Abraham P Lee

List of Publications by Year in descending order

Source: https://exaly.com/author-pdf/1618673/publications.pdf

Version: 2024-02-01

161 papers 12,787 citations

52 h-index 23533 111 g-index

175 all docs

175 docs citations

175 times ranked

12342 citing authors

#	Article	IF	CITATIONS
1	Highâ€Throughput and Dosageâ€Controlled Intracellular Delivery of Large Cargos by an Acousticâ€Electric Microâ€Vortices Platform. Advanced Science, 2022, 9, e2102021.	11.2	18
2	Microfluidic Compartmentalization Platforms for Single Cell Analysis. Biosensors, 2022, 12, 58.	4.7	12
3	A microfluidic device for blood plasma separation and fluorescence detection of biomarkers using acoustic microstreaming. Sensors and Actuators A: Physical, 2021, 317, 112482.	4.1	20
4	Rapid isolation of circulating cancer associated fibroblasts by acoustic microstreaming for assessing metastatic propensity of breast cancer patients. Lab on A Chip, 2021, 21, 875-887.	6.0	22
5	Lab on a Chip – past, present, and future. Lab on A Chip, 2021, 21, 1197-1198.	6.0	1
6	The vascular niche in next generation microphysiological systems. Lab on A Chip, 2021, 21, 3244-3262.	6.0	13
7	NADH Autofluorescence Phasor Flim for the Metabolic Characterization of T Cell and Leukemia Cell in a Droplet. Biophysical Journal, 2021, 120, 359a.	0.5	O
8	Shear-dependent microvortices in liquid–liquid flow-focusing geometry: A theoretical, numerical, and experimental study. Physics of Fluids, 2021, 33, .	4.0	3
9	Investigating PLGA microparticle swelling behavior reveals an interplay of expansive intermolecular forces. Scientific Reports, 2021, 11, 14512.	3.3	29
10	An <i>in vitro</i> vascularized micro-tumor model of human colorectal cancer recapitulates <i>in vivo</i> responses to standard-of-care therapy. Lab on A Chip, 2021, 21, 1333-1351.	6.0	58
11	A modular microfluidic system based on a multilayered configuration to generate large-scale perfusable microvascular networks. Microsystems and Nanoengineering, 2021, 7, 4.	7.0	23
12	Label-free enrichment of fate-biased human neural stem and progenitor cells. Biosensors and Bioelectronics, 2020, 152, 111982.	10.1	19
13	Two in One: Echocardiographic Features of Right-Ventricular Diverticulum and Left-Ventricular Aneurysm in the Same Patient. CJC Open, 2020, 2, 719-721.	1.5	O
14	A Path Analysis of Physical Activity Intensity and Waist Circumference on the Lipid Profile: A Cross-sectional Study of NHANES Data. American Journal of Health Education, 2020, 51, 310-317.	0.6	1
15	Right ventricular outflow tract ventricular tachycardia as a result of uncontrolled hyperthyroidism. Journal of Electrocardiology, 2020, 62, 110-112.	0.9	O
16	2020 vision: celebrating the 20th year of <i>Lab on a Chip</i> . Lab on A Chip, 2020, 20, 1889-1890.	6.0	3
17	Core Competencies for Undergraduates in Bioengineering and Biomedical Engineering: Findings, Consequences, and Recommendations. Annals of Biomedical Engineering, 2020, 48, 905-912.	2.5	37
18	Cardiac tissue engineering: state-of-the-art methods and outlook. Journal of Biological Engineering, 2019, 13, 57.	4.7	89

