

David Juncker

List of Publications by Year in descending order

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Version: 2024-02-01

100
papers

5,498
citations

94381

37
h-index

82499

72
g-index

114
all docs

114
docs citations

114
times ranked

6694
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|--|------|-----------|
| 1 | Printing meets lithography: Soft approaches to high-resolution patterning. IBM Journal of Research and Development, 2001, 45, 697-719. | 3.2 | 450 |
| 2 | Fiber-based tissue engineering: Progress, challenges, and opportunities. Biotechnology Advances, 2013, 31, 669-687. | 6.0 | 386 |
| 3 | Autonomous Microfluidic Capillary System. Analytical Chemistry, 2002, 74, 6139-6144. | 3.2 | 372 |
| 4 | Capillary microfluidics in microchannels: from microfluidic networks to capillary circuits. Lab on A Chip, 2018, 18, 2323-2347. | 3.1 | 252 |
| 5 | Microfluidics for Processing Surfaces and Miniaturizing Biological Assays. Advanced Materials, 2005, 17, 2911-2933. | 11.1 | 231 |
| 6 | High-sensitivity miniaturized immunoassays for tumor necrosis factor γ using microfluidic systems. Lab on A Chip, 2004, 4, 563. | 3.1 | 193 |
| 7 | Multipurpose microfluidic probe. Nature Materials, 2005, 4, 622-628. | 13.3 | 193 |
| 8 | Simultaneous detection of C-reactive protein and other cardiac markers in human plasma using micromosaic immunoassays and self-regulating microfluidic networks. Biosensors and Bioelectronics, 2004, 19, 1193-1202. | 5.3 | 172 |
| 9 | Microfluidic Networks Made of Poly(dimethylsiloxane), Si, and Au Coated with Polyethylene Glycol for Patterning Proteins onto Surfaces. Langmuir, 2001, 17, 4090-4095. | 1.6 | 161 |
| 10 | Capillaries: pre-programmed, self-powered microfluidic circuits built from capillary elements. Lab on A Chip, 2013, 13, 4180. | 3.1 | 158 |
| 11 | Duplexed aptamers: history, design, theory, and application to biosensing. Chemical Society Reviews, 2019, 48, 1390-1419. | 18.7 | 149 |
| 12 | Fabricating Microarrays of Functional Proteins Using Affinity Contact Printing. Angewandte Chemie - International Edition, 2002, 41, 2320-2323. | 7.2 | 146 |
| 13 | Composite Living Fibers for Creating Tissue Constructs Using Textile Techniques. Advanced Functional Materials, 2014, 24, 4060-4067. | 7.8 | 131 |
| 14 | Hydrogel Templates for Rapid Manufacturing of Bioactive Fibers and 3D Constructs. Advanced Healthcare Materials, 2015, 4, 2146-2153. | 3.9 | 127 |
| 15 | Immunochromatographic Assay on Thread. Analytical Chemistry, 2012, 84, 7736-7743. | 3.2 | 115 |
| 16 | Cross-reactivity in antibody microarrays and multiplexed sandwich assays: shedding light on the dark side of multiplexing. Current Opinion in Chemical Biology, 2014, 18, 29-37. | 2.8 | 109 |
| 17 | Microfluidics made of yarns and knots: from fundamental properties to simple networks and operations. Lab on A Chip, 2011, 11, 2618. | 3.1 | 100 |
| 18 | Emerging Technologies in Multi-material Bioprinting. Advanced Materials, 2021, 33, e2104730. | 11.1 | 100 |

