

Jeong-Bong Lee

List of Publications by Year in descending order

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152
papers

3,874
citations

147801

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h-index

138484

58
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153
all docs

153
docs citations

153
times ranked

4249
citing authors

#	ARTICLE	IF	CITATIONS
1	Disposable Smart Lab on a Chip for Point-of-Care Clinical Diagnostics. Proceedings of the IEEE, 2004, 92, 154-173.	21.3	429
2	Recovery of Nonwetting Characteristics by Surface Modification of Gallium-Based Liquid Metal Droplets Using Hydrochloric Acid Vapor. ACS Applied Materials & Interfaces, 2013, 5, 179-185.	8.0	225
3	Woven Yarn Thermoelectric Textiles. Advanced Materials, 2016, 28, 5038-5044.	21.0	195
4	A tapered hollow metallic microneedle array using backside exposure of SU-8. Journal of Micromechanics and Microengineering, 2004, 14, 597-603.	2.6	178
5	Microjet cooling devices for thermal management of electronics. IEEE Transactions on Components and Packaging Technologies, 2003, 26, 359-366.	1.3	158
6	Mechanically tunable photonic crystal structure. Applied Physics Letters, 2004, 85, 4845-4847.	3.3	149
7	A SU-8-Based Microfabricated Implantable Inductively Coupled Passive RF Wireless Intraocular Pressure Sensor. Journal of Microelectromechanical Systems, 2012, 21, 1338-1346.	2.5	144
8	A miniaturized high-voltage solar cell array as an electrostatic MEMS power supply. Journal of Microelectromechanical Systems, 1995, 4, 102-108.	2.5	112
9	Biocompatible SU-8-Based Microprobes for Recording Neural Spike Signals From Regenerated Peripheral Nerve Fibers. IEEE Sensors Journal, 2008, 8, 1830-1836.	4.7	97
10	On-demand magnetic manipulation of liquid metal in microfluidic channels for electrical switching applications. Lab on A Chip, 2017, 17, 128-133.	6.0	92
11	Rapid replication of polymeric and metallic high aspect ratio microstructures using PDMS and LIGA technology. Microsystem Technologies, 2002, 9, 5-10.	2.0	91
12	PDMS based coplanar microfluidic channels for the surface reduction of oxidized Galinstan. Lab on A Chip, 2014, 14, 200-209.	6.0	80
13	High aspect ratio tapered hollow metallic microneedle arrays with microfluidic interconnector. Microsystem Technologies, 2006, 13, 231-235.	2.0	72
14	Fabrication of a Microneedle/CNT Hierarchical Micro/Nano Surface Electrochemical Sensor and Its In-Vitro Glucose Sensing Characterization. Sensors, 2013, 13, 16672-16681.	3.8	70
15	Thermal and optical simulation of a photonic crystal light modulator based on the thermo-optic shift of the cut-off frequency. Optics Express, 2005, 13, 7174.	3.4	64
16	Innovative SU-8 Lithography Techniques and Their Applications. Micromachines, 2015, 6, 1-18.	2.9	63
17	Negative refraction in a Si-polymer photonic Crystal membrane. IEEE Photonics Technology Letters, 2005, 17, 1196-1198.	2.5	60
18	Hierarchical micro/nano structures for super-hydrophobic surfaces and super-lyophobic surface against liquid metal. Micro and Nano Systems Letters, 2014, 2, .	3.7	58

