

Xuhui Sun

List of Publications by Year in descending order

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105
papers

7,521
citations

43973

48
h-index

54797

84
g-index

105
all docs

105
docs citations

105
times ranked

8155
citing authors

#	ARTICLE	IF	CITATIONS
1	Transparent, stretchable, temperature-stable and self-healing ionogel-based triboelectric nanogenerator for biomechanical energy collection. <i>Nano Research</i> , 2022, 15, 2060-2068.	5.8	36
2	Promoted self-construction of Ni^{2+} -NiOOH in amorphous high entropy electrocatalysts for the oxygen evolution reaction. <i>Applied Catalysis B: Environmental</i> , 2022, 301, 120764.	10.8	103
3	Bamboo-inspired self-powered triboelectric sensor for touch sensing and sitting posture monitoring. <i>Nano Energy</i> , 2022, 91, 106670.	8.2	35
4	Tetrahedral DNA mediated direct quantification of exosomes by contact-electrification effect. <i>Nano Energy</i> , 2022, 92, 106781.	8.2	21
5	Temperature-Dependence Photoelectrochemical Hydrogen Generation Based on Alloyed Quantum Dots. <i>Journal of Physical Chemistry C</i> , 2022, 126, 174-182.	1.5	11
6	One-step synthesized PbSe nanocrystal inks decorated 2D MoS_2 heterostructure for high stability photodetectors with photoresponse extending to near-infrared region. <i>Journal of Materials Chemistry C</i> , 2022, 10, 2236-2244.	2.7	18
7	A half-wave rectifying triboelectric nanogenerator for self-powered water splitting towards hydrogen production. <i>Nano Energy</i> , 2022, 93, 106870.	8.2	37
8	Construction of Novel Bimetallic Oxyphosphide as Advanced Anode for Potassium Ion Hybrid Capacitor. <i>Advanced Science</i> , 2022, 9, e2105193.	5.6	14
9	Highly sensitive and fast-response ethanol sensing of porous Co_3O_4 hollow polyhedra via palladium reined spillover effect. <i>RSC Advances</i> , 2022, 12, 6725-6731.	1.7	12
10	Interface Engineering for Efficient Raindrop Solar Cell. <i>ACS Nano</i> , 2022, 16, 5292-5302.	7.3	47
11	A Liquid-Solid Interface-Based Triboelectric Tactile Sensor with Ultrahigh Sensitivity of 21.48 kPa^{-1} . <i>Nano-Micro Letters</i> , 2022, 14, 88.	14.4	47
12	Electron trapping & blocking effect enabled by MXene/TiO ₂ intermediate layer for charge regulation of triboelectric nanogenerators. <i>Nano Energy</i> , 2022, 98, 107236.	8.2	36
13	Brightness-enhanced electroluminescence driven by triboelectric nanogenerators through permittivity manipulation and impedance matching. <i>Nano Energy</i> , 2022, 98, 107308.	8.2	10
14	3D-printed endoplasmic reticulum rGO microstructure based self-powered triboelectric pressure sensor. <i>Chemical Engineering Journal</i> , 2022, 445, 136821.	6.6	28
15	Heterostructured core/gradient multi-shell quantum dots for high-performance and durable photoelectrochemical hydrogen generation. <i>Nano Energy</i> , 2022, 100, 107524.	8.2	11
16	Triboelectric current stimulation alleviates in vitro cell migration and in vivo tumor metastasis. <i>Nano Energy</i> , 2022, 100, 107471.	8.2	10
17	Intermediate layer for enhanced triboelectric nanogenerator. <i>Nano Energy</i> , 2021, 79, 105439.	8.2	70
18	Advances in self-powered triboelectric pressure sensors. <i>Journal of Materials Chemistry A</i> , 2021, 9, 20100-20130.	5.2	85