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|----|--|------|-----------|
| 19 | Microfluidic quadrupole and floating concentration gradient. <i>Nature Communications</i> , 2011, 2, 464. | 5.8 | 83 |
| 20 | Chamber and microfluidic probe for microperfusion of organotypic brain slices. <i>Lab on A Chip</i> , 2010, 10, 326-334. | 3.1 | 82 |
| 21 | Antibody Colocalization Microarray: A Scalable Technology for Multiplex Protein Analysis in Complex Samples. <i>Molecular and Cellular Proteomics</i> , 2012, 11, M111.011460. | 2.5 | 74 |
| 22 | Formation of Gradients of Proteins on Surfaces with Microfluidic Networks. <i>Langmuir</i> , 2000, 16, 9125-9130. | 1.6 | 71 |
| 23 | Integration of Shallow Gradients of Shh and Netrin-1 Guides Commissural Axons. <i>PLoS Biology</i> , 2015, 13, e1002119. | 2.6 | 65 |
| 24 | Microfluidic probes for use in life sciences and medicine. <i>Lab on A Chip</i> , 2013, 13, 40-50. | 3.1 | 61 |
| 25 | Microfluidic direct writer with integrated declogging mechanism for fabricating cell-laden hydrogel constructs. <i>Biomedical Microdevices</i> , 2014, 16, 387-395. | 1.4 | 61 |
| 26 | Microfluidic chain reaction of structurally programmed capillary flow events. <i>Nature</i> , 2022, 605, 464-469. | 13.7 | 61 |
| 27 | Soft and rigid two-level microfluidic networks for patterning surfaces. <i>Journal of Micromechanics and Microengineering</i> , 2001, 11, 532-541. | 1.5 | 60 |
| 28 | Autonomous microfluidic capillary circuits replicated from 3D-printed molds. <i>Lab on A Chip</i> , 2016, 16, 3804-3814. | 3.1 | 54 |
| 29 | NF- κ B signalling and cell fate decisions in response to a short pulse of tumour necrosis factor. <i>Scientific Reports</i> , 2016, 6, 39519. | 1.6 | 51 |
| 30 | Minimum information about a protein affinity reagent (MIAPAR). <i>Nature Biotechnology</i> , 2010, 28, 650-653. | 9.4 | 50 |
| 31 | Ensemble multicolour FRET model enables barcoding at extreme FRET levels. <i>Nature Nanotechnology</i> , 2018, 13, 925-932. | 15.6 | 49 |
| 32 | Hydrogel droplet microarrays with trapped antibody-functionalized beads for multiplexed protein analysis. <i>Lab on A Chip</i> , 2011, 11, 528-534. | 3.1 | 46 |
| 33 | Microfluidic Capillary Circuit for Rapid and Facile Bacteria Detection. <i>Analytical Chemistry</i> , 2017, 89, 6846-6853. | 3.2 | 45 |
| 34 | Nonconductive polymer microresonators actuated by the Kelvin polarization force. <i>Applied Physics Letters</i> , 2006, 89, 163506. | 1.5 | 42 |
| 35 | Combination of Mechanical and Molecular Filtration for Enhanced Enrichment of Circulating Tumor Cells. <i>Analytical Chemistry</i> , 2016, 88, 8510-8517. | 3.2 | 42 |
| 36 | Electrostatic actuator with liquid metal- κ elastomer compliant electrodes used for on-chip microvalving. <i>Journal of Micromechanics and Microengineering</i> , 2012, 22, 097001. | 1.5 | 41 |

