

# Jeong Min Baik

## List of Publications by Year in descending order

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100  
papers

4,497  
citations

109264

35  
h-index

106281

65  
g-index

103  
all docs

103  
docs citations

103  
times ranked

5681  
citing authors

#	ARTICLE	IF	CITATIONS
1	Hydrophobic Sponge Structure-Based Triboelectric Nanogenerator. <i>Advanced Materials</i> , 2014, 26, 5037-5042.	11.1	426
2	Boosted output performance of triboelectric nanogenerator via electric double layer effect. <i>Nature Communications</i> , 2016, 7, 12985.	5.8	336
3	Mesoporous pores impregnated with Au nanoparticles as effective dielectrics for enhancing triboelectric nanogenerator performance in harsh environments. <i>Energy and Environmental Science</i> , 2015, 8, 3006-3012.	15.6	315
4	Highly Stretchable 2D Fabrics for Wearable Triboelectric Nanogenerator under Harsh Environments. <i>ACS Nano</i> , 2015, 9, 6394-6400.	7.3	310
5	Robust nanogenerators based on graft copolymers via control of dielectrics for remarkable output power enhancement. <i>Science Advances</i> , 2017, 3, e1602902.	4.7	204
6	Embossed Hollow Hemisphere-Based Piezoelectric Nanogenerator and Highly Responsive Pressure Sensor. <i>Advanced Functional Materials</i> , 2014, 24, 2038-2043.	7.8	124
7	Pd-Sensitized Single Vanadium Oxide Nanowires: Highly Responsive Hydrogen Sensing Based on the Metal-Insulator Transition. <i>Nano Letters</i> , 2009, 9, 3980-3984.	4.5	121
8	Highly anisotropic power generation in piezoelectric hemispheres composed stretchable composite film for self-powered motion sensor. <i>Nano Energy</i> , 2015, 11, 1-10.	8.2	121
9	High humidity- and contamination-resistant triboelectric nanogenerator with superhydrophobic interface. <i>Nano Energy</i> , 2019, 57, 903-910.	8.2	119
10	Tin-Oxide-Nanowire-Based Electronic Nose Using Heterogeneous Catalysis as a Functionalization Strategy. <i>ACS Nano</i> , 2010, 4, 3117-3122.	7.3	99
11	Silk fibroin-based biodegradable piezoelectric composite nanogenerators using lead-free ferroelectric nanoparticles. <i>Nano Energy</i> , 2015, 14, 87-94.	8.2	97
12	Polarized Surface-Enhanced Raman Spectroscopy from Molecules Adsorbed in Nano-Gaps Produced by Electromigration in Silver Nanowires. <i>Nano Letters</i> , 2009, 9, 672-676.	4.5	84
13	Electrospun ion gel nanofibers for flexible triboelectric nanogenerator: electrochemical effect on output power. <i>Nanoscale</i> , 2015, 7, 16189-16194.	2.8	79
14	Self-Powered, Room-Temperature Electronic Nose Based on Triboelectrification and Heterogeneous Catalytic Reaction. <i>Advanced Functional Materials</i> , 2015, 25, 7049-7055.	7.8	76
15	High-Output Triboelectric Nanogenerator Based on Dual Inductive and Resonance Effects-Controlled Highly Transparent Polyimide for Self-Powered Sensor Network Systems. <i>Advanced Energy Materials</i> , 2019, 9, 1901987.	10.2	73
16	Growth of Metal Oxide Nanowires from Supercooled Liquid Nanodroplets. <i>Nano Letters</i> , 2009, 9, 4138-4146.	4.5	70
17	Effect of microstructural change on magnetic property of Mn-implanted p-type GaN. <i>Applied Physics Letters</i> , 2003, 82, 583-585.	1.5	69
18	The Progress of PVDF as a Functional Material for Triboelectric Nanogenerators and Self-Powered Sensors. <i>Micromachines</i> , 2018, 9, 532.	1.4	64

