

# 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	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
2	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
3	Spontaneous electrical charging of droplets by conventional pipetting. <i>Scientific Reports</i> , 2013, 3, 2037.	1.6	161
4	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
5	Biomimetic anti-reflective triboelectric nanogenerator for concurrent harvesting of solar and raindrop energies. <i>Nano Energy</i> , 2019, 57, 424-431.	8.2	127
6	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
7	Energy harvesting model of moving water inside a tubular system and its application of a stick-type compact triboelectric nanogenerator. <i>Nano Research</i> , 2015, 8, 2481-2491.	5.8	94
8	Monocharged electret based liquid-solid interacting triboelectric nanogenerator for its boosted electrical output performance. <i>Nano Energy</i> , 2020, 70, 104541.	8.2	83
9	Exo-shoe triboelectric nanogenerator: Toward high-performance wearable biomechanical energy harvester. <i>Nano Energy</i> , 2021, 80, 105525.	8.2	81
10	Recent advancements for improving the performance of triboelectric nanogenerator devices. <i>Nano Energy</i> , 2022, 99, 107318.	8.2	76
11	Universal biomechanical energy harvesting from joint movements using a direction-switchable triboelectric nanogenerator. <i>Nano Energy</i> , 2020, 71, 104584.	8.2	72
12	One-Step Fabrication of Transparent and Flexible Nanotopographical Triboelectric Nanogenerators via Thermal Nanoimprinting of Thermoplastic Fluoropolymers. <i>Advanced Materials</i> , 2015, 27, 7386-7394.	11.1	66
13	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
14	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
15	Complex 3D microfluidic architectures formed by mechanically guided compressive buckling. <i>Science Advances</i> , 2021, 7, eabj3686.	4.7	41
16	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
17	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
18	Triboelectric signal generation and its versatile utilization during gear-based ordinary power transmission. <i>Nano Energy</i> , 2020, 73, 104745.	8.2	32

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19	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
20	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
21	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
22	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
23	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
24	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
25	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
26	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
27	A Zeta ( $\zeta$ )-Pipet Tip to Reduce the Spontaneously Induced Electrical Charge of a Dispensed Aqueous Droplet. <i>Langmuir</i> , 2014, 30, 6644-6648.	1.6	23
28	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
29	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
30	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
31	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
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	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
34	Cold rolled robust metal assisted triboelectric nanogenerator for extremely durable operation. <i>Extreme Mechanics Letters</i> , 2020, 40, 100910.	2.0	19
35	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
36	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

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37	Facile Tailoring of Contact Layer Characteristics of the Triboelectric Nanogenerator Based on Portable Imprinting Device. <i>Materials</i> , 2020, 13, 872.	1.3	15
38	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
39	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
40	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
41	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
42	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
43	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
44	<scp>Pencilâ€tracedâ€graphite</scp> on cellulose: A rapid and solventâ€less approach for solar steam generation. <i>International Journal of Energy Research</i> , 2021, 45, 6395-6404.	2.2	11
45	Detection of cracked teeth using a mechanoluminescence phosphor with a stretchable photodetector array. <i>NPG Asia Materials</i> , 2022, 14, .	3.8	11
46	Comb-shaped electrode-based triboelectric nanogenerators for bi-directional mechanical energy harvesting. <i>Microelectronic Engineering</i> , 2017, 174, 46-51.	1.1	9
47	A Simple Approach to Characterize Gas-Aqueous Liquid Two-phase Flow Configuration Based on Discrete Solid-Liquid Contact Electrification. <i>Scientific Reports</i> , 2015, 5, 15172.	1.6	8
48	A capillary-based preconcentration device by using Ion Concentration Polarization through cation permselective membrane coating. <i>International Journal of Precision Engineering and Manufacturing</i> , 2015, 16, 1467-1471.	1.1	8
49	Capacitive Control of Spontaneously Induced Electrical Charge of Droplet by Electric Field-Assisted Pipetting. <i>Nano-Micro Letters</i> , 2015, 7, 341-346.	14.4	8
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	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
52	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
53	Direct Fabrication of Freestanding and Patterned Nanoporous Junctions in a 3D Microâ€Nanofluidic Device for Ionâ€Selective Transport. <i>Small</i> , 2020, 16, 2000998.	5.2	7
54	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

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55	Nanoimprinting: Oneâ€Step Fabrication of Transparent and Flexible Nanotopographicalâ€Triboelectric Nanogenerators via Thermal Nanoimprinting of Thermoplastic Fluoropolymers (Adv. Mater. 45/2015). Advanced Materials, 2015, 27, 7484-7484.	11.1	4
56	Improved electrocatalytic water oxidation with cobalt hydroxide nano-flakes supported on copper-modified nickel foam. Electrochimica Acta, 2021, 383, 138368.	2.6	4
57	Reliable Output Performance of a Photovoltaicâ€Piezoelectric Hybridized Energy Harvester with an Automatic Position-Adjustable Bending Instrument. International Journal of Precision Engineering and Manufacturing - Green Technology, 2022, 9, 1077-1086.	2.7	2
58	Facile Deposition of Silver Nanoparticles on Photonic Cellulose Nanocrystals Films: A Study on Solvent Stability and Post Antibacterial Activity. Macromolecular Materials and Engineering, 2021, 306, 2100289.	1.7	2
59	Development of pipette tips to control the spontaneously generated charge of droplets. , 2015, , .		1
60	Triboelectric Nanogenerators: Development of a Highâ€Performance Handheld Triboelectric Nanogenerator with a Lightweight Power Transmission Unit (Adv. Mater. Technol. 4/2020). Advanced Materials Technologies, 2020, 5, 2070023.	3.0	1
61	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
62	(Invited) Development of the High Performance Triboelectric Nanogenerator with a Mechanical Mediator for Its Practical Utilization. ECS Transactions, 2020, 97, 51-54.	0.3	0
63	Ionâ€Selective Transport: Direct Fabrication of Freestanding and Patterned Nanoporous Junctions in a 3D Microâ€Nanofluidic Device for Ionâ€Selective Transport (Small 22/2020). Small, 2020, 16, 2070123.	5.2	0
64	(Invited) Development of the High Performance Triboelectric Nanogenerator with a Mechanical Mediator for Its Practical Utilization. ECS Meeting Abstracts, 2020, MA2020-01, 1433-1433.	0.0	0