Yu Sun

List of Publications by Citations

284 papers	9,973 citations	55 h-index	89 g-index
334 ext. papers	11,949 ext. citations	6.1 avg, IF	6.36 L-index

#	Paper	IF	Citations
284	Microengineered platforms for cell mechanobiology. *Annual Review of Biomedical Engineering*, **2009**, 11, 203-33	12	317
283	Bio-microarray fabrication techniques--a review. *Critical Reviews in Biotechnology*, **2006**, 26, 237-59	9.4	304
282	Autofocusing in computer microscopy: selecting the optimal focus algorithm. *Microscopy Research and Technique*, **2004**, 65, 139-49	2.8	286
281	Monolithically Fabricated Microgripper With Integrated Force Sensor for Manipulating Microobjects and Biological Cells Aligned in an Ultrasonic Field. *Journal of Microelectromechanical Systems*, **2007**, 16, 7-15	2.5	274
280	On the tensile and shear strength of nano-reinforced composite interfaces. *Materials & Design*, **2004**, 25, 289-296		239
279	Biological Cell Injection Using an Autonomous MicroRobotic System. *International Journal of Robotics Research*, **2002**, 21, 861-868	5.7	238
278	Microfluidic approaches for cancer cell detection, characterization, and separation. *Lab on A Chip*, **2012**, 12, 1753-67	7.2	228
277	Mechanical property characterization of mouse zona pellucida. *IEEE Transactions on Nanobioscience*, **2003**, 2, 279-86	3.4	226
276	Nanonewton force-controlled manipulation of biological cells using a monolithic MEMS microgripper with two-axis force feedback. *Journal of Micromechanics and Microengineering*, **2008**, 18, 055013	2	209
275	Development of Carbon Nanotube-Based SensorsÂ Review. *IEEE Sensors Journal*, **2007**, 7, 266-284	4	207
274	Recent advances in microfluidic techniques for single-cell biophysical characterization. *Lab on A Chip*, **2013**, 13, 2464-83	7.2	184
273	A fully automated robotic system for microinjection of zebrafish embryos. *PLoS ONE*, **2007**, 2, e862	3.7	168
272	Classification of cell types using a microfluidic device for mechanical and electrical measurement on single cells. *Lab on A Chip*, **2011**, 11, 3174-81	7.2	137
271	In situ mechanical characterization of the cell nucleus by atomic force microscopy. *ACS Nano*, **2014**, 8, 3821-8	16.7	130
270	A bulk microfabricated multi-axis capacitive cellular force sensor using transverse comb drives. *Journal of Micromechanics and Microengineering*, **2002**, 12, 832-840	2	123
269	High-throughput biophysical measurement of human red blood cells. *Lab on A Chip*, **2012**, 12, 2560-7	7.2	122
268	A superelastic alloy microgripper with embedded electromagnetic actuators and piezoelectric force sensors: a numerical and experimental study. *Smart Materials and Structures*, **2005**, 14, 1265-1272	3.4	121

