Ya-jing Shen

List of Publications by Citations

110 papers	1,414 citations	22 h-index	33 g-index
160 ext. papers	1,931 ext. citations	5.4 avg, IF	5.25 L-index

#	Paper	IF	Citations
110	A bioinspired multilegged soft millirobot that functions in both dry and wet conditions. *Nature Communications*, **2018**, 9, 3944	17.4	233
109	Soft magnetic skin for super-resolution tactile sensing with force self-decoupling. *Science Robotics*, **2021**, 6,	18.6	59
108	Out-of-Plane Rotation Control of Biological Cells With a Robot-Tweezers Manipulation System for Orientation-Based Cell Surgery. *IEEE Transactions on Biomedical Engineering*, **2019**, 66, 199-207	5	46
107	Micro-rocket robot with all-optic actuating and tracking in blood. *Light: Science and Applications*, **2020**, 9, 84	16.7	45
106	An agglutinate magnetic spray transforms inanimate objects into millirobots for biomedical applications. *Science Robotics*, **2020**, 5,	18.6	44
105	Ultrahigh-Precision Rotational Positioning Under a Microscope: Nanorobotic System, Modeling, Control, and Applications. *IEEE Transactions on Robotics*, **2018**, 34, 497-507	6.5	41
104	Battery-Less Soft Millirobot That Can Move, Sense, and Communicate Remotely by Coupling the Magnetic and Piezoelectric Effects. *Advanced Science*, **2020**, 7, 2000069	13.6	40
103	A MEMS resonant accelerometer for low-frequency vibration detection. *Sensors and Actuators A: Physical*, **2018**, 283, 151-158	3.9	37
102	Plasmonic-Assisted Graphene Oxide Films with Enhanced Photothermal Actuation for Soft Robots. *Advanced Functional Materials*, **2020**, 30, 1910172	15.6	34
101	Hybrid 3D printing and electrodeposition approach for controllable 3D alginate hydrogel formation. *Biofabrication*, **2017**, 9, 025032	10.5	33
100	. *IEEE/ASME Transactions on Mechatronics*, **2015**, 20, 3009-3017	5.5	28
99	A Sliding Mode Flux-Linkage Controller With Integral Compensation for Switched Reluctance Motor. *IEEE Transactions on Magnetics*, **2009**, 45, 3322-3328	2	28
98	Effect of ambient humidity on the strength of the adhesion force of single yeast cell inside environmental-SEM. *Ultramicroscopy*, **2011**, 111, 1176-83	3.1	27
97	Vision-based Nano Robotic System for High-throughput Non-embedded Cell Cutting. *Scientific Reports*, **2016**, 6, 22534	4.9	27
96	Achieving Automated Organelle Biopsy on Small Single Cells Using a Cell Surgery Robotic System. *IEEE Transactions on Biomedical Engineering*, **2019**, 66, 2210-2222	5	25
95	Self-Actuating Asymmetric Platinum Catalytic Mobile Nanorobot. *IEEE Transactions on Robotics*, **2014**, 30, 33-39	6.5	24
94	State of the art: micro-nanorobotic manipulation in single cell analysis. *Robotics and Biomimetics*, **2014**, 1,		24

