Jie Xu

List of Publications by Year in descending order

93 papers	3,796 citations	136950 32 h-index	133252 59 g-index
97 all docs	97 docs citations	97 times ranked	5359 citing authors

#	Article	IF	Citations
1	Do surfaces with mixed hydrophilic and hydrophobic areas enhance pool boiling?. Applied Physics Letters, 2010, 97, .	3.3	352
2	Black Phosphorus and its Biomedical Applications. Theranostics, 2018, 8, 1005-1026.	10.0	253
3	3D printing: an emerging tool for novel microfluidics and lab-on-a-chip applications. Microfluidics and Nanofluidics, 2016, 20, 1.	2.2	222
4	Detection of heavy metal by paper-based microfluidics. Biosensors and Bioelectronics, 2016, 83, 256-266.	10.1	188
5	Oscillating bubbles: a versatile tool for lab on a chip applications. Lab on A Chip, 2012, 12, 4216.	6.0	176
6	Recent Advancements in Functionalized Paper-Based Electronics. ACS Applied Materials & Interfaces, 2016, 8, 20501-20515.	8.0	150
7	Carbon nanotube modification of microbial fuel cell electrodes. Biosensors and Bioelectronics, 2016, 85, 536-552.	10.1	116
8	Detecting and Tracking Nosocomial Methicillin-Resistant Staphylococcus aureus Using a Microfluidic SERS Biosensor. Analytical Chemistry, 2013, 85, 2320-2327.	6.5	110
9	The effects of 3D channel geometry on CTC passing pressure â€“ towards deformability-based cancer cell separation. Lab on A Chip, 2014, 14, 2576-2584.	6.0	94
10	Drop on demand in a microfluidic chip. Journal of Micromechanics and Microengineering, 2008, 18, 065020.	2.6	89
11	Use of a porous membrane for gas bubble removal in microfluidic channels: physical mechanisms and design criteria. Microfluidics and Nanofluidics, 2010, 9, 765-772.	2.2	82
12	A high-power ultrasonic microreactor and its application in gasâ€“liquid mass transfer intensification. Lab on A Chip, 2015, 15, 1145-1152.	6.0	76
13	Application of microfluidic â€œlab-on-a-chipâ€•for the detection of mycotoxins in foods. Trends in Food Science and Technology, 2015, 46, 252-263.	15.1	75
14	Study of separation force in constrained surface projection stereolithography. Rapid Prototyping Journal, 2017, 23, 353-361.	3.2	73
15	On the Quantification of Mixing in Microfluidics. Journal of the Association for Laboratory Automation, 2014, 19, 488-491.	2.8	69
16	Acoustic Microfluidic Separation Techniques and Bioapplications: A Review. Micromachines, 2020, 11, 921.	2.9	69
17	Simple graphene chemiresistors as pH sensors: fabrication and characterization. Measurement Science and Technology, 2011, 22, 107002.	2.6	68
18	Hydrodynamics and mass transfer of oscillating gasâ€liquid flow in ultrasonic microreactors. AICHE Journal, 2016, 62, 1294-1307.	3.6	68

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19	On the design of deterministic dielectrophoresis for continuous separation of circulating tumor cells from peripheral blood cells. Electrophoresis, 2019, 40, 1486-1493.	2.4	67
20	Leidenfrost levitation: beyond droplets. Scientific Reports, 2012, 2, 797.	3.3	65
21	Entry effects of droplet in a micro confinement: Implications for deformation-based circulating tumor cell microfiltration. Biomicrofluidics, 2015, 9, 024108.	2.4	46
22	Microstructures Fabricated by Twoâ€Photon Polymerization and Their Remote Manipulation Techniques: Toward 3D Printing of Micromachines. Advanced Optical Materials, 2018, 6, 1701359.	7.3	46
23	Effects of electrothermal vortices on insulatorâ€based dielectrophoresis for circulating tumor cell separation. Electrophoresis, 2018, 39, 869-877.	2.4	46
24	A bubble-powered micro-rotor: conception, manufacturing, assembly and characterization. Journal of Micromechanics and Microengineering, 2007, 17, 2454-2460.	2.6	45
25	Acoustic bubble-based bidirectional micropump. Microfluidics and Nanofluidics, 2020, 24, 1.	2.2	44
26	Deformability-based circulating tumor cell separation with conical-shaped microfilters: Concept, optimization, and design criteria. Biomicrofluidics, 2015, 9, 034106.	2.4	42
27	Particle squeezing in narrow confinements. Microfluidics and Nanofluidics, 2018, 22, 1.	2.2	40
28	Soft lithography based on photolithography and two-photon polymerization. Microfluidics and Nanofluidics, 2018, 22, 1.	2.2	40
29	Trapping and control of bubbles in various microfluidic applications. Lab on A Chip, 2020, 20, 4512-4527.	6.0	37
30	Liquid marbles as thermally robust droplets: coating-assisted Leidenfrost-like effect. Soft Matter, 2011, 7, 11314.	2.7	34
31	Control and ultrasonic actuation of a gasâ€“liquid interface in a microfluidic chip. Journal of Micromechanics and Microengineering, 2007, 17, 609-616.	2.6	33
32	Oscillating bubbles in teardrop cavities for microflow control. Microfluidics and Nanofluidics, 2013, 14, 591-596.	2.2	33
33	Onset of particle trapping and release via acoustic bubbles. Lab on A Chip, 2016, 16, 3024-3032.	6.0	33
34	Freezing of a Liquid Marble. Langmuir, 2012, 28, 10324-10328.	3.5	32
35	Droplet squeezing through a narrow constriction: Minimum impulse and critical velocity. Physics of Fluids, 2017, 29, 072102.	4.0	32
36	Acoustofluidic micromixer on lab-on-a-foil devices. Sensors and Actuators B: Chemical, 2019, 287, 312-319.	7.8	32

