

Qing Shi

List of Publications by Year in descending order

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133
papers

1,496
citations

304743

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135
docs citations

135
times ranked

1300
citing authors

#	ARTICLE	IF	CITATIONS
1	Holographic Display-Based Control for High-Accuracy Photolithography of Cellular Micro-Scaffold With Heterogeneous Architecture. IEEE/ASME Transactions on Mechatronics, 2022, 27, 1117-1127.	5.8	3
2	Determination of N-acetyl-DL-leucine in the saliva of healthy volunteers and diabetic patients using ultra-performance liquid chromatography with fluorescence detection. Clinica Chimica Acta, 2022, 526, 66-73.	1.1	5
3	Optogenetic stimulation of CA3 pyramidal neurons restores synaptic deficits to improve spatial short-term memory in APP/PS1 mice. Progress in Neurobiology, 2022, 209, 102209.	5.7	9
4	Controllable Melting and Flow of Ag in Self-Formed Amorphous Carbonaceous Shell for Nanointerconnection. Micromachines, 2022, 13, 213.	2.9	1
5	Bio-inspired engineering of a perfusion culture platform for guided three-dimensional nerve cell growth and differentiation. Lab on A Chip, 2022, 22, 1006-1017.	6.0	13
6	Development of a Small-Sized Quadruped Robotic Rat Capable of Multimodal Motions. IEEE Transactions on Robotics, 2022, 38, 3027-3043.	10.3	28
7	Electrically Controlled Aquatic Soft Actuators with Desynchronized Actuation and Light-Mediated Reciprocal Locomotion. ACS Applied Materials & Interfaces, 2022, 14, 12936-12948.	8.0	13
8	Noncontact 3-D Orientation Control at Microscale: Hydrodynamic Out-of-Plane Rotation and In-Plane Rotation by Compacted Rotational Stage. IEEE/ASME Transactions on Mechatronics, 2022, 27, 4807-4818.	5.8	4
9	Accurate modulation of photoprinting under stiffness imaging feedback for engineering ECMs with high-fidelity mechanical properties. Microsystems and Nanoengineering, 2022, 8, .	7.0	3
10	Learning Rat-Like Behavior for a Small-Scale Biomimetic Robot. Engineering, 2022, 17, 232-243.	6.7	3
11	A Motion Generation Strategy of Robotic Rat Using Imitation Learning for Behavioral Interaction. IEEE Robotics and Automation Letters, 2022, 7, 7351-7358.	5.1	3
12	A Small-Scale, Rat-Inspired Whisker Sensor for the Perception of a Biomimetic Robot: Design, Fabrication, Modeling, and Experimental Characterization. IEEE Robotics and Automation Magazine, 2022, 29, 115-126.	2.0	2
13	Bioinspired, Multifunctional, Active Whisker Sensors for Tactile Sensing of Mobile Robots. IEEE Robotics and Automation Letters, 2022, 7, 9565-9572.	5.1	3
14	A clamp-free micro-stretching system for evaluating the viscoelastic response of cell-laden microfibers. Biosensors and Bioelectronics, 2022, 214, 114517.	10.1	3
15	Ionic shape-morphing microrobotic end-effectors for environmentally adaptive targeting, releasing, and sampling. Nature Communications, 2021, 12, 411.	12.8	87
16	Texture Classification of a Miniature Whisker Sensor with Varied Contact Pose. Communications in Computer and Information Science, 2021, , 517-526.	0.5	0
17	A tetrahedral DNA nanorobot with conformational change in response to molecular trigger. Nanoscale, 2021, 13, 15552-15559.	5.6	15
18	Simultaneous determination of DL-cysteine, DL-homocysteine, and glutathione in saliva and urine by UHPLC-Q-Orbitrap HRMS: Application to studies of oxidative stress. Journal of Pharmaceutical and Biomedical Analysis, 2021, 196, 113939.	2.8	20