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|----|---|-----|-----------|
| 37 | Substrate-Bound Protein Gradients to Study Haptotaxis. <i>Frontiers in Bioengineering and Biotechnology</i> , 2015, 3, 40. | 2.0 | 41 |
| 38 | Comprehensive profiling of the ligand binding landscapes of duplexed aptamer families reveals widespread induced fit. <i>Nature Communications</i> , 2018, 9, 343. | 5.8 | 40 |
| 39 | Humidified Microcontact Printing of Proteins: Universal Patterning of Proteins on Both Low and High Energy Surfaces. <i>Langmuir</i> , 2014, 30, 12002-12010. | 1.6 | 39 |
| 40 | Wet-etching of structures with straight facets and adjustable taper into glass substrates. <i>Lab on A Chip</i> , 2010, 10, 494-498. | 3.1 | 37 |
| 41 | Luminescent Iridium(III)-Containing Block Copolymers: Self-Assembly into Biotin-Labeled Micelles for Biodetection Assays. <i>ACS Macro Letters</i> , 2012, 1, 954-959. | 2.3 | 37 |
| 42 | Fabrication of large-area polymer microfilter membranes and their application for particle and cell enrichment. <i>Lab on A Chip</i> , 2017, 17, 1960-1969. | 3.1 | 36 |
| 43 | Serpentine and leading-edge capillary pumps for microfluidic capillary systems. <i>Microfluidics and Nanofluidics</i> , 2015, 18, 357-366. | 1.0 | 34 |
| 44 | Printing Meets Lithography: Soft Approaches to High-Resolution Patterning. <i>Chimia</i> , 2002, 56, 527-542. | 0.3 | 33 |
| 45 | Generation of microisland cultures using microcontact printing to pattern protein substrates. <i>Journal of Neuroscience Methods</i> , 2012, 208, 10-17. | 1.3 | 33 |
| 46 | Two-Aperture Microfluidic Probes as Flow Dipoles: Theory and Applications. <i>Scientific Reports</i> , 2015, 5, 11943. | 1.6 | 30 |
| 47 | GAP-43 is key to mitotic spindle control and centrosome-based polarization in neurons. <i>Cell Cycle</i> , 2008, 7, 348-357. | 1.3 | 29 |
| 48 | Microarray-to-Microarray Transfer of Reagents by Snapping of Two Chips for Cross-Reactivity-Free Multiplex Immunoassays. <i>Analytical Chemistry</i> , 2012, 84, 4776-4783. | 3.2 | 27 |
| 49 | Tuning cell's surface affinity to direct cell specific responses to patterned proteins. <i>Biomaterials</i> , 2014, 35, 727-736. | 5.7 | 27 |
| 50 | Complementary oligonucleotides regulate induced fit ligand binding in duplexed aptamers. <i>Chemical Science</i> , 2017, 8, 2251-2256. | 3.7 | 27 |
| 51 | Taguchi Design-Based Optimization of Sandwich Immunoassay Microarrays for Detecting Breast Cancer Biomarkers. <i>Analytical Chemistry</i> , 2011, 83, 5767-5774. | 3.2 | 26 |
| 52 | Microfluidic multipoles theory and applications. <i>Nature Communications</i> , 2019, 10, 1781. | 5.8 | 26 |
| 53 | Nanocontact Printing of Proteins on Physiologically Soft Substrates to Study Cell Haptotaxis. <i>Langmuir</i> , 2016, 32, 13525-13533. | 1.6 | 22 |
| 54 | Neutrophil Chemotaxis in Moving Gradients. <i>Advanced Biology</i> , 2018, 2, 1700243. | 3.0 | 18 |

