

Hong Soo Choi

List of Publications by Year in descending order

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Version: 2024-02-01

78
papers

3,378
citations

186265

28
h-index

149698

56
g-index

85
all docs

85
docs citations

85
times ranked

3142
citing authors

#	ARTICLE	IF	CITATIONS
1	Fabrication and Characterization of Magnetic Microrobots for Three-Dimensional Cell Culture and Targeted Transportation. <i>Advanced Materials</i> , 2013, 25, 5863-5868.	21.0	360
2	Magnetically actuated microrobots as a platform for stem cell transplantation. <i>Science Robotics</i> , 2019, 4, .	17.6	247
3	Review of piezoelectric micromachined ultrasonic transducers and their applications. <i>Journal of Micromechanics and Microengineering</i> , 2017, 27, 113001.	2.6	186
4	A Magnetically Controlled Soft Microrobot Steering a Guidewire in a Three-Dimensional Phantom Vascular Network. <i>Soft Robotics</i> , 2019, 6, 54-68.	8.0	183
5	Magnetic Actuation Based Motion Control for Microrobots: An Overview. <i>Micromachines</i> , 2015, 6, 1346-1364.	2.9	170
6	3D-Printed Soft Magnetolectric Microswimmers for Delivery and Differentiation of Neuron-Like Cells. <i>Advanced Functional Materials</i> , 2020, 30, 1910323.	14.9	157
7	Magnetically Actuated Degradable Microrobots for Actively Controlled Drug Release and Hyperthermia Therapy. <i>Advanced Healthcare Materials</i> , 2019, 8, e1900213.	7.6	116
8	Fabrication and Manipulation of Ciliary Microrobots with Non-reciprocal Magnetic Actuation. <i>Scientific Reports</i> , 2016, 6, 30713.	3.3	114
9	Stretchable and suturable fibre sensors for wireless monitoring of connective tissue strain. <i>Nature Electronics</i> , 2021, 4, 291-301.	26.0	106
10	A review of magnetic actuation systems and magnetically actuated guidewire- and catheter-based microrobots for vascular interventions. <i>Intelligent Service Robotics</i> , 2020, 13, 1-14.	2.6	95
11	3D Fabrication of Fully Iron Magnetic Microrobots. <i>Small</i> , 2019, 15, e1805006.	10.0	79
12	A Capsule-Type Microrobot with Pick-and-Drop Motion for Targeted Drug and Cell Delivery. <i>Advanced Healthcare Materials</i> , 2018, 7, e1700985.	7.6	77
13	A microelectromechanical system artificial basilar membrane based on a piezoelectric cantilever array and its characterization using an animal model. <i>Scientific Reports</i> , 2015, 5, 12447.	3.3	70
14	Noncytotoxic artificial bacterial flagella fabricated from biocompatible ORMOCOMP and iron coating. <i>Journal of Materials Chemistry B</i> , 2014, 2, 357-362.	5.8	64
15	A magnetically actuated microrobot for targeted neural cell delivery and selective connection of neural networks. <i>Science Advances</i> , 2020, 6, .	10.3	64
16	A Triboelectric-Based Artificial Basilar Membrane to Mimic Cochlear Tonotopy. <i>Advanced Healthcare Materials</i> , 2016, 5, 2481-2487.	7.6	62
17	Fabrication and Characterization of a Magnetic Drilling Actuator for Navigation in a Three-dimensional Phantom Vascular Network. <i>Scientific Reports</i> , 2018, 8, 3691.	3.3	60
18	Acoustically Mediated Controlled Drug Release and Targeted Therapy with Degradable 3D Porous Magnetic Microrobots. <i>Advanced Healthcare Materials</i> , 2021, 10, e2001096.	7.6	59