267	High strength measurement of monolayer graphene oxide. *Carbon*, **2015**, 81, 497-504	10.4	117
266	Microfabricated arrays for high-throughput screening of cellular response to cyclic substrate deformation. *Lab on A Chip*, **2010**, 10, 227-34	7.2	116
265	Autonomous Robotic Pick-and-Place of Microobjects. *IEEE Transactions on Robotics*, **2010**, 26, 200-207	6.5	114
264	A Feedforward Mechanism Mediated by Mechanosensitive Ion Channel PIEZO1 and Tissue Mechanics Promotes Glioma Aggression. *Neuron*, **2018**, 100, 799-815.e7	13.9	107
263	Mesenchymal stem cell mechanobiology and emerging experimental platforms. *Journal of the Royal Society Interface*, **2013**, 10, 20130179	4.1	103
262	Characterizing fruit fly flight behavior using a microforce sensor with a new comb-drive configuration. *Journal of Microelectromechanical Systems*, **2005**, 14, 4-11	2.5	103
261	Microfabricated perfusable cardiac biowire: a platform that mimics native cardiac bundle. *Lab on A Chip*, **2014**, 14, 869-82	7.2	98
260	Effect of nanowire number, diameter, and doping density on nano-FET biosensor sensitivity. *ACS Nano*, **2011**, 5, 6661-8	16.7	95
259	Nanonewton Force Sensing and Control in Microrobotic Cell Manipulation. *International Journal of Robotics Research*, **2009**, 28, 1065-1076	5.7	93
258	Active Release of Microobjects Using a MEMS Microgripper to Overcome Adhesion Forces. *Journal of Microelectromechanical Systems*, **2009**, 18, 652-659	2.5	92
257	Moldable elastomeric polyester-carbon nanotube scaffolds for cardiac tissue engineering. *Acta Biomaterialia*, **2017**, 52, 81-91	10.8	91
256	A microfabricated platform for high-throughput unconfined compression of micropatterned biomaterial arrays. *Biomaterials*, **2010**, 31, 577-84	15.6	89
255	A review of non-contact micro- and nano-printing technologies. *Journal of Micromechanics and Microengineering*, **2014**, 24, 053001	2	88
254	Robotic ICSI (intracytoplasmic sperm injection). *IEEE Transactions on Biomedical Engineering*, **2011**, 58, 2102-8	5	87
253	Recent advances in nanorobotic manipulation inside scanning electron microscopes. *Microsystems and Nanoengineering*, **2016**, 2, 16024	7.7	81
252	Piezoresistivity Characterization of Synthetic Silicon Nanowires Using a MEMS Device. *Journal of Microelectromechanical Systems*, **2011**, 20, 959-967	2.5	79
251	A fast and simple method to fabricate circular microchannels in polydimethylsiloxane (PDMS). *Lab on A Chip*, **2011**, 11, 545-51	7.2	77
250	Anisotropic stress orients remodelling of mammalian limb bud ectoderm. *Nature Cell Biology*, **2015**, 17, 569-79	23.4	74

249	Three-dimensional rotation of mouse embryos. *IEEE Transactions on Biomedical Engineering*, **2012**, 59, 1049-56	5	74
248	. *IEEE/ASME Transactions on Mechatronics*, **2011**, 16, 918-924	5.5	73
247	An autoantibody identifies arrhythmogenic right ventricular cardiomyopathy and participates in its pathogenesis. *European Heart Journal*, **2018**, 39, 3932-3944	9.5	70
246	Intracellular manipulation and measurement with multipole magnetic tweezers. *Science Robotics*, **2019**, 4,	18.6	66
245	Electrical measurement of red blood cell deformability on a microfluidic device. *Lab on A Chip*, **2013** , 13, 3275-83	7.2	66
244	Investigation of mechanical properties of soft hydrogel microcapsules in relation to protein delivery using a MEMS force sensor. *Journal of Biomedical Materials Research - Part A*, **2010**, 92, 103-13	5.4	65
243	Suspended, Shrinkage-Free, Electrospun PLGA Nanofibrous Scaffold for Skin Tissue Engineering. *ACS Applied Materials & Interfaces*, **2015**, 7, 10872-7	9.5	64
242	Automated Four-Point Probe Measurement of Nanowires Inside a Scanning Electron Microscope. *IEEE Nanotechnology Magazine*, **2011**, 10, 674-681	2.6	64
241	High-Throughput Automated Injection of Individual Biological Cells. *IEEE Transactions on Automation Science and Engineering*, **2009**, 6, 209-219	4.9	64
240	Automated micropipette aspiration of single cells. *Annals of Biomedical Engineering*, **2013**, 41, 1208-16	4.7	62
239	(Micro)managing the mechanical microenvironment. *Integrative Biology (United Kingdom)*, **2011**, 3, 959-71	3.7	62
238	Human sperm rheotaxis: a passive physical process. *Scientific Reports*, **2016**, 6, 23553	4.9	61
237	A microfluidic device for simultaneous electrical and mechanical measurements on single cells. *Biomicrofluidics*, **2011**, 5, 14113	3.2	60
236	Fatigue of graphene. *Nature Materials*, **2020**, 19, 405-411	27	59
235	Effect of oscillating fluid flow stimulation on osteocyte mRNA expression. *Journal of Biomechanics*, **2012**, 45, 247-51	2.9	58
234	A Load-Lock-Compatible Nanomanipulation System for Scanning Electron Microscope. *IEEE/ASME Transactions on Mechatronics*, **2013**, 18, 230-237	5.5	57
233	Electrodeformation for single cell mechanical characterization. *Journal of Micromechanics and Microengineering*, **2011**, 21, 054012	2	56
232	Mechanical properties of wrinkled graphene generated by topological defects. *Carbon*, **2016**, 108, 204-214	10.4	55