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|----|--|-----|-----------|
| 55 | Integrated microfluidic probe station. Review of Scientific Instruments, 2010, 81, 115107. | 0.6 | 17 |
| 56 | Straight SU-8 pins. Journal of Micromechanics and Microengineering, 2010, 20, 055001. | 1.5 | 16 |
| 57 | High-Performance Low-Cost Antibody Microarrays Using Enzyme-Mediated Silver Amplification. Journal of Proteome Research, 2015, 14, 1872-1879. | 1.8 | 16 |
| 58 | Mechanically Matched Silicone Brain Implants Reduce Brain Foreign Body Response. Advanced Materials Technologies, 2021, 6, 2000909. | 3.0 | 16 |
| 59 | Microfluidic perfusion system for culturing and imaging yeast cell microarrays and rapidly exchanging media. Lab on A Chip, 2010, 10, 2449. | 3.1 | 15 |
| 60 | Large Dynamic Range Digital Nanodot Gradients of Biomolecules Made by Low-Cost Nanocontact Printing for Cell Haptotaxis. Small, 2013, 9, 3308-3313. | 5.2 | 15 |
| 61 | Nanodot Gradients: Large Dynamic Range Digital Nanodot Gradients of Biomolecules Made by Low-Cost Nanocontact Printing for Cell Haptotaxis (Small 19/2013). Small, 2013, 9, 3186-3186. | 5.2 | 14 |
| 62 | Evaluating mixtures of 14 hygroscopic additives to improve antibody microarray performance. Analytical and Bioanalytical Chemistry, 2015, 407, 8451-8462. | 1.9 | 14 |
| 63 | Protein microarray spots are modulated by patterning method, surface chemistry and processing conditions. Biosensors and Bioelectronics, 2019, 130, 397-407. | 5.3 | 13 |
| 64 | Serial Analysis of 38 Proteins during the Progression of Human Breast Tumor in Mice Using an Antibody Colocalization Microarray*. Molecular and Cellular Proteomics, 2015, 14, 1024-1037. | 2.5 | 12 |
| 65 | Immunohistochemistry Microarrays. Analytical Chemistry, 2017, 89, 8620-8625. | 3.2 | 12 |
| 66 | A Wireless Implantable Passive Strain Sensor System. , 0, , . | | 11 |
| 67 | Addressable Nanowell Arrays Formed Using Reversibly Sealable Hybrid Elastomer-Metal Stencils. Analytical Chemistry, 2010, 82, 3848-3855. | 3.2 | 11 |
| 68 | Polymeric microfabricated electrochemical nanoprobe with addressable electrodes. Sensors and Actuators B: Chemical, 2011, 157, 691-696. | 4.0 | 11 |
| 69 | Two-level submicron high porosity membranes (2LHPM) for the capture and release of white blood cells (WBCs). Lab on A Chip, 2019, 19, 589-597. | 3.1 | 10 |
| 70 | Spatially Selective Dissection of Signal Transduction in Neurons Grown on Netrin-1 Printed Nanoarrays <i>via</i> Segmented Fluorescence Fluctuation Analysis. ACS Nano, 2017, 11, 8131-8143. | 7.3 | 9 |
| 71 | Energetics of reactions in a dielectric barrier discharge with argon carrier gas: VI PEG-like coatings. Plasma Processes and Polymers, 2018, 15, 1700132. | 1.6 | 9 |
| 72 | A versatile snap chip for high-density sub-nanoliter chip-to-chip reagent transfer. Scientific Reports, 2015, 5, 11688. | 1.6 | 8 |