#	ARTICLE	IF	CITATIONS
19	Automated Fabrication of the High-Fidelity Cellular Micro-Scaffold Through Proportion-Corrective Control of the Photocuring Process. IEEE Robotics and Automation Letters, 2021, 6, 849-854.	5.1	1
20	Simultaneous determination of three endogenous chiral thiol compounds in serum from humans at normal and stress states using ultrahigh-performance liquid chromatography coupled to quadrupole-Orbitrap high resolution mass spectrometry. Journal of Chromatography A, 2021, 1642, 462028.	3.7	11
21	Simultaneous Determination of Chiral Thiol Compounds and Monitoring of Dynamic Changes in Human Urine after Drinking Chinese Korean Ethnic Rice Wine. Journal of Agricultural and Food Chemistry, 2021, 69, 5416-5427.	5.2	8
22	Crystal structure of 3,3â€²,3â€³-((1E,1â€²E,1â€³E)-((nitrilotris(ethane-2,1-diyl))tris(azaneylylidene))) Tj ETQq0 0 0 rgBT /Overlock 10 Tf Fur Kristallographie - New Crystal Structures, 2021, 236, 773-775.	0.3	0
23	Special issue on cyborg and bionic systems III. Advanced Robotics, 2021, 35, 399-399.	1.8	0
24	A 1-Hydroxy-2,4-Diformylnaphthalene-Based Fluorescent Probe and Its Detection of Sulfites/Bisulfite. Molecules, 2021, 26, 3064.	3.8	8
25	Implementing Rat-Like Motion for a Small-Sized Biomimetic Robot Based on Extraction of Key Movement Joints. IEEE Transactions on Robotics, 2021, 37, 747-762.	10.3	24
26	Isotropic Thermoelectric Performance of Layer-Structured n-Type Bi₂Te_{2.7}Se_{0.3} by Cu Doping. ACS Applied Materials & Interfaces, 2021, 13, 58781-58788.	8.0	17
27	A Real-Time Motion Detection and Object Tracking Framework for Future Robot-Rat Interaction. , 2021, , .		2
28	Biped Walking of Magnetic Microrobot in Oscillating Field for Indirect Manipulation of Non-Magnetic Objects. IEEE Nanotechnology Magazine, 2020, 19, 21-24.	2.0	12
29	Design and optimization of a lightweight and compact waist mechanism for a robotic rat. Mechanism and Machine Theory, 2020, 146, 103723.	4.5	7
30	Bioinspired Phase-Shift Turning Action for a Biomimetic Robot. IEEE/ASME Transactions on Mechatronics, 2020, 25, 84-94.	5.8	3
31	Fabrication of vascular smooth muscle-like tissues based on self-organization of circumferentially aligned cells in microengineered hydrogels. Lab on A Chip, 2020, 20, 3120-3131.	6.0	16
32	Routes for advancing SnTe thermoelectrics. Journal of Materials Chemistry A, 2020, 8, 16790-16813.	10.3	87
33	Permeable hollow 3D tissue-like constructs engineered by on-chip hydrodynamic-driven assembly of multicellular hierarchical micromodules. Acta Biomaterialia, 2020, 113, 328-338.	8.3	12
34	The lateralization of left hippocampal CA3 during the retrieval of spatial working memory. Nature Communications, 2020, 11, 2901.	12.8	37
35	Template-based fabrication of spatially organized 3D bioactive constructs using magnetic low-concentration gelation methacrylate (GelMA) microfibers. Soft Matter, 2020, 16, 3902-3913.	2.7	4
36	Magnetically Actuated Pick-and-place Operations of Cellular Micro-rings for High-speed Assembly of Micro-scale Biological Tube. , 2020, , .		0

