

Xiong Pu

List of Publications by Year in descending order

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57758

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times ranked

8784
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#	ARTICLE	IF	CITATIONS
1	Ultrastretchable, transparent triboelectric nanogenerator as electronic skin for biomechanical energy harvesting and tactile sensing. <i>Science Advances</i> , 2017, 3, e1700015.	10.3	920
2	Wearable Self-Charging Power Textile Based on Flexible Yarn Supercapacitors and Fabric Nanogenerators. <i>Advanced Materials</i> , 2016, 28, 98-105.	21.0	723
3	A Self-Charging Power Unit by Integration of a Textile Triboelectric Nanogenerator and a Flexible Lithium-Ion Battery for Wearable Electronics. <i>Advanced Materials</i> , 2015, 27, 2472-2478.	21.0	646
4	Large-Area All-Textile Pressure Sensors for Monitoring Human Motion and Physiological Signals. <i>Advanced Materials</i> , 2017, 29, 1703700.	21.0	558
5	Toward Wearable Self-Charging Power Systems: The Integration of Energy-Harvesting and Storage Devices. <i>Small</i> , 2018, 14, 1702817.	10.0	274
6	Freestanding Flag-Type Triboelectric Nanogenerator for Harvesting High-Altitude Wind Energy from Arbitrary Directions. <i>ACS Nano</i> , 2016, 10, 1780-1787.	14.6	268
7	Wearable Power-Textiles by Integrating Fabric Triboelectric Nanogenerators and Fiber-Shaped Dye-Sensitized Solar Cells. <i>Advanced Energy Materials</i> , 2016, 6, 1601048.	19.5	266
8	Self-Healable, Stretchable, Transparent Triboelectric Nanogenerators as Soft Power Sources. <i>ACS Nano</i> , 2018, 12, 6147-6155.	14.6	256
9	Triboelectric-Nanogenerator-Based Soft Energy-Harvesting Skin Enabled by Toughly Bonded Elastomer/Hydrogel Hybrids. <i>ACS Nano</i> , 2018, 12, 2818-2826.	14.6	245
10	Dendrite-free Zn anode with dual channel 3D porous frameworks for rechargeable Zn batteries. <i>Energy Storage Materials</i> , 2020, 30, 104-112.	18.0	235
11	Core-Shell-Yarn-Based Triboelectric Nanogenerator Textiles as Power Cloths. <i>ACS Nano</i> , 2017, 11, 12764-12771.	14.6	203
12	Wearable Textile-Based In-Plane Microsupercapacitors. <i>Advanced Energy Materials</i> , 2016, 6, 1601254.	19.5	201
13	Stretchable, self-healing, conductive hydrogel fibers for strain sensing and triboelectric energy-harvesting smart textiles. <i>Nano Energy</i> , 2020, 78, 105389.	16.0	186
14	Sn Alloying to Inhibit Hydrogen Evolution of Zn Metal Anode in Rechargeable Aqueous Batteries. <i>Advanced Functional Materials</i> , 2022, 32, .	14.9	139
15	Scalable synthesis of bi-functional high-performance carbon nanotube sponge catalysts and electrodes with optimum Cu-Fe coordination for oxygen reduction reaction. <i>Energy and Environmental Science</i> , 2015, 8, 1799-1807.	30.8	138
16	Dynamically Crosslinked Dry Ion-Conducting Elastomers for Soft Iontronics. <i>Advanced Materials</i> , 2021, 33, e2101396.	21.0	128
17	Efficient Charging of Li-Ion Batteries with Pulsed Output Current of Triboelectric Nanogenerators. <i>Advanced Science</i> , 2016, 3, 1500255.	11.2	122
18	Shape-Adaptive, Self-Healable Triboelectric Nanogenerator with Enhanced Performances by Soft Solid-Solid Contact Electrification. <i>ACS Nano</i> , 2019, 13, 8936-8945.	14.6	121

