

### **Benign design in analytical chemistry**

**Kaljurand, Mihkel; Koel, Mihkel** Critical reviews in analytical chemistry 2012 / p. 192-195  
<https://www.tandfonline.com/doi/pdf/10.1080/10408347.2011.645378>

### **Can 3D printing bring droplet microfluidics to every lab? - A systematic review**

**Gyimah, Nafisat; Scheler, Ott; Rang, Toomas; Pardy, Tamas** Micromachines 2021 / art. 339 <https://doi.org/10.3390/mi12030339>  
[Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Cell Migration in Microfluidic Devices : Invadosomes Formation in Confined Environments**

Chi, Pei-Yin; **Spuul, Pirjo**; Tseng, Fan-Gang Cell migrations : causes and functions 2019 / p. 79-103 [https://doi.org/10.1007/978-3-030-17593-1\\_6](https://doi.org/10.1007/978-3-030-17593-1_6) [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Cellprofiler is a fit tool for droplet digital image analysis**

**Bartkova, Simona; Vendelin, Marko; Pata, Pille; Scheler, Ott** 23rd International Conference on Miniaturized Systems for Chemistry and Life Sciences (MicroTAS 2019) Basel, Switzerland, 27 – 31 October 2019 2020 / art. 163704, p. 1644-1645  
<https://doi.org/10.1101/811869>

### **Chip design for microfluidic bioimpedance measurement**

Giannitsis, Athanasios; Cahill, Brian; **Land, Raul**; Gastrock, Gunter; Pliquett, Uwe; Nacke, T.; **Min, Mart**; Beckmann, Dieter  
Tagungsband : Technische Systeme für die Lebenswissenschaften : 14.Heiligenstädter Kolloquium : Heiligenstadt (Germany), 22.9-24.9.2008 2008 / p. 423-432

### **Closed-loop droplet size control in microfluidics = Suletud ahelaga tilkade suuruse juhtimine mikrofluidikas**

**Gyimah, Nafisat** 2024 <https://digikogu.taltech.ee/et/Item/c4a0c9de-83e5-41ff-bdcf-24ba61182d1f> [https://www.ester.ee/record=b5698980\\*est](https://www.ester.ee/record=b5698980*est)  
<https://doi.org/10.23658/taltech.47/2024>

### **CogniFlow: integrated modular system for automated droplet microfluidic bioanalysis**

**Jõemaa, Rauno; Afrin, Fariha; Gyimah, Nafisat**; Ashraf, Kanwal; **Pärnamets, Kaiser**; Giese, Lucas; Rocancourt, Mathieu; **Pardy, Tamas** EUROSENSORS XXXVI : Abstract book 2024 / PT6.188, p. 453-454 <https://doi.org/10.5162/EUROSENSORSXXXVI/PT6.188>

### **Compact empirical model for droplet generation in a Lab-on-Chip cytometry system**

**Pärnamets, Kaiser; Udal, Andres; Koel, Ants; Pardy, Tamas; Gyimah, Nafisat; Rang, Toomas** IEEE Access 2022 / p. 127708-127717 <https://doi.org/10.1109/ACCESS.2022.3226623> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Comparison of rectangular wave excitations in broad band impedance spectroscopy for microfluidic applications**

**Min, Mart**; Giannitsis, Athanasios; **Land, Raul**; Cahill, Brian; Pliquett, Uwe; Nacke, T.; Frense, Dieter; Gastrock, Gunter; Beckmann, Dieter World Congress on Medical Physics and Biomedical Engineering : September 7-12, 2009, Munich, Germany 2009 / p. 85-88  
[https://link.springer.com/chapter/10.1007/978-3-642-03885-3\\_24](https://link.springer.com/chapter/10.1007/978-3-642-03885-3_24)

### **Comparison of spectrally sparse excitation signals for fast bioimpedance spectroscopy : in the context of cytometry**

**Ojarand, Jaan; Land, Raul; Min, Mart** MeMeA 2012 IEEE International Symposium on Medical Measurements and Applications : proceedings : May 18-19, 2012, Budapest, Hungary 2012 / 5 p. : ill <https://ieeexplore.ieee.org/document/6226631>

### **Deep reinforcement learning-based digital twin for droplet microfluidics control**

**Gyimah, Nafisat; Scheler, Ott; Rang, Toomas; Pardy, Tamas** Physics of Fluids 2023 / art. 082020 <https://doi.org/10.1063/5.0159981>  
[Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Development of a transferable microfluidic droplet generator = Ülekantava mikrovedelik-tilkade generaatori arendus**

**Jõemaa, Rauno** 2024 [https://www.ester.ee/record=b5698969\\*est](https://www.ester.ee/record=b5698969*est) <https://doi.org/10.23658/taltech.46/2024>  
<https://digikogu.taltech.ee/et/Item/afb53063-1f89-4971-8758-142772e697dd>

