

Fumihito Arai

List of Publications by Year in descending order

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Version: 2024-02-01

532
papers

6,951
citations

94269

37
h-index

106150

65
g-index

536
all docs

536
docs citations

536
times ranked

5259
citing authors

#	ARTICLE	IF	CITATIONS
1	Stiffness Measurement of Organoids Using a Wide-Range Force Sensor Probe Fabricated Using a Quartz Crystal Resonator. IEEE Robotics and Automation Letters, 2022, 7, 2535-2540.	3.3	0
2	Magnetically Actuated Cell-Robot System: Precise Control, Manipulation, and Multimode Conversion. Small, 2022, 18, e2105414.	5.2	21
3	Magnetically Actuated Cell-Robot System: Precise Control, Manipulation, and Multimode Conversion (Small 15/2022). Small, 2022, 18, .	5.2	1
4	Bionic eye system mimicking microfluidic structure and intraocular pressure for glaucoma surgery training. PLoS ONE, 2022, 17, e0271171.	1.1	0
5	A force measurement platform for a vitreoretinal surgical simulator using an artificial eye module integrated with a quartz crystal resonator. Microsystems and Nanoengineering, 2022, 8, .	3.4	0
6	Evaluating Young's Modulus of Single Yeast Cells Based on Compression Using an Atomic Force Microscope with a Flat Tip. Microscopy and Microanalysis, 2021, 27, 392-399.	0.2	11
7	A Versatile Optoelectronic Tweezer System for Micro-Objects Manipulation: Transportation, Patterning, Sorting, Rotating and Storage. Micromachines, 2021, 12, 271.	1.4	18
8	Deformable ferrofluid-based millirobot with high motion accuracy and high output force. Applied Physics Letters, 2021, 118, .	1.5	29
9	Three-dimensional microchannel reflecting cell size distribution for on-chip production of platelet-like particles. Microfluidics and Nanofluidics, 2021, 25, 1.	1.0	1
10	Breakthrough in purification of fossil pollen for dating of sediments by a new large-particle on-chip sorter. Science Advances, 2021, 7, .	4.7	8
11	Weakening of resistance force by cell-ECM interactions regulate cell migration directionality and pattern formation. Communications Biology, 2021, 4, 808.	2.0	15
12	A portable acoustofluidic device for multifunctional cell manipulation and reconstruction. , 2021, , .		2
13	Microfluidic Bioreactor Made of Cyclo-Olefin Polymer for Observing On-Chip Platelet Production. Micromachines, 2021, 12, 1253.	1.4	4
14	Precise Control of Magnetized Macrophage Cell Robot for Targeted Drug Delivery. , 2021, , .		1
15	A Portable Remote Optoelectronic Tweezer System for Microobjects Manipulation. , 2021, , .		1
16	Injection of a Fluorescent Microsensor into a Specific Cell by Laser Manipulation and Heating with Multiple Wavelengths of Light. , 2020, , .		0
17	Detection and Control of Air Liquid Interface with an Open-Channel Microfluidic Chip for Circulating Tumor Cells Isolation from Human Whole Blood. IEEE Robotics and Automation Letters, 2020, , 1-1.	3.3	1
18	Raman image-activated cell sorting. Nature Communications, 2020, 11, 3452.	5.8	116

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19	Wide-range Load Sensor Using Vacuum Sealed Quartz Crystal Resonator for Simultaneous Biosignals Measurement on Bed. , 2020, , .		0
20	Intelligent image-activated cell sorting 2.0. Lab on A Chip, 2020, 20, 2263-2273.	3.1	93
21	Untethered Octopusâ€inspired Millirobot Actuated by Regular Tetrahedron Arranged Magnetic Field. Advanced Intelligent Systems, 2020, 2, 2070053.	3.3	7
22	Untethered Octopusâ€inspired Millirobot Actuated by Regular Tetrahedron Arranged Magnetic Field. Advanced Intelligent Systems, 2020, 2, 1900148.	3.3	25
23	High-Speed and High-Resolution On-Chip Pumping Utilizing Asymmetric Flow Resistors. , 2020, , .		1
24	Magnetically Driven Bionic Millirobots with a Low-Delay Automated Actuation System for Bioparticles Manipulation. Micromachines, 2020, 11, 231.	1.4	8
25	Cerebrovascular Model Equipped with Microsensors. IEJ Transactions on Sensors and Micromachines, 2020, 140, 354-362.	0.0	1
26	Magnetized Cell-robot Propelled by Magnetic Field for Cancer Killing. , 2020, , .		4
27	A novel and controllable cell-based microrobot in real vascular network for target tumor therapy. , 2020, , .		2
28	A novel portable cell sonoporation device based on open-source acoustofluidics. , 2020, , .		2
29	Continuous Mechanical Indexing of Single-Cell Spheroids Using a Robot-Integrated Microfluidic Chip. IEEE Robotics and Automation Letters, 2019, 4, 2973-2980.	3.3	17
30	High-speed microparticle isolation unlimited by Poisson statistics. Lab on A Chip, 2019, 19, 2669-2677.	3.1	23
31	Label-free chemical imaging flow cytometry by high-speed multicolor stimulated Raman scattering. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 15842-15848.	3.3	130
32	A practical guide to intelligent image-activated cell sorting. Nature Protocols, 2019, 14, 2370-2415.	5.5	71
33	On-chip rotational manipulation of microbeads and oocytes using acoustic microstreaming generated by oscillating asymmetrical microstructures. Biomicrofluidics, 2019, 13, 064103.	1.2	31
34	High-Speed On-Chip Mixing by Microvortex Generated by Controlling Local Jet Flow Using Dual Membrane Pumps. IEEE Robotics and Automation Letters, 2019, 4, 2839-2846.	3.3	4
35	Optical Measurement of Principal Stress on Retinal Model Using Digital Image Correlation for Vitreoretinal Surgery Simulator. , 2019, , .		0
36	High-speed On-chip Cell Sorting. Seibutsu Butsuri, 2019, 59, 248-254.	0.0	0

