

# Lixin Dong

## List of Publications by Citations

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155  
papers

4,493  
citations

29  
h-index

65  
g-index

218  
ext. papers

5,438  
ext. citations

5.9  
avg, IF

5.32  
L-index

#	Paper	IF	Citations
155	Artificial bacterial flagella: Fabrication and magnetic control. <i>Applied Physics Letters</i> , <b>2009</b> , 94, 064107	3.4	728
154	How Should Microrobots Swim?. <i>International Journal of Robotics Research</i> , <b>2009</b> , 28, 1434-1447	5.7	442
153	Characterizing the swimming properties of artificial bacterial flagella. <i>Nano Letters</i> , <b>2009</b> , 9, 3663-7	11.5	365
152	Reconfigurable magnetic microrobot swarm: Multimode transformation, locomotion, and manipulation. <i>Science Robotics</i> , <b>2019</b> , 4,	18.6	252
151	Assembly of nanodevices with carbon nanotubes through nanorobotic manipulations. <i>Proceedings of the IEEE</i> , <b>2003</b> , 9, 1803-1818	14.3	221
150	Nanorobotic spot welding: controlled metal deposition with attogram precision from copper-filled carbon nanotubes. <i>Nano Letters</i> , <b>2007</b> , 7, 58-63	11.5	155
149	Anomalous coiling of SiGe/Si and SiGe/Si/Cr helical nanobelts. <i>Nano Letters</i> , <b>2006</b> , 6, 1311-7	11.5	141
148	Fabrication and characterization of three-dimensional InGaAs/GaAs nanosprings. <i>Nano Letters</i> , <b>2006</b> , 6, 725-9	11.5	124
147	B4C-nanowires/carbon-microfiber hybrid structures and composites from cotton T-shirts. <i>Advanced Materials</i> , <b>2010</b> , 22, 2055-9	24	94
146	Electron-beam-induced deposition with carbon nanotube emitters. <i>Applied Physics Letters</i> , <b>2002</b> , 81, 1919-1921	3.4	93
145	Piezoresistivity Characterization of Synthetic Silicon Nanowires Using a MEMS Device. <i>Journal of Microelectromechanical Systems</i> , <b>2011</b> , 20, 959-967	2.5	79
144	Carbon nanotubes for nanorobotics. <i>Nano Today</i> , <b>2007</b> , 2, 12-21	17.9	77
143	Destructive constructions of nanostructures with carbon nanotubes through nanorobotic manipulation. <i>IEEE/ASME Transactions on Mechatronics</i> , <b>2004</b> , 9, 350-357	5.5	76
142	TaC Nanowire/Activated Carbon Microfiber Hybrid Structures from Bamboo Fibers. <i>Advanced Energy Materials</i> , <b>2011</b> , 1, 534-539	21.8	74
141	Photothermal Effect Induced Negative Photoconductivity and High Responsivity in Flexible Black Phosphorus Transistors. <i>ACS Nano</i> , <b>2017</b> , 11, 6048-6056	16.7	71
140	Soft Crawling Robots: Design, Actuation, and Locomotion. <i>Advanced Materials Technologies</i> , <b>2020</b> , 5, 1900837	6.8	61
139	Tutorial - Robotics in the small Part II: Nanorobotics. <i>IEEE Robotics and Automation Magazine</i> , <b>2007</b> , 14, 111-121	3.4	59