### **Digital microfluidic sampler for a portable capillary electropherograph**

**Gorbatšova, Jelena; Jaanus, Martin; Kaljurand, Mihkel** Analytical chemistry 2009 / p. 8590-8595 : ill

### **Digital twin for controlled generation of water-in-oil microdroplets with required size**

**Gyimah, Nafisat; Scheler, Ott; Rang, Toomas**; Pardy, Tamas 23rd International Conference on Thermal, Mechanical and Multi-Physics Simulation and Experiments in Microelectronics and Microsystems (EuroSimE), 25-27 April 2022, St Julian, Malta : proceedings 2022 / p. 85-91 <https://doi.org/10.1109/EuroSimE54907.2022.9758876>

### **Droplet image analysis with user-friendly freeware CellProfiler**

**Bartkova, Simona; Vendelin, Marko; Sanka, Immanuel; Pata, Pille; Scheler, Ott** Analytical methods 2020 / p. 2287-2294 : ill  
<https://doi.org/10.1039/DOA00031K> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Droplet-based methods for tackling antimicrobial resistance**

Ruszczak, Artur; **Bartkova, Simona**; Zapotoczna, Marta; **Scheler, Ott**; Garstecki, Piotr Current opinion in biotechnology 2022 / art.

102755 <https://doi.org/10.1016/j.copbio.2022.102755> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Electrowetting on dielectric actuation of droplets with capillary electrophoretic zones for MALDI mass spectrometric analysis**

**Gorbatšova, Jelena; Borissova, Maria; Kaljurand, Mihkel** Electrophoresis 2012 / p. 2682-2688 : ill  
<https://pubmed.ncbi.nlm.nih.gov/22965712/>

### **Electrowetting-on-dielectric actuation of droplets with capillary electrophoretic zones for off-line mass spectrometric analysis**

**Gorbatšova, Jelena; Borissova, Maria; Kaljurand, Mihkel** Journal of chromatography A 2012 / p. 9-15 : ill  
<https://pubmed.ncbi.nlm.nih.gov/22965712/>

### **Embedded blur-free single-image acquisition pipeline for droplet microfluidic imaging flow cytometry (IFC)**

**Afrin, Fariha; Pärnamets, Kaiser; Le Moullec, Yannick; Udal, Andres; Koel, Ants; Pardy, Tamas; Rang, Toomas** IEEE Access 2024 / p. 92431-92441 <https://doi.org/10.1109/ACCESS.2024.3421637>

### **Fabrication methods for microfluidic lab-on-chips**

**Giannitsis, Athanasios; Min, Mart** BEC 2010 : 2010 12th Biennial Baltic Electronics Conference : proceedings of the 12th Biennial Baltic Electronics Conference : Tallinn University of Technology, October 4-6, 2010, Tallinn, Estonia 2010 / p. 69-72

### **A Guide to biodetection in droplets**

**Bartkova, Simona; Zapotoczna, Marta; Sanka, Immanuel; Scheler, Ott** Analytical chemistry 2024 / p. 9745-975518  
<https://doi.org/10.1021/acs.analchem.3c04282>

### **Imepisikesed tilgad käituvad katseklaasidena**

Imeline Teadus 2023 / lk. 20 [https://www.ester.ee/record=b2747925\\*est](https://www.ester.ee/record=b2747925*est)

### **Improving coplanar electrodes for moving water droplets**

Giannitsis, Athanasios; Cahill, Brian; Pliquett, Uwe; Gastrock, Gunter; **Land, Raul**; Nacke, T.; **Min, Mart**; Beckmann, Dieter  
Proceedings of the 1st European Conference on Microfluidics - Microfluidics 2008 : Bologna, Italy December 10-12, 2008 2008 / [10] p  
[https://www.academia.edu/26174470/Improving\\_coplanar\\_electrodes\\_for\\_moving\\_water\\_droplets](https://www.academia.edu/26174470/Improving_coplanar_electrodes_for_moving_water_droplets)

### **Instrument-free Lab-on-a-Chip DNA amplification test for pathogen detection [Online resource]**

**Pardy, Tamas; Rang, Toomas; Kremer, Clemens; Tulp, Indrek** BEC 2018 : 2018 16th Biennial Baltic Electronics Conference (BEC) : proceedings of the 16th Biennial Baltic Electronics Conference, October 8-10, 2018 2018 / 4 p. : ill  
<https://doi.org/10.1109/BEC.2018.8600991>

### **Low-cost open-source flow velocity sensor for droplet generators**

Prabatama, Nicky Andre; **Jõemaa, Rauno**; Hegedus, Kristof; **Pardy, Tamas** 2022 18th Biennial Baltic Electronics Conference (BEC) 2022 / p. 1-4 <https://doi.org/10.1109/BEC56180.2022.9935606>

### **Low-cost, portable dual-channel pressure pump for droplet microfluidics**

**Jõemaa, Rauno; Grosberg, Martin; Rang, Toomas; Pardy, Tamas** 2022 45th Jubilee International Convention on Information, Communication and Electronic Technology (MIPRO), 23-27 May 2022, Opatija, Croatia : proceedings 2022 / p. 205-211 : ill  
<https://doi.org/10.23919/MIPRO55190.2022.9803371>

