Sang-Woo Kim

List of Publications by Year
in descending order

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345	24,726	3919 88	8599 146
papers	citations	h-index	g-index

354	354	354	21374
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Nanopatterned Textile-Based Wearable Triboelectric Nanogenerator. ACS Nano, 2015, 9, 3501-3509.	7.3	612
2	Transcutaneous ultrasound energy harvesting using capacitive triboelectric technology. Science, 2019, 365, 491-494.	6.0	569
3	Large-Scale Synthesis of High-Quality Hexagonal Boron Nitride Nanosheets for Large-Area Graphene Electronics. Nano Letters, 2012, 12, 714-718.	4.5	502
4	Coaxial Fiber Supercapacitor Using All-Carbon Material Electrodes. ACS Nano, 2013, 7, 5940-5947.	7.3	498
5	Highly Stretchable Piezoelectricâ€Pyroelectric Hybrid Nanogenerator. Advanced Materials, 2014, 26, 765-769.	11.1	469
6	Transparent Stretchable Self-Powered Patchable Sensor Platform with Ultrasensitive Recognition of Human Activities. ACS Nano, 2015, 9, 8801-8810.	7.3	450
7	Hydrophobic Sponge Structureâ€Based Triboelectric Nanogenerator. Advanced Materials, 2014, 26, 5037-5042.	11.1	426
8	Mechanically Powered Transparent Flexible Chargeâ€Generating Nanodevices with Piezoelectric ZnO Nanorods. Advanced Materials, 2009, 21, 2185-2189.	11.1	411
9	Transparent Flexible Graphene Triboelectric Nanogenerators. Advanced Materials, 2014, 26, 3918-3925.	11.1	391
10	Energy harvesting based on semiconducting piezoelectric ZnO nanostructures. Nano Energy, 2012, 1, 342-355.	8.2	346
11	Boosted output performance of triboelectric nanogenerator via electric double layer effect. Nature Communications, 2016, 7, 12985.	5.8	336
12	Micropatterned P(VDFâ€TrFE) Filmâ€Based Piezoelectric Nanogenerators for Highly Sensitive Selfâ€Powered Pressure Sensors. Advanced Functional Materials, 2015, 25, 3203-3209.	7.8	334
13	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
14	Highly Stretchable 2D Fabrics for Wearable Triboelectric Nanogenerator under Harsh Environments. ACS Nano, 2015, 9, 6394-6400.	7.3	310
15	Soundâ€Driven Piezoelectric Nanowireâ€Based Nanogenerators. Advanced Materials, 2010, 22, 4726-4730.	11.1	305
16	Ultrafine SnO₂nanoparticle loading onto reduced graphene oxide as anodes for sodium-ion batteries with superior rate and cycling performances. Journal of Materials Chemistry A, 2014, 2, 529-534.	5.2	297
17	Highâ€Performance Triboelectric Nanogenerators Based on Electrospun Polyvinylidene Fluorideâ€“Silver Nanowire Composite Nanofibers. Advanced Functional Materials, 2018, 28, 1703778.	7.8	291
18	Fully Rollable Transparent Nanogenerators Based on Graphene Electrodes. Advanced Materials, 2010, 22, 2187-2192.	11.1	290

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19	Active Matrix Electronic Skin Strain Sensor Based on Piezopotentialâ€Powered Graphene Transistors. Advanced Materials, 2015, 27, 3411-3417.	11.1	287
20	Boosting Powerâ€Generating Performance of Triboelectric Nanogenerators via Artificial Control of Ferroelectric Polarization and Dielectric Properties. Advanced Energy Materials, 2017, 7, 1600988.	10.2	282
21	Unidirectional Highâ€Power Generation via Stressâ€Induced Dipole Alignment from ZnSnO₃ Nanocubes/Polymer Hybrid Piezoelectric Nanogenerator. Advanced Functional Materials, 2014, 24, 37-43.	7.8	249