93	Evaluation of the single yeast cell's adhesion to ITO substrates with various surface energies via ESEM nanorobotic manipulation system. *IEEE Transactions on Nanobioscience*, **2011**, 10, 217-24	3.4	23
92	In situ reduction of silver nanoparticles on hybrid polydopamine-copper phosphate nanoflowers with enhanced antimicrobial activity. *Journal of Materials Chemistry B*, **2017**, 5, 5311-5317	7.3	22
91	Automatic Sample Alignment Under Microscopy for 360□Imaging Based on the Nanorobotic Manipulation System. *IEEE Transactions on Robotics*, **2017**, 33, 220-226	6.5	22
90	Study of the time effect on the strength of cell-cell adhesion force by a novel nano-picker. *Biochemical and Biophysical Research Communications*, **2011**, 409, 160-5	3.4	22
89	Graphene-Based Light-Driven Soft Robot with Snake-Inspired Concertina and Serpentine Locomotion. *Advanced Materials Technologies*, **2019**, 4, 1800366	6.8	22
88	Biodegradable porous sheet-like scaffolds for soft-tissue engineering using a combined particulate leaching of salt particles and magnetic sugar particles. *Journal of Bioscience and Bioengineering*, **2013**, 116, 126-31	3.3	21
87	Single cell adhesion force measurement for cell viability identification using an AFM cantilever-based micro putter. *Measurement Science and Technology*, **2011**, 22, 115802	2	20
86	Controllable 3D alginate hydrogel patterning via visible-light induced electrodeposition. *Biofabrication*, **2016**, 8, 025004	10.5	18
85	Design and characterization of nanoknife with buffering beam for in situ single-cell cutting. *Nanotechnology*, **2011**, 22, 305701	3.4	17
84	State of the Art: Bipedal Robots for Lower Limb Rehabilitation. *Applied Sciences (Switzerland)*, **2017**, 7, 1182	2.6	16
83	Single cell stiffness measurement at various humidity conditions by nanomanipulation of a nano-needle. *Nanotechnology*, **2013**, 24, 145703	3.4	16
82	. *IEEE Industrial Electronics Magazine*, **2010**, 4, 13-22	6.2	16
81	Nanorobotic Manipulation System for 360$^{circ }$ Characterization Atomic Force Microscopy. *IEEE Transactions on Industrial Electronics*, **2020**, 67, 2916-2924	8.9	16
80	A fast and powerful swimming microrobot with a serrated tail enhanced propulsion interface. *Nanoscale*, **2018**, 10, 19673-19677	7.7	16
79	Magnetically Actuated Heterogeneous Microcapsule-Robot for the Construction of 3D Bioartificial Architectures. *ACS Applied Materials & Interfaces*, **2019**, 11, 25664-25673	9.5	15
78	Multidirectional Image Sensing for Microscopy Based on a Rotatable Robot. *Sensors*, **2015**, 15, 31566-80	3.8	14
77	Less-invasive non-embedded cell cutting by nanomanipulation and vibrating nanoknife. *Applied Physics Letters*, **2017**, 110, 043701	3.4	12
76	Side-to-Side Cold Welding for Controllable Nanogap Formation from "Dumbbell" Ultrathin Gold Nanorods. *ACS Applied Materials & Interfaces*, **2016**, 8, 13506-11	9.5	12

75	Hydrothermal synthesis of gold nanoplates and their structure-dependent LSPR properties. *Journal of Materials Research*, **2018**, 33, 2671-2679	2.5	12
74	Recent Advances on In Situ SEM Mechanical and Electrical Characterization of Low-Dimensional Nanomaterials. *Scanning*, **2017**, 2017, 1985149	1.6	12
73	Nanorobotic System iTRo for Controllable 1D Micro/nano Material Twisting Test. *Scientific Reports*, **2017**, 7, 3077	4.9	11
72	Temperature compensation for MEMS resonant accelerometer based on genetic algorithm optimized backpropagation neural network. *Sensors and Actuators A: Physical*, **2020**, 316, 112393	3.9	11
71	Paper-Based Electrodeposition Chip for 3D Alginate Hydrogel Formation. *Micromachines*, **2015**, 6, 1546-1559	3.9	10
70	In-situ single cell manipulation via nanorobotic manipulation system inside E-SEM **2009**,		10
69	Inchworm-Inspired Soft Robot With Light-Actuated Locomotion. *IEEE Robotics and Automation Letters*, **2019**, 4, 1647-1652	4.2	9
68	Bending spring rate investigation of nanopipette for cell injection. *Nanotechnology*, **2015**, 26, 155702	3.4	9
67	Surface defect detection of magnetic microwires by miniature rotatable robot inside SEM. *AIP Advances*, **2016**, 6, 095309	1.5	9
66	Self-Assembly Magnetic Chain Unit for Bulk Biomaterial Actuation. *IEEE Robotics and Automation Letters*, **2019**, 4, 262-268	4.2	8
65	Programmable higher-order biofabrication of self-locking microencapsulation. *Biofabrication*, **2019**, 11, 035019	10.5	8
64	Development of a New Robotic Ankle Rehabilitation Platform for Hemiplegic Patients after Stroke. *Journal of Healthcare Engineering*, **2018**, 2018, 3867243	3.7	7
63	Starfish Inspired Milli Soft Robot With Omnidirectional Adaptive Locomotion Ability. *IEEE Robotics and Automation Letters*, **2021**, 6, 3325-3332	4.2	7
62	Millimeter-Scale Soft Continuum Robots for Large-Angle and High-Precision Manipulation by Hybrid Actuation. *Advanced Intelligent Systems*, **2020**, 3, 2000189	6	7
61	In Situ Micromechanical Characterization of Metallic Glass Microwires under Torsional Loading. *Experimental Mechanics*, **2019**, 59, 361-368	2.6	6
60	Specimen's plane misaligned installation solution based on charge fluctuation inside SEM. *Applied Physics Letters*, **2018**, 112, 144102	3.4	6
59	Tubular Microcapsules with Polysaccharide Membranes Based on a Co-axial Microfluidic Chip. *ACS Biomaterials Science and Engineering*, **2019**, 5, 6281-6289	5.5	6
58	Mechanism design and control strategies of an ankle robot for rehabilitation training **2015**,		6