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19	Fabrication of a two-dimensional piezoelectric micromachined ultrasonic transducer array using a top-crossover-to-bottom structure and metal bridge connections. <i>Journal of Micromechanics and Microengineering</i> , 2013, 23, 125037.	2.6	58
20	Dumbbell Fluidic Tweezers for Dynamical Trapping and Selective Transport of Microobjects. <i>Advanced Functional Materials</i> , 2017, 27, 1604571.	14.9	58
21	Recent Progress in Magnetically Actuated Microrobots for Targeted Delivery of Therapeutic Agents. <i>Advanced Healthcare Materials</i> , 2021, 10, e2001596.	7.6	56
22	A Needleâ€¢Type Microrobot for Targeted Drug Delivery by Affixing to a Microtissue. <i>Advanced Healthcare Materials</i> , 2020, 9, e1901697.	7.6	54
23	Upshift of Phase Transition Temperature in Nanostructured PbTiO ₃ Thick Film for High Temperature Applications. <i>ACS Applied Materials & Interfaces</i> , 2014, 6, 11980-11987.	8.0	38
24	Psychological tactile sensor structure based on piezoelectric nanowire cell arrays. <i>RSC Advances</i> , 2015, 5, 40363-40368.	3.6	37
25	Early Pheromone Experience Modifies a Synaptic Activity to Influence Adult Pheromone Responses of <i>C.Âlegans</i> . <i>Current Biology</i> , 2017, 27, 3168-3177.e3.	3.9	35
26	A Magnetically Powered Stem Cellâ€¢Based Microrobot for Minimally Invasive Stem Cell Delivery via the Intranasal Pathway in a Mouse Brain. <i>Advanced Healthcare Materials</i> , 2021, 10, e2100801.	7.6	32
27	MEMS piezoelectric artificial basilar membrane with passive frequency selectivity for short pulse width signal modulation. <i>Sensors and Actuators A: Physical</i> , 2013, 203, 6-10.	4.1	31
28	Steering Algorithm for a Flexible Microrobot to Enhance Guidewire Control in a Coronary Angioplasty Application. <i>Micromachines</i> , 2018, 9, 617.	2.9	30
29	Mechanical frequency selectivity of an artificial basilar membrane using a beam array with narrow supports. <i>Journal of Micromechanics and Microengineering</i> , 2013, 23, 095018.	2.6	29
30	Magnetically Actuated SiCNâ€¢Based Ceramic Microrobot for Guided Cell Delivery. <i>Advanced Healthcare Materials</i> , 2019, 8, e1900739.	7.6	29
31	A Biodegradable Magnetic Microrobot Based on Gelatin Methacrylate for Precise Delivery of Stem Cells with Mass Production Capability. <i>Small</i> , 2022, 18, .	10.0	29
32	Magnetic actuation of a cylindrical microrobot using time-delay-estimation closed-loop control: modeling and experiments. <i>Smart Materials and Structures</i> , 2014, 23, 035013.	3.5	28
33	Control of Multilevel Resistance in Vanadium Dioxide by Electric Field Using Hybrid Dielectrics. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 13571-13576.	8.0	28
34	31-mode piezoelectric micromachined ultrasonic transducer with PZT thick film by granule spraying in vacuum process. <i>Applied Physics Letters</i> , 2017, 110, .	3.3	25
35	A simple and rapid fabrication method for biodegradable drug-encapsulating microrobots using laser micromachining, and characterization thereof. <i>Sensors and Actuators B: Chemical</i> , 2018, 266, 276-287.	7.8	25
36	Improving guidewire-mediated steerability of a magnetically actuated flexible microrobot. <i>Micro and Nano Systems Letters</i> , 2018, 6, .	3.7	25

