

# 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	A single chemosensory GPCR is required for a concentration-dependent behavioral switching in <i>C.Âlegans</i> . <i>Current Biology</i> , 2022, 32, 398-411.e4.	3.9	12
2	Closedâ€Loop Temperatureâ€Controlled Magnetic Hyperthermia Therapy with Magnetic Guidance of Superparamagnetic Ironâ€Oxide Nanoparticles. <i>Advanced Therapeutics</i> , 2022, 5, .	3.2	9
3	An Electromagnetically Controllable Microrobotic Interventional System for Targeted, Realâ€Time Cardiovascular Intervention. <i>Advanced Healthcare Materials</i> , 2022, 11, e2102529.	7.6	20
4	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
5	Recent Progress in Magnetically Actuated Microrobots for Targeted Delivery of Therapeutic Agents. <i>Advanced Healthcare Materials</i> , 2021, 10, e2001596.	7.6	56
6	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
7	A 28.7V Modular Supply Multiplying Pulser With 75.4% Power Reduction Relative to CV <sup>2</sup> / <sub>i&gt;f&lt;/i&gt;. <i>IEEE Transactions on Circuits and Systems II: Express Briefs</i>, 2021, 68, 858-862.</sub>	3.0	7
8	Synthesize and Segment: Towards Improved Catheter Segmentation via Adversarial Augmentation. <i>Applied Sciences (Switzerland)</i> , 2021, 11, 1638.	2.5	3
9	Neurobots smuggle drugs across biological barriers. <i>Science Robotics</i> , 2021, 6, .	17.6	4
10	Stretchable and suturable fibre sensors for wireless monitoring of connective tissue strain. <i>Nature Electronics</i> , 2021, 4, 291-301.	26.0	106
11	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
12	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
13	PZT Ferroelectric Synapse TFT With Multi-Level of Conductance State for Neuromorphic Applications. <i>IEEE Access</i> , 2021, 9, 140975-140982.	4.2	11
14	Magnetically Actuated Forward-Looking Interventional Ultrasound Imaging: Feasibility Studies. <i>IEEE Transactions on Biomedical Engineering</i> , 2020, 67, 1797-1805.	4.2	7
15	Editorial for the Special Issue on the ICAE 2019. <i>Micromachines</i> , 2020, 11, 874.	2.9	0
16	A magnetically actuated microrobot for targeted neural cell delivery and selective connection of neural networks. <i>Science Advances</i> , 2020, 6, .	10.3	64
17	A Needleâ€Type Microrobot for Targeted Drug Delivery by Affixing to a Microtissue. <i>Advanced Healthcare Materials</i> , 2020, 9, e1901697.	7.6	54
18	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

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19	3D-Printed Soft Magnetolectric Microswimmers for Delivery and Differentiation of Neuron-Like Cells. <i>Advanced Functional Materials</i> , 2020, 30, 1910323.	14.9	157
20	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
21	Integrated Piezoelectric AlN Thin Film with SU-8/PDMS Supporting Layer for Flexible Sensor Array. <i>Sensors</i> , 2020, 20, 315.	3.8	15
22	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
23	Electronic Skin to Feel "Pain", Detecting "Prick" and "Hot" Pain Sensations. <i>Soft Robotics</i> , 2019, 6, 745-759.	8.0	9
24	Magnetically Actuated Degradable Microrobots for Actively Controlled Drug Release and Hyperthermia Therapy. <i>Advanced Healthcare Materials</i> , 2019, 8, e1900213.	7.6	116
25	A 3D Microscaffold Cochlear Electrode Array for Steroid Elution. <i>Advanced Healthcare Materials</i> , 2019, 8, e1900379.	7.6	23
26	Magnetically Actuated SiCN-Based Ceramic Microrobot for Guided Cell Delivery. <i>Advanced Healthcare Materials</i> , 2019, 8, e1900739.	7.6	29
27	Magnetically actuated microrobots as a platform for stem cell transplantation. <i>Science Robotics</i> , 2019, 4, .	17.6	247
28	Microrobotics: 3D Fabrication of Fully Iron Magnetic Microrobots (Small 16/2019). <i>Small</i> , 2019, 15, 1970086.	10.0	2
29	3D Fabrication of Fully Iron Magnetic Microrobots. <i>Small</i> , 2019, 15, e1805006.	10.0	79
30	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
31	Biocompatible Microrobots: Magnetically Actuated SiCN-Based Ceramic Microrobot for Guided Cell Delivery ( <i>Adv. Healthcare Mater.</i> 21/2019). <i>Advanced Healthcare Materials</i> , 2019, 8, 1970085.	7.6	2
32	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
33	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
34	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
35	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
36	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

