Bradley J Nelson

List of Publications by Year
in descending order

557 papers	32,761 citations	3721 89 h-index	5965 160 g-index
580 all docs	580 docs citations	580 times ranked	18514 citing authors

#	Article	IF	Citations
1	Microrobots for Minimally Invasive Medicine. Annual Review of Biomedical Engineering, 2010, 12, 55-85.	5.7	1,582
2	Magnetic Helical Micromachines: Fabrication, Controlled Swimming, and Cargo Transport. Advanced Materials, 2012, 24, 811-816.	11.1	983
3	OctoMag: An Electromagnetic System for 5-DOF Wireless Micromanipulation. IEEE Transactions on Robotics, 2010, 26, 1006-1017.	7.3	958
4	Artificial bacterial flagella: Fabrication and magnetic control. Applied Physics Letters, 2009, 94, .	1.5	932
5	The grand challenges of <i>Science Robotics</i>. Science Robotics, 2018, 3, .	9.9	787
6	Bio-inspired magnetic swimming microrobots for biomedical applications. Nanoscale, 2013, 5, 1259-1272.	2.8	652
7	How Should Microrobots Swim?. International Journal of Robotics Research, 2009, 28, 1434-1447.	5.8	563
8	Soft micromachines with programmable motility and morphology. Nature Communications, 2016, 7, 12263.	5.8	495
9	Controlled In Vivo Swimming of a Swarm of Bacteriaâ€Like Microrobotic Flagella. Advanced Materials, 2015, 27, 2981-2988.	11.1	440
10	Characterizing the Swimming Properties of Artificial Bacterial Flagella. Nano Letters, 2009, 9, 3663-3667.	4.5	436
11	Autofocusing in computer microscopy: Selecting the optimal focus algorithm. Microscopy Research and Technique, 2004, 65, 139-149.	1.2	393
12	Combating COVID-19â€"The role of robotics in managing public health and infectious diseases. Science Robotics, 2020, 5, .	9.9	393
13	Fabrication and Characterization of Magnetic Microrobots for Threeâ€Dimensional Cell Culture and Targeted Transportation. Advanced Materials, 2013, 25, 5863-5868.	11.1	360
14	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.	1.7	322
15	Recent developments in magnetically driven micro- and nanorobots. Applied Materials Today, 2017, 9, 37-48.	2.3	312
16	Biological Cell Injection Using an Autonomous MicroRobotic System. International Journal of Robotics Research, 2002, 21, 861-868.	5.8	310
17	Nanomagnetic encoding of shape-morphing micromachines. Nature, 2019, 575, 164-168.	13.7	307
18	Robotics in the Small, Part I: Microbotics. IEEE Robotics and Automation Magazine, 2007, 14, 92-103.	2.2	298

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19	Mechanical property characterization of mouse zona pellucida. IEEE Transactions on Nanobioscience, 2003, 2, 279-286.	2.2	282
20	Artificial bacterial flagella for micromanipulation. Lab on A Chip, 2010, 10, 2203.	3.1	279
21	Magnetic Helical Microswimmers Functionalized with Lipoplexes for Targeted Gene Delivery. Advanced Functional Materials, 2015, 25, 1666-1671.	7.8	279
22	Controlled Propulsion and Cargo Transport of Rotating Nickel Nanowires near a Patterned Solid Surface. ACS Nano, 2010, 4, 6228-6234.	7.3	269
23	An Integrated Microrobotic Platform for Onâ€Demand, Targeted Therapeutic Interventions. Advanced Materials, 2014, 26, 952-957.	11.1	259
24	Trends in Microâ€/Nanorobotics: Materials Development, Actuation, Localization, and System Integration for Biomedical Applications. Advanced Materials, 2021, 33, e2002047.	11.1	256
25	Magnetically actuated microrobots as a platform for stem cell transplantation. Science Robotics, 2019, 4, .	9.9	247
