

Dongwhi Choi

List of Publications by Year in descending order

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Version: 2024-02-01

64
papers

2,307
citations

279487

23
h-index

223531

46
g-index

65
all docs

65
docs citations

65
times ranked

2297
citing authors

#	ARTICLE	IF	CITATIONS
1	Reliable Output Performance of a Photovoltaic-Piezoelectric Hybridized Energy Harvester with an Automatic Position-Adjustable Bending Instrument. <i>International Journal of Precision Engineering and Manufacturing - Green Technology</i> , 2022, 9, 1077-1086.	2.7	2
2	Detection of cracked teeth using a mechanoluminescence phosphor with a stretchable photodetector array. <i>NPG Asia Materials</i> , 2022, 14, .	3.8	11
3	Charge transfer accelerating strategy for improving sensitivity of droplet based triboelectric sensors via heterogeneous wettability. <i>Nano Energy</i> , 2022, 97, 107213.	8.2	19
4	Recent advancements for improving the performance of triboelectric nanogenerator devices. <i>Nano Energy</i> , 2022, 99, 107318.	8.2	76
5	Lotus leaf-inspired droplet-based electricity generator with low-adhesive superhydrophobicity for a wide operational droplet volume range and boosted electricity output. <i>Nano Energy</i> , 2022, 99, 107361.	8.2	25
6	Smart conveyor roller system for self-powered product size identification in electrically off-grid condition via hybridization of triboelectric-electromagnetic generators. <i>Nano Energy</i> , 2022, 100, 107447.	8.2	15
7	Polypyrrole-coated nanocellulose for solar steam generation: A multi-surface photothermal ink with antibacterial and antifouling properties. <i>Carbohydrate Polymers</i> , 2022, 292, 119701.	5.1	12
8	High Quality Electret Based Triboelectric Nanogenerator for Boosted and Reliable Electrical Output Performance. <i>International Journal of Precision Engineering and Manufacturing - Green Technology</i> , 2021, 8, 125-137.	2.7	24
9	Solution-processed deposition based on plant polyphenol for silver conductive coating and its application on human motions detecting sensor. <i>Composites Science and Technology</i> , 2021, 201, 108550.	3.8	8
10	Exo-shoe triboelectric nanogenerator: Toward high-performance wearable biomechanical energy harvester. <i>Nano Energy</i> , 2021, 80, 105525.	8.2	81
11	Scalable Batch Fabrication of Flexible, Transparent and Self-triggered Tactile Sensor Array Based on Triboelectric Effect. <i>International Journal of Precision Engineering and Manufacturing - Green Technology</i> , 2021, 8, 519-531.	2.7	27
12	Electrical charge storage effect in carbon based polymer composite for long-term performance enhancement of the triboelectric nanogenerator. <i>Composites Science and Technology</i> , 2021, 207, 108680.	3.8	46
13	A highly sensitive magnetic configuration-based triboelectric nanogenerator for multidirectional vibration energy harvesting and self-powered environmental monitoring. <i>International Journal of Energy Research</i> , 2021, 45, 18262-18274.	2.2	24
14	Improved electrocatalytic water oxidation with cobalt hydroxide nano-flakes supported on copper-modified nickel foam. <i>Electrochimica Acta</i> , 2021, 383, 138368.	2.6	4
15	Facile Deposition of Silver Nanoparticles on Photonic Cellulose Nanocrystals Films: A Study on Solvent Stability and Post Antibacterial Activity. <i>Macromolecular Materials and Engineering</i> , 2021, 306, 2100289.	1.7	2
16	One-pot synthesis of silver nanoparticle deposited cellulose nanocrystals with high colloidal stability for bacterial contaminated water purification. <i>Journal of Environmental Chemical Engineering</i> , 2021, 9, 105535.	3.3	15
17	Dynamics of Electrically Driven Cholesteric Liquid Crystals by Triboelectrification and Their Application in Self-Powered Information Securing and Vision Correcting. <i>ACS Energy Letters</i> , 2021, 6, 3185-3194.	8.8	11
18	Triboelectrification-driven microbial inactivation in a conductive cellulose filter for affordable, portable, and efficient water sterilization. <i>Nano Energy</i> , 2021, 88, 106228.	8.2	31