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37	High-throughput label-free molecular fingerprinting flow cytometry. <i>Science Advances</i> , 2019, 5, eaau0241.	4.7	102
38	Development of a Spherical Model with a 3D Microchannel: An Application to Glaucoma Surgery. <i>Micromachines</i> , 2019, 10, 297.	1.4	4
39	Hydrogel Heart Model with Temperature Memory Properties for Surgical Simulation. <i>Sensors</i> , 2019, 19, 1102.	2.1	8
40	Tensile Characterization of Thin Biomembrane. , 2019, , .		2
41	Hydrogel Fluorescence Microsensor with Fluorescence Recovery for Prolonged Stable Temperature Measurements. <i>Sensors</i> , 2019, 19, 5247.	2.1	6
42	Local traction force in the proximal leading process triggers nuclear translocation during neuronal migration. <i>Neuroscience Research</i> , 2019, 142, 38-48.	1.0	15
43	Miniaturization effect of electroosmotic self-propulsive microswimmer powered by biofuel cell. <i>ROBOMECH Journal</i> , 2019, 6, .	0.9	8
44	Bionic Humanoid: Brain Model for Neurosurgical Training. <i>The Proceedings of the Bioengineering Conference Annual Meeting of BED/JSME</i> , 2019, 2019.31, 2D16.	0.0	0
45	Comment on "Ghost cytometry" <i>Science</i> , 2019, 364, .	6.0	6
46	Assembly and Monitoring of Modular Tissue Structure of Micro-Fibers. , 2019, , .		0
47	Calibration process for the Young's modulus of a mechanically trapped microbead measured by atomic force microscopy. , 2019, , .		0
48	Fluorescence Microsensor Using Near-Infrared Light for Physiological Measurement inside Tissue. , 2019, , .		0
49	Wide-range load sensing of newborn's biosignals with quartz crystal resonator. , 2019, , .		0
50	Self-Propelled Swimming Microrobot Using Electroosmotic Propulsion and Biofuel Cell. <i>IEEE Robotics and Automation Letters</i> , 2018, 3, 1787-1792.	3.3	16
51	Fabrication of engineered tubular tissue for small blood vessels via three-dimensional cellular assembly and organization ex vivo. <i>Journal of Biotechnology</i> , 2018, 276-277, 46-53.	1.9	5
52	Time-Lapse Mechanical Characterization of Zona Pellucida Using a Cell Carrier Chip. <i>Journal of Microelectromechanical Systems</i> , 2018, 27, 464-471.	1.7	3
53	Parallel trapping of single motile cells based on vibration-induced flow. <i>Microfluidics and Nanofluidics</i> , 2018, 22, 1.	1.0	9
54	Measurement of the mechanical properties of single <i>Synechocystis</i> sp. strain PCC6803 cells in different osmotic concentrations using a robot-integrated microfluidic chip. <i>Lab on A Chip</i> , 2018, 18, 1241-1249.	3.1	28

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55	On-Chip Tunable Cell Rotation Using Acoustically Oscillating Asymmetrical Microstructures. <i>Micromachines</i> , 2018, 9, 596.	1.4	25
56	Human detection by a load sensor using quartz crystal resonator. , 2018, , .		0
57	Mechanical Characterization of a Single Yeast Cell Using a Robot Integrated Microfluidic Chip. , 2018, , .		0
58	On-chip platelet production using three dimensional microchannel. , 2018, , .		0
59	Influenza virus replication raises the temperature of cells. <i>Virus Research</i> , 2018, 257, 94-101.	1.1	10
60	Fine Positioning of Micro-Tubular-Tools for Investigating the Stimulus Response of Swimming Paramecium. , 2018, , .		1
61	Toward High-throughput Sorting of Single Spheroids Based on Mechano-index on a Microfluidic Chip. , 2018, , .		0
62	Manipulating Microrobots Using Balanced Magnetic and Buoyancy Forces. <i>Micromachines</i> , 2018, 9, 50.	1.4	15
63	Fabrication of 3D Capillary Vessel Models with Circulatory Connection Ports. <i>Micromachines</i> , 2018, 9, 101.	1.4	5
64	Three-Dimensional Blood Vessel Model with Temperature-Indicating Function for Evaluation of Thermal Damage during Surgery. <i>Sensors</i> , 2018, 18, 345.	2.1	3
65	A surgical simulator for peeling the inner limiting membrane during wet conditions. <i>PLoS ONE</i> , 2018, 13, e0196131.	1.1	16
66	Turbulence Activates Platelet Biogenesis to Enable Clinical Scale ExVivo Production. <i>Cell</i> , 2018, 174, 636-648.e18.	13.5	218
67	Intelligent Image-Activated Cell Sorting. <i>Cell</i> , 2018, 175, 266-276.e13.	13.5	395
68	Mechanical diagnosis of human erythrocytes by ultra-high speed manipulation unraveled critical time window for global cytoskeletal remodeling. <i>Scientific Reports</i> , 2017, 7, 43134.	1.6	32
69	Microfluidic chip having multi fluorescence microsensors for spatiotemporal sensing of culture environment. , 2017, , .		0
70	On-Chip Cell Gym. , 2017, , .		2
71	On-chip cell sorting by high-speed local-flow control using dual membrane pumps. <i>Lab on A Chip</i> , 2017, 17, 2760-2767.	3.1	59
72	Application of an indicator-immobilized-gel-sheet for measuring the pH surrounding a calcium phosphate-based biomaterial. <i>Journal of Biomaterials Applications</i> , 2017, 31, 1296-1304.	1.2	14

