

Nils Paust

List of Publications by Year in descending order

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71
papers

2,369
citations

218677

26
h-index

214800

47
g-index

71
all docs

71
docs citations

71
times ranked

2424
citing authors

#	ARTICLE	IF	CITATIONS
1	ImmunoDisk® A Fully Automated Bead-Based Immunoassay Cartridge with All Reagents Pre-Stored. <i>Biosensors</i> , 2022, 12, 413.	4.7	3
2	The MRD disk: automated minimal residual disease monitoring by highly sensitive centrifugal microfluidic multiplex qPCR. <i>Lab on A Chip</i> , 2021, 21, 558-570.	6.0	1
3	A microfluidic cartridge for fast and accurate diagnosis of <i>Mycobacterium tuberculosis</i> infections on standard laboratory equipment. <i>Lab on A Chip</i> , 2021, 21, 1540-1548.	6.0	20
4	Centrifugal Microfluidic Integration of 4-Plex ddPCR Demonstrated by the Quantification of Cancer-Associated Point Mutations. <i>Processes</i> , 2021, 9, 97.	2.8	15
5	Point-of-Care System for HTLV-1 Proviral Load Quantification by Digital Mediator Displacement LAMP. <i>Micromachines</i> , 2021, 12, 159.	2.9	3
6	One-step, wash-free, bead-based immunoassay employing bound-free phase detection. <i>Analytica Chimica Acta</i> , 2021, 1153, 338280.	5.4	14
7	Rapid Tuberculosis Diagnostics Including Molecular First- and Second-Line Resistance Testing Based on a Novel Microfluidic DNA Extraction Cartridge. <i>Journal of Molecular Diagnostics</i> , 2021, 23, 643-650.	2.8	5
8	Blocking Protein Adsorption in Microfluidic Chips by a Hydrophobin Coating. <i>ACS Applied Polymer Materials</i> , 2021, 3, 3278-3286.	4.4	2
9	Miniaturization, Parallelization, and Automation of Endotoxin Detection by Centrifugal Microfluidics. <i>Analytical Chemistry</i> , 2021, 93, 8508-8516.	6.5	6
10	Eliminating viscosity bias in lateral flow tests. <i>Microsystems and Nanoengineering</i> , 2021, 7, 72.	7.0	7
11	Automated library preparation for whole genome sequencing by centrifugal microfluidics. <i>Analytica Chimica Acta</i> , 2021, 1182, 338954.	5.4	6
12	Automation of peptide desalting for proteomic liquid chromatography tandem mass spectrometry by centrifugal microfluidics. <i>Lab on A Chip</i> , 2021, 21, 2255-2264.	6.0	6
13	High Dynamic Range Digital Assay Enabled by Dual-Volume Centrifugal Step Emulsification. <i>Analytical Chemistry</i> , 2021, 93, 2854-2860.	6.5	10
14	Fully automated point-of-care differential diagnosis of acute febrile illness. <i>PLoS Neglected Tropical Diseases</i> , 2021, 15, e0009177.	3.0	16
15	OralDisk: A Chair-Side Compatible Molecular Platform Using Whole Saliva for Monitoring Oral Health at the Dental Practice. <i>Biosensors</i> , 2021, 11, 423.	4.7	13
16	Automation of Amplicon-Based Library Preparation for Next-Generation Sequencing by Centrifugal Microfluidics. <i>Analytical Chemistry</i> , 2020, 92, 12833-12841.	6.5	15
17	RespiDisk: a point-of-care platform for fully automated detection of respiratory tract infection pathogens in clinical samples. <i>Analyst</i> , 2020, 145, 7040-7047.	3.5	28
18	VectorDisk: A Microfluidic Platform Integrating Diagnostic Markers for Evidence-Based Mosquito Control. <i>Processes</i> , 2020, 8, 1677.	2.8	6

