

Nils Paust

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/7607551/publications.pdf>

Version: 2024-02-01

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	Centrifugal microfluidic platforms: advanced unit operations and applications. <i>Chemical Society Reviews</i> , 2015, 44, 6187-6229.	38.1	351
2	Centrifugal step emulsification applied for absolute quantification of nucleic acids by digital droplet RPA. <i>Lab on A Chip</i> , 2015, 15, 2759-2766.	6.0	150
3	Three-Phase Multiscale Modeling of a LiCoO_2 Cathode: Combining the Advantages of FIB-SEM Imaging and X-Ray Tomography. <i>Advanced Energy Materials</i> , 2015, 5, 1401612.	19.5	127
4	Rapid and fully automated bacterial pathogen detection on a centrifugal-microfluidic LabDisk using highly sensitive nested PCR with integrated sample preparation. <i>Lab on A Chip</i> , 2015, 15, 3749-3759.	6.0	121
5	Digital droplet PCR on disk. <i>Lab on A Chip</i> , 2016, 16, 208-216.	6.0	114
6	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
7	A Combination of X-Ray Tomography and Carbon Binder Modeling: Reconstructing the Three Phases of LiCoO_2 Li-Ion Battery Cathodes. <i>Advanced Energy Materials</i> , 2014, 4, 1301617.	19.5	95
8	Library preparation for next generation sequencing: A review of automation strategies. <i>Biotechnology Advances</i> , 2020, 41, 107537.	11.7	88
9	Centrifugo-dynamic inward pumping of liquids on a centrifugal microfluidic platform. <i>Lab on A Chip</i> , 2012, 12, 5142.	6.0	64
10	Digital droplet LAMP as a microfluidic app on standard laboratory devices. <i>Analytical Methods</i> , 2016, 8, 2750-2755.	2.7	46
11	A microfluidic timer for timed valving and pumping in centrifugal microfluidics. <i>Lab on A Chip</i> , 2015, 15, 1545-1553.	6.0	45
12	LabDisk for SAXS: a centrifugal microfluidic sample preparation platform for small-angle X-ray scattering. <i>Lab on A Chip</i> , 2016, 16, 1161-1170.	6.0	44
13	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
14	Review on pneumatic operations in centrifugal microfluidics. <i>Lab on A Chip</i> , 2019, 19, 3745-3770.	6.0	40
15	Passive water removal in fuel cells by capillary droplet actuation. <i>Sensors and Actuators A: Physical</i> , 2008, 143, 49-57.	4.1	37
16	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
17	Tomography based screening of flow field / current collector combinations for PEM water electrolysis. <i>RSC Advances</i> , 2014, 4, 58888-58894.	3.6	32
18	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

#	ARTICLE	IF	CITATIONS
19	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
20	The LabTube â€“ a novel microfluidic platform for assay automation in laboratory centrifuges. <i>Lab on A Chip</i> , 2014, 14, 1527-1537.	6.0	31
21	Centrifugo-pneumatic multi-liquid aliquoting â€“ parallel aliquoting and combination of multiple liquids in centrifugal microfluidics. <i>Lab on A Chip</i> , 2015, 15, 3250-3258.	6.0	31
22	Controlled counter-flow motion of magnetic bead chains rolling along microchannels. <i>Microfluidics and Nanofluidics</i> , 2011, 10, 935-939.	2.2	30
23	Pneumatic siphon valving and switching in centrifugal microfluidics controlled by rotational frequency or rotational acceleration. <i>Microfluidics and Nanofluidics</i> , 2015, 19, 1259-1269.	2.2	30
24	Centrifugo-thermopneumatic fluid control for valving and aliquoting applied to multiplex real-time PCR on off-the-shelf centrifugal thermocycler. <i>RSC Advances</i> , 2015, 5, 89603-89611.	3.6	29
25	Leukocyte enrichment based on a modified pinched flow fractionation approach. <i>Microfluidics and Nanofluidics</i> , 2013, 14, 551-563.	2.2	28
26	Rigorous buoyancy driven bubble mixing for centrifugal microfluidics. <i>Lab on A Chip</i> , 2016, 16, 261-268.	6.0	28
27	RespiDisk: a point-of-care platform for fully automated detection of respiratory tract infection pathogens in clinical samples. <i>Analyst</i> , The, 2020, 145, 7040-7047.	3.5	28
28	Electrochemical pesticide detection with AutoDip â€“ a portable platform for automation of crude sample analyses. <i>Lab on A Chip</i> , 2015, 15, 704-710.	6.0	26
29	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
30	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
31	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
32	Capillary driven movement of gas bubbles in tapered structures. <i>Microfluidics and Nanofluidics</i> , 2010, 9, 341-355.	2.2	24
33	Centrifugal Step Emulsification: How Buoyancy Enables High Generation Rates of Monodisperse Droplets. <i>Langmuir</i> , 2019, 35, 9809-9815.	3.5	24
34	Centrifugal Step Emulsification can Produce Water in Oil Emulsions with Extremely High Internal Volume Fractions. <i>Micromachines</i> , 2015, 6, 1180-1188.	2.9	20
35	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
36	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

