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 g-index
58 all docs	58 docs citations	58 times ranked	3250 citing authors

#	Article	IF	Citations
1	The self-powered artificial synapse mechanotactile sensing system by integrating triboelectric plasma and gas-ionic-gated graphene transistor. Nano Energy, 2022, 91, 106660.	8.2	41
2	Analyses of electrochemical behavior of plasma electrolytic oxidation film on Zirlo alloy in lithium borate buffer solution at 25â€“300ÂÂ°C. Surface and Coatings Technology, 2022, 429, 127935.	2.2	5
3	Triboelectric Plasma-Catalytic CO Oxidation of MnO2 Nanostructures Driven by Mechanical Energy at Room Temperature. ACS Applied Nano Materials, 2022, 5, 1426-1434.	2.4	7
4	Interactive-excited waterdrop triboelectric nanogenerator with ultrahigh charge density and instantaneous power. Nano Energy, 2022, 97, 107158.	8.2	11
5	A water collection system with ultra-high harvest rate and ultra-low energy consumption by integrating triboelectric plasma. Nano Energy, 2022, 96, 107081.	8.2	15
6	Triboelectric Plasma CO₂ Reduction Reaching a Mechanical Energy Conversion Efficiency of 2.3%. Advanced Science, 2022, 9, .	5.6	10
7	Rotational pulsed triboelectric nanogenerators integrated with synchronously triggered mechanical switches for high efficiency self-powered systems. Nano Energy, 2021, 82, 105725.	8.2	80
8	The water droplet with huge charge density excited by triboelectric nanogenerator for water sterilization. Nanotechnology, 2021, 32, 415404.	1.3	13
9	A general charge compensation strategy for calibrating the voltage of a triboelectric nanogenerator measured by a capacitive circuit. Nano Energy, 2021, 86, 106056.	8.2	44
10	From mouse to mouseâ€ear cress: Nanomaterials as vehicles in plant biotechnology. Exploration, 2021, 1, 9-20.	5.4	27
11	Triboelectric plasma decomposition of CO2 at room temperature driven by mechanical energy. Nano Energy, 2021, 88, 106287.	8.2	19
12	A stretchable self-powered triboelectric tactile sensor with EGaIn alloy electrode for ultra-low-pressure detection. Nano Energy, 2021, 89, 106320.	8.2	41
13	A self-powered photodetector using a pulsed triboelectric nanogenerator for actual working environments with random mechanical stimuli. Nano Energy, 2021, 90, 106518.	8.2	25
14	A robust all-inorganic hybrid energy harvester for synergistic energy collection from sunlight and raindrops. Nanotechnology, 2021, 32, 075401.	1.3	19
15	2D Cu₉S₅/PtS₂/WSe₂ Double Heterojunction Bipolar Transistor with High Current Gain. Advanced Materials, 2021, 33, e2106537.	11.1	19
16	The Regulation of O2 Spin State and Direct Oxidation of CO at Room Temperature Using Triboelectric Plasma by Harvesting Mechanical Energy. Nanomaterials, 2021, 11, 3408.	1.9	7
17	Tuning oxygen vacancies and improving UV sensing of ZnO nanowire by micro-plasma powered by a triboelectric nanogenerator. Nano Energy, 2020, 67, 104210.	8.2	75
18	A universal and passive power management circuit with high efficiency for pulsed triboelectric nanogenerator. Nano Energy, 2020, 68, 104372.	8.2	133

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19	The triboelectric microplasma transistor of monolayer graphene with a reversible oxygen ion floating gate. Nano Energy, 2020, 78, 105229.	8.2	12
20	Measuring the actual voltage of a triboelectric nanogenerator using the non-grounded method. Nano Energy, 2020, 77, 105108.	8.2	80
21	The recent progress of triboelectric nanogenerator-assisted photodetectors. Nanotechnology, 2020, 31, 292003.	1.3	11
22	Meter-scale fabrication of water-driven triboelectric nanogenerator based on in-situ grown layered double hydroxides through a bottom-up approach. Nano Energy, 2020, 71, 104646.	8.2	32
23	Cd(OH)2@ZnO nanowires thin-film transistor and UV photodetector with a floating ionic gate tuned by a triboelectric nanogenerator. Nano Energy, 2020, 73, 104808.	8.2	31
24	Temperature-Dependent Electrical Transport Properties of Individual NiCo2O4 Nanowire. Nanoscale Research Letters, 2019, 14, 10.	3.1	12
25	Self-Powered Intelligent Water Meter for Electrostatic Scale Preventing, Rust Protection, and Flow Sensor in a Solar Heater System. ACS Applied Materials & Interfaces, 2019, 11, 6396-6403.	4.0	31
26	Hybrid energy harvester with bi-functional nano-wrinkled anti-reflective PDMS film for enhancing energies conversion from sunlight and raindrops. Nano Energy, 2019, 66, 104188.	8.2	64
27	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. AAPS PharmSciTech, 2019, 20, 301.	1.5	28
28	The novel transistor and photodetector of monolayer MoS2 based on surface-ionic-gate modulation powered by a triboelectric nanogenerator. Nano Energy, 2019, 62, 38-45.	8.2	46
29	The high-speed ultraviolet photodetector of ZnO nanowire Schottky barrier based on the triboelectric-nanogenerator-powered surface-ionic-gate. Nano Energy, 2019, 60, 680-688.	8.2	62
30	Concurrent Harvesting of Ambient Energy by Hybrid Nanogenerators for Wearable Self-Powered Systems and Active Remote Sensing. ACS Applied Materials & Interfaces, 2018, 10, 14708-14715.	4.0	78
31	Managing and optimizing the output performances of a triboelectric nanogenerator by a self-powered electrostatic vibrator switch. Nano Energy, 2018, 46, 220-228.	8.2	97
32	Managing and maximizing the output power of a triboelectric nanogenerator by controlled tipâ€“electrode air-discharging and application for UV sensing. Nano Energy, 2018, 44, 208-216.	8.2	145
33	Selective aerobic oxidation of alkyl aromatics on Bi₂MoO₆ nanoplates decorated with Pt nanoparticles under visible light irradiation. Chemical Communications, 2018, 54, 12194-12197.	2.2	26
34	The self-powered CO2 gas sensor based on gas discharge induced by triboelectric nanogenerator. Nano Energy, 2018, 53, 898-905.	8.2	146
35	High Energy Storage Efficiency Triboelectric Nanogenerators with Unidirectional Switches and Passive Power Management Circuits. Advanced Functional Materials, 2018, 28, 1805216.	7.8	174
36	A Sliding-Mode Triboelectric Nanogenerator with Chemical Group Grated Structure by Shadow Mask Reactive Ion Etching. ACS Nano, 2017, 11, 8796-8803.	7.3	86

