

# David Juncker

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

98  
papers

4,417  
citations

32  
h-index

65  
g-index

114  
ext. papers

5,018  
ext. citations

8.9  
avg, IF

5.61  
L-index

#	Paper	IF	Citations
98	Microfluidic chain reaction of structurally programmed capillary flow events.. <i>Nature</i> , <b>2022</b> , 605, 464-469	50.4	8
97	Precise Chip-to-Chip Reagent Transfer for Cross-Reactivity-Free Multiplex Sandwich Immunoassays. <i>Methods in Molecular Biology</i> , <b>2021</b> , 2237, 141-149	1.4	1
96	Emerging Technologies in Multi-Material Bioprinting. <i>Advanced Materials</i> , <b>2021</b> , e2104730	24	23
95	Spatial Bias in Antibody Microarrays May Be an Underappreciated Source of Variability. <i>ACS Sensors</i> , <b>2021</b> , 6, 1796-1806	9.2	0
94	Mechanically Matched Silicone Brain Implants Reduce Brain Foreign Body Response. <i>Advanced Materials Technologies</i> , <b>2021</b> , 6, 2000909	6.8	6
93	Combinatorial nanodot stripe assay to systematically study cell haptotaxis. <i>Microsystems and Nanoengineering</i> , <b>2020</b> , 6, 114	7.7	3
92	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> , <b>2020</b> , 18, 383	8.5	1
91	Two-level submicron high porosity membranes (2LHPM) for the capture and release of white blood cells (WBCs). <i>Lab on A Chip</i> , <b>2019</b> , 19, 589-597	7.2	6
90	Duplexed aptamers: history, design, theory, and application to biosensing. <i>Chemical Society Reviews</i> , <b>2019</b> , 48, 1390-1419	58.5	89
89	Microfluidic multipoles theory and applications. <i>Nature Communications</i> , <b>2019</b> , 10, 1781	17.4	16
88	Protein microarray spots are modulated by patterning method, surface chemistry and processing conditions. <i>Biosensors and Bioelectronics</i> , <b>2019</b> , 130, 397-407	11.8	9
87	Microfluidic Probe for Neural Organotypic Brain Tissue and Cell Perfusion <b>2018</b> , 139-154		
86	Comprehensive profiling of the ligand binding landscapes of duplexed aptamer families reveals widespread induced fit. <i>Nature Communications</i> , <b>2018</b> , 9, 343	17.4	28
85	Hydrogel droplet single-cell processing: DNA purification, handling, release, and on-chip linearization. <i>Biomicrofluidics</i> , <b>2018</b> , 12, 024107	3.2	7
84	Energetics of reactions in a dielectric barrier discharge with argon carrier gas: VI PEG-like coatings. <i>Plasma Processes and Polymers</i> , <b>2018</b> , 15, 1700132	3.4	4
83	Ensemble multicolour FRET model enables barcoding at extreme FRET levels. <i>Nature Nanotechnology</i> , <b>2018</b> , 13, 925-932	28.7	35
82	Capillary microfluidics in microchannels: from microfluidic networks to capillaric circuits. <i>Lab on A Chip</i> , <b>2018</b> , 18, 2323-2347	7.2	132