26	Modeling Magnetic Torque and Force for Controlled Manipulation of Soft-Magnetic Bodies. , 2007, 23, 1247-1252.		243
27	Piezoelectrically Enhanced Photocatalysis with BiFeO3 Nanostructures for Efficient Water Remediation. IScience, 2018, 4, 236-246.	1.9	232
28	Fibronectin forms the most extensible biological fibers displaying switchable force-exposed cryptic binding sites. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 18267-18272.	3.3	230
29	3D Printed Enzymatically Biodegradable Soft Helical Microswimmers. Advanced Functional Materials, 2018, 28, 1804107.	7.8	222
30	Magnetic Helical Micromachines. Chemistry - A European Journal, 2013, 19, 28-38.	1.7	214
31	Artificial Swimmers Propelled by Acoustically Activated Flagella. Nano Letters, 2016, 16, 4968-4974.	4.5	209
32	Adaptive locomotion of artificial microswimmers. Science Advances, 2019, 5, eaau1532.	4.7	203
33	Undulatory Locomotion of Magnetic Multilink Nanoswimmers. Nano Letters, 2015, 15, 4829-4833.	4.5	202
34	Three-Dimensional Magnetic Manipulation of Micro- and Nanostructures for Applications in Life Sciences. IEEE Transactions on Magnetics, 2013, 49, 321-330.	1.2	200
35	Nanorobotic Spot Welding:Â Controlled Metal Deposition with Attogram Precision from Copper-Filled Carbon Nanotubes. Nano Letters, 2007, 7, 58-63.	4.5	194
36	Hybrid Magnetoelectric Nanowires for Nanorobotic Applications: Fabrication, Magnetoelectric Coupling, and Magnetically Assisted In Vitro Targeted Drug Delivery. Advanced Materials, 2017, 29, 1605458.	11.1	193

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37	Biocompatibility characteristics of the metal organic framework ZIF-8 for therapeutical applications. Applied Materials Today, 2018, 11, 13-21.	2.3	193
38	3D Printed Microtransporters: Compound Micromachines for Spatiotemporally Controlled Delivery of Therapeutic Agents. Advanced Materials, 2015, 27, 6644-6650.	11.1	192
39	Degradable Magnetic Composites for Minimally Invasive Interventions: Device Fabrication, Targeted Drug Delivery, and Cytotoxicity Tests. Advanced Materials, 2016, 28, 533-538.	11.1	190
40	Smallâ€Scale Machines Driven by External Power Sources. Advanced Materials, 2018, 30, e1705061.	11.1	186
41	Ultrasound Doppler-guided real-time navigation of a magnetic microswarm for active endovascular delivery. Science Advances, 2021, 7, .	4.7	186
42	A Magnetically Controlled Soft Microrobot Steering a Guidewire in a Three-Dimensional Phantom Vascular Network. Soft Robotics, 2019, 6, 54-68.	4.6	183
43	Small, Fast, and Under Control: Wireless Resonant Magnetic Micro-agents. International Journal of Robotics Research, 2010, 29, 613-636.	5.8	179
44	Artificial Bacterial Flagella for Remoteâ€Controlled Targeted Singleâ€Cell Drug Delivery. Small, 2014, 10, 1953-1957.	5.2	178
45	Neutrophil-inspired propulsion in a combined acoustic and magnetic field. Nature Communications, 2017, 8, 770.	5.8	175
46	Magnetic cilia carpets with programmable metachronal waves. Nature Communications, 2020, 11, 2637.	5.8	172
47	Mobility Experiments With Microrobots for Minimally Invasive Intraocular Surgery. , 2013, 54, 2853.		170
48	Anomalous Coiling of SiGe/Si and SiGe/Si/Cr Helical Nanobelts. Nano Letters, 2006, 6, 1311-1317.	4.5	163
