

Dong-Weon Lee

List of Publications by Year in descending order

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118
papers

3,088
citations

136950

32
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182427

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118
all docs

118
docs citations

118
times ranked

3657
citing authors

#	ARTICLE	IF	CITATIONS
1	Stress-assisted gold micro-wrinkles on a polymer cantilever for cardiac tissue engineering. <i>Colloids and Surfaces B: Biointerfaces</i> , 2022, 209, 112210.	5.0	6
2	Nanosilica coated polydimethylsiloxane mushroom structure: A next generation flexible, transparent, and mechanically durable superhydrophobic thin film. <i>Applied Surface Science</i> , 2022, 583, 152500.	6.1	17
3	Simultaneous measurement of contraction forces and field potentials of cardiomyocytes subjected to ion channel inhibitors. <i>Sensors and Actuators B: Chemical</i> , 2022, 358, 131495.	7.8	4
4	Biosensor Platform for Simultaneous Measurement of Mechanical and Electrophysiological Properties of Drug-Induced Cardiomyocytes. , 2022, , .		0
5	The effect of topographical and mechanical stimulation on the structural and functional anisotropy of cardiomyocytes grown on a circular PDMS diaphragm. <i>Biosensors and Bioelectronics</i> , 2022, 204, 114017.	10.1	6
6	Analysis of the Growth Characteristics of Cardiac Cells According to Mechanical Properties of Substrates Using the Simplified Measurement Technique of Tracker. <i>Journal of Sensor Science and Technology</i> , 2022, 31, 6-11.	0.2	0
7	Toward Point-of-Care chronic disease Management: Biomarker detection in exhaled breath using an E-Nose sensor based on rGO/SnO ₂ superstructures. <i>Chemical Engineering Journal</i> , 2022, 448, 137736.	12.7	26
8	On-stage bioreactor platform integrated with nano-patterned and gold-coated PDMS diaphragm for live cell stimulation and imaging. <i>Materials Science and Engineering C</i> , 2021, 118, 111355.	7.3	11
9	Stabilizing nanocrystalline Cu ₂ O with ZnO/rGO: Engineered photoelectrodes enables efficient water splitting. <i>Ceramics International</i> , 2021, 47, 7558-7570.	4.8	9
10	MnS ₂ /carbon nanotube electrode for improved supercapacitor performance. <i>Solid State Sciences</i> , 2021, 111, 106449.	3.2	15
11	N-/S- dual doped C@ZnO: An excellent material for highly selective and responsive NO ₂ sensing at ambient temperatures. <i>Chemical Engineering Journal</i> , 2021, 421, 127740.	12.7	25
12	Mea-On-Cantilever “ A Novel Multifunctional Device for Drug Toxicity Screening in Cardiomyocytes. , 2021, , .		1
13	Flexible, polymer-supported, ZnO nanorod array photoelectrodes for PEC water splitting applications. <i>Materials Science in Semiconductor Processing</i> , 2021, 121, 105445.	4.0	13
14	Multi-layered polymer cantilever integrated with full-bridge strain sensor to enhance force sensitivity in cardiac contractility measurement. <i>Analyst, The</i> , 2021, 146, 7160-7167.	3.5	5
15	Nanostructured Ni-Mn double hydroxide for high capacitance supercapacitor application. <i>Journal of Sensor Science and Technology</i> , 2021, 30, 71-75.	0.2	2
16	AgNW-based functional polymer cantilever to improve maturity and contractility of cardiomyocytes. <i>Journal of Sensor Science and Technology</i> , 2021, 30, 185-189.	0.2	0
17	Real-Time Monitoring of Changes in Cardiac Contractility Using Silicon Cantilever Arrays Integrated with Strain Sensors. <i>ACS Sensors</i> , 2021, 6, 3556-3563.	7.8	10
18	64 PI/PDMS hybrid cantilever arrays with an integrated strain sensor for a high-throughput drug toxicity screening application. <i>Biosensors and Bioelectronics</i> , 2021, 190, 113380.	10.1	14