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19	Stretchable, Transparent, and Thermally Stable Triboelectric Nanogenerators Based on Solvent-Free Ion-Conducting Elastomer Electrodes. <i>Advanced Functional Materials</i> , 2020, 30, 1909252.	14.9	114
20	Simultaneously Improving Electrical Conductivity and Thermopower of Polyaniline Composites by Utilizing Carbon Nanotubes as High Mobility Conduits. <i>ACS Applied Materials & Interfaces</i> , 2015, 7, 9589-9597.	8.0	111
21	Liquid-Type Cathode Enabled by 3D Sponge-Like Carbon Nanotubes for High Energy Density and Long Cycling Life of Li-S Batteries. <i>Advanced Materials</i> , 2014, 26, 7456-7461.	21.0	109
22	High-Energy Asymmetric Supercapacitor Yarns for Self-Charging Power Textiles. <i>Advanced Functional Materials</i> , 2019, 29, 1806298.	14.9	109
23	Boosting performances of triboelectric nanogenerators by optimizing dielectric properties and thickness of electrification layer. <i>RSC Advances</i> , 2020, 10, 17752-17759.	3.6	102
24	Seamlessly knitted stretchable comfortable textile triboelectric nanogenerators for E-textile power sources. <i>Nano Energy</i> , 2020, 78, 105327.	16.0	97
25	Stretchable Coplanar Self-Charging Power Textile with Resist-Dyeing Triboelectric Nanogenerators and Microsupercapacitors. <i>ACS Nano</i> , 2020, 14, 5590-5599.	14.6	94
26	Tunable Optical Modulator by Coupling a Triboelectric Nanogenerator and a Dielectric Elastomer. <i>Advanced Functional Materials</i> , 2017, 27, 1603788.	14.9	92
27	Boosting the Power and Lowering the Impedance of Triboelectric Nanogenerators through Manipulating the Permittivity for Wearable Energy Harvesting. <i>ACS Nano</i> , 2021, 15, 7513-7521.	14.6	90
28	Enhanced Solar Cell Conversion Efficiency of InGaN/GaN Multiple Quantum Wells by Piezo-Phototronic Effect. <i>ACS Nano</i> , 2017, 11, 9405-9412.	14.6	87
29	Control of geometrical properties of carbon nanotube electrodes towards high-performance microbial fuel cells. <i>Journal of Power Sources</i> , 2015, 280, 347-354.	7.8	82
30	Piezotronic Effect in Polarity-Controlled GaN Nanowires. <i>ACS Nano</i> , 2015, 9, 8578-8583.	14.6	73
31	Flexible Textile Direct-Current Generator Based on the Tribovoltaic Effect at Dynamic Metal-Semiconducting Polymer Interfaces. <i>ACS Energy Letters</i> , 2021, 6, 2442-2450.	17.4	73
32	Self-charging power system for distributed energy: beyond the energy storage unit. <i>Chemical Science</i> , 2021, 12, 34-49.	7.4	67
33	Scalable fabrication of stretchable and washable textile triboelectric nanogenerators as constant power sources for wearable electronics. <i>Nano Energy</i> , 2021, 88, 106247.	16.0	66
34	Piezo-Phototronic Effect in a Quantum Well Structure. <i>ACS Nano</i> , 2016, 10, 5145-5152.	14.6	63
35	Bioinspired soft electroreceptors for artificial precontact somatosensation. <i>Science Advances</i> , 2022, 8, .	10.3	56
36	Enhanced performances of Li/polysulfide batteries with 3D reduced graphene oxide/carbon nanotube hybrid aerogel as the polysulfide host. <i>Nano Energy</i> , 2016, 30, 193-199.	16.0	55

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37	Facile charge carrier adjustment for improving thermopower of doped polyaniline. <i>Polymer</i> , 2013, 54, 1136-1140.	3.8	54
38	Multifunctional Self-Charging Electrochromic Supercapacitors Driven by Direct-Current Triboelectric Nanogenerators. <i>Advanced Functional Materials</i> , 2021, 31, 2104348.	14.9	53
39	Enhanced overcharge performance of nano-LiCoO ₂ by novel Li ₃ VO ₄ surface coatings. <i>Nanoscale</i> , 2012, 4, 6743.	5.6	52
40	Fluorescence Turn-On Visualization of Microscopic Processes for Self-Healing Gels by AI-Egens and Anticounterfeiting Application. <i>Chemistry of Materials</i> , 2019, 31, 5683-5690.	6.7	52
41	Self-healing single-ion-conductive artificial polymeric solid electrolyte interphases for stable lithium metal anodes. <i>Nano Energy</i> , 2022, 93, 106871.	16.0	50
42	Safe and reliable operation of sulfur batteries with lithiated silicon. <i>Nano Energy</i> , 2014, 9, 318-324.	16.0	48
43	Tuning carrier lifetime in InGaN/GaN LEDs via strain compensation for high-speed visible light communication. <i>Scientific Reports</i> , 2016, 6, 37132.	3.3	47
44	A stretchable, harsh condition-resistant and ambient-stable hydrogel and its applications in triboelectric nanogenerator. <i>Nano Energy</i> , 2021, 86, 106086.	16.0	46
45	Vertically aligned NiS ₂ /CoS ₂ /MoS ₂ nanosheet array as an efficient and low-cost electrocatalyst for hydrogen evolution reaction in alkaline media. <i>Science Bulletin</i> , 2020, 65, 359-366.	9.0	45
46	A flexible triboelectric nanogenerator based on a super-stretchable and self-healable hydrogel as the electrode. <i>Nanoscale</i> , 2020, 12, 12753-12759.	5.6	45
47	Coupling effect of multiple precipitates on the ductile fracture of aged Al-Mg-Si alloys. <i>Scripta Materialia</i> , 2007, 57, 865-868.	5.2	44
48	High areal capacity of Li-S batteries enabled by freestanding CNF/rGO electrode with high loading of lithium polysulfide. <i>Electrochimica Acta</i> , 2017, 241, 406-413.	5.2	44
49	Resist-Dyed Textile Alkaline Zn Microbatteries with Significantly Suppressed Zn Dendrite Growth. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 5095-5106.	8.0	43
50	Ultra-stretchable and healable hydrogel-based triboelectric nanogenerators for energy harvesting and self-powered sensing. <i>RSC Advances</i> , 2021, 11, 17437-17444.	3.6	41
51	Electricity Generation and Self-Powered Sensing Enabled by Dynamic Electric Double Layer at Hydrogel-Dielectric Elastomer Interfaces. <i>ACS Nano</i> , 2021, 15, 19651-19660.	14.6	39
52	Piezoelectric-Phototronic Effect Controlled Dual-Channel Visible light Communication (PVLC) Using InGaN/GaN Multi-quantum Well Nanopillars. <i>Small</i> , 2015, 11, 6071-6077.	10.0	38
53	Textile Triboelectric Nanogenerators Simultaneously Harvesting Multiple High-Entropy Kinetic Energies. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 20145-20152.	8.0	38
54	Self-powered electrochromic devices with tunable infrared intensity. <i>Science Bulletin</i> , 2018, 63, 795-801.	9.0	37