81	Neutrophil Chemotaxis in Moving Gradients. <i>Advanced Biology</i> , <b>2018</b> , 2, 1700243	3.5	8
80	Bead-Extractor Assisted Ready-to-Use Reagent System (BEARS) for Immunoprecipitation Coupled to MALDI-MS. <i>Analytical Chemistry</i> , <b>2017</b> , 89, 3834-3839	7.8	7
79	Fabrication of large-area polymer microfilter membranes and their application for particle and cell enrichment. <i>Lab on A Chip</i> , <b>2017</b> , 17, 1960-1969	7.2	28
78	Microfluidic Capillary Circuit for Rapid and Facile Bacteria Detection. <i>Analytical Chemistry</i> , <b>2017</b> , 89, 6846-6853	7.3	31
77	Complementary oligonucleotides regulate induced fit ligand binding in duplexed aptamers. <i>Chemical Science</i> , <b>2017</b> , 8, 2251-2256	9.4	20
76	Immunohistochemistry Microarrays. <i>Analytical Chemistry</i> , <b>2017</b> , 89, 8620-8625	7.8	10
75	Snap Chip for Cross-reactivity-free and Spotter-free Multiplexed Sandwich Immunoassays. <i>Journal of Visualized Experiments</i> , <b>2017</b> ,	1.6	3
74	Antibody Colocalization Microarray for Cross-Reactivity-Free Multiplexed Protein Analysis. <i>Methods in Molecular Biology</i> , <b>2017</b> , 1619, 239-261	1.4	4
73	Spatially Selective Dissection of Signal Transduction in Neurons Grown on Netrin-1 Printed Nanoarrays via Segmented Fluorescence Fluctuation Analysis. <i>ACS Nano</i> , <b>2017</b> , 11, 8131-8143	16.7	7
72	Parallelized cytoindentation using convex micropatterned surfaces. <i>BioTechniques</i> , <b>2016</b> , 61, 73-82	2.5	5
71	Autonomous microfluidic capillary circuits replicated from 3D-printed molds. <i>Lab on A Chip</i> , <b>2016</b> , 16, 3804-3814	7.2	34
70	Nanocontact Printing of Proteins on Physiologically Soft Substrates to Study Cell Haptotaxis. <i>Langmuir</i> , <b>2016</b> , 32, 13525-13533	4	15
69	Combination of Mechanical and Molecular Filtration for Enhanced Enrichment of Circulating Tumor Cells. <i>Analytical Chemistry</i> , <b>2016</b> , 88, 8510-7	7.8	34
68	NF- $\kappa$ B signalling and cell fate decisions in response to a short pulse of tumour necrosis factor. <i>Scientific Reports</i> , <b>2016</b> , 6, 39519	4.9	30
67	Integration of shallow gradients of Shh and Netrin-1 guides commissural axons. <i>PLoS Biology</i> , <b>2015</b> , 13, e1002119	9.7	48
66	Two-Aperture Microfluidic Probes as Flow Dipole: Theory and Applications. <i>Scientific Reports</i> , <b>2015</b> , 5, 11943	4.9	21
65	Patchiness in a microhabitat chip affects evolutionary dynamics of bacterial cooperation. <i>Lab on A Chip</i> , <b>2015</b> , 15, 3723-9	7.2	5
64	Evaluating mixtures of 14 hygroscopic additives to improve antibody microarray performance. <i>Analytical and Bioanalytical Chemistry</i> , <b>2015</b> , 407, 8451-62	4.4	11

63	Serpentine and leading-edge capillary pumps for microfluidic capillary systems. <i>Microfluidics and Nanofluidics</i> , <b>2015</b> , 18, 357-366	2.8	28
62	Bioactive Fibers: Hydrogel Templates for Rapid Manufacturing of Bioactive Fibers and 3D Constructs (Adv. Healthcare Mater. 14/2015). <i>Advanced Healthcare Materials</i> , <b>2015</b> , 4, 2050	10.1	2
61	A versatile snap chip for high-density sub-nanoliter chip-to-chip reagent transfer. <i>Scientific Reports</i> , <b>2015</b> , 5, 11688	4.9	6
60	Serial analysis of 38 proteins during the progression of human breast tumor in mice using an antibody colocalization microarray. <i>Molecular and Cellular Proteomics</i> , <b>2015</b> , 14, 1024-37	7.6	11
59	Hydrogel Templates for Rapid Manufacturing of Bioactive Fibers and 3D Constructs. <i>Advanced Healthcare Materials</i> , <b>2015</b> , 4, 2146-2153	10.1	109
58	Substrate-bound protein gradients to study haptotaxis. <i>Frontiers in Bioengineering and Biotechnology</i> , <b>2015</b> , 3, 40	5.8	32
57	High-performance low-cost antibody microarrays using enzyme-mediated silver amplification. <i>Journal of Proteome Research</i> , <b>2015</b> , 14, 1872-9	5.6	15
56	A microfluidic chamber to study the dynamics of muscle-contraction-specific molecular interactions. <i>Analytical Chemistry</i> , <b>2015</b> , 87, 2582-7	7.8	6
55	Tuning cell-surface affinity to direct cell specific responses to patterned proteins. <i>Biomaterials</i> , <b>2014</b> , 35, 727-36	15.6	23
54	Cross-reactivity in antibody microarrays and multiplexed sandwich assays: shedding light on the dark side of multiplexing. <i>Current Opinion in Chemical Biology</i> , <b>2014</b> , 18, 29-37	9.7	81
53	Humidified microcontact printing of proteins: universal patterning of proteins on both low and high energy surfaces. <i>Langmuir</i> , <b>2014</b> , 30, 12002-10	4	32
52	Microfluidic direct writer with integrated declogging mechanism for fabricating cell-laden hydrogel constructs. <i>Biomedical Microdevices</i> , <b>2014</b> , 16, 387-95	3.7	57
51	Systematic analysis of microfluidic probe design and operation. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , <b>2014</b> , 2014, 1567-70	0.9	1
50	Neutrophil dynamics during migration in microfluidic concentration gradients <b>2014</b> ,		1
49	Composite Living Fibers for Creating Tissue Constructs Using Textile Techniques. <i>Advanced Functional Materials</i> , <b>2014</b> , 24, 4060-4067	15.6	118
48	Ordered, random, monotonic and non-monotonic digital nanodot gradients. <i>PLoS ONE</i> , <b>2014</b> , 9, e106541	3.7	4
47	Capillarics: pre-programmed, self-powered microfluidic circuits built from capillary elements. <i>Lab on A Chip</i> , <b>2013</b> , 13, 4180-9	7.2	130
46	Fiber-based tissue engineering: Progress, challenges, and opportunities. <i>Biotechnology Advances</i> , <b>2013</b> , 31, 669-87	17.8	330