22	Control of Electronic Structure of Graphene by Various Dopants and Their Effects on a Nanogenerator. Journal of the American Chemical Society, 2010, 132, 15603-15609.	6.6	247
23	All-in-one energy harvesting and storage devices. Journal of Materials Chemistry A, 2016, 4, 7983-7999.	5.2	245
24	Superâ€Flexible Nanogenerator for Energy Harvesting from Gentle Wind and as an Active Deformation Sensor. Advanced Functional Materials, 2013, 23, 2445-2449.	7.8	232
25	A Platform for Largeâ€Scale Graphene Electronics â€“ CVD Growth of Singleâ€Layer Graphene on CVDâ€Grown Hexagonal Boron Nitride. Advanced Materials, 2013, 25, 2746-2752.	11.1	227
26	Coreâ€“Shell Structured Silicon Nanoparticles@TiO_{2â€“x}/Carbon Mesoporous Microfiber Composite as a Safe and High-Performance Lithium-Ion Battery Anode. ACS Nano, 2014, 8, 2977-2985.	7.3	227
27	Hybrid Energy Harvesters: Toward Sustainable Energy Harvesting. Advanced Materials, 2019, 31, e1802898.	11.1	223
28	Silk Nanofiberâ€Networked Bioâ€Triboelectric Generator: Silk Bioâ€TEG. Advanced Energy Materials, 2016, 6, 1502329.	10.2	222
29	Piezoelectric properties in two-dimensional materials: Simulations and experiments. Materials Today, 2018, 21, 611-630.	8.3	219
30	High Output Piezo/Triboelectric Hybrid Generator. Scientific Reports, 2015, 5, 9309.	1.6	216
31	Graphene Tribotronics for Electronic Skin and Touch Screen Applications. Advanced Materials, 2017, 29, 1603544.	11.1	214
32	Fully Packaged Selfâ€Powered Triboelectric Pressure Sensor Using Hemispheresâ€Array. Advanced Energy Materials, 2016, 6, 1502566.	10.2	212
33	Shape memory polymer-based self-healing triboelectric nanogenerator. Energy and Environmental Science, 2015, 8, 3605-3613.	15.6	210
34	Robust nanogenerators based on graft copolymers via control of dielectrics for remarkable output power enhancement. Science Advances, 2017, 3, e1602902.	4.7	204
35	Transparent flexible stretchable piezoelectric and triboelectric nanogenerators for powering portable electronics. Nano Energy, 2015, 14, 139-160.	8.2	202
36	Highly sensitive stretchable transparent piezoelectric nanogenerators. Energy and Environmental Science, 2013, 6, 169-175.	15.6	197

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37	Directional dependent piezoelectric effect in CVD grown monolayer MoS 2 for flexible piezoelectric nanogenerators. Nano Energy, 2016, 22, 483-489.	8.2	197
38	P-Type Polymer-Hybridized High-Performance Piezoelectric Nanogenerators. Nano Letters, 2012, 12, 1959-1964.	4.5	196
39	Triboelectric Nanogenerators for Blue Energy Harvesting. ACS Nano, 2016, 10, 6429-6432.	7.3	191
40	Fully Stretchable Textile Triboelectric Nanogenerator with Knitted Fabric Structures. ACS Nano, 2017, 11, 10733-10741.	7.3	191
41	Triboelectrification-Induced Large Electric Power Generation from a Single Moving Droplet on Graphene/Polytetrafluoroethylene. ACS Nano, 2016, 10, 7297-7302.	7.3	183
42	Ferroelectric Polarization in CH₃NH₃PbI₃ Perovskite. Journal of Physical Chemistry Letters, 2015, 6, 1729-1735.	2.1	180
43	Triboelectric Series of 2D Layered Materials. Advanced Materials, 2018, 30, e1801210.	11.1	179
44	Controlled Growth of Semiconducting Nanowire, Nanowall, and Hybrid Nanostructures on Graphene for Piezoelectric Nanogenerators. ACS Nano, 2011, 5, 4197-4204.	7.3	178
45	Two-Dimensional Vanadium-Doped ZnO Nanosheet-Based Flexible Direct Current Nanogenerator. ACS Nano, 2013, 7, 8932-8939.	7.3	172