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19	Enhancement of cardiac contractility using gold-coated SU-8 cantilevers and their application to drug-induced cardiac toxicity tests. <i>Analyst</i> , The, 2021, 146, 6768-6779.	3.5	4
20	Exposure to nanoplastics impairs collective contractility of neonatal cardiomyocytes under electrical synchronization. <i>Biomaterials</i> , 2021, 278, 121175.	11.4	24
21	Gold nanoparticles decorated rGO-ZnCo ₂ O ₄ nanocomposite: A promising positive electrode for high performance hybrid supercapacitors. <i>Chemical Engineering Journal</i> , 2020, 379, 122211.	12.7	91
22	Drug-induced changes in mechanical behavior of electrically synchronized cardiomyocytes on surface-patterned polydimethylsiloxane diaphragm. <i>Sensors and Actuators A: Physical</i> , 2020, 301, 111760.	4.1	5
23	Micro-patterned SU-8 cantilever integrated with metal electrode for enhanced electromechanical stimulation of cardiac cells. <i>Colloids and Surfaces B: Biointerfaces</i> , 2020, 186, 110682.	5.0	21
24	Transition metal sulfide-laminated copper wire for flexible hybrid supercapacitor. <i>New Journal of Chemistry</i> , 2020, 44, 18489-18495.	2.8	11
25	Highly Flexible Superhydrophobic Poly(Urethane Acrylate) Film for Applications Requiring High Optical Transparency. <i>Macromolecular Materials and Engineering</i> , 2020, 305, 2000292.	3.6	5
26	Galinstan-based flexible microfluidic device for wireless human-sensor applications. <i>Sensors and Actuators A: Physical</i> , 2020, 315, 112344.	4.1	17
27	Polymer-Based Functional Cantilevers Integrated with Interdigitated Electrode Arrays—A Novel Platform for Cardiac Sensing. <i>Micromachines</i> , 2020, 11, 450.	2.9	12
28	Application of semi-permeable membrane for a scaffold in a nature-mimicking vascular system. <i>Journal of Membrane Science</i> , 2020, 611, 118384.	8.2	2
29	Vertically aligned one-dimensional ZnO/V ₂ O ₅ core-shell hetero-nanostructure for photoelectrochemical water splitting. <i>Journal of Energy Chemistry</i> , 2020, 49, 262-274.	12.9	43
30	Highly durable crack sensor integrated with silicone rubber cantilever for measuring cardiac contractility. <i>Nature Communications</i> , 2020, 11, 535.	12.8	66
31	Anion-exchange phase control of manganese sulfide for oxygen evolution reaction. <i>Journal of Materials Chemistry A</i> , 2020, 8, 3901-3909.	10.3	37
32	Supercapacitive performance of vanadium sulfide deposited on stainless steel mesh: effect of etching. <i>Micro and Nano Systems Letters</i> , 2020, 8, .	3.7	10
33	Large scale roll-to-roll production of polyurethane-acrylate-based hydrophobic film: a next-generation protection layer for solar devices. <i>Journal of Micromechanics and Microengineering</i> , 2020, 30, 115007.	2.6	0
34	ZnO/Cu ₂ O-decorated rGO: Heterojunction photoelectrode with improved solar water splitting performance. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 19177-19192.	7.1	44
35	Vertically aligned nanostructured FeOOH@MnO ₂ core shell electrode with better areal capacitance. <i>Journal of Power Sources</i> , 2019, 436, 226826.	7.8	26
36	Nano-textured polyimide cantilever for enhancing the contractile behavior of cardiomyocytes and its application to cardiac toxicity screening. <i>Sensors and Actuators B: Chemical</i> , 2019, 301, 126995.	7.8	12