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37	Design and Characterization of a 16-DOFs Nanorobotic Manipulation System for Repetitive and Pre-Programmable Tasks. IEEE Nanotechnology Magazine, 2019, 18, 1208-1212.	2.0	3
38	Three-Dimensional Autofocusing Visual Feedback for Automated Rare Cells Sorting in Fluorescence Microscopy. Micromachines, 2019, 10, 567.	2.9	3
39	Contact Annealing for Self-Soldering: In Situ Investigation into Interfaces between PVP-Coated Silver Nanoelectrodes and Carbon Nanotubes. ACS Applied Materials & Interfaces, 2019, 11, 36035-36043.	8.0	2
40	Magnetic Micromachine Using Nickel Nanoparticles for Propelling and Releasing in Indirect Assembly of Cell-Laden Micromodules. Micromachines, 2019, 10, 370.	2.9	11
41	3D Construction of Shape-Controllable Tissues through Self-Bonding of Multicellular Microcapsules. ACS Applied Materials & Interfaces, 2019, 11, 22950-22961.	8.0	18
42	Multicellular Co-Culture in Three-Dimensional Gelatin Methacryloyl Hydrogels for Liver Tissue Engineering. Molecules, 2019, 24, 1762.	3.8	34
43	Engineered tissue micro-rings fabricated from aggregated fibroblasts and microfibres for a bottom-up tissue engineering approach. Biofabrication, 2019, 11, 035029.	7.1	9
44	Identification of Rat Ultrasonic Vocalizations from Mix Sounds of a Robotic Rat in a Noisy Environment. , 2019, , .		0
45	Nanorobot assisted self-soldering investigation between PVP-coated silver electrodes and carbon nanotubes. , 2019, , .		0
46	Automated Sorting of Rare Cells Based on Autofocusing Visual Feedback in Fluorescence Microscopy. , 2019, , .		4
47	Development of an MEMS based biomimetic whisker sensor for tactile sensing. , 2019, , .		5
48	Untethered Micromachines Using Magnetic Nanoparticles for Wireless Assembly of Cell-laden Heterogeneous Micromodules*. , 2019, , .		0
49	Multifunctional Noncontact Micromanipulation Using Whirling Flow Generated by Vibrating a Single Piezo Actuator. Small, 2019, 15, e1804421.	10.0	34
50	An overview of biomimetic robots with animal behaviors. Neurocomputing, 2019, 332, 339-350.	5.9	72
51	Fabrication of perfusable 3D hepatic lobule-like constructs through assembly of multiple cell type laden hydrogel microstructures. Biofabrication, 2019, 11, 015016.	7.1	35
52	Development of a Highly Compact Microgripper Capable of Online Calibration for Multisized Microobject Manipulation. IEEE Nanotechnology Magazine, 2018, 17, 657-661.	2.0	22
53	Automated Fluidic Assembly of Microvessel-Like Structures Using a Multimicromanipulator System. IEEE/ASME Transactions on Mechatronics, 2018, 23, 667-678.	5.8	19
54	Microrobotic Assembly of Shape-Customized Three-Dimensional Microtissues Based on Surface Tension Driven Self-Alignment. IEEE Nanotechnology Magazine, 2018, 17, 684-687.	2.0	7

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55	Construction of Multilayer Porous Scaffold Based on Magnetically Guided Assembly of Microfiber. Journal of Systems Science and Complexity, 2018, 31, 581-595.	2.8	1
56	Vortex-Driven Rotation for Three-Dimensional Imaging Under Microscopy. IEEE Nanotechnology Magazine, 2018, 17, 688-691.	2.0	10
57	Magnetic alginate microfibers as scaffolding elements for the fabrication of microvascular-like structures. Acta Biomaterialia, 2018, 66, 272-281.	8.3	45
58	A novel, simplified strategy of relative quantification N-glycan: Quantitative glycomics using electrospray ionization mass spectrometry through the stable isotopic labeling by transglycosylation reaction of mutant enzyme Endo-M-N175Q. Journal of Pharmaceutical and Biomedical Analysis, 2018, 149, 365-373.	2.8	13
59	Construction of 3D Micro-Tissue Based on Electrodeposition and Robotic Manipulation. , 2018, , .		1
60	A Miniature Stereo Vision System for a Biomimetic Robotic Rat. , 2018, , .		2
61	3-D Visual Feedback for Automated Sorting of Cells with ultra-low Proportion under Dark Field. , 2018, , .		0
62	Special Feature on Bio-Inspired Robotics. Applied Sciences (Switzerland), 2018, 8, 817.	2.5	5
63	Assembly of Cellular Microstructures into Lobule-Like 3D Microtissues Based on Microrobotic Manipulation* Research supported by the Beijing Natural Science Foundation under Grant 4164099and the National Natural Science Foundation of China under grants 61603044and 61520106011.. , 2018, , .		0
64	Design and Online Calibration of a Highly Compact Microgripper. , 2018, , .		0
65	Determination of d,l-Amino Acids in Collagen from Pig and Cod Skins by UPLC Using Pre-column Fluorescent Derivatization. Food Analytical Methods, 2018, 11, 3130-3137.	2.6	10
66	A Modified Robotic Rat to Study Rat-Like Pitch and Yaw Movements. IEEE/ASME Transactions on Mechatronics, 2018, 23, 2448-2458.	5.8	31
67	Microfluidic Spun Alginate Hydrogel Microfibers and Their Application in Tissue Engineering. Gels, 2018, 4, 38.	4.5	28
68	Hydrodynamic Tweezers: Trapping and Transportation in Microscale Using Vortex Induced by Oscillation of a Single Piezoelectric Actuator. Sensors, 2018, 18, 2002.	3.8	17
69	Development of Highly Sensitive Analysis Method for Histamine and Metabolites in Pregnant Women's Fingernail by UPLC-ESI-MS. Analytical Sciences, 2018, 34, 1023-1029.	1.6	6
70	A Vision-Based Automated Manipulation System for the Pick-Up of Carbon Nanotubes. IEEE/ASME Transactions on Mechatronics, 2017, 22, 845-854.	5.8	35
71	How to achieve precise operation of a robotic manipulator on a macro to micro/nano scale. Assembly Automation, 2017, 37, 186-199.	1.7	8
72	Robotics-based micro-reeling of magnetic microfibers to fabricate helical structure for smooth muscle cells culture. , 2017, , .		4