46	Surface energy and wettability of van der Waals structures. Nanoscale, 2016, 8, 5764-5770.	2.8	167
47	Recent Progress on Flexible Triboelectric Nanogenerators for SelfPowered Electronics. ChemSusChem, 2015, 8, 2327-2344.	3.6	164
48	Reliable Piezoelectricity in Bilayer WSe₂ for Piezoelectric Nanogenerators. Advanced Materials, 2017, 29, 1606667.	11.1	158
49	Self-rechargeable cardiac pacemaker system with triboelectric nanogenerators. Nature Communications, 2021, 12, 4374.	5.8	158
50	A high performance PZT ribbon-based nanogenerator using graphene transparent electrodes. Energy and Environmental Science, 2012, 5, 8970.	15.6	157
51	Sustainable direct current powering a triboelectric nanogenerator via a novel asymmetrical design. Energy and Environmental Science, 2018, 11, 2057-2063.	15.6	153
52	Highâ€Performance Piezoelectric, Pyroelectric, and Triboelectric Nanogenerators Based on P(VDFâ€TrFE) with Controlled Crystallinity and Dipole Alignment. Advanced Functional Materials, 2017, 27, 1700702.	7.8	149
53	Textileâ€Based Triboelectric Nanogenerators for Selfâ€Powered Wearable Electronics. Advanced Functional Materials, 2019, 29, 1804533.	7.8	148
54	Allâ€Solutionâ€Processed Flexible Thin Film Piezoelectric Nanogenerator. Advanced Materials, 2012, 24, 6022-6027.	11.1	143

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55	Synthesis, properties and potential applications of two-dimensional transition metal dichalcogenides. Nano Convergence, 2015, 2, .	6.3	143
56	Self-organized ZnO quantum dots on SiO2/Si substrates by metalorganic chemical vapor deposition. Applied Physics Letters, 2002, 81, 5036-5038.	1.5	140
57	Biomolecular Piezoelectric Materials: From Amino Acids to Living Tissues. Advanced Materials, 2020, 32, e1906989.	11.1	134
58	SnO₂ Nanoslab as NO₂ Sensor: Identification of the NO₂ Sensing Mechanism on a SnO₂ Surface. ACS Applied Materials & Interfaces, 2014, 6, 357-363.	4.0	133
59	Dry etch damage in n-type GaN and its recovery by treatment with an N2 plasma. Journal of Applied Physics, 2000, 87, 7667-7670.	1.1	132
60	Wearable and Implantable Mechanical Energy Harvesters for Self-Powered Biomedical Systems. ACS Nano, 2015, 9, 7742-7745.	7.3	132
61	Enhanced light extraction efficiency of GaN-based light-emitting diodes with ZnO nanorod arrays grown using aqueous solution. Applied Physics Letters, 2009, 94, .	1.5	131
62	Highâ€Performance Triboelectric Nanogenerators Based on Solid Polymer Electrolytes with Asymmetric Pairing of Ions. Advanced Energy Materials, 2017, 7, 1700289.	10.2	129
63	Highly Conductive Ferroelectric Cellulose Composite Papers for Efficient Triboelectric Nanogenerators. Advanced Functional Materials, 2019, 29, 1904066.	7.8	127
64	Fully stretchable and highly durable triboelectric nanogenerators based on gold-nanosheet electrodes for self-powered human-motion detection. Nano Energy, 2017, 42, 300-306.	8.2	126
65	Why Celluloseâ€Based Electrochemical Energy Storage Devices?. Advanced Materials, 2021, 33, e2000892.	11.1	125
66	Embossed Hollow Hemisphereâ€Based Piezoelectric Nanogenerator and Highly Responsive Pressure Sensor. Advanced Functional Materials, 2014, 24, 2038-2043.	7.8	124
67	Pointâ€Defectâ€Passivated MoS₂ Nanosheetâ€Based High Performance Piezoelectric Nanogenerator. Advanced Materials, 2018, 30, e1800342.	11.1	124