57	Light-Driven Carbon-Based Soft Materials: Principle, Robotization, and Application. *Advanced Optical Materials*, **2021**, 9, 2100035	8.1	6
56	Multi-functionalized micro-helical capsule robots with superior loading and releasing capabilities. *Journal of Materials Chemistry B*, **2021**, 9, 1441-1451	7.3	6
55	In Situ SEM Torsion Test of Metallic Glass Microwires Based on Micro Robotic Manipulation. *Scanning*, **2017**, 2017, 6215691	1.6	5
54	Robot-aided electrospinning toward intelligent biomedical engineering. *Robotics and Biomimetics*, **2017**, 4, 17		5
53	A MEMS accelerometer based on synchronizing DETF oscillators **2019**,		5
52	. *IEEE/ASME Transactions on Mechatronics*, **2017**, 22, 2746-2756	5.5	5
51	Automatic 3D reconstruction of SEM images based on Nano-robotic manipulation and epipolar plane images. *Ultramicroscopy*, **2019**, 200, 149-159	3.1	4
50	Development of a rehabilitation robot for hand and wrist rehabilitation training **2015**,		4
49	In situbending and recovery characterization of hollow glass nanoneedle based on nanorobotic manipulation. *Journal of Micromechanics and Microengineering*, **2017**, 27, 095011	2	4
48	Nano-gyroscope assembly using Carbon Nanotube based on nanorobotic manipulation **2011**,		4
47	Plasmonic-Enhanced Graphene Oxide-Based Aquatic Robot for Target Cargo Delivery. *ACS Applied Materials & Interfaces*, **2021**, 13, 1503-1510	9.5	4
46	360□multiparametric imaging atomic force microscopy: A method for three-dimensional nanomechanical mapping. *Ultramicroscopy*, **2019**, 196, 83-87	3.1	4
45	Nano-assembly and welding of gold nanorods based on DNA origami and plasmon-induced laser irradiation. *International Journal of Intelligent Robotics and Applications*, **2018**, 2, 445-453	1.7	4
44	Low-Invasive Cell Injection based on Rotational Microrobot. *Advanced Biology*, **2019**, 3, e1800274	3.5	3
43	Design, Simulation and Fabrication of Triaxial MEMS High Shock Accelerometer. *Journal of Nanoscience and Nanotechnology*, **2015**, 15, 2952-7	1.3	3
42	Effect of the Tip Size on AFM Cantilever Based Force Sensor. *Journal of Sensors*, **2015**, 2015, 1-8	2	3
41	Cell-cell adhesion force measurement using nano picker via nanorobotic manipulators inside ESEM **2010**,		3
40	Nano knife fabrication and calibration for single cell cutting inside environmental SEM **2010**,		3