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37	Comprehensive Detection and Discrimination of Campylobacter Species by Use of Confocal Micro-Raman Spectroscopy and Multilocus Sequence Typing. Journal of Clinical Microbiology, 2012, 50, 2932-2946.	3.9	31
38	Microbubble array for on-chip worm processing. Applied Physics Letters, 2013, 102, 023702.	3.3	30
39	Integration of nanosensors into a sealed microchannel in a hybrid lab-on-a-chip device. Sensors and Actuators B: Chemical, 2012, 166-167, 870-877.	7.8	29
40	Dry inoculation methods for nonfat milk powder. Journal of Dairy Science, 2019, 102, 77-86.	3.4	29
41	Rechargeable membraneless glucose biobattery: Towards solid-state cathodes for implantable enzymatic devices. Journal of Power Sources, 2017, 343, 103-108.	7.8	28
42	Superhydrophobic Surfaces Based on Fractal and Hierarchical Microstructures Using Twoâ€Photon Polymerization: Toward Flexible Superhydrophobic Films. Advanced Materials Interfaces, 2018, 5, 1801126.	3.7	28
43	Acoustic excitation of superharmonic capillary waves on a meniscus in a planar microgeometry. Physics of Fluids, 2007, 19, 108107.	4.0	27
44	Larval Zebrafish Lateral Line as a Model for Acoustic Trauma. ENeuro, 2018, 5, ENEURO.0206-18.2018.	1.9	27
45	Acoustofluidic stick-and-play micropump built on foil for single-cell trapping. Lab on A Chip, 2019, 19, 3045-3053.	6.0	24
46	Fabrication of SERSâ€Active Substrates using Silver Nanofilmâ€Coated Porous Anodic Aluminum Oxide for Detection of Antibiotics. Journal of Food Science, 2015, 80, N834-40.	3.1	23
47	Effect of Constrained Surface Texturing on Separation Force in Projection Stereolithography. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2018, 140, .	2.2	22
48	Moisture Content of Bacterial Cells Determines Thermal Resistance of Salmonella enterica Serotype Enteritidis PT 30. Applied and Environmental Microbiology, 2021, 87, .	3.1	22
49	Monolayer graphene chemiresistive biosensor for rapid bacteria detection in a microchannel. Sensors and Actuators Reports, 2020, 2, 100004.	4.4	21
50	High-Yield Fabrication of Graphene Chemiresistors With Dielectrophoresis. IEEE Nanotechnology Magazine, 2012, 11, 751-759.	2.0	20
51	How to Cool a Burn. Journal of Burn Care and Research, 2012, 33, 176-187.	0.4	19
52	A compact lab-on-a-chip nanosensor for glycerol detection. Applied Physics Letters, 2012, 100, .	3.3	19
53	Acoustophoresis in variously shaped liquid droplets. Soft Matter, 2011, 7, 10063.	2.7	18
54	Chemical, physical and morphological properties of bacterial biofilms affect survival of encased Campylobacter jejuni F38011 under aerobic stress. International Journal of Food Microbiology, 2016, 238, 172-182.	4.7	17