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37	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
38	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
39	A thickness-mode piezoelectric micromachined ultrasound transducer annular array using a PMNâ€PZT single crystal. <i>Journal of Micromechanics and Microengineering</i> , 2018, 28, 075015.	2.6	8
40	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
41	Improving guidewire-mediated steerability of a magnetically actuated flexible microrobot. <i>Micro and Nano Systems Letters</i> , 2018, 6, .	3.7	25
42	Steering Algorithm for a Flexible Microrobot to Enhance Guidewire Control in a Coronary Angioplasty Application. <i>Micromachines</i> , 2018, 9, 617.	2.9	30
43	Feeding state regulates pheromoneâ€mediated avoidance behavior via the insulin signaling pathway in <i>Caenorhabditis elegans</i> . <i>EMBO Journal</i> , 2018, 37, .	7.8	25
44	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
45	Control of Multilevel Resistance in Vanadium Dioxide by Electric Field Using Hybrid Dielectrics. <i>ACS Applied Materials &amp; Interfaces</i> , 2017, 9, 13571-13576.	8.0	28
46	Early Pheromone Experience Modifies a Synaptic Activity to Influence Adult Pheromone Responses of <i>C.Âelegans</i> . <i>Current Biology</i> , 2017, 27, 3168-3177.e3.	3.9	35
47	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
48	Review of piezoelectric micromachined ultrasonic transducers and their applications. <i>Journal of Micromechanics and Microengineering</i> , 2017, 27, 113001.	2.6	186
49	Biomimetic Artificial Basilar Membranes for Nextâ€Generation Cochlear Implants. <i>Advanced Healthcare Materials</i> , 2017, 6, 1700674.	7.6	24
50	Dumbbell Fluidic Tweezers for Dynamical Trapping and Selective Transport of Microobjects. <i>Advanced Functional Materials</i> , 2017, 27, 1604571.	14.9	58
51	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
52	A Triboelectricâ€Based Artificial Basilar Membrane to Mimic Cochlear Tonotopy. <i>Advanced Healthcare Materials</i> , 2016, 5, 2481-2487.	7.6	62
53	Mechanosensitive channel stimulation system using low-intensity ultrasound by piezoelectric micromachined ultrasonic transducer array. , 2016, , .		0
54	Nano-patterned SU-8 surface using nanosphere-lithography for enhanced neuronal cell growth. <i>Nanotechnology</i> , 2016, 27, 175303.	2.6	16

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55	Fabrication and Manipulation of Ciliary Microrobots with Non-reciprocal Magnetic Actuation. Scientific Reports, 2016, 6, 30713.	3.3	114
56	A low-complexity iterative MIMO detection and decoding scheme using dimension reduction. Transactions on Emerging Telecommunications Technologies, 2016, 27, 136-145.	3.9	4
57	A microelectromechanical system artificial basilar membrane based on a piezoelectric cantilever array and its characterization using an animal model. Scientific Reports, 2015, 5, 12447.	3.3	70
58	Magnetic Actuation Based Motion Control for Microrobots: An Overview. Micromachines, 2015, 6, 1346-1364.	2.9	170
59	SU-8-based nanoporous substrate for migration of neuronal cells. Microelectronic Engineering, 2015, 141, 173-177.	2.4	6
60	A top-crossover-to-bottom addressed segmented annular array using piezoelectric micromachined ultrasonic transducers. Journal of Micromechanics and Microengineering, 2015, 25, 115024.	2.6	8
61	Psychological tactile sensor structure based on piezoelectric nanowire cell arrays. RSC Advances, 2015, 5, 40363-40368.	3.6	37
62	Influence of mechanical coupling by SiO <sub>2</sub> membrane on the frequency selectivity of microfabricated beam arrays for artificial basilar membranes. Journal of Mechanical Science and Technology, 2015, 29, 963-971.	1.5	8
63	A novel method for device-related electroencephalography artifact suppression to explore cochlear implant-related cortical changes in single-sided deafness. Journal of Neuroscience Methods, 2015, 255, 22-28.	2.5	14
64	Characterization and modeling of an acoustic sensor using AlN thin-film for frequency selectivity. Electronic Materials Letters, 2014, 10, 299-303.	2.2	5
65	Electromagnetic Steering of a Magnetic Cylindrical Microrobot Using Optical Feedback Closed-Loop Control. International Journal of Optomechatronics, 2014, 8, 129-145.	6.6	21
66	Noncytotoxic artificial bacterial flagella fabricated from biocompatible ORMOCOMP and iron coating. Journal of Materials Chemistry B, 2014, 2, 357-362.	5.8	64
67	Upshift of Phase Transition Temperature in Nanostructured PbTiO <sub>3</sub> Thick Film for High Temperature Applications. ACS Applied Materials & Interfaces, 2014, 6, 11980-11987.	8.0	38
68	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
69	Piezoelectric performance of continuous beam and narrow supported beam arrays for artificial basilar membranes. Electronic Materials Letters, 2014, 10, 1011-1018.	2.2	10
70	Magnetic actuation of a cylindrical microrobot using time-delay-estimation closed-loop control: modeling and experiments. Smart Materials and Structures, 2014, 23, 035013.	3.5	28
71	MICROFABRICATED AUDITORY SYSTEM MIMICKING HUMAN COCHLEA. World Scientific Series in Nanoscience and Nanotechnology, 2014, , 641-667.	0.1	0
72	Mechanical frequency selectivity of an artificial basilar membrane using a beam array with narrow supports. Journal of Micromechanics and Microengineering, 2013, 23, 095018.	2.6	29

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73	Time delay estimation for control of microrobots under uncertainties. , 2013, , .		1
74	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.	2.6	58
75	MEMS piezoelectric artificial basilar membrane with passive frequency selectivity for short pulse width signal modulation. Sensors and Actuators A: Physical, 2013, 203, 6-10.	4.1	31
76	Fabrication and Characterization of Magnetic Microrobots for Threeâ€­Dimensional Cell Culture and Targeted Transportation. Advanced Materials, 2013, 25, 5863-5868.	21.0	360
77	Finite Element Analysis of Piezoelectric Thin Film Membrane Structures. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2007, 54, 2036-2044.	3.0	19
78	Influence of top electrode design on pMUTs performance. Sensors and Actuators A: Physical, 2007, 135, 613-619.	4.1	18