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73	Force sensor probe using quartz crystal resonator with wide measurement range for mechanical characterization of HepG2 spheroid. <i>Sensors and Actuators A: Physical</i> , 2017, 265, 202-210.	2.0	9
74	Arterial graft with elastic layer structure grown from cells. <i>Scientific Reports</i> , 2017, 7, 140.	1.6	31
75	Optically driven micro- and nanorobots. , 2017, , 193-236.		1
76	Microrobot with passive diamagnetic levitation for microparticle manipulations. <i>Journal of Applied Physics</i> , 2017, 122, .	1.1	23
77	On-chip microfluid induced by oscillation of microrobot for noncontact cell transportation. <i>Applied Physics Letters</i> , 2017, 111, .	1.5	27
78	Vortex generation in microchannel for on-demand mixing. , 2017, , .		0
79	Mechanical characterization of ultra-thin membrane using force sensing chip. , 2017, , .		1
80	Hydrogel fluorescent sensor for long term environmental measurement. , 2017, , .		0
81	On-chip micromanipulation method based on mode switching of vibration-induced asymmetric flow. , 2017, , .		3
82	Large Indentation Method to Measure Elasticity of Cell in Robot-Integrated Microfluidic Chip. <i>IEEE Robotics and Automation Letters</i> , 2017, 2, 2002-2007.	3.3	8
83	Mechanical characterization of a single <i>synechocystis</i> sp. PCC 6803 cell in different osmolarity solutions. , 2017, , .		0
84	Pulse wave measurement using wide range load sensor using quartz crystal resonator. , 2017, , .		0
85	Automated on-chip sorting system for separation of spheroid based on the mechanical characteristics. , 2017, , .		0
86	Modeling the dead-band in magnetic actuation. , 2017, , .		0
87	Fabrication of hollow branch structure without core by circumferential exposure for vascular model with temperature indicating function. , 2017, , .		0
88	Fabrication of retina model having photoelastic pressure sensor for vitreoretinal surgery simulator. , 2017, , .		0
89	Eye surgery simulator for training intracular operation of inner limiting membrane. , 2017, , .		3
90	Microrobotic Platform for Single Motile Microorganism Investigation. <i>Micromachines</i> , 2017, 8, 295.	1.4	7

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91	Improvement of the Measurement Range and Temperature Characteristics of a Load Sensor Using a Quartz Crystal Resonator with All Crystal Layer Components. <i>Sensors</i> , 2017, 17, 1067.	2.1	23
92	Rare cell isolation and recovery on open-channel microfluidic chip. <i>PLoS ONE</i> , 2017, 12, e0174937.	1.1	19
93	An angiogenesis platform using a cubic artificial eggshell with patterned blood vessels on chicken chorioallantoic membrane. <i>PLoS ONE</i> , 2017, 12, e0175595.	1.1	9
94	Manipulation and Immobilization of a Single Fluorescence Nanosensor for Selective Injection into Cells. <i>Sensors</i> , 2016, 16, 2041.	2.1	5
95	Temporal Transition of Mechanical Characteristics of HUVEC/MSC Spheroids Using a Microfluidic Chip with Force Sensor Probes. <i>Micromachines</i> , 2016, 7, 221.	1.4	23
96	The Influence of Virus Infection on the Extracellular pH of the Host Cell Detected on Cell Membrane. <i>Frontiers in Microbiology</i> , 2016, 7, 1127.	1.5	30
97	Real-time <i>in vitro</i> intravascular reconstruction and navigation for endovascular aortic stent grafting. <i>International Journal of Medical Robotics and Computer Assisted Surgery</i> , 2016, 12, 648-657.	1.2	18
98	Retinal vessel model fabricated on a curved surface structure for a simulation of microcannulation. <i>ROBOMECH Journal</i> , 2016, 3, .	0.9	1
99	Laser-driven gel microtool for single-cell manipulation based on temperature control with a photothermal conversion material. <i>Applied Physics Letters</i> , 2016, 109, 254102.	1.5	9
100	Real-time observation and stimulation of a single motile cell using high-speed microrobotic platform. , 2016, , .		0
101	Elasticity evaluation of single cell with uniaxial deformation in microfluidic chip. , 2016, , .		0
102	On-chip cell mechanical characterization using non-tube measurement system. , 2016, , .		0
103	3D blood vessel model with temperature Indicator for evaluating thermal damage during surgery. , 2016, , .		0
104	Improvement of sensitivity of force sensor probe using quartz crystal resonator. , 2016, , .		0
105	Mechanical characterization of spheroids by force sensor probe using quartz crystal resonator. , 2016, , .		0
106	High-speed on-chip local flow control by synchronized actuation of piezo-driven dual membrane pumps. , 2016, , .		0
107	Mechanical characterization system using on-chip probe with wide range actuation. , 2016, , .		0
108	Multi fluorescence microsensors for spatiotemporal measurement of culture environment in a microfluidic chip. , 2016, , .		0