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19	Magnetic-field-induced liquid metal droplet manipulation. Journal of the Korean Physical Society, 2015, 66, 282-286.	0.7	57
20	A Super-Lyophobic 3-D PDMS Channel as a Novel Microfluidic Platform to Manipulate Oxidized Galinstan. Journal of Microelectromechanical Systems, 2013, 22, 1267-1275.	2.5	56
21	Machine vision for digital microfluidics. Review of Scientific Instruments, 2010, 81, 014302.	1.3	49
22	Liquid metal actuation-based reversible frequency tunable monopole antenna. Applied Physics Letters, 2014, 105, .	3.3	49
23	Characterization of the mechanical behavior of SU-8 at microscale by viscoelastic analysis. Journal of Micromechanics and Microengineering, 2016, 26, 105001.	2.6	44
24	A titer plate-based polymer microfluidic platform for high throughput nucleic acid purification. Biomedical Microdevices, 2008, 10, 21-33.	2.8	43
25	MEMS-Based Inductively Coupled RFID Transponder for Implantable Wireless Sensor Applications. IEEE Transactions on Magnetics, 2007, 43, 2412-2414.	2.1	40
26	A SU-8-Based Fully Integrated Biocompatible Inductively Powered Wireless Neurostimulator. Journal of Microelectromechanical Systems, 2013, 22, 170-176.	2.5	38
27	Thermo-optic photonic crystal light modulator. Applied Physics Letters, 2005, 86, 221111.	3.3	36
28	Viable cell handling with high aspect ratio polymer chopstick gripper mounted on a nano precision manipulator. Microsystem Technologies, 2008, 14, 1627-1633.	2.0	36
29	Cost-effective surface modification for Galinstan [®] lyophobicity. Journal of Colloid and Interface Science, 2017, 492, 33-40.	9.4	36
30	One-Dimensional Nanograting-Based Guided-Mode Resonance Pressure Sensor. Journal of Microelectromechanical Systems, 2012, 21, 1117-1123.	2.5	34
31	Silicon-Based 2-D Slab Photonic Crystal TM Polarizer at Telecommunication Wavelength. IEEE Photonics Technology Letters, 2008, 20, 641-643.	2.5	33
32	Hydrochloric acid-impregnated paper for gallium-based liquid metal microfluidics. Sensors and Actuators B: Chemical, 2015, 207, 199-205.	7.8	32
33	Magnetic Liquid Metal Marble: Characterization of Lyophobicity and Magnetic Manipulation for Switching Applications. Journal of Microelectromechanical Systems, 2016, 25, 1050-1057.	2.5	32
34	Stretchable and bendable carbon nanotube on PDMS super-lyophobic sheet for liquid metal manipulation. Journal of Micromechanics and Microengineering, 2014, 24, 055018.	2.6	31
35	Planarization techniques for vertically integrated metallic MEMS on silicon foundry circuits. Journal of Micromechanics and Microengineering, 1997, 7, 44-54.	2.6	29
36	Sub-micron metallic electrothermal actuators. Journal of Micromechanics and Microengineering, 2005, 15, 322-327.	2.6	29

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37	Electromagnetic three dimensional liquid metal manipulation. Lab on A Chip, 2019, 19, 3261-3267.	6.0	28
38	Surface Modification with Gallium Coating as Nonwetting Surfaces for Gallium-Based Liquid Metal Droplet Manipulation. ACS Applied Materials & Interfaces, 2019, 11, 35488-35495.	8.0	28
39	Biocompatibility of SU-8 and Its Biomedical Device Applications. Micromachines, 2021, 12, 794.	2.9	27
40	Metallic microgripper with SU-8 adaptor as end-effectors for heterogeneous micro/nano assembly applications. Microsystem Technologies, 2004, 10, 689-693.	2.0	26
41	Fabrication of Optically Transparent PDMS Artificial Lotus Leaf Film Using Underexposed and Underbaked Photoresist Mold. Journal of Microelectromechanical Systems, 2013, 22, 1073-1080.	2.5	26
42	SU-8-based immunoisulative microcontainer with nanoslots defined by nanoimprint lithography. Journal of Vacuum Science & Technology B, 2009, 27, 2795.	1.3	24
43	Robust capacitive pressure sensor array. Sensors and Actuators A: Physical, 2002, 101, 231-238.	4.1	23
44	Integrated micro-plasmas in silicon operating in helium. European Physical Journal D, 2010, 60, 601-608.	1.3	22
45	Thermo-optically tunable silicon photonic crystal light modulator. Optics Letters, 2010, 35, 3613.	3.3	20
46	Polydimethylsiloxane-based pattern transfer process for the post-IC integration of MEMS onto CMOS chips. Journal of Micromechanics and Microengineering, 2004, 14, 335-340.	2.6	19
47	An Implanted Magnetic Microfluidic Pump for In Vivo Bone Remodeling Applications. Micromachines, 2020, 11, 300.	2.9	19
48	Microassembled tunable mems inductor. , 0, , .		18
49	Cell encapsulation and oxygenation in nanoporous microcontainers. Biomedical Microdevices, 2009, 11, 1205-1212.	2.8	18
50	A Nanoporous, Transparent Microcontainer for Encapsulated Islet Therapy. Journal of Diabetes Science and Technology, 2009, 3, 297-303.	2.2	17
51	Silicon-Based Thermo-Optically Tunable Photonic Crystal Lens. IEEE Photonics Technology Letters, 2010, 22, 21-23.	2.5	17
52	Pressure-tunable guided-mode resonance sensor for single-wavelength characterization. Optics Letters, 2010, 35, 3871.	3.3	17
53	Surface modified nano-patterned SU-8 pillar array optically transparent super-hydrophobic thin film. Journal of Micromechanics and Microengineering, 2012, 22, 035012.	2.6	17
54	A high voltage solar cell array as an electrostatic MEMS power supply. , 0, , .		16