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	High-performance piezoelectric nanogenerators based on chemically-reinforced composites. Energy and Environmental Science, 2018, 11, 1425-1430.	15.6	119
70	ZnO nanowires with high aspect ratios grown by metalorganic chemical vapor deposition using gold nanoparticles. Applied Physics Letters, 2005, 86, 153119.	1.5	118
71	Water droplet-driven triboelectric nanogenerator with superhydrophobic surfaces. Nano Energy, 2019, 58, 579-584.	8.2	118
72	In-built thermo-mechanical cooperative feedback mechanism for self-propelled multimodal locomotion and electricity generation. Nature Communications, 2018, 9, 3438.	5.8	117

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73	Versatile neuromorphic electronics by modulating synaptic decay of single organic synaptic transistor: From artificial neural networks to neuro-prosthetics. Nano Energy, 2019, 65, 104035.	8.2	115
74	Smart textile triboelectric nanogenerators: Current status and perspectives. MRS Bulletin, 2021, 46, 512-521.	1.7	111
75	Piezoelectric two-dimensional nanosheets/anionic layer heterojunction for efficient direct current power generation. Scientific Reports, 2013, 3, 2017.	1.6	110
76	Sustainable powering triboelectric nanogenerators: Approaches and the path towards efficient use. Nano Energy, 2018, 51, 270-285.	8.2	110
77	Piezo/triboelectric nanogenerators based on 2-dimensional layered structure materials. Nano Energy, 2019, 57, 680-691.	8.2	108
78	Butylated melamine formaldehyde as a durable and highly positive friction layer for stable, high output triboelectric nanogenerators. Energy and Environmental Science, 2019, 12, 3156-3163.	15.6	107
79	High electron concentration and mobility in Al-doped n-ZnO epilayer achieved via dopant activation using rapid-thermal annealing. Journal of Applied Physics, 2005, 97, 066103.	1.1	106
80	Recent advances in power generation through piezoelectric nanogenerators. Journal of Materials Chemistry, 2011, 21, 18946.	6.7	103
81	Control of Triboelectrification by Engineering Surface Dipole and Surface Electronic State. ACS Applied Materials & Interfaces, 2016, 8, 18519-18525.	4.0	100
82	Control of Skin Potential by Triboelectrification with Ferroelectric Polymers. Advanced Materials, 2015, 27, 5553-5558.	11.1	98
83	Silk fibroin-based biodegradable piezoelectric composite nanogenerators using lead-free ferroelectric nanoparticles. Nano Energy, 2015, 14, 87-94.	8.2	97
84	Modeling of a GaN-based light-emitting diode for uniform current spreading. Applied Physics Letters, 2000, 77, 1903.	1.5	95
85	Hydrogen Silsequioxane-Derived Si/SiO_x Nanospheres for High-Capacity Lithium Storage Materials. ACS Applied Materials & Interfaces, 2014, 6, 9608-9613.	4.0	93
86	Paperâ€Based Piezoelectric Nanogenerators with High Thermal Stability. Small, 2011, 7, 2577-2580.	5.2	91
87	Selfâ€Compensated Insulating ZnOâ€Based Piezoelectric Nanogenerators. Advanced Functional Materials, 2014, 24, 6949-6955.	7.8	91
88	Understanding and modeling of triboelectric-electret nanogenerator. Nano Energy, 2018, 47, 401-409.	8.2	91
89	Triboelectrification induced self-powered microbial disinfection using nanowire-enhanced localized electric field. Nature Communications, 2021, 12, 3693.	5.8	87
90	High Permittivity CaCu₃Ti₄O₁₂ Particleâ€Induced Internal Polarization Amplification for High Performance Triboelectric Nanogenerators. Advanced Energy Materials, 2020, 10, 1903524.	10.2	85