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19	Toward smart net zero energy structures: Development of cement-based structural energy material for contact electrification driven energy harvesting and storage. <i>Nano Energy</i> , 2021, 89, 106389.	8.2	14
20	Geometric gradient assisted control of the triboelectric effect in a smart brake system for self-powered mechanical abrasion monitoring. <i>Nano Energy</i> , 2021, 89, 106448.	8.2	11
21	Coatable tannic acid-deposited cellulose nanocrystals for Fe(III) sensing and its application to a facile, scalable and portable sensing platform. <i>Dyes and Pigments</i> , 2021, 196, 109732.	2.0	8
22	Penicillium-traced Graphite on cellulose: A rapid and solventless approach for solar steam generation. <i>International Journal of Energy Research</i> , 2021, 45, 6395-6404.	2.2	11
23	Complex 3D microfluidic architectures formed by mechanically guided compressive buckling. <i>Science Advances</i> , 2021, 7, eabj3686.	4.7	41
24	Highly efficient patterning technique for silver nanowire electrodes by electrospray deposition and its application to self-powered triboelectric tactile sensor. <i>Scientific Reports</i> , 2021, 11, 21437.	1.6	20
25	Development of a vapor phase polymerization method using a wet-on-wet process to coat polypyrrole on never-dried nanocellulose crystals for fabrication of compression strain sensor. <i>Chemical Engineering Journal</i> , 2020, 381, 122700.	6.6	38
26	Reliable DC voltage generation based on the enhanced performance triboelectric nanogenerator fabricated by nanoimprinting-poling process and an optimized high efficiency integrated circuit. <i>Nano Energy</i> , 2020, 69, 104388.	8.2	22
27	Cold rolled robust metal assisted triboelectric nanogenerator for extremely durable operation. <i>Extreme Mechanics Letters</i> , 2020, 40, 100910.	2.0	19
28	(Invited) Development of the High Performance Triboelectric Nanogenerator with a Mechanical Mediator for Its Practical Utilization. <i>ECS Transactions</i> , 2020, 97, 51-54.	0.3	0
29	Development of a metal-to-metal imprinting process: Transcription quality analysis and surface wettability characterization. <i>Applied Surface Science</i> , 2020, 527, 146823.	3.1	6
30	Ion-Selective Transport: Direct Fabrication of Freestanding and Patterned Nanoporous Junctions in a 3D Microfluidic Device for Ion-Selective Transport (Small 22/2020). <i>Small</i> , 2020, 16, 2070123.	5.2	0
31	Facile Tailoring of Contact Layer Characteristics of the Triboelectric Nanogenerator Based on Portable Imprinting Device. <i>Materials</i> , 2020, 13, 872.	1.3	15
32	Development of a High-Performance Handheld Triboelectric Nanogenerator with a Lightweight Power Transmission Unit. <i>Advanced Materials Technologies</i> , 2020, 5, 2000003.	3.0	20
33	Universal biomechanical energy harvesting from joint movements using a direction-switchable triboelectric nanogenerator. <i>Nano Energy</i> , 2020, 71, 104584.	8.2	72
34	Water-Stable Flexible Nanocellulose Chiral Nematic Films through Acid Vapor Cross-Linked Glutaraldehyde for Chiral Nematic Templating. <i>ACS Macro Letters</i> , 2020, 9, 146-151.	2.3	30
35	Monocharged electret based liquid-solid interacting triboelectric nanogenerator for its boosted electrical output performance. <i>Nano Energy</i> , 2020, 70, 104541.	8.2	83
36	Direct Fabrication of Freestanding and Patterned Nanoporous Junctions in a 3D Microfluidic Device for Ion-Selective Transport. <i>Small</i> , 2020, 16, 2000998.	5.2	7