231	Interfacial Shear Strength of Multilayer Graphene Oxide Films. *ACS Nano*, **2016**, 10, 1939-47	16.7	55
230	A MEMS stage for 3-axis nanopositioning. *Journal of Micromechanics and Microengineering*, **2007**, 17, 1796-1802	2	55
229	Vision-based cellular force measurement using an elastic microfabricated device. *Journal of Micromechanics and Microengineering*, **2007**, 17, 1281-1288	2	55
228	Voyage inside the cell: Microsystems and nanoengineering for intracellular measurement and manipulation. *Microsystems and Nanoengineering*, **2015**, 1,	7.7	54
227	Solving the shrinkage-induced PDMS alignment registration issue in multilayer soft lithography. *Journal of Micromechanics and Microengineering*, **2009**, 19, 065015	2	54
226	Dynamic evaluation of autofocusing for automated microscopic analysis of blood smear and pap smear. *Journal of Microscopy*, **2007**, 227, 15-23	1.9	54
225	A high-aspect-ratio two-axis electrostatic microactuator with extended travel range. *Sensors and Actuators A: Physical*, **2002**, 102, 49-60	3.9	54
224	In situ mechanical characterization of mouse oocytes using a cell holding device. *Lab on A Chip*, **2010**, 10, 2154-61	7.2	52
223	MEMS capacitive force sensors for cellular and flight biomechanics. *Biomedical Materials (Bristol)*, **2007**, 2, S16-22	3.5	52
222	Mechanical analysis of chorion softening in prehatching stages of zebrafish embryos. *IEEE Transactions on Nanobioscience*, **2006**, 5, 89-94	3.4	52
221	Characterization of red blood cell deformability change during blood storage. *Lab on A Chip*, **2014**, 14, 577-83	7.2	50
220	Microfluidic approaches for gene delivery and gene therapy. *Lab on A Chip*, **2011**, 11, 3941-8	7.2	50
219	Robotic Micromanipulation: Fundamentals and Applications. *Annual Review of Control, Robotics, and Autonomous Systems*, **2019**, 2, 181-203	11.8	50
218	Robotic adherent cell injection for characterizing cell-cell communication. *IEEE Transactions on Biomedical Engineering*, **2015**, 62, 119-25	5	49
217	Single cell deposition and patterning with a robotic system. *PLoS ONE*, **2010**, 5, e13542	3.7	49
216	Three-dimensional nanosprings for electromechanical sensors. *Sensors and Actuators A: Physical*, **2006**, 130-131, 54-61	3.9	49
215	Human cardiac fibrosis-on-a-chip model recapitulates disease hallmarks and can serve as a platform for drug testing. *Biomaterials*, **2020**, 233, 119741	15.6	49
214	Nonlinear fracture toughness measurement and crack propagation resistance of functionalized graphene multilayers. *Science Advances*, **2018**, 4, eaao7202	14.3	48

