Jeong Min Baik

List of Publications by Year
in descending order

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	Ferroelectrically augmented contact electrification enables efficient acoustic energy transfer through liquid and solid media. Energy and Environmental Science, 2022, 15, 1243-1255.	15.6	24
2	Output signals control of triboelectric nanogenerator with metal-dielectric-metal configuration through high resistance grounded systems. Nano Energy, 2022, 95, 107023.	8.2	8
3	Phase-Tuned MoS₂ and Its Hybridization with Perovskite Oxide as Bifunctional Catalyst: A Rationale for Highly Stable and Efficient Water Splitting. ACS Applied Materials & Interfaces, 2022, 14, 18248-18260.	4.0	16
4	3D Multiple Triangular Prisms for Highly Sensitive Non-Contact Mode Triboelectric Bending Sensors. Nanomaterials, 2022, 12, 1499.	1.9	2
5	Sustainable highly charged C₆₀-functionalized polyimide in a non-contact mode triboelectric nanogenerator. Energy and Environmental Science, 2021, 14, 1004-1015.	15.6	52
6	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
7	Wide-temperature (up to 100ÂÂ°C) operation of thermostable vanadium oxide based microbolometers with Ti/MgF2 infrared absorbing layer for long wavelength infrared (LWIR) detection. Applied Surface Science, 2021, 547, 149142.	3.1	14
8	A Wide Dynamic Range Multi-Sensor ROIC for Portable Environmental Monitoring Systems With Two-Step Self-Optimization Schemes. IEEE Transactions on Circuits and Systems I: Regular Papers, 2021, 68, 2432-2443.	3.5	9
9	Graphene-Assisted Zwitterionic Conjugated Polycyclic Molecular Interfacial Layer Enables Highly Efficient and Stable Inverted Perovskite Solar Cells. Chemistry of Materials, 2021, 33, 5563-5571.	3.2	11
10	Development of a Novel Gas-Sensing Platform Based on a Network of Metal Oxide Nanowire Junctions Formed on a Suspended Carbon Nanomesh Backbone. Sensors, 2021, 21, 4525.	2.1	5
11	Automatically switchable mechanical frequency regulator for continuous mechanical energy harvesting via a triboelectric nanogenerator. Nano Energy, 2021, 89, 106350.	8.2	17
12	A thermodynamic approach toward selective and reversible sub-ppm H₂S sensing using ultra-small CuO nanorods impregnated with Nb₂O₅ nanoparticles. Journal of Materials Chemistry A, 2021, 9, 17425-17433.	5.2	16
13	High rotational speed hand-powered triboelectric nanogenerator toward a battery-free point-of-care detection system. RSC Advances, 2021, 11, 23221-23227.	1.7	4
14	Triboelectric Charge-Driven Enhancement of the Output Voltage of BiSbTe-Based Thermoelectric Generators. ACS Energy Letters, 2021, 6, 1095-1103.	8.8	18
15	Solutionâ€Processed Graphene Thinâ€Film Enables Binderâ€Free, Efficient Loading of Nanocatalysts for Electrochemical Water Splitting. Advanced Materials Interfaces, 2021, 8, 2101576.	1.9	7
16	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
17	A built-in electric field induced by ferroelectrics increases halogen-free organic solar cell efficiency in various device types. Nano Energy, 2020, 68, 104327.	8.2	38
18	3D Cu ball-based hybrid triboelectric nanogenerator with non-fullerene organic photovoltaic cells for self-powering indoor electronics. Nano Energy, 2020, 77, 105271.	8.2	33