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19	Hybrid Triboelectric Nanogenerators: From Energy Complementation to Integration. <i>Research</i> , 2021, 2021, 9143762.	2.8	32
20	Insight into Ion Diffusion Dynamics/Mechanisms and Electronic Structure of Highly Conductive Sodium-Rich $\text{Na}_{3+x}\text{La}_x\text{Zr}_{2-x}\text{Si}_2\text{PO}_{12}$ (0 ≤ x ≤ 0.5) Solid-State Electrolytes. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 13132-13138.	4.0	27
21	All-Inorganic CsPbBr_3 Perovskite Nanocrystals/2D Non-Layered Cadmium Sulfide Selenide for High-Performance Photodetectors by Energy Band Alignment Engineering. <i>Advanced Functional Materials</i> , 2021, 31, 2105051.	7.8	35
22	Abrasion and Fracture Self-Healable Triboelectric Nanogenerator with Ultrahigh Stretchability and Long-Term Durability. <i>Advanced Functional Materials</i> , 2021, 31, 2105380.	7.8	65
23	Self-Powered Gyroscope Angle Sensor Based on Resistive Matching Effect of Triboelectric Nanogenerator. <i>Advanced Materials Technologies</i> , 2021, 6, 2100797.	3.0	9
24	A Self-Powered Gas Sensor Based on Coupling Triboelectric Screening and Impedance Matching Effects. <i>Advanced Materials Technologies</i> , 2021, 6, 2100310.	3.0	21
25	Surface-microengineering for high-performance triboelectric tactile sensor via dynamically assembled ferrofluid template. <i>Nano Energy</i> , 2021, 87, 106215.	8.2	24
26	Surface Engineering for Enhanced Triboelectric Nanogenerator. <i>Nanoenergy Advances</i> , 2021, 1, 58-80.	3.6	47
27	A self-powered hydrogen leakage sensor based on impedance adjustable windmill-like triboelectric nanogenerator. <i>Nano Energy</i> , 2021, 89, 106453.	8.2	28
28	Hollow polyhedral ZnCo_2O_4 superstructure as an ethanol gas sensor and sensing mechanism study using near ambient pressure XPS. <i>Journal of Materials Chemistry C</i> , 2021, 9, 14278-14285.	2.7	10
29	Room-Temperature Direct Synthesis of PbSe Quantum Dot Inks for High-Detectivity Near-Infrared Photodetectors. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 51198-51204.	4.0	20
30	Boride-derived oxygen-evolution catalysts. <i>Nature Communications</i> , 2021, 12, 6089.	5.8	51
31	All-in-One Self-Powered Human-Machine Interaction System for Wireless Remote Telemetry and Control of Intelligent Cars. <i>Nanomaterials</i> , 2021, 11, 2711.	1.9	16
32	An Integrated Self-Powered Real-Time Pedometer System with Ultrafast Response and High Accuracy. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 61789-61798.	4.0	6
33	Identification of dual-active sites in cobalt phthalocyanine for electrochemical carbon dioxide reduction. <i>Nano Energy</i> , 2020, 67, 104163.	8.2	48
34	Blue Energy Collection toward All-Hours Self-Powered Chemical Energy Conversion. <i>Advanced Energy Materials</i> , 2020, 10, 2001041.	10.2	54
35	High-Valent Nickel Promoted by Atomically Embedded Copper for Efficient Water Oxidation. <i>ACS Catalysis</i> , 2020, 10, 9725-9734.	5.5	100
36	Real-time interface investigation on degradation mechanism of organic light-emitting diode by in-operando X-ray spectroscopies. <i>Organic Electronics</i> , 2020, 87, 105901.	1.4	2

