Lixin Dong

List of Publications by Year in Descending Order

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	Nanomanipulation in Biomedical Applications. *Current Robotics Reports*, **2021**, 2, 133-145	3.5	
154	In situ TEM revealing the effects of dislocations on lithium-ion migration in transition metal dichalcogenides. *Journal of Energy Chemistry*, **2021**, 58, 280-284	12	1
153	Plasmon-Enhanced Photovoltaic Characteristics of Black Phosphorus-MoS2 Heterojunction. *IEEE Open Journal of Nanotechnology*, **2021**, 2, 41-51	2.1	2
152	Ionic shape-morphing microrobotic end-effectors for environmentally adaptive targeting, releasing, and sampling. *Nature Communications*, **2021**, 12, 411	17.4	21
151	A tetrahedral DNA nanorobot with conformational change in response to molecular trigger. *Nanoscale*, **2021**, 13, 15552-15559	7.7	4
150	In situ TEM revealing pretreatment and interface effects in Ge2Sb2Te5. *Applied Physics Letters*, **2020**, 116, 222105	3.4	1
149	Soft Crawling Robots: Design, Actuation, and Locomotion. *Advanced Materials Technologies*, **2020**, 5, 1900837	6.8	61
148	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	9.5	1
147	Optimization of Protein-Protein Interaction Measurements for Drug Discovery Using AFM Force Spectroscopy. *IEEE Nanotechnology Magazine*, **2019**, 18, 509-517	2.6	1
146	Reconfigurable magnetic microrobot swarm: Multimode transformation, locomotion, and manipulation. *Science Robotics*, **2019**, 4,	18.6	252
145	Spirally deformable soft actuators and their designable helical actuations based on a highly oriented carbon nanotube film. *Soft Matter*, **2019**, 15, 9788-9796	3.6	6
144	. *IEEE Nanotechnology Magazine*, **2018**, 17, 994-1005	2.6	7
143	Multilayer Black Phosphorus Near-Infrared Photodetectors. *Sensors*, **2018**, 18,	3.8	16
142	Single-cell membrane drug delivery using porous pen nanodeposition. *Nanoscale*, **2018**, 10, 12704-12712	7.7	3
141	Single Pixel Black Phosphorus Photodetector for Near-Infrared Imaging. *Small*, **2018**, 14, 1702082	11	38
140	Analytic Approach for Robot Control Using Natural Language in Dynamic Environment **2018**,		1
139	Position sensitivity of optical nano-antenna arrays on optoelectronic devices. *Nano Energy*, **2018**, 53, 734-744	17.1	5

138	Photothermal Effect Induced Negative Photoconductivity and High Responsivity in Flexible Black Phosphorus Transistors. *ACS Nano*, **2017**, 11, 6048-6056	16.7	71
137	Characterization of Carbon Nanotube Based Infrared Photodetector Using Digital Microscopy. *Journal of Nanoscience and Nanotechnology*, **2017**, 17, 482-87	1.3	1
136	Edge effect of strained bilayer nanofilms for tunable multistability and actuation. *Nanoscale*, **2017**, 9, 2958-2962	7.7	11
135	Effect of NO2 and NH3 on the resistive switching behavior of W/Cu x O/Cu devices. *Journal of Micromechanics and Microengineering*, **2017**, 27, 105013	2	1
134	Nanorobotics. *Springer Handbooks*, **2017**, 559-584	1.3	
133	Micro-/Nanorobots **2016**, 671-716		1
132	Nonconvex compressive video sensing. *Journal of Electronic Imaging*, **2016**, 25,	0.7	2
131	Modeling and simulation of an ultrasensitive electron tunneling position/force nanosensor. *RSC Advances*, **2016**, 6, 8297-8302	3.7	
130	Reproducing kernel hilbert space based single infrared image super resolution. *Infrared Physics and Technology*, **2016**, 77, 104-113	2.7	2
129	Fabrication of a W/CuxO/Cu memristor with sub-micron holes for passive sensing of oxygen. *Microelectronic Engineering*, **2016**, 164, 48-52	2.5	7
128	Sliding Probe Methods for In Situ Nanorobotic Characterization of Individual Nanostructures. *IEEE Transactions on Robotics*, **2015**, 31, 12-18	6.5	4
127	Internal Electron Tunneling Enabled Ultrasensitive Position/Force Peapod Sensors. *Nano Letters*, **2015**, 15, 7281-7	11.5	6
126	Nanorobotic Manipulation of Helical Nanostructures. *Advanced Micro & Nanosystems*, **2015**, 477-503		
125	Nanotube fountain pen: Towards 3D manufacturing of metallic nanostructures. *Carbon*, **2015**, 86, 280-287	10.4	13
124	Highly stable chemical N-doping of graphene nanomesh FET **2014**,		1
123	Mechanically tough, elastic and stable rope-like double nanohelices. *Nanoscale*, **2014**, 6, 9436-42	7.7	3
122	Singular Sheet Etching of Graphene with Oxygen Plasma. *Nano-Micro Letters*, **2014**, 6, 116-124	19.5	39
121	In situ investigation of nanoelectrochemical systems **2014**,		1

