

Aaron T Ohta

List of Publications by Year in descending order

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117
papers

4,270
citations

186265

28
h-index

168389

53
g-index

117
all docs

117
docs citations

117
times ranked

3407
citing authors

#	ARTICLE	IF	CITATIONS
1	Massively parallel manipulation of single cells and microparticles using optical images. Nature, 2005, 436, 370-372.	27.8	1,345
2	Dynamic manipulation and separation of individual semiconducting and metallic nanowires. Nature Photonics, 2008, 2, 86-89.	31.4	246
3	Operational Regimes and Physics Present in Optoelectronic Tweezers. Journal of Microelectromechanical Systems, 2008, 17, 342-350.	2.5	158
4	Dynamic Cell and Microparticle Control via Optoelectronic Tweezers. Journal of Microelectromechanical Systems, 2007, 16, 491-499.	2.5	155
5	EWOD-driven droplet microfluidic device integrated with optoelectronic tweezers as an automated platform for cellular isolation and analysis. Lab on A Chip, 2009, 9, 1732.	6.0	143
6	Micro-assembly using optically controlled bubble microrobots. Applied Physics Letters, 2011, 99, .	3.3	138
7	Phototransistor-based optoelectronic tweezers for dynamic cell manipulation in cell culture media. Lab on A Chip, 2010, 10, 165-172.	6.0	122
8	Optically Controlled Cell Discrimination and Trapping Using Optoelectronic Tweezers. IEEE Journal of Selected Topics in Quantum Electronics, 2007, 13, 235-243.	2.9	116
9	Continuous Electrowetting of Non-toxic Liquid Metal for RF Applications. IEEE Access, 2014, 2, 874-882.	4.2	102
10	Parallel single-cell light-induced electroporation and dielectrophoretic manipulation. Lab on A Chip, 2009, 9, 1714.	6.0	100
11	A Liquid-Metal Monopole Array With Tunable Frequency, Gain, and Beam Steering. IEEE Antennas and Wireless Propagation Letters, 2013, 12, 1388-1391.	4.0	98
12	Light-Actuated AC Electroosmosis for Nanoparticle Manipulation. Journal of Microelectromechanical Systems, 2008, 17, 525-531.	2.5	97
13	NanoPen: Dynamic, Low-Power, and Light-Actuated Patterning of Nanoparticles. Nano Letters, 2009, 9, 2921-2925.	9.1	93
14	Hydrogel microrobots actuated by optically generated vapour bubbles. Lab on A Chip, 2012, 12, 3821.	6.0	91
15	Self-Actuation of Liquid Metal via Redox Reaction. ACS Applied Materials & Interfaces, 2016, 8, 6-10.	8.0	84
16	Motile and non-motile sperm diagnostic manipulation using optoelectronic tweezers. Lab on A Chip, 2010, 10, 3213.	6.0	72
17	Optically actuated thermocapillary movement of gas bubbles on an absorbing substrate. Applied Physics Letters, 2007, 91, nihpa130823.	3.3	69
18	A Liquid-Metal Polarization-Pattern-Reconfigurable Dipole Antenna. IEEE Antennas and Wireless Propagation Letters, 2018, 17, 50-53.	4.0	65