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37	Stable Silicene Wrapped by Graphene in Air. ACS Applied Materials & Interfaces, 2020, 12, 40620-40628.	4.0	11
38	Transition metal pincer complex based self-healable, stretchable and transparent triboelectric nanogenerator. Nano Energy, 2020, 78, 105348.	8.2	19
39	Highly-rough surface carbon nanofibers film as an effective interlayer for lithium-sulfur batteries. Journal of Semiconductors, 2020, 41, 092701.	2.0	14
40	Micro triboelectric ultrasonic device for acoustic energy transfer and signal communication. Nature Communications, 2020, 11, 4143.	5.8	156
41	Flexible Self-Powered Real-Time Ultraviolet Photodetector by Coupling Triboelectric and Photoelectric Effects. ACS Applied Materials & Interfaces, 2020, 12, 19384-19392.	4.0	80
42	Self-Powered Active Spherical Triboelectric Sensor for Fluid Velocity Detection. IEEE Nanotechnology Magazine, 2020, 19, 230-235.	1.1	22
43	An anti-freezing hydrogel based stretchable triboelectric nanogenerator for biomechanical energy harvesting at sub-zero temperature. Journal of Materials Chemistry A, 2020, 8, 13787-13794.	5.2	126
44	Hybridized Mechanical and Solar Energy-Driven Self-Powered Hydrogen Production. Nano-Micro Letters, 2020, 12, 88.	14.4	31
45	Metal-organic framework derived copper catalysts for CO ₂ to ethylene conversion. Journal of Materials Chemistry A, 2020, 8, 11117-11123.	5.2	82
46	High-performance flexible and broadband photodetectors based on PbS quantum dots/ZnO nanoparticles heterostructure. Science China Materials, 2019, 62, 225-235.	3.5	56
47	Frequency-independent self-powered sensing based on capacitive impedance matching effect of triboelectric nanogenerator. Nano Energy, 2019, 65, 103984.	8.2	44
48	The mechanism of structural changes and crystallization kinetics of amorphous red phosphorus to black phosphorus under high pressure. Chemical Communications, 2019, 55, 8094-8097.	2.2	9
49	Spiral Steel Wire-Based Fiber-Shaped Stretchable and Tailorable Triboelectric Nanogenerator for Wearable Power Source and Active Gesture Sensor. Nano-Micro Letters, 2019, 11, 39.	14.4	114
50	Efficient solar-driven hydrogen generation using colloidal heterostructured quantum dots. Journal of Materials Chemistry A, 2019, 7, 14079-14088.	5.2	46
51	Self-powered on-line ion concentration monitor in water transportation driven by triboelectric nanogenerator. Nano Energy, 2019, 62, 442-448.	8.2	63
52	Self-driven photodetection based on impedance matching effect between a triboelectric nanogenerator and a MoS ₂ nanosheets photodetector. Nano Energy, 2019, 59, 492-499.	8.2	50
53	A liquid PEDOT:PSS electrode-based stretchable triboelectric nanogenerator for a portable self-charging power source. Nanoscale, 2019, 11, 7513-7519.	2.8	55
54	Highly efficient self-healable and dual responsive hydrogel-based deformable triboelectric nanogenerators for wearable electronics. Journal of Materials Chemistry A, 2019, 7, 13948-13955.	5.2	163

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55	Carbon nitride supported Ni _{0.5} Co _{0.5} O nanoparticles with strong interfacial interaction to enhance the hydrolysis of ammonia borane. RSC Advances, 2019, 9, 11552-11557.	1.7	13
56	Largely enhanced triboelectric nanogenerator for efficient harvesting of water wave energy by soft contacted structure. Nano Energy, 2019, 57, 432-439.	8.2	278
57	Enhancing proliferation and migration of fibroblast cells by electric stimulation based on triboelectric nanogenerator. Nano Energy, 2019, 57, 600-607.	8.2	106
58	Impedance Matching Effect between a Triboelectric Nanogenerator and a Piezoresistive Pressure Sensor Induced Self-Powered Weighing. Advanced Materials Technologies, 2018, 3, 1800054.	3.0	49
59	Integrating a Silicon Solar Cell with a Triboelectric Nanogenerator via a Mutual Electrode for Harvesting Energy from Sunlight and Raindrops. ACS Nano, 2018, 12, 2893-2899.	7.3	229
60	Liquid-Metal-Based Super-Stretchable and Structure-Designable Triboelectric Nanogenerator for Wearable Electronics. ACS Nano, 2018, 12, 2027-2034.	7.3	353
61	Self-Powered Vehicle Emission Testing System Based on Coupling of Triboelectric and Chemoresistive Effects. Advanced Functional Materials, 2018, 28, 1703420.	7.8	95
62	Flexible self-charging power units for portable electronics based on folded carbon paper. Nano Research, 2018, 11, 4313-4322.	5.8	78
63	Cube-like CuCoO nanostructures on reduced graphene oxide for H ₂ generation from ammonia borane. Inorganic Chemistry Frontiers, 2018, 5, 1180-1187.	3.0	39
64	Boron-passivated surface Fe ^(iv) defects in hematite for highly efficient water oxidation. Nanoscale, 2018, 10, 7033-7039.	2.8	25
65	Organic-Inorganic Hybrid-Derived Molybdenum Carbide Nanoladders: Impacts of Surface Oxidation for Hydrogen Evolution Reaction. ChemNanoMat, 2018, 4, 194-202.	1.5	23
66	PbS Quantum Dots/2D Nonlayered CdS _x Se _{1-x} Nanosheet Hybrid Nanostructure for High-Performance Broadband Photodetectors. ACS Applied Materials & Interfaces, 2018, 10, 43887-43895.	4.0	29
67	Coaxial Triboelectric Nanogenerator and Supercapacitor Fiber-Based Self-Charging Power Fabric. ACS Applied Materials & Interfaces, 2018, 10, 42356-42362.	4.0	108
68	Atmospheric pressure difference driven triboelectric nanogenerator for efficiently harvesting ocean wave energy. Nano Energy, 2018, 54, 156-162.	8.2	65
69	Toward High Areal Energy and Power Density Electrode for Li-Ion Batteries via Optimized 3D Printing Approach. ACS Applied Materials & Interfaces, 2018, 10, 39794-39801.	4.0	126
70	Triboelectric-Electromagnetic Hybrid Generator for Harvesting Blue Energy. Nano-Micro Letters, 2018, 10, 54.	14.4	92
71	Triboelectric Nanogenerator Driven Self-Powered Photoelectrochemical Water Splitting Based on Hematite Photoanodes. ACS Nano, 2018, 12, 8625-8632.	7.3	76
72	A Wrinkled PEDOT:PSS Film Based Stretchable and Transparent Triboelectric Nanogenerator for Wearable Energy Harvesters and Active Motion Sensors. Advanced Functional Materials, 2018, 28, 1803684.	7.8	286