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73	3D assembly of carbon nanotubes for fabrication of field-effect transistors through nanomanipulation and electron-beam-induced deposition. Journal of Micromechanics and Microengineering, 2017, 27, 105007.	2.6	7
74	Assembly of RGD-Modified Hydrogel Micromodules into Permeable Three-Dimensional Hollow Microtissues Mimicking in Vivo Tissue Structures. ACS Applied Materials & Interfaces, 2017, 9, 41669-41679.	8.0	50
75	Hardware and control design considerations for a monitoring system of autonomous mobile robots in extreme environment. , 2017, , .		5
76	Nanomanipulation of a single carbon nanotube for the fabrication of a field-effect transistor. , 2017, , .		1
77	Development of a mobile APP for the operation monitoring and health management system of a steam turbine. , 2017, , .		1
78	Motion evaluation of a modified multi-link robotic rat. , 2017, , .		5
79	Robotics in Biomedical and Healthcare Engineering. Journal of Healthcare Engineering, 2017, 2017, 1-2.	1.9	4
80	Characterization of the Resistance and Force of a Carbon Nanotube/Metal Side Contact by Nanomanipulation. Scanning, 2017, 2017, 1-11.	1.5	26
81	Non-contact transportation and rotation of micro objects by vibrating glass needle circularly under water. , 2017, , .		2
82	Microrobotic assembly of shape-controllable microstructures to perfusable 3D cell-laden microtissues. , 2017, , .		0
83	Assembly of alginate microfibers to form a helical structure using micromanipulation with a magnetic field. Journal of Micromechanics and Microengineering, 2016, 26, 105017.	2.6	16
84	Analytical magnetic model for medical endoscopic robots: A ready-to-use implementation with permanent magnets. , 2016, , .		1
85	Automated pick-up of carbon nanotubes inside a scanning electron microscope. , 2016, , .		1
86	Development of lower limb motion detection based on LPMS. , 2016, , .		3
87	Development of lower limb rehabilitation evaluation system based on virtual reality technology. , 2016, , .		2
88	Development of an ankle robot MKA-III for rehabilitation training. , 2016, , .		3
89	Generation of swirl flow for non-contact rotation of micro objects by vibrating glass needle. , 2016, , .		0
90	Highly sensitive derivatization reagents possessing positively charged structures for the determination of oligosaccharides in glycoproteins by high-performance liquid chromatography electrospray ionization tandem mass spectrometry. Journal of Chromatography A, 2016, 1465, 79-89.	3.7	10

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91	Magnetically-guided manipulation of microfiber for fabrication of porous cell scaffold. , 2016, , .		0
92	Mechanism design of an ankle robot MKA-III for rehabilitation training. , 2016, , .		2
93	Non-contact high-speed rotation of micro targets by vibration of single piezoelectric actuator. , 2016, , .		4
94	High-Speed Bioassembly of Cellular Microstructures With Force Characterization for Repeating Single-Step Contact Manipulation. IEEE Robotics and Automation Letters, 2016, 1, 1097-1102.	5.1	3
95	Micromanipulation for Coiling Microfluidic Spun Alginate Microfibers by Magnetically Guided System. IEEE Robotics and Automation Letters, 2016, 1, 808-813.	5.1	8
96	Microbubbles for High-Speed Assembly of Cell-Laden Vascular-Like Microtube. IEEE Robotics and Automation Letters, 2016, 1, 754-759.	5.1	1
97	Mechanism design and control strategies of an ankle robot for rehabilitation training. , 2015, , .		9
98	3D magnetic assembly of cellular structures with "printing" manipulation by microrobot-controlled microfluidic system. , 2015, , .		3
99	Behavior modulation of rats to a robotic rat in multi-rat interaction. Bioinspiration and Biomimetics, 2015, 10, 056011.	2.9	24
100	Design and Control of a Biomimetic Robotic Rat for Interaction With Laboratory Rats. IEEE/ASME Transactions on Mechatronics, 2015, 20, 1832-1842.	5.8	37
101	Automated bubble-based assembly of cell-laden microgels into vascular-like microtubes. , 2015, , .		2
102	Automated biomanipulation to assemble cellular microstructure with railed multi-microrobotic system. , 2015, , .		0
103	Measurement of MWCNT/Tungsten contact resistance by bridging CNT on two tungsten electrodes with two manipulators. , 2015, , .		0
104	Development of an ankle motion detecting mechanism for ankle rehabilitation training. , 2015, , .		0
105	Contact characterization between multi-walled carbon nanotubes and metal electrodes. , 2015, , .		4
106	On-chip fabrication and magnetic force estimation of peapod-like hybrid microfibers using a microfluidic device. Microfluidics and Nanofluidics, 2015, 18, 1177-1187.	2.2	36
107	Three-dimensional magnetic assembly of alginate microfibers using microfluidic “printing” method. , 2015, , .		2
108	Automated Assembly of Vascular-Like Microtube With Repetitive Single-Step Contact Manipulation. IEEE Transactions on Biomedical Engineering, 2015, 62, 2620-2628.	4.2	58