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19	Library preparation for next generation sequencing: A review of automation strategies. <i>Biotechnology Advances</i> , 2020, 41, 107537.	11.7	88
20	Point-of-care testing system for digital single cell detection of MRSA directly from nasal swabs. <i>Lab on A Chip</i> , 2020, 20, 2549-2561.	6.0	44
21	Tryptic digestion of human serum for proteomic mass spectrometry automated by centrifugal microfluidics. <i>Lab on A Chip</i> , 2020, 20, 2937-2946.	6.0	12
22	Versatile Tool for Droplet Generation in Standard Reaction Tubes by Centrifugal Step Emulsification. <i>Molecules</i> , 2020, 25, 1914.	3.8	15
23	Centrifugal Step Emulsification: How Buoyancy Enables High Generation Rates of Monodisperse Droplets. <i>Langmuir</i> , 2019, 35, 9809-9815.	3.5	24
24	Flow control for lateral flow strips with centrifugal microfluidics. <i>Lab on A Chip</i> , 2019, 19, 2718-2727.	6.0	15
25	Minimizing Ethanol Carry-Over in Centrifugal Microfluidic Nucleic Acid Extraction by Advanced Bead Handling and Management of Diffusive Mass Transfer. , 2019, , .		4
26	Labslice XL â€“ A Centrifugal Microfluidic Cartridge for the Automated Bio-Chemical Processing of Industrial Process Water. , 2019, , .		1
27	Automated serial dilutions for high-dynamic-range assays enabled by fill-level-coupled valving in centrifugal microfluidics. <i>Lab on A Chip</i> , 2019, 19, 2205-2219.	6.0	14
28	Review on pneumatic operations in centrifugal microfluidics. <i>Lab on A Chip</i> , 2019, 19, 3745-3770.	6.0	40
29	Temperature change rate actuated bubble mixing for homogeneous rehydration of dry pre-stored reagents in centrifugal microfluidics. <i>Lab on A Chip</i> , 2018, 18, 362-370.	6.0	20
30	Robust temperature change rate actuated valving and switching for highly integrated centrifugal microfluidics. <i>Lab on A Chip</i> , 2017, 17, 864-875.	6.0	18
31	Investigation on PEM water electrolysis cell design and components for a HyCon solar hydrogen generator. <i>International Journal of Hydrogen Energy</i> , 2017, 42, 13544-13553.	7.1	32
32	Network simulation-based optimization of centrifugo-pneumatic blood plasma separation. <i>Biomicrofluidics</i> , 2017, 11, 024114.	2.4	15
33	C-reactive protein and interleukin 6 microfluidic immunoassays with on-chip pre-stored reagents and centrifugo-pneumatic liquid control. <i>Lab on A Chip</i> , 2017, 17, 1666-1677.	6.0	32
34	A technology platform for digital nucleic acid diagnostics at the point of care. <i>Laboratoriums Medizin</i> , 2017, 41, 245-249.	0.6	4
35	System-level network simulation for robust centrifugal-microfluidic lab-on-a-chip systems. <i>Lab on A Chip</i> , 2016, 16, 1873-1885.	6.0	26
36	Digital droplet LAMP as a microfluidic app on standard laboratory devices. <i>Analytical Methods</i> , 2016, 8, 2750-2755.	2.7	46

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37	Digital droplet PCR on disk. Lab on A Chip, 2016, 16, 208-216.	6.0	114
38	LabDisk for SAXS: a centrifugal microfluidic sample preparation platform for small-angle X-ray scattering. Lab on A Chip, 2016, 16, 1161-1170.	6.0	44
39	Rigorous buoyancy driven bubble mixing for centrifugal microfluidics. Lab on A Chip, 2016, 16, 261-268.	6.0	28
40	Centrifugo-thermopneumatic fluid control for valving and aliquoting applied to multiplex real-time PCR on off-the-shelf centrifugal thermocycler. RSC Advances, 2015, 5, 89603-89611.	3.6	29
41	Centrifugal Step Emulsification can Produce Water in Oil Emulsions with Extremely High Internal Volume Fractions. Micromachines, 2015, 6, 1180-1188.	2.9	20
42	Centrifugal microfluidic platforms: advanced unit operations and applications. Chemical Society Reviews, 2015, 44, 6187-6229.	38.1	351
43	Pneumatic siphon valving and switching in centrifugal microfluidics controlled by rotational frequency or rotational acceleration. Microfluidics and Nanofluidics, 2015, 19, 1259-1269.	2.2	30
44	A microfluidic timer for timed valving and pumping in centrifugal microfluidics. Lab on A Chip, 2015, 15, 1545-1553.	6.0	45
45	Rapid and fully automated bacterial pathogen detection on a centrifugal-microfluidic LabDisk using highly sensitive nested PCR with integrated sample preparation. Lab on A Chip, 2015, 15, 3749-3759.	6.0	121
46	Centrifugo-pneumatic multi-liquid aliquoting – parallel aliquoting and combination of multiple liquids in centrifugal microfluidics. Lab on A Chip, 2015, 15, 3250-3258.	6.0	31
47	Centrifugal step emulsification applied for absolute quantification of nucleic acids by digital droplet RPA. Lab on A Chip, 2015, 15, 2759-2766.	6.0	150
48	Centrifugo-pneumatic sedimentation, re-suspension and transport of microparticles. Lab on A Chip, 2015, 15, 4133-4137.	6.0	17
49	Microfluidic vapor-diffusion barrier for pressure reduction in fully closed PCR modules. Lab on A Chip, 2015, 15, 1084-1091.	6.0	19
50	Three-Phase Multiscale Modeling of a LiCoO ₂ Cathode: Combining the Advantages of FIB-SEM Imaging and X-Ray Tomography. Advanced Energy Materials, 2015, 5, 1401612.	19.5	127
51	Electrochemical pesticide detection with AutoDip – a portable platform for automation of crude sample analyses. Lab on A Chip, 2015, 15, 704-710.	6.0	26
52	Centrifugal LabTube platform for fully automated DNA purification and LAMP amplification based on an integrated, low-cost heating system. Biomedical Microdevices, 2014, 16, 375-85.	2.8	13
53	A Combination of X-Ray Tomography and Carbon Binder Modeling: Reconstructing the Three Phases of LiCoO ₂ Li-ion Battery Cathodes. Advanced Energy Materials, 2014, 4, 1301617.	19.5	95
54	The LabTube – a novel microfluidic platform for assay automation in laboratory centrifuges. Lab on A Chip, 2014, 14, 1527-1537.	6.0	31