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37	PDMS Cantilever Integrated with Metal Wrinkles to Measure Contractile Behaviours of Matured Cardiac Cells. , 2019, , .		0
38	Development of a Next-Generation Biosensing Platform for Simultaneous Detection of Mechano- and Electrophysiology of the Drug-Induced Cardiomyocytes. ACS Sensors, 2019, 4, 2623-2630.	7.8	18
39	Fabrication of surface-functionalized PUA composites to achieve superhydrophobicity. Micro and Nano Systems Letters, 2019, 7, .	3.7	8
40	Electrochemically controllable actuation of liquid metal droplets based on Marangoni effect. Journal of Applied Physics, 2019, 126, .	2.5	14
41	Artificial Heart Based on Electrically Controlled Non-Toxic Liquid Metal Pump. Advanced Engineering Materials, 2019, 21, 1900381.	3.5	16
42	Status review on the MEMS-based flexible supercapacitors. Journal of Micromechanics and Microengineering, 2019, 29, 093001.	2.6	11
43	Realizing the flexible and transparent highly-hydrophobic film through siloxane functionalized polyurethane-acrylate micro-pattern. Chemical Engineering Journal, 2019, 373, 68-77.	12.7	30
44	Hierarchical nanohybrids of B- and N-codoped graphene/mesoporous NiO nanodisks: an exciting new material for selective sensing of H_2S at near ambient temperature. Journal of Materials Chemistry A, 2019, 7, 9263-9278.	10.3	46
45	Miniaturized piezoelectric energy harvester for battery-free portable electronics. International Journal of Energy Research, 2019, 43, 2402.	4.5	6
46	Fully automated high-throughput cardiac toxicity screening platform using interlocking-structured 192 SU-8 cantilever arrays. Sensors and Actuators B: Chemical, 2019, 285, 129-136.	7.8	16
47	Biodegradable polymer material based smart stent: Wireless pressure sensor and 3D printed stent. Microelectronic Engineering, 2019, 206, 1-5.	2.4	41
48	Contractile behaviors of cardiac muscle cells on mushroom-shaped micropillar arrays. Colloids and Surfaces B: Biointerfaces, 2019, 174, 103-109.	5.0	21
49	Wireless pressure sensor integrated with a 3D printed polymer stent for smart health monitoring. Sensors and Actuators B: Chemical, 2019, 280, 201-209.	7.8	50
50	Scalable and ascendant synthesis of carbon cloth coated hierarchical core-shell $CoMoS_2@Co(OH)_2$ for flexible and high-performance supercapacitors. Journal of Materials Chemistry A, 2018, 6, 9592-9603.	10.3	64
51	On-vehicle triboelectric nanogenerator enabled self-powered sensor for tire pressure monitoring. Nano Energy, 2018, 49, 126-136.	16.0	94
52	Design and fabrication of a non-clogging scaffold composed of semi-permeable membrane. Materials and Design, 2018, 142, 229-239.	7.0	21
53	A Quasi 2D Flexible Micro-Supercapacitor Based on $MnO_2//NiCo_2O_4$ as a Miniaturized Energy-Storage Device. Energy Technology, 2018, 6, 1380-1391.	3.8	15
54	Polyurethane-acrylate-based hydrophobic film: Facile fabrication, characterization, and application. Japanese Journal of Applied Physics, 2018, 57, 06HJ09.	1.5	5

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55	Facile in-situ formation of rGO/ZnO nanocomposite: Photocatalytic remediation of organic pollutants under solar illumination. <i>Materials Chemistry and Physics</i> , 2018, 218, 218-228.	4.0	40
56	Hierarchically self-assembled ZnO architectures: Establishing light trapping networks for effective photoelectrochemical water splitting. <i>International Journal of Hydrogen Energy</i> , 2017, 42, 15126-15139.	7.1	29
57	Au Decorated ZnO hierarchical architectures: Facile synthesis, tunable morphology and enhanced CO detection at room temperature. <i>Sensors and Actuators B: Chemical</i> , 2017, 243, 990-1001.	7.8	89
58	An advanced selective liquid-metal plating technique for stretchable biosensor applications. <i>Lab on A Chip</i> , 2017, 17, 3415-3421.	6.0	88
59	Realizing Synergy between In ₂ O ₃ Nanocubes and Nitrogen-Doped Reduced Graphene Oxide: An Excellent Nanocomposite for the Selective and Sensitive Detection of CO at Ambient Temperatures. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 31728-31740.	8.0	44
60	Seesaw-structured triboelectric nanogenerator for scavenging electrical energy from rotational motion of mechanical systems. <i>Sensors and Actuators A: Physical</i> , 2017, 263, 600-609.	4.1	20
61	Photocurable PUA (Poly Urethaneacrylat) cantilever integrated with ultra-high sensitive crack-based sensor. , 2017, , .		1
62	Simple and cost-effective method for fabrication of optically transparent superhydrophobic thin film using reusable pua mold and roll-to-roll machine. , 2017, , .		0
63	Highly efficient superhydrophobic surface-based triboelectricnanogenerator for rotational machinerics. , 2017, , .		0
64	Numerical investigation of perforated polymer microcantilever sensor for contractile behavior of cardiomyocytes. <i>Japanese Journal of Applied Physics</i> , 2017, 56, 06GM01.	1.5	2
65	Piezoresistive sensor-integrated PDMS cantilever: A new class of device for measuring the drug-induced changes in the mechanical activity of cardiomyocytes. <i>Sensors and Actuators B: Chemical</i> , 2017, 240, 566-572.	7.8	67
66	Biomechanical Characterization of Cardiomyocyte Using PDMS Pillar with Microgrooves. <i>Sensors</i> , 2016, 16, 1258.	3.8	40
67	A Wireless Pressure Sensor Integrated with a Biodegradable Polymer Stent for Biomedical Applications. <i>Sensors</i> , 2016, 16, 809.	3.8	75
68	Polymeric cantilever integrated with PDMS/graphene composite strain sensor. <i>Review of Scientific Instruments</i> , 2016, 87, 105004.	1.3	19
69	A novel energy conversion method based on hydrogel material for self-powered sensor system applications. <i>Applied Energy</i> , 2016, 173, 103-110.	10.1	29
70	Hierarchical 3D nanostructure of GdInO ₃ and reduced-graphene-decorated GdInO ₃ nanocomposite for CO sensing applications. <i>Sensors and Actuators B: Chemical</i> , 2016, 234, 155-166.	7.8	33
71	Hierarchically Self-assembled Super Structural TiO ₂ Microspheres: Enhanced Excitonic Efficiency as Photocatalyst and Photoanode Material. <i>MRS Advances</i> , 2016, 1, 3877-3882.	0.9	0
72	Surface-patterned SU-8 cantilever arrays for preliminary screening of cardiac toxicity. <i>Biosensors and Bioelectronics</i> , 2016, 80, 456-462.	10.1	49