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19	Zero-dimensional heterostructures: N-doped graphene dots/SnO₂ for ultrasensitive and selective NO₂ gas sensing at low temperatures. Journal of Materials Chemistry A, 2020, 8, 11734-11742.	5.2	39
20	Triple layered Ga₂O₃/Cu₂O/Au photoanodes with enhanced photoactivity and stability prepared using iron nickel oxide catalysts. Journal of Materials Chemistry A, 2020, 8, 10966-10972.	5.2	5
21	Enhanced performance of a direct contact membrane distillation (DCMD) system with a Ti/MgF2 solar absorber under actual weather environments. Desalination, 2020, 491, 114580.	4.0	11
22	Ce oxide nanoparticles on porous reduced graphene oxides for stable hydrogen detection in air/HMDSO environment. Sensors and Actuators B: Chemical, 2020, 321, 128529.	4.0	11
23	3D Multiscale Gradient Pores Impregnated with Ag Nanowires for Simultaneous Pressure and Bending Detection with Enhanced Linear Sensitivity. Advanced Materials Technologies, 2020, 5, 1901041.	3.0	5
24	Highâ€Output Triboelectric Nanogenerator Based on Dual Inductive and Resonance Effectsâ€Controlled Highly Transparent Polyimide for Selfâ€Powered Sensor Network Systems. Advanced Energy Materials, 2019, 9, 1901987.	10.2	73
25	Photo-stimulated charge transfer in contact electrification coupled with plasmonic excitations. Nano Energy, 2019, 65, 104031.	8.2	5
26	A large-area fabrication of moth-eye patterned Au/TiO2 gap-plasmon structure and its application to plasmonic solar water splitting. Solar Energy Materials and Solar Cells, 2019, 201, 110033.	3.0	8
27	Strategies for ultrahigh outputs generation in triboelectric energy harvesting technologies: from fundamentals to devices. Science and Technology of Advanced Materials, 2019, 20, 927-936.	2.8	22
28	All-Transparent NO₂ Gas Sensors Based on Freestanding Al-Doped ZnO Nanofibers. ACS Applied Electronic Materials, 2019, 1, 1261-1268.	2.0	45
29	Directional Ostwald Ripening for Producing Aligned Arrays of Nanowires. Nano Letters, 2019, 19, 4306-4313.	4.5	14
30	Electrocatalytically driven fast removal of moisture by condensation of vapor and water splitting. Nano Energy, 2019, 61, 295-303.	8.2	1
31	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
32	Remarkable output power enhancement of sliding-mode triboelectric nanogenerator through direct metal-to-metal contact with the ground. Nano Energy, 2019, 57, 293-299.	8.2	28
33	Lowâ€Temperature Deâ€NO_x Extruded Monolithic Catalysts Based on Highly Dispersive Mnâ€“Ce Oxide Nanoparticles of Low Ce Content. Advanced Materials Technologies, 2019, 4, 1800462.	3.0	7
34	High humidity- and contamination-resistant triboelectric nanogenerator with superhydrophobic interface. Nano Energy, 2019, 57, 903-910.	8.2	119
35	Boosting the energy conversion efficiency of a combined triboelectric nanogenerator-capacitor. Nano Energy, 2019, 56, 571-580.	8.2	20
36	Realistic Circuit Modeling Using Derating Factors for Triboelectric Nanogenerators in Energy Harvesting Applications. , 2019, , .		1

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37	Transparent-flexible-multimodal triboelectric nanogenerators for mechanical energy harvesting and self-powered sensor applications. Nano Energy, 2018, 48, 471-480.	8.2	63
38	Design of Mechanical Frequency Regulator for Predictable Uniform Power from Triboelectric Nanogenerators. Advanced Energy Materials, 2018, 8, 1702667.	10.2	42
39	Circuit Modeling Approach for Analyzing Triboelectric Nanogenerators for Energy Harvesting. , 2018, , .		3
40	The Progress of PVDF as a Functional Material for Triboelectric Nanogenerators and Self-Powered Sensors. Micromachines, 2018, 9, 532.	1.4	64
41	Pyramidal Metalâ€“dielectric hybrid-structure geometry with an asymmetric TiO2 layer for broadband light absorption and photocatalytic applications. Nano Energy, 2018, 53, 468-474.	8.2	5
42	Plasmonic gold nanoparticle-decorated BiVO₄/ZnO nanowire heterostructure photoanodes for efficient water oxidation. Catalysis Science and Technology, 2018, 8, 3759-3766.	2.1	34
43	Highly-sensitive and highly-correlative flexible motion sensors based on asymmetric piezotronic effect. Nano Energy, 2018, 51, 185-191.	8.2	29
44	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
45	3D printed noise-cancelling triboelectric nanogenerator. Nano Energy, 2017, 38, 377-384.	8.2	41
46	Mechanically Robust, Stretchable Solar Absorbers with Submicron-Thick Multilayer Sheets for Wearable and Energy Applications. ACS Applied Materials & Interfaces, 2017, 9, 18061-18068.	4.0	16
47	Robust nanogenerators based on graft copolymers via control of dielectrics for remarkable output power enhancement. Science Advances, 2017, 3, e1602902.	4.7	204
48	Research Update: Recent progress in the development of effective dielectrics for high-output triboelectric nanogenerator. APL Materials, 2017, 5, .	2.2	51
49	Unidirectional growth of single crystalline Î²-Na_{0.33}V₂O₅and Î±-V₂O₅nanowires driven by controlling the pH of aqueous solution and their electrochemical performances for Na-ion batteries. CrystEngComm, 2017, 19, 5028-5037.	1.3	16
50	Photo-stimulated triboelectric generation. Nanoscale, 2017, 9, 18597-18603.	2.8	13
51	Enhanced piezoresponse of highly aligned electrospun poly(vinylidene fluoride) nanofibers. Nanotechnology, 2017, 28, 395402.	1.3	34
52	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
53	Parallel Aligned Mesopore Arrays in Pyramidal-Shaped Gallium Nitride and Their Photocatalytic Applications. ACS Applied Materials & Interfaces, 2016, 8, 18201-18207.	4.0	18
54	Self-powered triboelectric aptasensor for label-free highly specific thrombin detection. Nano Energy, 2016, 30, 77-83.	8.2	35