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55	Wearable Antifreezing Fiber-Shaped Zn/PANI Batteries with Suppressed Zn Dendrites and Operation in Sweat Electrolytes. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 17608-17617.	8.0	37
56	Self-Healing Solid Polymer Electrolyte for Room-Temperature Solid-State Lithium Metal Batteries. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 46794-46802.	8.0	37
57	Electrical transportation and piezotronic-effect modulation in AlGaN/GaN MOS HEMTs and unpassivated HEMTs. <i>Nano Energy</i> , 2017, 39, 53-59.	16.0	36
58	Regulating zinc electroplating chemistry to achieve high energy coaxial fiber Zn ion supercapacitor for self-powered textile-based monitoring system. <i>Nano Energy</i> , 2022, 93, 106893.	16.0	36
59	Seawater Degradable Triboelectric Nanogenerators for Blue Energy. <i>Advanced Materials Technologies</i> , 2020, 5, 2000455.	5.8	32
60	Triboelectric-optical responsive cholesteric liquid crystals for self-powered smart window, E-paper display and optical switch. <i>Science Bulletin</i> , 2021, 66, 1986-1993.	9.0	32
61	Effect of precipitate morphology evolution on the strength-toughness relationship in Al-Mg-Si alloys. <i>Scripta Materialia</i> , 2009, 60, 1109-1112.	5.2	31
62	Hierarchically porous carbon/red phosphorus composite for high-capacity sodium-ion battery anode. <i>Science Bulletin</i> , 2018, 63, 982-989.	9.0	31
63	Piezo-phototronic effect in InGaN/GaN semi-floating micro-disk LED arrays. <i>Nano Energy</i> , 2020, 67, 104218.	16.0	31
64	High-performance dual-ion Zn batteries enabled by a polyzwitterionic hydrogel electrolyte with regulated anion/cation transport and suppressed Zn dendrite growth. <i>Journal of Materials Chemistry A</i> , 2021, 9, 24325-24335.	10.3	31
65	Stretchable multi-luminescent fibers with AlEgens. <i>Journal of Materials Chemistry C</i> , 2019, 7, 10769-10776.	5.5	30
66	Piezotronic effect tuned AlGaN/GaN high electron mobility transistor. <i>Nanotechnology</i> , 2017, 28, 455203.	2.6	29
67	Enhanced photocurrent in InGaN/GaN MQWs solar cells by coupling plasmonic with piezo-phototronic effect. <i>Nano Energy</i> , 2019, 57, 300-306.	16.0	29
68	Ultrafast lithium-ion capacitors for efficient storage of energy generated by triboelectric nanogenerators. <i>Energy Storage Materials</i> , 2020, 24, 297-303.	18.0	29
69	Ultralight Iontronic Triboelectric Mechanoreceptor with High Specific Outputs for Epidermal Electronics. <i>Nano-Micro Letters</i> , 2022, 14, 86.	27.0	27
70	Stretchable Textile Rechargeable Zn Batteries Enabled by a Wax Dyeing Method. <i>Advanced Materials Technologies</i> , 2020, 5, .	5.8	22
71	Aging-dependent coupling effect of multiple precipitates on the ductile fracture of heat-treatable aluminum alloys. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2009, 499, 387-395.	5.6	21
72	Rational design of red phosphorus/reduced graphene oxide composites for stable sodium ion storage. <i>Journal of Alloys and Compounds</i> , 2019, 775, 1270-1276.	5.5	21