#	Article	IF	CITATIONS
19	A mass manufacturable thermoplastic based microfluidic droplet generator on cyclic olefin copolymer. Journal of Micromechanics and Microengineering, 2019, 29, 055009.	2.6	11
20	Rapid immunodiagnostics of multiple viral infections in an acoustic microstreaming device with serum and saliva samples. Lab on A Chip, 2019, 19, 1524-1533.	6.0	22
21	High-throughput continuous dielectrophoretic separation of neural stem cells. Biomicrofluidics, 2019, 13, 064111.	2.4	38
22	Labelâ€Free Metabolic Classification of Single Cells in Droplets Using the Phasor Approach to Fluorescence Lifetime Imaging Microscopy. Cytometry Part A: the Journal of the International Society for Analytical Cytology, 2019, 95, 93-100.	1.5	6
23	Whole-blood sorting, enrichment and in situ immunolabeling of cellular subsets using acoustic microstreaming. Microsystems and Nanoengineering, 2018, 4, .	7.0	57
24	It's Electric: When Technology Gives a Boost to Stem Cell Science. Current Stem Cell Reports, 2018, 4, 116-126.	1.6	13
25	Rapid and label-free identification of single leukemia cells from blood in a high-density microfluidic trapping array by fluorescence lifetime imaging microscopy. Lab on A Chip, 2018, 18, 1349-1358.	6.0	53
26	High-throughput microfluidic single-cell trapping arrays for biomolecular and imaging analysis. Methods in Cell Biology, 2018, 148, 35-50.	1.1	8
27	An integrated microfluidic platform for size-selective single-cell trapping of monocytes from blood. Biomicrofluidics, 2018, 12, 054104.	2.4	17
28	Cell Surface N-Glycans Influence Electrophysiological Properties and Fate Potential of Neural Stem Cells. Stem Cell Reports, 2018, 11, 869-882.	4.8	35
29	Lipoplexâ€Mediated Singleâ€Cell Transfection via Droplet Microfluidics. Small, 2018, 14, e1802055.	10.0	36
30	A hydrostatic pressure-driven passive micropump enhanced with siphon-based autofill function. Lab on A Chip, 2018, 18, 2167-2177.	6.0	37
31	A vascularized and perfused organ-on-a-chip platform for large-scale drug screening applications. Lab on A Chip, 2017, 17, 511-520.	6.0	250
32	A truly Lego (sup) \hat{A}^{\otimes} (sup)-like modular microfluidics platform. Journal of Micromechanics and Microengineering, 2017, 27, 035004.	2.6	67
33	A high throughput microfluidic platform for size-selective enrichment of cell populations in tissue and blood samples. Analyst, The, 2017, 142, 2558-2569.	3.5	41
34	3D Anastomosed Microvascular Network Model with Living Capillary Networks and Endothelial Cell-Lined Microfluidic Channels. Methods in Molecular Biology, 2017, 1612, 325-344.	0.9	11
35	In situ mRNA isolation from a microfluidic single-cell array using an external AFM nanoprobe. Lab on A Chip, 2017, 17, 1635-1644.	6.0	34
36	Functionalized Vesicles by Microfluidic Device. Methods in Molecular Biology, 2017, 1572, 489-510.	0.9	1

#	Article	IF	Citations
37	High-efficiency single cell encapsulation and size selective capture of cells in picoliter droplets based on hydrodynamic micro-vortices. Lab on A Chip, 2017, 17, 4324-4333.	6.0	34
38	Microfluidic Micro/Nano Droplets. Springer Handbooks, 2017, , 537-558.	0.6	0
39	Cell-sized lipid vesicles for cell-cell synaptic therapies. Technology, 2017, 05, 201-213.	1.4	5
40	Evaluation of quantum dot immunofluorescence and a digital CMOS imaging system as an alternative to conventional organic fluorescence dyes and laser scanning for quantifying protein microarrays. Proteomics, 2016, 16, 1271-1279.	2.2	22
41	Integrated On-Chip Microfluidic Immunoassay for Rapid Biomarker Detection. Procedia Engineering, 2016, 159, 53-57.	1.2	13
42	3-D In-Bi-Sn Electrodes for Lab-on-PCB Cell Sorting. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2016, 6, 1295-1300.	2.5	3
43	3D microtumors in vitro supported by perfused vascular networks. Scientific Reports, 2016, 6, 31589.	3.3	301
44	Engineering anastomosis between living capillary networks and endothelial cell-lined microfluidic channels. Lab on A Chip, 2016, 16, 282-290.	6.0	197
45	An on-chip microfluidic pressure regulator that facilitates reproducible loading of cells and hydrogels into microphysiological system platforms. Lab on A Chip, 2016, 16, 868-876.	6.0	37
46	Post-Formation Shrinkage and Stabilization of Microfluidic Bubbles in Lipid Solution. Langmuir, 2016, 32, 1939-1946.	3.5	15
47	LCAT pump optimization for an integrated microfluidic droplet generator. Microfluidics and Nanofluidics, 2015, 18, 1265-1275.	2.2	13
48	LCAT pump optimization for an integrated microfluidic droplet generator. Microfluidics and Nanofluidics, 2015, 18, 1265-1275.	2.2	0
49	Increasing label-free stem cell sorting capacity to reach transplantation-scale throughput. Biomicrofluidics, 2014, 8, 064106.	2.4	26
50	LCAT DNA Shearing. Journal of the Association for Laboratory Automation, 2014, 19, 163-170.	2.8	10
51	A microfabricated, optically accessible device to study the effects of mechanical cues on collagen fiber organization. Biomedical Microdevices, 2014, 16, 255-267.	2.8	5
52	Membrane Biophysics Define Neuron and Astrocyte Progenitors in the Neural Lineage. Stem Cells, 2014, 32, 706-716.	3.2	33
53	Cavity-induced microstreaming for simultaneous on-chip pumping and size-based separation of cells and particles. Lab on A Chip, 2014, 14, 3860.	6.0	73
54	Low-cost experimentation for the study of droplet microfluidics. Lab on A Chip, 2014, 14, 3978-3986.	6.0	22