213	Calibration of Multi-Axis MEMS Force Sensors Using the Shape-From-Motion Method. *IEEE Sensors Journal*, **2007**, 7, 344-351	4	47
212	Contact Detection in Microrobotic Manipulation. *International Journal of Robotics Research*, **2007**, 26, 821-828	5.7	46
211	Strengthening in Graphene Oxide Nanosheets: Bridging the Gap between Interplanar and Intraplanar Fracture. *Nano Letters*, **2015**, 15, 6528-34	11.5	45
210	In vitro and in vivo testing of glucose-responsive insulin-delivery microdevices in diabetic rats. *Lab on A Chip*, **2012**, 12, 2533-9	7.2	45
209	Microfluidic characterization of specific membrane capacitance and cytoplasm conductivity of single cells. *Biosensors and Bioelectronics*, **2013**, 42, 496-502	11.8	45
208	Manipulation of cells using an ultrasonic pressure field. *Ultrasound in Medicine and Biology*, **2005**, 31, 857-64	3.5	45
207	Elastic and viscoelastic characterization of microcapsules for drug delivery using a force-feedback MEMS microgripper. *Biomedical Microdevices*, **2009**, 11, 421-7	3.7	44
206	Mechanical stability of the cell nucleus - roles played by the cytoskeleton in nuclear deformation and strain recovery. *Journal of Cell Science*, **2018**, 131,	5.3	43
205	Travel range extension of a MEMS electrostatic microactuator. *IEEE Transactions on Control Systems Technology*, **2005**, 13, 138-145	4.8	42
204	Controlled aspiration and positioning of biological cells in a micropipette. *IEEE Transactions on Biomedical Engineering*, **2012**, 59, 1032-40	5	41
203	Automated Pick-Place of Silicon Nanowires. *IEEE Transactions on Automation Science and Engineering*, **2013**, 10, 554-561	4.9	40
202	Microdevice array-based identification of distinct mechanobiological response profiles in layer-specific valve interstitial cells. *Integrative Biology (United Kingdom)*, **2013**, 5, 673-80	3.7	40
201	A system for high-speed microinjection of adherent cells. *Review of Scientific Instruments*, **2008**, 79, 104302	1.7	40
200	Determination of local and global elastic moduli of valve interstitial cells cultured on soft substrates. *Journal of Biomechanics*, **2013**, 46, 1967-71	2.9	39
199	Biophysical characterization of bladder cancer cells with different metastatic potential. *Cell Biochemistry and Biophysics*, **2014**, 68, 241-6	3.2	36
198	Elastic and viscoelastic characterization of mouse oocytes using micropipette indentation. *Annals of Biomedical Engineering*, **2012**, 40, 2122-30	4.7	36
197	Locating End-Effector Tips in Robotic Micromanipulation. *IEEE Transactions on Robotics*, **2014**, 30, 125-130	3.5	35
196	Quantification of the specific membrane capacitance of single cells using a microfluidic device and impedance spectroscopy measurement. *Biomicrofluidics*, **2012**, 6, 34112	3.2	34

195	Decreased deformability of lymphocytes in chronic lymphocytic leukemia. *Scientific Reports*, **2015**, 5, 7613	4.9	33
194	Spatial mapping of tissue properties in vivo reveals a 3D stiffness gradient in the mouse limb bud. *Proceedings of the National Academy of Sciences of the United States of America*, **2020**, 117, 4781-4791	11.5	33
193	Stiffness increase of red blood cells during storage. *Microsystems and Nanoengineering*, **2018**, 4,	7.7	32
192	Automated microinjection of recombinant BCL-X into mouse zygotes enhances embryo development. *PLoS ONE*, **2011**, 6, e21687	3.7	32
191	Characterizing mechanical behavior of atomically thin films: A review. *Journal of Materials Research*, **2014**, 29, 338-347	2.5	31
190	Quantitative analysis of locomotive behavior of human sperm head and tail. *IEEE Transactions on Biomedical Engineering*, **2013**, 60, 390-6	5	31
189	Automated sperm immobilization for intracytoplasmic sperm injection. *IEEE Transactions on Biomedical Engineering*, **2011**, 58, 935-42	5	31
188	A monolithic polymeric microdevice for pH-responsive drug delivery. *Biomedical Microdevices*, **2009**, 11, 1251-7	3.7	31
187	Precision patterning of PDMS membranes and applications. *Journal of Micromechanics and Microengineering*, **2008**, 18, 037004	2	31
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185	Digital microfluidic processing of mammalian embryos for vitrification. *PLoS ONE*, **2014**, 9, e108128	3.7	30
184	Oscillatory cortical forces promote three dimensional cell intercalations that shape the murine mandibular arch. *Nature Communications*, **2019**, 10, 1703	17.4	29
183	A Three-Dimensional Magnetic Tweezer System for Intraembryonic Navigation and Measurement. *IEEE Transactions on Robotics*, **2018**, 34, 240-247	6.5	29
182	A Paper-Based Piezoelectric Accelerometer. *Micromachines*, **2018**, 9,	3.3	29
181	Microfluidic devices for mechanical characterisation of single cells in suspension. *Micro and Nano Letters*, **2011**, 6, 327	0.9	29
180	Millimeter-sized nanomanipulator with sub-nanometer positioning resolution and large force output. *Smart Materials and Structures*, **2007**, 16, 1742-1750	3.4	29
179	A microfabricated platform with hydrogel arrays for 3D mechanical stimulation of cells. *Acta Biomaterialia*, **2016**, 34, 113-124	10.8	28
178	Automated nanomanipulation for nanodevice construction. *Nanotechnology*, **2012**, 23, 065304	3.4	28

