K. Bhattacharyya, *Design and Scalable Fabrication of Hollow SU-8 Microneedles for Transdermal Drug Delivery*. Ieee Sensors Journal, 2018. **18**(14): p. 5635-5644.
 133. Md Ali, M.A., et al., *Microfluidic dielectrophoretic cell manipulation towards stable cell contact assemblies*. Biomed Microdevices, 2018. **20**(4): p. 95.
 134. Mc Crudden, M.T.C., et al., *Design, formulation and evaluation of novel dissolving microarray patches containing a long-acting rilpivirine nanosuspension*. Journal of Controlled Release, 2018. **292**: p. 119-129.
 135. Maeki, M., et al., *Advances in microfluidics for lipid nanoparticles and extracellular vesicles and applications in drug delivery systems*. Advanced Drug Delivery Reviews, 2018. **128**: p. 84-100.
 136. Ma, X.Y., et al., *Rapid 3D bioprinting of decellularized extracellular matrix with regionally varied mechanical properties and biomimetic microarchitecture*. Biomaterials, 2018. **185**: p. 310-321.
 137. Liu, X.M., et al., *A comparison of in vitro cytotoxicity assays in medical device regulatory studies*. Regulatory Toxicology and Pharmacology, 2018. **97**: p. 24-32.
 138. Liu, C., et al., *Hydrophilic coating film used to drive flow in a microfluidic point-of-care testing (POCT) device*. Micro & Nano Letters, 2018. **13**(6): p. 773-778.
 139. Lin, T.E., et al., *Electrochemical imaging of cells and tissues*. Chemical Science, 2018. **9**(20): p. 4546-4554.
 140. Lin, P.J., M.C. Chuang, and S.C. Chang, *Efficacy of using oxygen microbubble device for facultative anaerobe removal*. Iet Nanobiotechnology, 2018. **12**(7): p. 973-980.
 141. Lim, S.H., et al., *3D printed drug delivery and testing systems - a passing fad or the future?* Advanced Drug Delivery Reviews, 2018. **132**: p. 139-168.
 142. Liao, Z.R., et al., *Recent advances in microfluidic chip integrated electronic biosensors for multiplexed detection*. Biosensors & Bioelectronics, 2018. **121**: p. 272-280.
 143. Li, Z., et al., *Assessment of hepatic metabolism-dependent nephrotoxicity on an organ-on-a-chip microdevice*. Toxicol In Vitro, 2018. **46**: p. 1-8.
 144. Li, X. and T. Tian, *Recent advances in an organ-on-a-chip: biomarker analysis and applications*. Analytical Methods, 2018. **10**(26): p. 3122-3130.
 145. Li, M. and R.K. Anand, *Cellular dielectrophoresis coupled with single-cell analysis*. Analytical and Bioanalytical Chemistry, 2018. **410**(10): p. 2499-2515.
 146. Lee, S.H., et al., *Implantable small device enabled with magnetic actuation for on-demand and pulsatile drug delivery*. Journal of Controlled Release, 2018. **286**: p. 224-230.
 147. Lee, H.J., et al., *MEMS devices for drug delivery*. Advanced Drug Delivery Reviews, 2018. **128**: p. 132-147.
 148. Lee, H., et al., *Device-assisted transdermal drug delivery*. Advanced Drug Delivery

- Reviews, 2018. **127**: p. 35-45.
149. Kumaravel, M., P. Bawa, and N. Murai, *Magnetic resonance imaging of muscle injury in elite American football players: Predictors for return to play and performance*. European journal of radiology, 2018. **108**: p. 155-164.
 150. Kulasinghe, A., et al., *The Use of Microfluidic Technology for Cancer Applications and Liquid Biopsy*. Micromachines (Basel), 2018. **9**(8).
 151. Kimura, H., Y. Sakai, and T. Fujii, *Organ/body-on-a-chip based on microfluidic technology for drug discovery*. Drug Metabolism and Pharmacokinetics, 2018. **33**(1): p. 43-48.
 152. Kim, G.Y., J.I. Han, and J.K. Park, *Inertial Microfluidics-Based Cell Sorting*. Biochip Journal, 2018. **12**(4): p. 257-267.
 153. Kieninger, J., et al., *Microsensor systems for cell metabolism - from 2D culture to organ-on-chip*. Lab on a Chip, 2018. **18**(9): p. 1274-1291.
 154. Karimzadeh, A., et al., *Optical bio(sensing) using nitrogen doped graphene quantum dots: Recent advances and future challenges*. Trac-Trends in Analytical Chemistry, 2018. **108**: p. 110-121.
 155. Jodat, Y.A., et al., *Human-Derived Organ-on-a-Chip for Personalized Drug Development*. Current pharmaceutical design, 2018. **24**(45): p. 5471-5486.
 156. Jackson, J., et al., *Design and Near-Infrared Actuation of a Gold Nanorod-Polymer Microelectromechanical Device for On-Demand Drug Delivery*. Micromachines, 2018. **9**(1).
 157. Jackson, J., et al., *Design and Near-Infrared Actuation of a Gold Nanorod(-)Polymer Microelectromechanical Device for On-Demand Drug Delivery*. Micromachines (Basel), 2018. **9**(1).
 158. Humayun, M., C.W. Chow, and E.W.K. Young, *Microfluidic lung airway-on-a-chip with arrayable suspended gels for studying epithelial and smooth muscle cell interactions*. Lab on a Chip, 2018. **18**(9): p. 1298-1309.
 159. Hugle, M., et al., *A lab-on-a-chip for preconcentration of bacteria and nucleic acid extraction*. Rsc Advances, 2018. **8**(36): p. 20124-20130.
 160. Hossan, M.R., et al., *Review: Electric field driven pumping in microfluidic device*. Electrophoresis, 2018. **39**(5-6): p. 702-731.
 161. Hernandez-Sebastian, N., et al., *Design and Simulation of an Integrated Wireless Capacitive Sensors Array for Measuring Ventricular Pressure*. Sensors, 2018. **18**(9).
 162. He, Z.Y., N. Ranganathan, and P. Li, *Evaluating nanomedicine with microfluidics*. Nanotechnology, 2018. **29**(49).
 163. He, Z.Y. and J.M. Lin, *Recent Development of Cell Analysis on Microfluidics*. Cell Analysis on Microfluidics, ed. J.M. Lin. 2018. 43-93.
 164. Han, C.J., H.P. Chiang, and Y.C. Cheng, *Using Micro-Molding and Stamping to Fabricate Conductive Polydimethylsiloxane-Based Flexible High-Sensitivity Strain Gauges*. Sensors, 2018. **18**(2).
 165. Hacıoglu, A., H. Yilmazer, and C.B. Ustundag, *3D Printing for Tissue Engineering Applications*. Journal of Polytechnic, 2018. **21**(1): p. 221-227.
 166. Guenat, O.T. and F. Berthiaume, *Incorporating mechanical strain in organs-on-a-chip: Lung and skin*. Biomicrofluidics, 2018. **12**(4).
 167. Gruber, C., et al., *Importance of alternative methods for animal testing in the context of*

- conformity assessment of medical devices*. Berliner Und Munchener Tierarztliche Wochenschrift, 2018. **131**(7-8): p. 327-334.
168. Gray, M., et al., *Implantable biosensors and their contribution to the future of precision medicine*. Veterinary Journal, 2018. **239**: p. 21-29.
 169. Gopi, S., et al., *Biopolymers and Their Composites for Drug Delivery: A Brief Review*. Macromolecular Symposia, 2018. **380**(1).
 170. Gkatzis, K., et al., *Use of three-dimensional organoids and lung-on-a-chip methods to study lung development, regeneration and disease*. European Respiratory Journal, 2018. **52**(5).
 171. Gaikwad, P.S. and R. Banerjee, *Advances in point-of-care diagnostic devices in cancers*. Analyst, 2018. **143**(6): p. 1326-1348.
 172. Fizesan, I., et al., *IN VITRO CELLULAR MODELS, A RESOURCEFUL TOOL IN RESPIRATORY TOXICOLOGY*. Farmacia, 2018. **66**(4): p. 573-580.
 173. FizeşAn, I., *In Vitro Cellular Models, a Resourceful Tool in Respiratory Toxicology*. Farmacia, 2018. **66**(4): p. 573-580.
 174. Ferreira, N.N., et al., *Recent advances in smart hydrogels for biomedical applications: From self-assembly to functional approaches*. European Polymer Journal, 2018. **99**: p. 117-133.
 175. Fenton, O.S., et al., *Advances in Biomaterials for Drug Delivery*. Advanced Materials, 2018. **30**(29).
 176. Fedecostante, M., et al., *Recellularized Native Kidney Scaffolds as a Novel Tool in Nephrotoxicity Screening*. Drug Metab Dispos, 2018. **46**(9): p. 1338-1350.
 177. Farahani, R.D. and M. Dube, *Printing Polymer Nanocomposites and Composites in Three Dimensions*. Advanced Engineering Materials, 2018. **20**(2).
 178. Fan, Y.Q., *Low-cost microfluidics: materials and methods*. Micro & Nano Letters, 2018. **13**(10): p. 1367-1372.
 179. Estelle, P., et al., *Current trends in surface tension and wetting behavior of nanofluids*. Renewable & Sustainable Energy Reviews, 2018. **94**: p. 931-944.
 180. Ermis, M., E. Antmen, and V. Hasirci, *Micro and Nanofabrication methods to control cell-substrate interactions and cell behavior: A review from the tissue engineering perspective*. Bioactive Materials, 2018. **3**(3): p. 355-369.
 181. Economidou, S.N., D.A. Lamprou, and D. Douroumis, *3D printing applications for transdermal drug delivery*. International Journal of Pharmaceutics, 2018. **544**(2): p. 415-424.
 182. Donnelly, R.F. and E. Larraneta, *Microarray patches: potentially useful delivery systems for long-acting nanosuspensions*. Drug Discovery Today, 2018. **23**(5): p. 1026-1033.
 183. Damiati, S., et al., *Cell-Free Approaches in Synthetic Biology Utilizing Microfluidics*. Genes, 2018. **9**(3).
 184. Cohen, J.D., et al., *Detection and localization of surgically resectable cancers with a multi-analyte blood test*. Science, 2018. **359**(6378): p. 926-+.
 185. Coffel, J. and E. Nuxoll, *BioMEMS for biosensors and closed-loop drug delivery*. International Journal of Pharmaceutics, 2018. **544**(2): p. 335-349.
 186. Chinnadayala, S.R., K.D. Park, and S. Cho, *Review-In Vivo and In Vitro Microneedle Based Enzymatic and Non-Enzymatic Continuous Glucose Monitoring Biosensors*. Ecs

- Journal of Solid State Science and Technology, 2018. **7**(7): p. Q3159-Q3171.
187. Chiang, M.C., et al., *Detection of Hazardous Vapors Including Mixtures in Varied Conditions Using a Surface-Acoustic-Wave Device*. Ecs Journal of Solid State Science and Technology, 2018. **7**(7): p. Q3120-Q3125.
 188. Chen, Z., et al., *A Portable Multi-Channel Turbidity System for Rapid Detection of Pathogens by Loop-Mediated Isothermal Amplification*. Journal of Biomedical Nanotechnology, 2018. **14**(1): p. 198-205.
 189. Ceylan, O., et al., *A Hand-Held Point-of-Care Biosensor Device for Detection of Multiple Cancer and Cardiac Disease Biomarkers Using Interdigitated Capacitive Arrays*. Ieee Transactions on Biomedical Circuits and Systems, 2018. **12**(6): p. 1440-1449.
 190. Capozzi, M.E., et al., *Targeting the Incretin/Glucagon System With Triagonists to Treat Diabetes*. Endocrine Reviews, 2018. **39**(5): p. 719-738.
 191. Bovard, D., et al., *A lung/liver-on-a-chip platform for acute and chronic toxicity studies*. Lab on a Chip, 2018. **18**(24): p. 3814-3829.
 192. Bobrowski, T. and W. Schuhmann, *Long-term implantable glucose biosensors*. Current Opinion in Electrochemistry, 2018. **10**: p. 112-119.
 193. Bernard, M., et al., *Biocompatibility of polymer-based biomaterials and medical devices - regulations, in vitro screening and risk-management*. Biomaterials Science, 2018. **6**(8): p. 2025-2053.
 194. Behdani, B., et al., *Shape-based separation of micro-/nanoparticles in liquid phases*. Biomicrofluidics, 2018. **12**(5).
 195. Beckwith, A.L., J.T. Borenstein, and L.F. Velasquez-Garcia, *Monolithic, 3D-Printed Microfluidic Platform for Recapitulation of Dynamic Tumor Microenvironments*. Journal of Microelectromechanical Systems, 2018. **27**(6): p. 1009-1022.
 196. Babu, H. and L.A. Gheber, *Rapid assaying of miniaturized protein microarray*. Sensors and Actuators B-Chemical, 2018. **268**: p. 55-60.
 197. Alizadeh, N. and A. Salimi, *Ultrasensitive Bioaffinity Electrochemical Sensors: Advances and New Perspectives*. Electroanalysis, 2018. **30**(12): p. 2803-2840.
 198. Ali, M.A.M., et al., *Microfluidic dielectrophoretic cell manipulation towards stable cell contact assemblies*. Biomedical Microdevices, 2018. **20**(4).
 199. Alam, M.K., et al., *Recent advances in microfluidic technology for manipulation and analysis of biological cells (2007-2017)*. Analytica Chimica Acta, 2018. **1044**: p. 29-65.
 200. Ahn, J., et al., *Microfluidics in nanoparticle drug delivery; From synthesis to pre-clinical screening*. Advanced Drug Delivery Reviews, 2018. **128**: p. 29-53.
 201. Zhu, G.Z., et al., *A gold nanoparticle-modified indium tin oxide microelectrode for in-channel amperometric detection in dual-channel microchip electrophoresis*. Analytical Methods, 2017. **9**(29): p. 4319-4326.
 202. Zhao, Y., et al., *Directional Fluid Transport in Thin Porous Materials and its Functional Applications*. Small, 2017. **13**(4).
 203. Zhao, W.W., J.J. Xu, and H.Y. Chen, *Photoelectrochemical enzymatic biosensors*. Biosensors & Bioelectronics, 2017. **92**: p. 294-304.
 204. Zhang, Y. and N.T. Nguyen, *Magnetic digital microfluidics - a review*. Lab on a Chip, 2017. **17**(6): p. 994-1008.
 205. Zhang, Q.D., et al., *Logic digital fluidic in miniaturized functional devices: Perspective to*

- the next generation of microfluidic lab-on-chips*. Electrophoresis, 2017. **38**(7): p. 953-976.
206. Zhang, J.S., et al., *Design and Scaling Up of Microchemical Systems: A Review*, in *Annual Review of Chemical and Biomolecular Engineering, Vol 8*, J.M. Prausnitz, Editor. 2017. p. 285-305.
207. Zhang, H.B., J.K. Jackson, and M. Chiao, *Microfabricated Drug Delivery Devices: Design, Fabrication, and Applications*. Advanced Functional Materials, 2017. **27**(45).
208. Zhang, B. and M. Radisic, *Organ-on-a-chip devices advance to market*. Lab Chip, 2017. **17**(14): p. 2395-2420.
209. Youssef, A., S.J. Hollister, and P.D. Dalton, *Additive manufacturing of polymer melts for implantable medical devices and scaffolds*. Biofabrication, 2017. **9**(1): p. 29.
210. Yildizhan, Y., et al., *Dielectrophoretic Separation of Live and Dead Monocytes Using 3D Carbon-Electrodes*. Sensors, 2017. **17**(11).
211. Yi, Y. and J. Kosel, *A remotely operated drug delivery system with dose control*. Sensors and Actuators a-Physical, 2017. **261**: p. 177-183.
212. Yanagida, Y., *MEMS/NEMS-based Devices for Bio-measurements*. Electrochemistry, 2017. **85**(9): p. 572-579.
213. Yan, S., et al., *Hybrid microfluidics combined with active and passive approaches for continuous cell separation*. Electrophoresis, 2017. **38**(2): p. 238-249.
214. Yamada, K., et al., *Toward practical application of paper-based microfluidics for medical diagnostics: state-of-the-art and challenges*. Lab on a Chip, 2017. **17**(7): p. 1206-1249.
215. Xu, T.Z., et al., *Piezoresistive pressure sensor with high sensitivity for medical application using peninsula-island structure*. Frontiers of Mechanical Engineering, 2017. **12**(4): p. 546-553.
216. Xu, J.H., Y.Z. Wang, and S.S. Hu, *Nanocomposites of graphene and graphene oxides: Synthesis, molecular functionalization and application in electrochemical sensors and biosensors. A review*. Microchimica Acta, 2017. **184**(1): p. 1-44.
217. Xu, D.H., et al., *MEMS-based thermoelectric infrared sensors: A review*. Frontiers of Mechanical Engineering, 2017. **12**(4): p. 557-566.
218. Xi, H.D., et al., *Active droplet sorting in microfluidics: a review*. Lab on a Chip, 2017. **17**(5): p. 751-771.
219. Wilmer, M., et al., *Renal toxicity biomarker analysis upon compound exposures in a kidney-on-a-chip*. Toxicology Letters, 2017. **280**: p. S140-S140.
220. Watanabe, T., et al., *Review of Microfluidic Devices for On-Chip Chemical Sensing*. Electronics and Communications in Japan, 2017. **100**(4): p. 25-32.
221. Wang, L., et al., *A disease model of diabetic nephropathy in a glomerulus-on-a-chip microdevice*. Lab Chip, 2017. **17**(10): p. 1749-1760.
222. Wang, K.Y., et al., *Engineering Electroactive Dielectric Elastomers for Miniature Electromechanical Transducers*. Polymer Reviews, 2017. **57**(3): p. 369-396.
223. Vigier, S., et al., *Composition and organization of the pancreatic extracellular matrix by combined methods of immunohistochemistry, proteomics and scanning electron microscopy*. Curr Res Transl Med, 2017. **65**(1): p. 31-39.
224. Verneti, L., et al., *Functional Coupling of Human Microphysiology Systems: Intestine, Liver, Kidney Proximal Tubule, Blood-Brain Barrier and Skeletal Muscle*. Scientific

- Reports, 2017. **7**.
225. Valente, K.P., et al., *Microfluidic technologies for anticancer drug studies*. Drug Discovery Today, 2017. **22**(11): p. 1654-1670.
 226. Vadivelu, R., et al., *Microfluidic Technology for the Generation of Cell Spheroids and Their Applications*. Micromachines, 2017. **8**(4).
 227. Uhm, D., J.B. Ryu, and S. Jun, *An Interval Estimation Method of Patent Keyword Data for Sustainable Technology Forecasting*. Sustainability, 2017. **9**(11).
 228. Theobald, J., et al., *Liver-Kidney-on-Chip To Study Toxicity of Drug Metabolites*. ACS Biomaterials Science & Engineering, 2017. **4**(1): p. 78-89.
 229. Tang, L.J., et al., *Progress in Research of Flexible MEMS Microelectrodes for Neural Interface*. Micromachines, 2017. **8**(9).
 230. Tan, X.P., et al., *Metallic powder-bed based 3D printing of cellular scaffolds for orthopaedic implants: A state-of-the-art review on manufacturing, topological design, mechanical properties and biocompatibility*. Materials Science & Engineering C-Materials for Biological Applications, 2017. **76**: p. 1328-1343.
 231. Sriram, G., et al., *Paper-based microfluidic analytical devices for colorimetric detection of toxic ions: A review*. Trac-Trends in Analytical Chemistry, 2017. **93**: p. 212-227.
 232. Sonetha, V., et al., *Microelectromechanical Systems in Medicine*. Journal of Medical and Biological Engineering, 2017. **37**(4): p. 580-601.
 233. Sima, F., et al., *Ultrafast Laser Fabrication of Functional Biochips: New Avenues for Exploring 3D Micro- and Nano-Environments*. Micromachines, 2017. **8**(2).
 234. Shanmugam, N.R., S. Muthukumar, and S. Prasad, *A review on ZnO-based electrical biosensors for cardiac biomarker detection*. Future Science Oa, 2017. **3**(4).
 235. Shanbhag, P.P. and N.S. Patil, *BioMicroelectromechanical systems: A novel approach for drug targeting in chronic diseases*. New Horizons in Translational Medicine, 2017. **3**(6): p. 265-271.
 236. Sesen, M., T. Alan, and A. Neild, *Droplet control technologies for microfluidic high throughput screening (μ HTS)*. Lab on a Chip, 2017. **17**(14): p. 2372-2394.
 237. Serien, D., Y. Morimoto, and S. Takeuchi, *Photo-Induced Fabrication Technology for 3D Microdevices*, in *Advanced Mechatronics and MemS Devices II*, D. Zhang and B. Wei, Editors. 2017. p. 469-493.
 238. Samanta, A., et al., *Separation of magnetic beads in a hybrid continuous flow microfluidic device*. Journal of Magnetism and Magnetic Materials, 2017. **427**: p. 300-305.
 239. Salafi, T., K.K. Zeming, and Y. Zhang, *Advancements in microfluidics for nanoparticle separation*. Lab on a Chip, 2017. **17**(1): p. 11-33.
 240. Sakuta, Y., K.I. Tsunoda, and K. Sato, *Development of a Multichannel Dialysis Microchip for Bioassay of Drug Efficacy and Retention*. Anal Sci, 2017. **33**(3): p. 391-394.
 241. Reeve, L. and P. Baldrick, *Biocompatibility assessments for medical devices - evolving regulatory considerations*. Expert Review of Medical Devices, 2017. **14**(2): p. 161-167.
 242. Przygoda, R.T., *afety Assessment and Global Regulatory Requirements for Genetic Toxicity Evaluations of Medical Devices*. Environmental and Molecular Mutagenesis, 2017. **58**(5): p. 375-379.
 243. Prausnitz, M.R., *Engineering Microneedle Patches for Vaccination and Drug Delivery to*

- Skin*, in *Annual Review of Chemical and Biomolecular Engineering*, Vol 8, J.M. Prausnitz, Editor. 2017. p. 177-200.
244. Petroni, J.M., B.G. Lucca, and V.S. Ferreira, *Simple approach for the fabrication of screen-printed carbon-based electrode for amperometric detection on microchip electrophoresis*. *Analytica Chimica Acta*, 2017. **954**: p. 88-96.
 245. Papazoglou, S. and I. Zergioti, *Laser Induced Forward Transfer (LIFT) of nano-micro patterns for sensor applications*. *Microelectronic Engineering*, 2017. **182**: p. 25-34.
 246. Pan, P., et al., *MEMS-based platforms for mechanical manipulation and characterization of cells*. *Journal of Micromechanics and Microengineering*, 2017. **27**(12).
 247. Ozcelikkale, A., et al., *In vitro microfluidic models of tumor microenvironment to screen transport of drugs and nanoparticles*. *Wiley Interdisciplinary Reviews-Nanomedicine and Nanobiotechnology*, 2017. **9**(5).
 248. Oleaga, C., et al., *Contractile Force Readout of hESC-Cardiomyocytes*, in *Stem Cell-Derived Models in Toxicology*, M. Clements and L. Roquemore, Editors. 2017. p. 229-246.
 249. O'Mahony, C., et al., *Accuracy and feasibility of piezoelectric inkjet coating technology for applications in microneedle-based transdermal delivery*. *Microelectronic Engineering*, 2017. **172**: p. 19-25.
 250. Novo, P. and D. Janasek, *Current advances and challenges in microfluidic free-flow electrophoresis-A critical review*. *Analytica Chimica Acta*, 2017. **991**: p. 9-29.
 251. Nerguizian, V., et al., *Characterization of several cancer cell lines at microwave frequencies*. *Measurement*, 2017. **109**: p. 354-358.
 252. Narayanan, S.P. and S. Raghavan, *Solid silicon microneedles for drug delivery applications*. *International Journal of Advanced Manufacturing Technology*, 2017. **93**(1-4): p. 407-422.
 253. Musah, S., et al., *Mature induced-pluripotent-stem-cell-derived human podocytes reconstitute kidney glomerular-capillary-wall function on a chip*. *Nature Biomedical Engineering*, 2017. **1**(5).
 254. Mostafalu, P., et al., *Flexible Electronic Devices for Biomedical Applications*, in *Advanced Mechatronics and Mems Devices II*, D. Zhang and B. Wei, Editors. 2017. p. 341-366.
 255. Martinez-Rivas, A., et al., *Methods of Micropatterning and Manipulation of Cells for Biomedical Applications*. *Micromachines*, 2017. **8**(12).
 256. Magley, D.L., V. Narasimhan, and H. Choo. *Hydro-ionic microthruster for locomotion in low-Reynold'S number ionic fluids*. in *2017 IEEE 30th International Conference on Micro Electro Mechanical Systems (MEMS)*. 2017.
 257. Ma, J.Y., Y.C. Wang, and J. Liu, *Biomaterials Meet Microfluidics: From Synthesis Technologies to Biological Applications*. *Micromachines*, 2017. **8**(8).
 258. Lobo, E.O., et al., *Simple, rapid and, cost-effective fabrication of PDMS electrophoresis microchips using poly(vinyl acetate) as photoresist master*. *Electrophoresis*, 2017. **38**(2): p. 250-257.
 259. Liu, Y. and X.Y. Jiang, *Why microfluidics? Merits and trends in chemical synthesis*. *Lab on a Chip*, 2017. **17**(23): p. 3960-3978.
 260. Liu, B.W. and J.W. Liu, *Surface modification of nanozymes*. *Nano Research*, 2017. **10**(4): p. 1125-1148.
 261. Li, H., X. Duan, and T.D. Wang. *An electrostatic MEMS scanner with in-plane and out-of-*

- plane two-dimensional scanning capability for confocal endoscopic in vivo imaging.* in *2017 IEEE 30th International Conference on Micro Electro Mechanical Systems (MEMS)*. 2017.
262. Lan, L.Y., et al., *Recent advances in nanomaterial-based biosensors for antibiotics detection.* *Biosensors & Bioelectronics*, 2017. **91**: p. 504-514.
 263. Kurbanoglu, S., S.A. Ozkan, and A. Merkoci, *Nanomaterials-based enzyme electrochemical biosensors operating through inhibition for biosensing applications.* *Biosensors & Bioelectronics*, 2017. **89**: p. 886-898.
 264. Kottapalli, A.G.P., et al. *Polymer MEMS sensor for flow monitoring in biomedical device applications.* in *2017 IEEE 30th International Conference on Micro Electro Mechanical Systems (MEMS)*. 2017.
 265. Khoshmanesh, K., et al., *Liquid metal enabled microfluidics.* *Lab on a Chip*, 2017. **17**(6): p. 974-993.
 266. Khalid, N., I. Kobayashi, and M. Nakajima, *Recent lab-on-chip developments for novel drug discovery.* *Wiley Interdisciplinary Reviews-Systems Biology and Medicine*, 2017. **9**(4).
 267. Kaisti, M., *Detection principles of biological and chemical FET sensors.* *Biosensors & Bioelectronics*, 2017. **98**: p. 437-448.
 268. Jun, J.J., et al., *Fully integrated silicon probes for high-density recording of neural activity.* *Nature*, 2017. **551**(7679): p. 232-+.
 269. Jeong, H.Y., et al., *Rapid Antibiotic Susceptibility Testing System: Life Saving bioMEMS Devices,* in *2017 IEEE International Electron Devices Meeting*. 2017.
 270. Jeong, H.Y., et al. *Rapid antibiotic susceptibility test: Commercialization of life saving MEMS devices.* in *2017 IEEE 30th International Conference on Micro Electro Mechanical Systems (MEMS)*. 2017.
 271. Huang, L., et al., *A NOVEL BIOMEMS DEVICE FOR EFFICIENT ON-CHIP SINGLE CELL LOADING AND 3D ROTATION,* in *30th IEEE International Conference on Micro Electro Mechanical Systems*. 2017. p. 490-493.
 272. Huang, L., et al. *A novel biomems device for efficient on-chip single cell loading and 3D rotation.* in *2017 IEEE 30th International Conference on Micro Electro Mechanical Systems (MEMS)*. 2017.
 273. Huang, L., et al., *Microfluidics cell sample preparation for analysis: Advances in efficient cell enrichment and precise single cell capture.* *Biomicrofluidics*, 2017. **11**(1).
 274. Hou, X., et al., *Interplay between materials and microfluidics.* *Nature Reviews Materials*, 2017. **2**(5).
 275. Holst, J.J., et al., *The Gut: A Key to the Pathogenesis of Type 2 Diabetes? Metabolic Syndrome and Related Disorders*, 2017. **15**(6): p. 259-262.
 276. Hildebrandt, N., et al., *Energy Transfer with Semiconductor Quantum Dot Bioconjugates: A Versatile Platform for Biosensing, Energy Harvesting, and Other Developing Applications.* *Chemical Reviews*, 2017. **117**(2): p. 536-711.
 277. Hamzah, A.A., R.S. Selvarajan, and B.Y. Majlis, *Graphene for Biomedical Applications: A Review.* *Sains Malaysiana*, 2017. **46**(7): p. 1125-1139.
 278. Gong, M.M. and D. Sinton, *Turning the Page: Advancing Paper-Based Microfluidics for Broad Diagnostic Application.* *Chemical Reviews*, 2017. **117**(12): p. 8447-8480.

279. Fearis, K. and A. Petrie, *Best practices in early phase medical device development: Engineering, prototyping, and the beginnings of a quality management system*. Surgery, 2017. **161**(3): p. 571-575.
280. Farka, Z., et al., *Nanoparticle-Based Immunochemical Biosensors and Assays: Recent Advances and Challenges*. Chemical Reviews, 2017. **117**(15): p. 9973-10042.
281. Fan, Z.H., et al. *Tumor cell isolation in microfluidic devices for cancer treatment monitoring*. in *2017 IEEE 30th International Conference on Micro Electro Mechanical Systems (MEMS)*. 2017.
282. Esmaelian, M., et al., *A multiple correspondence analysis model for evaluating technology foresight methods*. Technological Forecasting and Social Change, 2017. **125**: p. 188-205.
283. Eliaz, N. and N. Metoki, *Calcium Phosphate Bioceramics: A Review of Their History, Structure, Properties, Coating Technologies and Biomedical Applications*. Materials, 2017. **10**(4).
284. Dressaire, E. and A. Sauret, *Clogging of microfluidic systems*. Soft Matter, 2017. **13**(1): p. 37-48.
285. Dinh, T., et al. *Environment-friendly wearable thermal flow sensors for noninvasive respiratory monitoring*. in *2017 IEEE 30th International Conference on Micro Electro Mechanical Systems (MEMS)*. 2017.
286. Ding, Z., et al., *Bacterial detection based on polymerase chain reaction and microbead dielectrophoresis characteristics*. IET Nanobiotechnol, 2017. **11**(5): p. 562-567.
287. Dao, D.V., *SPECIAL ISSUE ON BIOSENSORS, BIOELECTRONICS, BIOMEDICAL DEVICES, BIOMEMS/NEMS AND APPLICATIONS 2016 (BIO4APPS 2016) PREFACE*. Sensors and Materials, 2017. **29**(12).
288. da Silva, E.N.T., et al., *Pencil graphite leads as simple amperometric sensors for microchip electrophoresis*. Electrophoresis, 2017. **38**(21): p. 2733-2740.
289. Cui, Y., D.W. Li, and H. Bai, *Bioinspired Smart Materials for Directional Liquid Transport*. Industrial & Engineering Chemistry Research, 2017. **56**(17): p. 4887-4897.
290. Coelho, B., et al., *Digital Microfluidics for Nucleic Acid Amplification*. Sensors, 2017. **17**(7).
291. Cinquanta, L., D.E. Fontana, and N. Bizzaro, *Chemiluminescent immunoassay technology: what does it change in autoantibody detection? Auto- immunity highlights*, 2017. **8**(1): p. 9-9.
292. Chung, K., et al. *Combination of optical manipulation of particles and patterning of hydrogels for demonstration of digital drug cocktails*. in *2017 IEEE 30th International Conference on Micro Electro Mechanical Systems (MEMS)*. 2017.
293. Christoffersson, J., D. van Noort, and C.F. Mandenius, *Developing organ-on-a-chip concepts using bio-mechatronic design methodology*. Biofabrication, 2017. **9**(2).
294. Cho, E., M. Mohammadifar, and S. Choi. *A self-powered sensor patch for glucose monitoring in sweat*. in *2017 IEEE 30th International Conference on Micro Electro Mechanical Systems (MEMS)*. 2017.
295. Chen, Y.T., et al., *Field-effect transistor biosensors with two-dimensional black phosphorus nanosheets*. Biosensors & Bioelectronics, 2017. **89**: p. 505-510.
296. Chen, Y.F., et al., *A microfluidic circulatory system integrated with capillary-assisted*

- pressure sensors. *Lab on a Chip*, 2017. **17**(4): p. 653-662.
297. Chen, W., et al., *Microneedle-array patches loaded with dual mineralized protein/peptide particles for type 2 diabetes therapy*. *Nature Communications*, 2017. **8**.
298. Barazani, B., et al., *MEMS measurements of single cell stiffness decay due to cyclic mechanical loading*. *Biomedical Microdevices*, 2017. **19**(4).
299. Akbari, E., G.B. Szychalski, and J.W. Song, *Microfluidic approaches to the study of angiogenesis and the microcirculation*. *Microcirculation*, 2017. **24**(5).
300. Zhao, Y., A.C. Tavares, and M.A. Gauthier, *Nano-engineered electro-responsive drug delivery systems*. *Journal of Materials Chemistry B*, 2016. **4**(18): p. 3019-3030.
301. Zhang, J., et al., *Fundamentals and applications of inertial microfluidics: a review*. *Lab on a Chip*, 2016. **16**(1): p. 10-34.
302. Zavitsanou, S., et al., *Embedded Control in Wearable Medical Devices: Application to the Artificial Pancreas*. *Processes*, 2016. **4**(4): p. 29.
303. Yazdi, A.A., et al., *3D printing: an emerging tool for novel microfluidics and lab-on-a-chip applications*. *Microfluidics and Nanofluidics*, 2016. **20**(3).
304. Yang, Y., et al., *Microfluidic microbial fuel cells: from membrane to membrane free*. *Journal of Power Sources*, 2016. **324**: p. 113-125.
305. Wilmer, M.J., et al., *Kidney-on-a-Chip Technology for Drug-Induced Nephrotoxicity Screening*. *Trends in Biotechnology*, 2016. **34**(2): p. 156-170.
306. Tyler, B., et al., *Poly(lactic acid) (PLA) controlled delivery carriers for biomedical applications*. *Advanced Drug Delivery Reviews*, 2016. **107**: p. 163-175.
307. Tsao, C.W., *Polymer Microfluidics: Simple, Low-Cost Fabrication Process Bridging Academic Lab Research to Commercialized Production*. *Micromachines*, 2016. **7**(12).
308. Tahrani, A.A., A.H. Barnett, and C.J. Bailey, *Pharmacology and therapeutic implications of current drugs for type 2 diabetes mellitus*. *Nature Reviews Endocrinology*, 2016. **12**(10): p. 566-592.
309. Sutradhar, K.B. and C.D. Sumi, *Implantable microchip: the futuristic controlled drug delivery system*. *Drug Deliv*, 2016. **23**(1): p. 1-11.
310. Strisland, F., et al., *Meeting end user needs in international research projects aiming to develop medical device technology prototypes for integrated care: A case study*. *International Journal of Integrated Care*, 2016. **16**(5): p. 2.
311. Smith, S., et al., *CD-Based Microfluidics for Primary Care in Extreme Point-of-Care Settings*. *Micromachines*, 2016. **7**(2).
312. Scholten, K. and E. Meng, *Electron-beam lithography for polymer bioMEMS with submicron features*. *Microsystems & Nanoengineering*, 2016. **2**.
313. Schmidt, U., et al., *Biochemical piezoresistive sensors based on hydrogels for biotechnology and medical applications*. *Journal of Sensors and Sensor Systems*, 2016. **5**(2): p. 409-417.
314. Reddy, B., E. Salm, and R. Bashir, *Electrical Chips for Biological Point-of-Care Detection*, in *Annual Review of Biomedical Engineering, Vol 18*, M.L. Yarmush, Editor. 2016. p. 329-355.
315. Puttaraksa, N., et al., *Development of a microfluidic design for an automatic lab-on-chip operation*. *Microfluidics and Nanofluidics*, 2016. **20**(10).
316. Perez-Gonzalez, V.H., et al., *Emerging microfluidic devices for cancer cells/biomarkers*

- manipulation and detection*. IET Nanobiotechnol, 2016. **10**(5): p. 263-275.
317. Pengwang, E., et al., *Scanning Micromirror Platform Based on MEMS Technology for Medical Application*. Micromachines, 2016. **7**(2).
318. Paul, S.R., et al., *MEMS-Based Controlled Drug Delivery Systems: A Short Review*. Polymer-Plastics Technology and Engineering, 2016. **55**(9): p. 965-975.
319. Park, C.S., C. Lee, and O.S. Kwon, *Conducting Polymer Based Nanobiosensors*. Polymers, 2016. **8**(7).
320. Luttge, R., *Nano- and Microfabrication for Industrial and Biomedical Applications, 2nd Edition*. Nano- and Microfabrication for Industrial and Biomedical Applications, 2nd Edition. 2016. 1-259.
321. Lu, M.Q., et al., *Microfluidic hydrodynamic focusing for synthesis of nanomaterials*. Nano Today, 2016. **11**(6): p. 778-792.
322. Longo, A., et al., *Highly sensitive Electrochemical BioMEMS for TNF-alpha detection in humansaliva: Heart Failure*, in *Proceedings of the 30th Anniversary Eurosensors Conference - Eurosensors 2016*, I. Barsony, Z. Zolnai, and G. Battistig, Editors. 2016. p. 97-100.
323. Liu, Z.B., X. Han, and L.D. Qin, *Recent Progress of Microfluidics in Translational Applications*. Advanced Healthcare Materials, 2016. **5**(8): p. 871-888.
324. Kim, B.J. and E. Meng, *Review of polymer MEMS micromachining*. Journal of Micromechanics and Microengineering, 2016. **26**(1).
325. Kim, B.J. and E. Meng, *Micromachining of Parylene C for bioMEMS*. Polymers for Advanced Technologies, 2016. **27**(5): p. 564-576.
326. Kim, B.J. and E. Meng, *Review of polymer mems micromachining*. 2016. p. 013001.
327. Kherzi, B. and M. Pumera, *Self-propelled autonomous nanomotors meet microfluidics*. Nanoscale, 2016. **8**(40): p. 17415-17421.
328. Karbalaeei, A., R. Kumar, and H.J. Cho, *Thermocapillarity in Microfluidics-A Review*. Micromachines, 2016. **7**(1).
329. Jivani, R.R., et al., *Biomedical microelectromechanical systems (BioMEMS): Revolution in drug delivery and analytical techniques*. Saudi Pharm J, 2016. **24**(1): p. 1-20.
330. Hou, G.F., et al., *Review of Recent Advances in Carbon Nanotube Biosensors Based on Field-Effect Transistors*. Nano Life, 2016. **6**(3-4).
331. He, Y., et al., *Developments of 3D Printing Microfluidics and Applications in Chemistry and Biology: a Review*. Electroanalysis, 2016. **28**(8): p. 1658-1678.
332. Ferrer, I., et al., *New method for medical devices design and manufacture: Case studyscapholunate implant*. Advances in Mechanical Engineering, 2016. **8**(10): p. 11.
333. Drucker, D.J., *The Cardiovascular Biology of Glucagon-like Peptide-1*. Cell Metabolism, 2016. **24**(1): p. 15-30.
334. Cornelissen, M.P., et al., *Blunt Abdominal Wall Disruption by Seatbelt Injury; A Case Report and Review of the Literature*. Bulletin of emergency and trauma, 2016. **4**(2): p. 105-109.
335. Chong, Z.Z., et al., *Active droplet generation in microfluidics*. Lab on a Chip, 2016. **16**(1): p. 35-58.
336. Chen, X.Y., et al., *Fractal design of microfluidics and nanofluidics-A review*. Chemometrics and Intelligent Laboratory Systems, 2016. **155**: p. 19-25.