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55	Surface micromachined arch-shape on-chip 3-D solenoid inductors for high-frequency applications. Journal of Micro/ Nanolithography, MEMS, and MOEMS, 2003, 2, 275.	0.9	16
56	Effect of limiting the cathode surface on direct current microhollow cathode discharge in helium. Applied Physics Letters, 2008, 93, 071508.	3.3	16
57	Gallium-based liquid metal inkjet printing. , 2014, , .		16
58	Liquidâ€Metalâ€Enabled Flexible Metasurface with Selfâ€Healing Characteristics. Advanced Materials Interfaces, 2022, 9, .	3.7	16
59	Characterization of SU-8 as a photoresist for electron-beam lithography. , 2003, , .		15
60	Mechanically Tunable Negative-Index Photonic Crystal Lens. IEEE Photonics Journal, 2010, 2, 1003-1012.	2.0	15
61	A MEMS-based fully-integrated wireless neurostimulator. , 2010, , .		15
62	Acoustic wave-driven oxidized liquid metal-based energy harvester. EPJ Applied Physics, 2018, 81, 20902.	0.7	14
63	A new class of LC-resonator for micro-magnetic sensor application. Journal of Magnetism and Magnetic Materials, 2006, 304, 117-121.	2.3	13
64	A sub-micron metallic electrothermal gripper. Microsystem Technologies, 2010, 16, 367-373.	2.0	12
65	Reduction of out-of-plane warpage in surface micromachined beams using corrugation. Journal of Micromechanics and Microengineering, 2014, 24, 065023.	2.6	12
66	On-chip 3D air-core microinductor for high-frequency applications using deformation of sacrificial polymer. , 2001, , .		11
67	Chip-level integration of RF MEMS on-chip inductors using UV-LIGA technique. Microsystem Technologies, 2008, 14, 1429-1438.	2.0	11
68	On-demand frequency tunability of fluidic antenna implemented with gallium-based liquid metal alloy. EPJ Applied Physics, 2017, 78, 11101.	0.7	9
69	Nanoelectromechanical Disk Resonators as Highly Sensitive Mass Sensors. IEEE Electron Device Letters, 2018, 39, 1744-1747.	3.9	9
70	Conversion of Polymer Surfaces into Nonwetting Substrates for Liquid Metal Applications. Langmuir, 2021, 37, 8139-8147.	3.5	9
71	A micro-LC-resonator fabricated by MEMS technique for high-frequency sensor applications. Sensors and Actuators A: Physical, 2007, 135, 547-551.	4.1	8
72	Review of Electrothermal Micromirrors. Micromachines, 2022, 13, 429.	2.9	8

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73	Anisotropy in Thermal, Electrical and Mechanical Properties of Spin-Coated Polymer Dielectrics. Materials Research Society Symposia Proceedings, 1994, 338, 577.	0.1	7
74	Modeling of substrate-induced anisotropy in through-plane thermal behavior of polymeric thin films. Journal of Polymer Science, Part B: Polymer Physics, 1996, 34, 1591-1596.	2.1	7
75	Micromachined on-chip high-aspect ratio air core solenoid inductor for multi-GHz applications. , 0, , .		7
76	<title>Wafer level optoelectronic device packaging using MEMS (Invited Paper)</title>. , 2005, , .		7
77	Mems-based mechanically tunable flexible photonic crystal. , 2009, , .		7
78	One-step fabrication of optically transparent polydimethylsiloxane artificial lotus leaf film using under-exposed under-baked photoresist mold. , 2012, , .		7
79	Hydrochloric acid-impregnated paper for liquid metal microfluidics. , 2013, , .		7
80	One-step fabrication of three-dimensional polydimethylsiloxane peel-off microwell array for cell trapping. Journal of Micro/ Nanolithography, MEMS, and MOEMS, 2015, 14, 014503.	0.9	7
81	High aspect ratio air core solenoid inductors using an improved UV-LIGA process with contrast enhancement material. Microsystem Technologies, 2006, 13, 237-243.	2.0	6
82	A class of micromachined magnetic resonator for high-frequency magnetic sensor applications. Journal of Applied Physics, 2006, 99, 08B309.	2.5	6
83	Systematic analysis and experiment of inductive coupling and induced voltage for inductively coupled wireless implantable neurostimulator application. Journal of Micromechanics and Microengineering, 2012, 22, 075008.	2.6	6
84	One-Step Combined-Nanolithography-and-Photolithography for a 2D Photonic Crystal TM Polarizer. Micromachines, 2014, 5, 228-238.	2.9	6
85	Magnetic Field-Induced Recoverable Dynamic Morphological Change of Gallium-Based Liquid Metal. Journal of Microelectromechanical Systems, 2020, 29, 1208-1215.	2.5	6
86	Electric Field-Driven Liquid Metal Droplet Generation and Direction Manipulation. Micromachines, 2021, 12, 1131.	2.9	6
87	Advances in RF MEMS technology. , 2003, , .		5
88	Schottky barrier contact-based RF MEMS switch. , 2007, , .		5
89	Numerical Modeling and Characterization of Micromachined Flexible Magnetostrictive Thin Film Actuator. IEEE Transactions on Magnetics, 2008, 44, 3209-3212.	2.1	5
90	High-sensitivity microfluidic pressure sensor using a membrane-embedded resonant optical grating. , 2011, , .		5