49	A decade retrospective of medical robotics research from 2010 to 2020. Science Robotics, 2021, 6, eabi8017.	9.9	158
50	3Dâ€Printed Soft Magnetoelectric Microswimmers for Delivery and Differentiation of Neuronâ€Like Cells. Advanced Functional Materials, 2020, 30, 1910323.	7.8	157
51	Fabrication and Characterization of Three-Dimensional InGaAs/GaAs Nanosprings. Nano Letters, 2006, 6, 725-729.	4.5	155
52	Multiwavelength Light-Responsive Au/B-TiO₂ Janus Micromotors. ACS Nano, 2017, 11, 6146-6154.	7.3	155
53	Selective Trapping and Manipulation of Microscale Objects Using Mobile Microvortices. Nano Letters, 2012, 12, 156-160.	4.5	153
54	A bulk microfabricated multi-axis capacitive cellular force sensor using transverse comb drives. Journal of Micromechanics and Microengineering, 2002, 12, 832-840.	1.5	152

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55	Recent Advances in Wearable Transdermal Delivery Systems. Advanced Materials, 2018, 30, 1704530.	11.1	151
56	Soft Micro- and Nanorobotics. Annual Review of Control, Robotics, and Autonomous Systems, 2018, 1, 53-75.	7.5	145
57	A Six-Axis MEMS Forceâ€"Torque Sensor With Micro-Newton and Nano-Newtonmeter Resolution. Journal of Microelectromechanical Systems, 2009, 18, 433-441.	1.7	143
58	MOFBOTS: Metalâ€"Organicâ€Frameworkâ€Based Biomedical Microrobots. Advanced Materials, 2019, 31, e1901592.	11.1	139
59	Cellular Force Microscopy for in Vivo Measurements of Plant Tissue Mechanics Â Â. Plant Physiology, 2012, 158, 1514-1522.	2.3	135
60	Ultrasound-mediated piezoelectric differentiation of neuron-like PC12 cells on PVDF membranes. Scientific Reports, 2017, 7, 4028.	1.6	131
61	Characterizing fruit fly flight behavior using a microforce sensor with a new comb-drive configuration. Journal of Microelectromechanical Systems, 2005, 14, 4-11.	1.7	126
62	Magnetic control of continuum devices. International Journal of Robotics Research, 2017, 36, 68-85.	5.8	125
63	Hybrid Helical Magnetic Microrobots Obtained by 3D Templateâ€Assisted Electrodeposition. Small, 2014, 10, 1284-1288.	5.2	124
64	Shape-Switching Microrobots for Medical Applications: The Influence of Shape in Drug Delivery and Locomotion. ACS Applied Materials & Interfaces, 2015, 7, 6803-6811.	4.0	124
65	Synthesis and characterization of a nanocomposite of goethite nanorods and reduced graphene oxide for electrochemical capacitors. Journal of Solid State Chemistry, 2012, 185, 191-197.	1.4	123
66	Micropositioning of a weakly calibrated microassembly system using coarse-to-fine visual servoing strategies. IEEE Transactions on Electronics Packaging Manufacturing, 2000, 23, 123-131.	1.6	122
67	Vision-based force measurement. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2004, 26, 290-298.	9.7	121
68	Hermetically Coated Superparamagnetic Fe₂O₃ Particles with SiO₂ Nanofilms. Chemistry of Materials, 2009, 21, 2094-2100.	3.2	120
69	Targeted cargo delivery using a rotating nickel nanowire. Nanomedicine: Nanotechnology, Biology, and Medicine, 2012, 8, 1074-1080.	1.7	120
70	Magnetically Driven Silverâ€Coated Nanocoils for Efficient Bacterial Contact Killing. Advanced Functional Materials, 2016, 26, 1063-1069.	7.8	118
71	Behavior of rotating magnetic microrobots above the step-out frequency with application to control of multi-microrobot systems. Applied Physics Letters, 2014, 104, .	1.5	117