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73	A galinstan-based inkjet printing system for highly stretchable electronics with self-healing capability. Lab on A Chip, 2016, 16, 1366-1373.	6.0	135
74	A self-adjustable four-point probing system using polymeric three dimensional coils and non-toxic liquid metal. Review of Scientific Instruments, 2015, 86, 125006.	1.3	1
75	An oxidized liquid metal-based microfluidic platform for tunable electronic device applications. Lab on A Chip, 2015, 15, 766-775.	6.0	56
76	Selectively plated stretchable liquid metal wires for transparent electronics. Sensors and Actuators B: Chemical, 2015, 221, 1114-1119.	7.8	132
77	Hierarchical Mesoporous In ₂ O ₃ with Enhanced CO Sensing and Photocatalytic Performance: Distinct Morphologies of In(OH) ₃ via Self Assembly Coupled in Situ Solidâ€“Solid Transformation. ACS Applied Materials & Interfaces, 2015, 7, 7679-7689.	8.0	43
78	A microcantilever system with slider-crank actuation mechanism. Sensors and Actuators A: Physical, 2015, 226, 59-68.	4.1	5
79	Magnetic coupling between folded cantilevers for high-efficiency broadband energy harvesting. Sensors and Actuators A: Physical, 2015, 234, 17-22.	4.1	16
80	A novel liquid metal-based inkjet nozzle for flexible electronics. , 2015, , .		2
81	Hydrochloric acid-impregnated paper for gallium-based liquid metal microfluidics. Sensors and Actuators B: Chemical, 2015, 207, 199-205.	7.8	32
82	A study on linearity compensation of pressure-level sensor using contact-resistance change. Physica Status Solidi (A) Applications and Materials Science, 2014, 211, 1917-1922.	1.8	2
83	A Seesaw-Structured Energy Harvester With Superwide Bandwidth for TPMS Application. IEEE/ASME Transactions on Mechatronics, 2014, 19, 1514-1522.	5.8	34
84	An electromagnetic energy harvesting device based on high efficiency windmill structure for wireless forest fire monitoring application. Sensors and Actuators A: Physical, 2014, 219, 73-79.	4.1	38
85	Pressure level sensor using a conductive diaphragm and microswitch arrays. Sensors and Actuators A: Physical, 2014, 218, 154-161.	4.1	2
86	Selective nano-patterning of graphene using a heated atomic force microscope tip. Review of Scientific Instruments, 2014, 85, 045002.	1.3	7
87	PDMS based coplanar microfluidic channels for the surface reduction of oxidized Galinstan. Lab on A Chip, 2014, 14, 200-209.	6.0	80
88	Hierarchical In(OH) ₃ as a Precursor to Mesoporous In ₂ O ₃ Nanocubes: A Facile Synthesis Route, Mechanism of Self-Assembly, and Enhanced Sensing Response toward Hydrogen. Journal of Physical Chemistry C, 2014, 118, 6909-6921.	3.1	89
89	Hierarchical SnO/SnO ₂ nanocomposites: Formation of in situ p-n junctions and enhanced H ₂ sensing. Sensors and Actuators B: Chemical, 2013, 185, 265-273.	7.8	75
90	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