#	Article	IF	CITATIONS
55	A real-time characterization method to rapidly optimize molecular beacon signal for sensitive nucleic acids analysis. Analytical and Bioanalytical Chemistry, 2014, 406, 3059-3067.	3.7	4
56	Parallel generation of uniform fine droplets at hundreds of kilohertz in a flow-focusing module. Biomicrofluidics, 2013, 7, 34112.	2.4	55
57	Full range physiological mass transport control in 3D tissue cultures. Lab on A Chip, 2013, 13, 81-89.	6.0	112
58	Flow-focusing regimes for accelerated production of monodisperse drug-loadable microbubbles toward clinical-scale applications. Lab on A Chip, 2013, 13, 4816.	6.0	48
59	<i>In Vitro</i> Perfused Human Capillary Networks. Tissue Engineering - Part C: Methods, 2013, 19, 730-737.	2.1	337
60	A microfluidic concentration-gradient droplet array generator for the production of multi-color nanoparticles. Lab on A Chip, 2013, 13, 2815.	6.0	33
61	A microfluidic platform for generating large-scale nearly identical human microphysiological vascularized tissue arrays. Lab on A Chip, 2013, 13, 2990.	6.0	175
62	Passive droplet sorting using viscoelastic flow focusing. Lab on A Chip, 2013, 13, 1308.	6.0	53
63	The third decade of microfluidics. Lab on A Chip, 2013, 13, 1660.	6.0	21
64	Flow Rate Measurements, Methods. , 2013, , 1-18.		0
65	Novel on-demand droplet generation for selective fluid sample extraction. Biomicrofluidics, 2012, 6, 24103-2410310.	2.4	23
66	Scaled-up production of monodisperse, dual layer microbubbles using multi-array microfluidic module for medical imaging and drug delivery. Bubble Science, Engineering & Technology, 2012, 4, 12-20.	0.2	28
67	Advancing practical usage of microtechnology: a study of the functional consequences of dielectrophoresis on neural stem cells. Integrative Biology (United Kingdom), 2012, 4, 1223-1236.	1.3	43
68	A Laplace pressure based microfluidic trap for passive droplet trapping and controlled release. Biomicrofluidics, 2012, 6, 14110-1411013.	2.4	38
69	Lateral cavity acoustic transducer as an on-chip cell/particle microfluidic switch. Lab on A Chip, 2012, 12, 139-145.	6.0	69
70	Inspiring Engineering Minds to Advance Human Health: The Henry Samueli School of Engineering's Department of BME. IEEE Pulse, 2012, 3, 42-45.	0.3	4
71	Droplet microfluidics for amplification-free genetic detection of single cells. Lab on A Chip, 2012, 12, 3341.	6.0	81
72	Frequency discretization in dielectrophoretic assisted cell sorting arrays to isolate neural cells. Lab on A Chip, 2012, 12, 2182.	6.0	25