45	Nanodot Gradients: Large Dynamic Range Digital Nanodot Gradients of Biomolecules Made by Low-Cost Nanocontact Printing for Cell Haptotaxis (Small 19/2013). <i>Small</i> , <b>2013</b> , 9, 3186-3186	11	13
44	Large dynamic range digital nanodot gradients of biomolecules made by low-cost nanocontact printing for cell haptotaxis. <i>Small</i> , <b>2013</b> , 9, 3308-13	11	12
43	Microfluidic probes for use in life sciences and medicine. <i>Lab on A Chip</i> , <b>2013</b> , 13, 40-50	7.2	45
42	Digitizing immunoassay on an antibody nanoarray to improve assay sensitivity <b>2013</b> ,		2
41	Generation of microisland cultures using microcontact printing to pattern protein substrates. <i>Journal of Neuroscience Methods</i> , <b>2012</b> , 208, 10-7	3	32
40	Microarray-to-microarray transfer of reagents by snapping of two chips for cross-reactivity-free multiplex immunoassays. <i>Analytical Chemistry</i> , <b>2012</b> , 84, 4776-83	7.8	24
39	Immunochematographic assay on thread. <i>Analytical Chemistry</i> , <b>2012</b> , 84, 7736-43	7.8	105
38	Luminescent Iridium(III)-Containing Block Copolymers: Self-Assembly into Biotin-Labeled Micelles for Biodetection Assays. <i>ACS Macro Letters</i> , <b>2012</b> , 1, 954-959	6.6	31
37	Electrostatic actuator with liquid metal-elastomer compliant electrodes used for on-chip microvalving. <i>Journal of Micromechanics and Microengineering</i> , <b>2012</b> , 22, 097001	2	38
36	Antibody colocalization microarray: a scalable technology for multiplex protein analysis in complex samples. <i>Molecular and Cellular Proteomics</i> , <b>2012</b> , 11, M111.011460	7.6	65
35	Hydrogel droplet microarrays with trapped antibody-functionalized beads for multiplexed protein analysis. <i>Lab on A Chip</i> , <b>2011</b> , 11, 528-34	7.2	40
34	Microfluidic quadrupole and floating concentration gradient. <i>Nature Communications</i> , <b>2011</b> , 2, 464	17.4	68
33	Taguchi design-based optimization of sandwich immunoassay microarrays for detecting breast cancer biomarkers. <i>Analytical Chemistry</i> , <b>2011</b> , 83, 5767-74	7.8	21
32	Microfluidics made of yarns and knots: from fundamental properties to simple networks and operations. <i>Lab on A Chip</i> , <b>2011</b> , 11, 2618-24	7.2	89
31	Polymeric microfabricated electrochemical nanoprobe with addressable electrodes. <i>Sensors and Actuators B: Chemical</i> , <b>2011</b> , 157, 691-696	8.5	10
30	PDMS microfluidic capillary systems for patterning proteins on surfaces and performing miniaturized immunoassays. <i>Methods in Molecular Biology</i> , <b>2011</b> , 671, 177-94	1.4	6
29	Minimum information about a protein affinity reagent (MIAPAR). <i>Nature Biotechnology</i> , <b>2010</b> , 28, 650-3	44.5	37
28	Integrated microfluidic probe station. <i>Review of Scientific Instruments</i> , <b>2010</b> , 81, 115107	1.7	15

