

Gang Cheng

List of Publications by Year in descending order

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56
papers

4,562
citations

147566

31
h-index

143772

57
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58
all docs

58
docs citations

58
times ranked

3250
citing authors

#	ARTICLE	IF	CITATIONS
1	Harvesting Water Drop Energy by a Sequential Contactâ€Electrification and Electrostaticâ€Induction Process. <i>Advanced Materials</i> , 2014, 26, 4690-4696.	11.1	592
2	Waterâ€Solid Surface Contact Electrification and its Use for Harvesting Liquidâ€Wave Energy. <i>Angewandte Chemie - International Edition</i> , 2013, 52, 12545-12549.	7.2	384
3	Silicon-based hybrid cell for harvesting solar energy and raindrop electrostatic energy. <i>Nano Energy</i> , 2014, 9, 291-300.	8.2	225
4	Dual-Mode Triboelectric Nanogenerator for Harvesting Water Energy and as a Self-Powered Ethanol Nanosensor. <i>ACS Nano</i> , 2014, 8, 6440-6448.	7.3	222
5	Pulsed Nanogenerator with Huge Instantaneous Output Power Density. <i>ACS Nano</i> , 2013, 7, 7383-7391.	7.3	209
6	ZnO nanowire Schottky barrier ultraviolet photodetector with high sensitivity and fast recovery speed. <i>Applied Physics Letters</i> , 2011, 99, .	1.5	200
7	Triboelectric Nanogenerator as an Active UV Photodetector. <i>Advanced Functional Materials</i> , 2014, 24, 2810-2816.	7.8	180
8	A Hybridized Power Panel to Simultaneously Generate Electricity from Sunlight, Raindrops, and Wind around the Clock. <i>Advanced Energy Materials</i> , 2015, 5, 1501152.	10.2	174
9	High Energy Storage Efficiency Triboelectric Nanogenerators with Unidirectional Switches and Passive Power Management Circuits. <i>Advanced Functional Materials</i> , 2018, 28, 1805216.	7.8	174
10	Simultaneously Harvesting Electrostatic and Mechanical Energies from Flowing Water by a Hybridized Triboelectric Nanogenerator. <i>ACS Nano</i> , 2014, 8, 1932-1939.	7.3	172
11	The self-powered CO ₂ gas sensor based on gas discharge induced by triboelectric nanogenerator. <i>Nano Energy</i> , 2018, 53, 898-905.	8.2	146
12	Managing and maximizing the output power of a triboelectric nanogenerator by controlled tipâ€electrode air-discharging and application for UV sensing. <i>Nano Energy</i> , 2018, 44, 208-216.	8.2	145
13	A universal and passive power management circuit with high efficiency for pulsed triboelectric nanogenerator. <i>Nano Energy</i> , 2020, 68, 104372.	8.2	133
14	Managing and optimizing the output performances of a triboelectric nanogenerator by a self-powered electrostatic vibrator switch. <i>Nano Energy</i> , 2018, 46, 220-228.	8.2	97
15	Single-electrode-based rotary triboelectric nanogenerator and its applications as self-powered contact area and eccentric angle sensors. <i>Nano Energy</i> , 2015, 11, 323-332.	8.2	91
16	A multi-layered interdigitative-electrodes-based triboelectric nanogenerator for harvesting hydropower. <i>Nano Energy</i> , 2015, 15, 256-265.	8.2	89
17	A Sliding-Mode Triboelectric Nanogenerator with Chemical Group Grated Structure by Shadow Mask Reactive Ion Etching. <i>ACS Nano</i> , 2017, 11, 8796-8803.	7.3	86
18	Measuring the actual voltage of a triboelectric nanogenerator using the non-grounded method. <i>Nano Energy</i> , 2020, 77, 105108.	8.2	80

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19	Rotational pulsed triboelectric nanogenerators integrated with synchronously triggered mechanical switches for high efficiency self-powered systems. <i>Nano Energy</i> , 2021, 82, 105725.	8.2	80
20	Concurrent Harvesting of Ambient Energy by Hybrid Nanogenerators for Wearable Self-Powered Systems and Active Remote Sensing. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 14708-14715.	4.0	78
21	Tuning oxygen vacancies and improving UV sensing of ZnO nanowire by micro-plasma powered by a triboelectric nanogenerator. <i>Nano Energy</i> , 2020, 67, 104210.	8.2	75
22	Hybrid energy harvester with bi-functional nano-wrinkled anti-reflective PDMS film for enhancing energies conversion from sunlight and raindrops. <i>Nano Energy</i> , 2019, 66, 104188.	8.2	64
23	The high-speed ultraviolet photodetector of ZnO nanowire Schottky barrier based on the triboelectric-nanogenerator-powered surface-ionic-gate. <i>Nano Energy</i> , 2019, 60, 680-688.	8.2	62
24	Increase Output Energy and Operation Frequency of a Triboelectric Nanogenerator by Two Grounded Electrodes Approach. <i>Advanced Functional Materials</i> , 2014, 24, 2892-2898.	7.8	60
25	Multilayered Electrode-Based Triboelectric Nanogenerators with Managed Output Voltage and Multifold Enhanced Charge Transport. <i>Advanced Energy Materials</i> , 2015, 5, 1401452.	10.2	56
26	The novel transistor and photodetector of monolayer MoS ₂ based on surface-ionic-gate modulation powered by a triboelectric nanogenerator. <i>Nano Energy</i> , 2019, 62, 38-45.	8.2	46
27	A general charge compensation strategy for calibrating the voltage of a triboelectric nanogenerator measured by a capacitive circuit. <i>Nano Energy</i> , 2021, 86, 106056.	8.2	44
28	A stretchable self-powered triboelectric tactile sensor with EGaln alloy electrode for ultra-low-pressure detection. <i>Nano Energy</i> , 2021, 89, 106320.	8.2	41
29	The self-powered artificial synapse mechanotactile sensing system by integrating triboelectric plasma and gas-ionic-gated graphene transistor. <i>Nano Energy</i> , 2022, 91, 106660.	8.2	41
30	The unsaturated photocurrent controlled by two-dimensional barrier geometry of a single ZnO nanowire Schottky photodiode. <i>Applied Physics Letters</i> , 2008, 93, .	1.5	36
31	Meter-scale fabrication of water-driven triboelectric nanogenerator based on in-situ grown layered double hydroxides through a bottom-up approach. <i>Nano Energy</i> , 2020, 71, 104646.	8.2	32
32	Self-Powered Intelligent Water Meter for Electrostatic Scale Preventing, Rust Protection, and Flow Sensor in a Solar Heater System. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 6396-6403.	4.0	31
33	Cd(OH) ₂ @ZnO nanowires thin-film transistor and UV photodetector with a floating ionic gate tuned by a triboelectric nanogenerator. <i>Nano Energy</i> , 2020, 73, 104808.	8.2	31
34	A Nasal Temperature and pH Dual-Responsive In Situ Gel Delivery System Based on Microemulsion of Huperzine A: Formulation, Evaluation, and In Vivo Pharmacokinetic Study. <i>AAPS PharmSciTech</i> , 2019, 20, 301.	1.5	28
35	From mouse to mouse ear cress: Nanomaterials as vehicles in plant biotechnology. <i>Exploration</i> , 2021, 1, 9-20.	5.4	27
36	Selective aerobic oxidation of alkyl aromatics on Bi ₂ MoO ₆ nanoplates decorated with Pt nanoparticles under visible light irradiation. <i>Chemical Communications</i> , 2018, 54, 12194-12197.	2.2	26