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91	Graphene/polydimethylsiloxane nanocomposite strain sensor. Review of Scientific Instruments, 2013, 84, 105005.	1.3	67
92	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
93	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
94	Chemo-Mechanical Joint Detection with Both Dynamic and Static Microcantilevers for Interhomologue Molecular Identification. Analytical Chemistry, 2012, 84, 6679-6685.	6.5	17
95	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
96	Integrated microcantilevers for high-resolution sensing and probing. Measurement Science and Technology, 2012, 23, 022001.	2.6	48
97	One-step fabrication of optically transparent polydimethylsiloxane artificial lotus leaf film using under-exposed under-baked photoresist mold. , 2012, , .		7
98	A super-lyophobic PDMS micro-tunnel as a novel microfluidic platform for oxidized Galinstan®. , 2012, , .		5
99	Adsorption induced surface-stress sensing signal originating from both vertical interface effects and intermolecular lateral interactions. Analyst, The, 2011, 136, 5261.	3.5	5
100	Analysis on microfinger with grooved patterns and its application in electric-thermal microgripper. International Journal of Advanced Manufacturing Technology, 2011, 56, 505-513.	3.0	5
101	An investigation of electrical transport properties through a monolithic square-configured micro-four-point probe with ultra-sharp tips. Sensors and Actuators A: Physical, 2011, 166, 247-250.	4.1	4
102	Performance of nanocomposites stacked with carbon nanotubes and Nafion films. Sensors and Actuators A: Physical, 2011, 165, 316-320.	4.1	4
103	Super-hydrophobicity of nano-patterned polymer needle array. , 2011, , .		0
104	Micromachined fragment capturer for biomedical applications. Review of Scientific Instruments, 2011, 82, 115004.	1.3	2
105	Design and Modeling of an Efficiency Horizontal Thermal Micro-Actuator with Integrated Piezoresistors for Precise Control. Journal of Nanoscience and Nanotechnology, 2010, 10, 3311-3315.	0.9	2
106	Flexible and tactile sensor based on a photosensitive polymer. Microelectronic Engineering, 2010, 87, 1400-1403.	2.4	10
107	A micromachined pressure sensor based on an array of microswitches. Review of Scientific Instruments, 2010, 81, 055103.	1.3	4
108	Monolithic micro-electro-thermal actuator integrated with a lateral displacement sensor. Journal of Micromechanics and Microengineering, 2010, 20, 085031.	2.6	2

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109	A smart microfour-point probe with ultrasharp in-plane tips. Review of Scientific Instruments, 2009, 80, 045107.	1.3	8
110	Integrated microactuation scanning probe microscopy system. Journal of Vacuum Science & Technology B, 2009, 27, 1408.	1.3	4
111	A biomimetic micro-collector based on an ionic polymer metal composite. Microelectronic Engineering, 2009, 86, 916-919.	2.4	10
112	A piezoresistive tactile sensor based on carbon fibers and polymer substrates. Microelectronic Engineering, 2009, 86, 1250-1253.	2.4	37
113	Functional Microcantilever for a Novel Scanning Force Microscope. Journal of the Korean Physical Society, 2008, 52, 1496-1500.	0.7	3
114	Micro/nano-heater integrated cantilevers for micro/nano-lithography applications. Microelectronic Engineering, 2007, 84, 1041-1044.	2.4	11
115	Fabrication and evaluation of a novel protein sensor based on Lorentz force. Microelectronic Engineering, 2007, 84, 1719-1723.	2.4	5
116	Microprobe array with electrical interconnection for thermal imaging and data storage. Journal of Microelectromechanical Systems, 2002, 11, 215-221.	2.5	54
117	Magnetically actuated cantilever with small resonator for scanning probe microscopy. IEEJ Transactions on Sensors and Micromachines, 2001, 121, 113-118.	0.1	1
118	High-speed imaging by electromagnetic alloy actuated probe with dual spring. Journal of Microelectromechanical Systems, 2000, 9, 419-424.	2.5	5