

Dong Weon Lee

List of Publications by Year in descending order

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77
papers

2,823
citations

147801

31
h-index

189892

50
g-index

77
all docs

77
docs citations

77
times ranked

3483
citing authors

#	ARTICLE	IF	CITATIONS
1	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
2	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
3	Selectively plated stretchable liquid metal wires for transparent electronics. Sensors and Actuators B: Chemical, 2015, 221, 1114-1119.	7.8	132
4	Graphene-nanosheet wrapped cobalt sulphide as a binder free hybrid electrode for asymmetric solid-state supercapacitor. Journal of Power Sources, 2017, 342, 652-665.	7.8	130
5	A further discussion of nonlinear mechanical behavior for FGM beams under in-plane thermal loading. Composite Structures, 2011, 93, 831-842.	5.8	96
6	Enhanced CO ₂ gas-sensing performance of ZnO nanopowder by La loaded during simple hydrothermal method. Sensors and Actuators B: Chemical, 2016, 229, 288-296.	7.8	91
7	Gold nanoparticles decorated rGO-ZnCo ₂ O ₄ nanocomposite: A promising positive electrode for high performance hybrid supercapacitors. Chemical Engineering Journal, 2020, 379, 122211.	12.7	91
8	Au Decorated ZnO hierarchical architectures: Facile synthesis, tunable morphology and enhanced CO detection at room temperature. Sensors and Actuators B: Chemical, 2017, 243, 990-1001.	7.8	89
9	An advanced selective liquid-metal plating technique for stretchable biosensor applications. Lab on A Chip, 2017, 17, 3415-3421.	6.0	88
10	PDMS based coplanar microfluidic channels for the surface reduction of oxidized Galinstan. Lab on A Chip, 2014, 14, 200-209.	6.0	80
11	Perovskite hexagonal YMnO ₃ nanopowder as p-type semiconductor gas sensor for H ₂ S detection. Sensors and Actuators B: Chemical, 2015, 221, 857-866.	7.8	67
12	Piezoresistive sensor-integrated PDMS cantilever: A new class of device for measuring the drug-induced changes in the mechanical activity of cardiomyocytes. Sensors and Actuators B: Chemical, 2017, 240, 566-572.	7.8	67
13	Highly durable crack sensor integrated with silicone rubber cantilever for measuring cardiac contractility. Nature Communications, 2020, 11, 535.	12.8	66
14	Scalable and ascendant synthesis of carbon cloth coated hierarchical core-shell CoMoS@Co(OH) ₂ for flexible and high-performance supercapacitors. Journal of Materials Chemistry A, 2018, 6, 9592-9603.	10.3	64
15	An oxidized liquid metal-based microfluidic platform for tunable electronic device applications. Lab on A Chip, 2015, 15, 766-775.	6.0	56
16	A selective NH ₃ gas sensor based on mesoporous p-type NiV ₂ O ₆ semiconducting nanorods synthesized using solution method. Sensors and Actuators B: Chemical, 2014, 192, 414-422.	7.8	54
17	Surface-patterned SU-8 cantilever arrays for preliminary screening of cardiac toxicity. Biosensors and Bioelectronics, 2016, 80, 456-462.	10.1	49
18	Hierarchical nanohybrids of B- and N-codoped graphene/mesoporous NiO nanodisks: an exciting new material for selective sensing of H ₂ S at near ambient temperature. Journal of Materials Chemistry A, 2019, 7, 9263-9278.	10.3	46