177	Cell Contour Tracking and Data Synchronization for Real-Time, High-Accuracy Micropipette Aspiration. *IEEE Transactions on Automation Science and Engineering*, **2009**, 6, 536-543	4.9	27
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175	A Stick-Slip Positioning Stage Robust to Load Variations. *IEEE/ASME Transactions on Mechatronics*, **2016**, 21, 2165-2173	5.5	27
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173	Microfabricated glass devices for rapid single cell immobilization in mouse zygote microinjection. *Biomedical Microdevices*, **2009**, 11, 1169-74	3.7	26
172	Recapitulating pancreatic tumor microenvironment through synergistic use of patient organoids and organ-on-a-chip vasculature. *Advanced Functional Materials*, **2020**, 30, 2000545	15.6	24
171	Design of a Micro-Gripper and an Ultrasonic Manipulator for Handling Micron Sized Objects **2006**,		24
170	TMEM43 mutation p.S358L alters intercalated disc protein expression and reduces conduction velocity in arrhythmogenic right ventricular cardiomyopathy. *PLoS ONE*, **2014**, 9, e109128	3.7	24
169	Coordinating Biointeraction and Bioreaction of a Nanocarrier Material and an Anticancer Drug to Overcome Membrane Rigidity and Target Mitochondria in Multidrug-Resistant Cancer Cells. *Advanced Functional Materials*, **2017**, 27, 1700804	15.6	23
168	MEMS-based platforms for mechanical manipulation and characterization of cells. *Journal of Micromechanics and Microengineering*, **2017**, 27, 123003	2	23
167	Evolutionarily conserved intercalated disc protein Tmem65 regulates cardiac conduction and connexin 43 function. *Nature Communications*, **2015**, 6, 8391	17.4	23
166	Mechanical differences of sickle cell trait (SCT) and normal red blood cells. *Lab on A Chip*, **2015**, 15, 3138-46	7.2	22
165	Magnetic Measurement and Stimulation of Cellular and Intracellular Structures. *ACS Nano*, **2020**, 14, 3805-3821	16.7	21
164	Microdevice arrays with strain sensors for 3D mechanical stimulation and monitoring of engineered tissues. *Biomaterials*, **2018**, 172, 30-40	15.6	21
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162	Robotic Manipulation of Deformable Cells for Orientation Control. *IEEE Transactions on Robotics*, **2020**, 36, 271-283	6.5	21
161	Characterizing Inner Pressure and Stiffness of Trophoblast and Inner Cell Mass of Blastocysts. *Biophysical Journal*, **2018**, 115, 2443-2450	2.9	21
160	Microdevice Platform for Continuous Measurement of Contractility, Beating Rate, and Beating Rhythm of Human-Induced Pluripotent Stem Cell-Cardiomyocytes inside a Controlled Incubator Environment. *ACS Applied Materials & Interfaces*, **2018**, 10, 21173-21183	9.5	20

159	Investigating chorion softening of zebrafish embryos with a microrobotic force sensing system. *Journal of Biomechanics*, **2005**, 38, 1359-3	2.9	20
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157	Mechanical characterization of benign and malignant urothelial cells from voided urine. *Applied Physics Letters*, **2013**, 102, 123704	3.4	19
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154	Nano-dissection and sequencing of DNA at single sub-nuclear structures. *Small*, **2014**, 10, 3267-74	11	18
153	Robotic Probing of Nanostructures inside Scanning Electron Microscopy. *IEEE Transactions on Robotics*, **2014**, 30, 758-765	6.5	18
152	Autonomous Zebrafish Embryo Injection Using a Microrobotic System **2007**,		18
151	The conductive function of biopolymer corrects myocardial scar conduction blockage and resynchronizes contraction to prevent heart failure. *Biomaterials*, **2020**, 258, 120285	15.6	18
150	A MEMSXY-stage integrating compliant mechanism for nanopositioning at sub-nanometer resolution. *Journal of Micromechanics and Microengineering*, **2016**, 26, 025014	2	18
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148	Robotic Immobilization of Motile Sperm for Clinical Intracytoplasmic Sperm Injection. *IEEE Transactions on Biomedical Engineering*, **2019**, 66, 444-452	5	17
147	A system for counting fetal and maternal red blood cells. *IEEE Transactions on Biomedical Engineering*, **2014**, 61, 2823-9	5	17
146	Role of graphene in enhancing the mechanical properties of TiO/graphene heterostructures. *Nanoscale*, **2017**, 9, 11678-11684	7.7	17
145	An in-plane, bi-directional electrothermal MEMS actuator. *Journal of Micromechanics and Microengineering*, **2006**, 16, 2067-2070	2	17
144	Automated Robotic Measurement of 3-D Cell Morphologies. *IEEE Robotics and Automation Letters*, **2017**, 2, 499-505	4.2	15
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142	. *IEEE Robotics and Automation Letters*, **2017**, 2, 570-576	4.2	14