120	Singular Sheet Etching of Graphene with Oxygen Plasma **2014**, 6, 116		2
119	Tunable graphene nanomesh semiconductor: Design, fabrication, and characterization **2013**,		1
118	Simulation of Rotary Motion Generated by Head-to-Head Carbon Nanotube Shuttles. *IEEE/ASME Transactions on Mechatronics*, **2013**, 18, 130-137	5.5	23
117	In situ forming, characterization, and transduction of nanowire memristors. *Nanoscale*, **2013**, 5, 12310-5	7.7	42
116	Biotemplating fabrication, mechanical and electrical characterizations of NbC nanowire arrays from the bamboo substrate. *Journal of Alloys and Compounds*, **2013**, 560, 142-146	5.7	27
115	Design, fabrication, and characterization of graphene thermistor **2013**,		10
114	Nanorobotic Mass Transport **2013**, 137-153		
113	Thermo-flow and temperature sensing behaviour of graphene based on surface heat convection. *Micro and Nano Letters*, **2013**, 8, 681-685	0.9	16
112	SU-8 doped and encapsulated n-type graphene nanomesh with high air stability. *Applied Physics Letters*, **2013**, 103, 232113	3.4	10
111	Resistive switching in copper oxide nanowire-based memristor **2012**,		3
110	Characterization of surface heat convection of bilayer graphene **2012**,		2
109	Metal-filled carbon nanotube based optical nanoantennas: bubbling, reshaping, and in situ characterization. *Nanoscale*, **2012**, 4, 5673-9	7.7	18
108	Inter-sheet-effect-inspired graphene sensors: design, fabrication and characterization. *Nanotechnology*, **2012**, 23, 105501	3.4	20
107	Piezoresistivity characterization of silicon nanowires using a MEMS device **2011**,		1
106	TaC Nanowire/Activated Carbon Microfiber Hybrid Structures from Bamboo Fibers. *Advanced Energy Materials*, **2011**, 1, 534-539	21.8	74
105	Piezoresistivity Characterization of Synthetic Silicon Nanowires Using a MEMS Device. *Journal of Microelectromechanical Systems*, **2011**, 20, 959-967	2.5	79
104	Long-range linear elasticity and mechanical instability of self-scrolling binormal nanohelices under a uniaxial load. *Nanoscale*, **2011**, 3, 4301-6	7.7	15
103	Layer engineering of graphene with oxygen plasma etching **2011**,		2