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91	Chargeâ€Generating Mode Control in Highâ€Performance Transparent Flexible Piezoelectric Nanogenerators. Advanced Functional Materials, 2011, 21, 1187-1193.	7.8	84
92	Emerging Pyroelectric Nanogenerators to Convert Thermal Energy into Electrical Energy. Small, 2021, 17, e1903469.	5.2	84
93	Battery-free, wireless soft sensors for continuous multi-site measurements of pressure and temperature from patients at risk for pressure injuries. Nature Communications, 2021, 12, 5008.	5.8	83
94	Tandem triboelectric nanogenerators for optimally scavenging mechanical energy with broadband vibration frequencies. Nano Energy, 2017, 33, 515-521.	8.2	82
95	A conditioning circuit with exponential enhancement of output energy for triboelectric nanogenerator. Nano Energy, 2018, 51, 173-184.	8.2	82
96	Epitaxial growth of ZnO nanowall networks on GaN/sapphire substrates. Applied Physics Letters, 2007, 90, 033107.	1.5	80
97	Application of ferroelectric materials for improving output power of energy harvesters. Nano Convergence, 2018, 5, 30.	6.3	80
98	A Facile Route To Recover Intrinsic Graphene over Large Scale. ACS Nano, 2012, 6, 7781-7788.	7.3	79
99	High-performance hybrid cell based on an organic photovoltaic device and a direct current piezoelectric nanogenerator. Nano Energy, 2015, 12, 547-555.	8.2	79
100	Controllable Charge Transfer by Ferroelectric Polarization Mediated Triboelectricity. Advanced Functional Materials, 2016, 26, 3067-3073.	7.8	79
101	Nanophotonic-Engineered Photothermal Harnessing for Waste Heat Management and Pyroelectric Generation. ACS Nano, 2017, 11, 10568-10574.	7.3	75
102	Synthesis of Monoclinic Potassium Niobate Nanowires That Are Stable at Room Temperature. Journal of the American Chemical Society, 2013, 135, 6-9.	6.6	74
103	Depletion width engineering via surface modification for high performance semiconducting piezoelectric nanogenerators. Nano Energy, 2014, 8, 165-173.	8.2	73
104	Materialsâ€Related Strategies for Highly Efficient Triboelectric Energy Generators. Advanced Energy Materials, 2021, 11, 2003802.	10.2	73
105	Freestanding ZnO nanorod/graphene/ZnO nanorod epitaxial double heterostructure for improved piezoelectric nanogenerators. Nano Energy, 2015, 12, 268-277.	8.2	72
106	Self-Powered Motion-Driven Triboelectric Electroluminescence Textile System. ACS Applied Materials & Interfaces, 2019, 11, 5200-5207.	4.0	72
107	Enhanced Power Conversion Efficiency of Inverted Organic Solar Cells with a Ga-Doped ZnO Nanostructured Thin Film Prepared Using Aqueous Solution. Journal of Physical Chemistry C, 2010, 114, 15782-15785.	1.5	71
108	Mechanically Robust Silver Nanowires Network for Triboelectric Nanogenerators. Advanced Functional Materials, 2016, 26, 7717-7724.	7.8	71

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109	Ultrasound-mediated triboelectric nanogenerator for powering on-demand transient electronics. Science Advances, 2022, 8, eabl8423.	4.7	71
110	Flexible High-Performance Lead-Free Na_{0.47}K_{0.47}Li_{0.06}NbO₃ Microcube-Structure-Based Piezoelectric Energy Harvester. ACS Applied Materials & Interfaces, 2016, 8, 1766-1773.	4.0	70
111	Morphology Control and Electroluminescence of ZnO Nanorod/GaN Heterojunctions Prepared Using Aqueous Solution. Journal of Physical Chemistry C, 2009, 113, 8954-8958.	1.5	67