39	Single cell adhesion force measurement for viability identification using nanorobotic manipulation system inside ESEM **2011**,		3
38	Characterization of oscillating nano knife for single cell cutting by nanorobotic manipulation system inside ESEM **2011**,		3
37	Development of lower limb motion detection based on LPMS **2016**,		3
36	Robot-aided fNEh torque sensing within an ultrawide dynamic range. *Microsystems and Nanoengineering*, **2021**, 7, 2	7.7	3
35	Nanofiber-based biodegradable millirobot with controllable anchoring and adaptive stepwise release functions. *Matter*, **2022**, 5, 1277-1295	12.7	3
34	Automatic Microwaveguide Coupling Based on Hybrid Position and Light Intensity Feedback. *IEEE/ASME Transactions on Mechatronics*, **2019**, 24, 1166-1175	5.5	2
33	Mechanism design of an ankle robot MKA-III for rehabilitation training **2016**,		2
32	Nanorobotic System for Precise In Situ Three-Dimensional Manufacture of Helical Microstructures. *IEEE Robotics and Automation Letters*, **2018**, 1-1	4.2	2
31	Ultrasonic robotic system for noncontact small object manipulation based on Kinect gesture control. *International Journal of Advanced Robotic Systems*, **2017**, 14, 172988141773873	1.4	2
30	Dual-MWCNT Probe Thermal Sensor Assembly and Evaluation Based on Nanorobotic Manipulation inside a Field-Emission-Scanning Electron Microscope. *International Journal of Advanced Robotic Systems*, **2015**, 12, 21	1.4	2
29	Tactile Super-Resolution Model for Soft Magnetic Skin. *IEEE Robotics and Automation Letters*, **2022**, 7, 2589-2596	4.2	2
28	Magnetic Artificial Cilia Carpets for Transport, Mixing, and Directional Diffusion. *Advanced Engineering Materials*,2101399	3.5	2
27	Self-adaptive and efficient propulsion of Ray sperms at different viscosities enabled by heterogeneous dual helixes. *Proceedings of the National Academy of Sciences of the United States of America*, **2021**, 118,	11.5	2
26	Transparent Magnetic Soft Millirobot Actuated by Micro-Node Array. *Advanced Materials Technologies*, **2021**, 6, 2100131	6.8	2
25	Development of lower limb rehabilitation evaluation system based on virtual reality technology **2016**,		2
24	Hip, knee and ankle motion angle detection based on inertial sensor **2016**,		2
23	Flexible 3-D Helix Fabrication by In-Situ SEM Micromanipulation System. *IEEE Transactions on Industrial Electronics*, **2020**, 67, 5565-5574	8.9	2
22	Surface Texture Recognition by Deep Learning-Enhanced Tactile Sensing. *Advanced Intelligent Systems*,2100076	6	2

21	In-plane Dual-axis MEMS Resonant Accelerometer with A Uniform Sensitivity **2020**,		1
20	Precise Watch-Hand Alignment Under Disturbance Condition by Microrobotic System. *IEEE Transactions on Automation Science and Engineering*, **2019**, 16, 278-285	4.9	1
19	Magnetic manipulation for spatially patternel alginate hydrogel microfibers **2013**,		1
18	Effect of alignment angle on the alignment accuracy of a miniature rotation robot for microscopy imaging. *International Journal of Advanced Robotic Systems*, **2017**, 14, 172988141770357	1.4	1
17	Hydrothermal synthesis of gold nanoplates with different size ranges **2017**,		1
16	Development of a New Ankle Rehabilitation Robot MKA-IV **2017**,		1
15	Multi-slicing of C. elegans tissue using micro-nanocutting probe based on nanomanipulation **2012**,		1
14	Evaluation of nanoknife's edge angle for single cell cutting by using nanorobotic manipulators inside ESEM **2011**,		1
13	Single cell penetration using nano-pipette by E-SEM nanorobotic manipulation system **2009**,		1
12	Magnetic-Directed Manipulation and Assembly of Fragile Bioartificial Architectures in the Liquid–liquid Interface. *IEEE/ASME Transactions on Mechatronics*, **2022**, 1-11	5.5	1
11	Sensing and Intelligent Perception in Robotic Applications. *Journal of Sensors*, **2016**, 2016, 1-1	2	1
10	Development of an ankle robot MKA-III for rehabilitation training **2016**,		1
9	Investigation of the Nonaxisymmetric Bending Property of Pollen Tubes via a Rotary Nanorobotic System. *IEEE Nanotechnology Magazine*, **2019**, 18, 139-143	2.6	1
8	Design of 6-DOF Parallel Ankle Rehabilitation Robot **2018**,		1
7	Functionalized Spiral-Rolling Millirobot for Upstream Swimming in Blood Vessel.. *Advanced Science*, **2022**, e2200342	13.6	1
6	Scale effect investigation of copper microwire's mechanical properties after in situ scanning electron microscope twisting. *Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science*, **2019**, 233, 3670-3677	1.3	0
5	A smartphone-based calibration-free portable urinalysis device. *Journal of Central South University*, **2021**, 28, 3829-3837	2.1	0
4	Multi-directional Characterization for Pollen Tubes Based on a Nanorobotic Manipulation System. *Lecture Notes in Computer Science*, **2017**, 84-93	0.9	

3 Corrections to "Starfish Inspired Milli Soft Robot With Omnidirectional Adaptive Locomotion Ability" [Apr 21 3325-3332]. *IEEE Robotics and Automation Letters*, **2021**, 6, 5348-5348 4.2

2 3D SYSTEM CELL ENGINEERING USING MICRO- AND NANOROBOTICS **2018**, 255-273

1 In Situ Nanocharacterization of Yeast Cells Using ESEM and FIB. *Fungal Biology*, **2015**, 109-123 2.3