72	Fabrication and Manipulation of Ciliary Microrobots with Non-reciprocal Magnetic Actuation. Scientific Reports, 2016, 6, 30713.	1.6	114

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73	Wireless resonant magnetic microactuator for untethered mobile microrobots. Applied Physics Letters, 2008, 92, .	1.5	112
74	Artificial bacterial flagella functionalized with temperature-sensitive liposomes for controlled release. Sensors and Actuators B: Chemical, 2014, 196, 676-681.	4.0	109
75	Magnetic Helical Micro- and Nanorobots: Toward Their Biomedical Applications. Engineering, 2015, 1, 021-026.	3.2	109
76	Synthetic and living micropropellers for convection-enhanced nanoparticle transport. Science Advances, 2019, 5, eaav4803.	4.7	109
77	The rise of robots in surgical environments during COVID-19. Nature Machine Intelligence, 2020, 2, 566-572.	8.3	108
78	The pollen tube: a soft shell with a hard core. Plant Journal, 2013, 73, 617-627.	2.8	106
79	B₄Câ€Nanowires/Carbonâ€Microfiber Hybrid Structures and Composites from Cotton Tâ€shirts. Advanced Materials, 2010, 22, 2055-2059.	11.1	104
80	Superparamagnetic microrobots: fabrication by two-photon polymerization and biocompatibility. Biomedical Microdevices, 2013, 15, 997-1003.	1.4	103
81	Highly Efficient Coaxial TiO₂â€PtPd Tubular Nanomachines for Photocatalytic Water Purification with Multiple Locomotion Strategies. Advanced Functional Materials, 2016, 26, 6995-7002.	7.8	101
82	Magnetically driven Bi₂O₃/BiOCl-based hybrid microrobots for photocatalytic water remediation. Journal of Materials Chemistry A, 2015, 3, 23670-23676.	5.2	100
83	Chitosan Electrodeposition for Microrobotic Drug Delivery. Advanced Healthcare Materials, 2013, 2, 1037-1044.	3.9	99
84	Transition metal oxide and graphene nanocomposites for high-performance electrochemical capacitors. Physical Chemistry Chemical Physics, 2012, 14, 16331.	1.3	98
85	Electroforming of Implantable Tubular Magnetic Microrobots for Wireless Ophthalmologic Applications. Advanced Healthcare Materials, 2015, 4, 209-214.	3.9	98
86	Cellular forces and matrix assembly coordinate fibrous tissue repair. Nature Communications, 2016, 7, 11036.	5.8	98
87	Surface-Chemistry-Mediated Control of Individual Magnetic Helical Microswimmers in a Swarm. ACS Nano, 2018, 12, 6210-6217.	7.3	97
88	Sensor-based microassembly of hybrid MEMS devices. IEEE Control Systems, 1998, 18, 35-45.	1.0	95
89	Minimum Bounds on the Number of Electromagnets Required for Remote Magnetic Manipulation. IEEE Transactions on Robotics, 2015, 31, 714-722.	7.3	95
90	Bioinspired acousto-magnetic microswarm robots with upstream motility. Nature Machine Intelligence, 2021, 3, 116-124.	8.3	95

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91	Carbon nanotubes for nanorobotics. Nano Today, 2007, 2, 12-21.	6.2	94
92	Morphology, structure and magnetic properties of cobaltâ€"nickel films obtained from acidic electrolytes containing glycine. Electrochimica Acta, 2011, 56, 1399-1408.	2.6	93
93	Nanocrystalline Electroplated Cuâ€"Ni: Metallic Thin Films with Enhanced Mechanical Properties and Tunable Magnetic Behavior. Advanced Functional Materials, 2010, 20, 983-991.	7.8	92
94	Superparamagnetic Twistâ€Type Actuators with Shapeâ€Independent Magnetic Properties and Surface Functionalization for Advanced Biomedical Applications. Advanced Functional Materials, 2014, 24, 5269-5276.	7.8	92