337. Chen, H., et al., *A review on electronic bio-sensing approaches based on non-antibody recognition elements*. *Analyst*, 2016. **141**(8): p. 2335-2346.
338. Castner, J., et al., *STRENGTHENING THE ROLE OF NURSES IN MEDICAL DEVICE DEVELOPMENT*. *Journal of Professional Nursing*, 2016. **32**(4): p. 300-305.
339. Brass, L.F. and S.L. Diamond, *Transport physics and biorheology in the setting of hemostasis and thrombosis*. *Journal of Thrombosis and Haemostasis*, 2016. **14**(5): p. 906-917.
340. Bhattacharjee, N., et al., *The upcoming 3D-printing revolution in microfluidics*. *Lab on a Chip*, 2016. **16**(10): p. 1720-1742.
341. Becker, H. and B.L. Gray, *Microfluidics, BioMEMS, and Medical Microsystems XIV*, in *Microfluidics, Biomems, and Medical Microsystems Xiv*, B.L. Gray and H. Becker, Editors. 2016.
342. Barar, J., et al., *Advanced drug delivery and targeting technologies for the ocular diseases*. *Bioimpacts*, 2016. **6**(1): p. 49-67.
343. Barani, A., et al., *Microfluidic integrated acoustic waving for manipulation of cells and molecules*. *Biosensors & Bioelectronics*, 2016. **85**: p. 714-725.
344. Anna, S.L., *Droplets and Bubbles in Microfluidic Devices*, in *Annual Review of Fluid Mechanics, Vol 48*, S.H. Davis and P. Moin, Editors. 2016. p. 285-309.
345. Amin, R., et al., *3D-printed microfluidic devices*. *Biofabrication*, 2016. **8**(2).
346. Amin, R., et al., *3d-printed microfluidic devices*. 2016. p. 022001.
347. Adzhri, R., et al., *High-performance integrated field-effect transistor-based sensors*. *Analytica Chimica Acta*, 2016. **917**: p. 1-18.
348. Zhao, W.W., J.J. Xu, and H.Y. Chen, *Photoelectrochemical bioanalysis: the state of the art*. *Chemical Society Reviews*, 2015. **44**(3): p. 729-741.
349. Wohlers, T., *Medical and Bioengineering Applications*. 2015. 465.
350. Wegner, K.D. and N. Hildebrandt, *Quantum dots: bright and versatile in vitro and in vivo fluorescence imaging biosensors*. *Chemical Society Reviews*, 2015. **44**(14): p. 4792-4834.
351. Wang, Z.Y. and Z.H. Dai, *Carbon nanomaterial-based electrochemical biosensors: an overview*. *Nanoscale*, 2015. **7**(15): p. 6420-6431.
352. Wang, X., et al., *Microfluidics-to-mass spectrometry: A review of coupling methods and applications*. *Journal of Chromatography A*, 2015. **1382**: p. 98-116.
353. Wang, X., et al., *Similarity and duality of electromagnetic and piezoelectric vibration energy harvesters*. *Mechanical Systems and Signal Processing*, 2015. **52-53**: p. 672-684.
354. TermehYousefi, A., S. Bagheri, and N. Adib, *Integration of biosensors based on microfluidic: a review*. *Sensor Review*, 2015. **35**(2): p. 190-199.
355. Teles, F. and L. Fonseca, *Nucleic-Acid Testing, New Platforms and Nanotechnology for Point-of-Decision Diagnosis of Animal Pathogens*. *Methods in Molecular Biology*, 2015. **1247**: p. 253-283.
356. Su, Y., et al., *Design Strategies and Applications of Circulating Cell-Mediated Drug Delivery Systems*. *Acs Biomaterials Science & Engineering*, 2015. **1**(4): p. 201-217.
357. Strohmeier, O., et al., *Centrifugal microfluidic platforms: advanced unit operations and applications*. *Chemical Society Reviews*, 2015. **44**(17): p. 6187-6229.
358. Stancescu, M., et al., *A phenotypic in vitro model for the main determinants of human whole heart function*. *Biomaterials*, 2015. **60**: p. 20-30.

359. Srinivasan, B., et al., *TEER Measurement Techniques for In Vitro Barrier Model Systems*. Jala, 2015. **20**(2): p. 107-126.
360. Shimizu, K., et al., *Microfluidic devices for construction of contractile skeletal muscle microtissues*. J Biosci Bioeng, 2015. **119**(2): p. 212-6.
361. Schiffer, D., et al., *Enzyme-responsive polymers for microbial infection detection*. Expert Review of Molecular Diagnostics, 2015. **15**(9): p. 1125-1131.
362. Sanders, J.M., et al., *A BioMEMS Device for the Study of Mechanical Properties of Cells*, in *Microfluidics, Biomems, and Medical Microsystems Xiii*, B.L. Gray and H. Becker, Editors. 2015.
363. Riahi, R., et al., *Microfluidics for advanced drug delivery systems*. Current Opinion in Chemical Engineering, 2015. **7**: p. 101-112.
364. Renna, L., et al., *Extremely integrated device for high sensitive quantitative biosensing*. Sensors and Actuators B-Chemical, 2015. **209**: p. 1011-1014.
365. Quesada-Gonzalez, D. and A. Merkoci, *Nanoparticle-based lateral flow biosensors*. Biosensors & Bioelectronics, 2015. **73**: p. 47-63.
366. Perestrelo, A.R., et al., *Microfluidic Organ/Body-on-a-Chip Devices at the Convergence of Biology and Microengineering*. Sensors (Basel), 2015. **15**(12): p. 31142-70.
367. Park, J., et al., *Fingertip skin-inspired microstructured ferroelectric skins discriminate static/dynamic pressure and temperature stimuli*. Science Advances, 2015. **1**(9).
368. Oedit, A., et al., *Lab-on-a-Chip hyphenation with mass spectrometry: strategies for bioanalytical applications*. Current opinion in biotechnology, 2015. **31**: p. 79-85.
369. Nehra, A. and K.P. Singh, *Current trends in nanomaterial embedded field effect transistor-based biosensor*. Biosensors & Bioelectronics, 2015. **74**: p. 731-743.
370. McGilvray, K.C., et al., *Implantable microelectromechanical sensors for diagnostic monitoring and post-surgical prediction of bone fracture healing*. Journal of Orthopaedic Research, 2015. **33**(10): p. 1439-1446.
371. Luka, G., et al., *Microfluidics Integrated Biosensors: A Leading Technology towards Lab-on-a-Chip and Sensing Applications*. Sensors, 2015. **15**(12): p. 30011-30031.
372. Lin, L., et al., *An L-dopa electrochemical sensor based on a graphene doped molecularly imprinted chitosan film*. Analytical Methods, 2015. **7**(4): p. 1387-1394.
373. Li, Y., et al., *Bone defect animal models for testing efficacy of bone substitute biomaterials*. Journal of Orthopaedic Translation, 2015. **3**(3): p. 95-104.
374. Li, P., et al., *Optimized Matching of an Implantable Medical Device Antenna in Different Tissue Medium Using Load Pull Measurements*. 2015 86th Arftg Microwave Measurement Conference, 2015: p. 4.
375. Lake, M.A.e.a., *Microfluidic device design, fabrication, and testing protocols*. University of Notre Dame, Notre Dame, IN 46556, 2015.
376. Kwapiszewski, R., et al., *Three-layer poly(methyl methacrylate) microsystem for analysis of lysosomal enzymes for diagnostic purposes*. Analytica Chimica Acta, 2015. **853**: p. 702-709.
377. Kricka, L.J., et al., *The future of laboratory medicine - A 2014 perspective*. Clinica Chimica Acta, 2015. **438**: p. 284-303.
378. Kotnik, T., et al., *Electroporation-based applications in biotechnology*. Trends in Biotechnology, 2015. **33**(8): p. 480-488.

379. Kirby, D., et al., *Rapid and Cost-Efficient Enumeration of Rare Cancer Cells from Whole Blood by Low-Loss Centrifugo-Magnetophoretic Purification Under Stopped-Flow Conditions*. Cytometry Part a, 2015. **87A**(1): p. 74-80.
380. Kim, S., et al., *A Novel Forecasting Methodology for Sustainable Management of Defense Technology*. Sustainability, 2015. **7**(12): p. 16720-16736.
381. Khaderi, S.N., J.M.J. den Toonder, and P.R. Onck, *Magnetic Artificial Cilia for Microfluidic Propulsion*, in *Advances in Applied Mechanics, Vol 48*, S.P.A. Bordas and D.S. Balint, Editors. 2015. p. 1-78.
382. Karimi, A., et al., *Interplay of physical mechanisms and biofilm processes: review of microfluidic methods*. Lab on a Chip, 2015. **15**(1): p. 23-42.
383. Ivlev, I., J. Vacek, and P. Kneppo, *Multi-criteria decision analysis for supporting the selection of medical devices under uncertainty*. European Journal of Operational Research, 2015. **247**(1): p. 216-228.
384. Huang, W.G., et al., *Electrochemical processes and mechanistic aspects of field-effect sensors for biomolecules*. Journal of Materials Chemistry C, 2015. **3**(25): p. 6445-6470.
385. Hu, Z., et al., *An integrated microspectrometer for localised multiplexing measurements*. Lab on a Chip, 2015. **15**(1): p. 283-289.
386. Hu, B., et al., *Discovering cancer biomarkers from clinical samples by protein microarrays*. Proteomics Clinical Applications, 2015. **9**(1-2): p. 98-110.
387. Ho, C.M.B., et al., *3D printed microfluidics for biological applications*. Lab on a Chip, 2015. **15**(18): p. 3627-3637.
388. Hejazian, M., W.H. Li, and N.T. Nguyen, *Lab on a chip for continuous-flow magnetic cell separation*. Lab on a Chip, 2015. **15**(4): p. 959-970.
389. Hamid, Q., et al., *Surface modification of SU-8 for enhanced cell attachment and proliferation within microfluidic chips*. Journal of Biomedical Materials Research Part B- Applied Biomaterials, 2015. **103**(2): p. 473-484.
390. Gogolides, E., K. Ellinas, and A. Tserepi, *Hierarchical micro and nano structured, hydrophilic, superhydrophobic and superoleophobic surfaces incorporated in microfluidics, microarrays and lab on chip microsystems*. Microelectronic Engineering, 2015. **132**: p. 135-155.
391. Gleichmann, N., et al., *Toward microfluidic design automation: a new system simulation toolkit for the in silico evaluation of droplet-based lab-on-a-chip systems*. Microfluidics and Nanofluidics, 2015. **18**(5-6): p. 1095-1105.
392. Geninatti, T., et al., *Impedance characterization, degradation, and in vitro biocompatibility for platinum electrodes on BioMEMS*. Biomedical Microdevices, 2015. **17**(1).
393. Garay, E.F. and R. Bashirullah, *Biofluid Activated Microbattery for Disposable Microsystems*. Journal of Microelectromechanical Systems, 2015. **24**(1): p. 70-79.
394. Gahoi, N., S. Ray, and S. Srivastava, *Array-based proteomic approaches to study signal transduction pathways: Prospects, merits and challenges*. Proteomics, 2015. **15**(2-3): p. 218-231.
395. Espulgar, W., et al., *Single cell trapping and cell-cell interaction monitoring of cardiomyocytes in a designed microfluidic chip*. Sensors and Actuators B-Chemical, 2015. **207**: p. 43-50.

396. Diaz Lantada, A., et al., *Toward mass production of microtextured microdevices: linking rapid prototyping with microinjection molding*. International Journal of Advanced Manufacturing Technology, 2015. **76**(5-8): p. 1011-1020.
397. Chou, W.L., et al., *Recent Advances in Applications of Droplet Microfluidics*. Micromachines, 2015. **6**(9): p. 1249-1271.
398. Chinen, A.B., et al., *Nanoparticle Probes for the Detection of Cancer Biomarkers, Cells, and Tissues by Fluorescence*. Chemical Reviews, 2015. **115**(19): p. 10530-10574.
399. Chiao, J.C. and D. Kissinger, *Medical Applications of RF and Microwaves-Therapy and Safety*. Ieee Microwave Magazine, 2015. **16**(2): p. 12-13.
400. Chen, Y.J., et al., *DNA nanotechnology from the test tube to the cell*. Nature Nanotechnology, 2015. **10**(9): p. 748-760.
401. Cai, Z., et al., *A magnetically actuated valve for centrifugal microfluidic applications*. Sensors and Actuators B-Chemical, 2015. **206**: p. 22-29.
402. Bhardwaj, A., et al., *Stimuli-sensitive Systems-an emerging delivery system for drugs*. Artificial Cells Nanomedicine and Biotechnology, 2015. **43**(5): p. 299-310.
403. Ben-Yoav, H., et al., *A controlled microfluidic electrochemical lab-on-a-chip for label-free diffusion-restricted DNA hybridization analysis*. Biosensors & bioelectronics, 2015. **64**: p. 579-585.
404. Balasuriya, S., *Dynamical systems techniques for enhancing microfluidic mixing*. Journal of Micromechanics and Microengineering, 2015. **25**(9).
405. Aracil, C., et al., *Portable Lab-on-PCB platform for autonomous micromixing*. Microelectronic Engineering, 2015. **131**: p. 13-18.
406. Zhuang, J. and Y.S. Ju, *Deployable and Conformal Planar Micro-Devices: Design and Model Validation*. Micromachines, 2014. **5**(3): p. 528-546.
407. Zhu, K., et al., *Recent Developments in Antibody-Based Assays for the Detection of Bacterial Toxins*. Toxins, 2014. **6**(4): p. 1325-1348.
408. Zhu, J., et al., *Spatially selective release of aptamer-captured cells by temperature mediation*. Iet Nanobiotechnology, 2014. **8**(1): p. 2-9.
409. Zhou, J., et al., *Modulation of rotation-induced lift force for cell filtration in a low aspect ratio microchannel*. Biomicrofluidics, 2014. **8**(4): p. 044112-044112.
410. Zhou, H. and S. Yao, *A facile on-demand droplet microfluidic system for lab-on-a-chip applications*. Microfluidics and Nanofluidics, 2014. **16**(4): p. 667-675.
411. Zhou, G., F. Li, and H.-M. Cheng, *Progress in flexible lithium batteries and future prospects*. Energy & Environmental Science, 2014. **7**(4): p. 1307-1338.
412. Zheng, Y., A. Mannai, and M. Sawan, *A BioMEMS chip with integrated micro electromagnet array towards bio-particles manipulation*. Microelectronic Engineering, 2014. **128**: p. 1-6.
413. Zheng, G.-X., et al., *An integrated microfluidic device for culturing and screening of Giardia lamblia*. Experimental parasitology, 2014. **137**: p. 1-7.
414. Zhao, X., et al., *One-Dimensional Nanostructure Field-Effect Sensors for Gas Detection*. Sensors, 2014. **14**(8): p. 13999-14020.
415. Zhang, Y., et al., *New Gold Nanostructures for Sensor Applications: A Review*. Materials, 2014. **7**(7): p. 5169-5201.
416. Zhang, L., et al., *Nonlinear Group IV photonics based on silicon and germanium: from*

- near-infrared to mid-infrared*. *Nanophotonics*, 2014. **3**(4-5): p. 247-268.
417. Yu, Z.T.F., K.M.A. Yong, and J. Fu, *Microfluidic Blood Cell Sorting: Now and Beyond*. *Small*, 2014. **10**(9): p. 1687-1703.
418. Yu, Y., J. Chen, and J. Zhou, *Parallel-plate lab-on-a-chip based on digital microfluidics for on-chip electrochemical analysis*. *Journal of Micromechanics and Microengineering*, 2014. **24**(1): p. 015020-015020.
419. Yu, L., B.J. Kim, and E. Meng, *Chronically Implanted Pressure Sensors: Challenges and State of the Field*. *Sensors*, 2014. **14**(11): p. 20620-20644.
420. Yosefi, G., et al., *Design and Analysis of a High Force, Low Voltage and High Flow Rate Electro-Thermal Micropump*. *Micromachines*, 2014. **5**(4): p. 1323-1341.
421. Yetisen, A.K., et al., *Holographic Sensors: Three-Dimensional Analyte-Sensitive Nanostructures and Their Applications*. *Chemical reviews*, 2014. **114**(20): p. 10654-10696.
422. Yeo, L.Y. and J.R. Friend, *Surface Acoustic Wave Microfluidics*. *Annual Review of Fluid Mechanics*, 2014. **46**: p. 379-406.
423. Yeh, Y.-T., et al., *Point-of-Care Microdevices for Blood Plasma Analysis in Viral Infectious Diseases*. *Annals of Biomedical Engineering*, 2014. **42**(11): p. 2333-2343.
424. Ye, F., et al., *Frequency-Shifted Interferometry - A Versatile Fiber-Optic Sensing Technique*. *Sensors*, 2014. **14**(6): p. 10977-11000.
425. Yang, Y., G.D. Xu, and J. Liu, *A Prototype of an Implantable Thermoelectric Generator for Permanent Power Supply to Body Inside a Medical Device*. *Journal of Medical Devices-Transactions of the Asme*, 2014. **8**(1): p. 6.
426. Yan, S., et al., *Making a hydrophoretic focuser tunable using a diaphragm*. *Biomicrofluidics*, 2014. **8**(6): p. 064115-064115.
427. Yahya, W.N.W., N.A. Kadri, and F. Ibrahim, *Cell Patterning for Liver Tissue Engineering via Dielectrophoretic Mechanisms*. *Sensors*, 2014. **14**(7): p. 11714-11734.
428. Yahya, W.N., N.A. Kadri, and F. Ibrahim, *Cell patterning for liver tissue engineering via dielectrophoretic mechanisms*. *Sensors (Basel)*, 2014. **14**(7): p. 11714-34.
429. Yafouz, B., N.A. Kadri, and F. Ibrahim, *Dielectrophoretic Manipulation and Separation of Microparticles Using Microarray Dot Electrodes*. *Sensors*, 2014. **14**(4): p. 6356-6369.
430. Xing, Y., et al., *Radiolabeled Nanoparticles for Multimodality Tumor Imaging*. *Theranostics*, 2014. **4**(3): p. 290-306.
431. Wu, G., et al., *Experimental study of PLLA/INH slow release implant fabricated by three dimensional printing technique and drug release characteristics in vitro*. *Biomedical Engineering Online*, 2014. **13**: p. 97-97.
432. Wu, D., et al., *Single-Molecule Study of Proteins by Biological Nanopore Sensors*. *Sensors*, 2014. **14**(10): p. 18211-18222.
433. Wei, L., et al., *The Intersection of CMOS Microsystems and Upconversion Nanoparticles for Luminescence Bioimaging and Bioassays*. *Sensors*, 2014. **14**(9): p. 16829-16855.
434. Wei, H., et al., *Improved Fibroblast Functionalities by Microporous Pattern Fabricated by Microelectromechanical Systems*. *International Journal of Molecular Sciences*, 2014. **15**(7): p. 12998-13009.
435. Warren, A.D., et al., *Point-of-care diagnostics for noncommunicable diseases using synthetic urinary biomarkers and paper microfluidics*. *Proceedings of the National*

- Academy of Sciences of the United States of America, 2014. **111**(10): p. 3671-3676.
436. Wang, Y., et al., *Wearable and Highly Sensitive Graphene Strain Sensors for Human Motion Monitoring*. *Advanced Functional Materials*, 2014. **24**(29): p. 4666-4670.
437. Wang, G.R., F. Yang, and W. Zhao, *There can be turbulence in microfluidics at low Reynolds number*. *Lab on a Chip*, 2014. **14**(8): p. 1452-1458.
438. Wang, G., et al., *Field-programmable lab-on-a-chip based on microelectrode dot array architecture*. *Iet Nanobiotechnology*, 2014. **8**(3): p. 163-171.
439. Wang, F., et al., *Optically induced electrohydrodynamic instability-based micro-patterning of fluidic thin films*. *Microfluidics and Nanofluidics*, 2014. **16**(6): p. 1097-1106.
440. Volpatti, L.R. and A.K. Yetisen, *Commercialization of microfluidic devices*. *Trends in biotechnology*, 2014. **32**(7): p. 347-350.
441. Verschooten, T., et al., *Proof-of-concept demonstration of a Total Internal Reflection based module for fluorescence and absorbance detection using a 3D-printed syringe pump*. *Proceedings of SPIE*, 2014. **9130**: p. 91300E-91300E.
442. Vergauwe, N., et al., *A highly efficient extraction protocol for magnetic particles on a digital microfluidic chip*. *Sensors and Actuators B-Chemical*, 2014. **196**: p. 282-291.
443. Veerachamy, S., et al., *Bacterial adherence and biofilm formation on medical implants: A review*. *Proceedings of the Institution of Mechanical Engineers Part H-Journal of Engineering in Medicine*, 2014. **228**(10): p. 1083-1099.
444. Vashist, S.K., et al., *Immobilization of Antibodies and Enzymes on 3-Aminopropyltriethoxysilane-Functionalized Bioanalytical Platforms for Biosensors and Diagnostics*. *Chemical Reviews*, 2014. **114**(21): p. 11083-11130.
445. van Reenen, A., et al., *Integrated lab-on-chip biosensing systems based on magnetic particle actuation - a comprehensive review*. *Lab on a Chip*, 2014. **14**(12): p. 1966-1986.
446. Valverde, J.M. and F.J. Duran-Olivencia, *Acoustic streaming in pulsating flows through porous media*. *Rivista Del Nuovo Cimento*, 2014. **37**(11): p. 591-619.
447. Vaca, L., *Point-of-care Diagnostic Tools to Detect Circulating MicroRNAs as Biomarkers of Disease*. *Sensors*, 2014. **14**(5): p. 9117-9131.
448. Usamentiaga, R., et al., *Infrared Thermography for Temperature Measurement and Non-Destructive Testing*. *Sensors*, 2014. **14**(7): p. 12305-12348.
449. Unterweger, H., et al., *Development and characterization of magnetic iron oxide nanoparticles with a cisplatin-bearing polymer coating for targeted drug delivery*. *International Journal of Nanomedicine*, 2014. **9**: p. 3659-3676.
450. Uludag, Y., Z. Olcer, and M.S. Sagiroglu, *Design and characterisation of a thin-film electrode array with shared reference/counter electrodes for electrochemical detection*. *Biosensors & bioelectronics*, 2014. **57**: p. 85-90.
451. Uludag, Y., *Critical stages of a biodetection platform development from sensor chip fabrication to surface chemistry and assay development*. *Proceedings of SPIE*, 2014. **9112**: p. 911212-911212.
452. Tsougeni, K., et al., *Photolithography and plasma processing of polymeric lab on chip for wetting and fouling control and cell patterning*. *Microelectronic Engineering*, 2014. **124**: p. 47-52.
453. Tseng, P. and D. Di Carlo, *Substrates with Patterned Extracellular Matrix and Subcellular Stiffness Gradients Reveal Local Biomechanical Responses*. *Advanced Materials*, 2014.

- 26(8)**: p. 1242-1247.
454. Tsang, M., et al., *Development of Electroplated Magnesium Microstructures for Biodegradable Devices and Energy Sources*. Journal of Microelectromechanical Systems, 2014. **23(6)**: p. 1281-1289.
455. Tripathy, A., et al., *Role of Morphological Structure, Doping, and Coating of Different Materials in the Sensing Characteristics of Humidity Sensors*. Sensors, 2014. **14(9)**: p. 16343-16422.
456. Tomazelli Coltro, W.K., et al., *Recent advances in low-cost microfluidic platforms for diagnostic applications*. Electrophoresis, 2014. **35(16)**: p. 2309-2324.
457. Temiz, Y. and E. Delamarche, *'Chip-olate' and dry-film resists for efficient fabrication, singulation and sealing of microfluidic chips*. Journal of Micromechanics and Microengineering, 2014. **24(9)**: p. 097001-097001.
458. Telkki, V.-V., et al., *Lab-on-a-Chip Reactor Imaging with Unprecedented Chemical Resolution by Hadamard-Encoded Remote Detection NMR*. Angewandte Chemie-International Edition, 2014. **53(42)**: p. 11289-11293.
459. Tanke, H.J., et al., *The use of upconverting phosphors in point-of-care (POC) testing*. Proceedings of SPIE, 2014. **8947**: p. 89470P-89470P.
460. Tan, Y.H., et al., *The influence of gold surface texture on microglia morphology and activation*. Biomaterials Science, 2014. **2(1)**: p. 110-120.
461. Tan, H.Y., et al., *Lab-on-a-chip for rapid electrochemical detection of nerve agent Sarin*. Biomedical Microdevices, 2014. **16(2)**: p. 269-275.
462. Takehara, H., et al., *Lab-on-a-brain: Implantable micro-optical fluidic devices for neural cell analysis in vivo*. Scientific Reports, 2014. **4**: p. 6721-6721.
463. Tajik, S., M.A. Taher, and H. Beitollahi, *First Report for Electrochemical Determination of Levodopa and Cabergoline: Application for Determination of Levodopa and Cabergoline in Human Serum, Urine and Pharmaceutical Formulations*. Electroanalysis, 2014. **26(4)**: p. 796-806.
464. Tabeling, P., *Recent progress in the physics of microfluidics and related biotechnological applications*. Current Opinion in Biotechnology, 2014. **25**: p. 129-134.
465. Sun, J.S., Y.L. Xianyu, and X.Y. Jiang, *Point-of-care biochemical assays using gold nanoparticle-implemented microfluidics*. Chemical Society Reviews, 2014. **43(17)**: p. 6239-6253.
466. Sun, J., et al., *Detection biomarkers of lung cancer using mini-GC-PID system integrated with micro GC column and micro pre-concentrator*. Nanoscale Research Letters, 2014. **9**: p. 576-576.
467. Sugawara, M., A. Shoji, and M. Sakamoto, *Pore-forming Compounds as Signal Transduction Elements for Highly Sensitive Biosensing*. Analytical Sciences, 2014. **30(1)**: p. 119-128.
468. Strohmeier, O., et al., *Multiplex genotyping of KRAS point mutations in tumor cell DNA by allele-specific real-time PCR on a centrifugal microfluidic disk segment*. Microchimica Acta, 2014. **181(13-14)**: p. 1681-1688.
469. Spindel, S. and K.E. Sapsford, *Evaluation of Optical Detection Platforms for Multiplexed Detection of Proteins and the Need for Point-of-Care Biosensors for Clinical Use*. Sensors, 2014. **14(12)**: p. 22313-22341.

470. Song, W., et al., *Chip-off-the-old-rock: the study of reservoir-relevant geological processes with real-rock micromodels*. Lab on a Chip, 2014. **14**(22): p. 4382-4390.
471. Song, P., et al., *Moving towards individualized medicine with microfluidics technology*. Rsc Advances, 2014. **4**(22): p. 11499-11511.
472. Soltani, M., et al., *Nanophotonic trapping for precise manipulation of biomolecular arrays*. Nature Nanotechnology, 2014. **9**(6): p. 448-452.
473. Sinton, D., *Energy: the microfluidic frontier*. Lab on a Chip, 2014. **14**(17): p. 3127-3134.
474. Singh, R.K., et al., *Design and fabrication of 3-dimensional helical structures in polydimethylsiloxane for flow control applications*. Microsystem Technologies-Micro-and Nanosystems-Information Storage and Processing Systems, 2014. **20**(1): p. 101-111.
475. Singh, A., et al., *Electrochemical Sensing of Cortisol: A Recent Update*. Applied Biochemistry and Biotechnology, 2014. **174**(3): p. 1115-1126.
476. Shi, Q., et al., *In Vitro and In Vivo characterization of wireless and passive micro system enabling gastrointestinal pressure monitoring*. Biomedical Microdevices, 2014. **16**(6): p. 859-868.
477. Shen, H.-H., et al., *EWOD microfluidic systems for biomedical applications*. Microfluidics and Nanofluidics, 2014. **16**(5): p. 965-987.
478. Shatford, R. and V. Karanassios, *Microplasma fabrication: from semiconductor technology for 2D-chips and microfluidic channels to rapid prototyping and 3D-printing of microplasma devices*. Proceedings of SPIE, 2014. **9106**: p. 91060H-91060H.
479. Shallan, A.I., R.M. Guijt, and M.C. Breadmore, *Electrokinetics for sample preparation of biological molecules in biological samples using microfluidic systems*. Bioanalysis, 2014. **6**(14): p. 1961-1974.
480. Seddon, A.B., *Mid-Infrared Photonics for Early Cancer Diagnosis*. International Conference on Transparent Optical Networks-ICTON, 2014.
481. Sciancalepore, A.G., et al., *A Bioartificial Renal Tubule Device Embedding Human Renal Stem/Progenitor Cells*. Plos One, 2014. **9**(1): p. e87496-e87496.
482. Schultz, A., I. Papautsky, and J. Heikenfeld, *Investigation of Laplace Barriers for Arrayed Electrowetting Lab-on-a-Chip*. Langmuir, 2014. **30**(18): p. 5349-5356.
483. Schneider, G., *Future De Novo Drug Design*. Molecular Informatics, 2014. **33**(6-7): p. 397-402.
484. Schmitz-Hertzberg, S.-T., et al., *Towards a Smart Encapsulation System for Small-Sized Electronic Devices: A New Approach*. International Journal of Polymer Science, 2014: p. 713603-713603.
485. Saha, S., P. Sarkar, and A.P.F. Turner, *Interference-Free Electrochemical Detection of Nanomolar Dopamine Using Doped Polypyrrole and Silver Nanoparticles*. Electroanalysis, 2014. **26**(10): p. 2197-2206.
486. Sah, V.R. and R.E. Baier, *Bacteria Inside Semiconductors as Potential Sensor Elements: Biochip Progress*. Sensors, 2014. **14**(6): p. 11225-11244.
487. Sagadevan, S. and M. Periasamy, *Recent Trends in Nanobiosensors and their Applications - a Review*. Reviews on Advanced Materials Science, 2014. **36**(1): p. 62-69.
488. Sackmann, E.K., A.L. Fulton, and D.J. Beebe, *The present and future role of microfluidics in biomedical research*. Nature, 2014. **507**(7491): p. 181-189.
489. Rudyak, V. and A. Minakov, *Modeling and Optimization of Y-Type Micromixers*.