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73	Toward self-powered photodetection enabled by triboelectric nanogenerators. <i>Journal of Materials Chemistry C</i> , 2018, 6, 11893-11902.	2.7	45
74	Loading across the Periodic Table: Introducing 14 Different Metal Ions To Enhance Metal-Organic Framework Performance. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 30296-30305.	4.0	20
75	Hollow NiFe ₂ O ₄ nanospheres on carbon nanorods as a highly efficient anode material for lithium ion batteries. <i>Journal of Materials Chemistry A</i> , 2017, 5, 5007-5012.	5.2	77
76	Sn nanoparticles@nitrogen-doped carbon nanofiber composites as high-performance anodes for sodium-ion batteries. <i>Journal of Materials Chemistry A</i> , 2017, 5, 6277-6283.	5.2	91
77	Phosphorus-Mo ₂ C@carbon nanowires toward efficient electrochemical hydrogen evolution: composition, structural and electronic regulation. <i>Energy and Environmental Science</i> , 2017, 10, 1262-1271.	15.6	379
78	Orientation and Ordering of Organic and Hybrid Inorganic-Organic Polyurea Films Using Molecular Layer Deposition. <i>Journal of Physical Chemistry C</i> , 2017, 121, 11757-11764.	1.5	13
79	Nanogenerators for Self-Powered Gas Sensing. <i>Nano-Micro Letters</i> , 2017, 9, 45.	14.4	119
80	Lowering the Onset Potential of Fe ₂ TiO ₅ /Fe ₂ O ₃ Photoanodes by Interface Structures: F- and Rh-Based Treatments. <i>ACS Catalysis</i> , 2017, 7, 4062-4069.	5.5	61
81	The morphological effect on electronic structure and electrical transport properties of one-dimensional carbon nanostructures. <i>RSC Advances</i> , 2017, 7, 21079-21084.	1.7	2
82	All flexible electrospun papers based self-charging power system. <i>Nano Energy</i> , 2017, 38, 210-217.	8.2	97
83	⁵⁷ Fe ₂ O ₃ @CNTs Anode Materials for Lithium Ion Batteries Investigated by Electron Energy Loss Spectroscopy. <i>Chemistry of Materials</i> , 2017, 29, 3499-3506.	3.2	73
84	Fe ₂ TiO ₅ -incorporated hematite with surface P-modification for high-efficiency solar water splitting. <i>Nano Energy</i> , 2017, 32, 526-532.	8.2	50
85	Pt _x Ni _{10-x} O nanoparticles supported on N-doped graphene oxide with a synergetic effect for highly efficient hydrolysis of ammonia borane. <i>Catalysis Science and Technology</i> , 2017, 7, 5135-5142.	2.1	23
86	Synthesis and Structure-Dependent Optical Properties of ZnO Nanocomb and ZnO Nanoflag. <i>Journal of Physical Chemistry C</i> , 2017, 121, 26076-26085.	1.5	17
87	Multifunctional power unit by hybridizing contact-separate triboelectric nanogenerator, electromagnetic generator and solar cell for harvesting blue energy. <i>Nano Energy</i> , 2017, 39, 608-615.	8.2	117
88	Carbon coated bimetallic sulfide nanodots/carbon nanorod heterostructure enabling long-life lithium-ion batteries. <i>Journal of Materials Chemistry A</i> , 2017, 5, 25625-25631.	5.2	41
89	One-dimensional CdS _x Se _{1-x} nanoribbons for high-performance rigid and flexible photodetectors. <i>Journal of Materials Chemistry C</i> , 2017, 5, 7521-7526.	2.7	29
90	Loading the FeNiOOH cocatalyst on Pt-modified hematite nanostructures for efficient solar water oxidation. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 10453-10458.	1.3	55