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37	Feeding state regulates pheromone-mediated avoidance behavior via the insulin signaling pathway in <i>Caenorhabditis elegans</i> . <i>EMBO Journal</i> , 2018, 37, .	7.8	25
38	A Robust Motion Control With Antiwindup Scheme for Electromagnetic Actuated Microrobot Using Time-Delay Estimation. <i>IEEE/ASME Transactions on Mechatronics</i> , 2019, 24, 1096-1105.	5.8	25
39	Development of a High-Density Piezoelectric Micromachined Ultrasonic Transducer Array Based on Patterned Aluminum Nitride Thin Film. <i>Micromachines</i> , 2020, 11, 623.	2.9	25
40	Biomimetic Artificial Basilar Membranes for Next-Generation Cochlear Implants. <i>Advanced Healthcare Materials</i> , 2017, 6, 1700674.	7.6	24
41	A 3D Microscaffold Cochlear Electrode Array for Steroid Elution. <i>Advanced Healthcare Materials</i> , 2019, 8, e1900379.	7.6	23
42	Electromagnetic Steering of a Magnetic Cylindrical Microrobot Using Optical Feedback Closed-Loop Control. <i>International Journal of Optomechatronics</i> , 2014, 8, 129-145.	6.6	21
43	An Electromagnetically Controllable Microrobotic Interventional System for Targeted, Real-Time Cardiovascular Intervention. <i>Advanced Healthcare Materials</i> , 2022, 11, e2102529.	7.6	20
44	Finite Element Analysis of Piezoelectric Thin Film Membrane Structures. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2007, 54, 2036-2044.	3.0	19
45	Influence of top electrode design on pMUTs performance. <i>Sensors and Actuators A: Physical</i> , 2007, 135, 613-619.	4.1	18
46	Nano-patterned SU-8 surface using nanosphere-lithography for enhanced neuronal cell growth. <i>Nanotechnology</i> , 2016, 27, 175303.	2.6	16
47	Integrated Piezoelectric AlN Thin Film with SU-8/PDMS Supporting Layer for Flexible Sensor Array. <i>Sensors</i> , 2020, 20, 315.	3.8	15
48	A novel method for device-related electroencephalography artifact suppression to explore cochlear implant-related cortical changes in single-sided deafness. <i>Journal of Neuroscience Methods</i> , 2015, 255, 22-28.	2.5	14
49	Optimal path planning of multiple nanoparticles in continuous environment using a novel Adaptive Genetic Algorithm. <i>Precision Engineering</i> , 2018, 53, 65-78.	3.4	14
50	A piezoelectric micro-electro-mechanical system vector sensor with a mushroom-shaped proof mass for a dipole beam pattern. <i>Sensors and Actuators A: Physical</i> , 2021, 332, 113129.	4.1	14
51	Effect of Thickness Ratio in Piezoelectric/Elastic Cantilever Structure on the Piezoelectric Energy Harvesting Performance. <i>Electronic Materials Letters</i> , 2019, 15, 61-69.	2.2	12
52	A single chemosensory GPCR is required for a concentration-dependent behavioral switching in <i>C.Ælegans</i> . <i>Current Biology</i> , 2022, 32, 398-411.e4.	3.9	12
53	Characterization of a Piezoelectric AlN Beam Array in Air and Fluid for an Artificial Basilar Membrane. <i>Electronic Materials Letters</i> , 2018, 14, 101-111.	2.2	11
54	PZT Ferroelectric Synapse TFT With Multi-Level of Conductance State for Neuromorphic Applications. <i>IEEE Access</i> , 2021, 9, 140975-140982.	4.2	11