#	ARTICLE	IF	CITATIONS
19	An opto-thermocapillary cell micromanipulator. Lab on A Chip, 2013, 13, 2285.	6.0	63
20	Rapid electrocapillary deformation of liquid metal with reversible shape retention. Micro and Nano Systems Letters, 2015, 3, .	3.7	60
21	Trap profiles of projector based optoelectronic tweezers (OET) with HeLa cells. Optics Express, 2009, 17, 5231.	3.4	50
22	Aqueous droplet manipulation by optically induced Marangoni circulation. Microfluidics and Nanofluidics, 2011, 11, 307-316.	2.2	47
23	Cooperative Micromanipulation Using the Independent Actuation of Fifty Microrobots in Parallel. Scientific Reports, 2017, 7, 3278.	3.3	43
24	Bubbles in microfluidics: an all-purpose tool for micromanipulation. Lab on A Chip, 2021, 21, 1016-1035.	6.0	40
25	Efficient single-cell poration by microsecond laser pulses. Lab on A Chip, 2015, 15, 581-588.	6.0	38
26	A Wideband, Pressure-Driven, Liquid-Tunable Frequency Selective Surface. IEEE Microwave and Wireless Components Letters, 2011, 21, 465-467.	3.2	36
27	Laser-induced microbubble poration of localized single cells. Lab on A Chip, 2014, 14, 1572-1578.	6.0	35
28	CubeSats: A bright future for nanosatellites. Open Engineering, 2011, 1, .	1.6	31
29	A tunable x-band substrate integrated waveguide cavity filter using reconfigurable liquid-metal perturbing posts. , 2015, , .		27
30	Heterogeneous integration of InGaAsP microdisk laser on a silicon platform using optofluidic assembly. Applied Physics A: Materials Science and Processing, 2009, 95, 967-972.	2.3	26
31	Interactive actuation of multiple opto-thermocapillary flow-addressed bubble microrobots. Robotics and Biomimetics, 2014, 1, 14.	1.7	25
32	Antifouling coatings for optoelectronic tweezers. Lab on A Chip, 2009, 9, 2952.	6.0	23
33	A Noninvasive, Motility Independent, Sperm Sorting Method and Technology to Identify and Retrieve Individual Viable Nonmotile Sperm for Intracytoplasmic Sperm Injection. Journal of Urology, 2010, 184, 2466-2472.	0.4	20
34	Optoelectronic Tweezers as a Tool for Parallel Single-Cell Manipulation and Stimulation. IEEE Transactions on Biomedical Circuits and Systems, 2009, 3, 424-431.	4.0	19
35	Micro-assembly using optically controlled bubble microrobots in saline solution. , 2012, , .		18
36	Deep learning neural network analysis of human blastocyst expansion from time-lapse image files. Reproductive BioMedicine Online, 2021, 42, 1075-1085.	2.4	18

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37	Liquid-Metal-Based Reconfigurable Components for RF Front Ends. IEEE Potentials, 2015, 34, 24-30.	0.3	17
38	Complex Permittivity of NaOH Solutions Used in Liquid-Metal Circuits. IEEE Access, 2019, 7, 150150-150156.	4.2	17
39	Cooperative micromanipulation using optically controlled bubble microrobots. , 2012, , .		15
40	Low-Cost Rapid Fabrication of Conformal Liquid-Metal Patterns. Applied Sciences (Switzerland), 2019, 9, 1565.	2.5	15
41	Frequency-tunable slot antenna using continuous electrowetting of liquid metal. , 2014, , .		14
42	Spray-On Liquid-Metal Electrodes for Graphene Field-Effect Transistors. Micromachines, 2019, 10, 54.	2.9	14
43	An electrically actuated liquid-metal switch with metastable switching states. , 2016, , .		13
44	Parallel assembly of nanowires using lateral-field optoelectronic tweezers. , 2008, , .		11
45	Liquid-metal-based phase shifter with reconfigurable EBG filling factor. , 2015, , .		11
46	An Electrically Actuated DC-to-11-GHz Liquid-Metal Switch. IEEE Access, 2018, 6, 1261-1266.	4.2	11
47	Frequency-Reconfigurable Dipole Antenna Using Liquid-Metal Pixels. International Journal of Antennas and Propagation, 2018, 2018, 1-6.	1.2	11
48	Physically Reconfigurable RF Liquid Electronics via Laplace Barriers. IEEE Transactions on Microwave Theory and Techniques, 2019, 67, 4881-4889.	4.6	11
49	Trapping and Transport of Silicon Nanowires Using Lateral-Field Optoelectronic Tweezers. , 2007, , .		10
50	A liquid-metal reconfigurable double-stub tuner. , 2012, , .		10
51	Localized Single-Cell Lysis and Manipulation Using Optothermally-Induced Bubbles. Micromachines, 2017, 8, 121.	2.9	10
52	A reconfigurable, liquid-metal-based low-pass filter with reversible tuning. , 2013, , .		8
53	Micromanipulation With Microrobots. IEEE Open Journal of Nanotechnology, 2021, 2, 8-15.	2.0	8
54	Semiconductor nanowire manipulation using optoelectronic tweezers. , 2007, , .		7