95	Mobile Magnetic Nanocatalysts for Bioorthogonal Targeted Cancer Therapy. Advanced Functional Materials, 2018, 28, 1705920.	7.8	92
96	Magnetic Continuum Device with Variable Stiffness for Minimally Invasive Surgery. Advanced Intelligent Systems, 2020, 2, 1900086.	3.3	92
97	A Supervisory Wafer-Level 3D Microassembly System for Hybrid MEMS Fabrication. Journal of Intelligent and Robotic Systems: Theory and Applications, 2003, 37, 43-68.	2.0	90
98	Magnetically driven piezoelectric soft microswimmers for neuron-like cell delivery and neuronal differentiation. Materials Horizons, 2019, 6, 1512-1516.	6.4	88
99	Nearâ€Infrared Lightâ€Sensitive Polyvinyl Alcohol Hydrogel Photoresist for Spatiotemporal Control of Cellâ€Instructive 3D Microenvironments. Advanced Materials, 2018, 30, 1705564.	11.1	87
100	A Magnetically Controlled Wireless Optical Oxygen Sensor for Intraocular Measurements. IEEE Sensors Journal, 2008, 8, 29-37.	2.4	86
101	Force and vision resolvability for assimilating disparate sensory feedback. IEEE Transactions on Automation Science and Engineering, 1996, 12, 714-731.	2.4	84
102	Imaging Technologies for Biomedical Microâ€•and Nanoswimmers. Advanced Materials Technologies, 2019, 4, 1800575.	3.0	83
103	Assembly, Disassembly, and Anomalous Propulsion of Microscopic Helices. Nano Letters, 2013, 13, 4263-4268.	4.5	81
104	Six degree-of-freedom hand/eye visual tracking with uncertain parameters. IEEE Transactions on Automation Science and Engineering, 1995, 11, 725-732.	2.4	80
105	3D Fabrication of Fully Iron Magnetic Microrobots. Small, 2019, 15, e1805006.	5.2	79
106	Robust Electromagnetic Control of Microrobots Under Force and Localization Uncertainties. IEEE Transactions on Automation Science and Engineering, 2014, 11, 310-316.	3.4	78
107	Magnetically guided capsule endoscopy. Medical Physics, 2017, 44, e91-e111.	1.6	78
108	Indirect 3D and 4D Printing of Soft Robotic Microstructures. Advanced Materials Technologies, 2019, 4, 1900332.	3.0	78

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109	A Capsuleâ€Type Microrobot with Pickâ€andâ€Drop Motion for Targeted Drug and Cell Delivery. Advanced Healthcare Materials, 2018, 7, e1700985.	3.9	77
110	Strategies for Increasing the Tracking Region of an Eye-in-Hand System by Singularity and Joint Limit Avoidance. International Journal of Robotics Research, 1995, 14, 255-269.	5.8	76
111	Metalâ€"Organic Frameworks in Motion. Chemical Reviews, 2020, 120, 11175-11193.	23.0	75
112	Artificial Acoustoâ€Magnetic Soft Microswimmers. Advanced Materials Technologies, 2017, 2, 1700050.	3.0	74
113	Magnetoelectrically Driven Catalytic Degradation of Organics. Advanced Materials, 2019, 31, e1901378.	11.1	74
114	Mechanical Analysis of Chorion Softening in Prehatching Stages of Zebrafish Embryos. IEEE Transactions on Nanobioscience, 2006, 5, 89-94.	2.2	73
115	Tutorial - Robotics in the small Part II: Nanorobotics. IEEE Robotics and Automation Magazine, 2007, 14, 111-121.	2.2	72
116	A micro-particle positioning technique combining an ultrasonic manipulator and a microgripper. Journal of Micromechanics and Microengineering, 2006, 16, 1562-1570.	1.5	70
117	Flagella-like Propulsion for Microrobots Using a Nanocoil and a Rotating Electromagnetic Field. , 2007, , .		68
118	Towards nanotube linear servomotors. IEEE Transactions on Automation Science and Engineering, 2006, 3, 228-235.	3.4	67