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55	Analysis on the three-dimensional coupled vibration of composite cylindrical piezoelectric transducers. Journal of the Acoustical Society of America, 2018, 143, 1206-1213.	1.1	17
56	On characterization of separation force for resin replenishment enhancement in 3D printing. Additive Manufacturing, 2017, 17, 151-156.	3.0	16
57	Gallium-Based Room-Temperature Liquid Metals: Actuation and Manipulation of Droplets and Flows. Frontiers in Mechanical Engineering, 2017, 3, .	1.8	16
58	Acoustic bubble for spheroid trapping, rotation, and culture: a tumor-on-a-chip platform (ABSTRACT) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5	6.0	14
59	Analysis on Coupled Vibration of a Radially Polarized Piezoelectric Cylindrical Transducer. Sensors, 2017, 17, 2850.	3.8	13
60	Vibrational modes prediction for water-air bubbles trapped in circular microcavities. Physics of Fluids, 2018, 30, .	4.0	13
61	Desiccation in oil protects bacteria in thermal processing. Food Research International, 2020, 137, 109519.	6.2	13
62	Study of ultrasound thrombolysis using acoustic bubbles in a microfluidic device. Lab on A Chip, 2021, 21, 3707-3714.	6.0	13
63	AC electroosmosis micromixing on a lab-on-a-foil electric microfluidic device. Sensors and Actuators B: Chemical, 2022, 359, 131611.	7.8	13
64	Nitrogen-doped graphene approach to enhance the performance of a membraneless enzymatic biofuel cell. Frontiers in Energy, 2018, 12, 233-238.	2.3	12
65	Air-Diffusion-Channel Constrained Surface Based Stereolithography for Three-Dimensional Printing of Objects With Wide Solid Cross Sections. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2018, 140, .	2.2	12
66	Gate-Tuned Temperature in a Hexagonal Boron Nitride-Encapsulated 2-D Semiconductor Device. IEEE Transactions on Electron Devices, 2018, 65, 4068-4072.	3.0	12
67	Drastic sensing enhancement using acoustic bubbles for surface-based microfluidic sensors. Sensors and Actuators B: Chemical, 2017, 243, 298-302.	7.8	10
68	In-situ synthesis of 3D ultra-small gold augmented graphene hybrid for highly sensitive electrochemical binding capability. Journal of Colloid and Interface Science, 2019, 553, 289-297.	9.4	10
69	Phononics of Graphene Interfaced with Flowing Ionic Fluid: An Avenue for High Spatial Resolution Flow Sensor Applications. ACS Nano, 2021, 15, 6998-7005.	14.6	10
70	Liquid marbles with in-flows and out-flows: characteristics and performance limits. Soft Matter, 2012, 8, 11604.	2.7	8
71	Design of a novel flow-and-shoot microbeam. Radiation Protection Dosimetry, 2011, 143, 344-348.	0.8	7
72	Uniform Flow Control for a Multipassage Microfluidic Sensor. Journal of Fluids Engineering, Transactions of the ASME, 2013, 135, .	1.5	7

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73	Liquid metal robotics: a new category of soft robotics on the horizon. Science Bulletin, 2015, 60, 1047-1048.	9.0	7
74	Electromechanical equivalent circuit of the radially polarized cylindrical piezoelectric transducer in coupled vibration. Journal of the Acoustical Society of America, 2019, 145, 1303-1312.	1.1	7
75	Biogenic preparation of doughnut shaped manganese nanograins embellished on graphene for superior interfacial binding of biomarkers. Journal of Materials Research and Technology, 2020, 9, 9896-9906.	5.8	7
76	Design of a microfluidic device with a non-traditional flow profile for on-chip damage to zebrafish sensory cells. Journal of Micromechanics and Microengineering, 2014, 24, 017001.	2.6	6
77	Towards a Dynamic Clamp for Neurochemical Modalities. Sensors, 2015, 15, 10465-10480.	3.8	6
78	Glucose measurement via Raman spectroscopy of graphene: Principles and operation. Nano Research, 2022, 15, 8697-8704.	10.4	6
79	Energy-harvesting bioreactors: toward self-powered microfluidic devices, a mini-review. Microfluidics and Nanofluidics, 2020, 24, 1.	2.2	4
80	The Effect of Acceleration on the Separation Force in Constrained-Surface Stereolithography. Applied Sciences (Switzerland), 2022, 12, 442.	2.5	4
81	A Monolithic 3D Printed Axisymmetric Co-Flow Single and Compound Emulsion Generator. Micromachines, 2022, 13, 188.	2.9	4
82	Zebrafish hair cell mechanics and physiology through the lens of noise-induced hair cell death. AIP Conference Proceedings, 2018, , .	0.4	3
83	An Autonomous Planning Method for UAV Based on Behavior-Conditional Model. , 2019, , .		3
84	Chapter 4. Paper-fluidic Based Sensing in Food Safety and Quality Analysis. Food Chemistry, Function and Analysis, 2017, , 95-120.	0.2	2
85	Water sorption characteristics of freeze-dried bacteria in low-moisture foods. International Journal of Food Microbiology, 2022, 362, 109494.	4.7	2
86	A meta-analysis of variability in conjunctival microvascular hemorheology metrics. Microvascular Research, 2022, 142, 104340.	2.5	2
87	Leidenfrost Cart. , 2012, , .		1
88	Microparticle Manipulation Based on the Bulk Acoustic Wave Combined with the Liquid Crystal Backflow Effect Driving in 2D/3D Platforms. ACS Omega, 0, , .	3.5	1
89	Acoustic Manipulation of Particles in Variously Shaped Liquid Droplets. , 2011, , .		0
90	Microfluidic Flow Control and Particle Transport Using Acoustically Actuated Bubbles in Teardrop Shaped Cavities. , 2012, , .		0

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91	Microbubble Array as a Versatile Tool for On-Chip Worm Processing. , 2012, , .		0
92	Piezoelectric Actuation in Multiphase Microfluidics. , 2013, , 1-10.		0
93	Liquid Marbles. , 2013, , 1-9.		0