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109	Magnetic assembly of microfluidic spun alginate microfibers for fabricating three-dimensional cell-laden hydrogel constructs. <i>Microfluidics and Nanofluidics</i> , 2015, 19, 1169-1180.	2.2	31
110	Development of Battery Charging System Using Wireless Power Transmission for Outdoor Mobile Robots. <i>The Abstracts of the International Conference on Advanced Mechatronics Toward Evolutionary Fusion of IT and Mechatronics ICAM</i> , 2015, 2015.6, 110-111.	0.0	0
111	A Study on Effects of Outer Shape of Mobile Robot on Locomotive Performance in Grass Field. <i>The Abstracts of the International Conference on Advanced Mechatronics Toward Evolutionary Fusion of IT and Mechatronics ICAM</i> , 2015, 2015.6, 161-162.	0.0	1
112	Development of a nerve model of eyeball motion nerves to simulate the disorders of eyeball movements for neurologic examination training. , 2014, , .		0
113	Development of an omnidirectional vision system for environment perception. , 2014, , .		3
114	Design of operating software and electrical system of mobile robot for environmental monitoring. , 2014, , .		12
115	Development of a human-like motor nerve model to simulate the diseases effects on muscle tension for neurologic examination training. , 2014, , .		4
116	Bubble-based assembly of micro-tube with coordinated multiple manipulators. , 2014, , .		0
117	Dexterous nanomanipulation of 2D hydrogel microstructure for 3D assembly by multi-robot cooperation. , 2014, , .		0
118	Control of posture and trajectory for a rat-like robot interacting with multiple real rats. , 2014, , .		0
119	Micro-Assembly of a Vascular-Like Micro-Channel with Railed Micro-Robot Team-Coordinated Manipulation. <i>International Journal of Advanced Robotic Systems</i> , 2014, 11, 115.	2.1	16
120	Modulation of rat behaviour by using a rat-like robot. <i>Bioinspiration and Biomimetics</i> , 2013, 8, 046002.	2.9	37
121	A novel method to develop an animal model of depression using a small mobile robot. <i>Advanced Robotics</i> , 2013, 27, 61-69.	1.8	9
122	A rat-like robot for interacting with real rats. <i>Robotica</i> , 2013, 31, 1337-1350.	1.9	7
123	A biological humanoid joint controller based on muscle model. , 2013, , .		1
124	A rat-like robot WR-5 for animal behavior research. , 2012, , .		2
125	Mathematical modeling of robot-rat interaction for the analysis and modification of rat sociality. , 2012, , .		1
126	Image processing and behavior planning for robot-rat interaction. , 2012, , .		10

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127	Development of a Hybrid Wheel-Legged Mobile Robot WR-3 Designed for the Behavior Analysis of Rats. Advanced Robotics, 2011, 25, 2255-2272.	1.8	17
128	A robot-rat interaction experimental system based on the rat-inspired mobile robot WR-4. , 2011, , .		5
129	Development of experimental setup to create novel mental disorder model rats using small mobile robot. , 2010, , .		9
130	Development of a novel quadruped mobile robot for behavior analysis of rats. , 2010, , .		3
131	Development of a cognition system for analyzing rat's behaviors. , 2010, , .		10
132	Development of the hybrid wheel-legged mobile robot WR-3 designed to interact with rats. , 2010, , .		8
133	Distributed Control System for a Humanoid Robot. , 2007, , .		16