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109	Stiffness-index map based on single cell-spheroid analysis using robot integrated microfluidic chip. , 2016, , .		0
110	Rapid injection of single magnetic nanobead into a specific living cell using laser-assisted injection. , 2016, , .		0
111	Catch, load and launch toward on-chip active cell evaluation. , 2016, , .		11
112	Continuous-wave laser-assisted injection of single magnetic nanobeads into living cells. Sensors and Actuators B: Chemical, 2016, 230, 298-305.	4.0	12
113	High-precision motion of magnetic microrobot with ultrasonic levitation for 3-D rotation of single oocyte. International Journal of Robotics Research, 2016, 35, 1445-1458.	5.8	80
114	Hybrid stent device of flow-diverting effect and stent-assisted coil embolization formed by fractal structure. Medical and Biological Engineering and Computing, 2016, 54, 831-841.	1.6	6
115	Artificial Eggshell with Micropatterned Surface for Inducing Blood Vessel Formation of Chick Embryo. The Proceedings of Mechanical Engineering Congress Japan, 2016, 2016, J0270102.	0.0	0
116	2G21 Cellular Isolation System for Rare cell using Open Microfluidic Chip. The Proceedings of the Bioengineering Conference Annual Meeting of BED/J SME, 2016, 2016.28, _2G21-1_- _2G21-4_.	0.0	0
117	High Speed and High Magnified Visual Tracking for Single Motile Cell Investigations. The Proceedings of Mechanical Engineering Congress Japan, 2016, 2016, J0230106.	0.0	0
118	Characteristics for administrating liquid medicine in passive drug delivery system. The Proceedings of Mechanical Engineering Congress Japan, 2016, 2016, J2230101.	0.0	0
119	2G22 High Sensitivity Detection of Influenza Virus Subtype by QCM mounting Chip. The Proceedings of the Bioengineering Conference Annual Meeting of BED/J SME, 2016, 2016.28, _2G22-1_- _2G22-4_.	0.0	0
120	On-chip monitoring of megakaryocytes in shear flow environment. , 2015, , .		0
121	Automated platform for rare cell isolation and pick-up using air-liquid interface control. , 2015, , .		0
122	Mechanical characterization of floating cell using whole chip deformation mechanism. , 2015, , .		0
123	Unconstraint measurement of vital information using near-infrared light sensor. , 2015, , .		0
124	Cell adhesion control of optically-driven microtool using thermo-sensitive gel and laser heating. , 2015, , .		0
125	On-chip 3D rotation of oocyte based on a vibration-induced local whirling flow. Microsystems and Nanoengineering, 2015, 1, .	3.4	73
126	A method to measure displacement of microscale structures with high resolution and large stroke for cellular characterization. , 2015, , .		0

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127	Mechanical characterization of oocyte using an opened microchannel environment. , 2015, , .		1
128	Cellular force measurement by load sensor using quartz crystal resonator. , 2015, , .		0
129	Automation of an on-chip cell mechanical characterization system for stiffness evaluation. , 2015, , .		0
130	Mechanical characterization of a single <i>Synechocystis</i> sp. PCC 6803. , 2015, , .		0
131	Inducing blood vessel formation using cubic eggshell with patterned surface. , 2015, , .		1
132	Quantitative assessment of manual and robotic microcannulation for eye surgery using new eye model. <i>International Journal of Medical Robotics and Computer Assisted Surgery</i> , 2015, 11, 210-217.	1.2	36
133	On-Chip Transportation and Measurement of Mechanical Characteristics of Oocytes in an Open Environment. <i>Micromachines</i> , 2015, 6, 648-659.	1.4	26
134	On-Chip Method to Measure Mechanical Characteristics of a Single Cell by Using Moiré Fringe. <i>Micromachines</i> , 2015, 6, 660-673.	1.4	34
135	Egg-in-Cube: Design and Fabrication of a Novel Artificial Eggshell with Functionalized Surface. <i>PLoS ONE</i> , 2015, 10, e0118624.	1.1	15
136	Fluid Separated Volumetric Flow Converter (FSVFC) for high speed and precise cell position control. , 2015, , .		0
137	Comparative Analysis of <i>kdp</i> and <i>ktr</i> Mutants Reveals Distinct Roles of the Potassium Transporters in the Model Cyanobacterium <i>Synechocystis</i> sp. Strain PCC 6803. <i>Journal of Bacteriology</i> , 2015, 197, 676-687.	1.0	39
138	Cell manipulation method based on vibration-induced local flow control in open chip environment. , 2015, , .		2
139	Vibration-assisted optical injection of a single fluorescent sensor into a target cell. <i>Sensors and Actuators B: Chemical</i> , 2015, 220, 40-49.	4.0	10
140	Novel microfluidic chip for extracting cell deformability. , 2015, , .		2
141	Fluorescence sensor array for non-contact measurement of oxygen consumption rate of single oocyte on a microfluidic chip. , 2015, , .		0
142	On-chip measurement of cellular mechanical properties using moiré fringe. , 2015, , .		3
143	On-chip cell transportation based on vibration-induced local flow in open chip environment. , 2015, , .		5
144	Mechanical characterization system of cyanobacteria using a robot integrated microfluidic chip. , 2015, , .		1