119	Progress in robotics for combating infectious diseases. Science Robotics, 2021, 6, .	9.9	67
120	Electrodeposition of low residual stress CoNiMnP hard magnetic thin films for magnetic MEMS actuators. Journal of Magnetism and Magnetic Materials, 2005, 292, 49-58.	1.0	66
121	Piezoresistive InGaAs/GaAs Nanosprings with Metal Connectors. Nano Letters, 2009, 9, 554-561.	4.5	66
122	4D printing and robotics. Science Robotics, 2018, 3, .	9.9	66
123	Motile Piezoelectric Nanoeels for Targeted Drug Delivery. Advanced Functional Materials, 2019, 29, 1808135.	7.8	66
124	Real-time Rigid-body Visual Tracking in a Scanning Electron Microscope. International Journal of Robotics Research, 2009, 28, 498-511.	5.8	65
125	Visually Servoing Magnetic Intraocular Microdevices. IEEE Transactions on Robotics, 2012, 28, 798-809.	7.3	64
126	Noncytotoxic artificial bacterial flagella fabricated from biocompatible ORMOCOMP and iron coating. Journal of Materials Chemistry B, 2014, 2, 357-362.	2.9	64

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127	Magnetoelectric micromachines with wirelessly controlled navigation and functionality. Materials Horizons, 2016, 3, 113-118.	6.4	64
128	Biodegradable Metalâ€"Organic Frameworkâ€Based Microrobots (MOFBOTs). Advanced Healthcare Materials, 2020, 9, e2001031.	3.9	64
129	Calibration of a parametric model of an optical microscope. Optical Engineering, 1999, 38, 1989.	0.5	63
130	Grain Boundary Segregation and Interdiffusion Effects in Nickelâ€"Copper Alloys: An Effective Means to Improve the Thermal Stability of Nanocrystalline Nickel. ACS Applied Materials & Interfaces, 2011, 3, 2265-2274.	4.0	63
131	Highâ€Resolution SPECT Imaging of Stimuliâ€Responsive Soft Microrobots. Small, 2019, 15, e1900709.	5.2	62
132	A high-aspect-ratio two-axis electrostatic microactuator with extended travel range. Sensors and Actuators A: Physical, 2002, 102, 49-60.	2.0	61
133	Three-dimensional nanosprings for electromechanical sensors. Sensors and Actuators A: Physical, 2006, 130-131, 54-61.	2.0	61
134	MEMS capacitive force sensors for cellular and flight biomechanics. Biomedical Materials (Bristol), 2007, 2, S16-S22.	1.7	61
135	Noncontact manipulation using a transversely magnetized rolling robot. Applied Physics Letters, 2013, 103, .	1.5	59
136	Acoustically Mediated Controlled Drug Release and Targeted Therapy with Degradable 3D Porous Magnetic Microrobots. Advanced Healthcare Materials, 2021, 10, e2001096.	3.9	59
137	Dumbbell Fluidic Tweezers for Dynamical Trapping and Selective Transport of Microobjects. Advanced Functional Materials, 2017, 27, 1604571.	7.8	58
138	A photopatternable superparamagnetic nanocomposite: Material characterization and fabrication of microstructures. Sensors and Actuators B: Chemical, 2011, 156, 433-443.	4.0	57
139	Catalytic Locomotion of Coreâ€"Shell Nanowire Motors. ACS Nano, 2016, 10, 9983-9991.	7.3	57
140	Batch fabrication of carbon nanotube bearings. Nanotechnology, 2007, 18, 075703.	1.3	56
141	A comparison between fine-grained and nanocrystalline electrodeposited Cuâ€"Ni films. Insights on mechanical and corrosion performance. Surface and Coatings Technology, 2011, 205, 5285-5293.	2.2	56
142	A smart multifunctional drug delivery nanoplatform for targeting cancer cells. Nanoscale, 2016, 8, 12723-12728.	2.8	56