141	Polyacrylamide gel substrates that simulate the mechanical stiffness of normal and malignant neuronal tissues increase protoporphyin IX synthesis in glioma cells. *Journal of Biomedical Optics*, **2015**, 20, 098002	3.5	14
140	Automated Parallel Electrical Characterization of Cells Using Optically-Induced Dielectrophoresis. *IEEE Transactions on Automation Science and Engineering*, **2020**, 17, 1084-1092	4.9	14
139	A Flexure-Guided Piezo Drill for Penetrating the Zona Pellucida of Mammalian Oocytes. *IEEE Transactions on Biomedical Engineering*, **2018**, 65, 678-686	5	14
138	Miniaturized platform with on-chip strain sensors for compression testing of arrayed materials. *Lab on A Chip*, **2012**, 12, 4178-84	7.2	14
137	Directed batch assembly of three-dimensional helical nanobelts through angular winding and electroplating. *Nanotechnology*, **2007**, 18, 055304	3.4	14
136	Autofocusing algorithm selection in computer microscopy **2005**,		14
135	Automated Non-Invasive Measurement of Single Sperm's Motility and Morphology. *IEEE Transactions on Medical Imaging*, **2018**, 37, 2257-2265	11.7	14
134	Cell and Tissue Scale Forces Coregulate Fgfr2-Dependent Tetrads and Rosettes in the Mouse Embryo. *Biophysical Journal*, **2017**, 112, 2209-2218	2.9	13
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132	In situ TEM tensile testing of carbon-linked graphene oxide nanosheets using a MEMS device. *Nanotechnology*, **2016**, 27, 28LT01	3.4	13
131	A microdevice platform for characterizing the effect of mechanical strain magnitudes on the maturation of iPSC-Cardiomyocytes. *Biosensors and Bioelectronics*, **2021**, 175, 112875	11.8	13
130	Hedgehog-Activated Fat4 and PCP Pathways Mediate Mesenchymal Cell Clustering and Villus Formation in Gut Development. *Developmental Cell*, **2020**, 52, 647-658.e6	10.2	12
129	High-throughput measurement of gap junctional intercellular communication. *American Journal of Physiology - Heart and Circulatory Physiology*, **2014**, 306, H1708-13	5.2	12
128	Semi-confined compression of microfabricated polymerized biomaterial constructs. *Journal of Micromechanics and Microengineering*, **2011**, 21, 054014	2	12
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126	Graphene fatigue through van der Waals interactions. *Science Advances*, **2020**, 6,	14.3	12
125	Accuracy analysis of a multi-closed-loop deployable mechanism. *Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science*, **2016**, 230, 611-621	1.3	11
124	Effect of lattice stacking orientation and local thickness variation on the mechanical behavior of few layer graphene oxide. *Carbon*, **2018**, 136, 168-175	10.4	11

