Hongsoo Choi, Ph D

List of Publications by Year
in descending order

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		218592	189801
54	2,954	26	50
papers	citations	h-index	g-index

54	54	54	2737
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Fabrication and Characterization of Magnetic Microrobots for Threeâ€Dimensional Cell Culture and Targeted Transportation. Advanced Materials, 2013, 25, 5863-5868.	11.1	360
2	Magnetically actuated microrobots as a platform for stem cell transplantation. Science Robotics, 2019, 4, .	9.9	247
3	Review of piezoelectric micromachined ultrasonic transducers and their applications. Journal of Micromechanics and Microengineering, 2017, 27, 113001.	1.5	186
4	A Magnetically Controlled Soft Microrobot Steering a Guidewire in a Three-Dimensional Phantom Vascular Network. Soft Robotics, 2019, 6, 54-68.	4.6	183
5	Magnetic Actuation Based Motion Control for Microrobots: An Overview. Micromachines, 2015, 6, 1346-1364.	1.4	170
6	3Dâ€Printed Soft Magnetoelectric Microswimmers for Delivery and Differentiation of Neuronâ€Like Cells. Advanced Functional Materials, 2020, 30, 1910323.	7.8	157
7	Magnetically Actuated Degradable Microrobots for Actively Controlled Drug Release and Hyperthermia Therapy. Advanced Healthcare Materials, 2019, 8, e1900213.	3.9	116
8	Fabrication and Manipulation of Ciliary Microrobots with Non-reciprocal Magnetic Actuation. Scientific Reports, 2016, 6, 30713.	1.6	114
9	A review of magnetic actuation systems and magnetically actuated guidewire- and catheter-based microrobots for vascular interventions. Intelligent Service Robotics, 2020, 13, 1-14.	1.6	95
10	3D Fabrication of Fully Iron Magnetic Microrobots. Small, 2019, 15, e1805006.	5.2	79
11	A Capsuleâ€Type Microrobot with Pickâ€andâ€Drop Motion for Targeted Drug and Cell Delivery. Advanced Healthcare Materials, 2018, 7, e1700985.	3.9	77
12	A microelectromechanical system artificial basilar membrane based on a piezoelectric cantilever array and its characterization using an animal model. Scientific Reports, 2015, 5, 12447.	1.6	70
13	Noncytotoxic artificial bacterial flagella fabricated from biocompatible ORMOCOMP and iron coating. Journal of Materials Chemistry B, 2014, 2, 357-362.	2.9	64
14	A magnetically actuated microrobot for targeted neural cell delivery and selective connection of neural networks. Science Advances, 2020, 6, .	4.7	64
15	A Triboelectricâ€Based Artificial Basilar Membrane to Mimic Cochlear Tonotopy. Advanced Healthcare Materials, 2016, 5, 2481-2487.	3.9	62
16	Fabrication and Characterization of a Magnetic Drilling Actuator for Navigation in a Three-dimensional Phantom Vascular Network. Scientific Reports, 2018, 8, 3691.	1.6	60
17	Acoustically Mediated Controlled Drug Release and Targeted Therapy with Degradable 3D Porous Magnetic Microrobots. Advanced Healthcare Materials, 2021, 10, e2001096.	3.9	59
18	Fabrication of a two-dimensional piezoelectric micromachined ultrasonic transducer array using a top-crossover-to-bottom structure and metal bridge connections. Journal of Micromechanics and Microengineering, 2013, 23, 125037.	1.5	58