112	High-performance triboelectric nanogenerators with artificially well-tailored interlocked interfaces. Nano Energy, 2016, 27, 595-601.	8.2	66
113	Selective growth of ZnO nanorods on SiO2/Si substrates using a graphene buffer layer. Nano Research, 2011, 4, 440-447.	5.8	63
114	Flexible hybrid cell for simultaneously harvesting thermal and mechanical energies. Nano Energy, 2013, 2, 817-825.	8.2	61
115	Reliable operation of a nanogenerator under ultraviolet light via engineering piezoelectric potential. Energy and Environmental Science, 2013, 6, 841.	15.6	61
116	Thermally Induced Strainâ€Coupled Highly Stretchable and Sensitive Pyroelectric Nanogenerators. Advanced Energy Materials, 2015, 5, 1500704.	10.2	61
117	Nanogenerators to Power Implantable Medical Systems. Joule, 2020, 4, 1398-1407.	11.7	61
118	General Route to Single-Crystalline SnO Nanosheets on Arbitrary Substrates. Journal of Physical Chemistry C, 2010, 114, 11050-11055.	1.5	60
119	Effect of Rapid Thermal Annealing on Al Dopedn-ZnO Films Grown by RF-Magnetron Sputtering. Japanese Journal of Applied Physics, 2005, 44, 4776-4779.	0.8	56
120	Nanoscale Networked Single-Walled Carbon-Nanotube Electrodes for Transparent Flexible Nanogenerators. Journal of Physical Chemistry C, 2010, 114, 1379-1384.	1.5	56
121	Fish-scale bio-inspired multifunctional ZnO nanostructures. NPG Asia Materials, 2015, 7, e232-e232.	3.8	56
122	Treefrog Toe Padâ€Inspired Micropatterning for Highâ€Power Triboelectric Nanogenerator. Advanced Functional Materials, 2019, 29, 1901638.	7.8	56
123	Integration of Transparent Supercapacitors and Electrodes Using Nanostructured Metallic Glass Films for Wirelessly Rechargeable, Skin Heat Patches. Nano Letters, 2020, 20, 4872-4881.	4.5	56
124	3D-printed biomimetic-villus structure with maximized surface area for triboelectric nanogenerator and dust filter. Nano Energy, 2019, 63, 103857.	8.2	55
125	A Metalâ€Like Conductive Elastomer with a Hierarchical Wrinkled Structure. Advanced Materials, 2020, 32, 1906460.	11.1	55
126	Fabrication of piezoresistive Si nanorod-based pressure sensor arrays: A promising candidate for portable breath monitoring devices. Nano Energy, 2021, 80, 105537.	8.2	55

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127	Surface dipole enhanced instantaneous charge pair generation in triboelectric nanogenerator. Nano Energy, 2016, 26, 360-370.	8.2	54
128	ITO-free inverted polymer solar cells using a GZO cathode modified by ZnO. Solar Energy Materials and Solar Cells, 2011, 95, 1610-1614.	3.0	52
129	Sustainable highly charged C₆₀-functionalized polyimide in a non-contact mode triboelectric nanogenerator. Energy and Environmental Science, 2021, 14, 1004-1015.	15.6	52
130	Control of naturally coupled piezoelectric and photovoltaic properties for multi-type energy scavengers. Energy and Environmental Science, 2011, 4, 4607.	15.6	51
131	Graphene surface induced specific self-assembly of poly(3-hexylthiophene) for nanohybrid optoelectronics: from first-principles calculation to experimental characterizations. Soft Matter, 2013, 9, 5355.	1.2	50
132	Recent trends of biocompatible triboelectric nanogenerators toward selfâ€powered eâ€skin. EcoMat, 2020, 2, e12065.	6.8	49
133	Catalyst-free synthesis of ZnO nanowall networks on Si3N4âˆ•Si substrates by metalorganic chemical vapor deposition. Applied Physics Letters, 2006, 88, 253114.	1.5	48