### **Microfabrication of biomedical lab-on-chip devices : a review**

**Giannitsis, Athanasios** Estonian journal of engineering 2011 / p. 109-139 : ill

### **Microfluidic droplet classification through tuned convolutional neural network on a resource constrained platform**

**Afrin, Fariha; Le Moullec, Yannick; Pardy, Tamas** 2024 19th Biennial Baltic Electronics Conference (BEC) 2024 / 4 p  
<https://doi.org/10.1109/BEC61458.2024.10737958>

### **Microfluidic screening of antibiotic susceptibility at a single-cell level shows the inoculum effect of cefotaxime on: E. coli**

Postek, Witold; Gargulinski, Pawel; **Scheler, Ott**; Kaminski, Tomasz S.; Garstecki, Piotr Lab on a Chip 2018 / p. 3668 - 3677  
<https://doi.org/10.1039/c8lc00916c> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Modular, dual-tone piezoelectric micropump driver for low-cost, portable droplet generation**

**Jõemaa, Rauno; Pardy, Tamas** 2024 19th Biennial Baltic Electronics Conference (BEC) 2024 / 6 p  
<https://doi.org/10.1109/BEC61458.2024.10737948>

### **Multichannel electrical impedance spectroscopy analyzer with microfluidic sensors**

**Ojarand, Jaan; Min, Mart; Koel, Ants** Sensors 2019 / art. 1891, 28 p. : ill <https://doi.org/10.3390/s19081891> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Open source hardware cost-effective imaging sensors for high-throughput droplet microfluidic systems**

**Pärnamets, Kaiser; Koel, Ants; Pardy, Tamas; Rang, Toomas** Proceedings of 26th International Conference : ELECTRONICS 2022 2022 / 6 p <https://doi.org/10.1109/IEECONF55059.2022.9810383>

**Optical detection methods for droplet microfluidic applications = Optilised tuvastusmeetodid tilkade mikrofluidiliste rakenduste jaoks**

**Pärnamets, Kaiser** 2023 <https://doi.org/10.23658/taltech.31/2023> <https://digikogu.taltech.ee/et/Item/ffb85150-fb85-4a7c-b130-0d7f2c3b7fb5>  
[https://www.eester.ee/record=b5569973\\*est](https://www.eester.ee/record=b5569973*est)

**Optical detection methods for high-throughput fluorescent droplet microflow cytometry**

**Pärnamets, Kaiser; Pardy, Tamas; Koel, Ants; Rang, Toomas; Scheler, Ott; Le Moullec, Yannick; Afrin, Fariha**

Micromachines 2021 / art. 345, 20 p. : ill <https://doi.org/10.3390/mi12030345> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Paper microzones as a route to greener analytical chemistry**

**Kaljurand, Mihkel** Current Opinion in Green and Sustainable Chemistry 2019 / p. 15-18 <https://doi.org/10.1016/j.cogsc.2019.03.002>  
[Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**PID controller tuning optimization using genetic algorithm for droplet size control in microfluidics**

**Gyimah, Nafisat; Jõemaa, Rauno; Pärnamets, Kaiser; Scheler, Ott; Rang, Toomas; Pardy, Tamas** 2022 18th Biennial Baltic Electronics Conference (BEC) 2022 / 6 p <https://doi.org/10.1109/BEC56180.2022.9935596>

**Recent advancements on greening analytical separation**

**Kaljurand, Mihkel; Koel, Mihkel** Critical reviews in analytical chemistry 2011 / p. 2-20 : ill  
<https://www.tandfonline.com/doi/full/10.1080/10408347.2011.539420>

**Smart materials in miniaturized devices**

**Kaljurand, Mihkel** Handbook of smart materials in analytical chemistry 2019 / p. 621–642 <https://doi.org/10.1002/9781119422587.ch19>

**TalTechi teadlaste juhend aitab laboris veetilkade abil suuri avastusi teha**

**Bartkova, Simona** postimees.ee 2024 [TalTechi teadlaste juhend aitab laboris veetilkade abil suuri avastusi teha](#)

**Thermal analysis of a disposable, instrument-free DNA amplification lab-on-a-chip platform**

**Pardy, Tamas; Rang, Toomas; Tulp, Indrek** Sensors 2018 / art. 1812, 13 p. : ill <https://doi.org/10.3390/s18061812> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**3D finite element modelling of mixing phenomena in droplet-based microfluidic systems**

Szomor, Zsombó; **Gyimah, Nafisat**; Fürjes, Peter; Pardy, Tamas 2024 19th Biennial Baltic Electronics Conference (BEC) 2024 / 4 p <https://doi.org/10.1109/BEC61458.2024.10737975>

**Usage of microfluidic lab-on-chips in biomedicine**

**Giannitsis, Athanasios; Min, Mart** BEC 2010 : 2010 12th Biennial Baltic Electronics Conference : proceedings of the 12th Biennial Baltic Electronics Conference : Tallinn University of Technology, October 4-6, 2010, Tallinn, Estonia 2010 / p. 249-252