138	Piezoresistive InGaAs/GaAs nanosprings with metal connectors. <i>Nano Letters</i> , <b>2009</b> , 9, 554-61	11.5	56
137	. <i>IEEE Transactions on Automation Science and Engineering</i> , <b>2006</b> , 3, 228-235	4.9	56
136	Three-dimensional nanosprings for electromechanical sensors. <i>Sensors and Actuators A: Physical</i> , <b>2006</b> , 130-131, 54-61	3.9	49
135	Batch fabrication of carbon nanotube bearings. <i>Nanotechnology</i> , <b>2007</b> , 18, 075703	3.4	47
134	Flagella-like Propulsion for Microrobots Using a Nanocoil and a Rotating Electromagnetic Field <b>2007</b> ,		46
133	Real-time Rigid-body Visual Tracking in a Scanning Electron Microscope. <i>International Journal of Robotics Research</i> , <b>2009</b> , 28, 498-511	5.7	44
132	In situ forming, characterization, and transduction of nanowire memristors. <i>Nanoscale</i> , <b>2013</b> , 5, 12310-5	7.7	42
131	Singular Sheet Etching of Graphene with Oxygen Plasma. <i>Nano-Micro Letters</i> , <b>2014</b> , 6, 116-124	19.5	39
130	Single Pixel Black Phosphorus Photodetector for Near-Infrared Imaging. <i>Small</i> , <b>2018</b> , 14, 1702082	11	38
129	Nanotube fluidic junctions: internanotube attogram mass transport through walls. <i>Nano Letters</i> , <b>2009</b> , 9, 210-4	11.5	37
128	Shaping Nanoelectrodes for High-Precision Dielectrophoretic Assembly of Carbon Nanotubes. <i>IEEE Nanotechnology Magazine</i> , <b>2009</b> , 8, 449-456	2.6	37
127	Fabrication and characterization of freestanding Si/Cr micro- and nanospirals. <i>Microelectronic Engineering</i> , <b>2006</b> , 83, 1237-1240	2.5	30
126	Supermolecular switches based on multiwalled carbon nanotubes. <i>Applied Physics Letters</i> , <b>2010</b> , 96, 073116	11.6	28
125	Nanofibers and nanoparticles from the insect-capturing adhesive of the Sundew ( <i>Drosera</i> ) for cell attachment. <i>Journal of Nanobiotechnology</i> , <b>2010</b> , 8, 20	9.4	28
124	Biotemplating fabrication, mechanical and electrical characterizations of NbC nanowire arrays from the bamboo substrate. <i>Journal of Alloys and Compounds</i> , <b>2013</b> , 560, 142-146	5.7	27
123	. <i>IEEE Nanotechnology Magazine</i> , <b>2008</b> , 7, 508-517	2.6	25
122	Nanoassembly of Carbon Nanotubes through Mechanochemical Nanorobotic Manipulations. <i>Japanese Journal of Applied Physics</i> , <b>2003</b> , 42, 295-298	1.4	24
121	Simulation of Rotary Motion Generated by Head-to-Head Carbon Nanotube Shuttles. <i>IEEE/ASME Transactions on Mechatronics</i> , <b>2013</b> , 18, 130-137	5.5	23