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55	Piezoelectric performance of continuous beam and narrow supported beam arrays for artificial basilar membranes. <i>Electronic Materials Letters</i> , 2014, 10, 1011-1018.	2.2	10
56	All-in-one low-intensity pulsed ultrasound stimulation system using piezoelectric micromachined ultrasonic transducer (pMUT) arrays for targeted cell stimulation. <i>Biomedical Microdevices</i> , 2017, 19, 86.	2.8	10
57	An SU-8-based microprobe with a nanostructured surface enhances neuronal cell attachment and growth. <i>Micro and Nano Systems Letters</i> , 2017, 5, .	3.7	9
58	Electronic Skin to Feel "Pain": Detecting "Prick" and "Hot" Pain Sensations. <i>Soft Robotics</i> , 2019, 6, 745-759.	8.0	9
59	Closed-Loop Temperature-Controlled Magnetic Hyperthermia Therapy with Magnetic Guidance of Superparamagnetic Iron Oxide Nanoparticles. <i>Advanced Therapeutics</i> , 2022, 5, .	3.2	9
60	A top-crossover-to-bottom addressed segmented annular array using piezoelectric micromachined ultrasonic transducers. <i>Journal of Micromechanics and Microengineering</i> , 2015, 25, 115024.	2.6	8
61	Influence of mechanical coupling by SiO ₂ membrane on the frequency selectivity of microfabricated beam arrays for artificial basilar membranes. <i>Journal of Mechanical Science and Technology</i> , 2015, 29, 963-971.	1.5	8
62	A thickness-mode piezoelectric micromachined ultrasound transducer annular array using a PMN-PZT single crystal. <i>Journal of Micromechanics and Microengineering</i> , 2018, 28, 075015.	2.6	8
63	Magnetically Actuated Forward-Looking Interventional Ultrasound Imaging: Feasibility Studies. <i>IEEE Transactions on Biomedical Engineering</i> , 2020, 67, 1797-1805.	4.2	7
64	A 28.7V Modular Supply Multiplying Pulser With 75.4% Power Reduction Relative to CV ² . <i>IEEE Transactions on Circuits and Systems II: Express Briefs</i> , 2021, 68, 858-862.	3.0	7
65	Dexamethasone delivery for hearing preservation in animal cochlear implant model: continuity, long-term release, and fast release rate. <i>Acta Oto-Laryngologica</i> , 2020, 140, 705-714.	0.9	7
66	SU-8-based nanoporous substrate for migration of neuronal cells. <i>Microelectronic Engineering</i> , 2015, 141, 173-177.	2.4	6
67	Characterization and modeling of an acoustic sensor using AlN thin-film for frequency selectivity. <i>Electronic Materials Letters</i> , 2014, 10, 299-303.	2.2	5
68	A low-complexity iterative MIMO detection and decoding scheme using dimension reduction. <i>Transactions on Emerging Telecommunications Technologies</i> , 2016, 27, 136-145.	3.9	4
69	Neurobots smuggle drugs across biological barriers. <i>Science Robotics</i> , 2021, 6, .	17.6	4
70	The Design and Optimization of a Compressive-Type Vector Sensor Utilizing a PMN-28PT Piezoelectric Single-Crystal. <i>Sensors</i> , 2019, 19, 5155.	3.8	3
71	Synthesize and Segment: Towards Improved Catheter Segmentation via Adversarial Augmentation. <i>Applied Sciences (Switzerland)</i> , 2021, 11, 1638.	2.5	3
72	Microrobotics: 3D Fabrication of Fully Iron Magnetic Microrobots (Small 16/2019). <i>Small</i> , 2019, 15, 1970086.	10.0	2

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73	Biocompatible Microrobots: Magnetically Actuated SiCN-Based Ceramic Microrobot for Guided Cell Delivery (Adv. Healthcare Mater. 21/2019). Advanced Healthcare Materials, 2019, 8, 1970085.	7.6	2
74	Time delay estimation for control of microrobots under uncertainties. , 2013, , .		1
75	Design and fabrication of a mems test socket with an attached tip for a ball-grid-array integrated circuit package. Journal of Mechanical Science and Technology, 2014, 28, 2807-2814.	1.5	0
76	Mechanosensitive channel stimulation system using low-intensity ultrasound by piezoelectric micromachined ultrasonic transducer array. , 2016, , .		0
77	Editorial for the Special Issue on the ICAE 2019. Micromachines, 2020, 11, 874.	2.9	0
78	MICROFABRICATED AUDITORY SYSTEM MIMICKING HUMAN COCHLEA. World Scientific Series in Nanoscience and Nanotechnology, 2014, , 641-667.	0.1	0