- Micromachines, 2014. **5**(4): p. 886-912.
490. Roy, S., et al., *Theory and Analysis of Generalized Mixing and Dilution of Biochemical Fluids Using Digital Microfluidic Biochips*. Acm Journal on Emerging Technologies in Computing Systems, 2014. **11**(1): p. 2-2.
491. Romanov, V., et al., *A critical comparison of protein microarray fabrication technologies*. Analyst, 2014. **139**(6): p. 1303-1326.
492. Rodriguez, G.A., J.L. Lawrie, and S.M. Weiss, *Nanoporous silicon biosensors for DNA sensing*. Woodhead Publishing Series in Biomaterials, 2014(68): p. 304-333.
493. Rodrigues, T., P. Schneider, and G. Schneider, *Accessing New Chemical Entities through Microfluidic Systems*. Angewandte Chemie-International Edition, 2014. **53**(23): p. 5750-5758.
494. Rival, A., et al., *An EWOD-based microfluidic chip for single-cell isolation, mRNA purification and subsequent multiplex qPCR*. Lab on a Chip, 2014. **14**(19): p. 3739-3749.
495. Reuther, C., et al., *Programmable Patterning of Protein Bioactivity by Visible Light*. Nano Letters, 2014. **14**(7): p. 4050-4057.
496. Rensch, C., et al., *A solvent resistant lab-on-chip platform for radiochemistry applications*. Lab on a Chip, 2014. **14**(14): p. 2556-2564.
497. Ren, Y., et al., *Effects of Chip Geometries on Dielectrophoresis and Electrorotation Investigation*. Chinese Journal of Mechanical Engineering, 2014. **27**(1): p. 103-110.
498. Ren, X., et al., *Design, Fabrication, and Characterization of Archaeal Tetraether Free-Standing Planar Membranes in a PDMS- and PCB-Based Fluidic Platform*. Acs Applied Materials & Interfaces, 2014. **6**(15): p. 12618-12628.
499. Ren, K.N., Y. Chen, and H.K. Wu, *New materials for microfluidics in biology*. Current Opinion in Biotechnology, 2014. **25**: p. 78-85.
500. Rees, J.M., *Towards online, continuous monitoring for rheometry of complex fluids*. Advances in Colloid and Interface Science, 2014. **206**: p. 294-302.
501. Rahbar, M., H.Y. Tseng, and B.L. Gray, *High-aspect ratio magnetic nanocomposite polymer cilium*. Proceedings of SPIE, 2014. **8976**: p. 89760D-89760D.
502. Qi, N., et al., *Surface-enhanced Raman scattering on a zigzag microfluidic chip: towards high-sensitivity detection of As(III) ions*. Analytical Methods, 2014. **6**(12): p. 4077-4082.
503. Puri, I.K. and R. Ganguly, *Particle Transport in Therapeutic Magnetic Fields*, in *Annual Review of Fluid Mechanics, Vol 46*, S.H. Davis and P. Moin, Editors. 2014. p. 407-440.
504. Prohm, C. and H. Stark, *Feedback control of inertial microfluidics using axial control forces*. Lab on a Chip, 2014. **14**(12): p. 2115-2123.
505. Pratsch, K., R. Wellhausen, and H. Seitz, *Advances in the quantification of protein microarrays*. Current opinion in chemical biology, 2014. **18**: p. 16-20.
506. Poesio, P. and E.N. Wang, *Resonance induced wetting state transition of a ferrofluid droplet on superhydrophobic surfaces*. Experimental Thermal and Fluid Science, 2014. **57**: p. 353-357.
507. Piyasena, M.E. and S.W. Graves, *The intersection of flow cytometry with microfluidics and microfabrication*. Lab on a Chip, 2014. **14**(6): p. 1044-1059.
508. Piunno, P.A.E., et al., *A Comprehensive Microfluidics Device Construction and Characterization Module for the Advanced Undergraduate Analytical Chemistry Laboratory*. Journal of chemical education, 2014. **91**(6): p. 902-907.

509. Pires, N.M.M., et al., *Recent Developments in Optical Detection Technologies in Lab-on-a-Chip Devices for Biosensing Applications*. *Sensors*, 2014. **14**(8): p. 15458-15479.
510. Pesenti, A., et al., *Coupling Paper-Based Microfluidics and Lab on a Chip Technologies for Confirmatory Analysis of Trinitro Aromatic Explosives*. *Analytical Chemistry*, 2014. **86**(10): p. 4707-4714.
511. Perumal, V., U. Hashim, and T. Adam, *Mask Design and Simulation: Computer Aided Design for Lab-On-Chip Application*. *Advanced Materials Research*, 2014. **832**: p. 84-88.
512. Perdigones, F., et al., *Highly Integrable Pressurized Microvalve for Portable SU-8 Microfluidic Platforms*. *Journal of Microelectromechanical Systems*, 2014. **23**(2): p. 398-405.
513. Peng, S., D. Lohse, and X. Zhang, *Microwetting of Supported Graphene on Hydrophobic Surfaces Revealed by Polymerized Interfacial Femtodroplets*. *Langmuir*, 2014. **30**(33): p. 10043-10049.
514. Peng, L.F., et al., *Micro hot embossing of thermoplastic polymers: a review*. *Journal of Micromechanics and Microengineering*, 2014. **24**(1).
515. Paydar, O.H., et al., *Characterization of 3D-printed microfluidic chip interconnects with integrated O-rings*. *Sensors and Actuators A-Physical*, 2014. **205**: p. 199-203.
516. Patko, D., et al., *Microfluidic channels laser-cut in thin double-sided tapes: Cost-effective biocompatible fluidics in minutes from design to final integration with optical biochips*. *Sensors and Actuators B-Chemical*, 2014. **196**: p. 352-356.
517. Park, J.Y. and L.J. Kricka, *Prospects for the commercialization of chemiluminescence-based point-of-care and on-site testing devices*. *Analytical and Bioanalytical Chemistry*, 2014. **406**(23): p. 5631-5637.
518. Park, B.H., et al., *Integration of sample pretreatment, mu PCR, and detection for a total genetic analysis microsystem*. *Microchimica Acta*, 2014. **181**(13-14): p. 1655-1668.
519. Pardon, G., et al., *Rapid mold-free manufacturing of microfluidic devices with robust and spatially directed surface modifications*. *Microfluidics and Nanofluidics*, 2014. **17**(4): p. 773-779.
520. Papadopoulos, V.E., et al., *A passive micromixer for enzymatic digestion of DNA*. *Microelectronic Engineering*, 2014. **124**: p. 42-46.
521. Pan, Y., K. Karns, and A.E. Herr, *Microfluidic electrophoretic mobility shift assays for quantitative biochemical analysis*. *Electrophoresis*, 2014. **35**(15): p. 2078-2090.
522. Padmaraj, D., et al., *Mitochondrial Membrane Studies Using Impedance Spectroscopy with Parallel pH Monitoring*. *Plos One*, 2014. **9**(7): p. e101793-e101793.
523. Padalkar, M., et al., *Infrared Fiber Optic Probes for Evaluation of Musculoskeletal Tissue Pathology*. *Proceedings of SPIE*, 2014. **8926**: p. 89263Y-89263Y.
524. Ozhikandathil, J. and M. Packirisamy, *Monolithically Integrated Optical Microfluidic Chip by Single Step Lithography and Etching for Detection of Fluorophore Tagged Recombinant Bovine Somatotropin (rbST)*. *Journal of the Electrochemical Society*, 2014. **161**(2): p. B3155-B3159.
525. Otsuka, K., et al., *Single Cell Traffic of Swimming Green Paramecia on Microchips with Micro-flow Channels Fabricated by Micro-casting*. *Advanced Materials Research*, 2014. **875-877**: p. 2224-2228.
526. Onodera, T. and K. Toko, *Towards an Electronic Dog Nose: Surface Plasmon Resonance*

- Immunosensor for Security and Safety*. Sensors, 2014. **14**(9): p. 16586-16616.
527. Odera, T., et al., *Droplet formation behavior in a microfluidic device fabricated by hydrogel molding*. Microfluidics and Nanofluidics, 2014. **17**(3): p. 469-476.
528. Novo, P., V. Chu, and J.P. Conde, *Integrated fluorescence detection of labeled biomolecules using a prism-like PDMS microfluidic chip and lateral light excitation*. Lab on a Chip, 2014. **14**(12): p. 1991-1995.
529. Nosrati, R., et al., *Rapid selection of sperm with high DNA integrity*. Lab on a Chip, 2014. **14**(6): p. 1142-1150.
530. Norian, H., et al., *An integrated CMOS quantitative-polymerase-chain-reaction lab-on-chip for point-of-care diagnostics*. Lab on a Chip, 2014. **14**(20): p. 4076-4084.
531. Nogueira, D.R., et al., *Mechanisms Underlying Cytotoxicity Induced by Engineered Nanomaterials: A Review of In Vitro Studies*. Nanomaterials, 2014. **4**(2): p. 454-484.
532. Nimse, S.B., et al., *Immobilization Techniques for Microarray: Challenges and Applications*. Sensors, 2014. **14**(12): p. 22208-22229.
533. Ngwuluka, N.C., N.A. Ocheke, and O.I. Aruoma, *Naturapolyceutics: The Science of Utilizing Natural Polymers for Drug Delivery*. Polymers, 2014. **6**(5): p. 1312-1332.
534. Nezhad, A.S., et al., *Optimization of flow assisted entrapment of pollen grains in a microfluidic platform for tip growth analysis*. Biomedical Microdevices, 2014. **16**(1): p. 23-33.
535. Navin, C.V., et al., *Lab-on-a-chip devices for gold nanoparticle synthesis and their role as a catalyst support for continuous flow catalysis*. Nanotechnology Reviews, 2014. **3**(1): p. 39-63.
536. Munir, A., et al., *FEM analysis of magnetic agitation for tagging biomolecules with magnetic nanoparticles in a microfluidic system*. Sensors and Actuators B-Chemical, 2014. **197**: p. 1-12.
537. Muluneh, M. and D. Issadore, *A multi-scale PDMS fabrication strategy to bridge the size mismatch between integrated circuits and microfluidics*. Lab on a Chip, 2014. **14**(23): p. 4552-4558.
538. Mohammed, M.I. and M.P.Y. Desmulliez, *Autonomous capillary microfluidic system with embedded optics for improved troponin I cardiac biomarker detection*. Biosensors & bioelectronics, 2014. **61**: p. 478-484.
539. Mohammed, M.-I. and M.P.Y. Desmulliez, *CO₂ Laser Manufacturing of Miniaturised Lenses for Lab-on-a-Chip Systems*. Micromachines, 2014. **5**(3): p. 457-471.
540. Mishra, A., et al., *Optoelectrical microfluidics as a promising tool in biology*. Trends in biotechnology, 2014. **32**(8): p. 415-422.
541. Mirasoli, M., et al., *Recent advancements in chemical luminescence-based lab-on-chip and microfluidic platforms for bioanalysis*. Journal of pharmaceutical and biomedical analysis, 2014. **87**: p. 36-52.
542. Minnikanti, S., A. Gangopadhyay, and D.R. Reyes, *Polyelectrolyte Multilayers in Microfluidic Systems for Biological Applications*. Polymers, 2014. **6**(8): p. 2100-2115.
543. Meucci, S., et al., *Tubeless biochip for tailoring cell co-cultures in closed microchambers*. Microelectronic Engineering, 2014. **124**: p. 8-12.
544. Merola, F., et al., *3D visualization and biovolume estimation of motile cells by digital holography*. Proceedings of SPIE, 2014. **9129**: p. 91291W-91291W.

545. Melzer, J.E., et al., *Silver-coated Teflon hollow waveguides for the delivery of terahertz radiation*. Proceedings of SPIE, 2014. **8938**: p. 89380I-89380I.
546. Mehrabani, S., A.J. Maker, and A.M. Armani, *Hybrid Integrated Label-Free Chemical and Biological Sensors*. Sensors, 2014. **14**(4): p. 5890-5928.
547. Meacham, J.M., et al., *Physical Methods for Intracellular Delivery: Practical Aspects from Laboratory Use to Industrial-Scale Processing*. Jala, 2014. **19**(1): p. 1-18.
548. McAughtrie, S., K. Faulds, and D. Graham, *Surface enhanced Raman spectroscopy (SERS): Potential applications for disease detection and treatment*. Journal of Photochemistry and Photobiology C-Photochemistry Reviews, 2014. **21**: p. 40-53.
549. Mayur, M., et al., *Effect of interfacial Maxwell stress on time periodic electro- osmotic flow in a thin liquid film with a flat interface*. Electrophoresis, 2014. **35**(5): p. 670-680.
550. Mauk, M.G., et al., *Point-of-Care Medical Tests Devices and their Value as Educational Projects for Engineering Students*, in *2014 Asee Annual Conference*. 2014, Amer Soc Engineering Education: Washington.
551. Malik, A., S.S. Raja, and P.K. Gupta, *Versatile laser microfabrication techniques for lab-on-chip devices in general and uranium analysis in particular*. Pramana-Journal of Physics, 2014. **82**(2): p. 243-248.
552. Malachowski, K., et al., *Self-Folding Single Cell Grippers*. Nano Letters, 2014. **14**(7): p. 4164-4170.
553. Makgwane, P.R. and S.S. Ray, *Synthesis of Nanomaterials by Continuous-Flow Microfluidics: A Review*. Journal of Nanoscience and Nanotechnology, 2014. **14**(2): p. 1338-1363.
554. Low, W.S., N.A. Kadri, and W.A.B.b.W. Abas, *Computational Fluid Dynamics Modelling of Microfluidic Channel for Dielectrophoretic BioMEMS Application*. Scientific World Journal, 2014: p. 961301-961301.
555. Lou, J., Y. Wang, and L. Tong, *Microfiber Optical Sensors: A Review*. Sensors, 2014. **14**(4): p. 5823-5844.
556. Liu, X., et al., *Mid-Infrared nonlinear silicon photonics*. Proceedings of SPIE, 2014. **8990**: p. 899000-899000.
557. Liu, C.-H. and G.-B. Lee, *A micropump using amplified deformation of resilient membranes through oil hydraulics*. Microfluidics and Nanofluidics, 2014. **17**(2): p. 393-400.
558. Lindenburg, L. and M. Merckx, *Engineering Genetically Encoded FRET Sensors*. Sensors, 2014. **14**(7): p. 11691-11713.
559. Lin, S., et al., *Thermally-induced miniaturization for micro- and nanofabrication: progress and updates*. Lab on a Chip, 2014. **14**(18): p. 3475-3488.
560. Lin, P., Y.H. Hsu, and C.K. Lee, *Universal Lab on a Smartphone - A research of TiOPc thin film as a light dependence electrode*. Proceedings of SPIE, 2014. **8951**: p. 89510I-89510I.
561. Lin, J.C., *Current Activities on Exposure Limits for Humans in the Radio-Frequency Region*. IEEE Antennas and Propagation Magazine, 2014. **56**(6): p. 256-258.
562. Lim, J.-M. and R. Karnik, *Optimizing the discovery and clinical translation of nanoparticles: could microfluidics hold the key?* Nanomedicine, 2014. **9**(8): p. 1113-1116.
563. Liao, Y. and Y. Cheng, *Femtosecond Laser 3D Fabrication in Porous Glass for Micro- and Nanofluidic Applications*. Micromachines, 2014. **5**(4): p. 1106-1134.

564. Liao, C. and S. Hu, *Physical-Level Synthesis for Digital Lab-On-a-Chip Considering Variation, Contamination, and Defect*. Ieee Transactions on Nanobioscience, 2014. **13**(1): p. 3-11.
565. Li, Z., *Miniature Optofluidic Darkfield Microscope for Biosensing*. Proceedings of SPIE, 2014. **9198**: p. 91980G-91980G.
566. Li, S., et al., *Simple and reusable picoinjector for liquid delivery via nanofluidics approach*. Nanoscale Research Letters, 2014. **9**: p. 147-147.
567. Li, M., et al., *A review of microfabrication techniques and dielectrophoretic microdevices for particle manipulation and separation*. Journal of Physics D-Applied Physics, 2014. **47**(6): p. 063001-063001.
568. Li, L. and A. Mason, *Development of an Integrated CMOS-Microfluidic Instrumentation Array for High Throughput Membrane Protein Studies*. IEEE International Symposium on Circuits and Systems, 2014: p. 638-641.
569. Li, J., et al., *USB-driven microfluidic chips on printed circuit boards*. Lab on a Chip, 2014. **14**(5): p. 860-864.
570. Li, B., et al., *A smartphone controlled handheld microfluidic liquid handling system*. Lab on a Chip, 2014. **14**(20): p. 4085-4092.
571. Lee, M., et al., *Synchronized reinjection and coalescence of droplets in microfluidics*. Lab on a Chip, 2014. **14**(3): p. 509-513.
572. Lee, K.G., et al., *3D printed modules for integrated microfluidic devices*. Rsc Advances, 2014. **4**(62): p. 32876-32880.
573. Lee, H., et al., *Various On-Chip Sensors with Microfluidics for Biological Applications*. Sensors, 2014. **14**(9): p. 17008-17036.
574. Lee, H., et al., *Various On-Chip Sensors with Microfluidics for Biological Applications*. Sensors, 2014. **14**(9): p. 17008-17036.
575. Lee, G.-B. and H. Zhang, *Special Issue for the 8th IEEE International Conference on Nano/Micro Engineered and Molecular Systems (IEEE-NEMS 2013)*. Iet Nanobiotechnology, 2014. **8**(1): p. 1-1.
576. Lee, G.-B., et al., *Optically induced dielectrophoresis sorting with automated medium exchange in an integrated optofluidic device resulting in higher cell viability*. Lab on a Chip, 2014. **14**(15): p. 2837-2843.
577. Labuz, J.M. and S. Takayama, *Elevating sampling*. Lab on a Chip, 2014. **14**(17): p. 3165-3171.
578. Kuecuekbalaban, P., et al., *Exploring risks and benefits of point-of-care tests for healthcare and self-tests for laypersons: An interview study assessing complementary expert perspectives on diagnostic lab-on-a-chip systems*. Technology and Health Care, 2014. **22**(6): p. 817-833.
579. Kremer, M.P. and A. Tortschanoff, *Thermally induced light-driven Microfluidics using a MOEMS-based Laser Scanner for Particle Manipulation*. Proceedings of SPIE, 2014. **8976**: p. 89761F-89761F.
580. Kistrup, K., et al., *Fabrication and modelling of injection moulded all-polymer capillary microvalves for passive microfluidic control*. Journal of Micromechanics and Microengineering, 2014. **24**(12): p. 125007-125007.
581. Kiourti, A., K.A. Psathas, and K.S. Nikita, *Implantable and Ingestible Medical Devices With*

- Wireless Telemetry Functionalities: A Review of Current Status and Challenges.* Bioelectromagnetics, 2014. **35**(1): p. 1-15.
582. Kim, Y., et al., *Direct inkjet printing of micro-scale silver electrodes on polydimethylsiloxane (PDMS) microchip.* Journal of Micromechanics and Microengineering, 2014. **24**(11): p. 115010-115010.
583. Kim, K., et al., *Ultrahigh-speed rotating nanoelectromechanical system devices assembled from nanoscale building blocks.* Nature Communications, 2014. **5**: p. 3632-3632.
584. Kim, H., et al., *New Coating Method for Sustained Drug Release: Surface Modification of ePTFE Grafts by inner coating PLGA.* Bulletin of the Korean Chemical Society, 2014. **35**(5): p. 1333-1336.
585. Kilb, N., J. Burger, and G. Roth, *Protein microarray generation by in situ protein expression from template DNA.* Engineering in Life Sciences, 2014. **14**(4): p. 352-364.
586. Kikkawa, Y.S., et al., *Growth factor-eluting cochlear implant electrode: impact on residual auditory function, insertional trauma, and fibrosis.* Journal of Translational Medicine, 2014. **12**: p. 280-280.
587. Khaing, Z.Z., et al., *Advanced biomaterials for repairing the nervous system: what can hydrogels do for the brain?* Materials Today, 2014. **17**(7): p. 332-340.
588. Ketkova, L.A. and M.F. Churbanov, *3D laser ultramicroscopy: A method for nondestructive characterization of micro- and nanoinclusions in high-purity materials for fiber and power optics.* Inorganic Materials, 2014. **50**(12): p. 1301-1316.
589. Kersaudy-Kerhoas, M., et al., *Validation of a Fully Integrated Platform and Disposable Microfluidic Chips Enabling Parallel Purification of Genome Segments for Assembly.* Biotechnology and bioengineering, 2014. **111**(8): p. 1627-1637.
590. Kelley, S.O., et al., *Advancing the speed, sensitivity and accuracy of biomolecular detection using multi-length-scale engineering.* Nature Nanotechnology, 2014. **9**(12): p. 969-980.
591. Kazemzadeh, A., et al., *Gating valve on spinning microfluidic platforms: A flow switch/control concept.* Sensors and Actuators B-Chemical, 2014. **204**: p. 149-158.
592. Kazarine, A. and E.D. Salin, *Volumetric measurements by image segmentation on centrifugal microfluidic platforms in motion.* Lab on a Chip, 2014. **14**(18): p. 3572-3581.
593. Kawano, T., *Use of Swimming Cells of Green Paramecia for Detection of Toxic Rare Earth Ions at Lethal and Sub-lethal Concentration.* Advanced Materials Research, 2014. **875-877**: p. 2229-2237.
594. Kantak, C., et al., *Lab-on-a-chip technology: impacting non-invasive prenatal diagnostics (NIPD) through miniaturisation.* Lab on a Chip, 2014. **14**(5): p. 841-854.
595. Kanoun, O., et al., *Flexible Carbon Nanotube Films for High Performance Strain Sensors.* Sensors, 2014. **14**(6): p. 10042-10071.
596. Kang, Y.-C., C.-H. Lin, and R. Chen, *Capacitively catenary feedback control for open-type digital microfluidics.* Journal of Micro-Nanolithography MemS and Moems, 2014. **13**(1): p. 013013-013013.
597. Kaler, K. and R. Prakash, *Droplet Microfluidics for Chip-Based Diagnostics.* Sensors, 2014. **14**(12): p. 23283-23306.
598. Kadlec, M.W., et al., *A Cell Phone-Based Microphotometric System for Rapid*

- Antimicrobial Susceptibility Testing*. Jala, 2014. **19**(3): p. 258-266.
599. Julich, S., et al., *Lab-on-a-chip modules for detection of highly pathogenic bacteria: from sample preparation to detection*. Proceedings of SPIE, 2014. **9107**: p. 91070R-91070R.
600. Jubery, T.Z., S.K. Srivastava, and P. Dutta, *Dielectrophoretic separation of bioparticles in microdevices: A review*. Electrophoresis, 2014. **35**(5): p. 691-713.
601. Jo, M.C. and R. Guldiken, *Particle manipulation by phase-shifting of surface acoustic waves*. Sensors and Actuators A-Physical, 2014. **207**: p. 39-42.
602. Jiang, Z.H., et al., *A Compact, Low-Profile Metasurface-Enabled Antenna for Wearable Medical Body-Area Network Devices*. Ieee Transactions on Antennas and Propagation, 2014. **62**(8): p. 4021-4030.
603. Jiang, Y., et al., *Applications of Micro/Nanoparticles in Microfluidic Sensors: A Review*. Sensors, 2014. **14**(4): p. 6952-6964.
604. Jeon, S., et al., *High-Purity Isolation and Recovery of Circulating Tumor Cells using Conducting Polymer-deposited Microfluidic Device*. Theranostics, 2014. **4**(11): p. 1123-1132.
605. Javier del Campo, F., *Miniaturization of electrochemical flow devices A mini-review*. Electrochemistry Communications, 2014. **45**: p. 91-94.
606. Islam, M.R., et al., *Poly (N-isopropylacrylamide) Microgel-Based Optical Devices for Sensing and Biosensing*. Sensors, 2014. **14**(5): p. 8984-8995.
607. Isaac, K.M., C. Gonzales, and D. Sen, *Modeling of redox electrochemical MHD and three-dimensional CFD simulations of transient phenomena in microfluidic cells*. Microfluidics and Nanofluidics, 2014. **17**(5): p. 943-958.
608. Hwang, I., *Virus Outbreaks in Chemical and Biological Sensors*. Sensors, 2014. **14**(8): p. 13592-13612.
609. Hwang, G., et al., *Mobile microrobotic manipulator in microfluidics*. Sensors and Actuators A-Physical, 2014. **215**: p. 56-64.
610. Hupert, M.L., et al., *Arrays of high-aspect ratio microchannels for high-throughput isolation of circulating tumor cells (CTCs)*. Microsystem Technologies-Micro-and Nanosystems-Information Storage and Processing Systems, 2014. **20**(10-11): p. 1815-1825.
611. Huetten, M., et al., *In Vitro and In Vivo Evaluation of a Hydrogel Reservoir as a Continuous Drug Delivery System for Inner Ear Treatment*. Plos One, 2014. **9**(8): p. e104564-e104564.
612. Huang, X., et al., *On-Site Formation of Emulsions by Controlled Air Plugs*. Small, 2014. **10**(4): p. 758-765.
613. Hu, K., et al., *Testing of Flow-Based Microfluidic Biochips: Fault Modeling, Test Generation, and Experimental Demonstration*. Ieee Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2014. **33**(10): p. 1463-1475.
614. Hsieh, A.T.-H., P.J. Pan, and A.P. Lee, *A real-time characterization method to rapidly optimize molecular beacon signal for sensitive nucleic acids analysis*. Analytical and Bioanalytical Chemistry, 2014. **406**(13): p. 3059-3067.
615. Howes, P.D., R. Chandrawati, and M.M. Stevens, *Colloidal nanoparticles as advanced biological sensors*. Science, 2014. **346**(6205): p. 53-+.
616. Honrado, C., C.A. Silva, and T. Dong, *Design and characterization of a multiplexed*

- capillary-driven lab-on-chip for water quality analysis*. 2014 IEEE International Symposium on Medical Measurements and Applications (Memea), 2014: p. 340-345.
617. Honrado, C. and T. Dong, *Development and optimization of an integrated capillary-based opto-microfluidic device for chemiluminescence quantitative detection*. Journal of Micromechanics and Microengineering, 2014. **24**(12): p. 125023-125023.
618. Hong, J.A., et al., *Recent discoveries and applications involving small-molecule microarrays*. Current opinion in chemical biology, 2014. **18**: p. 21-28.
619. Hondroulis, E., et al., *Immuno Nanoparticles Integrated Electrical Control of Targeted Cancer Cell Development Using Whole Cell Bioelectronic Device*. Theranostics, 2014. **4**(9): p. 919-930.
620. Hoffmann, W., et al., *Opportunities and risks of diagnostic lab-on-a-chip systems in healthcare from a health system stakeholder's perspective*. Personalized Medicine, 2014. **11**(3): p. 273-283.
621. Ho, H.-p., et al., *Allergen screening bioassays: recent developments in lab-on-a-chip and lab-on-a-disc systems*. Bioanalysis, 2014. **6**(14): p. 2005-2018.
622. Hess-Dunning, A.E., et al., *Microscale Characterization of a Mechanically Adaptive Polymer Nanocomposite With Cotton-Derived Cellulose Nanocrystals for Implantable BioMEMS*. Journal of Microelectromechanical Systems, 2014. **23**(4): p. 774-784.
623. Hess-Dunning, A.E., R.L. Smith, and C.A. Zorman, *Development of Polynorborene as a Structural Material for Microfluidics and Flexible BioMEMS*. Journal of Applied Polymer Science, 2014. **131**(24): p. 40969-40969.
624. Heo, J., et al., *Ultra-high-aspect-orthogonal and tunable three dimensional polymeric nanochannel stack array for BioMEMS applications*. Nanoscale, 2014. **6**(16): p. 9681-9688.
625. Henares, T.G., et al., *Advancements in Capillary-Assembled Microchip (CAs-CHIP) Development for Multiple Analyte Sensing and Microchip Electrophoresis*. Analytical Sciences, 2014. **30**(1): p. 7-15.
626. He, F. and S.R. Nugen, *Automating fluid delivery in a capillary microfluidic device using low-voltage electrowetting valves*. Microfluidics and Nanofluidics, 2014. **16**(5): p. 879-886.
627. Hayat, A., G. Catanante, and J.L. Marty, *Current Trends in Nanomaterial-Based Amperometric Biosensors*. Sensors, 2014. **14**(12): p. 23439-23461.
628. Hatefi-Mehrjardi, A., et al., *Poly-(Alizarin Red S)-Modified Glassy Carbon Electrode for Simultaneous Electrochemical Determination of Levodopa, Homovanillic Acid and Ascorbic Acid*. Electroanalysis, 2014. **26**(11): p. 2491-2500.
629. Hashmi, A. and J. Xu, *On the Quantification of Mixing in Microfluidics*. Jala, 2014. **19**(5): p. 488-491.
630. Hashemkhani Zolfani, S. and M. Bahrami, *Investment prioritizing in high tech industries based on SWARA-COPRAS approach*. Technological and Economic Development of Economy, 2014. **20**(3): p. 534-553.
631. Hartmann, A., et al., *A novel tool for dynamic cell adhesion studies - the De-Adhesion Number Investigator DANI*. Lab on a Chip, 2014. **14**(3): p. 542-546.
632. Harrison, M.C. and A.M. Armani, *Utilizing embedded optofluidic sensors for fluorescent detection measurements in space and time*. Proceedings of SPIE, 2014. **8933**: p. 89330B-

- 89330B.
633. Haraldsson, T., C.F. Carlborg, and W. van der Wijngaart, *OSTE - a novel polymer system developed for Lab-on-Chip*. Proceedings of SPIE, 2014. **8976**: p. 897608-897608.
 634. Haneveld, J., et al., *Laser assisted and hermetic room temperature bonding, based on direct bonding technology*. Proceedings of SPIE, 2014. **8973**: p. 89730L-89730L.
 635. Hamdi, F.S., et al., *Low Temperature Irreversible Poly(DiMethyl) Siloxane Packaging of Silanized SU8 Microchannels: Characterization and Lab-on-Chip Application*. Journal of Microelectromechanical Systems, 2014. **23**(5): p. 1015-1024.
 636. Ha, B.H., et al., *Three-dimensional hydrodynamic flow and particle focusing using four vortices Dean flow*. Microfluidics and Nanofluidics, 2014. **17**(4): p. 647-655.
 637. Guzowski, J. and P. Garstecki, *Comment on "Wetting-induced formation of controllable monodisperse multiple emulsions in microfluidics" by N.-N. Deng, W. Wang, X.-J. Ju, R. Xie, D. A. Weitz and L.-Y. Chu, Lab Chip, 2013, 13, 4047*. Lab on a Chip, 2014. **14**(8): p. 1477-1478.
 638. Guvanasen, G.S., et al., *Polydimethylsiloxane Microstencils Molded on 3-D-Printed Templates*. Journal of Microelectromechanical Systems, 2014. **23**(5): p. 1045-1053.
 639. Guo, N., et al., *CMOS Time-Resolved, Contact, and Multispectral Fluorescence Imaging for DNA Molecular Diagnostics*. Sensors, 2014. **14**(11): p. 20602-20619.
 640. Gunawan, C.A., M. Ge, and C. Zhao, *Robust and versatile ionic liquid microarrays achieved by microcontact printing*. Nature Communications, 2014. **5**: p. 3744-3744.
 641. Guckenberger, D.J., et al., *A Combined Fabrication and Instrumentation Platform for Sample Preparation*. Jala, 2014. **19**(3): p. 267-274.
 642. Gross-Kosche, P., et al., *Deposition of NonFouling Plasma Polymers to a Thermoplastic Silicone Elastomer for Microfluidic and Biomedical Applications*. Journal of Applied Polymer Science, 2014. **131**(14): p. 40500-40500.
 643. Grist, S.M., et al., *Fabrication and laser patterning of polystyrene optical oxygen sensor films for lab-on-a-chip applications*. Analyst, 2014. **139**(22): p. 5718-5727.
 644. Gray, B.L., *A Review of Magnetic Composite Polymers Applied to Microfluidic Devices*. Journal of the Electrochemical Society, 2014. **161**(2): p. B3173-B3183.
 645. Gray, B.L., *Smart and functional polymer materials for smart and functional microfluidic instruments*. Proceedings of SPIE, 2014. **9060**: p. 90600N-90600N.
 646. Gransee, R., et al., *Fluorescence detection in Lab-on-a-chip systems using ultrafast nucleic acid amplification methods*. Proceedings of SPIE, 2014. **9107**: p. 91070P-91070P.
 647. Gong, M.M., et al., *Lab-in-a-pen: a diagnostics format familiar to patients for low-resource settings*. Lab on a Chip, 2014. **14**(5): p. 957-963.
 648. Gomez, F.A., *Paper microfluidics in bioanalysis*. Bioanalysis, 2014. **6**(21): p. 2911-2914.
 649. Glynn, M., et al., *Centrifugo-Magnetophoretic Purification of CD4+Cells from Whole Blood Toward Future HIV/AIDS Point-of-Care Applications*. Jala, 2014. **19**(3): p. 285-296.
 650. Ghallab, Y.H. and Y. Ismail, *CMOS Based Lab-on-a-Chip: Applications, Challenges and Future Trends*. Ieee Circuits and Systems Magazine, 2014. **14**(2): p. 27-47.
 651. Gencoglu, A. and A.R. Minerick, *Electrochemical detection techniques in micro- and nanofluidic devices*. Microfluidics and Nanofluidics, 2014. **17**(5): p. 781-807.
 652. Geislinger, T.M. and T. Franke, *Hydrodynamic lift of vesicles and red blood cells in flow from Fahrus & Lindqvist to microfluidic cell sorting*. Advances in Colloid and Interface

- Science, 2014. **208**: p. 161-176.
653. Garcia-Cordero, J.L. and S.J. Maerkl, *A 1024-sample serum analyzer chip for cancer diagnostics*. Lab on a Chip, 2014. **14**(15): p. 2642-2650.
654. Gallego, D. and S. Bueno, *Exploring the application of the Delphi method as a forecasting tool in Information Systems and Technologies research*. Technology Analysis & Strategic Management, 2014. **26**(9): p. 987-999.
655. Gallagher, R.I. and V. Espina, *Reverse Phase Protein Arrays: Mapping the Path Towards Personalized Medicine*. Molecular Diagnosis & Therapy, 2014. **18**(6): p. 619-630.
656. Gajasinghe, R.W.R.L., et al., *Experimental study of PDMS bonding to various substrates for monolithic microfluidic applications*. Journal of Micromechanics and Microengineering, 2014. **24**(7): p. 075010-075010.
657. Gaertner, C., et al., *Portable capillary electrophoresis-system for on-site food analysis with lab-on-a-chip based contactless conductivity detection*. Proceedings of SPIE, 2014. **9112**: p. 911211-911211.
658. Gaertner, C., et al., *Lab-on-a-chip PCR: Real-time PCR in miniaturized format for HLA diagnostics*. Proceedings of SPIE, 2014. **9107**: p. 910700-910700.
659. Ferre-Borrull, J., et al., *Nanostructural Engineering of Nanoporous Anodic Alumina for Biosensing Applications*. Materials, 2014. **7**(7): p. 5225-5253.
660. Feng, P., et al., *Gas Sensors Based on Semiconducting Nanowire Field-Effect Transistors*. Sensors, 2014. **14**(9): p. 17406-17429.
661. Fargnoli, A.S., et al., *Anti-inflammatory loaded poly-lactic glycolic acid nanoparticle formulations to enhance myocardial gene transfer: an in-vitro assessment of a drug/gene combination therapeutic approach for direct injection*. Journal of Translational Medicine, 2014. **12**: p. 171-171.
662. Farahani, H., R. Wagiran, and M.N. Hamidon, *Humidity Sensors Principle, Mechanism, and Fabrication Technologies: A Comprehensive Review*. Sensors, 2014. **14**(5): p. 7881-7939.
663. Fang, M., et al., *III–V Nanowires: Synthesis, Property Manipulations, and Device Applications*. Journal of Nanomaterials, 2014. **2014**: p. 1-14.
664. Fang, M., et al., *III-V Nanowires: Synthesis, Property Manipulations, and Device Applications*. Journal of Nanomaterials, 2014: p. 702859-702859.
665. Fan, L.-L., et al., *High-throughput, single-stream microparticle focusing using a microchannel with asymmetric sharp corners*. Microfluidics and Nanofluidics, 2014. **17**(4): p. 639-646.
666. Eyer, K., et al., *A liposomal fluorescence assay to study permeation kinetics of drug-like weak bases across the lipid bilayer*. Journal of Controlled Release, 2014. **173**: p. 102-109.
667. Ertl, P., et al., *Lab-on-a-chip technologies for stem cell analysis*. Trends in biotechnology, 2014. **32**(5): p. 245-253.
668. Enomoto, J., et al., *Reverse transfection in microchamber arrays for cell migration assays*. Sensors and Actuators B-Chemical, 2014. **190**: p. 896-899.
669. Elagli, A., et al., *Facile immobilization of enzyme by entrapment using a plasma-deposited organosilicon thin film*. Journal of Molecular Catalysis B-Enzymatic, 2014. **110**: p. 77-86.
670. Dulay, S.B., et al., *Automated microfluidically controlled electrochemical biosensor for*

- the rapid and highly sensitive detection of Francisella tularensis*. Biosensors & bioelectronics, 2014. **59**: p. 342-349.
671. Diez-Pascual, A.M. and P.S. Shuttleworth, *Layer-by-Layer Assembly of Biopolyelectrolytes onto Thermo/pH-Responsive Micro/Nano-Gels*. Materials, 2014. **7**(11): p. 7472-7512.
672. Dentry, M.B., J.R. Friend, and L.Y. Yeo, *Continuous flow actuation between external reservoirs in small-scale devices driven by surface acoustic waves*. Lab on a Chip, 2014. **14**(4): p. 750-758.
673. de Ruiter, R., et al., *Electrostatic potential wells for on-demand drop manipulation in microchannels*. Lab on a Chip, 2014. **14**(5): p. 883-891.
674. David de Paz, H., P. Brotons, and C. Munoz-Almagro, *Molecular isothermal techniques for combating infectious diseases: towards low-cost point-of-care diagnostics*. Expert Review of Molecular Diagnostics, 2014. **14**(7): p. 827-843.
675. Datta-Chaudhuri, T., P. Abshire, and E. Smela, *Packaging commercial CMOS chips for lab on a chip integration*. Lab on a Chip, 2014. **14**(10): p. 1753-1766.
676. Dak, P., A. Ebrahimi, and M.A. Alam, *Non-faradaic impedance characterization of an evaporating droplet for microfluidic and biosensing applications*. Lab on a Chip, 2014. **14**(14): p. 2469-2479.
677. Cui, Y. and P. Wang, *The Design and Operation of Ultra-Sensitive and Tunable Radio-Frequency Interferometers*. IEEE Transactions on Microwave Theory and Techniques, 2014. **62**(12): p. 3172-3182.
678. Cretich, M., F. Damin, and M. Chiari, *Protein microarray technology: how far off is routine diagnostics?* Analyst, 2014. **139**(3): p. 528-542.
679. Courson, R., et al., *Low-cost multilevel microchannel lab on chip: DF-1000 series dry film photoresist as a promising enabler*. Rsc Advances, 2014. **4**(97): p. 54847-54853.
680. Costa, C., et al., *Biosensors for the Detection of Circulating Tumour Cells*. Sensors, 2014. **14**(3): p. 4856-4875.
681. Comina, G., A. Suska, and D. Filippini, *Low cost lab-on-a-chip prototyping with a consumer grade 3D printer*. Lab on a Chip, 2014. **14**(16): p. 2978-2982.
682. Collier, T.L., *Microfluidic preparation of radiopharmaceuticals for use in imaging studies*. Proceedings of SPIE, 2014. **9107**: p. 91070J-91070J.
683. Collier, C.M., et al., *Optoelectrowetting for continuous microdroplet actuation*. Proceedings of SPIE, 2014. **9129**: p. 91293Q-91293Q.
684. Clausen, I. and T. Glott, *Development of Clinically Relevant Implantable Pressure Sensors: Perspectives and Challenges*. Sensors, 2014. **14**(9): p. 17686-17702.
685. Ciurana, J., *Designing, prototyping and manufacturing of medical devices*. International Journal of Computer Integrated Manufacturing, 2014. **27**(10): p. 899-900.
686. Chung, P., et al., *Rapid and Low-cost Prototyping of Medical Devices Using 3D Printed Molds for Liquid Injection Molding*. Jove-Journal of Visualized Experiments, 2014(88): p. 16.
687. Cheng, Y., Y. Liao, and K. Sugioka, *Femtosecond laser 3D nanofabrication in glass: enabling direct write of integrated micro/nanofluidic chips*. Proceedings of SPIE, 2014. **8967**: p. 896708-896708.
688. Chen, Y., et al., *Pulsed Laser Activated Cell Sorting with Three Dimensional Sheathless Inertial Focusing*. Small, 2014. **10**(9): p. 1746-1751.