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|----|---|-----|-----------|
| 73 | Bead-Extractor Assisted Ready-to-Use Reagent System (BEARS) for Immunoprecipitation Coupled to MALDI-MS. <i>Analytical Chemistry</i> , 2017, 89, 3834-3839. | 3.2 | 8 |
| 74 | Hydrogel droplet single-cell processing: DNA purification, handling, release, and on-chip linearization. <i>Biomicrofluidics</i> , 2018, 12, 024107. | 1.2 | 8 |
| 75 | PDMS Microfluidic Capillary Systems for Patterning Proteins on Surfaces and Performing Miniaturized Immunoassays. <i>Methods in Molecular Biology</i> , 2011, 671, 177-194. | 0.4 | 8 |
| 76 | A Microfluidic Chamber To Study the Dynamics of Muscle-Contraction-Specific Molecular Interactions. <i>Analytical Chemistry</i> , 2015, 87, 2582-2587. | 3.2 | 7 |
| 77 | Parallelized cytoindentation using convex micropatterned surfaces. <i>BioTechniques</i> , 2016, 61, 73-82. | 0.8 | 7 |
| 78 | The Mini Colon Model: a benchtop multi-bioreactor system to investigate the gut microbiome. <i>Gut Microbes</i> , 2022, 14, . | 4.3 | 7 |
| 79 | Patchiness in a microhabitat chip affects evolutionary dynamics of bacterial cooperation. <i>Lab on A Chip</i> , 2015, 15, 3723-3729. | 3.1 | 6 |
| 80 | The Microfluidic Probe: Operation and Use for Localized Surface Processing. <i>Journal of Visualized Experiments</i> , 2009, , . | 0.2 | 5 |
| 81 | Antibody Colocalization Microarray for Cross-Reactivity-Free Multiplexed Protein Analysis. <i>Methods in Molecular Biology</i> , 2017, 1619, 239-261. | 0.4 | 5 |
| 82 | Combinatorial nanodot stripe assay to systematically study cell haptotaxis. <i>Microsystems and Nanoengineering</i> , 2020, 6, 114. | 3.4 | 5 |
| 83 | Closing the system: production of viral antigen-presenting dendritic cells eliciting specific CD8+ T cell activation in fluorinated ethylene propylene cell culture bags. <i>Journal of Translational Medicine</i> , 2020, 18, 383. | 1.8 | 4 |
| 84 | Ordered, Random, Monotonic and Non-Monotonic Digital Nanodot Gradients. <i>PLoS ONE</i> , 2014, 9, e106541. | 1.1 | 4 |
| 85 | Microsqueeze force sensor useful as contact-free profilometer and viscometer. <i>Applied Physics Letters</i> , 2005, 86, 063507. | 1.5 | 3 |
| 86 | Design and Fabrication of Novel Compliant Electrostatically Actuated Microvalves. <i>Advanced Materials Research</i> , 2009, 74, 179-182. | 0.3 | 3 |
| 87 | Digitizing immunoassay on an antibody nanoarray to improve assay sensitivity. , 2013, , . | | 3 |
| 88 | Snap Chip for Cross-reactivity-free and Spotter-free Multiplexed Sandwich Immunoassays. <i>Journal of Visualized Experiments</i> , 2017, , . | 0.2 | 3 |
| 89 | Spatial Bias in Antibody Microarrays May Be an Underappreciated Source of Variability. <i>ACS Sensors</i> , 2021, 6, 1796-1806. | 4.0 | 3 |
| 90 | Preparation and Shear Modulus of Polyacrylamide Gels as Nerve Cell Culture. <i>AIP Conference Proceedings</i> , 2008, , . | 0.3 | 2 |

| # | ARTICLE | IF | CITATIONS |
|-----|---|-----|-----------|
| 91 | Bioactive Fibers: Hydrogel Templates for Rapid Manufacturing of Bioactive Fibers and 3D Constructs (Adv. Healthcare Mater. 14/2015). Advanced Healthcare Materials, 2015, 4, 2050-2050. | 3.9 | 2 |
| 92 | Precise Chip-to-Chip Reagent Transfer for Cross-Reactivity-Free Multiplex Sandwich Immunoassays. Methods in Molecular Biology, 2021, 2237, 141-149. | 0.4 | 2 |
| 93 | Microfabricated electrochemical probe for the rapid detection of proteins released by cells. , 2009, , . | | 1 |
| 94 | Lab on a chip Canada “ rapid diffusion over large length scales. Lab on A Chip, 2013, 13, 2438. | 3.1 | 1 |
| 95 | Systematic analysis of microfluidic probe design and operation. , 2014, 2014, 1567-70. | | 1 |
| 96 | Neutrophil dynamics during migration in microfluidic concentration gradients. , 2014, , . | | 1 |
| 97 | Microchannel-based capillary microfluidics: From simple networks to capillary circuits. , 2018, , . | | 1 |
| 98 | Microfluidic Probes to Process Surfaces, Cells, and Tissues. Regenerative Medicine, Artificial Cells and Nanomedicine, 2013, , 257-279. | 0.7 | 1 |
| 99 | See-through cartridge for real time monitoring of tumor cells capturing on microfilters. , 2014, , . | | 0 |
| 100 | Microfluidic Probe for Neural Organotypic Brain Tissue and Cell Perfusion. , 2018, , 139-154. | | 0 |