#	Article	IF	CITATIONS
73	Microfluidic Generation of Acoustically Active Nanodroplets. Small, 2012, 8, 1876-1879.	10.0	36
74	Microfluidic droplet sorting with a high frequency ultrasound beam. Lab on A Chip, 2012, 12, 2736.	6.0	47
75	Microfluidic Droplet Manipulations and Their Applications. , 2012, , 23-50.		21
76	Piezoelectrically driven vertical cavity acoustic transducers for the convective transport and rapid detection of DNA and protein binding to DNA microarrays with SPR imaging—A parametric study. Biosensors and Bioelectronics, 2012, 35, 37-43.	10.1	22
77	Acoustic particle trapping in a microfluidic device using frequency modulated signal., 2011,,.		0
78	Stable, biocompatible lipid vesicle generation by solvent extraction-based droplet microfluidics. Biomicrofluidics, 2011, 5, 44113-4411312.	2.4	127
79	Backscattering measurement from a single microdroplet. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2011, 58, 874-879.	3.0	8
80	$1\mbox{-Million}$ droplet array with wide-field fluorescence imaging for digital PCR. Lab on A Chip, 2011, 11, 3838.	6.0	274
81	High-speed, clinical-scale microfluidic generation of stable phase-change droplets for gas embolotherapy. Lab on A Chip, 2011, 11, 3990.	6.0	46
82	Precision Manufacture of Phase-Change Perfluorocarbon Droplets Using Microfluidics. Ultrasound in Medicine and Biology, 2011, 37, 1952-1957.	1.5	47
83	Biophysical Characteristics Reveal Neural Stem Cell Differentiation Potential. PLoS ONE, 2011, 6, e25458.	2.5	69
84	Tunable 3D droplet self-assembly for ultra-high-density digital micro-reactor arrays. Lab on A Chip, 2011, 11, 2509.	6.0	57
85	Particle manipulation in a microfluidic channel using acoustic trap. Biomedical Microdevices, 2011, 13, 779-788.	2.8	42
86	Lateral air cavities for microfluidic pumping with the use of acoustic energy. Microfluidics and Nanofluidics, 2011, 10, 1269-1278.	2.2	70
87	Targeted cell immobilization by ultrasound microbeam. Biotechnology and Bioengineering, $2011,108,1643-1650.$	3.3	71
88	Real time acoustic sensing of flowing microdroplets in a microfluidic device. , 2011, , .		0
89	Two-dimensional cell trapping by ultrasound microbeam. , 2011, , .		1
90	High-throughput single-cell pathogen detection on a droplet microfluidic platform. , 2011, , .		0

#	Article	IF	CITATIONS
91	Acoustic cavity transducers for the manipulation of cells and biomolecules. Proceedings of SPIE, 2010, , .	0.8	O
92	Improving Cell Loading Efficiency Into Microfluidic Devices Using LCATs., 2010,,.		0
93	Counting single molecules in sub-nanolitre droplets. Lab on A Chip, 2010, 10, 161-164.	6.0	52
94	Polymer–lipid microbubbles for biosensing and the formation of porous structures. Journal of Colloid and Interface Science, 2010, 344, 521-527.	9.4	28
95	Microfluidics structures for probing the dynamic behaviour of filamentous fungi. Microelectronic Engineering, 2010, 87, 786-789.	2.4	46
96	Motility of bacteria in microfluidic structures. Microelectronic Engineering, 2010, 87, 810-813.	2.4	27
97	Transverse Acoustic Trapping Using a Gaussian Focused Ultrasound. Ultrasound in Medicine and Biology, 2010, 36, 350-355.	1.5	58
98	Microfluidics: an emerging technology for food and health science. Annals of the New York Academy of Sciences, 2010, 1190, 186-192.	3.8	8
99	Acoustic responses of monodisperse lipid encapsulated microbubble contrast agents produced by flow focusing. Bubble Science, Engineering & Technology, 2010, 2, 33-40.	0.2	40
100	PLGA micro/nanosphere synthesis by droplet microfluidic solvent evaporation and extraction approaches. Lab on A Chip, 2010, 10, 1820.	6.0	139
101	Micro-/Nanodroplets in Microfluidic Devices. , 2010, , 553-569.		2
102	Fast Real Time Binding for Surface Assays Using VCAT Coupled With SPRI. , 2010, , .		0
103	Microfluidic cellular and molecular detection for lab-on-a-chip applications., 2009, 2009, 4147-9.		5
104	Acoustic characterization of individual monodisperse contrast agents with an optical-acoustical system. , 2009, , .		0
105	Ultrasonic analysis of precision-engineered acoustically active lipospheres produced by microfluidic. , 2009, , .		1
106	Single beam acoustic trapping. Applied Physics Letters, 2009, 95, 73701.	3.3	199
107	A slow-adapting microfluidic-based tactile sensor. Journal of Micromechanics and Microengineering, 2009, 19, 085002.	2.6	27
108	Dual frequency dielectrophoresis with interdigitated sidewall electrodes for microfluidic flowâ€through separation of beads and cells. Electrophoresis, 2009, 30, 782-791.	2.4	132