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37	A self-powered photodetector using a pulsed triboelectric nanogenerator for actual working environments with random mechanical stimuli. <i>Nano Energy</i> , 2021, 90, 106518.	8.2	25
38	Study on dynamics of photoexcited charge injection and trapping in CdS quantum dots sensitized TiO ₂ nanowire array film electrodes. <i>Applied Physics Letters</i> , 2014, 104, .	1.5	23
39	Preparation and In Vitro/In Vivo Evaluation of Puerarin Solid Self-Microemulsifying Drug Delivery System by Spherical Crystallization Technique. <i>AAPS PharmSciTech</i> , 2016, 17, 1336-1346.	1.5	19
40	Triboelectric plasma decomposition of CO ₂ at room temperature driven by mechanical energy. <i>Nano Energy</i> , 2021, 88, 106287.	8.2	19
41	A robust all-inorganic hybrid energy harvester for synergistic energy collection from sunlight and raindrops. <i>Nanotechnology</i> , 2021, 32, 075401.	1.3	19
42	2D Cu ₉ S ₅ /PtS ₂ /WSe ₂ Double Heterojunction Bipolar Transistor with High Current Gain. <i>Advanced Materials</i> , 2021, 33, e2106537.	11.1	19
43	A water collection system with ultra-high harvest rate and ultra-low energy consumption by integrating triboelectric plasma. <i>Nano Energy</i> , 2022, 96, 107081.	8.2	15
44	The water droplet with huge charge density excited by triboelectric nanogenerator for water sterilization. <i>Nanotechnology</i> , 2021, 32, 415404.	1.3	13
45	Temperature-Dependent Electrical Transport Properties of Individual NiCo ₂ O ₄ Nanowire. <i>Nanoscale Research Letters</i> , 2019, 14, 10.	3.1	12
46	The triboelectric microplasma transistor of monolayer graphene with a reversible oxygen ion floating gate. <i>Nano Energy</i> , 2020, 78, 105229.	8.2	12
47	The recent progress of triboelectric nanogenerator-assisted photodetectors. <i>Nanotechnology</i> , 2020, 31, 292003.	1.3	11
48	Interactive-excited waterdrop triboelectric nanogenerator with ultrahigh charge density and instantaneous power. <i>Nano Energy</i> , 2022, 97, 107158.	8.2	11
49	Preparation of CuIn(S _x) _{1-x} Se ₂ thin films with tunable band gap by controlling sulfurization temperature of CuInSe ₂ . <i>Journal of Materials Research</i> , 2010, 25, 2426-2429.	1.2	10
50	Triboelectric Plasma CO ₂ Reduction Reaching a Mechanical Energy Conversion Efficiency of 2.3%. <i>Advanced Science</i> , 2022, 9, .	5.6	10
51	Modulating the surface states of electric field assembled CuO nanowires by electrochemical deposition method. <i>Applied Physics Letters</i> , 2009, 95, .	1.5	7
52	Triboelectric Plasma-Catalytic CO Oxidation of MnO ₂ Nanostructures Driven by Mechanical Energy at Room Temperature. <i>ACS Applied Nano Materials</i> , 2022, 5, 1426-1434.	2.4	7
53	The Regulation of O ₂ Spin State and Direct Oxidation of CO at Room Temperature Using Triboelectric Plasma by Harvesting Mechanical Energy. <i>Nanomaterials</i> , 2021, 11, 3408.	1.9	7
54	Analyses of electrochemical behavior of plasma electrolytic oxidation film on Zirlo alloy in lithium borate buffer solution at 25–300°C. <i>Surface and Coatings Technology</i> , 2022, 429, 127935.	2.2	5

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55	Path-related unexpected injection charges in BaTiO ₃ ferroelectric thin films studied by Kelvin force microscopy. Applied Physics Letters, 2010, 97, 162902.	1.5	4
56	ANALYSIS OF A SINGLE BIOMOLECULE TRANSITING WITH NANOPORE. , 2009, , .		0