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55	A tunable low-pass filter using a liquid-metal reconfigurable periodic defected ground structure. , 2012, , .		7
56	A tunable amplifier using reconfigurable liquid-metal double-stub tuners. , 2015, , .		7
57	A Polarization-Reconfigurable Antipodal Dipole Antenna Using Liquid Metal. , 2018, , .		7
58	Optofluidics and optoelectronic tweezers. , 2008, , .		6
59	A liquid-metal reconfigurable Yagi-Uda monopole array. , 2013, , .		6
60	Automated actuation of multiple bubble microrobots using computer-generated holograms. Proceedings of SPIE, 2015, , .	0.8	6
61	Parallel actuation and independent addressing of many bubble microrobots. , 2016, , .		6
62	Optical Manipulation of Cells. Microsystems and Nanosystems, 2017, , 93-128.	0.1	6
63	Vision-assisted micromanipulation using closed-loop actuation of multiple microrobots. Robotics and Biomimetics, 2017, 4, 7.	1.7	6
64	Retrodirective Systems. , 0, , .		6
65	Metallic Nanoparticle Manipulation using Optoelectronic Tweezers. , 2009, , .		5
66	A liquid-metal tunable electromagnetic-bandgap microstrip filter. , 2012, , .		5
67	Collaborative micromanipulation using multiple bubble microrobots in an open reservoir. Micro and Nano Letters, 2017, 12, 891-896.	1.3	5
68	Enabling Reconfigurable All-Liquid Microcircuits via Laplace Barriers to Control Liquid Metal. , 2019, , .		5
69	Liquid-Metal Nodal Sheet for Reconfigurable Devices and Circuits. IEEE Access, 2020, 8, 167596-167603.	4.2	5
70	A liquid-metal reconfigurable log-periodic balun. , 2014, , .		4
71	Reconfigurable liquid-metal antenna with integrated surface-tension actuation. , 2016, , .		4
72	Electrically actuated liquid metal for reconfigurable RF devices. , 2016, , .		4

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73	An Electrically Actuated Liquid-Metal Gain-Reconfigurable Antenna. <i>International Journal of Antennas and Propagation</i> , 2018, 2018, 1-7.	1.2	4
74	Optically controlled manipulation of live cells using optoelectronic tweezers. , 2006, , .		3
75	Optoelectronic tweezers (OET) trap stiffness with HeLa cells. <i>Proceedings of SPIE</i> , 2008, , .	0.8	3
76	Assessment of Single Cell Viability Following Light-Induced Electroporation Through use of On-Chip Microfluidics. , 2009, , .		3
77	Automated micro-object caging using bubble microrobots. , 2016, , .		3
78	Parallel actuation of multiple bubble microrobots in saline solution in an open reservoir. , 2017, , .		3
79	Light-induced microbubble poration of localized cells. , 2013, 2013, 4482-5.		2
80	A planar liquid-metal shunt switch. , 2016, , .		2
81	Editorial for the Special Issue on Microdevices and Microsystems for Cell Manipulation. <i>Micromachines</i> , 2017, 8, 276.	2.9	2
82	Rapid measurement of impedance changes associated with developmental phases in <i>Artemia</i> cysts. , 2017, , .		2
83	Microporous Capacitive Sensors for Use in Surgical Procedures. , 2017, , .		2
84	RECi-P: Rapid, Economical Circuit Prototyping. , 2019, , .		2
85	Leveraging discrete modulation and liquid metal antennas for interference reduction. <i>Eurasip Journal on Wireless Communications and Networking</i> , 2021, 2021, .	2.4	2
86	Electrocapillary Actuation of Liquid Metal in Microchannels. <i>Micromachines</i> , 2022, 13, 572.	2.9	2
87	In-situ single cell electroporation using optoelectronic tweezers. , 2008, , .		1
88	Micro-assembly using optically controlled bubbles. , 2011, , .		1
89	Small satellites for rapid-response communication and situational assessment. , 2012, , .		1
90	Bubble-driven light-absorbing hydrogel microrobot for the assembly of bio-objects. , 2013, 2013, 5303-6.		1