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19	Transparent-flexible-multimodal triboelectric nanogenerators for mechanical energy harvesting and self-powered sensor applications. <i>Nano Energy</i> , 2018, 48, 471-480.	8.2	63
20	Self-Assembled and Highly Selective Sensors Based on Air-Bridge-Structured Nanowire Junction Arrays. <i>ACS Applied Materials &amp; Interfaces</i> , 2013, 5, 6802-6807.	4.0	62
21	Nanostructure-Dependent Metal-Insulator Transitions in Vanadium-Oxide Nanowires. <i>Journal of Physical Chemistry C</i> , 2008, 112, 13328-13331.	1.5	58
22	Surface dipole enhanced instantaneous charge pair generation in triboelectric nanogenerator. <i>Nano Energy</i> , 2016, 26, 360-370.	8.2	54
23	Sustainable highly charged C <sub>60</sub> -functionalized polyimide in a non-contact mode triboelectric nanogenerator. <i>Energy and Environmental Science</i> , 2021, 14, 1004-1015.	15.6	52
24	Research Update: Recent progress in the development of effective dielectrics for high-output triboelectric nanogenerator. <i>APL Materials</i> , 2017, 5, .	2.2	51
25	Highly efficient organic light-emitting diodes with hole injection layer of transition metal oxides. <i>Journal of Applied Physics</i> , 2005, 98, 093707.	1.1	49
26	High-yield TiO <sub>2</sub> nanowire synthesis and single nanowire field-effect transistor fabrication. <i>Applied Physics Letters</i> , 2008, 92, .	1.5	47
27	Fe Nanowires in Nanoporous Alumina: Geometric Effect versus Influence of Pore Walls. <i>Journal of Physical Chemistry C</i> , 2008, 112, 2252-2255.	1.5	46
28	Enhancing Light Emission of Nanostructured Vertical Light-Emitting Diodes by Minimizing Total Internal Reflection. <i>Advanced Functional Materials</i> , 2012, 22, 632-639.	7.8	46
29	All-Transparent NO <sub>2</sub> Gas Sensors Based on Freestanding Al-Doped ZnO Nanofibers. <i>ACS Applied Electronic Materials</i> , 2019, 1, 1261-1268.	2.0	45
30	Facile Synthesis of Single Crystalline Metallic RuO <sub>2</sub> Nanowires and Electromigration-Induced Transport Properties. <i>Journal of Physical Chemistry C</i> , 2011, 115, 4611-4615.	1.5	42
31	Design of Mechanical Frequency Regulator for Predictable Uniform Power from Triboelectric Nanogenerators. <i>Advanced Energy Materials</i> , 2018, 8, 1702667.	10.2	42
32	3D printed noise-cancelling triboelectric nanogenerator. <i>Nano Energy</i> , 2017, 38, 377-384.	8.2	41
33	Electrothermally Induced Highly Responsive and Highly Selective Vanadium Oxide Hydrogen Sensor Based on Metal-Insulator Transition. <i>Journal of Physical Chemistry C</i> , 2012, 116, 226-230.	1.5	40
34	Zero-dimensional heterostructures: N-doped graphene dots/SnO <sub>2</sub> for ultrasensitive and selective NO <sub>2</sub> gas sensing at low temperatures. <i>Journal of Materials Chemistry A</i> , 2020, 8, 11734-11742.	5.2	39
35	A built-in electric field induced by ferroelectrics increases halogen-free organic solar cell efficiency in various device types. <i>Nano Energy</i> , 2020, 68, 104327.	8.2	38
36	Self-powered triboelectric aptasensor for label-free highly specific thrombin detection. <i>Nano Energy</i> , 2016, 30, 77-83.	8.2	35