#	Article	IF	Citations
19	Dumbbell Fluidic Tweezers for Dynamical Trapping and Selective Transport of Microobjects. Advanced Functional Materials, 2017, 27, 1604571.	7.8	58
20	Recent Progress in Magnetically Actuated Microrobots for Targeted Delivery of Therapeutic Agents. Advanced Healthcare Materials, 2021, 10, e2001596.	3.9	56
21	A Needleâ€Type Microrobot for Targeted Drug Delivery by Affixing to a Microtissue. Advanced Healthcare Materials, 2020, 9, e1901697.	3.9	54
22	Psychological tactile sensor structure based on piezoelectric nanowire cell arrays. RSC Advances, 2015, 5, 40363-40368.	1.7	37
23	MEMS piezoelectric artificial basilar membrane with passive frequency selectivity for short pulse width signal modulation. Sensors and Actuators A: Physical, 2013, 203, 6-10.	2.0	31
24	Steering Algorithm for a Flexible Microrobot to Enhance Guidewire Control in a Coronary Angioplasty Application. Micromachines, 2018, 9, 617.	1.4	30
25	Mechanical frequency selectivity of an artificial basilar membrane using a beam array with narrow supports. Journal of Micromechanics and Microengineering, 2013, 23, 095018.	1.5	29
26	Magnetically Actuated SiCNâ€Based Ceramic Microrobot for Guided Cell Delivery. Advanced Healthcare Materials, 2019, 8, e1900739.	3.9	29
27	A Biodegradable Magnetic Microrobot Based on Gelatin Methacrylate for Precise Delivery of Stem Cells with Mass Production Capability. Small, 2022, 18, .	5.2	29
28	31-mode piezoelectric micromachined ultrasonic transducer with PZT thick film by granule spraying in vacuum process. Applied Physics Letters, 2017, 110, .	1.5	25
29	A simple and rapid fabrication method for biodegradable drug-encapsulating microrobots using laser micromachining, and characterization thereof. Sensors and Actuators B: Chemical, 2018, 266, 276-287.	4.0	25
30	Improving guidewire-mediated steerability of a magnetically actuated flexible microrobot. Micro and Nano Systems Letters, 2018, 6, .	1.7	25
31	A Robust Motion Control With Antiwindup Scheme for Electromagnetic Actuated Microrobot Using Time-Delay Estimation. IEEE/ASME Transactions on Mechatronics, 2019, 24, 1096-1105.	3.7	25
32	Development of a High-Density Piezoelectric Micromachined Ultrasonic Transducer Array Based on Patterned Aluminum Nitride Thin Film. Micromachines, 2020, 11, 623.	1.4	25
33	Biomimetic Artificial Basilar Membranes for Nextâ€Generation Cochlear Implants. Advanced Healthcare Materials, 2017, 6, 1700674.	3.9	24
34	A 3D Microscaffold Cochlear Electrode Array for Steroid Elution. Advanced Healthcare Materials, 2019, 8, e1900379.	3.9	23
35	Electromagnetic Steering of a Magnetic Cylindrical Microrobot Using Optical Feedback Closed-Loop Control. International Journal of Optomechatronics, 2014, 8, 129-145.	3.3	21
36	An Electromagnetically Controllable Microrobotic Interventional System for Targeted, Realâ€Time Cardiovascular Intervention. Advanced Healthcare Materials, 2022, 11, e2102529.	3.9	20

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37	Finite Element Analysis of Piezoelectric Thin Film Membrane Structures. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2007, 54, 2036-2044.	1.7	19
38	Influence of top electrode design on pMUTs performance. Sensors and Actuators A: Physical, 2007, 135, 613-619.	2.0	18
39	MEMS flexible artificial basilar membrane fabricated from piezoelectric aluminum nitride on an SU-8 substrate. Journal of Micromechanics and Microengineering, 2017, 27, 075006.	1.5	18
40	Nano-patterned SU-8 surface using nanosphere-lithography for enhanced neuronal cell growth. Nanotechnology, 2016, 27, 175303.	1.3	16
41	Integrated Piezoelectric AlN Thin Film with SU-8/PDMS Supporting Layer for Flexible Sensor Array. Sensors, 2020, 20, 315.	2.1	15
42	A piezoelectric micro-electro-mechanical system vector sensor with a mushroom-shaped proof mass for a dipole beam pattern. Sensors and Actuators A: Physical, 2021, 332, 113129.	2.0	14
43	Characterization of a Piezoelectric AlN Beam Array in Air and Fluid for an Artificial Basilar Membrane. Electronic Materials Letters, 2018, 14, 101-111.	1.0	11
44	Piezoelectric performance of continuous beam and narrow supported beam arrays for artificial basilar membranes. Electronic Materials Letters, 2014, 10, 1011-1018.	1.0	10
45	All-in-one low-intensity pulsed ultrasound stimulation system using piezoelectric micromachined ultrasonic transducer (pMUT) arrays for targeted cell stimulation. Biomedical Microdevices, 2017, 19, 86.	1.4	10
46	Electronic Skin to Feel â€œPainâ€: Detecting â€œPrickâ€•and â€œHotâ€•Pain Sensations. Soft Robotics, 2019, 6, 745-759.	4.6	9
47	Closedâ€Loop Temperatureâ€Controlled Magnetic Hyperthermia Therapy with Magnetic Guidance of Superparamagnetic Ironâ€Oxide Nanoparticles. Advanced Therapeutics, 2022, 5, .	1.6	9
48	Influence of mechanical coupling by SiO2 membrane on the frequency selectivity of microfabricated beam arrays for artificial basilar membranes. Journal of Mechanical Science and Technology, 2015, 29, 963-971.	0.7	8
49	Magnetically Actuated Forward-Looking Interventional Ultrasound Imaging: Feasibility Studies. IEEE Transactions on Biomedical Engineering, 2020, 67, 1797-1805.	2.5	7
50	Review on Fabrication and Manipulation of Scaffold and Ciliary Microrobots. Hanyang Medical Reviews, 2016, 36, 235.	0.4	2
51	Piezoelectric ALN cantilever array on a SU-8 substrate for flexible artificial basilar membrane. , 2017, , .		1
52	Fabrication and targeted particle delivery using microrobots. , 2015, , .		0
53	Mechanosensitive channel stimulation system using low-intensity ultrasound by piezoelectric micromachined ultrasonic transducer array. , 2016, , .		0
54	Characterization of a mm-scale swimming microrobot for 3D manipulation. , 2017, , .		0