689. Chen, Q., et al., *Investigation and improvement of reversible microfluidic devices based on glass-PDMS-glass sandwich configuration*. *Microfluidics and Nanofluidics*, 2014. **16**(1-2): p. 83-90.
690. Chen, J., et al., *Study of cyanoethyl pullulan as insulator for electrowetting*. *Sensors and Actuators B-Chemical*, 2014. **199**: p. 183-189.
691. Charwat, V., et al., *Monitoring cellular stress responses using integrated high-frequency impedance spectroscopy and time-resolved ELISA*. *Analyst*, 2014. **139**(20): p. 5271-5282.
692. Cetin, B., M.B. Ozer, and M.E. Solmaz, *Microfluidic bio-particle manipulation for biotechnology*. *Biochemical engineering journal*, 2014. **92**: p. 63-82.
693. Casado-Vela, J., M. Fuentes, and J.M. Franco-Zorrilla, *Screening of Protein-Protein and Protein-DNA Interactions Using Microarrays: Applications in Biomedicine*. *Advances in Protein Chemistry and Structural Biology*, 2014. **95**: p. 231-281.
694. Carlomagno, G.M., et al., *Heat Flux Sensors for Infrared Thermography in Convective Heat Transfer*. *Sensors*, 2014. **14**(11): p. 21065-21116.
695. Calixto, G., et al., *Nanotechnology-based drug delivery systems for treatment of oral cancer: a review*. *International Journal of Nanomedicine*, 2014. **9**: p. 3719-3735.
696. Cadei, A., et al., *Kinetic and thermal energy harvesters for implantable medical devices and biomedical autonomous sensors*. *Measurement Science & Technology*, 2014. **25**(1): p. 012003-012003.
697. Cable, M.L., et al., *Identification of primary amines in Titan tholins using microchip nonaqueous capillary electrophoresis*. *Earth and Planetary Science Letters*, 2014. **403**: p. 99-107.
698. Brunetti, B., et al., *A disposable electrochemical biosensor for L-DOPA determination in undiluted human serum*. *Electrochemistry Communications*, 2014. **48**: p. 28-31.
699. Brennan, M.D., et al., *Oxygen control with microfluidics*. *Lab on a Chip*, 2014. **14**(22): p. 4305-4318.
700. Boehm, R.D., et al., *Inkjet printing for pharmaceutical applications*. *Materials Today*, 2014. **17**(5): p. 247-252.
701. Bisaria, A., P. Hersen, and M.N. McClean, *Microfluidic Platforms for Generating Dynamic Environmental Perturbations to Study the Responses of Single Yeast Cells*. *Methods in Molecular Biology*, 2014. **1205**: p. 111-129.
702. Bhaumik, S.K., et al., *Droplet transport through dielectrophoretic actuation using line electrode*. *Microfluidics and Nanofluidics*, 2014. **16**(3): p. 597-603.
703. Bhattacharjee, S., A. Banerjee, and B.B. Bhattacharya, *Sample preparation with multiple dilutions on digital microfluidic biochips*. *IET Computers and Digital Techniques*, 2014. **8**(1): p. 49-58.
704. Bhargava, K.C., B. Thompson, and N. Malmstadt, *Discrete elements for 3D microfluidics*. *Proceedings of the National Academy of Sciences of the United States of America*, 2014. **111**(42): p. 15013-15018.
705. Benavente-Babace, A., et al., *Single-cell trapping and selective treatment via co-flow within a microfluidic platform*. *Biosensors & bioelectronics*, 2014. **61**: p. 298-305.
706. Beitollahi, H. and M. Mostafavi, *Nanostructured Base Electrochemical Sensor for Simultaneous Quantification and Voltammetric Studies of Levodopa and Carbidopa in Pharmaceutical Products and Biological Samples*. *Electroanalysis*, 2014. **26**(5): p. 1090-

- 1098.
707. Beckers, G. and B. Dehez, *Design and Modeling of an Electromagnetic Peristaltic Micropump*. IEEE ASME International Conference on Advanced Intelligent Mechatronics, 2014: p. 180-185.
708. Becker, H., et al., *Real-time PCR in microfluidic devices*. Proceedings of SPIE, 2014. **8976**: p. 89760Z-89760Z.
709. Bashir, M., et al., *Surface Coating of Bonded PDMS Microchannels by Atmospheric Pressure Microplasma*. Plasma Processes and Polymers, 2014. **11**(3): p. 279-288.
710. Basar, M.R., et al., *Application of Wireless Power Transmission Systems in Wireless Capsule Endoscopy: An Overview*. Sensors, 2014. **14**(6): p. 10929-10951.
711. Baratchi, S., et al., *Immunology on chip: Promises and opportunities*. Biotechnology Advances, 2014. **32**(2): p. 333-346.
712. Bangash, J.I., et al., *A Survey of Routing Protocols in Wireless Body Sensor Networks*. Sensors, 2014. **14**(1): p. 1322-1357.
713. Babaei, A., E. Ansari, and M. Afrasiabi, *A new sensor based on a MCM-41-nickel hydroxide nanoparticle-multi-walled carbon nanotube-modified glassy carbon electrode for a sensitive simultaneous determination of levodopa, paracetamol and tryptophan*. Analytical Methods, 2014. **6**(21): p. 8729-8737.
714. Aracil, C., et al., *Depressurised reservoirs for portable fluid extraction in SU-8-based microfluidic systems*. Micro & Nano Letters, 2014. **9**(11): p. 821-824.
715. Amrhein, S., et al., *Characterization of aqueous two phase systems by combining lab-on-a-chip technology with robotic liquid handling stations*. Journal of Chromatography a, 2014. **1367**: p. 68-77.
716. Ameri, S.K., et al., *All electronic approach for high-throughput cell trapping and lysis with electrical impedance monitoring*. Biosensors & bioelectronics, 2014. **54**: p. 462-467.
717. Amaya, M., et al., *Proteomic strategies for the discovery of novel diagnostic and therapeutic targets for infectious diseases*. Pathogens and Disease, 2014. **71**(2): p. 175-187.
718. Altintas, Z., W.M. Fakanya, and I.E. Tothill, *Cardiovascular disease detection using bio-sensing techniques*. Talanta, 2014. **128**: p. 177-186.
719. Algieri, C., et al., *Bio-Mimetic Sensors Based on Molecularly Imprinted Membranes*. Sensors, 2014. **14**(8): p. 13863-13912.
720. Algahtani, M.S., et al., *High throughput screening for biomaterials discovery*. Journal of Controlled Release, 2014. **190**: p. 115-126.
721. Alberti, M., et al., *Impedance spectra of patch clamp scenarios for single cells immobilized on a lab-on-a-chip*. Microfluidics and Nanofluidics, 2014. **17**(2): p. 263-274.
722. Akagi, J., et al., *Integrated chip-based physiometer for automated fish embryo toxicity biotests in pharmaceutical screening and ecotoxicology*. Cytometry Part a, 2014. **85A**(6): p. 537-547.
723. Ai, Y. and B.L. Marrone, *Separation of Biological Cells in a Microfluidic Device Using Surface Acoustic Waves (SAWs)*. Proceedings of SPIE, 2014. **8976**: p. 897600-897600.
724. Ahmed, M.U., et al., *Personalized diagnostics and biosensors: a review of the biology and technology needed for personalized medicine*. Critical reviews in biotechnology, 2014. **34**(2): p. 180-196.

725. Agudelo, C.G., M. Packirisamy, and A. Geitmann, *Lab-on-a-Chip for Studying Growing Pollen Tubes*. Methods in Molecular Biology, 2014. **1080**: p. 237-248.
726. Afzal, A., *Implantable zirconia bioceramics for bone repair and replacement: A chronological review*. Materials Express, 2014. **4**(1): p. 1-12.
727. Acimovic, S.S., et al., *LSPR Chip for Parallel, Rapid, and Sensitive Detection of Cancer Markers in Serum*. Nano Letters, 2014. **14**(5): p. 2636-2641.
728. Abushagur, A.A.G., et al., *Advances in Bio-Tactile Sensors for Minimally Invasive Surgery Using the Fibre Bragg Grating Force Sensor Technique: A Survey*. Sensors, 2014. **14**(4): p. 6633-6665.
729. Abel, L., et al., *Autoimmune profiling with protein microarrays in clinical applications*. Biochimica Et Biophysica Acta-Proteins and Proteomics, 2014. **1844**(5): p. 977-987.
730. Zhu, H., et al., *Optical imaging techniques for point-of-care diagnostics*. Lab on a Chip, 2013. **13**(1): p. 51-67.
731. Zhu, F., et al., *Additive manufacturing of Lab-on-a-Chip devices: Promises and Challenges*. Proceedings of SPIE, 2013. **8923**: p. 892344-892344.
732. Zhu, F., et al., *A high-throughput Lab-on-a-Chip interface for zebrafish embryo tests in drug discovery and ecotoxicology*. Proceedings of SPIE, 2013. **8923**: p. 892345-892345.
733. Zhou, J., et al., *Modulation of aspect ratio for complete separation in an inertial microfluidic channel*. Lab on a Chip, 2013. **13**(10): p. 1919-1929.
734. Zhou, H. and S. Yao, *Electrostatic charging and control of droplets in microfluidic devices*. Lab on a Chip, 2013. **13**(5): p. 962-969.
735. Zhou, H., et al., *Fiber-based tunable microcavity fluidic dye laser*. Optics Letters, 2013. **38**(18): p. 3604-3607.
736. Zhou, G., et al., *A novel pulsed drug-delivery system: polyelectrolyte layer-by-layer coating of chitosan-alginate microgels*. International Journal of Nanomedicine, 2013. **8**: p. 877-887.
737. Zheng, Y., C. Jacquemod, and M. Sawan, *A Portable Lab-on-chip Platform for Magnetic Beads Density Measuring*. IEEE International Symposium on Circuits and Systems, 2013: p. 1071-1074.
738. Zhao, Y., et al., *Lab-on-a-chip technologies for single-molecule studies*. Lab on a Chip, 2013. **13**(12): p. 2183-2198.
739. Zhao, W., et al., *An integrated microfluidic device for rapid serodiagnosis of amebiasis*. Biomicrofluidics, 2013. **7**(1): p. 011101-011101.
740. Zhang, Z. and S. Negrath, *Microfluidics and cancer: are we there yet?* Biomedical Microdevices, 2013. **15**(4): p. 595-609.
741. Zhang, Y. and T.-H. Wang, *Full-Range Magnetic Manipulation of Droplets via Surface Energy Traps Enables Complex Bioassays*. Advanced Materials, 2013. **25**(21): p. 2903-2908.
742. Zhang, Y., *Optimal design of label-free silicon "lab on a chip" biosensors*. Progress in Natural Science-Materials International, 2013. **23**(5): p. 481-486.
743. Zhang, L.G., et al., *Intelligent numerical manipulation of micrometer-scale emulsions using polymer confinement*. Advanced Materials Research, 2013. **813**: p. 431-434.
744. Zhang, B., et al., *Flexible packaging of solid-state integrated circuit chips with elastomeric microfluidics*. Scientific Reports, 2013. **3**: p. 1098-1098.

745. Zeng, J., et al., *Magnetic concentration of particles and cells in ferrofluid flow through a straight microchannel using attracting magnets*. *Microfluidics and Nanofluidics*, 2013. **15**(1): p. 49-55.
746. Zajadacz, J., et al., *Measurement and simulation of the pull-off strength at the separation of miniaturized 3D connectors consisting of silicon masters with undercuts and PDMS replicas*. *Microelectronic Engineering*, 2013. **101**: p. 31-36.
747. Yurgel, V., T. Collares, and F. Seixas, *Developments in the use of nanocapsules in oncology*. *Brazilian Journal of Medical and Biological Research*, 2013. **46**(6): p. 486-501.
748. Yun, H., K. Kim, and W.G. Lee, *Cell manipulation in microfluidics*. *Biofabrication*, 2013. **5**(2): p. 022001-022001.
749. Yuan, Q. and J. Wu, *Thermally biased AC electrokinetic pumping effect for Lab-on-a-chip based delivery of biofluids*. *Biomedical Microdevices*, 2013. **15**(1): p. 125-133.
750. Yu, L., et al., *Advances of lab-on-a-chip in isolation, detection and post-processing of circulating tumour cells*. *Lab on a Chip*, 2013. **13**(16): p. 3163-3182.
751. Young, E.W.K., *Advances in Microfluidic Cell Culture Systems for Studying Angiogenesis*. *Jala*, 2013. **18**(6): p. 427-436.
752. Young, E.W., *Advances in microfluidic cell culture systems for studying angiogenesis*. *J Lab Autom*, 2013. **18**(6): p. 427-36.
753. Yoshida, S., K. Sato, and S. Takeuchi, *Sequential micro-assembly of three dimensional biological microstructures from two dimensional cell-laden micro-plates*. *Procedia CIRP*, 2013. **5**: p. 196-200.
754. Yoon, H., *Current Trends in Sensors Based on Conducting Polymer Nanomaterials*. *Nanomaterials*, 2013. **3**(3): p. 524-549.
755. Yobas, L., *Microsystems for cell-based electrophysiology*. *Journal of Micromechanics and Microengineering*, 2013. **23**(8): p. 083002-083002.
756. Yeste, A. and F.J. Quintana, *Antigen Microarrays for the Study of Autoimmune Diseases*. *Clinical chemistry*, 2013. **59**(7): p. 1036-1044.
757. Yang, Y., G. Dong Xu, and J. Liu, *A Prototype of an Implantable Thermoelectric Generator for Permanent Power Supply to Body Inside a Medical Device*. *Journal of Medical Devices*, 2013. **8**(1): p. 6.
758. Yang, S., et al., *An addressable cell array for a platform of biosensor chips*. *Proceedings of SPIE*, 2013. **8879**: p. 88790W-88790W.
759. Yafouz, B., N.A. Kadri, and F. Ibrahim, *Microarray Dot Electrodes Utilizing Dielectrophoresis for Cell Characterization*. *Sensors*, 2013. **13**(7): p. 9029-9046.
760. Yafia, M. and H. Najjaran, *High precision control of gap height for enhancing principal digital microfluidics operations*. *Sensors and Actuators B-Chemical*, 2013. **186**: p. 343-352.
761. Xu, Y., et al., *Paper-based solid-state electrochemiluminescence sensor using poly(sodium 4-styrenesulfonate) functionalized graphene/nafion composite film*. *Analytica Chimica Acta*, 2013. **763**: p. 20-27.
762. Xu, X., et al., *Optimization of microfluidic microsphere-trap arrays*. *Biomicrofluidics*, 2013. **7**(1): p. 014112-014112.
763. Xu, B.-B., et al., *On-Chip Catalytic Microreactors for Modern Catalysis Research*. *Chemcatchem*, 2013. **5**(8): p. 2091-2099.

764. Xiang, Z., et al., *Development of vertical SU-8 microtubes integrated with dissolvable tips for transdermal drug delivery*. *Biomicrofluidics*, 2013. **7**(2): p. 026502-026502.
765. Wu, T.-F., Z. Mei, and Y.-H. Lo, *Label-free optofluidic cell classifier utilizing support vector machines*. *Sensors and Actuators B-Chemical*, 2013. **186**: p. 327-332.
766. Wu, T.-F., et al., *Rapid White Blood Cell Detection for Peritonitis Diagnosis*. *Proceedings of SPIE*, 2013. **8615**: p. 861500-861500.
767. Wong, I.Y., S.N. Bhatia, and M. Toner, *Nanotechnology: emerging tools for biology and medicine*. *Genes & development*, 2013. **27**(22): p. 2397-2408.
768. Wingren, C., *Novel type of protein chip for multiplex detection of autoantibodies*. *Expert Review of Proteomics*, 2013. **10**(5): p. 417-420.
769. Waseem, A., M. Yaqoob, and A. Nabi, *Analytical Applications of Flow Injection Chemiluminescence for the Determination of Pharmaceuticals-A Review*. *Current Pharmaceutical Analysis*, 2013. **9**(4): p. 363-395.
770. Wang, Z.F., Y.P. Seah, and Z.P. Wang, *Seamless joining of porous membrane with thermoplastic microfluidic devices*. *Microelectronic Engineering*, 2013. **110**: p. 386-391.
771. Wang, Y. and J. Irudayaraj, *Surface-enhanced Raman spectroscopy at single-molecule scale and its implications in biology*. *Philosophical Transactions of the Royal Society B-Biological Sciences*, 2013. **368**(1611): p. 20120026-20120026.
772. Wang, X., et al., *Microfluidic Device for Controllable Chemical Release via Field-Actuated Membrane Incorporating Nanoparticles*. *Journal of Nanomaterials*, 2013: p. 864584-864584.
773. Wang, X., J.A. Hagen, and I. Papautsky, *Paper pump for passive and programmable transport*. *Biomicrofluidics*, 2013. **7**(1): p. 014107-014107.
774. Wang, S., et al., *Production rate and diameter analysis of spherical monodisperse microbubbles from two-dimensional, expanding-nozzle flow-focusing microfluidic devices*. *Biomicrofluidics*, 2013. **7**(1): p. 014103-014103.
775. Wang, K.I.K., et al., *Toward embedded laboratory automation for smart lab-on-a-chip embryo arrays*. *Biosensors & bioelectronics*, 2013. **48**: p. 188-196.
776. Wang, J., et al., *Drug Delivery Implants in the Treatment of Vitreous Inflammation*. *Mediators of inflammation*, 2013: p. 780634-780634.
777. Wang, H., et al., *Initial Assessment of the Function Experiment of Electromagnetism Driven Micropump*. *Journal of Pure and Applied Microbiology*, 2013. **7**: p. 249-254.
778. Wang, G., et al., *A lab-in-a-droplet bioassay strategy for centrifugal microfluidics with density difference pumping, power to disc and bidirectional flow control*. *Lab on a Chip*, 2013. **13**(18): p. 3698-3706.
779. Wang, C.-W., D. Sinton, and M.G. Moffitt, *Morphological Control via Chemical and Shear Forces in Block Copolymer Self-Assembly in the Lab-on-Chip*. *ACS Nano*, 2013. **7**(2): p. 1424-1436.
780. Vladisavljevic, G.T., et al., *Industrial lab-on-a-chip: Design, applications and scale-up for drug discovery and delivery*. *Advanced Drug Delivery Reviews*, 2013. **65**(11-12): p. 1626-1663.
781. Vespini, V., et al., *Milking liquid nano-droplets by an IR laser: a new modality for the visualization of electric field lines*. *Measurement Science & Technology*, 2013. **24**(4): p. 045203-045203.

782. van Steijn, V., et al., *Block-and-break generation of microdroplets with fixed volume*. *Biomicrofluidics*, 2013. **7**(2): p. 024108-024108.
783. van Leest, T. and J. Caro, *Cavity-enhanced optical trapping of bacteria using a silicon photonic crystal*. *Lab on a Chip*, 2013. **13**(22): p. 4358-4365.
784. Vafaie, R.H., et al., *An electroosmotically-driven micromixer modified for high miniaturized microchannels using surface micromachining*. *Biotechnology and Bioprocess Engineering*, 2013. **18**(3): p. 594-605.
785. Ulrich, L.C., et al., *FDA's Pediatric Device Consortia: National Program Fosters Pediatric Medical Device Development*. *Pediatrics*, 2013. **131**(5): p. 981-985.
786. Travagliati, M., et al., *Easy Monitoring of Velocity Fields in Microfluidic Devices Using Spatiotemporal Image Correlation Spectroscopy*. *Analytical Chemistry*, 2013. **85**(17): p. 8080-8084.
787. Toth, E., et al., *Design, realisation and validation of microfluidic stochastic mixers integrable in bioanalytical systems using CFD modeling*. *Biomedical Circuits and Systems Conference*, 2013: p. 266-269.
788. Tortorich, R.P. and J.-W. Choi, *Inkjet Printing of Carbon Nanotubes*. *Nanomaterials*, 2013. **3**(3): p. 453-468.
789. Tonooka, T., T. Teshima, and S. Takeuchi, *Clustering triple microbeads in a dynamic microarray for timing-controllable bead-based reactions*. *Microfluidics and Nanofluidics*, 2013. **14**(6): p. 1039-1048.
790. Tomcik, P., *Microelectrode Arrays with Overlapped Diffusion Layers as Electroanalytical Detectors: Theory and Basic Applications*. *Sensors*, 2013. **13**(10): p. 13659-13684.
791. Thredgold, L.D., et al., *Optimization of physical parameters of 'injected' metal electrodes for capacitively coupled contactless conductivity detection on poly(dimethylsiloxane) microchips*. *Proceedings of SPIE*, 2013. **8923**: p. 89234D-89234D.
792. Testouri, A., et al., *Generation of Crystalline Polyurethane Foams Using Millifluidic Lab-on-a-Chip Technologies*. *Advanced Engineering Materials*, 2013. **15**(11): p. 1086-1098.
793. Tanweer, F., et al., *Application of microfluidic systems in management of head and neck squamous cell carcinoma*. *Head and Neck-Journal for the Sciences and Specialties of the Head and Neck*, 2013. **35**(5): p. 756-763.
794. Tang, Q., et al., *Development of terahertz (THz) microfluidic devices for "Lab-on-a-Chip" applications*. *Proceedings of SPIE*, 2013. **8585**.
795. Tanaka, Y., *Electric actuating valves incorporated into an all glass-based microchip exploiting the flexibility of ultra thin glass*. *Rsc Advances*, 2013. **3**(26): p. 10213-10220.
796. Taffoni, F., et al., *Optical Fiber-Based MR-Compatible Sensors for Medical Applications: An Overview*. *Sensors*, 2013. **13**(10): p. 14105-14120.
797. Suscillon, C., O.D. Velez, and V.I. Slaveykova, *Alternating current-dielectrophoresis driven on-chip collection and chaining of green microalgae in freshwaters*. *Biomicrofluidics*, 2013. **7**(2): p. 024109-024109.
798. Sun, X., et al., *Controlled dispensing and mixing of pico- to nanoliter volumes using on-demand droplet-based microfluidics*. *Microfluidics and Nanofluidics*, 2013. **15**(1): p. 117-126.
799. Sun, T., et al., *Cytocompatibility Assessment of Si, Plasma Enhanced Chemical Vapor Deposition-Formed SiO₂ and Si₃N₄ Used for Neural Prosthesis: A Comparative Study*.

- Nanoscience and Nanotechnology Letters, 2013. **5**(8): p. 916-920.
800. Sun, J., et al., *Size-based hydrodynamic rare tumor cell separation in curved microfluidic channels*. *Biomicrofluidics*, 2013. **7**(1): p. 011802-011802.
801. Sun, H., G.Y.J. Chen, and S.Q. Yao, *Recent Advances in Microarray Technologies for Proteomics*. *Chemistry & biology*, 2013. **20**(5): p. 685-699.
802. Streets, A.M. and Y. Huang, *Chip in a lab: Microfluidics for next generation life science research*. *Biomicrofluidics*, 2013. **7**(1): p. 011302-011302.
803. Song, E. and J.-W. Choi, *Conducting Polyaniline Nanowire and Its Applications in Chemiresistive Sensing*. *Nanomaterials*, 2013. **3**(3): p. 498-523.
804. Sofla, A., et al., *Enrichment of live unlabelled cardiomyocytes from heterogeneous cell populations using manipulation of cell settling velocity by magnetic field*. *Biomicrofluidics*, 2013. **7**(1): p. 014110-014110.
805. Snyder, J.L., et al., *High-performance, low-voltage electroosmotic pumps with molecularly thin silicon nanomembranes*. *Proceedings of the National Academy of Sciences of the United States of America*, 2013. **110**(46): p. 18425-18430.
806. Smith, D.F. and R.D. Cummings, *Application of Microarrays for Deciphering the Structure and Function of the Human Glycome*. *Molecular & Cellular Proteomics*, 2013. **12**(4): p. 902-912.
807. Skommer, J., et al., *Multiparameter Lab-on-a-Chip flow cytometry of the cell cycle*. *Biosensors & bioelectronics*, 2013. **42**: p. 586-591.
808. Shimizu, K., et al., *Poly(N-isopropylacrylamide)-coated microwell arrays for construction and recovery of multicellular spheroids*. *Journal of Bioscience and Bioengineering*, 2013. **115**(6): p. 695-699.
809. Shim, S., et al., *Antibody-independent isolation of circulating tumor cells by continuous-flow dielectrophoresis*. *Biomicrofluidics*, 2013. **7**(1): p. 011807-011807.
810. Shim, S., et al., *Antibody-independent isolation of circulating tumor cells by continuous-flow dielectrophoresis*. *Biomicrofluidics*, 2013. **7**(1): p. 11807.
811. Shim, S., et al., *Dielectrophoresis has broad applicability to marker-free isolation of tumor cells from blood by microfluidic systems*. *Biomicrofluidics*, 2013. **7**(1): p. 011808-011808.
812. Shibata, T., et al., *Fabrication and characterization of bioprobe integrated with a hollow nanoneedle for novel AFM applications in cellular function analysis*. *Microelectronic Engineering*, 2013. **111**: p. 325-331.
813. Shi, X.-W., et al., *Protein addressing on patterned microchip by coupling chitosan electrodeposition and 'electro-click' chemistry*. *Biofabrication*, 2013. **5**(4): p. 041001-041001.
814. Shen, Z., Y. Zou, and X. Chen, *An integrated microfluidic signal generator using multiphase droplet grating*. *Microfluidics and Nanofluidics*, 2013. **14**(5): p. 809-815.
815. Shen, H.-H., et al., *Single-Nucleotide Polymorphism Detection Based on a Temperature-Controllable Electrowetting on Dielectrics Digital Microfluidic System*. *Sensors and Materials*, 2013. **25**(9): p. 643-651.
816. Shen, H.-H., et al., *SNP Detection based on Temperature-Controllable EWOD Digital Microfluidics System*. 2013. 95.
817. Shafiee, H., et al., *Acute On-Chip HIV Detection Through Label-Free Electrical Sensing of*

- Viral Nano-Lysate*. Small, 2013. **9**(15): p. 2553-2563.
818. Selimovic, S., M.R. Dokmeci, and A. Khademhosseini, *Organs-on-a-chip for drug discovery*. Current Opinion in Pharmacology, 2013. **13**(5): p. 829-833.
819. Seddon, A.B., *Mid-infrared (IR) - A hot topic: The potential for using mid-IR light for non-invasive early detection of skin cancer in vivo*. Physica Status Solidi B-Basic Solid State Physics, 2013. **250**(5): p. 1020-1027.
820. Scullion, M.G., T.F. Krauss, and A. Di Falco, *Slotted Photonic Crystal Sensors*. Sensors, 2013. **13**(3): p. 3675-3710.
821. Scherr, T., et al., *A numerical study on distributions during cryoprotectant loading caused by laminar flow in a microchannel*. Biomicrofluidics, 2013. **7**(2): p. 024104-024104.
822. Schaumburg, F., et al., *Design, implementation and characterization of a BioMEMS testing device*. Journal of Physics Conference Series, 2013. **477**: p. 012012-012012.
823. Sarasu, S. and K. Rama, *Design and Development of Organ on Chip using Microfluidic Technology for Simulation*. 2013.
824. Salmon, H., L. Couraud, and G. Hwang, *Using Breakdown Phenomenon As Mobile Magnetic Field Sensor in Microfluidics*. IEEE International Conference on Intelligent Robots and Systems, 2013: p. 2041-2046.
825. Salmanzadeh, A., et al., *Investigating dielectric properties of different stages of syngeneic murine ovarian cancer cells*. Biomicrofluidics, 2013. **7**(1): p. 011809-011809.
826. Sahore, V. and I. Fritsch, *Flat Flow Profiles Achieved with Microfluidics Generated by Redox-Magnetohydrodynamics*. Analytical Chemistry, 2013. **85**(24): p. 11809-11816.
827. SadAbadi, H., et al., *Integration of gold nanoparticles in PDMS microfluidics for lab-on-a-chip plasmonic biosensing of growth hormones*. Biosensors & bioelectronics, 2013. **44**: p. 77-84.
828. Sabotin, I., et al., *Optimization of grooved micromixer for microengineering technologies*. Informacije Midem-Journal of Microelectronics Electronic Components and Materials, 2013. **43**(1): p. 3-13.
829. Roy, P., et al., *Digital Microfluidic System: A new design for heterogeneous sample based integration of multiple DMFBs*. IEEE International Symposium on Circuits and Systems, 2013: p. 1905-1909.
830. Robinson, T. and P.S. Dittrich, *Microfluidic Technology for Molecular Diagnostics*. Advances in Biochemical Engineering-Biotechnology, 2013. **133**: p. 89-114.
831. Rensch, C., et al., *Microfluidics: A Groundbreaking Technology for PET Tracer Production?* Molecules, 2013. **18**(7): p. 7930-7956.
832. Renaudot, R., et al., *Optimized micro devices for liquid-dielectrophoresis (LDEP) actuation of conductive solutions*. Sensors and Actuators B-Chemical, 2013. **177**: p. 620-626.
833. Ren, Y. and W.W.-F. Leung, *Numerical and experimental investigation on flow and mixing in batch-mode centrifugal microfluidics*. International Journal of Heat and Mass Transfer, 2013. **60**: p. 95-104.
834. Ren, Y., L.M.-C. Chow, and W.W.-F. Leung, *Cell culture using centrifugal microfluidic platform with demonstration on Pichia pastoris*. Biomedical Microdevices, 2013. **15**(2): p. 321-337.
835. Rao, M.P. and J. Irudayaraj, *Microelectromechanical Systems for in vivo Therapeutics*.

- Pan Stanford Series on Biomedical Nanotechnology. 2013. 348.
836. Rao, B.S. and U. Hashim, *Microfluidic Photomask Design using CAD Software for Application in Lab-On-Chip Biomedical Nano Diagnostics*. Advanced Materials Research, 2013. **795**: p. 388-392.
837. Ranjith, S.K., B.S.V. Patnaik, and S. Vedantam, *Hydrodynamics of the developing region in hydrophobic microchannels: A dissipative particle dynamics study*. Physical Review E, 2013. **87**(3): p. 033303-033303.
838. Ramos-Cabrer, P. and F. Campos, *Liposomes and nanotechnology in drug development: focus on neurological targets*. International Journal of Nanomedicine, 2013. **8**: p. 951-960.
839. Rajagopalan, J. and M.T.A. Saif, *Fabrication of Freestanding 1-D PDMS Microstructures Using Capillary Micromolding*. Journal of Microelectromechanical Systems, 2013. **22**(5): p. 992-994.
840. Rajabi, N., et al., *Microfluidic Device for the Continuous Preparation of Eukaryotic Cells for Metabolic Analysis*. Proceedings IEEE Micro Electro Mechanical Systems, 2013: p. 259-262.
841. Preira, P., et al., *Single cell rheometry with a microfluidic constriction: Quantitative control of friction and fluid leaks between cell and channel walls*. Biomicrofluidics, 2013. **7**(2): p. 24111.
842. Preira, P., et al., *Single cell rheometry with a microfluidic constriction: Quantitative control of friction and fluid leaks between cell and channel walls*. Biomicrofluidics, 2013. **7**(2): p. 024111-024111.
843. Poorreza, E., et al., *Microseparator based-on 4-phase travelling wave dielectrophoresis for lab-on-a-chip applications*. Indian Journal of Pure & Applied Physics, 2013. **51**(7): p. 506-515.
844. Plessy, C., et al., *Population transcriptomics with single-cell resolution: A new field made possible by microfluidics*. Bioessays, 2013. **35**(2): p. 131-140.
845. Pillay, V., et al., *A Review of the Effect of Processing Variables on the Fabrication of Electrospun Nanofibers for Drug Delivery Applications*. Journal of Nanomaterials, 2013: p. 789289-789289.
846. Petryayeva, E., W.R. Algar, and I.L. Medintz, *Quantum Dots in Bioanalysis: A Review of Applications Across Various Platforms for Fluorescence Spectroscopy and Imaging*. Applied Spectroscopy, 2013. **67**(3): p. 215-252.
847. Petralia, S., et al., *In-Check system: A highly integrated silicon Lab-on-Chip for sample preparation, PCR amplification and microarray detection of nucleic acids directly from biological samples*. Sensors and Actuators B-Chemical, 2013. **187**: p. 99-105.
848. Patel, S., S. Qian, and X. Xuan, *Reservoir-based dielectrophoresis for microfluidic particle separation by charge*. Electrophoresis, 2013. **34**(7): p. 961-968.
849. Park, S., et al., *High-throughput on-chip leukemia diagnosis*. International Journal of Laboratory Hematology, 2013. **35**(5): p. 480-490.
850. Park, J.W., et al., *Advances in microfluidics-based experimental methods for neuroscience research*. Lab on a Chip, 2013. **13**(4): p. 509-521.
851. Park, J., et al., *Shape of a large drop on a rough hydrophobic surface*. Physics of Fluids, 2013. **25**(2): p. 022102-022102.