143	Microrobots: a new era in ocular drug delivery. Expert Opinion on Drug Delivery, 2014, 11, 1815-1826.	2.4	54
144	A Needleâ€Type Microrobot for Targeted Drug Delivery by Affixing to a Microtissue. Advanced Healthcare Materials, 2020, 9, e1901697.	3.9	54

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145	Localized non-contact manipulation using artificial bacterial flagella. Applied Physics Letters, 2011, 99, .	1.5	52
146	Polymer-Based Wireless Resonant Magnetic Microrobots. IEEE Transactions on Robotics, 2014, 30, 26-32.	7.3	52
147	MiniMag: A Hemispherical Electromagnetic System for 5-DOF Wireless Micromanipulation. Springer Tracts in Advanced Robotics, 2014, , 317-329.	0.3	52
148	Magnetic helical micro-/nanomachines: Recent progress and perspective. Matter, 2022, 5, 77-109.	5.0	52
149	Calibration of Multi-Axis MEMS Force Sensors Using the Shape-From-Motion Method. IEEE Sensors Journal, 2007, 7, 344-351.	2.4	51
150	Helical and Tubular Lipid Microstructures that are Electrolessâ€Coated with CoNiReP for Wireless Magnetic Manipulation. Small, 2012, 8, 1498-1502.	5.2	51
151	In situ construction of potato starch based carbon nanofiber/activated carbon hybrid structure for high-performance electrical double layer capacitor. Journal of Power Sources, 2012, 207, 199-204.	4.0	50
152	Model-Based Calibration for Magnetic Manipulation. IEEE Transactions on Magnetics, 2017, 53, 1-6.	1.2	50
153	3D mechanical characterization of single cells and small organisms using acoustic manipulation and force microscopy. Nature Communications, 2021, 12, 2583.	5.8	50
154	A CAD model based tracking system for visually guided microassembly. Robotica, 2005, 23, 409-418.	1.3	49
155	Travel range extension of a MEMS electrostatic microactuator. IEEE Transactions on Control Systems Technology, 2005, 13, 138-145.	3.2	49
156	Three-axis micro-force sensor with sub-micro-Newton measurement uncertainty and tunable force range. Journal of Micromechanics and Microengineering, 2010, 20, 025011.	1.5	49
157	Robotically controlled microprey to resolve initial attack modes preceding phagocytosis. Science Robotics, 2017, 2, .	9.9	49
158	Magnetic quadrupole assemblies with arbitrary shapes and magnetizations. Science Robotics, 2019, 4, .	9.9	49
159	In Vitro Oxygen Sensing Using Intraocular Microrobots. IEEE Transactions on Biomedical Engineering, 2012, 59, 3104-3109.	2.5	48
160	Graphite Coating of Iron Nanowires for Nanorobotic Applications: Synthesis, Characterization and Magnetic Wireless Manipulation. Advanced Functional Materials, 2013, 23, 823-831.	7.8	48
161	Measuring the Mechanical Properties of Plant Cell Walls. Plants, 2015, 4, 167-182.	1.6	48
162	Mechanically interlocked 3D multi-material micromachines. Nature Communications, 2020, 11, 5957.	5.8	48

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163	Optomechatronic Design of Microassembly Systems for Manufacturing Hybrid Microsystems. IEEE Transactions on Industrial Electronics, 2005, 52, 1013-1023.	5.2	46
164	Shaping Nanoelectrodes for High-Precision Dielectrophoretic Assembly of Carbon Nanotubes. IEEE Nanotechnology Magazine, 2009, 8, 449-456.	1.1	46
165	Micro- and Nanorobots Swimming in Heterogeneous Liquids. ACS Nano, 2014, 8, 8718-8724.	7.3	46
