Pei-Yu Chiou

List of Publications by Year
in descending order

57	1,753	331670 21	361022 35
papers	citations	h-index	g-index

59	59	59	2324
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Massively parallel delivery of large cargo into mammalian cells with light pulses. Nature Methods, 2015, 12, 439-444.	19.0	151
2	Phototransistor-based optoelectronic tweezers for dynamic cell manipulation in cell culture media. Lab on A Chip, 2010, 10, 165-172.	6.0	122
3	Optically Controlled Cell Discrimination and Trapping Using Optoelectronic Tweezers. IEEE Journal of Selected Topics in Quantum Electronics, 2007, 13, 235-243.	2.9	116
4	Type V Collagen in Scar Tissue Regulates the Size of Scar after Heart Injury. Cell, 2020, 182, 545-562.e23.	28.9	113
5	Pulsed laser triggered high speed microfluidic fluorescence activated cell sorter. Lab on A Chip, 2012, 12, 1378.	6.0	111
6	Flexible, multifunctional neural probe with liquid metal enabled, ultra-large tunable stiffness for deep-brain chemical sensing and agent delivery. Biosensors and Bioelectronics, 2019, 131, 37-45.	10.1	107
7	Modifying the Mitochondrial Genome. Cell Metabolism, 2016, 23, 785-796.	16.2	101
8	Light-Actuated AC Electroosmosis for Nanoparticle Manipulation. Journal of Microelectromechanical Systems, 2008, 17, 525-531.	2.5	97
9	Mitochondrial Transfer by Photothermal Nanoblade Restores Metabolite Profile in Mammalian Cells. Cell Metabolism, 2016, 23, 921-929.	16.2	84
10	Microfluidic integrated optoelectronic tweezers for single-cell preparation and analysis. Lab on A Chip, 2013, 13, 3721.	6.0	79
11	3D pulsed laser-triggered high-speed microfluidic fluorescence-activated cell sorter. Analyst, The, 2013, 138, 7308.	3.5	73
12	Pulsed Laser Activated Cell Sorting with Three Dimensional Sheathless Inertial Focusing. Small, 2014, 10, 1746-1751.	10.0	66
13	Photothermal Nanoblade for Large Cargo Delivery into Mammalian Cells. Analytical Chemistry, 2011, 83, 1321-1327.	6.5	64
14	Tunnel Dielectrophoresis for Tunable, Singleâ€Stream Cell Focusing in Physiological Buffers in Highâ€Speed Microfluidic Flows. Small, 2016, 12, 4343-4348.	10.0	53
15	Fabrication of 3D high aspect ratio PDMS microfluidic networks with a hybrid stamp. Lab on A Chip, 2015, 15, 1861-1868.	6.0	48
16	Optoelectronic tweezers integrated with lensfree holographic microscopy for wide-field interactive cell and particle manipulation on a chip. Lab on A Chip, 2013, 13, 2278.	6.0	41
17	Pulsed laser triggered high speed microfluidic switch. Applied Physics Letters, 2008, 93, .	3.3	35
18	Intracellular Photothermal Delivery for Suspension Cells Using Sharp Nanoscale Tips in Microwells. ACS Nano, 2019, 13, 10835-10844.	14.6	32