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37	Enhanced piezoresponse of highly aligned electrospun poly(vinylidene fluoride) nanofibers. <i>Nanotechnology</i> , 2017, 28, 395402.	1.3	34
38	Plasmonic gold nanoparticle-decorated BiVO <sub>4</sub> /ZnO nanowire heterostructure photoanodes for efficient water oxidation. <i>Catalysis Science and Technology</i> , 2018, 8, 3759-3766.	2.1	34
39	3D Cu ball-based hybrid triboelectric nanogenerator with non-fullerene organic photovoltaic cells for self-powering indoor electronics. <i>Nano Energy</i> , 2020, 77, 105271.	8.2	33
40	A composite of a graphene oxide derivative as a novel sensing layer in an organic field-effect transistor. <i>Journal of Materials Chemistry C</i> , 2014, 2, 4539-4544.	2.7	32
41	Highly Branched RuO <sub>2</sub> Nanoneedles on Electrospun TiO <sub>2</sub> Nanofibers as an Efficient Electrocatalytic Platform. <i>ACS Applied Materials &amp; Interfaces</i> , 2015, 7, 15321-15330.	4.0	32
42	Enhancement of magnetic properties by nitrogen implantation to Mn-implanted p-type GaN. <i>Applied Physics Letters</i> , 2004, 84, 1120-1122.	1.5	31
43	Electronic Structure and Magnetism in Transition Metals Doped 8-Hydroxy-Quinoline Aluminum. <i>Journal of the American Chemical Society</i> , 2008, 130, 13522-13523.	6.6	31
44	Highly-sensitive and highly-correlative flexible motion sensors based on asymmetric piezotronic effect. <i>Nano Energy</i> , 2018, 51, 185-191.	8.2	29
45	Remarkable output power enhancement of sliding-mode triboelectric nanogenerator through direct metal-to-metal contact with the ground. <i>Nano Energy</i> , 2019, 57, 293-299.	8.2	28
46	ZnO Nanowire-Based Antireflective Coatings with Double-Nanotextured Surfaces. <i>ACS Applied Materials &amp; Interfaces</i> , 2014, 6, 1375-1379.	4.0	24
47	Ferroelectrically augmented contact electrification enables efficient acoustic energy transfer through liquid and solid media. <i>Energy and Environmental Science</i> , 2022, 15, 1243-1255.	15.6	24
48	The effects of implanted nitrogen ions on the magnetic properties of Mn-implanted GaN. <i>Metals and Materials International</i> , 2004, 10, 555-558.	1.8	22
49	Strategies for ultrahigh outputs generation in triboelectric energy harvesting technologies: from fundamentals to devices. <i>Science and Technology of Advanced Materials</i> , 2019, 20, 927-936.	2.8	22
50	Two-dimensional metal-dielectric hybrid-structured film with titanium oxide for enhanced visible light absorption and photo-catalytic application. <i>Nano Energy</i> , 2016, 21, 115-122.	8.2	21
51	Boosting the energy conversion efficiency of a combined triboelectric nanogenerator-capacitor. <i>Nano Energy</i> , 2019, 56, 571-580.	8.2	20
52	Effect of microstructural evolution on magnetic property of Mn-implanted p-type GaN. <i>Applied Physics Letters</i> , 2003, 83, 2632-2634.	1.5	19
53	Structural Evolution of Chemically-Driven RuO <sub>2</sub> Nanowires and 3-Dimensional Design for Photo-Catalytic Applications. <i>Scientific Reports</i> , 2015, 5, 11933.	1.6	19
54	Gate-Tunable Spin Exchange Interactions and Inversion of Magnetoresistance in Single Ferromagnetic ZnO Nanowires. <i>ACS Nano</i> , 2016, 10, 4618-4626.	7.3	19