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145	Cell adhesion control of microtool using thermo-responsive polymer and laser heating. , 2015, , .		0
146	Optical heating of metallic nanoparticles for fast injection of nanoscale sensor into living cells. , 2015, , .		0
147	Wide Range Load Sensor Using Quartz Crystal Resonator for Detection of Biological Signals. IEEE Sensors Journal, 2015, 15, 1913-1919.	2.4	26
148	Quantitative study on appearance of microvessels in spectral endoscopic imaging. Journal of Biomedical Optics, 2015, 20, 036005.	1.4	5
149	On-chip actuation transmitter for enhancing the dynamic response of cell manipulation using a macro-scale pump. Biomicrofluidics, 2015, 9, 014114.	1.2	19
150	Avian Influenza Virus Infection of Immortalized Human Respiratory Epithelial Cells Depends upon a Delicate Balance between Hemagglutinin Acid Stability and Endosomal pH. Journal of Biological Chemistry, 2015, 290, 10627-10642.	1.6	28
151	Protection of wide-range QCR load sensor using robust outer case for stable detection of biosignals. , 2015, , .		0
152	1P1-N04 130 Hz High-Speed Cell Manipulation in a Microfluidic Channel. The Proceedings of JSME Annual Conference on Robotics and Mechatronics (Robomec), 2015, 2015, _1P1-N04_1-_1P1-N04_2.	0.0	0
153	On-chip Cellular Force Measurement Using Direct-outer-drive Mechanism. Transactions of the Society of Instrument and Control Engineers, 2015, 51, 2-7.	0.1	0
154	Cell Mechanical Characterization Based on On-Chip Robotics. , 2015, , 3-22.		1
155	1P1-L05 Automated rare cell isolation and pick-up using air-liquid interface control on open-chip. The Proceedings of JSME Annual Conference on Robotics and Mechatronics (Robomec), 2015, 2015, _1P1-L05_1-_1P1-L05_3.	0.0	0
156	Characteristics of Non-Contact Pulse Wave Measurement Using Near Infrared Sensor. The Abstracts of the International Conference on Advanced Mechatronics Toward Evolutionary Fusion of IT and Mechatronics ICAM, 2015, 2015.6, 80-81.	0.0	0
157	Development of a New Rapid Isolation Device for Circulating Tumor Cells (CTCs) Using 3D Palladium Filter and Its Application for Genetic Analysis. PLoS ONE, 2014, 9, e88821.	1.1	69
158	High Resolution Cell Positioning Based on a Flow Reduction Mechanism for Enhancing Deformability Mapping. Micromachines, 2014, 5, 1188-1201.	1.4	19
159	A Single Cell Extraction Chip Using Vibration-Induced Whirling Flow and a Thermo-Responsive Gel Pattern. Micromachines, 2014, 5, 681-696.	1.4	57
160	Selective and rapid cell injection of fluorescence sensor encapsulated in liposome using optical control of zeta potential and local mechanical stimulus by optical tweezers. , 2014, , .		2
161	Development of local environmental control system by combination of microfluidic chip and pipette. , 2014, , .		0
162	On-chip enucleation of an oocyte by untethered microrobots. Journal of Micromechanics and Microengineering, 2014, 24, 095004.	1.5	25

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163	Catheter manipulation training system based on quantitative measurement of catheter insertion and rotation. <i>Advanced Robotics</i> , 2014, 28, 1321-1328.	1.1	5
164	Microfluidic perfusion culture system for multilayer artery tissue models. <i>Biomicrofluidics</i> , 2014, 8, 064113.	1.2	16
165	Microrobotic platform for mechanical stimulation of swimming microorganism on a chip. , 2014, , .		5
166	Rapid injection of fluorescence sensor into a target cell by local mechanical stimulus of optical tweezers. , 2014, , .		0
167	On-line tracking and stimulation of swimming microorganism by on-chip microrobot. , 2014, , .		0
168	On-chip measurement of mechanical properties of a single cyanobacteria using direct-outer-drive mechanism. , 2014, , .		0
169	Detection of influenza virus subtype using quartz crystal microbalance. , 2014, , .		1
170	On-chip cell manipulation by vibration-induced whirling flow. , 2014, , .		0
171	Non-contact measurement of oxygen consumption rate of single oocyte using stripe-shaped fluorescence sensor on microfluidic chip. , 2014, , .		0
172	Quantitative image analyses of nuclear dynamics in migrating neurons. , 2014, , .		0
173	Open microfluidic chip using air-liquid interface for single cell isolation and aspiration. , 2014, , .		0
174	Measurement of cellular reactive force on a microfluidic chip using moiré fringe. , 2014, , .		0
175	Cell isolation system for rare Circulating Tumor Cell. , 2014, , .		3
176	Wide-range load sensor using quartz crystal resonator for biological signal detection. , 2014, , .		2
177	Fabrication of retinal microvessel model using three-dimensional membrane. , 2014, , .		0
178	Untethered micro-robot with gripping mechanism for on-chip cell surgery utilizing outer magnetic force. , 2014, , .		6
179	Virus purification and enrichment by hydroxyapatite chromatography on a chip. <i>Sensors and Actuators B: Chemical</i> , 2014, 201, 185-190.	4.0	27
180	Three dimensional rotation of bovine oocyte by using magnetically driven on-chip robot. , 2014, , .		9