27	Straight SU-8 pins. <i>Journal of Micromechanics and Microengineering</i> , <b>2010</b> , 20, 055001	2	12
26	Addressable nanowell arrays formed using reversibly sealable hybrid elastomer-metal stencils. <i>Analytical Chemistry</i> , <b>2010</b> , 82, 3848-55	7.8	9
25	Chamber and microfluidic probe for microperfusion of organotypic brain slices. <i>Lab on A Chip</i> , <b>2010</b> , 10, 326-34	7.2	74
24	Microfluidic perfusion system for culturing and imaging yeast cell microarrays and rapidly exchanging media. <i>Lab on A Chip</i> , <b>2010</b> , 10, 2449-57	7.2	14
23	Wet-etching of structures with straight facets and adjustable taper into glass substrates. <i>Lab on A Chip</i> , <b>2010</b> , 10, 494-8	7.2	25
22	Microfabricated electrochemical probe for the rapid detection of proteins released by cells <b>2009</b> ,		1
21	Design and Fabrication of Novel Compliant Electrostatically Actuated Microvalves. <i>Advanced Materials Research</i> , <b>2009</b> , 74, 179-182	0.5	2
20	The microfluidic probe: operation and use for localized surface processing. <i>Journal of Visualized Experiments</i> , <b>2009</b> ,	1.6	4
19	GAP-43 is key to mitotic spindle control and centrosome-based polarization in neurons. <i>Cell Cycle</i> , <b>2008</b> , 7, 348-57	4.7	26
18	Preparation and Shear Modulus of Polyacrylamide Gels as Nerve Cell Culture. <i>AIP Conference Proceedings</i> , <b>2008</b> ,	0	1
17	Nonconductive polymer microresonators actuated by the Kelvin polarization force. <i>Applied Physics Letters</i> , <b>2006</b> , 89, 163506	3.4	35
16	Microsqueeze force sensor useful as contact-free profilometer and viscometer. <i>Applied Physics Letters</i> , <b>2005</b> , 86, 063507	3.4	2
15	Multipurpose microfluidic probe. <i>Nature Materials</i> , <b>2005</b> , 4, 622-8	27	163
14	Microfluidics for Processing Surfaces and Miniaturizing Biological Assays. <i>Advanced Materials</i> , <b>2005</b> , 17, 2911-2933	24	208
13	Simultaneous detection of C-reactive protein and other cardiac markers in human plasma using micromosaic immunoassays and self-regulating microfluidic networks. <i>Biosensors and Bioelectronics</i> , <b>2004</b> , 19, 1193-202	11.8	159
12	High-sensitivity miniaturized immunoassays for tumor necrosis factor alpha using microfluidic systems. <i>Lab on A Chip</i> , <b>2004</b> , 4, 563-9	7.2	178
11	Fabricating Microarrays of Functional Proteins Using Affinity Contact Printing. <i>Angewandte Chemie</i> , <b>2002</b> , 114, 2426-2429	3.6	16
10	Fabricating microarrays of functional proteins using affinity contact printing. <i>Angewandte Chemie - International Edition</i> , <b>2002</b> , 41, 2320-3	16.4	128

9	Printing Meets Lithography: Soft Approaches to High-Resolution Patterning. <i>Chimia</i> , <b>2002</b> , 56, 527-542	1.3	28
8	Autonomous microfluidic capillary system. <i>Analytical Chemistry</i> , <b>2002</b> , 74, 6139-44	7.8	327
7	Soft and rigid two-level microfluidic networks for patterning surfaces. <i>Journal of Micromechanics and Microengineering</i> , <b>2001</b> , 11, 532-541	2	56
6	. <i>IBM Journal of Research and Development</i> , <b>2001</b> , 45, 697-719	2.5	399
5	Microfluidic Networks Made of Poly(dimethylsiloxane), Si, and Au Coated with Polyethylene Glycol for Patterning Proteins onto Surfaces. <i>Langmuir</i> , <b>2001</b> , 17, 4090-4095	4	145
4	Formation of Gradients of Proteins on Surfaces with Microfluidic Networks. <i>Langmuir</i> , <b>2000</b> , 16, 9125-9130	4	66
3	A wireless implantable passive strain sensor system		5
2	3D-Printed Autonomous Capillary Circuits		1
1	Gravity-based microfiltration reveals unexpected prevalence of circulating tumor cell clusters in ovarian cancer		1