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55	Parallel Aligned Mesopore Arrays in Pyramidal-Shaped Gallium Nitride and Their Photocatalytic Applications. <i>ACS Applied Materials &amp; Interfaces</i> , 2016, 8, 18201-18207.	4.0	18
56	Triboelectric Charge-Driven Enhancement of the Output Voltage of BiSbTe-Based Thermoelectric Generators. <i>ACS Energy Letters</i> , 2021, 6, 1095-1103.	8.8	18
57	Automatically switchable mechanical frequency regulator for continuous mechanical energy harvesting via a triboelectric nanogenerator. <i>Nano Energy</i> , 2021, 89, 106350.	8.2	17
58	Rhodium-oxide-coated indium tin oxide for enhancement of hole injection in organic light emitting diodes. <i>Applied Physics Letters</i> , 2005, 87, 072105.	1.5	16
59	Mechanically Robust, Stretchable Solar Absorbers with Submicron-Thick Multilayer Sheets for Wearable and Energy Applications. <i>ACS Applied Materials &amp; Interfaces</i> , 2017, 9, 18061-18068.	4.0	16
60	Unidirectional growth of single crystalline $\text{I}^2\text{-Na}_{0.33}\text{V}_2\text{O}_5$ and $\text{I}^{\pm}\text{-V}_2\text{O}_5$ nanowires driven by controlling the pH of aqueous solution and their electrochemical performances for Na-ion batteries. <i>CrystEngComm</i> , 2017, 19, 5028-5037.	1.3	16
61	A thermodynamic approach toward selective and reversible sub-ppm $\text{H}_2\text{S}$ sensing using ultra-small $\text{CuO}$ nanorods impregnated with $\text{Nb}_2\text{O}_5$ nanoparticles. <i>Journal of Materials Chemistry A</i> , 2021, 9, 17425-17433.	5.2	16
62	Phase-Tuned $\text{MoS}_2$ and Its Hybridization with Perovskite Oxide as Bifunctional Catalyst: A Rationale for Highly Stable and Efficient Water Splitting. <i>ACS Applied Materials &amp; Interfaces</i> , 2022, 14, 18248-18260.	4.0	16
63	Fabrication of $(\text{Ga,Mn})\text{N}$ nanowires with room temperature ferromagnetism using nitrogen plasma. <i>Applied Physics Letters</i> , 2005, 87, 042105.	1.5	14
64	Directional Ostwald Ripening for Producing Aligned Arrays of Nanowires. <i>Nano Letters</i> , 2019, 19, 4306-4313.	4.5	14
65	Wide-temperature (up to $100^\circ\text{C}$ ) operation of thermostable vanadium oxide based microbolometers with $\text{Ti/MgF}_2$ infrared absorbing layer for long wavelength infrared (LWIR) detection. <i>Applied Surface Science</i> , 2021, 547, 149142.	3.1	14
66	Three-Dimensional Branched Nanowire Heterostructures as Efficient Light-Extraction Layer in Light-Emitting Diodes. <i>Advanced Functional Materials</i> , 2014, 24, 3384-3391.	7.8	13
67	Photo-stimulated triboelectric generation. <i>Nanoscale</i> , 2017, 9, 18597-18603.	2.8	13
68	Alternatively driven dual nanowire arrays by $\text{ZnO}$ and $\text{CuO}$ for selective sensing of gases. <i>Sensors and Actuators B: Chemical</i> , 2013, 185, 10-16.	4.0	12
69	Enhanced performance of a direct contact membrane distillation (DCMD) system with a $\text{Ti/MgF}_2$ solar absorber under actual weather environments. <i>Desalination</i> , 2020, 491, 114580.	4.0	11
70	Ce oxide nanoparticles on porous reduced graphene oxides for stable hydrogen detection in air/HMDSO environment. <i>Sensors and Actuators B: Chemical</i> , 2020, 321, 128529.	4.0	11
71	Graphene-Assisted Zwitterionic Conjugated Polycyclic Molecular Interfacial Layer Enables Highly Efficient and Stable Inverted Perovskite Solar Cells. <i>Chemistry of Materials</i> , 2021, 33, 5563-5571.	3.2	11
72	Enhancement of magnetic properties in $(\text{Ga,Mn})\text{N}$ nanowires due to $\text{N}_2$ plasma treatment. <i>Applied Physics Letters</i> , 2006, 89, 152113.	1.5	10