102	Image-based 3D reconstruction using helical nanobelts for localized rotations. *Journal of Microscopy*, **2010**, 237, 122-35	1.9	20
101	Optical properties of a nanomatch-like plasmonic structure. *Journal of the Optical Society of America A: Optics and Image Science, and Vision*, **2010**, 27, 1783-90	1.8	
100	Supermolecular switches based on multiwalled carbon nanotubes. *Applied Physics Letters*, **2010**, 96, 073116	3.4	28
99	Rotary nanomotors based on head-to-head nanotube shuttles **2010**,		1
98	Shaping the nanostructures from electromigration-based deposition **2010**,		2
97	Molecular nanosensors based on the inter-sheet tunneling effect of a bilayer graphene **2010**,		2
96	Numerical investigations of a multi-walled carbon nanotube-based multi-segmented optical antenna. *Applied Physics B: Lasers and Optics*, **2010**, 101, 601-609	1.9	5
95	Plumbing the Depths of the Nanometer Scale. *IEEE Nanotechnology Magazine*, **2010**, 4, 13-22	1.7	4
94	B4C-nanowires/carbon-microfiber hybrid structures and composites from cotton T-shirts. *Advanced Materials*, **2010**, 22, 2055-9	24	94
93	Nanofibers and nanoparticles from the insect-capturing adhesive of the Sundew (Drosera) for cell attachment. *Journal of Nanobiotechnology*, **2010**, 8, 20	9.4	28
92	How Should Microrobots Swim?. *Springer Tracts in Advanced Robotics*, **2010**, 157-167	0.5	20
91	Nanorobotics **2010**, 1633-1659		0
90	Micromanipulation using artificial bacterial flagella **2009**,		8
89	Real-time Rigid-body Visual Tracking in a Scanning Electron Microscope. *International Journal of Robotics Research*, **2009**, 28, 498-511	5.7	44
88	Stability and analysis of configuration-tunable bi-directional MWNT bearings. *Nanotechnology*, **2009** , 20, 495704	3.4	6
87	How Should Microrobots Swim?. *International Journal of Robotics Research*, **2009**, 28, 1434-1447	5.7	442
86	Aging effect of rolled-up InGaAs/GaAs/Cr helical nanobelts. *Microelectronic Engineering*, **2009**, 86, 824-827	2.5	6
85	Controllable melting and flow of Sn in flexible amorphous carbon nanotubes. *Carbon*, **2009**, 47, 3122-3127	6.4	17

84	Dual-Chirality Helical Nanobelts: Linear-to-Rotary Motion Converters for Three-Dimensional Microscopy. *Journal of Microelectromechanical Systems*, **2009**, 18, 1047-1053	2.5	20
83	Piezoresistive InGaAs/GaAs nanosprings with metal connectors. *Nano Letters*, **2009**, 9, 554-61	11.5	56
82	Characterizing the swimming properties of artificial bacterial flagella. *Nano Letters*, **2009**, 9, 3663-7	11.5	365
81	Nanotube fluidic junctions: internanotube attogram mass transport through walls. *Nano Letters*, **2009**, 9, 210-4	11.5	37
80	Electrostatic actuation and electromechanical switching behavior of one-dimensional nanostructures. *ACS Nano*, **2009**, 3, 2953-64	16.7	17
79	Artificial bacterial flagella: Fabrication and magnetic control. *Applied Physics Letters*, **2009**, 94, 064107	3.4	728
78	Shaping Nanoelectrodes for High-Precision Dielectrophoretic Assembly of Carbon Nanotubes. *IEEE Nanotechnology Magazine*, **2009**, 8, 449-456	2.6	37
77	. *IEEE Nanotechnology Magazine*, **2009**, 8, 565-568	2.6	7
76	3-D InGaAs/GaAs Helical Nanobelts for Optoelectronic Devices. *International Journal of Optomechatronics*, **2008**, 2, 88-103	3.5	20
75	Micro/Nanorobots **2008**, 411-450		11
74	. *IEEE Nanotechnology Magazine*, **2008**, 7, 508-517	2.6	25
73	Dual-chirality helical nanobelts: A novel linear-to-rotary motion converter. *Proceedings of the IEEE International Conference on Micro Electro Mechanical Systems (MEMS)*, **2008**,		2
72	Nanohelices as motion converters **2008**,		1
71	Ring closure of rolled-up Si□r nanoribbons. *Applied Physics Letters*, **2008**, 92, 143110	3.4	16
70	Bending and buckling of rolled-up SiGe□i microtubes using nanorobotic manipulation. *Applied Physics Letters*, **2008**, 92, 243102	3.4	19
69	Ultra flexible SiGe/Si/Cr nanosprings. *Microelectronics Journal*, **2008**, 39, 478-481	1.8	22
68	Real-time rigid-body visual tracking in a scanning electron microscope **2007**,		2
67	Nanorobotic spot welding: controlled metal deposition with attogram precision from copper-filled carbon nanotubes. *Nano Letters*, **2007**, 7, 58-63	11.5	155