134	Layerâ€byâ€Layer Controlled Perovskite Nanocomposite Thin Films for Piezoelectric Nanogenerators. Advanced Functional Materials, 2014, 24, 6262-6269.	7.8	48
135	Lipids: Source of Static Electricity of Regenerative Natural Substances and Nondestructive Energy Harvesting. Advanced Materials, 2018, 30, e1804949.	11.1	48
136	A stamped PEDOT:PSSâ€“silicon nanowire hybrid solar cell. Nanotechnology, 2012, 23, 145401.	1.3	47
137	Thin Ag Layer Inserted GZO Multilayer Grown by Roll-to-Roll Sputtering for Flexible and Transparent Conducting Electrodes. Journal of the Electrochemical Society, 2010, 157, J301.	1.3	46
138	Microdischargeâ€Based Direct Current Triboelectric Nanogenerator via Accumulation of Triboelectric Charge in Atmospheric Condition. Advanced Energy Materials, 2020, 10, 2000730.	10.2	46
139	Ultrahigh Power Output from Triboelectric Nanogenerator Based on Serrated Electrode via Spark Discharge. Advanced Energy Materials, 2020, 10, 2002312.	10.2	45
140	Reactivation of Mg acceptor in Mg-doped GaN by nitrogen plasma treatment. Applied Physics Letters, 2000, 76, 3079-3081.	1.5	44
141	Effects of In or Ga doping on the growth behavior and optical properties of ZnO nanorods fabricated by hydrothermal process. Physica Status Solidi (A) Applications and Materials Science, 2013, 210, 1552-1556.	0.8	44
142	Effective sulfur passivation of an n-type GaN surface by an alcohol-based sulfide solution. Journal of Applied Physics, 2000, 87, 4591-4593.	1.1	43
143	Hexagonal boron nitride assisted growth of stoichiometric Al 2 O 3 dielectric on graphene for triboelectric nanogenerators. Nano Energy, 2015, 12, 556-566.	8.2	43
144	Research Update: Nanogenerators for self-powered autonomous wireless sensors. APL Materials, 2017, 5, .	2.2	43

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145	Selective formation of ZnO nanodots on nanopatterned substrates by metalorganic chemical vapor deposition. Applied Physics Letters, 2003, 83, 3593-3595.	1.5	42
146	Highly flexible ZnO/Ag/ZnO conducting electrode for organic photonic devices. Ceramics International, 2015, 41, 7146-7150.	2.3	42
147	Self-powered transparent flexible graphene microheaters. Nano Energy, 2015, 17, 356-365.	8.2	42
148	Piezoelectric touch-sensitive flexible hybrid energy harvesting nanoarchitectures. Nanotechnology, 2010, 21, 405503.	1.3	40
149	Surface modification of triboelectric materials by neutral beams. Journal of Materials Chemistry A, 2019, 7, 25066-25077.	5.2	40
150	Ultrathin Noncontact-Mode Triboelectric Nanogenerator Triggered by Giant Dielectric Material Adaption. ACS Energy Letters, 0, , 1189-1197.	8.8	40
151	Noise and sensitivity characteristics of solid-state nanopores with a boron nitride 2-D membrane on a pyrex substrate. Nanoscale, 2016, 8, 5755-5763.	2.8	39
152	Electromigration-induced failure of GaN multi-quantum well light emitting diode. Electronics Letters, 2000, 36, 908.	0.5	38
153	High quality graphene-semiconducting oxide heterostructure for inverted organic photovoltaics. Journal of Materials Chemistry, 2012, 22, 13032.	6.7	38
154	Rewritable ghost floating gates by tunnelling triboelectrification for two-dimensional electronics. Nature Communications, 2017, 8, 15891.	5.8	38
155	Flexible chemical sensors based on hybrid layer consisting of molybdenum disulphide nanosheets and carbon nanotubes. Carbon, 2018, 129, 607-612.	5.4	38