852. Park, J., et al., *Design for a Lithographically Patterned Bioartificial Endocrine Pancreas*. Artificial Organs, 2013. **37**(12): p. 1059-1067.
853. Park, E.S., et al., *Sequentially pulsed fluid delivery to establish soluble gradients within a scalable microfluidic chamber array*. Biomicrofluidics, 2013. **7**(1): p. 011804-011804.
854. Parisi, J., et al., *In situ synthesis of vertical 3-D copper-core/carbon-sheath nanowalls in microfluidic devices*. Rsc Advances, 2013. **3**(5): p. 1388-1396.
855. Orejon, D., K. Sefiane, and M.E.R. Shanahan, *Evaporation of nanofluid droplets with applied DC potential*. Journal of colloid and interface science, 2013. **407**: p. 29-38.
856. Opekar, F., P. Tuma, and K. Stulik, *Contactless Impedance Sensors and Their Application to Flow Measurements*. Sensors, 2013. **13**(3): p. 2786-2801.
857. Ohlander, A., et al., *Genotyping of single nucleotide polymorphisms by melting curve analysis using thin film semi-transparent heaters integrated in a lab-on-foil system*. Lab on a Chip, 2013. **13**(11): p. 2075-2082.
858. Nwankire, C.E., et al., *At-line bioprocess monitoring by immunoassay with rotationally controlled serial siphoning and integrated supercritical angle fluorescence optics*. Analytica Chimica Acta, 2013. **781**: p. 54-62.
859. Nuxoll, E., *BioMEMS in drug delivery*. Advanced Drug Delivery Reviews, 2013. **65**(11-12): p. 1611-1625.
860. Novak, R., N. Ranu, and R.A. Mathies, *Rapid fabrication of nickel molds for prototyping embossed plastic microfluidic devices*. Lab on a Chip, 2013. **13**(8): p. 1468-1471.
861. Nikolic-Jaric, M., et al., *Differential electronic detector to monitor apoptosis using dielectrophoresis-induced translation of flowing cells (dielectrophoresis cytometry)*. Biomicrofluidics, 2013. **7**(2): p. 024101-024101.
862. Nikolic, M., et al., *Self-mixing laser Doppler flow sensor: an optofluidic implementation*. Applied Optics, 2013. **52**(33): p. 8128-8133.
863. Ngoepe, M., et al., *Integration of Biosensors and Drug Delivery Technologies for Early Detection and Chronic Management of Illness*. Sensors, 2013. **13**(6): p. 7680-7713.
864. Ngoepe, M., et al., *Integration of biosensors and drug delivery technologies for early detection and chronic management of illness*. Sensors (Basel), 2013. **13**(6): p. 7680-713.
865. Nge, P.N., C.I. Rogers, and A.T. Woolley, *Advances in Microfluidic Materials, Functions, Integration, and Applications*. Chemical reviews, 2013. **113**(4): p. 2550-2583.
866. Nezhad, A.S., et al., *Quantification of cellular penetrative forces using lab-on-a-chip technology and finite element modeling*. Proceedings of the National Academy of Sciences of the United States of America, 2013. **110**(20): p. 8093-8098.
867. Nezhad, A.S., et al., *PDMS Microcantilever-Based Flow Sensor Integration for Lab-on-a-Chip*. Ieee Sensors Journal, 2013. **13**(2): p. 601-609.
868. Nevitt, M., *Selecting and designing with the right thermoplastic polymer for your microfluidic chip: a close look into cyclo-olefin polymer*. Proceedings of SPIE, 2013. **8615**: p. 86150F-86150F.
869. Nery, E.W. and L.T. Kubota, *Sensing approaches on paper-based devices: a review*. Analytical and Bioanalytical Chemistry, 2013. **405**(24): p. 7573-7595.
870. Nam-Trung, N., et al., *Design, fabrication and characterization of drug delivery systems based on lab-on-a-chip technology*. Advanced Drug Delivery Reviews, 2013. **65**(11-12): p. 1403-1419.

871. Myers, F.B., et al., *A Handheld Point-of-Care Genomic Diagnostic System*. Plos One, 2013. **8**(8): p. e70266-e70266.
872. Murray, C., et al., *Electro-adaptive microfluidics for active tuning of channel geometry using polymer actuators*. Microfluidics and Nanofluidics, 2013. **14**(1-2): p. 345-358.
873. Munir, A., et al., *In situ analysis of capturing dynamics of magnetic nanoparticles in a microfluidic system*. Smart Structures and Systems, 2013. **12**(1): p. 1-22.
874. Mukundan, V., W.J. Nelson, and B.L. Pruitt, *Microactuator device for integrated measurement of epithelium mechanics*. Biomedical Microdevices, 2013. **15**(1): p. 117-123.
875. Mu, X., et al., *Microfluidics for Manipulating Cells*. Small, 2013. **9**(1): p. 9-21.
876. Moschou, D., et al., *Integrated biochip for PCR-based DNA amplification and detection on capacitive biosensors*. Proceedings of SPIE, 2013. **8765**.
877. Moon, H.S., et al., *Continual collection and re-separation of circulating tumor cells from blood using multi-stage multi-orifice flow fractionation*. Biomicrofluidics, 2013. **7**(1): p. 14105.
878. Moon, H.-S., et al., *Continual collection and re-separation of circulating tumor cells from blood using multi-stage multi-orifice flow fractionation*. Biomicrofluidics, 2013. **7**(1): p. 014105-014105.
879. Mohammed, M.-I. and M.P.Y. Desmulliez, *Planar lens integrated capillary action microfluidic immunoassay device for the optical detection of troponin I*. Biomicrofluidics, 2013. **7**(6): p. 064112-064112.
880. Modak, N., A. Datta, and R. Ganguly, *Influence of the Microchannel Geometry on Magnetophoretic Separation of Functionalized Magnetic Beads in a Microfluidic Sorter and Field Flow Fractionation Device*. Magnetohydrodynamics, 2013. **49**(3-4): p. 391-396.
881. Mink, J.E., R.M. Qaisi, and M.M. Hussain, *Graphene-Based Flexible Micrometer-Sized Microbial Fuel Cell*. Energy Technology, 2013. **1**(11): p. 648-652.
882. Miled, M.A., A. Gagne, and M. Sawan, *Hybrid Modeling Method for a DEP Based Particle Manipulation*. Sensors, 2013. **13**(2): p. 1730-1753.
883. Menegatti, E., et al., *Lab-on-a-chip: Emerging analytical platforms for immune-mediated diseases*. Autoimmunity Reviews, 2013. **12**(8): p. 814-820.
884. Mendoza-Madrigal, A.G., et al., *Mechanical Biosensors in Biological and Food Area: a Review*. Revista Mexicana De Ingenieria Quimica, 2013. **12**(2): p. 205-225.
885. Matteucci, M., et al., *Fabrication and characterization of injection molded multi level nano and microfluidic systems*. Microelectronic Engineering, 2013. **111**: p. 294-298.
886. Mason, C., et al., *Application of Clinical Microsystems to Improve the Outpatient Care of Patients with Sickle Cell Disease (Scd)*. American Journal of Hematology, 2013. **88**(12): p. E48-E48.
887. Martinez-Rivas, A., et al., *Tube interconnection in polydimethylsiloxane based fluidic microchannels*. Microelectronic Engineering, 2013. **110**: p. 461-464.
888. Martinez-Quijada, J., et al., *Fabrication and characterization of aluminum thin film heaters and temperature sensors on a photopolymer for lab-on-chip systems*. Sensors and Actuators A-Physical, 2013. **193**: p. 170-181.
889. Marago, O.M., et al., *Optical trapping and manipulation of nanostructures*. Nature Nanotechnology, 2013. **8**(11): p. 807-819.

890. Manzano-Roman, R., et al., *Protein arrays as tool for studies at the host-pathogen interface*. Journal of Proteomics, 2013. **94**: p. 387-400.
891. Mampallil, D., et al., *Electrowetting-driven oscillating drops sandwiched between two substrates*. Physical Review E, 2013. **88**(5): p. 053015-053015.
892. Malana, M.A. and R. Zohra, *The release behavior and kinetic evaluation of tramadol HCl from chemically cross linked Ter polymeric hydrogels*. Daru-Journal of Pharmaceutical Sciences, 2013. **21**: p. 10-10.
893. Malainou, A., et al., *Plasma-Assisted Nanoscale Protein Patterning on Si Substrates via Colloidal Lithography*. Journal of Physical Chemistry a, 2013. **117**(50): p. 13743-13751.
894. Majlis, B.Y., *MEMS and Lab on Chip: Interfacing Macro to Nano World*. 2013. VII.
895. Maji, D. and S. Das, *Simulation and Feasibility Study of Flow Sensor on Flexible Polymer for Healthcare Application*. Ieee Transactions on Biomedical Engineering, 2013. **60**(12): p. 3298-3305.
896. Ma, H., H. Xu, and J. Qin, *Biomimetic tumor microenvironment on a microfluidic platform*. Biomicrofluidics, 2013. **7**(1): p. 011501-011501.
897. Ly, J., et al., *Automated Reagent-Dispensing System for Microfluidic Cell Biology Assays*. Jala, 2013. **18**(6): p. 530-541.
898. Luo, Y., K. Chakrabarty, and T.-Y. Ho, *Design of Cyberphysical Digital Microfluidic Biochips under Completion-Time Uncertainties in Fluidic Operations*. Design Automation Conference DAC, 2013.
899. Lucarotti, C., et al., *Synthetic and Bio-Artificial Tactile Sensing: A Review*. Sensors, 2013. **13**(2): p. 1435-1466.
900. Lu, X., et al., *Detecting and Tracking Nosocomial Methicillin-Resistant Staphylococcus aureus Using a Microfluidic SERS Biosensor*. Analytical Chemistry, 2013. **85**(4): p. 2320-2327.
901. Liu, Z., et al., *Rapid isolation of cancer cells using microfluidic deterministic lateral displacement structure*. Biomicrofluidics, 2013. **7**(1): p. 011801-011801.
902. Liu, Y., M. Tian, and H. Zhang, *Microfluidics for Synthesis of Peptide-Based PET Tracers*. Biomed Research International, 2013: p. 839683-839683.
903. Liu, S., et al., *A 60 GHz Liquid Sensing Substrate Integrated Cavity in LTCC*. European Microwave Conference, 2013: p. 613-615.
904. Liu, L., et al., *Real-time frequency-domain terahertz sensing and imaging of isopropyl alcohol-water mixtures on a microfluidic chip*. Sensors and Actuators B-Chemical, 2013. **184**: p. 228-234.
905. Liu, B., J. Fu, and M. Muradoglu, *Modeling and fabrication of scale-like cantilever for cell capturing*. Proceedings of SPIE, 2013. **8923**: p. 89232Z-89232Z.
906. Liu, A.-Q. and C. Yang, *Optofluidics 2013*. Lab on a Chip, 2013. **13**(14): p. 2673-2674.
907. Lin, Y.H., et al., *A negative-pressure-driven microfluidic chip for the rapid detection of a bladder cancer biomarker in urine using bead-based enzyme-linked immunosorbent assay*. Biomicrofluidics, 2013. **7**(2): p. 24103.
908. Lin, Y.-H., et al., *A negative-pressure-driven microfluidic chip for the rapid detection of a bladder cancer biomarker in urine using bead-based enzyme-linked immunosorbent assay*. Biomicrofluidics, 2013. **7**(2): p. 024103-024103.
909. Lia, J.J. and J.J. Zhu, *Quantum dots for fluorescent biosensing and bio-imaging*

- applications*. *Analyst*, 2013. **138**(9): p. 2506-2515.
910. Li, Z., *On-chip Optofluidic Grating Spectrograph for Biomedical Applications*. Proceedings of SPIE, 2013. **8845**: p. 88450P-88450P.
911. Li, Y. and P.-y. Zhang, *MEMS-Based Microsystem for Monitoring of Blood Glucose*. International Conference on Electrical, Control and Automation Engineering (Ecae 2013), 2013: p. 220-223.
912. Li, Y., et al., *Geometric optimization of liquid-liquid slug flow in a flow-focusing millifluidic device for synthesis of nanomaterials*. *Chemical Engineering Journal*, 2013. **217**: p. 447-459.
913. Li, S., et al., *High-throughput particle manipulation by hydrodynamic, electrokinetic, and dielectrophoretic effects in an integrated microfluidic chip*. *Biomicrofluidics*, 2013. **7**(2): p. 24106.
914. Li, S., et al., *High-throughput particle manipulation by hydrodynamic, electrokinetic, and dielectrophoretic effects in an integrated microfluidic chip*. *Biomicrofluidics*, 2013. **7**(2): p. 024106-024106.
915. Li, H., et al., *Note: Mobile micro-Raman analyzer integrated with a lab-on-a-chip*. *Review of Scientific Instruments*, 2013. **84**(5): p. 056105-056105.
916. Lewis, A.P., et al., *Review on the development of truly portable and in-situ capillary electrophoresis systems*. *Measurement Science & Technology*, 2013. **24**(4): p. 042001-042001.
917. Lei, K.F., *Recent Developments and Patents on Biological Sensing using Nanoparticles in Microfluidic Systems*. *Recent Patents on Nanotechnology*, 2013. **7**(1): p. 81-90.
918. Lee, S.Y., G.F. Walsh, and L. Dal Negro, *Microfluidics integration of aperiodic plasmonic arrays for spatial-spectral optical detection*. *Optics Express*, 2013. **21**(4): p. 4945-4957.
919. Lee, J.-R., et al., *Emerging protein array technologies for proteomics*. *Expert Review of Proteomics*, 2013. **10**(1): p. 65-75.
920. Lee, C.P., Y.H. Chen, and Z.H. Wei, *Fabrication of hexagonally packed cell culture substrates using droplet formation in a T-shaped microfluidic junction*. *Biomicrofluidics*, 2013. **7**(1): p. 014101-014101.
921. Lee, C.-P., B.-Y. Fang, and Z.-H. Wei, *Influence of electrolytes on contact angles of droplets under electric field*. *Analyst*, 2013. **138**(8): p. 2372-2377.
922. Lee, C.-H. and C.-C. Hsieh, *Stretching DNA by electric field and flow field in microfluidic devices: An experimental validation to the devices designed with computer simulations*. *Biomicrofluidics*, 2013. **7**(1): p. 014109-014109.
923. Lee, C., *Special Issue on International Conference on BioElectronics, BioSensors, BioMedical Devices, BioMEMS/NEMS and Applications 2012 (Bio4Apps 2012) Preface*. *Sensors and Materials*, 2013. **25**(9).
924. Leary, J.F., et al., *Human organ-on-a-chip BioMEMS devices for testing new diagnostic and therapeutic strategies*. Proceedings of SPIE, 2013. **8615**: p. 86150A-86150A.
925. Latorre, A., R. Lorca, and A. Somoza, *Fluorescent DNA Stabilized Silver Nanoclusters as Biosensors*. *Journal of Chemistry*, 2013: p. 631421-631421.
926. Lai, X., et al., *A Survey of Body Sensor Networks*. *Sensors*, 2013. **13**(5): p. 5406-5447.
927. Ladj, R., et al., *Polymer encapsulation of inorganic nanoparticles for biomedical applications*. *International journal of pharmaceutics*, 2013. **458**(1): p. 230-241.

928. Lackowski, M., A. Krupa, and D. Butrymowicz, *Dielectrophoresis flow control in microchannels*. Journal of Electrostatics, 2013. **71**(5): p. 921-925.
929. La, M., et al., *A centrifugal force-based serpentine micromixer (CSM) on a plastic lab-on-a-disk for biochemical assays*. Microfluidics and Nanofluidics, 2013. **15**(1): p. 87-98.
930. Kwong, P., S. Seidel, and M. Gupta, *Solventless Fabrication of Porous-on-Porous Materials*. ACS Applied Materials & Interfaces, 2013. **5**(19): p. 9714-9718.
931. Kurzbuch, D., M. Somers, and C. McDonagh, *High efficiency ring-lens supercritical angle fluorescence (SAF) detection for optimum bioassay performance*. Optics Express, 2013. **21**(19): p. 22070-22075.
932. Kural, M.H. and K.L. Billiar, *Regulating tension in three-dimensional culture environments*. Experimental cell research, 2013. **319**(16): p. 2447-2459.
933. Kunstmann-Olsen, C., J.D. Hoyland, and H.G. Rubahn, *Optimizing microfabricated liquid planar waveguides for microfluidic lab-on-chip flow cytometry systems*. Proceedings of SPIE, 2013. **8775**.
934. Krishna, K.S., et al., *Lab-on-a-chip synthesis of inorganic nanomaterials and quantum dots for biomedical applications*. Advanced Drug Delivery Reviews, 2013. **65**(11-12): p. 1470-1495.
935. Korten, S., et al., *Sample solution constraints on motor-driven diagnostic nanodevices*. Lab on a Chip, 2013. **13**(5): p. 866-876.
936. Koh, W.H., K.S. Lok, and N. Nam-Trung, *A Digital Micro Magnetofluidic Platform for Lab-on-a-Chip Applications*. Journal of Fluids Engineering-Transactions of the ASME, 2013. **135**(2): p. 021302-021302.
937. Kitsara, M. and J. Ducree, *Integration of functional materials and surface modification for polymeric microfluidic systems*. Journal of Micromechanics and Microengineering, 2013. **23**(3): p. 033001-033001.
938. Kim, U., et al., *Development of Low-Cost Plastic Microfluidic Sensors toward Rapid and Point-of-Use Detection of Arsenic in Drinking Water for Global Health*. Biomedical Circuits and Systems Conference, 2013: p. 113-117.
939. Kim, S. and S. Roy, *Microelectromechanical Systems and Nephrology: The Next Frontier in Renal Replacement Technology*. Advances in Chronic Kidney Disease, 2013. **20**(6): p. 516-535.
940. Khodaparast, S., et al., *A micro particle shadow velocimetry (μ PSV) technique to measure flows in microchannels*. Experiments in Fluids, 2013. **54**(2): p. 1474-1474.
941. Khan, Z.S. and S.A. Vanapalli, *Probing the mechanical properties of brain cancer cells using a microfluidic cell squeezer device*. Biomicrofluidics, 2013. **7**(1): p. 011806-011806.
942. Khaldi, A.A., et al., *Numerical investigations of AC electrokinetic forces to enhance the rate of transport of reactants in a microchannel*. Mechanika, 2013(4): p. 437-444.
943. Kemna, E.W.M., et al., *Label-free, high-throughput, electrical detection of cells in droplets*. Analyst, 2013. **138**(16): p. 4585-4592.
944. Kaur, N., et al., *Magnetron sputtered Cu₃N/NiTiCu shape memory thin film heterostructures for MEMS applications*. Journal of Nanoparticle Research, 2013. **15**(3): p. 1468-1468.
945. Karimi, A., S. Yazdi, and A.M. Ardekani, *Hydrodynamic mechanisms of cell and particle trapping in microfluidics*. Biomicrofluidics, 2013. **7**(2).

946. Jung, W., et al., *An innovative sample-to-answer polymer lab-on-a-chip with on-chip reservoirs for the POCT of thyroid stimulating hormone (TSH)*. *Lab on a Chip*, 2013. **13**(23): p. 4653-4662.
947. Juncker, D., A.R. Wheeler, and D. Sinton, *Lab on a chip Canada - rapid diffusion over large length scales*. *Lab on a Chip*, 2013. **13**(13): p. 2438-2440.
948. Julich, S., et al., *Purification of Bacillus thuringiensis DNA with polymer-based, microfluidic lab-on-a-chip systems*. *Proceedings of SPIE*, 2013. **8719**: p. 87190E-87190E.
949. Jubery, T.Z. and P. Dutta, *A new design for efficient dielectrophoretic separation of cells in a microdevice*. *Electrophoresis*, 2013. **34**(5): p. 643-650.
950. Javadi, A., et al., *Effect of wetting on capillary pumping in microchannels*. *Scientific Reports*, 2013. **3**: p. 1412-1412.
951. Irshad, M., et al., *Molecularly Imprinted Nanomaterials for Sensor Applications*. *Nanomaterials*, 2013. **3**(4): p. 615-637.
952. Hung, L.-Y., et al., *An integrated microfluidic platform for rapid tumor cell isolation, counting and molecular diagnosis*. *Biomedical Microdevices*, 2013. **15**(2): p. 339-352.
953. Huang, Y., et al., *Multiarray cell stretching platform for high-magnification real-time imaging*. *Nanomedicine*, 2013. **8**(4): p. 543-553.
954. Huang, Y. and A.J. Mason, *Lab-on-CMOS integration of microfluidics and electrochemical sensors*. *Lab on a Chip*, 2013. **13**(19): p. 3929-3934.
955. Huang, S.-H., et al., *Light-Addressed Electrodeposition of Enzyme-Entrapped Chitosan Membranes for Multiplexed Enzyme-Based Bioassays Using a Digital Micromirror Device*. *Sensors*, 2013. **13**(8): p. 10711-10724.
956. Huang, S., et al., *Low Cost Extraction and Isothermal Amplification of DNA for Infectious Diarrhea Diagnosis*. *Plos One*, 2013. **8**(3): p. e60059-e60059.
957. Huang, K.-W., et al., *Microfluidic integrated optoelectronic tweezers for single-cell preparation and analysis*. *Lab on a Chip*, 2013. **13**(18): p. 3721-3727.
958. Huang, K.-W., et al., *Optoelectronic tweezers integrated with lensfree holographic microscopy for wide-field interactive cell and particle manipulation on a chip*. *Lab on a Chip*, 2013. **13**(12): p. 2278-2284.
959. Hu, Z., et al., *Integrated Microfluidic Spectroscopic Sensor Using Arrayed Waveguide Grating*. *Proceedings of SPIE*, 2013. **8911**: p. 89110A-89110A.
960. Hoheisel, J.D., M.S.S. Alhamdani, and C. Schroeder, *Affinity-based microarrays for proteomic analysis of cancer tissues*. *Proteomics Clinical Applications*, 2013. **7**(1-2): p. 8-16.
961. Ho, D., et al., *CMOS Tunable-Color Image Sensor With Dual-ADC Shot-Noise-Aware Dynamic Range Extension*. *Ieee Transactions on Circuits and Systems I-Regular Papers*, 2013. **60**(8): p. 2116-2129.
962. Hlawatsch, N., et al., *IFSA - A microfluidic chip-platform for frit-based immunoassay protocols*. *Proceedings of SPIE*, 2013. **8615**: p. 86150J-86150J.
963. Hitzbleck, M. and E. Delamarche, *Reagents in microfluidics: an 'in' and 'out' challenge*. *Chemical Society Reviews*, 2013. **42**(21): p. 8494-8516.
964. Hiraoka, M., et al., *Miniaturized Pumps and Valves, Based on Conductive Polymer Actuators, for Lab-On-Chip Application*. *Proceedings IEEE Micro Electro Mechanical Systems*, 2013: p. 1187-1190.

965. Hildenhagen, J., et al., *Simultaneous Micro Structuring and Functionalisation of Surfaces with Picosecond Laser*. Proceedings of SPIE, 2013. **8769**: p. 87691D-87691D.
966. Hickerson, A.I., et al., *Disposable miniature check valve design suitable for scalable manufacturing*. Sensors and Actuators A-Physical, 2013. **203**: p. 76-81.
967. Heo, Y.J., et al., *Stretchable cell culture platforms using micropneumatic actuators*. Micro & Nano Letters, 2013. **8**(12): p. 865-868.
968. Hein, M.A., et al., *Fabrication of BioInspired Inorganic Nanocilia Sensors*. IEEE Transactions on Magnetics, 2013. **49**(1): p. 191-196.
969. Hashmi, A., et al., *Oscillating bubbles in teardrop cavities for microflow control*. Microfluidics and Nanofluidics, 2013. **14**(3-4): p. 591-596.
970. Hao, X., et al., *Discovery during Hydrogen Annealing: Formation of Nanoscale Fluorocarbon Tubular Structures*. Japanese Journal of Applied Physics, 2013. **52**(9).
971. Hagiwara, M., et al., *High-Speed Magnetic Microrobot Actuation in a Microfluidic Chip by a Fine V-Groove Surface*. IEEE Transactions on Robotics, 2013. **29**(2): p. 363-372.
972. Gupta, R., et al., *Hydrodynamics of liquid-liquid Taylor flow in microchannels*. Chemical Engineering Science, 2013. **92**: p. 180-189.
973. Gubala, V., et al., *Simple approach to study biomolecule adsorption in polymeric microfluidic channels*. Analytica Chimica Acta, 2013. **760**: p. 75-82.
974. Gonzalez, I., et al., *Ultrasonic sorting in polymer-based microdevices: application to early detection*. Pan American Health Care Exchanges, 2013.
975. Girao, P.S., et al., *Tactile sensors for robotic applications*. Measurement, 2013. **46**(3): p. 1257-1271.
976. Giouroudi, I. and F. Keplinger, *Microfluidic Biosensing Systems Using Magnetic Nanoparticles*. International Journal of Molecular Sciences, 2013. **14**(9): p. 18535-18556.
977. Gielen, F., et al., *A Fully Unsupervised Compartment-on-Demand Platform for Precise Nanoliter Assays of Time-Dependent Steady-State Enzyme Kinetics and Inhibition*. Analytical Chemistry, 2013. **85**(9): p. 4761-4769.
978. Ge, Y. and X. Yin, *Simulation of gold nanoparticles aggravating MEMS cantilever optical static detection Biochip*. Advanced Materials Research, 2013. **694-697**: p. 966-970.
979. Garcia-Gancedo, L., et al., *Sensors based on SAW and FBAR technologies*. Proceedings of SPIE, 2013. **8793**: p. 879308-879308.
980. Gao, J., et al., *Lab-on-a-chip for high frequency acoustic characterization*. Sensors and Actuators B-Chemical, 2013. **177**: p. 753-760.
981. Gao, D., et al., *Recent advances in microfluidics combined with mass spectrometry: technologies and applications*. Lab on a Chip, 2013. **13**(17): p. 3309-3322.
982. Fuad, N.M. and D. Wlodkovic, *Microfluidic EmbryoSort Technology - Towards in flow analysis, sorting and dispensing of individual vertebrate embryos*. Proceedings of SPIE, 2013. **8923**: p. 892347-892347.
983. Fu, C., et al., *Latent factor analysis facilitates modelling of oncogenic genes for colon adenocarcinoma*. Iet Systems Biology, 2013. **7**(5): p. 165-169.
984. Frese, I. and R. Gransee, *Effect of surface structuring onto the efficiency of the in- and out-coupling of light from a chip in Lab-on-a-chip approaches with optical detection*. Proceedings of SPIE, 2013. **8719**: p. 87190D-87190D.
985. Frankowski, M., et al., *Microflow Cytometers with Integrated Hydrodynamic Focusing*.

- Sensors, 2013. **13**(4): p. 4674-4693.
986. Franke, T., et al., *Numerical simulation of surface acoustic wave actuated cell sorting*. Central European Journal of Mathematics, 2013. **11**(4): p. 760-778.
987. Flores, G., F. Perdignes, and J.M. Quero, *Pressurized Microvalve with SMD-Based Activation to Drive Fluid in Low-Cost and Autonomous MEMS*. Spanish Conference on Electron Devices, 2013: p. 147-150.
988. Feng, H., et al., *Fundamental Study of the Micro-cantilever for More Sensitive Surface Stress-based Biosensor*. Key Engineering Materials, 2013. **562-565**: p. 334-338.
989. Fatoyinbo, H.O., *Microfluidic devices for cell manipulation*. Woodhead Publishing Series in Biomaterials, 2013(61): p. 283-350.
990. Esmailsabzali, H., et al., *Detection and isolation of circulating tumor cells: Principles and methods*. Biotechnology Advances, 2013. **31**(7): p. 1063-1084.
991. Eslamian, M. and M.Z. Saghir, *Novel thermophoretic particle separators: Numerical analysis and simulation*. Applied Thermal Engineering, 2013. **59**(1-2): p. 527-534.
992. Esfandyarpour, R., et al., *Simulation and fabrication of a new novel 3D injectable biosensor for high throughput genomics and proteomics in a lab-on-a-chip device*. Nanotechnology, 2013. **24**(46): p. 465301-465301.
993. Duval, D. and L.M. Lechuga, *Breakthroughs in Photonics 2012: 2012 Breakthroughs in Lab-on-a-Chip and Optical Biosensors*. Ieee Photonics Journal, 2013. **5**(2): p. 0700906-0700906.
994. Drobot, B.A., et al., *Tapered air-core Bragg waveguide spectrometers for lab-on-a-chip applications*. Proceedings of SPIE, 2013. **8726**.
995. Dott, C., et al., *A Mucoadhesive Electrospun Nanofibrous Matrix for Rapid Oramucosal Drug Delivery*. Journal of Nanomaterials, 2013: p. 924947-924947.
996. Ding, X.Y., et al., *Surface acoustic wave microfluidics*. Lab on a Chip, 2013. **13**(18): p. 3626-3649.
997. Ding, X., et al., *Surface acoustic wave microfluidics*. Lab on a Chip, 2013. **13**(18): p. 3626-3649.
998. Devathanan, D., K. Trebych, and V. Karanassios, *3d-printed, sugar cube-size microplasma on a hybrid chip used as a spectral-lamp to characterize UV-Vis transmission characteristics of polycarbonate chips for microfluidic applications*. Proceedings of SPIE, 2013. **8718**: p. 87180B-87180B.
999. Deng, Y.-L. and Y.-J. Juang, *Electrokinetic trapping and surface enhanced Raman scattering detection of biomolecules using optofluidic device integrated with a microneedles array*. Biomicrofluidics, 2013. **7**(1): p. 014111-014111.
1000. den Toonder, J.M.J. and P.R. Onck, *Microfluidic manipulation with artificial/bioinspired cilia*. Trends in biotechnology, 2013. **31**(2): p. 85-91.
1001. Demircan, Y., E. Ozgur, and H. Kulah, *Dielectrophoresis: Applications and future outlook in point of care*. Electrophoresis, 2013. **34**(7): p. 1008-1027.
1002. Demir, Y.K., Z. Akan, and O. Kerimoglu, *Characterization of Polymeric Microneedle Arrays for Transdermal Drug Delivery*. Plos One, 2013. **8**(10): p. e77289-e77289.
1003. De Leo, E., et al., *Communications and Switching in Microfluidic Systems: Pure Hydrodynamic Control for Networking Labs-on-a-Chip*. IEEE Transactions on Communications, 2013. **61**(11): p. 4663-4677.

1004. de Kort, B.J., G.J. de Jong, and G.W. Somsen, *Native fluorescence detection of biomolecular and pharmaceutical compounds in capillary electrophoresis: Detector designs, performance and applications: A review*. *Analytica Chimica Acta*, 2013. **766**: p. 13-33.
1005. Dawson, G., S. Lee, and A. Juel, *The trapping and release of bubbles from a linear pore*. *Journal of Fluid Mechanics*, 2013. **722**: p. 437-460.
1006. Das, T., et al., *Empirical chemosensitivity testing in a spheroid model of ovarian cancer using a microfluidics-based multiplex platform*. *Biomicrofluidics*, 2013. **7**(1): p. 011805-011805.
1007. Das, T. and S. Chakraborty, *Perspective: Flicking with flow: Can microfluidics revolutionize the cancer research?* *Biomicrofluidics*, 2013. **7**(1): p. 011811-011811.
1008. Damhorst, G.L., et al., *A liposome-based ion release impedance sensor for biological detection*. *Biomedical Microdevices*, 2013. **15**(5): p. 895-905.
1009. D'Avino, G., *Non-Newtonian deterministic lateral displacement separator: theory and simulations*. *Rheologica Acta*, 2013. **52**(3): p. 221-236.
1010. Cung, K., et al., *Biotemplated synthesis of PZT nanowires*. *Nano Lett*, 2013. **13**(12): p. 6197-202.
1011. Cung, K., et al., *Biotemplated Synthesis of PZT Nanowires*. *Nano Letters*, 2013. **13**(12): p. 6197-6202.
1012. Cuennet, J.G., A.E. Vasdekis, and D. Psaltis, *Optofluidic-tunable color filters and spectroscopy based on liquid-crystal microflows*. *Lab on a Chip*, 2013. **13**(14): p. 2721-2726.
1013. Cramer, A., J. Pal, and G. Gerbeth, *Model experiments for the Czochralski crystal growth technique*. *European Physical Journal-Special Topics*, 2013. **220**(1): p. 259-273.
1014. Cook, B.S., J.R. Cooper, and M.M. Tentzeris, *An Inkjet-Printed Microfluidic RFID-Enabled Platform for Wireless Lab-on-Chip Applications*. *IEEE Transactions on Microwave Theory and Techniques*, 2013. **61**(12): p. 4714-4723.
1015. Colovic, B., et al., *Pore Geometry of Ceramic Device: the Key Factor of Drug Release Kinetics*. *Science of Sintering*, 2013. **45**(1): p. 107-116.
1016. Collier, C.M., J. Nichols, and J.F. Holzman, *Digital microfluidics technologies for biomedical devices*. *Woodhead Publishing Series in Biomaterials*, 2013(61): p. 139-164.
1017. Clark, A., et al., *Optimized Release Matrices for use in BioMEMs Device to Study Metastasis*. *Proceedings of SPIE*, 2013. **8615**: p. 86150C-86150C.
1018. Cima, I., et al., *Label-free isolation of circulating tumor cells in microfluidic devices: Current research and perspectives*. *Biomicrofluidics*, 2013. **7**(1): p. 011810-011810.
1019. Cima, I., et al., *Label-free isolation of circulating tumor cells in microfluidic devices: Current research and perspectives*. *Biomicrofluidics*, 2013. **7**(1): p. 11810.
1020. Ciftlik, A.T., M. Etori, and M.A.M. Gijs, *High Throughput-Per-Footprint Inertial Focusing*. *Small*, 2013. **9**(16): p. 2764-2773.
1021. Chung, W.Y., et al., *Magnetic biosensing system based on TSMC 0.35 um BioMEMS process for sensing magnetic nanobeads*. *Micro & Nano Letters*, 2013. **8**(6): p. 288-290.
1022. Chua, C.K. and M. Pumera, *Chemically Modified Graphenes as Detectors in Lab-on-Chip Device*. *Electroanalysis*, 2013. **25**(4): p. 945-950.
1023. Chua, C.K. and M. Pumera, *Detection of silver nanoparticles on a lab-on-chip platform*.