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181	Design and fabrication of cubic eggshell containing chick embryo for a novel biomedical platform. , 2014, , .		1
182	Special Issue on Cutting Edge of Robotics in Japan 2014. Advanced Robotics, 2014, 28, 431-431.	1.1	0
183	Red blood cell fatigue evaluation based on the close-encountering point between extensibility and recoverability. Lab on A Chip, 2014, 14, 1135.	3.1	98
184	Geometrical alignment for improving cell evaluation in a microchannel with application on multiple myeloma red blood cells. RSC Advances, 2014, 4, 45050-45058.	1.7	30
185	A New Dimensionless Index for Evaluating Cell Stiffness-Based Deformability in Microchannel. IEEE Transactions on Biomedical Engineering, 2014, 61, 1187-1195.	2.5	47
186	Fabrication of an On-Chip Nanorobot Integrating Functional Nanomaterials for Single-Cell Punctures. IEEE Transactions on Robotics, 2014, 30, 59-67.	7.3	29
187	Miniaturized load sensor using quartz crystal resonator constructed through microfabrication and bonding. ROBOMECH Journal, 2014, 1, .	0.9	20
188	Multi-fluorescent micro-sensor for accurate measurement of pH and temperature variations in micro-environments. Sensors and Actuators B: Chemical, 2014, 203, 54-62.	4.0	26
189	Temperature Changes in Brown Adipocytes Detected with a Bimaterial Microcantilever. Biophysical Journal, 2014, 106, 2458-2464.	0.2	37
190	Non-contact measurement of oxygen consumption rate of single oocyte using fluorescence sensor. , 2014, , .		0
191	Improving the evaluation of cell deformability by different channel width in a microfluidic device. , 2014, , .		0
192	Virus Enrichment for Single Virus Infection by Using 3D Insulator Based Dielectrophoresis. PLoS ONE, 2014, 9, e94083.	1.1	27
193	3P1-B05 Comparison Between the Surface and Global Deformability of Red Blood Cells using AFM and Microfluidic Channel(Bio Assembler for 3D Cellular System Innovation (2)). The Proceedings of JSME Annual Conference on Robotics and Mechatronics (Robomec), 2014, 2014, _3P1-B05_1-_3P1-B05_2.	0.0	0
194	1C25 Rapid isolation chip for specific rare cells. The Proceedings of the Bioengineering Conference Annual Meeting of BED/JSME, 2014, 2014.26, 85-86.	0.0	0
195	3P2-F06 Rapid self-layout of rare cells by air-liquid interface control on open-channel microfluidic chip(Nano/Micro Fluid System). The Proceedings of JSME Annual Conference on Robotics and Mechatronics (Robomec), 2014, 2014, _3P2-F06_1-_3P2-F06_4.	0.0	0
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398	Sensor selection based on possibility measure for grinding system. , 1999, , .		4
399	Proposal of Reliability Based on Degree of Fuzziness for Evaluating Sensor Fusion. Journal of Japan Society for Fuzzy Theory and Systems, 1999, 11, 320-327.	0.0	0
400	Sensor Fusion System Using Recurrent Fuzzy Inference. Journal of Intelligent and Robotic Systems: Theory and Applications, 1998, 23, 201-216.	2.0	9
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403	Augmentation of safety in a teleoperation system for intravascular neurosurgery. Advanced Robotics, 1998, 13, 323-325.	1.1	23
404	Safety-oriented system in human-machine cooperative work using ER fluid and task-oriented sensing. Advanced Robotics, 1998, 13, 41-58.	1.1	0
405	Micro resonator for a tactile display. Advanced Robotics, 1997, 12, 135-153.	1.1	3
406	Distributed virtual environment for intravascular tele-surgery using multimedia telecommunication. , 1996, , .		19
407	Development of Air Conditioning Equipment Inspection Robot for Automatic Measurement of Outlet Air Volume.. Journal of the Robotics Society of Japan, 1996, 14, 720-732.	0.0	2
408	Force Measurement and Control of Micromanipulator. Transactions of the Society of Instrument and Control Engineers, 1996, 32, 1152-1159.	0.1	0
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415	Sensor selected fusion using selection rules acquired by ES (application to inference of surface) Tj ETQq1 1 0.784314 rgBT /Q1verlock	10	10
416	A model for operating spherical micro objects. , 0, , .		5
417	Assistance system for crane operation using multimodal display. , 0, , .		10
418	Structure Configuration Using Genetic Algorithm For Cellular Robotic System. , 0, , .		24
419	Mechanism and swimming experiment of micro mobile robot in water. , 0, , .		7
420	Steering mechanism of underwater micro mobile robot. , 0, , .		57
421	Approach to distributed micro robotic system. Development of micro line trace robot and autonomous micro robotic system. , 0, , .		13
422	Micro manipulation based on micro physics-strategy based on attractive force reduction and stress measurement. , 0, , .		99
423	Neural network controller for flexible plate considering spillover effect on learning process. , 0, , .		3
424	Steering mechanism and swimming experiment of micro mobile robot in water. , 0, , .		19
425	Operational assistance of the crane system by the interactive adaptation interface. , 0, , .		7
426	Adhesion forces reduction for micro manipulation based on micro physics. , 0, , .		58
427	Multimedia tele-surgery using high speed optical fiber network and its application to intravascular neurosurgery - system configuration and computer networked robotic implementation. , 0, , .		26
428	Integrated micro endeffector for dexterous micromanipulation. , 0, , .		5
429	Multimedia tele-operation of crane system supported by interactive adaptation interface. , 0, , .		2
430	Path planning and environment understanding based on distributed sensing in distributed autonomous robotic system. , 0, , .		3
431	Self-organizing multiple robotic system (a population control through biologically inspired immune) Tj ETQq1 1 0.784314 rgBT /Overlock	12	12
432	Cooperative path planning and navigation based on distributed sensing. , 0, , .		10