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37	Preparation and In Vitro/In Vivo Evaluation of Puerarin Solid Self-Microemulsifying Drug Delivery System by Spherical Crystallization Technique. AAPS PharmSciTech, 2016, 17, 1336-1346.	1.5	19
38	A Hybridized Power Panel to Simultaneously Generate Electricity from Sunlight, Raindrops, and Wind around the Clock. Advanced Energy Materials, 2015, 5, 1501152.	10.2	174
39	A multi-layered interdigitative-electrodes-based triboelectric nanogenerator for harvesting hydropower. Nano Energy, 2015, 15, 256-265.	8.2	89
40	Single-electrode-based rotationary triboelectric nanogenerator and its applications as self-powered contact area and eccentric angle sensors. Nano Energy, 2015, 11, 323-332.	8.2	91
41	Multilayeredâ€Electrodeâ€Based Triboelectric Nanogenerators with Managed Output Voltage and Multifold Enhanced Charge Transport. Advanced Energy Materials, 2015, 5, 1401452.	10.2	56
42	Harvesting Water Drop Energy by a Sequential Contactâ€Electrification and Electrostaticâ€Induction Process. Advanced Materials, 2014, 26, 4690-4696.	11.1	592
43	Increase Output Energy and Operation Frequency of a Triboelectric Nanogenerator by Two Grounded Electrodes Approach. Advanced Functional Materials, 2014, 24, 2892-2898.	7.8	60
44	Study on dynamics of photoexcited charge injection and trapping in CdS quantum dots sensitized TiO2 nanowire array film electrodes. Applied Physics Letters, 2014, 104, .	1.5	23
45	Triboelectric Nanogenerator as an Active UV Photodetector. Advanced Functional Materials, 2014, 24, 2810-2816.	7.8	180
46	Silicon-based hybrid cell for harvesting solar energy and raindrop electrostatic energy. Nano Energy, 2014, 9, 291-300.	8.2	225
47	Dual-Mode Triboelectric Nanogenerator for Harvesting Water Energy and as a Self-Powered Ethanol Nanosensor. ACS Nano, 2014, 8, 6440-6448.	7.3	222
48	Simultaneously Harvesting Electrostatic and Mechanical Energies from Flowing Water by a Hybridized Triboelectric Nanogenerator. ACS Nano, 2014, 8, 1932-1939.	7.3	172
49	Waterâ€“Solid Surface Contact Electrification and its Use for Harvesting Liquidâ€Wave Energy. Angewandte Chemie - International Edition, 2013, 52, 12545-12549.	7.2	384
50	Pulsed Nanogenerator with Huge Instantaneous Output Power Density. ACS Nano, 2013, 7, 7383-7391.	7.3	209
51	ZnO nanowire Schottky barrier ultraviolet photodetector with high sensitivity and fast recovery speed. Applied Physics Letters, 2011, 99, .	1.5	200
52	Preparation of CuIn(S_xSe_{1â€“x})₂ thin films with tunable band gap by controlling sulfurization temperature of CuInSe₂. Journal of Materials Research, 2010, 25, 2426-2429.	1.2	10
53	Path-related unexpected injection charges in BaTiO3 ferroelectric thin films studied by Kelvin force microscopy. Applied Physics Letters, 2010, 97, 162902.	1.5	4
54	Modulating the surface states of electric field assembled CuO nanowires by electrochemical deposition method. Applied Physics Letters, 2009, 95, .	1.5	7

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55	ANALYSIS OF A SINGLE BIOMOLECULE TRANSITING WITH NANOPORE. , 2009, , .		0
56	The unsaturated photocurrent controlled by two-dimensional barrier geometry of a single ZnO nanowire Schottky photodiode. Applied Physics Letters, 2008, 93, .	1.5	36