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19	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
20	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
21	Two-Dimensional Materials for High-Energy Solid-State Asymmetric Pseudocapacitors with High Mass Loadings. <i>ChemSusChem</i> , 2020, 13, 1582-1592.	6.8	43
22	Carbon alternative pseudocapacitive V ₂ O ₅ nanobricks and MnO ₂ nanoflakes @ MnO ₂ nanowires hetero-phase for high-energy pseudocapacitor. <i>Journal of Power Sources</i> , 2020, 453, 227766.	7.8	43
23	Core-shell hetero-nanostructured 1D transition metal polyphosphates decorated 2D bimetallic layered double hydroxide for sustainable hybrid supercapacitor. <i>Journal of Power Sources</i> , 2020, 466, 228286.	7.8	42
24	Electrochemical impedance analysis of spray deposited CZTS thin film: Effect of Se introduction. <i>Optical Materials</i> , 2016, 58, 418-425.	3.6	41
25	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
26	An electromagnetic energy harvesting device based on high efficiency windmill structure for wireless forest fire monitoring application. <i>Sensors and Actuators A: Physical</i> , 2014, 219, 73-79.	4.1	38
27	A piezoresistive tactile sensor based on carbon fibers and polymer substrates. <i>Microelectronic Engineering</i> , 2009, 86, 1250-1253.	2.4	37
28	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
29	Enhanced H ₂ S Sensing Performance of a p-type Semiconducting PdO-NiO Nanoscale Heteromixture. <i>Applied Surface Science</i> , 2017, 420, 638-650.	6.1	35
30	Preparation and LPG-gas sensing characteristics of p-type semiconducting LaNbO ₄ ceramic material. <i>Applied Surface Science</i> , 2013, 283, 58-64.	6.1	34
31	A Seesaw-Structured Energy Harvester With Superwide Bandwidth for TPMS Application. <i>IEEE/ASME Transactions on Mechatronics</i> , 2014, 19, 1514-1522.	5.8	34
32	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
33	Hydrochloric acid-impregnated paper for gallium-based liquid metal microfluidics. <i>Sensors and Actuators B: Chemical</i> , 2015, 207, 199-205.	7.8	32
34	Structural, optical, and selective ethanol sensing properties of p-type semiconducting CoNb ₂ O ₆ nanopowder. <i>Sensors and Actuators B: Chemical</i> , 2014, 205, 289-297.	7.8	31
35	Realizing the flexible and transparent highly-hydrophobic film through siloxane functionalized polyurethane-acrylate micro-pattern. <i>Chemical Engineering Journal</i> , 2019, 373, 68-77.	12.7	30
36	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

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37	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
38	Fabrication of Optically Transparent PDMS Artificial Lotus Leaf Film Using Underexposed and Underbaked Photoresist Mold. <i>Journal of Microelectromechanical Systems</i> , 2013, 22, 1073-1080.	2.5	26
39	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
40	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
41	Exposure to nanoplastics impairs collective contractility of neonatal cardiomyocytes under electrical synchronization. <i>Biomaterials</i> , 2021, 278, 121175.	11.4	24
42	Fabrication and characterization of microcapsules with polyamide/polyurea as hybrid shell. <i>Journal of Materials Science</i> , 2012, 47, 2040-2044.	3.7	22
43	Towards high performance unique microstructures of Co ₉ S ₈ //CoFe ₂ O ₄ for asymmetric supercapacitor. <i>Journal of Industrial and Engineering Chemistry</i> , 2018, 61, 206-215.	5.8	22
44	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
45	Surface modified nano-patterned SU-8 pillar array optically transparent super-hydrophobic thin film. <i>Journal of Micromechanics and Microengineering</i> , 2012, 22, 035012.	2.6	17
46	Galinstan-based flexible microfluidic device for wireless human-sensor applications. <i>Sensors and Actuators A: Physical</i> , 2020, 315, 112344.	4.1	17
47	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
48	Magnetic coupling between folded cantilevers for high-efficiency broadband energy harvesting. <i>Sensors and Actuators A: Physical</i> , 2015, 234, 17-22.	4.1	16
49	Artificial Heart Based on Electrically Controlled Non-Toxic Liquid Metal Pump. <i>Advanced Engineering Materials</i> , 2019, 21, 1900381.	3.5	16
50	Fully automated high-throughput cardiac toxicity screening platform using interlocking-structured 192 SU-8 cantilever arrays. <i>Sensors and Actuators B: Chemical</i> , 2019, 285, 129-136.	7.8	16
51	Bottom-up Approach for Designing Cobalt Tungstate Nanospheres through Sulfur Amendment for High-Performance Hybrid Supercapacitors. <i>ChemSusChem</i> , 2021, 14, 1602-1611.	6.8	16
52	A Quasi 2D Flexible Micro-Supercapacitor Based on MnO ₂ //NiCo ₂ O ₄ as a Miniaturized Energy Storage Device. <i>Energy Technology</i> , 2018, 6, 1380-1391.	3.8	15
53	Feasibility of Polycaprolactone Scaffolds Fabricated by Three-Dimensional Printing for Tissue Engineering of Tunica Albuginea. <i>World Journal of Men's Health</i> , 2018, 36, 66.	3.3	15
54	MnS ₂ /carbon nanotube electrode for improved supercapacitor performance. <i>Solid State Sciences</i> , 2021, 111, 106449.	3.2	15