#	Article	IF	Citations
19	Self-Locking Optoelectronic Tweezers for Single-Cell and Microparticle Manipulation across a Large Area in High Conductivity Media. Scientific Reports, 2016, 6, 22630.	3.3	29
20	Liquid Metalâ€Based Multifunctional Micropipette for 4D Single Cell Manipulation. Advanced Science, 2018, 5, 1700711.	11.2	25
21	Stable transplantation of human mitochondrial DNA by high-throughput, pressurized isolated mitochondrial delivery. ELife, 2021, 10, .	6.0	25
22	Lift-off cell lithography for cell patterning with clean background. Lab on A Chip, 2018, 18, 3074-3078.	6.0	24
23	Tunnel dielectrophoresis for ultra-high precision size-based cell separation. Lab on A Chip, 2021, 21, 1049-1060.	6.0	24
24	Pressure-Driven Mitochondrial Transfer Pipeline Generates Mammalian Cells of Desired Genetic Combinations and Fates. Cell Reports, 2020, 33, 108562.	6.4	21
25	Deep, sub-wavelength acoustic patterning of complex and non-periodic shapes on soft membranes supported by air cavities. Lab on A Chip, 2019, 19, 3714-3725.	6.0	19
26	Plasmonic micropillars for precision cell force measurement across a large field-of-view. Applied Physics Letters, 2018, 112, 033701.	3.3	15
27	Photothermal Intracellular Delivery Using Gold Nanodisk Arrays. , 2020, 2, 1475-1483.		15
28	Heavily doped silicon electrode for dielectrophoresis in high conductivity media. Applied Physics Letters, 2017, 111, .	3.3	13
29	Differential Contributions of Actin and Myosin to the Physical Phenotypes and Invasion of Pancreatic Cancer Cells. Cellular and Molecular Bioengineering, 2020, 13, 27-44.	2.1	13
30	Field-programmable acoustic array for patterning micro-objects. Applied Physics Letters, 2020, 116, .	3.3	5
31	Characterization of a light switchable microelectrode array for retinal prosthesis. Applied Physics Letters, 2011, 99, 253702.	3.3	4
32	Direct Nuclear Delivery of DNA by Photothermal Nanoblade. Journal of the Association for Laboratory Automation, 2015, 20, 659-662.	2.8	4
33	Microfluidics: Tunnel Dielectrophoresis for Tunable, Single-Stream Cell Focusing in Physiological Buffers in High-Speed Microfluidic Flows (Small 32/2016). Small, 2016, 12, 4302-4302.	10.0	4
34	Distributed colorimetric interferometer for mapping the pressure distribution in a complex microfluidics network. Lab on A Chip, 2021, 21, 942-950.	6.0	3
35	A conceptual prototype of the light switchable microelectrode array (LSMA) for retinal prosthesis. , 2010, , .		2
36	Large Area Precision Cell Traction Force Measurements Using Gold Disk Mounted Micro-Pillars. , 2018, , .		2

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37	SMC Difference of Normal and Cancerous Human Urothelial Cells Quantified with an Opto-Electrokinetic Device. , 2018, , .		2
38	Generating stable isolated mitochondrial recipient clones in mammalian cells using MitoPunch mitochondrial transfer. STAR Protocols, 2021, 2, 100850.	1.2	2
39	Optoelectronic tweezers integrated with 3D microfluidic networks. , 2013, , .		1
40	Tunable dielectrophoresis for sheathless 3D focusing. , 2015, , .		1
41	Intracellular Delivery by Shape Anisotropic Magnetic Particleâ€“Induced Cell Membrane Cuts. Journal of the Association for Laboratory Automation, 2016, 21, 548-556.	2.8	1
42	Rapid fabrication of multifunctional microcapillary for four-dimensional single cell manipulation. , 2018, , .		1
43	A Novel Single-Cell Surgery Tool Using Photothermal Effects of Metal Nanoparticles. , 2007, , .		0
44	Light image patterned molecular delivery into live cells using gold particle coated substrate. , 2008, , .		0
45	Optoelectronic tweezers integrating with lensless imaging for wide field interactive optical manipulation. , 2009, , .		0
46	A laser driven optofluidic device for high-speed and precise volume-controlled droplet generation on demand. , 2010, , .		0
47	Driving multilayer PDMS based peristaltic pump with laser pulses. , 2011, , .		0
48	Real-time monitoring of photothermal porated mammalian cells by electric impedance sensors. , 2012, , .		0
49	Fabrication and performance of the light switchable microelectrode array for retinal prosthesis. , 2013, , .		0
50	Photothermal nanoblades for delivery of large-sized cargo into mammalian cells at high throughput. , 2016, , .		0
51	A hybrid silicon-PDMS multifunctional neural probe. , 2016, , .		0
52	Plasmonic micropillars for massively parallel precision cell force measurement. , 2017, , .		0
53	Pulsed laser activated cell sorter with dielectrophoretic single stream sheathless focusing. , 2017, , .		0
54	A high throughput electrorotation flow cytometer for single-cell analysis in continuous flows. , 2017, , .		0

#	Article	IF	Citations
55	Photothermal intracellular delivery with self-aligned cell seeding. , 2017, , .		0
56	Parallel Nanomechanical Indentation Platform Using Quantitative Phase Imaging. , 2018, , .		0
57	10.1063/5.0003147.1. , 2020, , .		0