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434	New PZT actuator using piezoelectric thin film on parallel plate structure. , 0, , .		8
435	Vision based navigation system considering error recovery for autonomous mobile robot. , 0, , .		3
436	Manipulation of DNA molecule utilizing the conformational transition in the higher order structure of DNA. , 0, , .		3
437	Self rule organization in a non-signal urban traffic flow. , 0, , .		0
438	Micro resonator using electromagnetic actuator for tactile display. , 0, , .		37
439	Screening of single Escherichia coli by electric field and laser tweezer. , 0, , .		3
440	Microflow system and transportation of DNA molecule by dielectrophoretic force utilizing the conformational transition in the higher order structure of DNA molecule. , 0, , .		8
441	A new pick up and release method by heating for micromanipulation. , 0, , .		29
442	A new operational assistance system for rough terrain crane by interactive adaptation interface. , 0, , .		1
443	Cooperation of multiple robots in cellular robotic system based on information sharing. , 0, , .		1
444	Bio-micromanipulation (new direction for operation improvement). , 0, , .		16
445	Adhesion-type micro end effector for micromanipulation. , 0, , .		20
446	Evaluation on flexibility of swarm intelligent system. , 0, , .		17
447	Micro force sensor for intravascular neurosurgery and in vivo experiment. , 0, , .		27
448	3D position and orientation control method of micro object by dielectrophoresis. , 0, , .		6
449	Parallel beam micro sensor/actuator unit using PZT thin films and its application examples. , 0, , .		15
450	Vision based navigation system by variable template matching for autonomous mobile robot. , 0, , .		12

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451	The design and development of a four-fingered robot hand (adjustment of grasping position by using) Tj ETQq1 1 0.784314 rgBT /Overl FO		
452	Safety oriented mechanism and control using ER fluid in the joint. , 0, , .		4
453	Bio-micromanipulation system for high throughput screening of microbes in microchannel. , 0, , .		5
454	Force display method to improve safety in teleoperation system for intravascular neurosurgery. , 0, , .		14
455	A new ID acquiring method for personal identification system with fingerprint. , 0, , .		2
456	Recognizing environmental change through multiplex reinforcement learning in group robot system. , 0, , .		0
457	Vision based navigation system for autonomous mobile robot with global matching. , 0, , .		15
458	Group behavior control for MARS (micro autonomous robotic system). , 0, , .		16
459	Teleoperated laser manipulator with dielectrophoretic assistance for selective separation of a microbe. , 0, , .		9
460	3D calibration of bio-micromanipulator with local illumination. , 0, , .		0
461	VR training system with adaptive operational assistance considering straight-line transfer operation. , 0, , .		1
462	Sensor selection by reliability based on possibility measure. , 0, , .		8
463	3D bio-micromanipulation (bilateral control system using micro tri-axial force sensor). , 0, , .		6
464	Micro tri-axial force sensor for 3D bio-micromanipulation. , 0, , .		31
465	Assistance system for crane operation with haptic display - operational assistance to suppress round payload swing. , 0, , .		14
466	Microrobotics. , 0, , 187-198.		2
467	A preliminary study on cooperative visual support by mobile camera for mobile robot teleoperation. , 0, , .		2
468	Seamless tracking system with multiple cameras. , 0, , .		5