#	Article	IF	CITATIONS
109	Controllable microfluidic synthesis of multiphase drug arrying lipospheres for site argeted therapy. Biotechnology Progress, 2009, 25, 938-945.	2.6	68
110	Rapid label-free DNA analysis in picoliter microfluidic droplets using FRET probes. Microfluidics and Nanofluidics, 2009, 6, 391.	2.2	51
111	Engineering microscale cellular niches for three-dimensional multicellular co-cultures. Lab on A Chip, 2009, 9, 1740.	6.0	331
112	Nonviral gene vector formation in monodispersed picolitre incubator for consistent gene delivery. Lab on A Chip, 2009, 9, 2638.	6.0	39
113	Cutting edge: Microfluidic–micromagnetic blood cleansing device. Lab on A Chip, 2009, 9, 1167.	6.0	2
114	Lateral cavity acoustic transducer. Lab on A Chip, 2009, 9, 41-43.	6.0	87
115	10.1063/1.3206910.1., 2009, , .		4
116	Microfluidic sorting of droplets by size. Microfluidics and Nanofluidics, 2008, 4, 343-348.	2.2	76
117	Droplet microfluidics. Lab on A Chip, 2008, 8, 198.	6.0	2,385
118	Unique Dielectric Properties Distinguish Stem Cells and Their Differentiated Progeny. Stem Cells, 2008, 26, 656-665.	3.2	185
119	Rapid microfabrication of solvent-resistant biocompatible microfluidic devices. Lab on A Chip, 2008, 8, 983.	6.0	102
120	A slow-adapting microfluidic based tactile sensor. Proceedings of the IEEE International Conference on Micro Electro Mechanical Systems (MEMS), 2008, , .	0.0	1
121	Maintaining Monodispersity in a Microbubble Population Formed by Flow-Focusing. Langmuir, 2008, 24, 1745-1749.	3. 5	102
122	Tailoring the Size Distribution of Ultrasound Contrast Agents: Possible Method for Improving Sensitivity in Molecular Imaging. Molecular Imaging, 2007, 6, 7290.2007.00034.	1.4	109
123	Dielectrophoresis switching with vertical sidewall electrodes for microfluidic flow cytometry. Lab on A Chip, 2007, 7, 1114.	6.0	258
124	On-chip generation of microbubbles as a practical technology for manufacturing contrast agents for ultrasonic imaging. Lab on A Chip, 2007, 7, 463.	6.0	248
125	Side-Wall Vertical Electrodes for Lateral Field Microfluidic Applications. Journal of Microelectromechanical Systems, 2007, 16, 454-461.	2.5	78
126	Droplet coalescence by geometrically mediated flow in microfluidic channels. Microfluidics and Nanofluidics, 2007, 3, 495-499.	2.2	137