120	Ultra flexible SiGe/Si/Cr nanosprings. <i>Microelectronics Journal</i> , <b>2008</b> , 39, 478-481	1.8	22
119	Nanorobotics for creating NEMS from 3D helical nanostructures. <i>Journal of Physics: Conference Series</i> , <b>2007</b> , 61, 257-261	0.3	21
118	Ionic shape-morphing microrobotic end-effectors for environmentally adaptive targeting, releasing, and sampling. <i>Nature Communications</i> , <b>2021</b> , 12, 411	17.4	21
117	Inter-sheet-effect-inspired graphene sensors: design, fabrication and characterization. <i>Nanotechnology</i> , <b>2012</b> , 23, 105501	3.4	20
116	Image-based 3D reconstruction using helical nanobelts for localized rotations. <i>Journal of Microscopy</i> , <b>2010</b> , 237, 122-35	1.9	20
115	Dual-Chirality Helical Nanobelts: Linear-to-Rotary Motion Converters for Three-Dimensional Microscopy. <i>Journal of Microelectromechanical Systems</i> , <b>2009</b> , 18, 1047-1053	2.5	20
114	3-D InGaAs/GaAs Helical Nanobelts for Optoelectronic Devices. <i>International Journal of Optomechatronics</i> , <b>2008</b> , 2, 88-103	3.5	20
113	3D nanorobotic manipulation of nano-order objects inside SEM		20
112	How Should Microrobots Swim?. <i>Springer Tracts in Advanced Robotics</i> , <b>2010</b> , 157-167	0.5	20
111	Bending and buckling of rolled-up SiGeBi microtubes using nanorobotic manipulation. <i>Applied Physics Letters</i> , <b>2008</b> , 92, 243102	3.4	19
110	Metal-filled carbon nanotube based optical nanoantennas: bubbling, reshaping, and in situ characterization. <i>Nanoscale</i> , <b>2012</b> , 4, 5673-9	7.7	18
109	Controllable melting and flow of Sn in flexible amorphous carbon nanotubes. <i>Carbon</i> , <b>2009</b> , 47, 3122-3127	27.4	17
108	Electrostatic actuation and electromechanical switching behavior of one-dimensional nanostructures. <i>ACS Nano</i> , <b>2009</b> , 3, 2953-64	16.7	17
107	Multilayer Black Phosphorus Near-Infrared Photodetectors. <i>Sensors</i> , <b>2018</b> , 18,	3.8	16
106	Thermo-flow and temperature sensing behaviour of graphene based on surface heat convection. <i>Micro and Nano Letters</i> , <b>2013</b> , 8, 681-685	0.9	16
105	Ring closure of rolled-up SiCr nanoribbons. <i>Applied Physics Letters</i> , <b>2008</b> , 92, 143110	3.4	16
104	Long-range linear elasticity and mechanical instability of self-scrolling binormal nanohelices under a uniaxial load. <i>Nanoscale</i> , <b>2011</b> , 3, 4301-6	7.7	15
103	Directed batch assembly of three-dimensional helical nanobelts through angular winding and electroplating. <i>Nanotechnology</i> , <b>2007</b> , 18, 055304	3.4	14

102	3-D Nanorobotic Manipulation of Nanometer-scale Objects. <i>Journal of Robotics and Mechatronics</i> , <b>2001</b> , 13, 146-153	0.7	14
101	Nanotube fountain pen: Towards 3D manufacturing of metallic nanostructures. <i>Carbon</i> , <b>2015</b> , 86, 280-287	6.4	13
100	Three-dimensional Nanorobotic Manipulations of Carbon Nanotubes. <i>Journal of Robotics and Mechatronics</i> , <b>2002</b> , 14, 245-252	0.7	12
99	Edge effect of strained bilayer nanofilms for tunable multistability and actuation. <i>Nanoscale</i> , <b>2017</b> , 9, 2958-2962	7.7	11
98	Micro/Nanorobots <b>2008</b> , 411-450		11
97	Local control of electric current driven shell etching of multiwalled carbon nanotubes. <i>Applied Physics A: Materials Science and Processing</i> , <b>2007</b> , 89, 133-139	2.6	11
96	3D nanorobotic manipulations of multi-walled carbon nanotubes		11
95	Design, fabrication, and characterization of graphene thermistor <b>2013</b> ,		10
94	SU-8 doped and encapsulated n-type graphene nanomesh with high air stability. <i>Applied Physics Letters</i> , <b>2013</b> , 103, 232113	3.4	10
93	Calibration of Carbon Nanotube Probes for Pico-Newton Order Force Measurement Inside a Scanning Electron Microscope. <i>Journal of Robotics and Mechatronics</i> , <b>2004</b> , 16, 155-162	0.7	10
92	Ultra-small site temperature sensing by carbon nanotube thermal probes		9
91	Micromanipulation using artificial bacterial flagella <b>2009</b> ,		8
90	Dielectrophoretic micro/nanoassembly with microtweezers and nanoelectrodes		8
89	. <i>IEEE Nanotechnology Magazine</i> , <b>2018</b> , 17, 994-1005	2.6	7
88	. <i>IEEE Nanotechnology Magazine</i> , <b>2009</b> , 8, 565-568	2.6	7
87	Micro and Nanorobotic Assembly Using Dielectrophoresis		7
86	Fabrication of a W/CuxO/Cu memristor with sub-micron holes for passive sensing of oxygen. <i>Microelectronic Engineering</i> , <b>2016</b> , 164, 48-52	2.5	7
85	Internal Electron Tunneling Enabled Ultrasensitive Position/Force Peapod Sensors. <i>Nano Letters</i> , <b>2015</b> , 15, 7281-7	11.5	6