- Electrophoresis, 2013. **34**(14): p. 2007-2010.
1024. Chretiennot, T., D. Dubuc, and K. Grenier, *A Microwave and Microfluidic Planar Resonator for Efficient and Accurate Complex Permittivity Characterization of Aqueous Solutions*. IEEE Transactions on Microwave Theory and Techniques, 2013. **61**(2): p. 972-978.
1025. Chen, Y., et al., *Conformal coating of parylene for surface anti-adhesion in polydimethylsiloxane (PDMS) double casting technique*. Sensors and Actuators A-Physical, 2013. **189**: p. 143-150.
1026. Chen, X., et al., *Wirelessly Addressable Heater Array for Centrifugal Microfluidics and Escherichia Coli Sterilization*. IEEE Engineering in Medicine and Biology Society Conference Proceedings, 2013: p. 5505-5508.
1027. Chen, Q., Q. Chen, and G. Maccioni, *Fabrication of microfluidics structures on different glasses by simplified imprinting technique*. Current Applied Physics, 2013. **13**(1): p. 256-261.
1028. Chen, J.D., et al., *Progress of Microfluidics for Biology and Medicine*. Nano-Micro Letters, 2013. **5**(1): p. 66-80.
1029. Chen, J., et al., *Progress of Microfluidics for Biology and Medicine*. Nano-Micro Letters, 2013. **5**(1): p. 66-80.
1030. Chen, C.-M., et al., *Gene expression rate comparison for multiple high-throughput datasets*. Iet Systems Biology, 2013. **7**(5): p. 135-142.
1031. Chen, A., et al., *Reconfigurable microfluidics combined with antibody microarrays for enhanced detection of T-cell secreted cytokines*. Biomicrofluidics, 2013. **7**(2): p. 024105-024105.
1032. Charmet, J., et al., *Optimizing Parylene C Adhesion for MEMS Processes: Potassium Hydroxide Wet Etching*. Journal of Microelectromechanical Systems, 2013. **22**(4): p. 855-864.
1033. Chang, H.-C. and L. Yeo, *Editorial: Moving on in biomicrofluidics*. Biomicrofluidics, 2013. **7**(1): p. 010401-010401.
1034. Chakraborty, S., *Preface to Special Topic: Microfluidics in Cancer Research*. Biomicrofluidics, 2013. **7**(1): p. 011701-011701.
1035. Catarino, S.O., et al., *An Overview of Modeling and Simulation for Lab-on-a-Chip Applications*. 2013 IEEE 3rd Portuguese Meeting in Bioengineering (Enbeng), 2013.
1036. Capretto, L., et al., *Production of polymeric micelles by microfluidic technology for combined drug delivery: Application to osteogenic differentiation of human periodontal ligament mesenchymal stem cells (hPDLSCs)*. International journal of pharmaceutics, 2013. **440**(2): p. 195-206.
1037. Cao, Z. and L. Yobas, *Microchannel plate as a novel bipolar electrode for high-performance enrichment of anions*. Electrophoresis, 2013. **34**(14): p. 1991-1997.
1038. Camps, T., et al., *Development of polysilicon devices for microfluidic thermal instrumentation*. Sensors and Actuators A-Physical, 2013. **189**: p. 67-73.
1039. Calvo-Lopez, A., et al., *Biparametric potentiometric analytical microsystem for nitrate and potassium monitoring in water recycling processes for manned space missions*. Analytica Chimica Acta, 2013. **804**: p. 190-196.
1040. Briani, M., et al., *Design and Optimization of Reaction Chamber and Detection System in*

- Dynamic Labs-on-Chip for Proteins Detection*. Ieee Transactions on Biomedical Engineering, 2013. **60**(8): p. 2161-2166.
1041. Brettschneider, T., et al., *Wafer-level packaging and laser bonding as an approach for silicon-into-lab-on-chip integration*. Journal of Micromechanics and Microengineering, 2013. **23**(5): p. 055005-055005.
1042. Blaire, G., et al., *Hybrid Bio-Mag-MEMS combining magnetophoresis and dielectrophoresis*. European Physical Journal B, 2013. **86**(4): p. 165-165.
1043. Birkholz, M., et al., *Sensing glucose concentrations at GHz frequencies with a fully embedded Biomicro-electromechanical system (BioMEMS)*. Journal of Applied Physics, 2013. **113**(24): p. 244904-244904.
1044. Bhushan, B. and J. Utter, *Nanoscale adhesion, friction and wear of proteins on polystyrene*. Colloids and Surfaces B-Biointerfaces, 2013. **102**: p. 484-491.
1045. Bhalla, N., et al., *Microfluidic Platform for Enzyme-Linked and Magnetic Particle-Based Immunoassay*. Micromachines, 2013. **4**(2): p. 257-271.
1046. Bercich, R.A., D.R. Duffy, and P.P. Irazoqui, *Far-Field RF Powering of Implantable Devices: Safety Considerations*. Ieee Transactions on Biomedical Engineering, 2013. **60**(8): p. 2107-2112.
1047. Barkam, S., S. Saraf, and S. Seal, *Fabricated Micro-Nano Devices for In vivo and In vitro Biomedical Applications*. Wiley Interdisciplinary Reviews-Nanomedicine and Nanobiotechnology, 2013. **5**(6): p. 544-568.
1048. Babaei, A., A.R. Taheri, and M. Aminikhah, *Nanomolar simultaneous determination of levodopa and serotonin at a novel carbon ionic liquid electrode modified with Co(OH)(2) nanoparticles and multi-walled carbon nanotubes*. Electrochimica Acta, 2013. **90**: p. 317-325.
1049. Arvand, M. and N. Ghodsi, *A voltammetric sensor based on graphene-modified electrode for the determination of trace amounts of L-dopa in mouse brain extract and pharmaceuticals*. Journal of Solid State Electrochemistry, 2013. **17**(3): p. 775-784.
1050. Arce, C.L., et al., *Silicon nanophotonic ring resonator sensors integrated in reaction tubes*. Proceedings of SPIE, 2013. **8598**: p. 85980I-85980I.
1051. Aracil, C., et al., *Microfluidic Impulsion System Manufactured by PCB-MEMS for Lab on a Chip*. Spanish Conference on Electron Devices, 2013: p. 131-134.
1052. Ambekar, D., et al., *Development of a Point-of-Care Medical Device to Measure Head Impact in Contact Sports*, in *2013 35th Annual International Conference of the Ieee Engineering in Medicine and Biology Society*. 2013, Ieee: New York. p. 4167-4170.
1053. Amasia, M., et al., *Experimental validation of numerical study on thermoelectric-based heating in an integrated centrifugal microfluidic platform for polymerase chain reaction amplification*. Biomicrofluidics, 2013. **7**(1): p. 014106-014106.
1054. Alvankarian, J., A. Bahadorimehr, and B.Y. Majlis, *A pillar-based microfilter for isolation of white blood cells on elastomeric substrate*. Biomicrofluidics, 2013. **7**(1): p. 014102-014102.
1055. Alshareef, M., et al., *Separation of tumor cells with dielectrophoresis-based microfluidic chip*. Biomicrofluidics, 2013. **7**(1): p. 011803-011803.
1056. Alshareef, M., et al., *Separation of tumor cells with dielectrophoresis-based microfluidic chip*. Biomicrofluidics, 2013. **7**(1): p. 11803.

1057. Allerdissen, M., R. Greiner, and A. Richter, *Microfluidic microchemomechanical systems*. Advances in Science and Technology, 2013. **81**: p. 84-89.
1058. Ali, M.A., et al., *Highly Efficient Bionzyme Functionalized Nanocomposite-Based Microfluidics Biosensor Platform for Biomedical Application*. Scientific Reports, 2013. **3**.
1059. Alcalá-Alcalá, S., et al., *A biodegradable polymeric system for peptide-protein delivery assembled with porous microspheres and nanoparticles, using an adsorption/infiltration process*. International Journal of Nanomedicine, 2013. **8**: p. 2141-2151.
1060. Albanese, A., et al., *Tumour-on-a-chip provides an optical window into nanoparticle tissue transport*. Nature Communications, 2013. **4**.
1061. Al-Gayem, Q., et al., *Scanning the Strength of a Test Signal to Monitor Electrode Degradation within Bio-Fluidic Microsystems*. IEEE International On-Line Testing Symposium, 2013: p. 133-138.
1062. Akagi, J., et al., *Dynamic analysis of angiogenesis in transgenic zebrafish embryos using a 3D multilayer chip-based technology*. Proceedings of SPIE, 2013. **8615**: p. 86151B-86151B.
1063. Akagi, J., et al., *Microflow cytometry in studies of programmed tumor cell death*. Sensors and Actuators B-Chemical, 2013. **189**: p. 2-10.
1064. Akagi, J., et al., *Multivariate analysis of apoptotic markers versus cell cycle phase in living human cancer cells by microfluidic cytometry*. Proceedings of SPIE, 2013. **8615**: p. 86150W-86150W.
1065. Akagi, J., et al., *Fish on chips: Microfluidic living embryo array for accelerated in vivo angiogenesis assays*. Sensors and Actuators B-Chemical, 2013. **189**: p. 11-20.
1066. Akagi, J., et al., *Immobilization of zebrafish larvae on a chip-based device for environmental scanning electron microscopy (ESEM) imaging*. Proceedings of SPIE, 2013. **8923**: p. 892346-892346.
1067. Ahluwalia, B.S. and O.G. Hellesø, *Optical waveguide loop for planar trapping of blood cells and microspheres*. Proceedings of SPIE, 2013. **8810**: p. 88100T-88100T.
1068. Adams, N.M., et al., *Design criteria for developing low-resource magnetic bead assays using surface tension valves*. Biomicrofluidics, 2013. **7**(1): p. 014104-014104.
1069. Abonnenc, M., et al., *Programmable Interactions of Functionalized Single Bioparticles in a Dielectrophoresis-Based Microarray Chip*. Analytical Chemistry, 2013. **85**(17): p. 8219-8224.
1070. Abidin, H.E.Z., et al., *Electrical characteristics of double stacked Ppy-PVA supercapacitor for powering biomedical MEMS devices*. Microelectronic Engineering, 2013. **111**: p. 374-378.
1071. Abdallah, B.G. and A. Ros, *Surface coatings for microfluidic-based biomedical devices*. Woodhead Publishing Series in Biomaterials, 2013(61): p. 63-99.
1072. Zorman, C.A. and A.C. Barnes, *Silicon Carbide BioMEMS*. Silicon Carbide Biotechnology: a Biocompatible Semiconductor for Advanced Biomedical Devices and Applications, 1st Edition, 2012: p. 351-376.
1073. Zhu, T., et al., *In-Line Fiber Optic Interferometric Sensors in Single-Mode Fibers*. Sensors, 2012. **12**(8): p. 10430-10449.
1074. Zhang, F., M. Aghagolzadeh, and K. Oweiss, *A Fully Implantable, Programmable and Multimodal Neuroprocessor for Wireless, Cortically Controlled Brain-Machine Interface*

- Applications*. Journal of Signal Processing Systems for Signal Image and Video Technology, 2012. **69**(3): p. 351-361.
1075. Yun, C.-H., et al., *Multi-degree-of-freedom ultrasonic micromotor for guidewire and catheter navigation: The NeuroGlide actuator*. Applied Physics Letters, 2012. **100**(16): p. 164101-164101.
1076. Yoon, J.-Y. and B. Kim, *Lab-on-a-Chip Pathogen Sensors for Food Safety*. Sensors, 2012. **12**(8): p. 10713-10741.
1077. Yin, H. and D. Marshall, *Microfluidics for single cell analysis*. Current opinion in biotechnology, 2012. **23**(1): p. 110-119.
1078. Yildirim, E., M.A.S. Arikan, and H. Kulah, *A normally closed electrostatic parylene microvalve for micro total analysis systems*. Sensors and Actuators A-Physical, 2012. **181**: p. 81-86.
1079. Yapar, E.A., et al., *Injectable In Situ Forming Microparticles: A Novel Drug Delivery System*. Tropical Journal of Pharmaceutical Research, 2012. **11**(2): p. 307-318.
1080. Yan, X.-X., et al., *Hollow metallic microneedles fabricated by combining bulk silicon micromachining and UV-LIGA technology*. Microsystem Technologies-Micro-and Nanosystems-Information Storage and Processing Systems, 2012. **18**(1): p. 37-42.
1081. Yamaguchi, S., et al., *Cell patterning through inkjet printing of one cell per droplet*. Biofabrication, 2012. **4**(4): p. 045005-045005.
1082. Xavier, J., et al., *Three dimensional optical twisters-driven helically stacked multi-layered microrotors*. Applied Physics Letters, 2012. **100**(12): p. 121101-121101.
1083. Wu, Y., J.D. Benson, and M. Almasri, *Micromachined Coulter counter for dynamic impedance study of time sensitive cells*. Biomedical Microdevices, 2012. **14**(4): p. 739-750.
1084. Wu, J., G. Zheng, and L.M. Lee, *Optical imaging techniques in microfluidics and their applications*. Lab on a Chip, 2012. **12**(19): p. 3566-3575.
1085. Wu, C.-C., et al., *Increased density and coverage uniformity of viruses on a sensor surface by using U-type, T-type, and W-type microfluidic devices*. Biomicrofluidics, 2012. **6**(2): p. 024124-024124.
1086. Worner, M., *Numerical modeling of multiphase flows in microfluidics and micro process engineering: a review of methods and applications*. Microfluidics and Nanofluidics, 2012. **12**(6): p. 841-886.
1087. Williams, J.K., et al., *Probing the tumor microenvironment: collection and induction*. Proceedings of SPIE, 2012. **8251**: p. 825105-825105.
1088. Wee, W.-H., M.A.A. Razak, and N.A. Kadri, *Electrochemical Cell Entrapment Device for BioMEMS Applications Using Benchtop Fabrication Techniques*. International Journal of Electrochemical Science, 2012. **7**(11): p. 11588-11595.
1089. Wallin, P., et al., *A method to integrate patterned electrospun fibers with microfluidic systems to generate complex microenvironments for cell culture applications*. Biomicrofluidics, 2012. **6**(2): p. 024131-024131.
1090. Wallace, G.G., et al., *Nanobionics: the impact of nanotechnology on implantable medical bionic devices*. Nanoscale, 2012. **4**(15): p. 4327-4347.
1091. Walczak, R., *Nonconventional fluorimetric and spectrophotometric detection in microfluidic chips*. Procedia Engineering, 2012. **47**: p. 1498-1501.

1092. Vitol, E.A., V. Novosad, and E.A. Rozhkova, *Microfabricated magnetic structures for future medicine: from sensors to cell actuators*. *Nanomedicine*, 2012. **7**(10): p. 1611-1624.
1093. Verch, T. and R. Bakhtiar, *Miniaturized immunoassays: moving beyond the microplate*. *Bioanalysis*, 2012. **4**(2): p. 177-188.
1094. Vardharajula, S., et al., *Functionalized carbon nanotubes: biomedical applications*. *International Journal of Nanomedicine*, 2012. **7**: p. 5361-5374.
1095. Tng, D.J.H., et al., *Approaches and Challenges of Engineering Implantable Microelectromechanical Systems (MEMS) Drug Delivery Systems for in Vitro and in Vivo Applications*. *Micromachines*, 2012. **3**(4): p. 615-631.
1096. Thilsted, A.H., et al., *Flow manipulation and cell immobilization for biochemical applications using thermally responsive fluids*. *Biomicrofluidics*, 2012. **6**(4): p. 041101-041101.
1097. Tendulkar, S., et al., *A three-dimensional microfluidic approach to scaling up microencapsulation of cells*. *Biomedical Microdevices*, 2012. **14**(3): p. 461-469.
1098. Techawanitchai, P., et al., *A smart hydrogel-based time bomb triggers drug release mediated by pH-jump reaction*. *Science and Technology of Advanced Materials*, 2012. **13**(6): p. 064202-064202.
1099. Svobodova, Z., et al., *Development of a magnetic immunosorbent for on-chip preconcentration of amyloid beta isoforms: Representatives of Alzheimer's disease biomarkers*. *Biomicrofluidics*, 2012. **6**(2): p. 024126-024126.
1100. Sutanto, J., et al., *Novel First-Level Interconnect Techniques for Flip Chip on MEMS Devices*. *Journal of Microelectromechanical Systems*, 2012. **21**(1): p. 132-144.
1101. Sun, H., et al., *A Qcm-Based Lab-On-A-Chip Device for Real Time Characterization of Shear-Induced Platelets Adhesion and Aggregation*. 2012. 22.
1102. Subramani, K., S. Pathak, and H. Hosseinkhani, *Recent Trends in Diabetes Treatment using Nanotechnology*. *Digest Journal of Nanomaterials and Biostructures*, 2012. **7**(1): p. 85-95.
1103. Stout, D.A. and T.J. Webster, *Carbon nanotubes for stem cell control*. *Materials Today*, 2012. **15**(7-8): p. 312-318.
1104. Steffens, C., et al., *Atomic Force Microscopy as a Tool Applied to Nano/Biosensors*. *Sensors*, 2012. **12**(6): p. 8278-8300.
1105. Ssekitoleko, R.T., et al., *Design and Fabrication of PMN-PT Based High Frequency Ultrasound Imaging Devices Integrated into Medical Interventional Tools*. 2011 IEEE International Ultrasonics Symposium (Ius), 2012: p. 2345-2348.
1106. Silvestri, S. and E. Schena, *Micromachined Flow Sensors in Biomedical Applications*. *Micromachines*, 2012. **3**(2): p. 225-243.
1107. Sigurdson, M. and C.D. Meinhart, *Analysis Tools for Thermally Driven Microfluidics*. 2012. 861.
1108. Sherwood, J.M., et al., *The effect of red blood cell aggregation on velocity and cell-depleted layer characteristics of blood in a bifurcating microchannel*. *Biomicrofluidics*, 2012. **6**(2): p. 024119-024119.
1109. Sharma, S. and M. Madou, *Micro and nano patterning of carbon electrodes for bioMEMS*. *Bioinspired Biomimetic and Nanobiomaterials*, 2012. **1**(4): p. 252-265.

1110. Sen, M., et al., *Accumulation and detection of secreted proteins from single cells for reporter gene assays using a local redox cycling-based electrochemical (LRC-EC) chip device*. Lab on a Chip, 2012. **12**(21): p. 4328-4335.
1111. Sekhar, P.K. and V. Uwizeye, *Review of sensor and actuator mechanisms for bioMEMS*. Woodhead Publishing Series in Biomaterials, 2012(43): p. 46-77.
1112. Schumacher, S., et al., *Highly-integrated lab-on-chip system for point-of-care multiparameter analysis*. Lab on a Chip, 2012. **12**(3): p. 464-473.
1113. Sato, K., S. Takahashi, and J.-i. Anzai, *Layer-by-layer Thin Films and Microcapsules for Biosensors and Controlled Release*. Analytical Sciences, 2012. **28**(10): p. 929-938.
1114. Sahayadhas, A., K. Sundaraj, and M. Murugappan, *Detecting Driver Drowsiness Based on Sensors: A Review*. Sensors, 2012. **12**(12): p. 16937-16953.
1115. Sah, M.L. and V. Juyal, *Programmed delivery of verapamil hydrochloride from tablet in a capsule device*. Brazilian Journal of Pharmaceutical Sciences, 2012. **48**(2): p. 237-242.
1116. Rondeau, E. and J.J. Cooper-White, *Formation of multilayered biopolymer microcapsules and microparticles in a multiphase microfluidic flow*. Biomicrofluidics, 2012. **6**(2): p. 024125-024125.
1117. Rolfe, P., *Micro- and Nanosensors for Medical and Biological Measurement*. Sensors and Materials, 2012. **24**(6): p. 275-302.
1118. Rios-Mondragon, I., X. Wang, and H.H. Gerdes, *Spatio-temporal analysis of tamoxifen-induced bystander effects in breast cancer cells using microfluidics*. Biomicrofluidics, 2012. **6**(2): p. 24128-241289.
1119. Rios-Mondragon, I., X. Wang, and H.-H. Gerdes, *Spatio-temporal analysis of tamoxifen-induced bystander effects in breast cancer cells using microfluidics*. Biomicrofluidics, 2012. **6**(2): p. 024128-024128.
1120. Riggio, C., et al., *Poly-L-lysine-coated magnetic nanoparticles as intracellular actuators for neural guidance*. International Journal of Nanomedicine, 2012. **7**: p. 3155-3166.
1121. Rezai, P., W.I. Wu, and P.R. Selvaganapathy, *Microfabrication of polymers for bioMEMS*. Woodhead Publishing Series in Biomaterials, 2012(43): p. 3-45.
1122. Reynolds, K.A., et al., *Occurrence of household mold and efficacy of sodium hypochlorite disinfectant*. J Occup Environ Hyg, 2012. **9**(11): p. 663-9.
1123. Ren, H., H.-S. Lee, and J. Chae, *Miniaturizing microbial fuel cells for potential portable power sources: promises and challenges*. Microfluidics and Nanofluidics, 2012. **13**(3): p. 353-381.
1124. Ren, D.-H., et al., *Micropatterning and Its Applications in Biomedical Research*. Progress in Biochemistry and Biophysics, 2012. **39**(10): p. 931-944.
1125. Rajendran, V., *Self powered biomems sensor for hydrocephalus shunts*. International Journal of Developmental Neuroscience, 2012. **30**(8): p. 678-679.
1126. Rai, M., et al., *Biomedical Applications of Nanobiosensors: the State-of-the-Art*. Journal of the Brazilian Chemical Society, 2012. **23**(1): p. 14-24.
1127. Qazi, H.H., A.B. bin Mohammad, and M. Akram, *Recent Progress in Optical Chemical Sensors*. Sensors, 2012. **12**(12): p. 16522-16556.
1128. Ponmozhi, J., et al., *Smart sensors/actuators for biomedical applications: Review*. Measurement, 2012. **45**(7): p. 1675-1688.
1129. Piraino, F., et al., *Polyester mu-assay chip for stem cell studies*. Biomicrofluidics, 2012.

- 6(4): p. 044109-044109.
1130. Pinto, A.M.R. and M. Lopez-Amo, *Photonic Crystal Fibers for Sensing Applications*. Journal of Sensors, 2012: p. 598178-598178.
1131. Piccin, O., et al., *DESIGN, DEVELOPMENT AND PRELIMINARY ASSESSMENT OF GRASPING DEVICES FOR ROBOTIZED MEDICAL APPLICATIONS*. Proceedings of the Asme International Design Engineering Technical Conferences and Computers and Information in Engineering Conference 2012, Vol 4, Pts a and B. 2012, New York: Amer Soc Mechanical Engineers. 65-73.
1132. Perry, G., et al., *Inhibiting protein biofouling using graphene oxide in droplet-based microfluidic microsystems*. Lab on a Chip, 2012. **12**(9): p. 1601-1604.
1133. Peng, H., et al., *Thiol Reactive Probes and Chemosensors*. Sensors, 2012. **12**(11): p. 15907-15946.
1134. Patrascu, M., et al., *Flexible, electrostatic microfluidic actuators based on thin film fabrication*. Sensors and Actuators A-Physical, 2012. **186**: p. 249-256.
1135. Passaro, V.M.N., et al., *Recent Advances in Integrated Photonic Sensors*. Sensors, 2012. **12**(11): p. 15558-15598.
1136. Pararas, E.E.L., D.A. Borkholder, and J.T. Borenstein, *Microsystems technologies for drug delivery to the inner ear*. Advanced Drug Delivery Reviews, 2012. **64**(14): p. 1650-1660.
1137. Panta, Y.M., S. Aryal, and P.C. Adhikari, *Analysis of Electrokinetic Fluid Flow in T-Shaped Dna Chips*. 2012. 948.
1138. Pan, Y., et al., *Magnetic nanoparticles for the manipulation of proteins and cells*. Chemical Society Reviews, 2012. **41**(7): p. 2912-2942.
1139. Ozhikandathil, J. and M. Packirisamy, *Nano-islands integrated evanescence-based lab-on-a-chip on silica-on-silicon and polydimethylsiloxane hybrid platform for detection of recombinant growth hormone*. Biomicrofluidics, 2012. **6**(4): p. 046501-046501.
1140. Oni, Y. and W.O. Soboyejo, *Swelling and diffusion of PNIPA-based gels for localized chemotherapy and hyperthermia*. Materials Science & Engineering C-Materials for Biological Applications, 2012. **32**(1): p. 24-30.
1141. Ochoa, M., C. Mousoulis, and B. Ziaie, *Polymeric microdevices for transdermal and subcutaneous drug delivery*. Advanced Drug Delivery Reviews, 2012. **64**(14): p. 1603-1616.
1142. Nikolic-Jaric, M., et al., *Electronic detection of dielectrophoretic forces exerted on particles flowing over interdigitated electrodes*. Biomicrofluidics, 2012. **6**(2): p. 024117-024117.
1143. Nicolini, C., N. Bragazzi, and E. Pechkova, *Nanoproteomics enabling personalized nanomedicine*. Advanced Drug Delivery Reviews, 2012. **64**(13): p. 1522-1531.
1144. Nam, J., et al., *Density-dependent separation of encapsulated cells in a microfluidic channel by using a standing surface acoustic wave*. Biomicrofluidics, 2012. **6**(2): p. 024120-024120.
1145. Meng, E. and H. Tuan, *MEMS-enabled implantable drug infusion pumps for laboratory animal research, preclinical, and clinical applications*. Advanced Drug Delivery Reviews, 2012. **64**(14): p. 1628-1638.
1146. Mekar, H., C. Okuyama, and A. Ueno, *Control of inclination angle of glass-like carbon mold by defocus UV exposure on Si-containing photoresist*. Journal of Vacuum Science &

- Technology B, 2012. **30**(6): p. 06FB12-06FB12.
1147. Medina-Sanchez, M., S. Miserere, and A. Merkoci, *Nanomaterials and lab-on-a-chip technologies*. Lab on a Chip, 2012. **12**(11): p. 1932-1943.
1148. Mazloum-Ardakani, M., et al., *Application of nanosized MCM-41 to fabrication of a nanostructured electrochemical sensor for the simultaneous determination of levodopa and carbidopa*. Analyst, 2012. **137**(8): p. 1950-1955.
1149. Martin, J.L., et al., *A user-centred approach to requirements elicitation in medical device development: A case study from an industry perspective*. Applied Ergonomics, 2012. **43**(1): p. 184-190.
1150. Martin, J.L. and J. Barnett, *Integrating the results of user research into medical device development: insights from a case study*. BMC Medical Informatics and Decision Making, 2012. **12**: p. 10.
1151. Mark, D., et al., *Automated and miniaturized detection of biological threats with a centrifugal microfluidic system*. Proceedings of SPIE, 2012. **8367**: p. 83670E-83670E.
1152. Marin, A.G., I.G. Loscertales, and A. Barrero, *Surface tension effects on submerged electrosprays*. Biomicrofluidics, 2012. **6**(4): p. 044104-044104.
1153. Marie, R. and A. Kristensen, *Nanofluidic devices towards single DNA molecule sequence mapping*. Journal of Biophotonics, 2012. **5**(8-9): p. 673-686.
1154. Mansoor, I., U.O. Haefeli, and B. Stoeber, *Hollow Out-of-Plane Polymer Microneedles Made by Solvent Casting for Transdermal Drug Delivery*. Journal of Microelectromechanical Systems, 2012. **21**(1): p. 44-52.
1155. Maji, D., S.K. Lahiri, and S. Das, *Study of hydrophilicity and stability of chemically modified PDMS surface using piranha and KOH solution*. Surface and Interface Analysis, 2012. **44**(1): p. 62-69.
1156. Maffli, L., et al., *Pump it up*. Proceedings of SPIE, 2012. **8340**: p. 83402Q-83402Q.
1157. Lynch, C.M., et al., *Demonstration of Continuous Electrowetting Actuation*. 2012. 841.
1158. Lutz, B.J., O. Polyakov, and C. Rinaldo, *Hybrid membrane-microfluidic components using a novel ceramic MEMS technology*. Proceedings of SPIE, 2012. **8251**: p. 82510P-82510P.
1159. Louizos, L.-A., P.G. Athanasopoulos, and K. Varty, *Microelectromechanical Systems and Nanotechnology: A Platform for the Next Stent Technological Era*. Vascular and Endovascular Surgery, 2012. **46**(8): p. 605-609.
1160. Liu, Y. and L. Yobas, *Cylindrical glass nanocapillaries patterned via coarse lithography (> 1 μ m) for biomicrofluidic applications*. Biomicrofluidics, 2012. **6**(4): p. 046502-046502.
1161. Liu, X., et al., *Elastic and Viscoelastic Characterization of Mouse Oocytes Using Micropipette Indentation*. Annals of Biomedical Engineering, 2012. **40**(10): p. 2122-2130.
1162. Liang, L. and X. Xuan, *Continuous sheath-free magnetic separation of particles in a U-shaped microchannel*. Biomicrofluidics, 2012. **6**(4): p. 044106-044106.
1163. Liana, D.D., et al., *Recent Advances in Paper-Based Sensors*. Sensors, 2012. **12**(9): p. 11505-11526.
1164. Lian, M., et al., *Monodisperse alginate microgel formation in a three-dimensional microfluidic droplet generator*. Biomicrofluidics, 2012. **6**(4): p. 044108-044108.
1165. Li, X., et al., *Fiber-Optical Sensors: Basics and Applications in Multiphase Reactors*. Sensors, 2012. **12**(9): p. 12519-12544.
1166. Li, T., et al., *Compact, power-efficient architectures using microvalves and microsensors*,

- for intrathecal, insulin, and other drug delivery systems.* Advanced Drug Delivery Reviews, 2012. **64**(14): p. 1639-1649.
1167. Li, M., et al., *Reductive surface synthesis of gold nanoparticles on silicate glass and their biochemical sensor applications.* Biomicrofluidics, 2012. **6**(4): p. 044111-044111.
1168. Li, D., *Electrokinetic Microfluidics and Biomedical Lab-On-A-Chip Devices.* 2012. 738.
1169. Lei, K.F., *Microfluidic Systems for Diagnostic Applications: A Review.* Jala, 2012. **17**(5): p. 330-347.
1170. Lee, Y., et al., *Preparation of photolithographically patterned inverse opal hydrogel microstructures and its application to protein patterning.* Biosensors & bioelectronics, 2012. **35**(1): p. 243-250.
1171. Lee, S.H., et al., *Microchip for Sustained Drug Delivery by Diffusion Through Microchannels.* Aaps Pharmscitech, 2012. **13**(1): p. 211-217.
1172. Lee, K.S., B. Kim, and M.A. Shannon, *An electrostatically driven valve-less peristaltic micropump with a stepwise chamber.* Sensors and Actuators A-Physical, 2012. **187**: p. 183-189.
1173. Kwiatkowski, P., et al., *DNA microarray-based gene expression profiling in diagnosis, assessing prognosis and predicting response to therapy in colorectal cancer.* Postepy higieny i medycyny doswiadczalnej, 2012. **66**: p. 330-338.
1174. Kutter, J.P., *Liquid phase chromatography on microchips.* Journal of Chromatography a, 2012. **1221**: p. 72-82.
1175. Kulinsky, L. and M.J. Madou, *BioMEMs for drug delivery applications.* Woodhead Publishing Series in Biomaterials, 2012(43): p. 218-268.
1176. Krivitsky, V., et al., *Si Nanowires Forest-Based On-Chip Biomolecular Filtering, Separation and Preconcentration Devices: Nanowires Do it All.* Nano Letters, 2012. **12**(9): p. 4748-4756.
1177. Kozako, T., et al., *Liposomes and nanotechnology in drug development: focus on oncotargets.* International Journal of Nanomedicine, 2012. **7**: p. 4943-4951.
1178. Kiourti, A. and K.S. Nikita, *A Review of Implantable Patch Antennas for Biomedical Telemetry: Challenges and Solutions.* Ieee Antennas and Propagation Magazine, 2012. **54**(3): p. 210-228.
1179. Khodakov, D., et al., *DNA capture-probe based separation of double-stranded polymerase chain reaction amplification products in poly(dimethylsiloxane) microfluidic channels.* Biomicrofluidics, 2012. **6**(2): p. 026503-026503.
1180. Khanna, P., *Cellular microinjection for therapeutic and research applications.* Woodhead Publishing Series in Biomaterials, 2012(43): p. 432-448.
1181. Kennedy, M.J., et al., *Analysis of a laminar-flow diffusional mixer for directed self-assembly of liposomes.* Biomicrofluidics, 2012. **6**(4): p. 044119-044119.
1182. Kawashima, T., et al., *Fabrication of hollow SiO₂ nanoneedle array and characterization of simultaneous multi-site ion-conductance recordings for cell morphology imaging.* Microelectronic Engineering, 2012. **98**: p. 663-667.
1183. Jian, A.Q., et al., *Microfluidic flow direction control using continuous-wave laser.* Sensors and Actuators A-Physical, 2012. **188**: p. 329-334.
1184. Jensen, K.E., et al., *Experimental characterisation of a novel viscoelastic rectifier design.* Biomicrofluidics, 2012. **6**(4): p. 044112-044112.

1185. Jastrzebska, E., et al., *Multi-function microsystem for cells migration analysis and evaluation of photodynamic therapy procedure in coculture*. *Biomicrofluidics*, 2012. **6**(4): p. 044116-044116.
1186. Jang, K., et al., *Selective cell capture and analysis using shallow antibody-coated microchannels*. *Biomicrofluidics*, 2012. **6**(4): p. 044117-044117.
1187. Jamaati, J., H. Niazmand, and M. Renksizbulut, *Flow Patterns and Electrokinetic Mixing Performance in Heterogeneous Microchannels*. 2012. 199.
1188. Hunter, G., et al., *Nanostructured material sensor processing using microfabrication techniques*. *Sensor Review*, 2012. **32**(2): p. 106-117.
1189. Hughes, A.J., et al., *Microfluidic integration for automated targeted proteomic assays*. *Proceedings of the National Academy of Sciences of the United States of America*, 2012. **109**(16): p. 5972-5977.
1190. Huang, S.-H., et al., *Light-addressable measurements of cellular oxygen consumption rates in microwell arrays based on phase-based phosphorescence lifetime detection*. *Biomicrofluidics*, 2012. **6**(4): p. 044118-044118.
1191. Hu, Y., et al., *Shape controllable microgel particles prepared by microfluidic combining external ionic crosslinking*. *Biomicrofluidics*, 2012. **6**(2): p. 026502-026502.
1192. Hsieh, C.-C., T.-H. Lin, and C.-D. Huang, *Simulation guided design of a microfluidic device for electrophoretic stretching of DNA*. *Biomicrofluidics*, 2012. **6**(4): p. 044105-044105.
1193. Hou, H.W., et al., *A microfluidics approach towards high-throughput pathogen removal from blood using margination*. *Biomicrofluidics*, 2012. **6**(2): p. 024115-024115.
1194. Hong, Y., et al., *Nanobiosensors Based on Localized Surface Plasmon Resonance for Biomarker Detection*. *Journal of Nanomaterials*, 2012: p. 759830-759830.
1195. Hong, S., et al., *Microfluidic three-dimensional hydrodynamic flow focusing for the rapid protein concentration analysis*. *Biomicrofluidics*, 2012. **6**(2): p. 024132-024132.
1196. Holst, G.L. and B.D. Jensen, *A Silicon Thermomechanical In-Plane Microactuation System for Large Displacements in Aqueous Environments*. 2012. 502.
1197. Heidari, A., et al., *Simulation Based Design of Disk Resonator Biosensors Under Fabrication Uncertainty*. *Journal of Mechanical Design*, 2012. **134**(4): p. 041005-041005.
1198. Hashmi, A., et al., *Oscillating bubbles: a versatile tool for lab on a chip applications*. *Lab on a Chip*, 2012. **12**(21): p. 4216-4227.
1199. Hashim, U., P.N.A. Diyana, and T. Adam, *Numerical Simulation of Microfluidic Devices*. 2012 10th IEEE International Conference on Semiconductor Electronics (Icse), 2012: p. 26-29.
1200. Hannan, M.A., et al., *Modulation Techniques for Biomedical Implanted Devices and Their Challenges*. *Sensors*, 2012. **12**(1): p. 297-319.
1201. Haidary, S.M., E.P. Corcoles, and N.K. Ali, *Nanoporous Silicon as Drug Delivery Systems for Cancer Therapies*. *Journal of Nanomaterials*, 2012: p. 830503-830503.
1202. Groen, M.S., et al., *Design Considerations for a Micromachined Proportional Control Valve*. *Micromachines*, 2012. **3**(2): p. 396-412.
1203. Grabiec, P., *Micro- and nano-systems for chemical/bio-medical analysis and diagnostics*. *Procedia Engineering*, 2012. **47**: p. 1502-1505.
1204. Gong, M.M., et al., *Hand-powered microfluidics: A membrane pump with a patient-to-chip syringe interface*. *Biomicrofluidics*, 2012. **6**(4): p. 044102-044102.