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73	Hybrid Nanogenerator for Biomechanical Energy Harvesting, Motion State Detection, and Pulse Sensing. <i>Advanced Materials Technologies</i> , 2022, 7, .	5.8	21
74	Trapping Polysulfides Catholyte in Carbon Nanofiber Sponges for Improving the Performances of Sulfur Batteries. <i>Journal of the Electrochemical Society</i> , 2015, 162, A1396-A1400.	2.9	20
75	An effective approach to alleviating the thermal effect in microstripe array-LEDs <i>via</i> the piezo-phototronic effect. <i>Materials Horizons</i> , 2018, 5, 116-122.	12.2	20
76	A flower-like CoS ₂ /MoS ₂ heteronanosheet array as an active and stable electrocatalyst toward the hydrogen evolution reaction in alkaline media. <i>RSC Advances</i> , 2020, 10, 8973-8981.	3.6	19
77	Intrinsic catalytic Sites-Rich Co-doped SnO ₂ nanoparticles enabling enhanced conversion and capture of polysulfides. <i>Chemical Engineering Journal</i> , 2022, 431, 134033.	12.7	19
78	Self-powered electronic paper with energy supplies and information inputs solely from mechanical motions. <i>Photonics Research</i> , 2020, 8, 1496.	7.0	18
79	Stable lithium metal batteries enabled by localized high-concentration electrolytes with sevoflurane as a diluent. <i>Journal of Materials Chemistry A</i> , 2022, 10, 9001-9009.	10.3	18
80	Functional surface modifications on nanostructured LiCoO ₂ with lithium vanadates. <i>Journal of Nanoparticle Research</i> , 2012, 14, 1.	1.9	15
81	Hollow Ni ₃ Se ₄ with High Tap Density as a Carbon-Free Sulfur Immobilizer to Realize High Volumetric and Gravimetric Capacity for Lithium-Sulfur Batteries. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 25267-25277.	8.0	15
82	Flexible Ionic Diodes with High Rectifying Ratio and Wide Temperature Tolerance. <i>Advanced Functional Materials</i> , 2022, 32, .	14.9	14
83	Red Phosphorus/Onion-like Mesoporous Carbon Composite as High-performance Anode for Sodium-Ion Battery. <i>ChemElectroChem</i> , 2019, 6, 5721-5727.	3.4	13
84	Elastic Kernmantle E-Braids for High-Impact Sports Monitoring. <i>Advanced Science</i> , 2022, 9, .	11.2	12
85	Graphitic Mesoporous Carbon/Mn ₇ C ₃ as Polysulfide Host for High Rate Li-S Batteries. <i>Journal of the Electrochemical Society</i> , 2019, 166, A2028-A2034.	2.9	11
86	Atomistic insights into the reaction mechanism of nanostructured LiI: Implications for rechargeable Li-I ₂ batteries. <i>Energy Storage Materials</i> , 2019, 17, 211-219.	18.0	10
87	Next-Generation Energy Harvesting and Storage Technologies for Robots Across All Scales. <i>Advanced Intelligent Systems</i> , 2023, 5, .	6.1	10
88	Does the Mg ₂ Battery Suffer Severe Shuttle Effect?. <i>Journal of Physical Chemistry C</i> , 2018, 122, 28518-28527.	3.1	9
89	Flexible capacitive pressure sensors with micro-patterned porous dielectric layer for wearable electronics. <i>Journal of Micromechanics and Microengineering</i> , 2022, 32, 034003.	2.6	9
90	Revisiting the positive roles of liquid polysulfides in alkali metal-sulfur electrochemistry: from electrolyte additives to active catholyte. <i>Nanoscale</i> , 2019, 11, 21595-21621.	5.6	6

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91	Robust Pb ²⁺ sensor based on flexible ZnO/ZnS core-shell nanoarrays. Applied Physics Letters, 2016, 108, 153104.	3.3	3
92	On-Chip 3D Zn/NiOOH Helical Electrodes for High-Energy-Density Microbattery. ACS Applied Energy Materials, 2022, 5, 6282-6290.	5.1	2
93	3.3: Fabricating Self-Powered E-Paper on Paper Substrates and Driven by Triboelectric Nanogenerator Module. Digest of Technical Papers SID International Symposium, 2021, 52, 67-70.	0.3	1