84	Stability and analysis of configuration-tunable bi-directional MWNT bearings. <i>Nanotechnology</i> , <b>2009</b> , 20, 495704	3.4	6
83	Aging effect of rolled-up InGaAs/GaAs/Cr helical nanobelts. <i>Microelectronic Engineering</i> , <b>2009</b> , 86, 824-827	5	6
82	Spirally deformable soft actuators and their designable helical actuations based on a highly oriented carbon nanotube film. <i>Soft Matter</i> , <b>2019</b> , 15, 9788-9796	3.6	6
81	Numerical investigations of a multi-walled carbon nanotube-based multi-segmented optical antenna. <i>Applied Physics B: Lasers and Optics</i> , <b>2010</b> , 101, 601-609	1.9	5
80	A hybrid nanorobotic manipulation system integrated with nanorobotic manipulators inside scanning and transmission electron microscopes		5
79	Field emission property characterization of individual carbon nanotubes through nanorobotic manipulations and its applications <b>2004</b> ,		5
78	Perspective of nanotube sensors and nanotube actuators		5
77	Nanorobotic Systems. <i>International Journal of Advanced Robotic Systems</i> , <b>2005</b> , 2, 28	1.4	5
76	Three-dimensional nanoassembly of multi-walled carbon nanotubes through nanorobotic manipulations by using electron-beam-induced deposition		5
75	Position control and explicit force control of constrained motions of a manipulator for accurate grinding tasks. <i>Advanced Robotics</i> , <b>1996</b> , 11, 285-300	1.7	5
74	Field Emission Properties of Individual Carbon Nanotubes in Nanorobotic Manipulation and Electron-Beam-Induced Deposition. <i>Journal of Robotics and Mechatronics</i> , <b>2004</b> , 16, 597-603	0.7	5
73	Field Emission of Individual Carbon Nanotubes and its Improvement by Decoration with Ruthenium Dioxide Super-Nanoparticles. <i>Journal of Robotics and Mechatronics</i> , <b>2005</b> , 17, 475-482	0.7	5
72	Position sensitivity of optical nano-antenna arrays on optoelectronic devices. <i>Nano Energy</i> , <b>2018</b> , 53, 734-744	17.1	5
71	Sliding Probe Methods for In Situ Nanorobotic Characterization of Individual Nanostructures. <i>IEEE Transactions on Robotics</i> , <b>2015</b> , 31, 12-18	6.5	4
70	Plumbing the Depths of the Nanometer Scale. <i>IEEE Nanotechnology Magazine</i> , <b>2010</b> , 4, 13-22	1.7	4
69	Nano encoders based on vertical arrays of individual carbon nanotubes. <i>Advanced Robotics</i> , <b>2006</b> , 20, 1281-1301	1.7	4
68	Nanotube devices fabricated in a nano laboratory		4
67	Nanotube multi-functional nanoposition sensors. <i>Proceedings of the Institution of Mechanical Engineers, Part N: Journal of Nanoengineering and Nanosystems</i> , <b>2005</b> , 219, 23-27		4