1205. Giridharan, V., et al., *Microfluidic Platforms for Evaluation of Nanobiomaterials: A Review*. Journal of Nanomaterials, 2012: p. 789841-789841.
1206. Ghannad-Rezaie, M., et al., *A Near-Infrared Optomechanical Intracranial Pressure Microsensor*. Journal of Microelectromechanical Systems, 2012. **21**(1): p. 23-33.
1207. Furukawa, S. and T. Kawano, *Enhanced Microsphere Transport in Capillary by Conditioned Cells of Green Paramecia Used as Living Micromachines Controlled by Electric Stimuli*. Sensors and Materials, 2012. **24**(7): p. 375-386.
1208. Fujie, T., et al., *Inkjet printing of protein microarrays on freestanding polymeric nanofilms for spatio-selective cell culture environment*. Biomedical Microdevices, 2012. **14**(6): p. 1069-1076.
1209. Fu, Y.Q., et al., *Smart microgrippers for bioMEMS applications*. Woodhead Publishing Series in Biomaterials, 2012(43): p. 291-336.
1210. Foudeh, A.M., et al., *Microfluidic designs and techniques using lab-on-a-chip devices for pathogen detection for point-of-care diagnostics*. Lab Chip, 2012. **12**(18): p. 3249-66.
1211. Foudeh, A.M., et al., *Microfluidic designs and techniques using lab-on-a-chip devices for pathogen detection for point-of-care diagnostics*. Lab on a Chip, 2012. **12**(18): p. 3249-3266.
1212. Estevez, M.C., M. Alvarez, and L.M. Lechuga, *Integrated optical devices for lab-on-a-chip biosensing applications*. Laser & Photonics Reviews, 2012. **6**(4): p. 463-487.
1213. Esashi, M., *Revolution of Sensors in Micro-Electromechanical Systems*. Japanese Journal of Applied Physics, 2012. **51**(8): p. 080001-080001.
1214. Emani, S., et al., *Novel microfluidic platform for automated lab-on-chip testing of hypercoagulability panel*. Blood Coagulation & Fibrinolysis, 2012. **23**(8): p. 760-768.
1215. Dugat-Bony, E., et al., *Detecting unknown sequences with DNA microarrays: explorative probe design strategies*. Environmental microbiology, 2012. **14**(2): p. 356-371.
1216. Desbois, L., et al., *A microfluidic device for on-chip agarose microbead generation with ultralow reagent consumption*. Biomicrofluidics, 2012. **6**(4): p. 044101-044101.
1217. de la Piedra, A., A. Braeken, and A. Touhafi, *Sensor Systems Based on FPGAs and Their Applications: A Survey*. Sensors, 2012. **12**(9): p. 12235-12264.
1218. Daus, A.W., P.G. Layer, and C. Thielemann, *A spheroid-based biosensor for the label-free detection of drug-induced field potential alterations*. Sensors and Actuators B-Chemical, 2012. **165**(1): p. 53-58.
1219. Culeac, I., et al., *Fiber Optic Interferometric Method for Registration of IR Radiation Fiber Optic Interferometric Method*. NATO Science for Peace and Security Series A-Chemistry and Biology, 2012: p. 379-388.
1220. Cialla, D., et al., *Surface-enhanced Raman spectroscopy (SERS): progress and trends*. Analytical and Bioanalytical Chemistry, 2012. **403**(1): p. 27-54.
1221. Chirra, H.D. and T.A. Desai, *Emerging microtechnologies for the development of oral drug delivery devices*. Advanced Drug Delivery Reviews, 2012. **64**(14): p. 1569-1578.
1222. Chin, C.D., V. Linder, and S.K. Sia, *Commercialization of microfluidic point-of-care diagnostic devices*. Lab on a Chip, 2012. **12**(12): p. 2118-2134.
1223. Cheng, Y., et al., *Electroaddressing Functionalized Polysaccharides as Model Biofilms for Interrogating Cell Signaling*. Advanced Functional Materials, 2012. **22**(3): p. 519-528.
1224. Cheng, P., et al., *Dielectrophoretic tweezers as a platform for biomolecular analysis in a*

- highly parallel format*. Abstracts of Papers of the American Chemical Society, 2012. **244**.
1225. Chen, J., J. Li, and Y. Sun, *Microfluidic approaches for cancer cell detection, characterization, and separation*. Lab on a Chip, 2012. **12**(10): p. 1753-1767.
1226. Chang, Y.-W., et al., *Uniform yeast cell assembly via microfluidics*. Biomicrofluidics, 2012. **6**(2): p. 024118-024118.
1227. Chandran, R.B., et al., *Influence of buoyancy-driven flow on mass transfer in a two-stream microfluidic channel: Introduction of cryoprotective agents into cell suspensions*. Biomicrofluidics, 2012. **6**(4): p. 044110-044110.
1228. Cavalli, R., et al., *New chitosan nanobubbles for ultrasound-mediated gene delivery: preparation and in vitro characterization*. International Journal of Nanomedicine, 2012. **7**: p. 3309-3318.
1229. Carrara, S., et al., *Fully Integrated Biochip Platforms for Advanced Healthcare*. Sensors, 2012. **12**(8): p. 11013-11060.
1230. Bompert, M., K. Haupt, and C. Ayela, *Micro and Nanofabrication of Molecularly Imprinted Polymers*. Topics in Current Chemistry, 2012. **325**: p. 83-110.
1231. Bockelmann, H., V. Heuveline, and D.P.J. Barz, *Optimization of an electrokinetic mixer for microfluidic applications*. Biomicrofluidics, 2012. **6**(2): p. 24123-24123.
1232. Blanco-Calvo, M., et al., *Circulating MicroRNAs: Molecular Microsensors in Gastrointestinal Cancer*. Sensors, 2012. **12**(7): p. 9349-9362.
1233. Binh-Khiem, N., et al., *THREE DIMENSIONAL MICROFLUIDIC DESIGN WITH SPINCOATED MICROMETER-THIN ELASTOMER MULTILAYER*, in *2012 IEEE 25th International Conference on Micro Electro Mechanical Systems*. 2012.
1234. Bilro, L., et al., *Optical Sensors Based on Plastic Fibers*. Sensors, 2012. **12**(9): p. 12184-12207.
1235. Bellah, M.M., S. Christensen, and S.M. Iqbal, *Nanostructures for Medical Diagnostics*. Journal of Nanomaterials, 2012: p. 486301-486301.
1236. Bechtold, F., *Innovation steps towards a novel and cost efficient LTCC packaging technology for high end applications*. Informacije Midem-Journal of Microelectronics Electronic Components and Materials, 2012. **42**(4): p. 211-224.
1237. Bal, B.S. and M.N. Rahaman, *Orthopedic applications of silicon nitride ceramics*. Acta Biomaterialia, 2012. **8**(8): p. 2889-2898.
1238. Bachman, M. and G.P. Li, *Laminates for MEMS and BioMEMS*. International Conference on Electronic Materials and Packaging, 2012.
1239. Aziz, M.S., et al., *Gold nanoparticle trapping and delivery for therapeutic applications*. International Journal of Nanomedicine, 2012. **7**: p. 11-17.
1240. Aravamudhan, S., *MEMS for in vivo sensing*. Woodhead Publishing Series in Biomaterials, 2012(43): p. 81-96.
1241. Anand, S., et al., *Electrothermal Microactuators With Peg Drive Improve Performance for Brain Implant Applications*. Journal of Microelectromechanical Systems, 2012. **21**(5): p. 1172-1186.
1242. Allain, V., C. Bourgaux, and P. Couvreur, *Self-assembled nucleolipids: from supramolecular structure to soft nucleic acid and drug delivery devices*. Nucleic acids research, 2012. **40**(5): p. 1891-1903.
1243. Adiguzel, Y. and H. Kulah, *CMOS Cell Sensors for Point-of-Care Diagnostics*. Sensors,

2012. **12**(8): p. 10042-10066.
1244. Abhari, F., H. Jaafar, and N.A.M. Yunus, *A Comprehensive Study of Micropumps Technologies*. International Journal of Electrochemical Science, 2012. **7**(10): p. 9765-9780.
1245. Zhou, M. and S. Dong, *Bioelectrochemical Interface Engineering: Toward the Fabrication of Electrochemical Biosensors, Biofuel Cells, and Self-Powered Logic Biosensors*. Accounts of Chemical Research, 2011. **44**(11): p. 1232-1243.
1246. Zhao, J., et al., *Electrophoretic separation of neurotransmitters on a polystyrene nano-sphere/polystyrene sulphonate coated poly(dimethylsiloxane) microchannel*. Biomicrofluidics, 2011. **5**(3): p. 034104-034104.
1247. Zhao, C. and X. Cheng, *Microfluidic separation of viruses from blood cells based on intrinsic transport processes*. Biomicrofluidics, 2011. **5**(3): p. 032004-032004.
1248. Zhang, X., et al., *Nanofiber-modified surface directed cell migration and orientation in microsystem*. Biomicrofluidics, 2011. **5**(3): p. 032007-032007.
1249. Zhang, R., C. Dalton, and G.A. Jullien, *Two-phase AC electrothermal fluidic pumping in a coplanar asymmetric electrode array*. Microfluidics and Nanofluidics, 2011. **10**(3): p. 521-529.
1250. Zhang, D., L. Men, and Q. Chen, *Microfabrication and Applications of Opto-Microfluidic Sensors*. Sensors, 2011. **11**(5): p. 5360-5382.
1251. Zeng, H. and Y. Zhao, *Sensing Movement: Microsensors for Body Motion Measurement*. Sensors, 2011. **11**(1): p. 638-660.
1252. Yilmaz, G., A.T. Ciftlik, and H. Kulah, *A MEMS-based spiral channel dielectrophoretic chromatography system for cytometry applications*. Biotechnology Journal, 2011. **6**(2): p. 185-194.
1253. Yeo, L.Y., et al., *Microfluidic Devices for Bioapplications*. Small, 2011. **7**(1): p. 12-48.
1254. Ye, X., et al., *In Situ Comparative Studies of Self-Assembly Adsorption of Bovine Serum Albumin on Nano Films by Atomic Force Microscopy*. Journal of Nanoscience and Nanotechnology, 2011. **11**(12): p. 10765-10769.
1255. Yan, X., et al., *Electrochemical determination of L-dopa at cobalt hexacyanoferrate/large-mesopore carbon composite modified electrode*. Journal of Electroanalytical Chemistry, 2011. **663**(1): p. 36-42.
1256. Yan, J., et al., *Electrochemical biosensors for on-chip detection of oxidative stress from immune cells*. Biomicrofluidics, 2011. **5**(3): p. 032008-032008.
1257. Xin, Y., T. Hu, and P.K. Chu, *In vitro studies of biomedical magnesium alloys in a simulated physiological environment: A review*. Acta Biomaterialia, 2011. **7**(4): p. 1452-1459.
1258. Witte, H., et al., *Integration of 3-D cell cultures in fluidic microsystems for biological screenings*. Engineering in Life Sciences, 2011. **11**(2): p. 140-147.
1259. Wilson, J.A., *Using General-Purpose Graphic Processing Units for BCI Systems*. IEEE Engineering in Medicine and Biology Society Conference Proceedings, 2011: p. 4625-4628.
1260. Warkiani, M.E., C.-P. Lou, and H.-Q. Gong, *Fabrication of multi-layer polymeric micro-sieve having narrow slot pores with conventional ultraviolet-lithography and micro-fabrication techniques*. Biomicrofluidics, 2011. **5**(3): p. 036504-036504.

1261. Wang, L. and P.C.H. Li, *Microfluidic DNA microarray analysis: A review*. Analytica Chimica Acta, 2011. **687**(1): p. 12-27.
1262. Wang, J.T., J. Wang, and J.J. Han, *Fabrication of Advanced Particles and Particle-Based Materials Assisted by Droplet-Based Microfluidics*. Small, 2011. **7**(13): p. 1728-1754.
1263. Vasan, A.S.S., R. Doraiswami, and M. Pecht, *Embedded 3D BioMEMS for Multiplexed Label Free Detection*. Electronic Components and Technology Conference, 2011: p. 1412-1419.
1264. van der Wouden, E.J., et al., *Detection of pathogens with impedance analysis in a lab on a chip*. Procedia Engineering, 2011. **25**.
1265. Ulman, A., et al., *Highly Active Engineered-Enzyme Oriented Monolayers: Formation, Characterization and Sensing Applications*. Journal of Nanobiotechnology, 2011. **9**: p. 26-26.
1266. Trietsch, S.J., T. Hankemeier, and H.J. van der Linden, *Lab-on-a-chip technologies for massive parallel data generation in the life sciences: A review*. Chemometrics and Intelligent Laboratory Systems, 2011. **108**(1): p. 64-75.
1267. Thio, T., et al., *Hybrid Capillary-Flap Valve for Vapor Control in Point-of-Care Microfluidic CD*. IFMBE Proceedings, 2011. **35**: p. 578-581.
1268. ThaiHuu, N., et al., *Label-free microfluidic characterization of temperature-dependent biomolecular interactions*. Biomicrofluidics, 2011. **5**(3): p. 034118-034118.
1269. Tan, K.K., et al., *Development of a Portable Tissue Micro Array Instrument*. Journal of Medical Devices-Transactions of the Asme, 2011. **5**(4): p. 044503-044503.
1270. Smith, R.A., et al., *A system to measure minute hydraulic permeability of nanometer scale devices in a non-destructive manner*. Measurement Science & Technology, 2011. **22**(4): p. 045802-045802.
1271. Sin, M.L.Y., et al., *System Integration - A Major Step toward Lab on a Chip*. Journal of Biological Engineering, 2011. **5**(1): p. 6-6.
1272. Shilton, R.J., et al., *Rotational microfluidic motor for on-chip microcentrifugation*. Applied Physics Letters, 2011. **98**(25): p. 254103-254103.
1273. Shilton, R.J., et al., *On-chip surface acoustic wave driven microfluidic motors*. Proceedings of SPIE, 2011. **8204**: p. 82041J-82041J.
1274. Shaw, K.J., et al., *Microsystems for personalized biomolecular diagnostics*. Engineering in Life Sciences, 2011. **11**(2): p. 121-132.
1275. Seker, E., et al., *Solving Medical Problems with BioMEMS*. Ieee Pulse, 2011. **2**(6): p. 51-59.
1276. Sankaranarayanan, S.K.R.S., R. Singh, and V.R. Bhethanabotla, *Influence of Non-Newtonian Fluid Dynamics on SAW Induced Acoustic Streaming in View of Biological Applications*. 2011. 1549.
1277. Roncaglia, A. and M. Ferri, *Thermoelectric Materials in MEMS and NEMS: A Review*. Science of Advanced Materials, 2011. **3**(3): p. 401-419.
1278. Ritzi-Lehnert, M., et al., *New Lab-On-A-Chip System for Infectious Disease Analysis*. 2011. 920.
1279. Revzin, A., *Preface to Special Topic: Microsystems for manipulation and analysis of living cells*. Biomicrofluidics, 2011. **5**(3): p. 031901-031901.
1280. Reddy, B.V., Y.S.K. Swamy, and N. Usha, *Generate Vision in Blind People Using Suitable*

- Neuroprosthesis Implant of BIOMEMS in Brain*. Communications in Computer and Information Science, 2011. **193**: p. 309-317.
1281. Raja, W.K., et al., *Development Path and Current Status of the NANIVID: A New Device for Cancer Cell Studies*. Proceedings of SPIE, 2011. **7929**: p. 79290A-79290A.
1282. Plouffe, B.D., L.H. Lewis, and S.K. Murthy, *Computational design optimization for microfluidic magnetophoresis (vol 5, 013413, 2011)*. Biomicrofluidics, 2011. **5**(4): p. 049901-049901.
1283. Piacentini, N., et al., *Separation of platelets from other blood cells in continuous-flow by dielectrophoresis field-flow-fractionation*. Biomicrofluidics, 2011. **5**(3): p. 034122-034122.
1284. Pevec, S., et al., *Micromachining of Optical Fibers Using Selective Etching Based on Phosphorus Pentoxide Doping*. IEEE Photonics Journal, 2011. **3**(4): p. 627-632.
1285. Patrascu, M., et al., *Design, fabrication and characterization of electrostatic micro actuators for microfluidic platforms*. Procedia Engineering, 2011. **25**.
1286. Paquette, A., *Design of a Pragmatic Test Lab for Evaluating and Testing Wireless Medical Devices*. 2011.
1287. Ozhikandathil, J., M. Packirisamy, and I. Stiharu, *Modeling and Analysis of Low Voltage Electro-Osmotic Micropump*. 2011. 329.
1288. Oni, Y., et al., *Effects of temperature on diffusion from PNIPA-based gels in a BioMEMS device for localized chemotherapy and hyperthermia*. Materials Science & Engineering C-Materials for Biological Applications, 2011. **31**(2): p. 67-76.
1289. Namdeo, S., et al., *Swimming direction reversal of flagella through ciliary motion of mastigonemes*. Biomicrofluidics, 2011. **5**(3): p. 034108-034108.
1290. Nam, S.H., et al., *Non-positional cell microarray prepared by shape-coded polymeric microboards: A new microarray format for multiplex and high throughput cell-based assays*. Biomicrofluidics, 2011. **5**(3): p. 032001-032001.
1291. Murari, K., et al., *Compensation-free, all-fiber-optic, two-photon endomicroscopy at 1.55 μ m*. Optics Letters, 2011. **36**(7): p. 1299-1301.
1292. Morshed, B.I., M. Shams, and T. Mussivand, *A simple and effective fluidic encapsulation protocol for bioMEMS devices*. IEEE Electronics Express, 2011. **8**(19): p. 1549-1555.
1293. Moraes, C., Y. Sun, and C.A. Simmons, *Microfabricated Devices for Studying Cellular Biomechanics and Mechanobiology*. Studies in Mechanobiology Tissue Engineering and Biomaterials, 2011. **4**: p. 145-175.
1294. Mir, M., et al., *Electrokinetic techniques applied to electrochemical DNA biosensors*. Electrophoresis, 2011. **32**(8): p. 811-821.
1295. Meng, L., et al., *Acoustic aligning and trapping of microbubbles in an enclosed PDMS microfluidic device*. Sensors and Actuators B-Chemical, 2011. **160**(1): p. 1599-1605.
1296. Meier, R.C., et al., *Complex three-dimensional high aspect ratio microfluidic network manufactured in combined PerMX dry-resist and SU-8 technology*. Biomicrofluidics, 2011. **5**(3): p. 034111-034111.
1297. Mei, Z., et al., *Applying an optical space-time coding method to enhance light scattering signals in microfluidic devices*. Biomicrofluidics, 2011. **5**(3): p. 034116-034116.
1298. Manteca, A., M. Mujika, and S. Arana, *GMR sensors: Magnetoresistive behaviour optimization for biological detection by means of superparamagnetic nanoparticles*.

- Biosensors & bioelectronics, 2011. **26**(8): p. 3705-3709.
1299. Malainou, A., et al., *Nanoscale protein patterning on Si substrates using colloidal lithography and plasma processing*. Procedia Engineering, 2011. **25**.
1300. Mackay, R.E., N. Lionis, and H.R. Le, *3D surface topography and reflectivity of anisotropic etched silicon micromirrors for BioMEMS*. Microsystem Technologies-Micro-and Nanosystems-Information Storage and Processing Systems, 2011. **17**(12): p. 1763-1770.
1301. Luo, X.L., et al., *Biofabrication of chitosan-silver composite SERS substrates enabling quantification of adenine by a spectroscopic shift*. Biofabrication, 2011. **3**(3): p. 034108-034108.
1302. Lueke, J. and W.A. Moussa, *MEMS-Based Power Generation Techniques for Implantable Biosensing Applications*. Sensors, 2011. **11**(2): p. 1433-1460.
1303. Lopez-Marin, L.M., et al., *MEMS and nanotechnology: challenges and opportunities. The case of the fight against tuberculosis*. Proceedings of SPIE, 2011. **8031**: p. 803111-803111.
1304. Liu, Y., et al., *Chitosan to electroaddress biological components in lab-on-a-chip devices*. Carbohydrate Polymers, 2011. **84**(2): p. 704-708.
1305. Lippmann, J.M. and A.P. Pisano, *Simple, High-Precision, Microliter Per Minute, Fluid-Flow Sensor*. PROCEEDINGS: IEEE MICRO ELECTRO MECHANICAL SYSTEMS, 2011: p. 1197-1200.
1306. Lin, L., et al., *Fabrication of a gel particle array in a microfluidic device for bioassays of protein and glucose in human urine samples*. Biomicrofluidics, 2011. **5**(3): p. 034112-034112.
1307. Lin, C.-C., J.-L. Hsu, and G.-B. Lee, *Sample preconcentration in microfluidic devices*. Microfluidics and Nanofluidics, 2011. **10**(3): p. 481-511.
1308. Liang, L., J. Zhu, and X. Xuan, *Three-dimensional diamagnetic particle deflection in ferrofluid microchannel flows*. Biomicrofluidics, 2011. **5**(3): p. 034110-034110.
1309. Li, Z. and M. Kawashita, *Current progress in inorganic artificial biomaterials*. Journal of Artificial Organs, 2011. **14**(3): p. 163-170.
1310. Li, W., et al., *On-chip integrated lensless fluorescence microscopy/spectroscopy module for cell-based sensors*. Proceedings of SPIE, 2011. **7894**: p. 78940Q-78940Q.
1311. Li, L., et al., *Partial transfection of cells using laminar flows in microchannels*. Biomicrofluidics, 2011. **5**(3): p. 036503-036503.
1312. Lee, W.H., et al., *Needle-type environmental microsensors: design, construction and uses of microelectrodes and multi-analyte MEMS sensor arrays*. Measurement Science & Technology, 2011. **22**(4): p. 042001-042001.
1313. Lee, D.-H., et al., *Microbridge structures for uniform interval control of flowing droplets in microfluidic networks*. Biomicrofluidics, 2011. **5**(3): p. 034117-034117.
1314. Land, K.J., et al., *Low cost fabrication and assembly process for re-usable 3D polydimethylsiloxane (PDMS) microfluidic networks*. Biomicrofluidics, 2011. **5**(3): p. 036502-036502.
1315. Lal, R., S. Ramachandran, and J. Kwok, *Integrated sensors and BioMEMS for in vitro high throughput biomarkers and drug discovery*. Current opinion in biotechnology, 2011. **22**: p. S30-S30.
1316. Kunzmann, A., et al., *Toxicology of engineered nanomaterials: Focus on biocompatibility, biodistribution and biodegradation*. Biochimica Et Biophysica Acta-General Subjects,

2011. **1810**(3): p. 361-373.
1317. Kumar, A.M., S. Jung, and T. Ji, *Protein Biosensors Based on Polymer Nanowires, Carbon Nanotubes and Zinc Oxide Nanorods*. Sensors, 2011. **11**(5): p. 5087-5111.
1318. Kuczynski, R.S., H.-C. Chang, and A. Revzin, *Dielectrophoretic microfluidic device for the continuous sorting of Escherichia coli from blood cells*. Biomicrofluidics, 2011. **5**(3): p. 032005-032005.
1319. Kokot, G., et al., *Measurement of fluid flow generated by artificial cilia*. Biomicrofluidics, 2011. **5**(3): p. 034103-034103.
1320. Kish, L.L., et al., *Log-normal distribution of single molecule fluorescence bursts in micro/nano-fluidic channels*. Applied Physics Letters, 2011. **99**(14): p. 143121-143121.
1321. Kim, J.C., et al., *A wearable artificial kidney: technical requirements and potential solutions*. Expert Review of Medical Devices, 2011. **8**(5): p. 567-579.
1322. Khoshmanesh, K., et al., *Dielectrophoretic platforms for bio-microfluidic systems*. Biosensors & bioelectronics, 2011. **26**(5): p. 1800-1814.
1323. Khaleque, T., et al., *Experimental Methods of Actuation, Characterization and Prototyping of Hydrogels for BioMEMS/NEMS Applications*. Journal of Nanoscience and Nanotechnology, 2011. **11**(3): p. 2470-2479.
1324. Kempisty, B., P. Zawierucha, and M. Nowicki, *Using of DNA and RNA microarrays in order to identify oncogenesis markers in mammals*. Medycyna weterynaryjna, 2011. **67**(8): p. 527-530.
1325. Jumbadkar, R. and J. Kalambe, *Feedback Control System for BioMEMS Application*. Communications in Computer and Information Science, 2011. **250**: p. 421-423.
1326. Johnson, D.W., et al., *SUOX Process Optimization for Ultra Thick High Aspect Ratio LIGA Imaging*. Proceedings of SPIE, 2011. **7972**: p. 79722U-79722U.
1327. Jiang, H., X. Weng, and D. Li, *Microfluidic whole-blood immunoassays*. Microfluidics and Nanofluidics, 2011. **10**(5): p. 941-964.
1328. Jeong, M.-H., et al., *ELECTRICAL RELIABILITY OF Cu/Sn MICRO-BUMP IN WAFER LEVEL PACKAGING FOR BioMEMS DEVICES*. 2011. 314.
1329. Jen, C.-P. and H.-H. Chang, *A handheld preconcentrator for the rapid collection of cancerous cells using dielectrophoresis generated by circular microelectrodes in stepping electric fields*. Biomicrofluidics, 2011. **5**(3): p. 034101-034101.
1330. Jaffrezic-Renault, N. and A. Errachid, *Analytical Microsystems for Biomedical and Environmental Applications*. Biocybernetics and Biomedical Engineering, 2011. **31**(4): p. 3-16.
1331. Inamdar, N.K. and J.T. Borenstein, *Microfluidic cell culture models for tissue engineering*. Current opinion in biotechnology, 2011. **22**(5): p. 681-689.
1332. Hwang, K.-Y., et al., *Rapid detection of bacterial cell from whole blood: Integration of DNA sample preparation into single micro-PCR chip*. Sensors and Actuators B-Chemical, 2011. **154**(1): p. 46-51.
1333. Huang, L. and Z. Guo, *Biosensing in a microelectrofluidic system using optical whispering-gallery mode spectroscopy*. Biomicrofluidics, 2011. **5**(3): p. 034114-034114.
1334. Hu, N., et al., *A cell electrofusion microfluidic device integrated with 3D thin-film microelectrode arrays*. Biomicrofluidics, 2011. **5**(3): p. 034121-034121.
1335. Hong, C.-C., et al., *A microfluidic chip platform with electrochemical carbon nanotube*

- electrodes for pre-clinical evaluation of antibiotics nanocapsules*. Biosensors & bioelectronics, 2011. **26**(8): p. 3620-3626.
1336. Herman, B., et al., *ON THE TYPES AND ROLES OF DEMONSTRATORS FOR DESIGNING MEDICAL DEVICES*, in *Proceedings of the 18th International Conference on Engineering Design*, S.J. Culley, et al., Editors. 2011, Design Soc: Glasgow.
1337. Hashemi, N., et al., *Optofluidic characterization of marine algae using a microflow cytometer*. Biomicrofluidics, 2011. **5**(3): p. 032009-032009.
1338. Graham, A.H.D., et al., *Commercialisation of CMOS Integrated Circuit Technology in Multi-Electrode Arrays for Neuroscience and Cell-Based Biosensors*. Sensors, 2011. **11**(5): p. 4943-4971.
1339. Gosselin, B., *Recent Advances in Neural Recording Microsystems*. Sensors, 2011. **11**(5): p. 4572-4597.
1340. Gonzalez-Guerrero, A.B., et al., *Advanced photonic biosensors for point-of-care diagnostics*. Procedia Engineering, 2011. **25**.
1341. Glass, N.R., et al., *Organosilane deposition for microfluidic applications*. Biomicrofluidics, 2011. **5**(3): p. 036501-036501.
1342. Giannitsis, A.T., T. Parve, and M. Min, *Integration of Biosensors and Associated Electronics on Lab-on-Chip Devices*. Elektronika Ir Elektrotechnika, 2011(4): p. 61-66.
1343. Gai, H., Y. Li, and E.S. Yeung, *Optical Detection Systems on Microfluidic Chips*. Topics in Current Chemistry, 2011. **304**: p. 171-201.
1344. Gach, P.C., et al., *Isolation and manipulation of living adherent cells by micromolded magnetic rafts*. Biomicrofluidics, 2011. **5**(3): p. 032002-032002.
1345. Fischer, R., et al., *Cell Cultures in Microsystems: Biocompatibility Aspects*. Biotechnology and bioengineering, 2011. **108**(3): p. 687-693.
1346. Fior, R., et al., *A study on the cellular structure during stress solicitation induced by BioMEMS*. IEEE Engineering in Medicine and Biology Society Conference Proceedings, 2011: p. 2455-2458.
1347. Fegghi, S. and N.J. Sniadecki, *Mechanobiology of Platelets: Techniques to Study the Role of Fluid Flow and Platelet Retraction Forces at the Micro- and Nano-Scale*. International Journal of Molecular Sciences, 2011. **12**(12): p. 9009-9030.
1348. Fang, Q., et al., *Developing a Wireless Implantable Body Sensor Network in MICS Band*. Ieee Transactions on Information Technology in Biomedicine, 2011. **15**(4): p. 567-576.
1349. Fang, A. and B. Cathala, *Smart swelling biopolymer microparticles by a microfluidic approach: Synthesis, in situ encapsulation and controlled release*. Colloids & Surfaces B: Biointerfaces, 2011. **82**(1): p. 81-86.
1350. Eriksen, J., et al., *Dynamic in situ chromosome immobilisation and DNA extraction using localized poly(N-isopropylacrylamide) phase transition*. Biomicrofluidics, 2011. **5**(3): p. 031101-031101.
1351. Dutse, S.W. and N.A. Yusof, *Microfluidics-Based Lab-on-Chip Systems in DNA-Based Biosensing: An Overview*. Sensors, 2011. **11**(6): p. 5754-5768.
1352. Dimov, N., et al., *Pheromone synthesis in a biomicroreactor coated with anti-adsorption polyelectrolyte multilayer*. Biomicrofluidics, 2011. **5**(3): p. 034102-034102.
1353. Dicorato, F., E. Moore, and J. Glennon, *Integration of amperometric sensors for microchip capillary electrophoresis application*. Journal of Physics Conference Series,

2011. **307**: p. 012059-012059.
1354. Dickson, M.N., et al., *Efficient capture of circulating tumor cells with a novel immunocytochemical microfluidic device*. *Biomicrofluidics*, 2011. **5**(3): p. 034119-034119.
1355. Desmaele, D., M. Boukallel, and S. Regnier, *Actuation means for the mechanical stimulation of living cells via microelectromechanical systems: A critical review*. *Journal of Biomechanics*, 2011. **44**(8): p. 1433-1446.
1356. Darwish, A. and A.E. Hassanien, *Wearable and Implantable Wireless Sensor Network Solutions for Healthcare Monitoring*. *Sensors*, 2011. **11**(6): p. 5561-5595.
1357. Cui, S., et al., *A microfluidic chip for highly efficient cell capturing and pairing*. *Biomicrofluidics*, 2011. **5**(3): p. 032003-032003.
1358. Cima, M.J., *Microsystem Technologies for Medical Applications*. *Annual Review of Chemical and Biomolecular Engineering*, 2011. **2**: p. 355-378.
1359. Chumbimuni-Torres, K.Y., et al., *Adsorption of proteins to thin-films of PDMS and its effect on the adhesion of human endothelial cells*. *Rsc Advances*, 2011. **1**(4): p. 706-714.
1360. Chuang, C.-H., et al., *Programmable Dielectrophoretic Chip for Cell Manipulations*. *Japanese Journal of Applied Physics*, 2011. **50**(6): p. 06GL11-06GL11.
1361. Choi, S., et al., *Microfluidic-based biosensors toward point-of-care detection of nucleic acids and proteins*. *Microfluidics and Nanofluidics*, 2011. **10**(2): p. 231-247.
1362. Cheng, Y., et al., *Mechanism of anodic electrodeposition of calcium alginate*. *Soft Matter*, 2011. **7**(12): p. 5677-5684.
1363. Chen, A. and T. Pan, *Three-dimensional fit-to-flow microfluidic assembly*. *Biomicrofluidics*, 2011. **5**(4): p. 046505-046505.
1364. Chau, L.T., B.E. Rolfe, and J.J. Cooper-White, *A microdevice for the creation of patent, three-dimensional endothelial cell-based microcirculatory networks*. *Biomicrofluidics*, 2011. **5**(3): p. 034115-034115.
1365. Cetin, B. and D.Q. Li, *Dielectrophoresis in microfluidics technology*. *Electrophoresis*, 2011. **32**(18): p. 2410-2427.
1366. Cetin, B. and D. Li, *Dielectrophoresis in microfluidics technology*. *Electrophoresis*, 2011. **32**(18): p. 2410-2427.
1367. Carruthers, B.E., P.A. Clingan, and Asee, *Use of FLUENT Software in a First-Year Engineering Microfluidic Design Course*, in *2011 Asee Annual Conference & Exposition*. 2011.
1368. Buzdugan, M.I., T.I. Buzdugan, and H. Balan, *Considerations on Electromagnetic Compatibility for Medical Devices*, in *International Conference on Advancements of Medicine and Health Care through Technology*, S. Vlad and R.V. Ciupa, Editors. 2011, Springer: New York. p. 94-99.
1369. Borenstein, J.T. and G. Vunjak-Novakovic, *Engineering Tissue with BioMEMS*. *Ieee Pulse*, 2011. **2**(6): p. 28-34.
1370. Birkholz, M., et al., *Ultrathin TiN Membranes as a Technology Platform for CMOS-Integrated MEMS and BioMEMS Devices*. *Advanced Functional Materials*, 2011. **21**(9): p. 1652-1656.
1371. Bhushan, B. and B. Bhushan, *MEMS/NEMS and BioMEMS/BioNEMS: Materials, Devices, and Biomimetics*. 2011. 945.