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91	A SU-8-based compact implantable wireless pressure sensor for intraocular pressure sensing application. , 2011, 2011, 2854-7.		5
92	Biocompatible polymeric wireless pressure sensor for intraocular pressure sensing application. , 2011, , .		5
93	Biofriendly bonding processes for nanoporous implantable SU-8 microcapsules for encapsulated cell therapy. Journal of Microencapsulation, 2011, 28, 771-782.	2.8	5
94	A super-lyophobic PDMS micro-tunnel as a novel microfluidic platform for oxidized Galinstan®. , 2012, , .		5
95	Liquid metal-based reconfigurable and stretchable photolithography. Journal of Micromechanics and Microengineering, 2016, 26, 045004.	2.6	5
96	Cmos VCO & LNA implemented by air-suspended on-chip RF MEMS LC. , 0, , .		4
97	An Ultra-Wideband Low Noise Amplifier with Air-suspended RF MEMS Inductors. , 2006, , .		4
98	High-Aspect Ratio Metallic Nano Grippers. , 2006, , .		4
99	Electromagnet polarity dependent reversible dynamic behavior of magnetic liquid metal marble. Materials Research Express, 2020, 7, 015708.	1.6	4
100	Massive replication of polymeric high-aspect-ratio microstructures using PDMS casting. , 2001, , .		3
101	3-D, Self-aligned, Micro-assembled, Electrical Interconnects for Heterogeneous Integration. , 2003, 4981, 189.		3
102	A disposable plastic biochip cartridge with on-chip power sources for blood analysis. , 0, , .		3
103	SU8-Based Micro Neural Probe for Enhanced Chronic in-Vivo Recording of Spike Signals from Regenerated Axons. , 2006, , .		3
104	Process integration and development of inverted photonic crystal arrays. Journal of Vacuum Science & Technology B, 2006, 24, 705.	1.3	3
105	Nanocomposites for Neural Interfaces. Materials Research Society Symposia Proceedings, 2006, 926, 1.	0.1	3
106	De-tethering of high aspect ratio metallic and polymeric MEMS/NEMS parts for the direct pick-and-place assembly of 3D microsystem. Microsystem Technologies, 2008, 14, 1621-1626.	2.0	3
107	Digital microfluidics-based high-throughput imaging for systems biology. , 2008, , .		3
108	A highly-compliant asymmetric 2D guided-mode resonance sensor for simultaneous measurement of dual-axis strain. , 2013, , .		3