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55	Boosted output performance of triboelectric nanogenerator via electric double layer effect. Nature Communications, 2016, 7, 12985.	5.8	336
56	Surface dipole enhanced instantaneous charge pair generation in triboelectric nanogenerator. Nano Energy, 2016, 26, 360-370.	8.2	54
57	Optical design of ZnO-based antireflective layers for enhanced GaAs solar cell performance. Physical Chemistry Chemical Physics, 2016, 18, 2906-2912.	1.3	6
58	Two-dimensional metal-dielectric hybrid-structured film with titanium oxide for enhanced visible light absorption and photo-catalytic application. Nano Energy, 2016, 21, 115-122.	8.2	21
59	Gate-Tunable Spin Exchange Interactions and Inversion of Magnetoresistance in Single Ferromagnetic ZnO Nanowires. ACS Nano, 2016, 10, 4618-4626.	7.3	19
60	Structural Evolution of Chemically-Driven RuO2 Nanowires and 3-Dimensional Design for Photo-Catalytic Applications. Scientific Reports, 2015, 5, 11933.	1.6	19
61	Selfâ€Powered, Roomâ€Temperature Electronic Nose Based on Triboelectrification and Heterogeneous Catalytic Reaction. Advanced Functional Materials, 2015, 25, 7049-7055.	7.8	76
62	Highly Stretchable 2D Fabrics for Wearable Triboelectric Nanogenerator under Harsh Environments. ACS Nano, 2015, 9, 6394-6400.	7.3	310
63	Silk fibroin-based biodegradable piezoelectric composite nanogenerators using lead-free ferroelectric nanoparticles. Nano Energy, 2015, 14, 87-94.	8.2	97
64	Highly Branched RuO₂ Nanoneedles on Electrospun TiO₂ Nanofibers as an Efficient Electrocatalytic Platform. ACS Applied Materials & Interfaces, 2015, 7, 15321-15330.	4.0	32
65	Mesoporous pores impregnated with Au nanoparticles as effective dielectrics for enhancing triboelectric nanogenerator performance in harsh environments. Energy and Environmental Science, 2015, 8, 3006-3012.	15.6	315
66	Electrospun ion gel nanofibers for flexible triboelectric nanogenerator: electrochemical effect on output power. Nanoscale, 2015, 7, 16189-16194.	2.8	79
67	Visible Color Tunable Emission in Three-Dimensional Light Emitting Diodes by MgO Passivation of Pyramid Tip. ACS Applied Materials & Interfaces, 2015, 7, 27743-27748.	4.0	8
68	Highly anisotropic power generation in piezoelectric hemispheres composed stretchable composite film for self-powered motion sensor. Nano Energy, 2015, 11, 1-10.	8.2	121
69	Threeâ€Dimensional Branched Nanowire Heterostructures as Efficient Lightâ€Extraction Layer in Lightâ€Emitting Diodes. Advanced Functional Materials, 2014, 24, 3384-3391.	7.8	13
70	Embossed Hollow Hemisphereâ€Based Piezoelectric Nanogenerator and Highly Responsive Pressure Sensor. Advanced Functional Materials, 2014, 24, 2038-2043.	7.8	124
71	Hydrophobic Sponge Structureâ€Based Triboelectric Nanogenerator. Advanced Materials, 2014, 26, 5037-5042.	11.1	426
72	A composite of a graphene oxide derivative as a novel sensing layer in an organic field-effect transistor. Journal of Materials Chemistry C, 2014, 2, 4539-4544.	2.7	32