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91	Self-supported ultrathin mesoporous CoFe ₂ O ₄ /CoO nanosheet arrays assembled from nanowires with enhanced lithium storage performance. <i>Journal of Materials Science</i> , 2016, 51, 6590-6599.	1.7	16
92	Cu _x Co _{1-x} O Nanoparticles on Graphene Oxide as A Synergistic Catalyst for High Efficiency Hydrolysis of Ammonia Borane. <i>Angewandte Chemie</i> , 2016, 128, 12129-12133.	1.6	22
93	Cu _x Co _{1-x} O Nanoparticles on Graphene Oxide as A Synergistic Catalyst for High Efficiency Hydrolysis of Ammonia Borane. <i>Angewandte Chemie - International Edition</i> , 2016, 55, 11950-11954.	7.2	186
94	Self-powered textile for wearable electronics by hybridizing fiber-shaped nanogenerators, solar cells, and supercapacitors. <i>Science Advances</i> , 2016, 2, e1600097.	4.7	705
95	Comprehensive electronic structure characterization of pristine and nitrogen/phosphorus doped carbon nanocages. <i>Carbon</i> , 2016, 103, 480-487.	5.4	23
96	Thin-Layer Fe ₂ TiO ₅ on Hematite for Efficient Solar Water Oxidation. <i>ACS Nano</i> , 2015, 9, 5348-5356.	7.3	121
97	Revealing the synergetic effects in Ni nanoparticle-carbon nanotube hybrids by scanning transmission X-ray microscopy and their application in the hydrolysis of ammonia borane. <i>Nanoscale</i> , 2015, 7, 9715-9722.	2.8	38
98	Carbon-coated Fe ₂ O ₃ nanostructures for efficient anode of Li-ion battery. <i>Journal of Materials Chemistry A</i> , 2015, 3, 5183-5188.	5.2	67
99	NiO-Co ₃ O ₄ nanoplate composite as efficient anode in Li-ion battery. <i>Electrochimica Acta</i> , 2015, 178, 590-596.	2.6	63
100	Synchrotron Soft X-ray Absorption Spectroscopy Study of Carbon and Silicon Nanostructures for Energy Applications. <i>Advanced Materials</i> , 2014, 26, 7786-7806.	11.1	84
101	Hydrogen-treated hematite nanostructures with low onset potential for highly efficient solar water oxidation. <i>Journal of Materials Chemistry A</i> , 2014, 2, 6727.	5.2	87
102	Coupling Ti-doping and oxygen vacancies in hematite nanostructures for solar water oxidation with high efficiency. <i>Journal of Materials Chemistry A</i> , 2014, 2, 2491.	5.2	128
103	Aqueous Solution Synthesis of Pt _n M _m (M = Fe, Co, Ni) Bimetallic Nanoparticles and Their Catalysis for the Hydrolytic Dehydrogenation of Ammonia Borane. <i>ACS Applied Materials & Interfaces</i> , 2014, 6, 12429-12435.	4.0	110
104	Ti-doped hematite nanostructures for solar water splitting with high efficiency. <i>Journal of Applied Physics</i> , 2012, 112, .	1.1	106
105	The effect of catalysts and underlayer metals on the properties of PECVD-grown carbon nanostructures. <i>Nanotechnology</i> , 2010, 21, 045201.	1.3	19