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109	Magnetic liquid metal marble: Wireless manipulation of liquid metal droplet for electrical switching applications. , 2015, , .		3
110	Resonant piezoresistive amplifiers: Towards single element nano-mechanical RF front ends. , 2017, , .		3
111	Magnetically-induced various recoverable deformation of magnetic liquid metal marble. , 2018, , .		3
112	Axially-Anisotropic Hierarchical Grating 2D Guided-Mode Resonance Strain-Sensor. Sensors, 2019, 19, 5223.	3.8	3
113	Implanted Wireless Intramedullary Fluid Modulator for Bone Density Augmentation. , 2020, , .		3
114	<title>On-chip dome-shape spiral micro-inductor for high-frequency applications</title>. , 2002, , .		2
115	Tunable nanophotonic device based on flexible photonic crystal. , 2004, , .		2
116	Schottky Contact RF MEMS Switch Characterization. IEEE MTT-S International Microwave Symposium Digest IEEE MTT-S International Microwave Symposium, 2007, , .	0.0	2
117	Schottky Barrier Contact-Based RF MEMS Switch. Journal of Microelectromechanical Systems, 2008, 17, 1439-1446.	2.5	2
118	A wireless powered fully integrated SU-8-based implantable LC transponder. Microsystem Technologies, 2010, 16, 1657-1663.	2.0	2
119	A novel microneedle-based non- enzymatic glucose sensor for painless diabetes testing application. , 2011, , .		2
120	Air-Suspended Fast Transient Tunable Silicon Photonic Crystal Waveguide. IEEE Photonics Technology Letters, 2014, 26, 603-605.	2.5	2
121	Reversible On-Demand Magnetic Liquid Metal Marble Manipulation by Magnetowetting: Split and Merge, Deformation and Recovery. , 2019, , .		2
122	Plasma-Treated PDMS as Intrinsically Non-Wetting Surface for Gallium-Alloy Liquid Metal Microfluidics. , 2020, , .		2
123	De-Tethering of Metallic and Polymeric MEMS/NEMS Parts for the Direct Pick-and-Place Assembly of 3D Microsystem. , 2006, , .		2
124	MEMS for Drug Delivery. , 2006, , 325-348.		2
125	Disposable Biochip Cartridge for Clinical Diagnostics Toward Point-of-Care Systems. , 2002, , 187-189.		2
126	Mechanically Tunable Nanophotonic Devices. Materials Research Society Symposia Proceedings, 2005, 872, 1.	0.1	1

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127	Ferromagnetic 3-D impellor-shaped micro-stirrer bar for micromixing. , 2007, , .		1
128	Electro-thermally tunable silicon photonic crystal lens. , 2010, , .		1
129	A PDMS-based pressure-tunable nanograting. , 2011, , .		1
130	A High Dynamic Restoring Force Electrostatic Actuator. Journal of Microelectromechanical Systems, 2013, 22, 1032-1040.	2.5	1
131	Dimensional limitation of polymeric microfluidic platform for liquid metal manipulation. , 2014, , .		1
132	Negative refraction based on the superprism effect in a micromachined flexible photonic crystal. , 2005, , .		0
133	Microlens array and micro claspers for high performance optoelectronic devices packaging. , 0, , .		0
134	Focusing in the second band of a flexible membrane photonic crystal. , 2005, , .		0
135	Silicon-based 2D slab nano photonic crystal TM polarizer in telecommunication wavelength. , 2007, , .		0
136	Inductively coupled MEMS-based micro RFID transponder. , 2007, , .		0
137	Silicon-Based 2D Slab Nano Photonic Crystal Thermo-Optic Light Modulator. , 2008, , .		0
138	A fully-integrated RF LC transponder platform for implantable wireless sensor applications. , 2009, , .		0
139	Feasibility Assessment and Analysis of a Forward Injected Photonic Crystal Device. IEEE Nanotechnology Magazine, 2009, 8, 391-401.	2.0	0
140	Mechanically tunable photonic crystal lens. Proceedings of SPIE, 2010, , .	0.8	0
141	MEMS-enabled mechanically-tunable 2D photonic crystal lens. , 2011, , .		0
142	Super-hydrophobicity of nano-patterned polymer needle array. , 2011, , .		0
143	Magnetically-assembled immunoisolative polymeric cell transplantation device. , 2015, , .		0
144	Micro/Nano Hierarchical Super-Lyophobic Surfaces Against Gallium-Based Liquid Metal Alloy. , 0, , .		0

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145	Gallium Oxide Coated Flat Surface as Non-Wetting Surface for Actuation of Liquid Metal Droplets. , 2019, , .		0
146	Electro-Hydrodynamic Droplet Generation, Manipulation, and Repulsion of Oxidized Gallium-Based Liquid Metal. , 2019, , .		0
147	Tunable and Flexible Nano Photonic Crystals. , 2019, , .		0
148	Editorial for the Special Issue on the ICAE 2019. Micromachines, 2020, 11, 874.	2.9	0
149	Negative refraction in Si-based 2-dimensional slab photonic crystal structures. , 2006, , .		0
150	Thermo-Optically Tunable Photonic Crystal Light Modulator Utilizing Cut-Off Effect. , 2010, , .		0
151	High-Aspect-Ratio Nanoscale Patterning in a Negative Tone Photoresist. Journal of Information and Communication Convergence Engineering, 2015, 13, 56-61.	0.2	0
152	Acoustic Wave-Driven Liquid Metal Expansion. Micromachines, 2022, 13, 685.	2.9	0