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55	Electrochemically controllable actuation of liquid metal droplets based on Marangoni effect. <i>Journal of Applied Physics</i> , 2019, 126, .	2.5	14
56	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
57	Measurement of the gauge factor of carbon fiber and its application to sensors. <i>Microelectronic Engineering</i> , 2008, 85, 787-791.	2.4	13
58	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
59	Computational study of effects of contact resistance on a large-scale vanadium redox flow battery stack. <i>International Journal of Energy Research</i> , 2019, 43, 2343-2360.	4.5	12
60	Polymer-Based Functional Cantilevers Integrated with Interdigitated Electrode Arrays—A Novel Platform for Cardiac Sensing. <i>Micromachines</i> , 2020, 11, 450.	2.9	12
61	Status review on the MEMS-based flexible supercapacitors. <i>Journal of Micromechanics and Microengineering</i> , 2019, 29, 093001.	2.6	11
62	Transition metal sulfide-laminated copper wire for flexible hybrid supercapacitor. <i>New Journal of Chemistry</i> , 2020, 44, 18489-18495.	2.8	11
63	Flexible and tactile sensor based on a photosensitive polymer. <i>Microelectronic Engineering</i> , 2010, 87, 1400-1403.	2.4	10
64	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
65	Engineered ridge and micropillar array detectors to quantify the directional migration of fibroblasts. <i>RSC Advances</i> , 2017, 7, 51436-51443.	3.6	9
66	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
67	Fabrication of surface-functionalized PUA composites to achieve superhydrophobicity. <i>Micro and Nano Systems Letters</i> , 2019, 7, .	3.7	8
68	Miniaturized piezoelectric energy harvester for battery-free portable electronics. <i>International Journal of Energy Research</i> , 2019, 43, 2402.	4.5	6
69	Polyurethane-acrylate-based hydrophobic film: Facile fabrication, characterization, and application. <i>Japanese Journal of Applied Physics</i> , 2018, 57, 06HJ09.	1.5	5
70	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
71	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
72	Enhancement of cardiac contractility using gold-coated SU-8 cantilevers and their application to drug-induced cardiac toxicity tests. <i>Analyst, The</i> , 2021, 146, 6768-6779.	3.5	4

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73	A novel liquid metal-based inkjet nozzle for flexible electronics. , 2015, , .		2
74	Effects of low temperature on electrophysiology and mechanophysiology of human induced pluripotent stem cell-derived cardiomyocytes (hiPSC-CMs). Micro and Nano Systems Letters, 2021, 9, .	3.7	2
75	A switchable cantilver for a chemically sensitive scanning force microscope. Journal of Mechanical Science and Technology, 2005, 19, 2172-2178.	1.5	0
76	Simple and cost-effective method for fabrication of optically transparent superhydrophobic thin film using reusable pua mold and roll-to-roll machine. , 2017, , .		0
77	Large scale roll-to-roll production of polyurethane-acrylate-based hydrophobic film: a next-generation protection layer for solar devices. Journal of Micromechanics and Microengineering, 2020, 30, 115007.	2.6	0