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122	Electromechanical interactions in a carbon nanotube based thin film field emitting diode. *Nanotechnology*, **2008**, 19, 025701	3.4	11
121	Nanomechanical elasticity and fracture studies of lithium phosphate (LPO) and lithium tantalate (LTO) solid-state electrolytes. *Nanoscale*, **2019**, 11, 18730-18738	7.7	11
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119	Three-dimensional niche stiffness synergizes with Wnt7a to modulate the extent of satellite cell symmetric self-renewal divisions. *Molecular Biology of the Cell*, **2020**, 31, 1703-1713	3.5	10
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117	Partially filled electrodes for digital microfluidic devices. *Applied Physics Letters*, **2013**, 103, 024103	3.4	9
116	. *IEEE Transactions on Automation Science and Engineering*, **2011**, 8, 625-632	4.9	9
115	A CNT-PDMS wearable device for simultaneous measurement of wrist pulse pressure and cardiac electrical activity. *Materials Science and Engineering C*, **2020**, 117, 111345	8.3	9
114	Label-free conduction velocity mapping and gap junction assessment of functional iPSC-Cardiomyocyte monolayers. *Biosensors and Bioelectronics*, **2020**, 167, 112468	11.8	9
113	A System for Automated Detection of Ampoule Injection Impurities. *IEEE Transactions on Automation Science and Engineering*, **2017**, 14, 1119-1128	4.9	8
112	Stiffening of sickle cell trait red blood cells under simulated strenuous exercise conditions. *Microsystems and Nanoengineering*, **2016**, 2, 16061	7.7	8
111	Combined Sensing, Cognition, Learning, and Control for Developing Future Neuro-Robotics Systems: A Survey. *IEEE Transactions on Cognitive and Developmental Systems*, **2019**, 11, 148-161	3	7
110	A Novel Method for Extrinsic Calibration of Multiple RGB-D Cameras Using Descriptor-Based Patterns. *Sensors*, **2019**, 19,	3.8	7
109	Electrical impedance-based contractile stress measurement of human iPSC-Cardiomyocytes. *Biosensors and Bioelectronics*, **2020**, 166, 112399	11.8	7
108	Embedded silver PDMS electrodes for single cell electrical impedance spectroscopy. *Journal of Micromechanics and Microengineering*, **2016**, 26, 095006	2	7
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106	A MEMS Stage for 3-Axis Nanopositioning **2007**,		6

105	Magnetic Micromanipulation for Measurement of Stiffness Heterogeneity and Anisotropy in the Mouse Mandibular Arch. *Research*, **2020**, 2020, 7914074	7.8	6
104	Real-Time Microforce Sensors and High Speed Vision System for Insect Flight Control Analysis **2008** , 451-460		6
103	Culture on Tissue-Specific Coatings Derived from Amylase-Digested Decellularized Adipose Tissue Enhances the Proliferation and Adipogenic Differentiation of Human Adipose-Derived Stromal Cells. *Biotechnology Journal*, **2020**, 15, e1900118	5.6	6
102	Efficient obstacle detection based on prior estimation network and spatially constrained mixture model for unmanned surface vehicles. *Journal of Field Robotics*, **2021**, 38, 212-228	6.7	6
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97	Autofocusing for automated microscopic evaluation of blood smear and pap smear. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society*, **2006**, 2006, 4718-21		5
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41	A microfabricated platform with on-chip strain sensing and hydrogel arrays for 3D mechanical stimulation of cells **2016**,		1
40	Robotic Orientation Control of Deformable Cells **2019**,		1
39	Automated nanoprobing under scanning electron microscopy **2013**,		1
38	Three-dimensional robotic control of a 5-micrometer magnetic bead for intra-embryonic navigation and measurement **2017**,		1
37	A MEMS XY-stage with sub-nanometer positioning resolution **2015**,		1
36	Automated nanomanipulation for nano device construction **2012**,		1
35	Microfluidic devices for single-cell trapping and automated micro-robotic injection **2013**, 351-365e		1
34	A MEMS microgripper with changeable gripping tips **2011**,		1

33	Piezoresistivity characterization of silicon nanowires using a MEMS device **2011**,		1
32	A MEMS tensile testing device for mechanical characterization of individual nanowires **2010**,		1
31	A high-throughput array for mechanical stimulation of adherent biological cells **2009**,		1
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27	Field Emission Properties of Carbon Nanotube Thin Films Grown on Different Substrate Materials **2008**,		1
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List of Publications

15	Robot-Aided Micromanipulation of Biological Cells with Integrated Optical Tweezers and Microfluidic Chip. *Advanced Micro & Nanosystems*,393-416		1
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8	Robotic Micromanipulation of Cells and Small Organisms. *Advanced Micro & Nanosystems*, **2015**, 339-368		
7	Microscale generation of dynamic forces in cell culture systems47-68		
6	Robotic Rotational Positioning of End-Effectors for Micromanipulation. *IEEE Transactions on Robotics*, **2022**, 1-11	6.5	
5	Biophysical Measurement of Cellular and Intracellular Structures Using Magnetic Tweezers **2022**, 269-284		
4	Stimuli-Responsive Drug Delivery Microchips **2016**, 3833-3840		
3	Robotic Micropipette Aspiration of Biological Cells. *Springer Tracts in Advanced Robotics*, **2013**, 591-602	0.5	
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