66	Carbon nanotubes for nanorobotics. *Nano Today*, **2007**, 2, 12-21	17.9	77
65	Local control of electric current driven shell etching of multiwalled carbon nanotubes. *Applied Physics A: Materials Science and Processing*, **2007**, 89, 133-139	2.6	11
64	In-situ nanorobotic soldering of three-dimensional helical nanobelts using gold nanoink **2007**,		3
63	Directed batch assembly of three-dimensional helical nanobelts through angular winding and electroplating. *Nanotechnology*, **2007**, 18, 055304	3.4	14
62	Batch fabrication of nanotube transducers **2007**,		1
61	Conductometric sensors based on InGaAs/GaAs nanocoils **2007**,		2
60	Automatic Nanorobotic Characterization of Anomalously Rolled-up SiGe/Si Helical Nanobelts through Vision-based Force Measurement **2007**,		1
59	Flagella-like Propulsion for Microrobots Using a Nanocoil and a Rotating Electromagnetic Field **2007**,		46
58	Batch fabrication of carbon nanotube bearings. *Nanotechnology*, **2007**, 18, 075703	3.4	47
57	Nanorobotics for creating NEMS from 3D helical nanostructures. *Journal of Physics: Conference Series*, **2007**, 61, 257-261	0.3	21
56	Tutorial - Robotics in the small Part II: Nanorobotics. *IEEE Robotics and Automation Magazine*, **2007**, 14, 111-121	3.4	59
55	Nanorobotics **2007**, 1545-1574		
54	Fabrication and characterization of freestanding Si/Cr micro- and nanospirals. *Microelectronic Engineering*, **2006**, 83, 1237-1240	2.5	30
53	Fabrication and Characterization of Self-scrolling Si/Cr Micro- and Nanostructures **2006**,		2
52	Optical Tracking of Multi-walled Carbon Nanotubes by Attaching Functionalized Quantum Dots **2006**,		1
51	Nano encoders based on vertical arrays of individual carbon nanotubes. *Advanced Robotics*, **2006**, 20, 1281-1301	1.7	4
50	Shell Engineering of Carbon Nanotube Arrays by Current Driven Breakdown **2006**,		1
49	. *IEEE Transactions on Automation Science and Engineering*, **2006**, 3, 228-235	4.9	56

48	Fabrication and characterization of three-dimensional InGaAs/GaAs nanosprings. *Nano Letters*, **2006**, 6, 725-9	11.5	124
47	NANOROBOTIC MANIPULATION OF CARBON NANOTUBES INSIDE A TRANSIMISSION ELECTRON MICROSCOPE. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2006**, 39, 114-119		1
46	Three-dimensional nanosprings for electromechanical sensors. *Sensors and Actuators A: Physical*, **2006**, 130-131, 54-61	3.9	49
45	Anomalous coiling of SiGe/Si and SiGe/Si/Cr helical nanobelts. *Nano Letters*, **2006**, 6, 1311-7	11.5	141
44	Measurement of a Bending Modulus of a Nanotube through Hybrid Nanorobotic Manipulation System inside SEM and TEM. *Nippon Kikai Gakkai Ronbunshu, C Hen/Transactions of the Japan Society of Mechanical Engineers, Part C*, **2005**, 71, 1349-1354		1
43	Nanorobotic Systems. *International Journal of Advanced Robotic Systems*, **2005**, 2, 28	1.4	5
42	Nanotube multi-functional nanoposition sensors. *Proceedings of the Institution of Mechanical Engineers, Part N: Journal of Nanoengineering and Nanosystems*, **2005**, 219, 23-27		4
41	Field Emission of Individual Carbon Nanotubes and its Improvement by Decoration with Ruthenium Dioxide Super-Nanoparticles. *Journal of Robotics and Mechatronics*, **2005**, 17, 475-482	0.7	5
40	Field emission property characterization of individual carbon nanotubes through nanorobotic manipulations and its applications **2004**,		5
39	Destructive constructions of nanostructures with carbon nanotubes through nanorobotic manipulation. *IEEE/ASME Transactions on Mechatronics*, **2004**, 9, 350-357	5.5	76
38	Calibration of Bending Moduli of Carbon Nanotube Probes for pico-Newton Force Measurement. *Nippon Kikai Gakkai Ronbunshu, C Hen/Transactions of the Japan Society of Mechanical Engineers, Part C*, **2004**, 70, 427-432		
37	Calibration of Carbon Nanotube Probes for Pico-Newton Order Force Measurement Inside a Scanning Electron Microscope. *Journal of Robotics and Mechatronics*, **2004**, 16, 155-162	0.7	10
36	Field Emission Properties of Individual Carbon Nanotubes in Nanorobotic Manipulation and Electron-Beam-Induced Deposition. *Journal of Robotics and Mechatronics*, **2004**, 16, 597-603	0.7	5
35	Nanoassembly of Carbon Nanotubes through Mechanochemical Nanorobotic Manipulations. *Japanese Journal of Applied Physics*, **2003**, 42, 295-298	1.4	24
34	Assembly of nanodevices with carbon nanotubes through nanorobotic manipulations. *Proceedings of the IEEE*, **2003**, 9, 1803-1818	14.3	221
33	Electron-beam-induced deposition with carbon nanotube emitters. *Applied Physics Letters*, **2002**, 81, 1919-1921	3.4	93
32	Fabrication and Property Analysis of MWNT Junctions through Nanorobotic Manipulations. *International Journal of Nonlinear Sciences and Numerical Simulation*, **2002**, 3,	1.8	2
31	Three-dimensional Nanorobotic Manipulations of Carbon Nanotubes. *Journal of Robotics and Mechatronics*, **2002**, 14, 245-252	0.7	12