66	Shape modification of carbon nanotubes and its applications in nanotube scissors		4
65	A tetrahedral DNA nanorobot with conformational change in response to molecular trigger. <i>Nanoscale</i> , <b>2021</b> , 13, 15552-15559	7.7	4
64	Single-cell membrane drug delivery using porous pen nanodeposition. <i>Nanoscale</i> , <b>2018</b> , 10, 12704-12712	7.7	3
63	Mechanically tough, elastic and stable rope-like double nanohelices. <i>Nanoscale</i> , <b>2014</b> , 6, 9436-42	7.7	3
62	Resistive switching in copper oxide nanowire-based memristor <b>2012</b> ,		3
61	In-situ nanorobotic soldering of three-dimensional helical nanobelts using gold nanoink <b>2007</b> ,		3
60	Selective Eradication of Individual Carbon Nanotubes from Vertically Aligned Arrays		3
59			3
58	Hybrid nanorobotic approaches for fabricating NEMS from 3D helical nanostructures		3
57	Measurements of the bi-linear elasticity of identical carbon nanotubes		3
56	Electron-beam-induced deposition of conductive nanostructures with carbon nanotube emitters		3
55	Force measurement with pico-Newton order resolution using a carbon nanotube probe		3
54	Inter-process measurement of MWNT rigidity and fabrication of MWNT junctions through nanorobotic manipulations. <i>AIP Conference Proceedings</i> , <b>2001</b> ,	0	3
53	Nonconvex compressive video sensing. <i>Journal of Electronic Imaging</i> , <b>2016</b> , 25,	0.7	2
52	Characterization of surface heat convection of bilayer graphene <b>2012</b> ,		2
51	Shaping the nanostructures from electromigration-based deposition <b>2010</b> ,		2
50	Molecular nanosensors based on the inter-sheet tunneling effect of a bilayer graphene <b>2010</b> ,		2
49	Layer engineering of graphene with oxygen plasma etching <b>2011</b> ,		2

48	Dual-chirality helical nanobelts: A novel linear-to-rotary motion converter. <i>Proceedings of the IEEE International Conference on Micro Electro Mechanical Systems (MEMS)</i> , <b>2008</b> ,		2
47	Real-time rigid-body visual tracking in a scanning electron microscope <b>2007</b> ,		2
46	Fabrication and Characterization of Self-scrolling Si/Cr Micro- and Nanostructures <b>2006</b> ,		2
45	Conductometric sensors based on InGaAs/GaAs nanocoils <b>2007</b> ,		2
44	Pure metal deposit using multi-walled carbon nanotubes decorated with ruthenium dioxide super-nanoparticles		
43	Carbon nanotubes based position sensors		2
42	Towards Linear Nano Servomotors with Integrated Position Sensing		2
41	Fabrication and Property Analysis of MWNT Junctions through Nanorobotic Manipulations. <i>International Journal of Nonlinear Sciences and Numerical Simulation</i> , <b>2002</b> , 3,	1.8	2
40	3D nanoassembly of carbon nanotubes through nanorobotic manipulations		2
39	Multipoint sliding probe methods for in situ electrical transport property characterization of individual nanostructures		2
38	Singular Sheet Etching of Graphene with Oxygen Plasma <b>2014</b> , 6, 116		2
37	Reproducing kernel hilbert space based single infrared image super resolution. <i>Infrared Physics and Technology</i> , <b>2016</b> , 77, 104-113	2.7	2
36	Plasmon-Enhanced Photovoltaic Characteristics of Black Phosphorus-MoS2 Heterojunction. <i>IEEE Open Journal of Nanotechnology</i> , <b>2021</b> , 2, 41-51	2.1	2
35	Characterization of Carbon Nanotube Based Infrared Photodetector Using Digital Microscopy. <i>Journal of Nanoscience and Nanotechnology</i> , <b>2017</b> , 17, 482-87	1.3	1
34	Contact Annealing for Self-Soldering: In Situ Investigation into Interfaces between PVP-Coated Silver Nanoelectrodes and Carbon Nanotubes. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2019</b> , 11, 36035-36043	0.5	1
33	Optimization of Protein-Protein Interaction Measurements for Drug Discovery Using AFM Force Spectroscopy. <i>IEEE Nanotechnology Magazine</i> , <b>2019</b> , 18, 509-517	2.6	1
32	In situ TEM revealing pretreatment and interface effects in Ge2Sb2Te5. <i>Applied Physics Letters</i> , <b>2020</b> , 116, 222105	3.4	1
31	Micro-/Nanorobots <b>2016</b> , 671-716		1