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37	Triboelectric signal generation and its versatile utilization during gear-based ordinary power transmission. <i>Nano Energy</i> , 2020, 73, 104745.	8.2	32
38	Triboelectric Nanogenerators: Development of a High-Performance Handheld Triboelectric Nanogenerator with a Lightweight Power Transmission Unit (<i>Adv. Mater. Technol.</i> 4/2020). <i>Advanced Materials Technologies</i> , 2020, 5, 2070023.	3.0	1
39	(Invited) Development of the High Performance Triboelectric Nanogenerator with a Mechanical Mediator for Its Practical Utilization. <i>ECS Meeting Abstracts</i> , 2020, MA2020-01, 1433-1433.	0.0	0
40	Development of a highly transparent and flexible touch sensor based on triboelectric effect. <i>Functional Composites and Structures</i> , 2019, 1, 045001.	1.6	29
41	Development of a triboelectric nanogenerator with enhanced electrical output performance by embedding electrically charged microparticles. <i>Functional Composites and Structures</i> , 2019, 1, 045005.	1.6	17
42	Increased Interfacial Area between Dielectric Layer and Electrode of Triboelectric Nanogenerator toward Robustness and Boosted Energy Output. <i>Nanomaterials</i> , 2019, 9, 71.	1.9	21
43	Biomimetic anti-reflective triboelectric nanogenerator for concurrent harvesting of solar and raindrop energies. <i>Nano Energy</i> , 2019, 57, 424-431.	8.2	127
44	Freestanding 3D Mesostructures, Functional Devices, and Shape-Programmable Systems Based on Mechanically Induced Assembly with Shape Memory Polymers. <i>Advanced Materials</i> , 2019, 31, e1805615.	11.1	105
45	Extremely high and elongated power output from a mechanical mediator-assisted triboelectric nanogenerator driven by the biomechanical energy. <i>Nano Energy</i> , 2019, 56, 851-858.	8.2	21
46	Direct fabrication of spatially patterned or aligned electrospun nanofiber mats on dielectric polymer surfaces. <i>Chemical Engineering Journal</i> , 2018, 335, 712-719.	6.6	38
47	Development of the Triboelectric Nanogenerator Using a Metal-to-Metal Imprinting Process for Improved Electrical Output. <i>Micromachines</i> , 2018, 9, 551.	1.4	23
48	Assembly of Advanced Materials into 3D Functional Structures by Methods Inspired by Origami and Kirigami: A Review. <i>Advanced Materials Interfaces</i> , 2018, 5, 1800284.	1.9	195
49	A textile-based triboelectric nanogenerator with humidity-resistant output characteristic and its applications in self-powered healthcare sensors. <i>Nano Energy</i> , 2018, 50, 513-520.	8.2	217
50	Fabrication of polystyrene-based multi-well screening platform for micrometer-scale surface topographies promoting stem cell functions. <i>Microelectronic Engineering</i> , 2017, 174, 28-34.	1.1	8
51	Comb-shaped electrode-based triboelectric nanogenerators for bi-directional mechanical energy harvesting. <i>Microelectronic Engineering</i> , 2017, 174, 46-51.	1.1	9
52	Spontaneous occurrence of liquid-solid contact electrification in nature: Toward a robust triboelectric nanogenerator inspired by the natural lotus leaf. <i>Nano Energy</i> , 2017, 36, 250-259.	8.2	159
53	A smart pipet tip: Triboelectricity and thermoelectricity assisted in situ evaluation of electrolyte concentration. <i>Nano Energy</i> , 2017, 38, 419-427.	8.2	30
54	Facile and cost-effective fabrication of patternable superhydrophobic surfaces via salt dissolution assisted etching. <i>Applied Surface Science</i> , 2017, 393, 449-456.	3.1	49

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55	Nanoimprinting: One-Step Fabrication of Transparent and Flexible Nanotopographical Triboelectric Nanogenerators via Thermal Nanoimprinting of Thermoplastic Fluoropolymers (Adv. Mater. 45/2015). Advanced Materials, 2015, 27, 7484-7484.	11.1	4
56	A Simple Approach to Characterize Gas-Aqueous Liquid Two-phase Flow Configuration Based on Discrete Solid-Liquid Contact Electrification. Scientific Reports, 2015, 5, 15172.	1.6	8
57	One-Step Fabrication of Transparent and Flexible Nanotopographical Triboelectric Nanogenerators via Thermal Nanoimprinting of Thermoplastic Fluoropolymers. Advanced Materials, 2015, 27, 7386-7394.	11.1	66
58	Development of pipette tips to control the spontaneously generated charge of droplets. , 2015, , .		1
59	A capillary-based preconcentration device by using Ion Concentration Polarization through cation permselective membrane coating. International Journal of Precision Engineering and Manufacturing, 2015, 16, 1467-1471.	1.1	8
60	Capacitive Control of Spontaneously Induced Electrical Charge of Droplet by Electric Field-Assisted Pipetting. Nano-Micro Letters, 2015, 7, 341-346.	14.4	8
61	Energy harvesting model of moving water inside a tubular system and its application of a stick-type compact triboelectric nanogenerator. Nano Research, 2015, 8, 2481-2491.	5.8	94
62	A Zeta (ζ)-Pipet Tip to Reduce the Spontaneously Induced Electrical Charge of a Dispensed Aqueous Droplet. Langmuir, 2014, 30, 6644-6648.	1.6	23
63	Spontaneous electrical charging of droplets by conventional pipetting. Scientific Reports, 2013, 3, 2037.	1.6	161
64	Fully Self-Powered Electro spray System via Triboelectric High Voltage Generator and Its Use to Control Wettability of Various Surfaces. International Journal of Precision Engineering and Manufacturing - Green Technology, 0, , 1.	2.7	1