#	ARTICLE	IF	CITATIONS
37	Microfluidic vapor-diffusion barrier for pressure reduction in fully closed PCR modules. Lab on A Chip, 2015, 15, 1084-1091.	6.0	19
38	Robust temperature change rate actuated valving and switching for highly integrated centrifugal microfluidics. Lab on A Chip, 2017, 17, 864-875.	6.0	18
39	Centrifugo-pneumatic sedimentation, re-suspension and transport of microparticles. Lab on A Chip, 2015, 15, 4133-4137.	6.0	17
40	The effect of wetting properties on bubble dynamics and fuel distribution in the flow field of direct methanol fuel cells. Journal of Power Sources, 2011, 196, 8048-8056.	7.8	16
41	Fully automated point-of-care differential diagnosis of acute febrile illness. PLoS Neglected Tropical Diseases, 2021, 15, e0009177.	3.0	16
42	Bubble Jet agent release cartridge for chemical single cell stimulation. Biomedical Microdevices, 2013, 15, 1-8.	2.8	15
43	Network simulation-based optimization of centrifugo-pneumatic blood plasma separation. Biomicrofluidics, 2017, 11, 024114.	2.4	15
44	Flow control for lateral flow strips with centrifugal microfluidics. Lab on A Chip, 2019, 19, 2718-2727.	6.0	15
45	Automation of Amplicon-Based Library Preparation for Next-Generation Sequencing by Centrifugal Microfluidics. Analytical Chemistry, 2020, 92, 12833-12841.	6.5	15
46	Versatile Tool for Droplet Generation in Standard Reaction Tubes by Centrifugal Step Emulsification. Molecules, 2020, 25, 1914.	3.8	15
47	Centrifugal Microfluidic Integration of 4-Plex ddPCR Demonstrated by the Quantification of Cancer-Associated Point Mutations. Processes, 2021, 9, 97.	2.8	15
48	Automated serial dilutions for high-dynamic-range assays enabled by fill-level-coupled valving in centrifugal microfluidics. Lab on A Chip, 2019, 19, 2205-2219.	6.0	14
49	One-step, wash-free, bead-based immunoassay employing bound-free phase detection. Analytica Chimica Acta, 2021, 1153, 338280.	5.4	14
50	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
51	OralDisk: A Chair-Side Compatible Molecular Platform Using Whole Saliva for Monitoring Oral Health at the Dental Practice. Biosensors, 2021, 11, 423.	4.7	13
52	Passive water management for μ fuel-cells using capillary microstructures. Journal of Micromechanics and Microengineering, 2008, 18, 104007.	2.6	12
53	Tryptic digestion of human serum for proteomic mass spectrometry automated by centrifugal microfluidics. Lab on A Chip, 2020, 20, 2937-2946.	6.0	12
54	High Dynamic Range Digital Assay Enabled by Dual-Volume Centrifugal Step Emulsification. Analytical Chemistry, 2021, 93, 2854-2860.	6.5	10

#	ARTICLE	IF	CITATIONS
55	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
56	Eliminating viscosity bias in lateral flow tests. <i>Microsystems and Nanoengineering</i> , 2021, 7, 72.	7.0	7
57	VectorDisk: A Microfluidic Platform Integrating Diagnostic Markers for Evidence-Based Mosquito Control. <i>Processes</i> , 2020, 8, 1677.	2.8	6
58	Miniaturization, Parallelization, and Automation of Endotoxin Detection by Centrifugal Microfluidics. <i>Analytical Chemistry</i> , 2021, 93, 8508-8516.	6.5	6
59	Automated library preparation for whole genome sequencing by centrifugal microfluidics. <i>Analytica Chimica Acta</i> , 2021, 1182, 338954.	5.4	6
60	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
61	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
62	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
63	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
64	A technology platform for digital nucleic acid diagnostics at the point of care. <i>Laboratoriums Medizin</i> , 2017, 41, 245-249.	0.6	4
65	Minimizing Ethanol Carry-Over in Centrifugal Microfluidic Nucleic Acid Extraction by Advanced Bead Handling and Management of Diffusive Mass Transfer. , 2019, , .		4
66	Point-of-Care System for HTLV-1 Proviral Load Quantification by Digital Mediator Displacement LAMP. <i>Micromachines</i> , 2021, 12, 159.	2.9	3
67	ImmunoDisk A Fully Automated Bead-Based Immunoassay Cartridge with All Reagents Pre-Stored. <i>Biosensors</i> , 2022, 12, 413.	4.7	3
68	Blocking Protein Adsorption in Microfluidic Chips by a Hydrophobin Coating. <i>ACS Applied Polymer Materials</i> , 2021, 3, 3278-3286.	4.4	2
69	Labslice XL A Centrifugal Microfluidic Cartridge for the Automated Bio-Chemical Processing of Industrial Process Water. , 2019, , .		1
70	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
71	Smaller structures taking the lead - analysis and simulation of structure size influences on binding kinetics down to the single molecule level. , 2010, , .		0