30	Highly stable chemical N-doping of graphene nanomesh FET <b>2014</b> ,		1
29	Tunable graphene nanomesh semiconductor: Design, fabrication, and characterization <b>2013</b> ,		1
28	Effect of NO <sub>2</sub> and NH <sub>3</sub> on the resistive switching behavior of W/Cu x O/Cu devices. <i>Journal of Micromechanics and Microengineering</i> , <b>2017</b> , 27, 105013	2	1
27	In situ investigation of nanoelectrochemical systems <b>2014</b> ,		1
26	Piezoresistivity characterization of silicon nanowires using a MEMS device <b>2011</b> ,		1
25	Rotary nanomotors based on head-to-head nanotube shuttles <b>2010</b> ,		1
24	Nanohelices as motion converters <b>2008</b> ,		1
23	Optical Tracking of Multi-walled Carbon Nanotubes by Attaching Functionalized Quantum Dots <b>2006</b> ,		1
22	Batch fabrication of nanotube transducers <b>2007</b> ,		1
21	Automatic Nanorobotic Characterization of Anomalously Rolled-up SiGe/Si Helical Nanobelts through Vision-based Force Measurement <b>2007</b> ,		1
20	Assembly of arrays of individual lateral nanotube emitters on nanoelectrodes		1
19	Dielectrophoretic nanoassembly of individual carbon nanotubes onto nanoelectrodes		1
18	Shell Engineering of Carbon Nanotube Arrays by Current Driven Breakdown <b>2006</b> ,		1
17	NANOROBOTIC MANIPULATION OF CARBON NANOTUBES INSIDE A TRANSMISSION ELECTRON MICROSCOPE. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , <b>2006</b> , 39, 114-119		1
16	Field emission of telescoping multi-walled carbon nanotubes		1
15	Measurement of a Bending Modulus of a Nanotube through Hybrid Nanorobotic Manipulation System inside SEM and TEM. <i>Nippon Kikai Gakkai Ronbunshu, C Hen/Transactions of the Japan Society of Mechanical Engineers, Part C</i> , <b>2005</b> , 71, 1349-1354		1
14	Multipoint sliding probe methods for in situ electrical transport property characterization of individual nanostructures		1
13	In situ TEM revealing the effects of dislocations on lithium-ion migration in transition metal dichalcogenides. <i>Journal of Energy Chemistry</i> , <b>2021</b> , 58, 280-284	12	1

12	Analytic Approach for Robot Control Using Natural Language in Dynamic Environment <b>2018</b> ,	1
11	Nanorobotics <b>2010</b> , 1633-1659	0
10	Modeling and simulation of an ultrasensitive electron tunneling position/force nanosensor. <i>RSC Advances</i> , <b>2016</b> , 6, 8297-8302	3.7
9	Nanorobotics. <i>Springer Handbooks</i> , <b>2017</b> , 559-584	1.3
8	Nanorobotic Manipulation of Helical Nanostructures. <i>Advanced Micro &amp; Nanosystems</i> , <b>2015</b> , 477-503	
7	Nanorobotic Mass Transport <b>2013</b> , 137-153	
6	Optical properties of a nanomatch-like plasmonic structure. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , <b>2010</b> , 27, 1783-90	1.8
5	Calibration of Bending Moduli of Carbon Nanotube Probes for pico-Newton Force Measurement. <i>Nippon Kikai Gakkai Ronbunshu, C Hen/Transactions of the Japan Society of Mechanical Engineers, Part C</i> , <b>2004</b> , 70, 427-432	
4	DESTRUCTIVE CONSTRUCTION OF NANOSTRUCTURES WITH CARBON NANOTUBES. <i>The Proceedings of the International Conference on Motion and Vibration Control</i> , <b>2002</b> , 6.2, 1050-1055	0
3	Nanorobotics <b>2007</b> , 1545-1574	
2	Analysis of the static behaviors of rolling guideways <b>1994</b> , 181-186	
1	Nanomanipulation in Biomedical Applications. <i>Current Robotics Reports</i> , <b>2021</b> , 2, 133-145	3.5