1372. Bhushan, B. and B. Bhushan, *Mechanical Properties of Nanostructures*. 2011. 584.
1373. Bertarelli, E., et al., *Electrostatic Diaphragm Micropump Electro-Fluid-Mechanical Simulation*. 2011. 459.
1374. Bellan, L.M., D. Wu, and R.S. Langer, *Current trends in nanobiosensor technology*. Wiley Interdisciplinary Reviews-Nanomedicine and Nanobiotechnology, 2011. **3**(3): p. 229-246.
1375. Bashir, R., A. Khademhosseini, and S. Sia, *Delving into BioMEMS*. Ieee Pulse, 2011. **2**(6): p. 12-12.
1376. Babaei, A. and M. Babazadeh, *Multi-walled carbon nanotubes/chitosan polymer composite modified glassy carbon electrode for sensitive simultaneous determination of levodopa and morphine*. Analytical Methods, 2011. **3**(10): p. 2400-2405.
1377. Babaei, A. and M. Babazadeh, *A Selective Simultaneous Determination of Levodopa and Serotonin Using a Glassy Carbon Electrode Modified with Multiwalled Carbon Nanotube/Chitosan Composite*. Electroanalysis, 2011. **23**(7): p. 1726-1735.
1378. Au, A.K., et al., *Microvalves and Micropumps for BioMEMS*. Micromachines, 2011. **2**(2): p. 179-220.
1379. Asiello, P.J. and A.J. Baeumner, *Miniaturized isothermal nucleic acid amplification, a review*. Lab on a Chip, 2011. **11**(8): p. 1420-1430.
1380. Ashraf, M.W., S. Tayyaba, and N. Afzulpurkar, *Micro Electromechanical Systems (MEMS) Based Microfluidic Devices for Biomedical Applications*. International Journal of Molecular Sciences, 2011. **12**(6): p. 3648-3704.
1381. Angione, M.D., et al., *Carbon based materials for electronic bio-sensing*. Materials Today, 2011. **14**(9): p. 424-433.
1382. Angelescu, D.E. and D.E. Angelescu, *Microfluidic Design*. Highly Integrated Microfluidics Design. 2011. 185-219.
1383. Altman, W.R., et al., *Controlled transport of superparamagnetic beads with spin-valves*. Applied Physics Letters, 2011. **99**(14): p. 143703-143703.
1384. Algar, W.R., et al., *Semiconductor Quantum Dots in Bioanalysis: Crossing the Valley of Death*. Analytical Chemistry, 2011. **83**(23): p. 8826-8837.
1385. Alazzam, A., et al., *Interdigitated comb-like electrodes for continuous separation of malignant cells from blood using dielectrophoresis*. Electrophoresis, 2011. **32**(11): p. 1327-1336.
1386. Ahmad, H., et al., *A robotics platform for automated batch fabrication of high density, microfluidics-based DNA microarrays, with applications to single cell, multiplex assays of secreted proteins*. Review of Scientific Instruments, 2011. **82**(9): p. 094301-094301.
1387. Agastin, S., et al., *Continuously perfused microbubble array for 3D tumor spheroid model (vol 5, 024110, 2011)*. Biomicrofluidics, 2011. **5**(3): p. 039901-039901.
1388. Afshar, R., et al., *Magnetic particle dosing and size separation in a microfluidic channel*. Sensors and Actuators B-Chemical, 2011. **154**(1): p. 73-80.
1389. Zordan, E., F. Amirouche, and Y. Zhou, *Principle design and actuation of a dual chamber electromagnetic micropump with coaxial cantilever valves*. Biomedical Microdevices, 2010. **12**(1): p. 55-62.
1390. Zhu, T., et al., *Electroporation based on hydrodynamic focusing of microfluidics with low dc voltage*. Biomedical Microdevices, 2010. **12**(1): p. 35-40.
1391. Zhu, L., et al., *Fabrication of monodisperse, large-sized, functional biopolymeric*

- microspheres using a low-cost and facile microfluidic device*. Biomedical Microdevices, 2010. **12**(1): p. 169-177.
1392. Zhu, G., et al., *Transient alterations in slow oscillations of hippocampal networks by low-frequency stimulations on multi-electrode arrays*. Biomedical Microdevices, 2010. **12**(1): p. 153-158.
1393. Zhou, P., L. Young, and Z. Chen, *Weak solvent based chip lamination and characterization of on-chip valve and pump*. Biomedical Microdevices, 2010. **12**(5): p. 821-832.
1394. Zhou, L., et al., *Mitochondria-targeting photosensitizer-encapsulated amorphous nanocage as a bimodal reagent for drug delivery and biodiagnose in vitro*. Biomedical Microdevices, 2010. **12**(4): p. 655-663.
1395. Zhao, L., et al., *Chemotherapy resistance research of lung cancer based on micro-fluidic chip system with flow medium*. Biomedical Microdevices, 2010. **12**(2): p. 325-332.
1396. Zhang, Y., et al., *An all-in-one microfluidic device for parallel DNA extraction and gene analysis*. Biomedical Microdevices, 2010. **12**(6): p. 1043-1049.
1397. Zhang, W., et al., *Preferential vitrification of water in small alginate microcapsules significantly augments cell cryopreservation by vitrification*. Biomedical Microdevices, 2010. **12**(1): p. 89-96.
1398. Zhang, H., et al., *Construction of a laser combiner for dual fluorescent single molecule imaging of pRNA of phi29 DNA packaging motor*. Biomedical Microdevices, 2010. **12**(1): p. 97-106.
1399. Zhang, C. and D. Xing, *Microfluidic gradient PCR (MG-PCR): A new method for microfluidic DNA amplification*. Biomedical Microdevices, 2010. **12**(1): p. 1-12.
1400. Zejli, H., et al., *Sonogel-carbon electrode based on hemin for detection of superoxide*. Talanta, 2010. **80**(5): p. 1805-1808.
1401. Yuli, W., et al., *Microdevice to capture colon crypts for in vitro studies* Electronic supplementary information (ESI) available: *Fabrication of an array microstrainer and modeling of the fluid velocity distribution*. See DOI: 10.1039/b927316f. Lab on a Chip - Miniaturisation for Chemistry & Biology, 2010. **10**(12): p. 1596-1603.
1402. Ye, N., et al., *Microfluidic devices for characterizing the agonist of formyl peptide receptor in RBL-FPR cells*. Biomedical Microdevices, 2010. **12**(3): p. 513-521.
1403. Yamanishi, Y., et al., *Powerful actuation of magnetized microtools by focused magnetic field for particle sorting in a chip*. Biomedical Microdevices, 2010. **12**(4): p. 745-752.
1404. Wu, Y., et al., *Sustained release of insulin through skin by intradermal microdelivery system*. Biomedical Microdevices, 2010. **12**(4): p. 665-671.
1405. Wang, G.-J., Y.-C. Lin, and S.-H. Hsu, *The fabrication of PLGA microvessel scaffolds with nano-patterned inner walls*. Biomedical Microdevices, 2010. **12**(5): p. 841-848.
1406. Wang, F. and M.A. Burns, *Droplet-based microsystem for multi-step bioreactions*. Biomedical Microdevices, 2010. **12**(3): p. 533-541.
1407. Villa, M., et al., *Growth of primary embryo cells in a microculture system*. Biomedical Microdevices, 2010. **12**(2): p. 253-261.
1408. Tsuchiya, K., et al., *Design and development of a biocompatible painless microneedle by the ion sputtering deposition method*. Precision Engineering, 2010. **34**(3): p. 461-466.
1409. Tsai, H.-H., et al., *Multiple type biosensors fabricated using the CMOS BioMEMS*

- platform*. Sensors and Actuators, B: Chemical, 2010. **144**(2): p. 407-412.
1410. Troszak, G.D. and B. Rubinsky, *A primary current distribution model of a novel micro-electroporation channel configuration*. Biomedical Microdevices, 2010. **12**(5): p. 833-840.
1411. Tonomura, W., et al., *Parallel multipoint recording of aligned and cultured neurons on micro channel array toward cellular network analysis*. Biomedical Microdevices, 2010. **12**(4): p. 737-743.
1412. Tang, Z., et al., *An optimized process for fabrication of high-aspect-ratio photoresist-derived carbon microelectrode array on silicon substrate*. Thin Solid Films, 2010. **518**(10): p. 2701-2706.
1413. Tang, L., et al., *Targeted cell adhesion on selectively micropatterned polymer arrays on a poly(dimethylsiloxane) surface*. Biomedical Microdevices, 2010. **12**(1): p. 13-21.
1414. Tan, D.C.-W., L.-Y.L. Yung, and P. Roy, *Controlled microscale diffusion gradients in quiescent extracellular fluid*. Biomedical Microdevices, 2010. **12**(3): p. 523-532.
1415. Takei, K., et al., *Microtube-based electrode arrays for low invasive extracellular recording with a high signal-to-noise ratio*. Biomedical Microdevices, 2010. **12**(1): p. 41-48.
1416. Sunil, K.A., et al., *Antibody functionalized interdigitated μ -electrode ($ID\mu E$) based impedimetric cortisol biosensor* Electronic supplementary information (ESI) available: *Imaginary impedance studies for cortisol estimation in standard solutions and Saliva*. Analyst, 2010. **135**(8): p. 1941-1946.
1417. Su, G. and R.M. Pidaparti, *Drug Particle Delivery Investigation Through a Valveless Micropump*. Journal of Microelectromechanical Systems, 2010. **19**(6): p. 1390-1399.
1418. Stratmeyer, M.E., et al., *What we know and don't know about the bioeffects of nanoparticles: Developing experimental approaches for safety assessment*. Biomedical Microdevices, 2010. **12**(4): p. 569-573.
1419. Steedman, M.R., et al., *Enhanced differentiation of retinal progenitor cells using microfabricated topographical cues*. Biomedical Microdevices, 2010. **12**(3): p. 363-369.
1420. Staples, M., *Microchips and controlled-release drug reservoirs*. Wiley Interdisciplinary Reviews-Nanomedicine and Nanobiotechnology, 2010. **2**(4): p. 400-417.
1421. Souza, G.R., et al., *Combinatorial targeting and nanotechnology applications*. Biomedical Microdevices, 2010. **12**(4): p. 597-606.
1422. Sollier, E., et al., *Fast and continuous plasma extraction from whole human blood based on expanding cell-free layer devices*. Biomedical Microdevices, 2010. **12**(3): p. 485-497.
1423. Shimizu, K., et al., *Assembly of skeletal muscle cells on a Si-MEMS device and their generative force measurement*. Biomedical Microdevices, 2010. **12**(2): p. 247-252.
1424. Shim, J.S., A.W. Browne, and C.H. Ahn, *An on-chip whole blood/plasma separator with bead-packed microchannel on COC polymer*. Biomedical Microdevices, 2010. **12**(5): p. 949-957.
1425. Shemesh, J., et al., *Advanced microfluidic droplet manipulation based on piezoelectric actuation*. Biomedical Microdevices, 2010. **12**(5): p. 907-914.
1426. Shao, J., et al., *A microfluidic chip for permeability assays of endothelial monolayer*. Biomedical Microdevices, 2010. **12**(1): p. 81-88.
1427. Shao, G., W. Qiu, and W. Wang, *Fast replication of out-of-plane microlens with polydimethylsiloxane and curable polymer (NOA73)*. Microsystem Technologies, 2010.

- 16(8)**: p. 1471-1477.
1428. Schievano, S., et al., *First-in-man implantation of a novel percutaneous valve: a new approach to medical device development*. Eurointervention, 2010. **5(6)**: p. 745-750.
1429. Sang, S. and H. Witte, *Fabrication of a surface stress-based PDMS micro-membrane biosensor*. Microsystem Technologies, 2010. **16(6)**: p. 1001-1008.
1430. Sabourin, D., et al., *Microfluidic DNA microarrays in PMMA chips: Streamlined fabrication via simultaneous DNA immobilization and bonding activation by brief UV exposure*. Biomedical Microdevices, 2010. **12(4)**: p. 673-681.
1431. Roy, S., B.B. Bhattacharya, and K. Chakrabarty, *Optimization of Dilution and Mixing of Biochemical Samples Using Digital Microfluidic Biochips*. Ieee Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2010. **29(11)**: p. 1696-1708.
1432. Rosen, Y. and P. Gurman, *MEMS and Microfluidics for Diagnostics Devices*. Current Pharmaceutical Biotechnology, 2010. **11(4)**: p. 366-375.
1433. Ricotti, L., et al., *Adhesion and proliferation of skeletal muscle cells on single layer poly(lactic acid) ultra-thin films*. Biomedical Microdevices, 2010. **12(5)**: p. 809-819.
1434. Richter, C., et al., *Spatially controlled cell adhesion on three-dimensional substrates*. Biomedical Microdevices, 2010. **12(5)**: p. 787-795.
1435. Rastogi, A., et al., *Development and characterization of a scalable microperforated device capable of long-term zero order drug release*. Biomedical Microdevices, 2010. **12(5)**: p. 915-921.
1436. Qi, Y., et al., *Piezoelectric ribbons printed onto rubber for flexible energy conversion*. Nano Letters, 2010. **10(2)**: p. 524-525.
1437. Prudenzeno, F., et al., *Near and medium infrared optical fiber lasers and emerging applications*. Proceedings of SPIE-The International Society for Optical Engineering, 2010. **7598**: p. 75981A-75981A.
1438. Privett, B.J., J.H. Shin, and M.H. Schoenfish, *Electrochemical Sensors*. Analytical Chemistry, 2010. **82(12)**: p. 4723-4741.
1439. Pjecic, I., et al., *Glass-composite prototyping for flow PCR with in situ DNA analysis*. Biomedical Microdevices, 2010. **12(2)**: p. 333-343.
1440. Piruska, A., et al., *Nanofluidics in chemical analysis*. Chemical Society Reviews, 2010. **39(3)**: p. 1060-1072.
1441. Patel, A.A., et al., *Biophysical mechanisms of single-cell interactions with microtopographical cues*. Biomedical Microdevices, 2010. **12(2)**: p. 287-296.
1442. Park, J., J. Li, and A. Han, *Micro-macro hybrid soft-lithography master (MMHSM) fabrication for lab-on-a-chip applications*. Biomedical Microdevices, 2010. **12(2)**: p. 345-351.
1443. Park, E.S., et al., *Packaging for Bio-micro-electro-mechanical Systems (BioMEMS) and Microfluidic Chips*. 2010. 563.
1444. Pandian, R.P., et al., *An implantable Teflon chip holding lithium naphthalocyanine microcrystals for secure, safe, and repeated measurements of pO₂ in tissues*. Biomedical Microdevices, 2010. **12(3)**: p. 381-387.
1445. Njagi, J., et al., *Amperometric Detection of Dopamine in Vivo with an Enzyme Based Carbon Fiber Microbiosensor*. Analytical Chemistry, 2010. **82(3)**: p. 989-996.
1446. Nelson, B.J., I.K. Kaliakatsos, and J.J. Abbott, *Microrobots for Minimally Invasive*

- Medicine*. Annual Review of Biomedical Engineering, 2010. **12**: p. 55-85.
1447. Nathan, M., *Microbattery Technologies for Miniaturized Implantable Medical Devices*. Current Pharmaceutical Biotechnology, 2010. **11**(4): p. 404-410.
1448. Nam, K.-H., et al., *Size-based separation and collection of mouse pancreatic islets for functional analysis*. Biomedical Microdevices, 2010. **12**(5): p. 865-874.
1449. Movahed, S. and D. Li, *Numerical studies of continuous nutrient delivery for tumour spheroid culture in a microchannel by electrokinetically-induced pressure-driven flow*. Biomedical Microdevices, 2010. **12**(6): p. 1061-1072.
1450. Mohanty, S., T. Baier, and F. Schönfeld, *Three-dimensional CFD modelling of a continuous immunomagnetophoretic cell capture in BioMEMS*. Biochemical engineering journal, 2010. **51**(3): p. 110-116.
1451. Modak, N., et al., *Experimental and numerical characterization of magnetophoretic separation for MEMS-based biosensor applications*. Biomedical Microdevices, 2010. **12**(1): p. 23-34.
1452. Minas, G., R.F. Wolffenbuttel, and J.H. Correia, *MCM-based microlaboratory for simultaneous measurement of several biochemical parameters by spectrophotometry*. Biomedical Microdevices, 2010. **12**(4): p. 727-736.
1453. Matteucci, M., et al., *A reconfigurable superparamagnetic bead filter for microfluidic detection of bio-material*. Microelectronic Engineering, 2010. **87**(5-8): p. 742-746.
1454. Martinez, D., et al., *High-fidelity patch-clamp recordings from neurons cultured on a polymer microchip*. Biomedical Microdevices, 2010. **12**(6): p. 977-985.
1455. Markov, D.A., et al., *Tape underlayment rotary-node (TURN) valves for simple on-chip microfluidic flow control*. Biomedical Microdevices, 2010. **12**(1): p. 135-144.
1456. Mahalanabis, M., et al., *An integrated disposable device for DNA extraction and helicase dependent amplification*. Biomedical Microdevices, 2010. **12**(2): p. 353-359.
1457. Ma, L., et al., *A porous 3D cell culture micro device for cell migration study*. Biomedical Microdevices, 2010. **12**(4): p. 753-760.
1458. Luo, X., et al., *An automatic microturbidostat for bacterial culture at constant density*. Biomedical Microdevices, 2010. **12**(3): p. 499-503.
1459. Lovchik, R.D., et al., *A microfluidic device for depositing and addressing two cell populations with intercellular population communication capability*. Biomedical Microdevices, 2010. **12**(2): p. 275-282.
1460. Liu, L., et al., *A micro-channel-well system for culture and differentiation of embryonic stem cells on different types of substrate*. Biomedical Microdevices, 2010. **12**(3): p. 505-511.
1461. Lin, J.-L., et al., *Application of indium tin oxide (ITO)-based microheater chip with uniform thermal distribution for perfusion cell culture outside a cell incubator*. Biomedical Microdevices, 2010. **12**(3): p. 389-398.
1462. Lin, C.-C., et al., *An integrated microfluidic chip for non-immunological determination of urinary albumin*. Biomedical Microdevices, 2010. **12**(5): p. 887-896.
1463. Lilienthal, K., et al., *Self-organized nanostructures in silicon and glass for MEMS, MOEMS and BioMEMS*. Materials Science & Engineering: B, 2010. **169**(1-3): p. 78-84.
1464. Liao, C.-Y. and Y.-C. Su, *Formation of biodegradable microcapsules utilizing 3D, selectively surface-modified PDMS microfluidic devices*. Biomedical Microdevices, 2010.

- 12(1)**: p. 125-133.
1465. Li, H. and F. Lai, *Multiphysics modeling of responsive characteristics of ionic-strength-sensitive hydrogel*. Biomedical Microdevices, 2010. **12(3)**: p. 419-434.
1466. Lee, Y., et al., *Micropatterned assembly of silica nanoparticles for a protein microarray with enhanced detection sensitivity*. Biomedical Microdevices, 2010. **12(3)**: p. 457-464.
1467. Lee, Y., G. Ferrari, and S.C. Lee, *Estimating design space available for polypeptides through consideration of major histocompatibility complex binding motifs*. Biomedical Microdevices, 2010. **12(2)**: p. 207-222.
1468. Lee, S.H., et al., *Fabrication and characterization of implantable and flexible nerve cuff electrodes with Pt, Ir and IrOx films deposited by RF sputtering*. Journal of Micromechanics and Microengineering, 2010. **20(3)**.
1469. Lee, S.C., *Implications of available design space for identification of non-immunogenic protein therapeutics*. Biomedical Microdevices, 2010. **12(2)**: p. 283-286.
1470. Lee, M.G., S. Choi, and J.-K. Park, *Rapid multivortex mixing in an alternately formed contraction-expansion array microchannel*. Biomedical Microdevices, 2010. **12(6)**: p. 1019-1026.
1471. Lee, K., et al., *2-layer based microfluidic concentration generator by hybrid serial and volumetric dilutions*. Biomedical Microdevices, 2010. **12(2)**: p. 297-309.
1472. Lee, D.H., et al., *Fabrication of three-dimensional microarray structures by controlling the thickness and elasticity of poly (dimethylsiloxane) membrane*. Biomedical Microdevices, 2010. **12(1)**: p. 49-54.
1473. Lee, C.-Y. and Z.-H. Chen, *Valveless impedance micropump with integrated magnetic diaphragm*. Biomedical Microdevices, 2010. **12(2)**: p. 197-205.
1474. Lan, W., et al., *One-step synthesis of chitosan-silica hybrid microspheres in a microfluidic device*. Biomedical Microdevices, 2010. **12(6)**: p. 1087-1095.
1475. Lai, F., H. Li, and R. Luo, *Chemo-electro-mechanical modeling of ionic-strength-sensitive hydrogel: Influence of Young's modulus*. International Journal of Solids & Structures, 2010. **47(22)**: p. 3141-3149.
1476. Kumar, K., et al., *Handheld histology-equivalent sectioning laser-scanning confocal optical microscope for interventional imaging*. Biomedical Microdevices, 2010. **12(2)**: p. 223-233.
1477. Krishnan, S., et al., *Thermal stability analysis of thin film Ni-NiOx-Cr tunnel junctions*. Thin Solid Films, 2010. **518(12)**: p. 3367-3372.
1478. Khoury, M., et al., *A microfluidic traps system supporting prolonged culture of human embryonic stem cells aggregates*. Biomedical Microdevices, 2010. **12(6)**: p. 1001-1008.
1479. Khang, D., et al., *Nanotechnology for regenerative medicine*. Biomedical Microdevices, 2010. **12(4)**: p. 575-587.
1480. Kent, N.J., et al., *Microfluidic device to study arterial shear-mediated platelet-surface interactions in whole blood: Reduced sample volumes and well-characterised protein surfaces*. Biomedical Microdevices, 2010. **12(6)**: p. 987-1000.
1481. Kendziora, C.A., et al., *Advances in stand-off detection of trace explosives by infrared photo-thermal imaging*. Proceedings of SPIE-The International Society for Optical Engineering, 2010. **7664**: p. 76641J-76641J.
1482. Jung, Y., et al., *Six-stage cascade paramagnetic mode magnetophoretic separation*

- system for human blood samples. *Biomedical Microdevices*, 2010. **12**(4): p. 637-645.
1483. Jung, K.O., *Engineering of nanometer-sized cross-linked hydrogels for biomedical applications*. *Canadian Journal of Chemistry*, 2010. **88**(3): p. 173-184.
1484. Jing, G., S.F. Perry, and S. Tatic-Lucic, *Precise cell patterning using cytophobic self-assembled monolayer deposited on top of semi-transparent gold*. *Biomedical Microdevices*, 2010. **12**(5): p. 935-948.
1485. Irimia, D., *Microfluidic Technologies for Temporal Perturbations of Chemotaxis*. *Annual Review of Biomedical Engineering*, 2010. **12**(1): p. 259-284.
1486. Huh, D., et al., *Reconstituting Organ-Level Lung Functions on a Chip*. *Science*, 2010. **328**(5986): p. 1662-1668.
1487. Hu, K., et al., *Compressed collagen gel as the scaffold for skin engineering*. *Biomedical Microdevices*, 2010. **12**(4): p. 627-635.
1488. Hsieh, C.-H., C.-J.C. Huang, and Y.-Y. Huang, *Patterned PDMS based cell array system: A novel method for fast cell array fabrication*. *Biomedical Microdevices*, 2010. **12**(5): p. 897-905.
1489. Han, L.-H., et al., *Fabrication of three-dimensional scaffolds for heterogeneous tissue engineering*. *Biomedical Microdevices*, 2010. **12**(4): p. 721-725.
1490. Guan, X., et al., *Rapid detection of pathogens using antibody-coated microbeads with bioluminescence in microfluidic chips*. *Biomedical Microdevices*, 2010. **12**(4): p. 683-691.
1491. Gu, W. and Y. Zhao, *Cellular electrical impedance spectroscopy: an emerging technology of microscale biosensors*. *Expert Review of Medical Devices*, 2010. **7**(6): p. 767-779.
1492. Green, S.R., et al., *In situ and ex vivo evaluation of a wireless magnetoelastic biliary stent monitoring system*. *Biomedical Microdevices*, 2010. **12**(3): p. 477-484.
1493. Goyal, S., et al., *Active and biomimetic nanofilters for selective protein separation*. *Biomedical Microdevices*, 2010. **12**(2): p. 317-324.
1494. Goubko, C.A., et al., *Hydrogel cell patterning incorporating photocaged RGDS peptides*. *Biomedical Microdevices*, 2010. **12**(3): p. 555-568.
1495. Ghafar-Zadeh, E., et al., *Erratum: Handheld impedance biosensor system using engineered proteinaceous receptors (Biomedical Microdevices DOI:10.1007/s10544-010-9451-0)*. *Biomedical Microdevices*, 2010. **12**(6): p. 1107.
1496. Ghafar-Zadeh, E., et al., *Handheld impedance biosensor system using engineered proteinaceous receptors*. *Biomedical Microdevices*, 2010. **12**(6): p. 967-975.
1497. Garcia-Cordero, J., et al., *Microfluidic sedimentation cytometer for milk quality and bovine mastitis monitoring*. *Biomedical Microdevices*, 2010. **12**(6): p. 1051-1059.
1498. Gallego-Perez, D., et al., *Versatile methods for the fabrication of polyvinylidene fluoride microstructures*. *Biomedical Microdevices*, 2010. **12**(6): p. 1009-1017.
1499. Fundueanu, G., et al., *An intelligent multicompartmental system based on thermo-sensitive starch microspheres for temperature-controlled release of drugs*. *Biomedical Microdevices*, 2010. **12**(4): p. 693-704.
1500. Fernandez-Rosas, E., et al., *Internalization and cytotoxicity analysis of silicon-based microparticles in macrophages and embryos*. *Biomedical Microdevices*, 2010. **12**(3): p. 371-379.
1501. Feichtner, F., et al., *Microdialysis based device for continuous extravascular monitoring of blood glucose*. *Biomedical Microdevices*, 2010. **12**(3): p. 399-407.

1502. Evenou, F., T. Fujii, and Y. Sakai, *Spontaneous formation of stably-attached and 3D-organized hepatocyte aggregates on oxygen-permeable polydimethylsiloxane membranes having 3D microstructures*. Biomedical Microdevices, 2010. **12**(3): p. 465-475.
1503. Evans, A.T., et al., *A low power, microvalve regulated architecture for drug delivery systems*. Biomedical Microdevices, 2010. **12**(1): p. 159-168.
1504. Evans, A.T., S. Chiravuri, and Y.B. Gianchandani, *Transdermal power transfer for recharging implanted drug delivery devices via the refill port*. Biomedical Microdevices, 2010. **12**(2): p. 179-185.
1505. Evans, A.T., S. Chiravuri, and Y.B. Gianchandani, *Erratum: Transdermal power transfer for recharging implanted drug delivery devices via the refill port (Biomedical Microdevices DOI: 10.1007/s10544-009-9371-z)*. Biomedical Microdevices, 2010. **12**(2): p. 361.
1506. Elman, N.M. and U.M. Upadhyay, *Medical Applications of Implantable Drug Delivery Microdevices Based on MEMS (Micro-Electro-Mechanical-Systems)*. Current Pharmaceutical Biotechnology, 2010. **11**(4): p. 398-403.
1507. Dorozhkin, S.V., *Bioceramics of calcium orthophosphates*. Biomaterials, 2010. **31**(7): p. 1465-1485.
1508. Dixon, A. and S. Takayama, *Guided corona generates wettability patterns that selectively direct cell attachment inside closed microchannels*. Biomedical Microdevices, 2010. **12**(5): p. 769-775.
1509. Desai, S., *Understanding release kinetics of biopolymer drug delivery microcapsules for biomedical applications*. Materials science & engineering.B, Solid-state materials for advanced technology, 2010. **168**(1-3): p. 127-131.
1510. Curtis, M.W., et al., *Hypertrophy, gene expression, and beating of neonatal cardiac myocytes are affected by microdomain heterogeneity in 3D*. Biomedical Microdevices, 2010. **12**(6): p. 1073-1085.
1511. Culeac, I.P., et al., *Speckle based fiber optic method for registration of IR radiation*. Proceedings of SPIE-The International Society for Optical Engineering, 2010. **7469**: p. 74690G-74690G.
1512. Congqi, Y. and J.P. Darrin, *Rheological properties of peptide-based hydrogels for biomedical and other applications Part of the peptide- and protein-based materials themed issue*. Chemical Society Reviews, 2010. **39**(9): p. 3528-3540.
1513. Congqi, Y. and J.P. Darrin, *Rheological properties of peptide-based hydrogels for biomedical and other applications*. Chemical Society Reviews, 2010. **39**(9): p. 3528-3540.
1514. Cohen, A., et al., *Microscale metal additive manufacturing of multi-component medical devices*. Rapid Prototyping Journal, 2010. **16**(3): p. 209-215.
1515. Clow, A.L., P.T. Gaynor, and B.J. Oback, *A novel micropit device integrates automated cell positioning by dielectrophoresis and nuclear transfer by electrofusion*. Biomedical Microdevices, 2010. **12**(5): p. 777-786.
1516. Cioffi, M., et al., *A computational and experimental study inside microfluidic systems: The role of shear stress and flow recirculation in cell docking*. Biomedical Microdevices, 2010. **12**(4): p. 619-626.
1517. Chung, C.K., et al., *Water-assisted CO₂ laser ablated glass and modified thermal bonding*

- for capillary-driven bio-fluidic application*. Biomedical Microdevices, 2010. **12**(1): p. 107-114.
1518. Chueh, B.-H., et al., *Patterning alginate hydrogels using light-directed release of caged calcium in a microfluidic device*. Biomedical Microdevices, 2010. **12**(1): p. 145-151.
1519. Chu, P.K., *Recent applications of plasma-based ion implantation and deposition to microelectronic, nano-structured, and biomedical materials*. Surface & Coatings Technology, 2010. **204**(18): p. 2853-2863.
1520. Christ, K.V., et al., *Measurement of single-cell adhesion strength using a microfluidic assay*. Biomedical Microdevices, 2010. **12**(3): p. 443-455.
1521. Chowdhury, M.M., et al., *Enhanced effects of secreted soluble factor preserve better pluripotent state of embryonic stem cell culture in a membrane-based compartmentalized micro-bioreactor*. Biomedical Microdevices, 2010. **12**(6): p. 1097-1105.
1522. Choi, Y., et al., *A high throughput microelectroporation device to introduce a chimeric antigen receptor to redirect the specificity of human T cells*. Biomedical Microdevices, 2010. **12**(5): p. 855-863.
1523. Choi, S.-O., et al., *An electrically active microneedle array for electroporation*. Biomedical Microdevices, 2010. **12**(2): p. 263-273.
1524. Choi, S., et al., *Ultrafast self-assembly of microscale particles by open-channel flow*. Langmuir, 2010. **26**(7): p. 4661-4667.
1525. Choi, J.-W., et al., *Combined micro and macro additive manufacturing of a swirling flow coaxial phacoemulsifier sleeve with internal micro-vanes*. Biomedical Microdevices, 2010. **12**(5): p. 875-886.
1526. Chihchen, C., et al., *Microfluidic isolation and transcriptome analysis of serum microvesicles* Electronic supplementary information (ESI) available: *The supplementary materials show no cellular contamination in the serum sample and capture of fluorescently labeled*. Lab on a Chip - Miniaturisation for Chemistry & Biology, 2010. **10**(4): p. 505-511.
1527. Chen, M.C.W., M. Gupta, and K.C. Cheung, *Alginate-based microfluidic system for tumor spheroid formation and anticancer agent screening*. Biomedical Microdevices, 2010. **12**(4): p. 647-654.
1528. Chen, L. and A.T. Conlisk, *DNA nanowire translocation phenomena in nanopores*. Biomedical Microdevices, 2010. **12**(2): p. 235-245.
1529. Chen, D., et al., *An integrated, self-contained microfluidic cassette for isolation, amplification, and detection of nucleic acids*. Biomedical Microdevices, 2010. **12**(4): p. 705-719.
1530. Chao, K., B. Chen, and J. Wu, *Numerical analysis of field-modulated electroosmotic flows in microchannels with arbitrary numbers and configurations of discrete electrodes*. Biomedical Microdevices, 2010. **12**(6): p. 959-966.
1531. Chang, W.-J., et al., *Fluidic measurement of electric field sensitivity of Ti-GaAs Schottky junction gated field effect biosensors*. Biomedical Microdevices, 2010. **12**(5): p. 849-854.
1532. Chandrasekaran, A. and M. Packirisamy, *Integrated microfluidic biophotonic chip for laser induced fluorescence detection*. Biomedical Microdevices, 2010. **12**(5): p. 923-933.
1533. Capaldi, A.P., *Analysis of Gene Function using Dna Microarrays*. Methods in Enzymology,

2010. **470**: p. 3-17.
1534. Campo, E.M., et al., *Focus ion beam micromachined glass pipettes for cell microinjection*. Biomedical Microdevices, 2010. **12**(2): p. 311-316.
1535. Caicedo, H.H., et al., *Multiphysics simulation of a microfluidic perfusion chamber for brain slice physiology*. Biomedical Microdevices, 2010. **12**(5): p. 761-767.
1536. Burke, P. and C. Rutherglen, *Towards a single-chip, implantable RFID system: Is a single-cell radio possible?* Biomedical Microdevices, 2010. **12**(4): p. 589-596.
1537. Breckenridge, M.T., T.T. Egelhoff, and H. Baskaran, *A microfluidic imaging chamber for the direct observation of chemotactic transmigration*. Biomedical Microdevices, 2010. **12**(3): p. 543-553.
1538. Bork, T., et al., *Development and in-vitro characterization of an implantable flow sensing transducer for hydrocephalus*. Biomedical Microdevices, 2010. **12**(4): p. 607-618.
1539. Borenstein, J.T., et al., *Functional endothelialized microvascular networks with circular cross-sections in a tissue culture substrate*. Biomedical Microdevices, 2010. **12**(1): p. 71-79.
1540. Bhattacharjee, B. and H. Najjaran, *Droplet position control in digital microfluidic systems*. Biomedical Microdevices, 2010. **12**(1): p. 115-124.
1541. Bhandari, R., S. Negi, and F. Solzbacher, *Wafer-scale fabrication of penetrating neural microelectrode arrays*. Biomedical Microdevices, 2010. **12**(5): p. 797-807.
1542. Bhagat, A.A.S., et al., *Inertial microfluidics for sheath-less high-throughput flow cytometry*. Biomedical Microdevices, 2010. **12**(2): p. 187-195.
1543. Bayer, C.L., A.A. Konuk, and N.A. Peppas, *Development of a protein sensing device utilizing interactions between polyaniline and a polymer acid dopant*. Biomedical Microdevices, 2010. **12**(3): p. 435-442.
1544. Bandothkar, A.J., et al., *Nanostructured conducting polymer based reagentless capacitive immunosensor*. Biomedical Microdevices, 2010. **12**(1): p. 63-70.
1545. Amadi, O.C., et al., *A low resistance microfluidic system for the creation of stable concentration gradients in a defined 3D microenvironment*. Biomedical Microdevices, 2010. **12**(6): p. 1027-1041.
1546. Algar, W.R., A.J. Tavares, and U.J. Krull, *Beyond labels: A review of the application of quantum dots as integrated components of assays, bioprobes, and biosensors utilizing optical transduction*. Analytica Chimica Acta, 2010. **673**(1): p. 1-25.
1547. Adewola, A.F., et al., *Microfluidic perfusion and imaging device for multi-parametric islet function assessment*. Biomedical Microdevices, 2010. **12**(3): p. 409-417.
1548. Addae-Mensah, K., et al., *Cryogenic etching of silicon: An alternative method for fabrication of vertical microcantilever master molds*. Journal of Microelectromechanical Systems, 2010. **19**(1): p. 64-74.