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73	ZnO Nanowire-Based Antireflective Coatings with Double-Nanotextured Surfaces. ACS Applied Materials & Interfaces, 2014, 6, 1375-1379.	4.0	24
74	Alternatively driven dual nanowire arrays by ZnO and CuO for selective sensing of gases. Sensors and Actuators B: Chemical, 2013, 185, 10-16.	4.0	12
75	Self-Assembled and Highly Selective Sensors Based on Air-Bridge-Structured Nanowire Junction Arrays. ACS Applied Materials & Interfaces, 2013, 5, 6802-6807.	4.0	62
76	Unprecedented Insulator-to-Metal Transition Dynamics by Heterogeneous Catalysis in Pd-Sensitized Single Vanadium Oxide Nanowires. Journal of Physical Chemistry C, 2013, 117, 21864-21869.	1.5	3
77	Correlation between thermal annealing temperature and Joule-heating based insulator-metal transition in VO2 nanobeams. Applied Physics Letters, 2013, 103, 203114.	1.5	9
78	Electrothermally Induced Highly Responsive and Highly Selective Vanadium Oxide Hydrogen Sensor Based on Metalâ€“Insulator Transition. Journal of Physical Chemistry C, 2012, 116, 226-230.	1.5	40
79	Enhancing Light Emission of Nanostructured Vertical Lightâ€Emitting Diodes by Minimizing Total Internal Reflection. Advanced Functional Materials, 2012, 22, 632-639.	7.8	46
80	Modulating ZnO Nanostructure Arrays on Any Substrates by Nanolevel Structure Control. Journal of Physical Chemistry C, 2011, 115, 7987-7992.	1.5	4
81	Facile Synthesis of Single Crystalline Metallic RuO₂ Nanowires and Electromigration-Induced Transport Properties. Journal of Physical Chemistry C, 2011, 115, 4611-4615.	1.5	42
82	Tin-Oxide-Nanowire-Based Electronic Nose Using Heterogeneous Catalysis as a Functionalization Strategy. ACS Nano, 2010, 4, 3117-3122.	7.3	99
83	Pd-Sensitized Single Vanadium Oxide Nanowires: Highly Responsive Hydrogen Sensing Based on the Metalâ^'Insulator Transition. Nano Letters, 2009, 9, 3980-3984.	4.5	121
84	Growth of Metal Oxide Nanowires from Supercooled Liquid Nanodroplets. Nano Letters, 2009, 9, 4138-4146.	4.5	70
85	Polarized Surface-Enhanced Raman Spectroscopy from Molecules Adsorbed in Nano-Gaps Produced by Electromigration in Silver Nanowires. Nano Letters, 2009, 9, 672-676.	4.5	84
86	Observation of ferromagnetic ordering in Mnâ€doped 8â€hydroxyâ€quinoline aluminum. Physica Status Solidi - Rapid Research Letters, 2008, 2, 22-24.	1.2	4
87	Electronic Structure and Magnetism in Transition Metals Doped 8-Hydroxy-Quinoline Aluminum. Journal of the American Chemical Society, 2008, 130, 13522-13523.	6.6	31
88	Fe Nanowires in Nanoporous Alumina:â€‰ Geometric Effect versus Influence of Pore Walls. Journal of Physical Chemistry C, 2008, 112, 2252-2255.	1.5	46
89	Nanostructure-Dependent Metalâ^'Insulator Transitions in Vanadium-Oxide Nanowires. Journal of Physical Chemistry C, 2008, 112, 13328-13331.	1.5	58
90	High-yield TiO2 nanowire synthesis and single nanowire field-effect transistor fabrication. Applied Physics Letters, 2008, 92, .	1.5	47

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91	Enhancement of magnetic properties in (Ga,Mn)N nanowires due to N2 plasma treatment. Applied Physics Letters, 2006, 89, 152113.	1.5	10
92	Ferromagnetic properties of (Ga,Mn)N nanowires grown by a chemical vapor deposition method. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2005, 23, 530.	1.6	6
93	Rhodium-oxide-coated indium tin oxide for enhancement of hole injection in organic light emitting diodes. Applied Physics Letters, 2005, 87, 072105.	1.5	16
94	Fabrication of (Ga,Mn)N nanowires with room temperature ferromagnetism using nitrogen plasma. Applied Physics Letters, 2005, 87, 042105.	1.5	14
95	Highly efficient organic light-emitting diodes with hole injection layer of transition metal oxides. Journal of Applied Physics, 2005, 98, 093707.	1.1	49
96	The effects of implanted nitrogen ions on the magnetic properties of Mn-implanted GaN. Metals and Materials International, 2004, 10, 555-558.	1.8	22
97	Enhancement of magnetic properties by nitrogen implantation to Mn-implanted p-type GaN. Applied Physics Letters, 2004, 84, 1120-1122.	1.5	31
98	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
99	Effect of microstructural change on magnetic property of Mn-implanted p-type GaN. Applied Physics Letters, 2003, 82, 583-585.	1.5	69
100	Effect of microstructural evolution on magnetic property of Mn-implanted p-type GaN. Applied Physics Letters, 2003, 83, 2632-2634.	1.5	19