156	Strategically Designed Zeolitic Imidazolate Frameworks for Controlling the Degree of Graphitization. Bulletin of the Chemical Society of Japan, 2018, 91, 1474-1480.	2.0	38
157	Observation of spatially-varying Fermi velocity in strained-graphene directly grown on hexagonal boron nitride. Carbon, 2014, 74, 139-145.	5.4	37
158	Crystal-Structure-Dependent Piezotronic and Piezo-Phototronic Effects of ZnO/ZnS Core/Shell Nanowires for Enhanced Electrical Transport and Photosensing Performance. ACS Applied Materials & Interfaces, 2018, 10, 28736-28744.	4.0	36
159	Effect of alcohol-based sulfur treatment on Pt Ohmic contacts top-type GaN. Applied Physics Letters, 2001, 78, 1942-1944.	1.5	35
160	Graphene/h-BN/ZnO van der Waals tunneling heterostructure based ultraviolet photodetector. Optics Express, 2015, 23, 18864.	1.7	35
161	An Organic/Inorganic Nanocomposite of Cellulose Nanofibers and ZnO Nanorods for Highly Sensitive, Reliable, Wireless, and Wearable Multifunctional Sensor Applications. ACS Applied Materials & Interfaces, 2019, 11, 48239-48248.	4.0	35
162	Synthesis and field emission properties of triangular-shaped GaN nanowires on Si(100) substrates. Journal of Crystal Growth, 2009, 311, 495-499.	0.7	34

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163	Chlorine-trapped CVD bilayer graphene for resistive pressure sensor with high detection limit and high sensitivity. 2D Materials, 2017, 4, 025049.	2.0	34
164	Two-Dimensional Materials Inserted at the Metal/Semiconductor Interface: Attractive Candidates for Semiconductor Device Contacts. Nano Letters, 2018, 18, 4878-4884.	4.5	34
165	Fabrication of piezoelectric poly(l-lactic acid)/BaTiO3 fibre by the melt-spinning process. Scientific Reports, 2020, 10, 16339.	1.6	34
166	Effects of sulfur treatment on electrical and optical performance of InGaN/GaN multiple-quantum-well blue light-emitting diodes. Applied Physics Letters, 2001, 78, 1766-1768.	1.5	33
167	Tunable piezoelectric nanogenerators using flexoelectricity of well-ordered hollow 2D MoS2 shells arrays for energy harvesting. Nano Energy, 2019, 61, 471-477.	8.2	33
168	Dual Friction Mode Textileâ€Based Tire Cord Triboelectric Nanogenerator. Advanced Functional Materials, 2020, 30, 2002401.	7.8	33
169	InGaN/GaN multiple quantum well light-emitting diodes with highly transparent Pt thin film contact on p-GaN. Journal of Applied Physics, 2000, 87, 4464-4466.	1.1	31
170	ZnO growth on Si substrates by metalorganic vapor phase epitaxy. Journal of Crystal Growth, 2002, 240, 112-116.	0.7	31
171	ZnO nanotubes by template wetting process. Physica E: Low-Dimensional Systems and Nanostructures, 2007, 37, 241-244.	1.3	31
172	Highly flexible Al-doped ZnO/Ag/Al-doped ZnO multilayer films deposited on PET substrates at room temperature. Ceramics International, 2016, 42, 3473-3478.	2.3	31
173	Dynamic halide perovskite heterojunction generates direct current. Energy and Environmental Science, 2021, 14, 374-381.	15.6	31
174	Microbial Disinfection with Supercoiling Capacitive Triboelectric Nanogenerator. Advanced Energy Materials, 2022, 12, .	10.2	31
175	Ferroelectric Coupling Effect on the Energyâ€Band Structure of Hybrid Heterojunctions with Selfâ€Organized P(VDFâ€TrFE) Nanomatrices. Advanced Materials, 2014, 26, 5619-5625.	11.1	30
176	Patchable and Implantable 2D Nanogenerator. Small, 2021, 17, e1903519.	5.2	30
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