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470	High speed random separation of microobject in microchip by laser manipulator and dielectrophoresis. , 0, , .		37
471	Prototyping design and automation of micro/nano manipulation system. , 0, , .		37
472	3D viewpoint selection and bilateral control for bio-micromanipulation. , 0, , .		25
473	Dynamical analysis and suppression of human hunting in the excavator operation. , 0, , .		12
474	A novel fingerprint image sensing device and recognition algorithm for sensed fingerprint image. , 0, , .		0
475	Suppression of mechanical coupling for parallel beam gyroscope. , 0, , .		0
476	Microknife using ultrasonic vibration. , 0, , .		5
477	Artificial larynx using PZT ceramic vibrator as a sound source (the characteristic improvement of PZT) Tj ETQq1 1 0.784314 rgBT /Ove		0
478	Analysis of driving ability of bimorph-type bending actuators synthesized by hydrothermal method. , 0, , .		0
479	Flexible rope manipulation by dual manipulator system using vision sensor. , 0, , .		43
480	3D nanorobotic manipulations of multi-walled carbon nanotubes. , 0, , .		24
481	A relaxation system adapting to user's condition-identification of relationship between massage intensity and heart rate variability. , 0, , .		6
482	Three-dimensional bio-micromanipulation under the microscope. , 0, , .		27
483	Dome shaped touch sensor using PZT thin film made by hydrothermal method. , 0, , .		8
484	Tactile display which presents shear deformation on human finger. , 0, , .		2
485	3D attitude control system for bio-micromanipulation. , 0, , .		5
486	Mechanical micro-dissection by microknife using ultrasonic vibration and ultra fine touch probe sensor. , 0, , .		8

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487	Three-dimensional nanoassembly of multi-walled carbon nanotubes through nanorobotic manipulations by using electron-beam-induced deposition. , 0, , .		17
488	Micro touch sensor array made by hydrothermal method. , 0, , .		6
489	Human-robot mutual communication system. , 0, , .		18
490	Optimal configuration of micro touch sensor array structure. , 0, , .		1
491	Sensor selected fusion with sensor selection based gating neural network. , 0, , .		2
492	3D nanoassembly of carbon nanotubes through nanorobotic manipulations. , 0, , .		8
493	Facial expression of robot face for human-robot mutual communication. , 0, , .		15
494	New catheter driving method using linear stepping mechanism for intravascular neurosurgery. , 0, , .		89
495	Generalized facial expression of character face based on deformation model for human-robot communication. , 0, , .		5
496	Force measurement with pico-Newton order resolution using a carbon nanotube probe. , 0, , .		5
497	Rapid production of an in vitro anatomical model of human cerebral arteries based on CT images. , 0, , .		1
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499	Nanotube devices fabricated in a nano laboratory. , 0, , .		4
500	The pico-Newton order force measurement with a calibrated carbon nanotube probe. , 0, , .		2
501	Electron-beam-induced deposition of conductive nanostructures with carbon nanotube emitters. , 0, , .		3
502	Tungsten-rich deposits at anode using carbon nanotube emitters. , 0, , .		0
503	An in vitro membranous arterial model based on individual information for intravascular neurosurgery. , 0, , .		1
504	Development of character robots for human-robot mutual communication. , 0, , .		5

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505	Mood and task coordination of home robots. , 0, , .		7
506	Measurements of the bi-linear elasticity of identical carbon nanotubes. , 0, , .		3
507	Pico-Newton order force measurement using a calibrated carbon nanotube probe by electromechanical resonance. , 0, , .		8
508	Length control of carbon nanotubes through nanorobotic manipulations. , 0, , .		2
509	Situation based task selection mechanism for interactive robot system. , 0, , .		2
510	A New Application of synchrotron radiation to the carbon nanotubes - shape control and purification. , 0, , .		0
511	Hybrid nanorobotic manipulation system inside scanning electron microscope and transmission electron microscope. , 0, , .		10
512	Transparent tactile feeling device for touch-screen interface. , 0, , .		1
513	Ultra-small site temperature sensing by carbon nanotube thermal probes. , 0, , .		20
514	Recent topics of micro and nano mechatronics. , 0, , .		0
515	Patient-tailored anatomical model of cerebral artery for simulating endovascular intervention. , 0, , .		0
516	Carbon nanotubes based position sensors. , 0, , .		9
517	Three dimensional photoelastic stress analysis on patient-tailored anatomical model of cerebral artery. , 0, , .		2
518	Sensitivity adjustment based on resonant frequency change for tactile sensing. , 0, , .		0
519	Estimation of sleep cycle and quality based on nonlinear analysis of heart rate variability. , 0, , .		1
520	Nanolaboratory - a prototype nanomanufacturing system. , 0, , .		3
521	Manipulation of deformable linear objects with knot invariant to classify condition. , 0, , .		2
522	Laser Manipulation and Fabrication of Functional Microtool Using Photo-crosslinkable Resin. , 0, , .		0

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523	Towards Linear Nano Servomotors with Integrated Position Sensing. , 0, , .		7
524	Novel Force Sensor Using Vibrating Piezoelectric Element. , 0, , .		4
525	Comfortable environment for human by IRT based adaptive and intelligent interface. , 0, , .		0
526	Strategy of Picking Up Thin Plate by Robot Hand Using Deformation of Soft Fingertip. , 0, , .		10
527	Adaptive human interface for refreshing sleep based on biological rhythm. , 0, , .		2
528	In vitro patient-specific model of cerebral artery for evaluating procedures of endovascular intervention. , 0, , .		2
529	In-situ microfabrication of permeation membrane with photo-crosslinkable resin for isolation and culture of individual cells. , 0, , .		3
530	Self-assembled giant carbon nanotube construction using langmuir-blodgett films and CVD method. , 0, , .		0
531	Local growth of carbon nanotubes on the cantilever by chemical vapor deposition with FIB assist etching. , 0, , .		1
532	Patient-specific neurovascular simulator for evaluating the performance of medical robots and instrumens. , 0, , .		14