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55	Three-dimensional electrochemical Li-ion battery modelling featuring a focused ion-beam/scanning electron microscopy based three-phase reconstruction of a LiCoO ₂ cathode. <i>Electrochimica Acta</i> , 2014, 115, 131-139.	5.2	96
56	A versatile-deployable bacterial detection system for food and environmental safety based on LabTube-automated DNA purification, LabReader-integrated amplification, readout and analysis. <i>Analyst, The</i> , 2014, 139, 2788-2798.	3.5	7
57	Tomography based screening of flow field / current collector combinations for PEM water electrolysis. <i>RSC Advances</i> , 2014, 4, 58888-58894.	3.6	32
58	Leukocyte enrichment based on a modified pinched flow fractionation approach. <i>Microfluidics and Nanofluidics</i> , 2013, 14, 551-563.	2.2	28
59	Bubble Jet agent release cartridge for chemical single cell stimulation. <i>Biomedical Microdevices</i> , 2013, 15, 1-8.	2.8	15
60	Numerical Investigations on Electric Field Characteristics with Respect to Capacitive Detection of Free-Flying Droplets. <i>Sensors</i> , 2012, 12, 10550-10565.	3.8	4
61	Centrifugo-dynamic inward pumping of liquids on a centrifugal microfluidic platform. <i>Lab on A Chip</i> , 2012, 12, 5142.	6.0	64
62	Pneumatic dispensing of nano- to picoliter droplets of liquid metal with the StarJet method for rapid prototyping of metal microstructures. <i>Microfluidics and Nanofluidics</i> , 2012, 12, 75-84.	2.2	25
63	The effect of wetting properties on bubble dynamics and fuel distribution in the flow field of direct methanol fuel cells. <i>Journal of Power Sources</i> , 2011, 196, 8048-8056.	7.8	16
64	Controlled counter-flow motion of magnetic bead chains rolling along microchannels. <i>Microfluidics and Nanofluidics</i> , 2011, 10, 935-939.	2.2	30
65	Capillary driven movement of gas bubbles in tapered structures. <i>Microfluidics and Nanofluidics</i> , 2010, 9, 341-355.	2.2	24
66	Smaller structures taking the lead - analysis and simulation of structure size influences on binding kinetics down to the single molecule level. , 2010, , .		0
67	Capillary-driven pumping for passive degassing and fuel supply in direct methanol fuel cells. <i>Microfluidics and Nanofluidics</i> , 2009, 7, 531-543.	2.2	24
68	Self-regulating passive fuel supply for small direct methanol fuel cells operating in all orientations. <i>Journal of Power Sources</i> , 2009, 192, 442-450.	7.8	33
69	Passive water removal in fuel cells by capillary droplet actuation. <i>Sensors and Actuators A: Physical</i> , 2008, 143, 49-57.	4.1	37
70	Fully passive degassing and fuel supply in direct methanol fuel cells. <i>Proceedings of the IEEE International Conference on Micro Electro Mechanical Systems (MEMS)</i> , 2008, , .	0.0	5
71	Passive water management for μ fuel-cells using capillary microstructures. <i>Journal of Micromechanics and Microengineering</i> , 2008, 18, 104007.	2.6	12