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73	Correlation between thermal annealing temperature and Joule-heating based insulator-metal transition in VO <sub>2</sub> nanobeams. <i>Applied Physics Letters</i> , 2013, 103, 203114.	1.5	9
74	A Wide Dynamic Range Multi-Sensor ROIC for Portable Environmental Monitoring Systems With Two-Step Self-Optimization Schemes. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , 2021, 68, 2432-2443.	3.5	9
75	Visible Color Tunable Emission in Three-Dimensional Light Emitting Diodes by MgO Passivation of Pyramid Tip. <i>ACS Applied Materials &amp; Interfaces</i> , 2015, 7, 27743-27748.	4.0	8
76	A large-area fabrication of moth-eye patterned Au/TiO <sub>2</sub> gap-plasmon structure and its application to plasmonic solar water splitting. <i>Solar Energy Materials and Solar Cells</i> , 2019, 201, 110033.	3.0	8
77	Output signals control of triboelectric nanogenerator with metal-dielectric-metal configuration through high resistance grounded systems. <i>Nano Energy</i> , 2022, 95, 107023.	8.2	8
78	Low-Temperature DeNO <sub>x</sub> Extruded Monolithic Catalysts Based on Highly Dispersive Mn-Ce Oxide Nanoparticles of Low Ce Content. <i>Advanced Materials Technologies</i> , 2019, 4, 1800462.	3.0	7
79	Solution-Processed Graphene Thin-Film Enables Binder-Free, Efficient Loading of Nanocatalysts for Electrochemical Water Splitting. <i>Advanced Materials Interfaces</i> , 2021, 8, 2101576.	1.9	7
80	Ferromagnetic properties of (Ga,Mn)N nanowires grown by a chemical vapor deposition method. <i>Journal of Vacuum Science &amp; Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 2005, 23, 530.	1.6	6
81	Optical design of ZnO-based antireflective layers for enhanced GaAs solar cell performance. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 2906-2912.	1.3	6
82	Pyramidal Metal-dielectric hybrid-structure geometry with an asymmetric TiO <sub>2</sub> layer for broadband light absorption and photocatalytic applications. <i>Nano Energy</i> , 2018, 53, 468-474.	8.2	5
83	Photo-stimulated charge transfer in contact electrification coupled with plasmonic excitations. <i>Nano Energy</i> , 2019, 65, 104031.	8.2	5
84	Triple layered Ga <sub>2</sub> O <sub>3</sub> /Cu <sub>2</sub> O/Au photoanodes with enhanced photoactivity and stability prepared using iron nickel oxide catalysts. <i>Journal of Materials Chemistry A</i> , 2020, 8, 10966-10972.	5.2	5
85	Development of a Novel Gas-Sensing Platform Based on a Network of Metal Oxide Nanowire Junctions Formed on a Suspended Carbon Nanomesh Backbone. <i>Sensors</i> , 2021, 21, 4525.	2.1	5
86	3D Multiscale Gradient Pores Impregnated with Ag Nanowires for Simultaneous Pressure and Bending Detection with Enhanced Linear Sensitivity. <i>Advanced Materials Technologies</i> , 2020, 5, 1901041.	3.0	5
87	Observation of ferromagnetic ordering in Mn-doped 8-hydroxyquinoline aluminum. <i>Physica Status Solidi - Rapid Research Letters</i> , 2008, 2, 22-24.	1.2	4
88	Modulating ZnO Nanostructure Arrays on Any Substrates by Nanolevel Structure Control. <i>Journal of Physical Chemistry C</i> , 2011, 115, 7987-7992.	1.5	4
89	High rotational speed hand-powered triboelectric nanogenerator toward a battery-free point-of-care detection system. <i>RSC Advances</i> , 2021, 11, 23221-23227.	1.7	4
90	Unprecedented Insulator-to-Metal Transition Dynamics by Heterogeneous Catalysis in Pd-Sensitized Single Vanadium Oxide Nanowires. <i>Journal of Physical Chemistry C</i> , 2013, 117, 21864-21869.	1.5	3

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91	Circuit Modeling Approach for Analyzing Triboelectric Nanogenerators for Energy Harvesting. , 2018, , ,		3
92	The migration of alkali metal (Na+, Li+, and K+) ions in single crystalline vanadate nanowires: Rasch-Hinrichsen resistivity. Current Applied Physics, 2019, 19, 516-520.	1.1	3
93	Co-implantation of Mn+ N into p-type GaN for highTC ferromagnetism. Physica Status Solidi C: Current Topics in Solid State Physics, 2003, 0, 2878-2881.	0.8	2
94	Energy Harvesting: Design of Mechanical Frequency Regulator for Predictable Uniform Power from Triboelectric Nanogenerators (Adv. Energy Mater. 15/2018). Advanced Energy Materials, 2018, 8, 1870072.	10.2	2
95	Graphene Antiadhesion Layer for the Effective Peel-and-Pick Transfer of Metallic Electrodes toward Flexible Electronics. ACS Applied Materials & Interfaces, 2021, 13, 22000-22008.	4.0	2
96	3D Multiple Triangular Prisms for Highly Sensitive Non-Contact Mode Triboelectric Bending Sensors. Nanomaterials, 2022, 12, 1499.	1.9	2
97	Electrocatalytically driven fast removal of moisture by condensation of vapor and water splitting. Nano Energy, 2019, 61, 295-303.	8.2	1
98	Realistic Circuit Modeling Using Derating Factors for Triboelectric Nanogenerators in Energy Harvesting Applications. , 2019, , ,		1
99	Electric-Field Induced Abrupt and Multi-Step Insulator-Metal Transitions in Vanadium Dioxide Nanobeams. Journal of Nanoscience and Nanotechnology, 2017, 17, 4247-4250.	0.9	0
100	Solutionâ€Processed Graphene Thinâ€Film Enables Binderâ€Free, Efficient Loading of Nanocatalysts for Electrochemical Water Splitting (Adv. Mater. Interfaces 23/2021). Advanced Materials Interfaces, 2021, 8, ,	1.9	0