166	Magnetic Control of a Flexible Needle in Neurosurgery. IEEE Transactions on Biomedical Engineering, 2021, 68, 616-627.	2.5	46
167	Nanotube Fluidic Junctions: Internanotube Attogram Mass Transport through Walls. Nano Letters, 2009, 9, 210-214.	4.5	45
168	On-the-fly catalytic degradation of organic pollutants using magneto-photoresponsive bacteria-templated microcleaners. Journal of Materials Chemistry A, 2019, 7, 24847-24856.	5.2	45
169	A Submillimeter Continuous Variable Stiffness Catheter for Compliance Control. Advanced Science, 2021, 8, e2101290.	5.6	45
170	A Survey on Swarm Microrobotics. IEEE Transactions on Robotics, 2022, 38, 1531-1551.	7.3	45
171	Cooperative manipulation and transport of microobjects using multiple helical microcarriers. RSC Advances, 2014, 4, 26771-26776.	1.7	44
172	A Magnetically Navigated Microcannula for Subretinal Injections. IEEE Transactions on Biomedical Engineering, 2021, 68, 119-129.	2.5	44
173	Biodegradable Smallâ€Scale Swimmers for Biomedical Applications. Advanced Materials, 2021, 33, e2102049.	11.1	44
174	Generating mobile fluidic traps for selective three-dimensional transport of microobjects. Applied Physics Letters, 2014, 105, .	1.5	43
175	Microfluidic-Based Droplet and Cell Manipulations Using Artificial Bacterial Flagella. Micromachines, 2016, 7, 25.	1.4	43
176	MEMS FOR CELLULAR FORCE MEASUREMENTS AND MOLECULAR DETECTION. International Journal of Information Acquisition, 2004, 01, 23-32.	0.2	42
177	A Microassembly System for the Flexible Assembly of Hybrid Robotic Mems Devices. International Journal of Optomechatronics, 2009, 3, 69-90.	3.3	42
178	Comparison, optimization, and limitations of magnetic manipulation systems. Journal of Micro-Bio Robotics, 2013, 8, 107-120.	2.1	42
179	Controlled Propulsion of Twoâ€Dimensional Microswimmers in a Precessing Magnetic Field. Small, 2018, 14, e1800722.	5.2	42
180	Thermoset Shape Memory Polymer Variable Stiffness 4D Robotic Catheters. Advanced Science, 2022, 9, e2103277.	5.6	42

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181	Toward targeted retinal drug delivery with wireless magnetic microrobots. , 2008, , .		41
182	Strategies for single particle manipulation using acoustic and flow fields. Ultrasonics, 2010, 50, 247-257.	2.1	41
183	Superparamagnetic photocurable nanocomposite for the fabrication of microcantilevers. Journal of Micromechanics and Microengineering, 2011, 21, 025023.	1.5	41
184	Voltageâ€Induced Coercivity Reduction in Nanoporous Alloy Films: A Boost toward Energyâ€Efficient Magnetic Actuation. Advanced Functional Materials, 2017, 27, 1701904.	7.8	41
185	Fabrication and characterization of freestanding Si/Cr micro- and nanospirals. Microelectronic Engineering, 2006, 83, 1237-1240.	1.1	40
186	Non-ideal swimming of artificial bacterial flagella near a surface. , 2010, , .		40
187	Fabrication of Segmented Au/Co/Au Nanowires: Insights in the Quality of Co/Au Junctions. ACS Applied Materials & Interfaces, 2014, 6, 14583-14589.	4.0	40
188	Investigation of Magnetotaxis of Reconfigurable Microâ€Origami Swimmers with Competitive and Cooperative Anisotropy. Advanced Functional Materials, 2018, 28, 1802110.	7.8	40
189	A Variable Stiffness Magnetic Catheter Made of a Conductive Phaseâ€Change Polymer for Minimally Invasive Surgery. Advanced Functional Materials, 2022, 32, .	7.8	40
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