#	Article	IF	Citations
127	Micro/Nanodroplets in Microfluidic Devices. , 2007, , 571-590.		1
128	A Microfluidic Approach and Enhancement Towards a Colorimetric Enzyme-Linked-Immunosorbant-Assay for Diagnostic Detection of Infectious Diseases. , 2007, , .		0
129	Tailoring the size distribution of ultrasound contrast agents: possible method for improving sensitivity in molecular imaging. Molecular Imaging, 2007, 6, 384-92.	1.4	51
130	Monodisperse Lipoplex Generation by Integrated Picoliter Micro Reactor and Incubator., 2006,,.		0
131	Design and Fabrication of Vertical Electrodes in Microchannels for Particles/cells Sorting by Dielectrophoresis., 2006,,.		0
132	Formulation of Monodisperse Contrast Agents in Microfluidic Systems for Ultrasonic Imaging. , 2006, , .		1
133	Alternating droplet generation and controlled dynamic droplet fusion in microfluidic device for CdS nanoparticle synthesis. Lab on A Chip, 2006, 6, 174.	6.0	362
134	Controlled Microfluidic Encapsulation of Cells, Proteins, and Microbeads in Lipid Vesicles. Journal of the American Chemical Society, 2006, 128, 5656-5658.	13.7	249
135	Fungi Use Efficient Algorithms for the Exploration of Microfluidic Networks. Small, 2006, 2, 1212-1220.	10.0	72
136	Molecular motors-based micro- and nano-biocomputation devices. Microelectronic Engineering, 2006, 83, 1582-1588.	2.4	53
137	Monodispersed microfluidic droplet generation by shear focusing microfluidic device. Sensors and Actuators B: Chemical, 2006, 114, 350-356.	7.8	277
138	Control of serial microfluidic droplet size gradient by step-wise ramping of flow rates. Microfluidics and Nanofluidics, 2006, 3, 19-25.	2.2	16
139	A Multi-Functional Micro Total Analysis System ($1\frac{1}{4}$ TAS) Platform for Transport and Sensing of Biological Fluids using Microchannel Parallel Electrodes. , 2006, , 135-158.		1
140	Fungal growth in confined microfabricated networks. , 2005, , .		1
141	Polymer microstructures for cellular growth studies. , 2005, , .		0
142	Microfluidic separation of satellite droplets as the basis of a monodispersed micron and submicron emulsification system. Lab on A Chip, 2005, 5, 1178.	6.0	109
143	Human neural stem cell growth and differentiation in a gradient-generating microfluidic device. Lab on A Chip, 2005, 5, 401.	6.0	501
144	A Microfabrication Process for Polymer Microchannel With Embedded Vertical Electrodes for Microfluidic Applications., 2004,, 439.		2

#	Article	lF	Citations
145	Design of microfluidic channel geometries for the control of droplet volume, chemical concentration, and sorting. Lab on A Chip, 2004, 4, 292.	6.0	446
146	SPECIAL ISSUE FOREWORD. Lab on A Chip, 2004, 4, 31N.	6.0	17
147	Microfluidic flow transducer based on the measurement of electrical admittance. Lab on A Chip, 2004, 4, 7.	6.0	59
148	Special Issue on Biomedical Applications for MEMS and Microfluidics. Proceedings of the IEEE, 2004, 92, 3-5.	21.3	19
149	An AC Magnetohydrodynamic Microfluidic Switch for Micro Total Analysis Systems. Biomedical Microdevices, 2003, 5, 55-60.	2.8	53
150	Vertical-actuated electrostatic comb drive with in situ capacitive position correction for application in phase shifting diffraction interferometry. Journal of Microelectromechanical Systems, 2003, 12, 960-971.	2.5	77
151	Optimization of Shear Driven Droplet Generation in a Microfluidic Device., 2003,, 579.		1
152	Photothermal properties of shape memory polymer micro-actuators for treating stroke. Lasers in Surgery and Medicine, 2002, 30, 1-11.	2.1	282
153	Defense Applications of MEMS. MRS Bulletin, 2001, 26, 318-319.	3.5	41
154	An AC magnetohydrodynamic micropump. Sensors and Actuators B: Chemical, 2000, 63, 178-185.	7.8	361
155	Electrostatic comb drive for vertical actuation. , 1997, , .		6
156	Thin film shape memory alloy microactuators. Journal of Microelectromechanical Systems, 1996, 5, 270-282.	2.5	466
157	Mixed-sputter deposition of Ni-Ti-Cu shape memory films. Thin Solid Films, 1996, 274, 101-105.	1.8	86
158	A practical microgripper by fine alignment, eutectic bonding and SMA actuation. Sensors and Actuators A: Physical, 1996, 54, 755-759.	4.1	97
159	Repetitive impact testing of micromechanical structures. Sensors and Actuators A: Physical, 1993, 39, 73-82.	4.1	6
160	Impact, Friction, and Wear Testing of Microsamples of Polycrystalline Silicon. Materials Research Society Symposia Proceedings, 1992, 276, 67.	0.1	9
161	Polysilicon angular microvibromotors. Journal of Microelectromechanical Systems, 1992, 1, 70-76.	2.5	34