30	DESTRUCTIVE CONSTRUCTION OF NANOSTRUCTURES WITH CARBON NANOTUBES. *The Proceedings of the International Conference on Motion and Vibration Control*, **2002**, 6.2, 1050-1055	0	
29	Inter-process measurement of MWNT rigidity and fabrication of MWNT junctions through nanorobotic manipulations. *AIP Conference Proceedings*, **2001**,	0	3
28	3-D Nanorobotic Manipulation of Nanometer-scale Objects. *Journal of Robotics and Mechatronics*, **2001**, 13, 146-153	0.7	14
27	Position control and explicit force control of constrained motions of a manipulator for accurate grinding tasks. *Advanced Robotics*, **1996**, 11, 285-300	1.7	5
26	Analysis of the static behaviors of rolling guideways **1994**, 181-186		
25	Selective Eradication of Individual Carbon Nanotubes from Vertically Aligned Arrays		3
24	Assembly of arrays of individual lateral nanotube emitters on nanoelectrodes		1
23			3
22	Dielectrophoretic nanoassembly of individual carbon nanotubes onto nanoelectrodes		1
21	Hybrid nanorobotic approaches for fabricating NEMS from 3D helical nanostructures		3
20	Measurements of the bi-linear elasticity of identical carbon nanotubes		3
19	Field emission of telescoping multi-walled carbon nanotubes		1
18	Ultra-small site temperature sensing by carbon nanotube thermal probes		9
17	Pure metal deposit using multi-walled carbon nanotubes decorated with ruthenium dioxide super-nanoparticles		2
16	A hybrid nanorobotic manipulation system integrated with nanorobotic manipulators inside scanning and transmission electron microscopes		5
15	Carbon nanotubes based position sensors		2
14	Nanotube devices fabricated in a nano laboratory		4
13	Electron-beam-induced deposition of conductive nanostructures with carbon nanotube emitters		3

12	Perspective of nanotube sensors and nanotube actuators	5
11	Dielectrophoretic micro/nanoassembly with microtweezers and nanoelectrodes	8
10	Towards Linear Nano Servomotors with Integrated Position Sensing	2
9	Three-dimensional nanoassembly of multi-walled carbon nanotubes through nanorobotic manipulations by using electron-beam-induced deposition	5
8	3D nanoassembly of carbon nanotubes through nanorobotic manipulations	2
7	Force measurement with pico-Newton order resolution using a carbon nanotube probe	3
6	Shape modification of carbon nanotubes and its applications in nanotube scissors	4
5	3D nanorobotic manipulation of nano-order objects inside SEM	20
4	3D nanorobotic manipulations of multi-walled carbon nanotubes	11
3	Multipoint sliding probe methods for in situ electrical transport property characterization of individual nanostructures	1
2	Multipoint sliding probe methods for in situ electrical transport property characterization of individual nanostructures	2
1	Micro and Nanorobotic Assembly Using Dielectrophoresis	7