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91	Closed-loop vision-assisted actuation of a bubble microrobot. , 2016, , .		1
92	Managing Interference Through Discrete Modulation and Liquid Metal Antennas. , 2018, , .		1
93	A Ferrofluidically Actuated Liquid-Metal RF Switch. , 2018, , .		1
94	Toward the Design of a Reconfigurable Liquid-Metal Pixel Array. , 2021, , .		1
95	Hybrid microdisk laser on a silicon platform using lateral-field optoelectronic tweezers assembly. , 2008, , .		1
96	Optical MEMS and nano-photonics for diagnostics. , 2008, , .		0
97	Assembly of III-V microdisk lasers on silicon using lateral-field optoelectronic tweezers. , 2008, , .		0
98	Optofluidic assembly of microdisk lasers on a silicon chip. , 2008, , .		0
99	Study of the dipole-dipole interaction between metallic nanowires trapped using Optoelectronic Tweezers (OET). , 2008, , .		0
100	NanoPen: Light-actuated patterning of nanoparticles. , 2009, , .		0
101	Force versus position profiles of HeLa cells trapped in phototransistor-based optoelectronic tweezers. Proceedings of SPIE, 2009, , .	0.8	0
102	An Optically Controlled 3D Cell Culturing System. Advances in OptoElectronics, 2011, 2011, 1-8.	0.6	0
103	Optofluidics for Lab-on-a-Chip. Advances in OptoElectronics, 2012, 2012, 1-2.	0.6	0
104	Liquid-metal reconfigurable RF components and antennas. , 2014, , .		0
105	Molecular delivery and transfection by laser-induced oscillating microbubbles. , 2014, , .		0
106	Feasibility of an Ultrasonic Bone-Marrow Harvester. , 2016, , .		0
107	Cell patterning in a hydrogel using optically induced dielectrophoresis. , 2016, , .		0
108	Instrument Mounted Liquid-Pressure Sensor System for Biomedical Applications. , 2017, , .		0

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109	Towards Flexible Patch Antennas: Characterization of Introduced Gaps. , 2017, , .		0
110	Measurement of Impedance Changes Associated with Developmental Phases in Artemia Cysts. , 2018, , .		0
111	Predictive Design of a Liquid-Metal Switch Actuated by Continuous Electrowetting. , 2020, , .		0
112	A Tunable Parallel-Plate Capacitor Using Liquid-Metal Actuation. , 2021, , .		0
113	Tunable Microwave Inductor Using Liquid-Metal Microfluidics. , 2021, , .		0
114	Two-Dimensional Actuation of Liquid-Metal Droplets for Hot-Spot Cooling. , 2021, , .		0
115	Optofluidic Assembly of InGaAsP Microdisk Lasers on Si Photonic Circuits with Submicron Alignment Accuracy. , 2009, , .		0
116	Corrections to "Complex Permittivity of NaOH Solutions Used in Liquid-Metal Circuits" IEEE Access, 2021, 9, 149398-149398.	4.2	0
117	Liquid-Metal, Flexible-Ceramic-Based Antenna for Extreme High-Temperature Conformal Seeker Applications. , 2022, , .		0