

Xuhui Sun

List of Publications by Year in descending order

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105
papers

7,521
citations

41344

49
h-index

54911

84
g-index

105
all docs

105
docs citations

105
times ranked

8155
citing authors

#	ARTICLE	IF	CITATIONS
1	Self-powered textile for wearable electronics by hybridizing fiber-shaped nanogenerators, solar cells, and supercapacitors. <i>Science Advances</i> , 2016, 2, e1600097.	10.3	705
2	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.	30.8	379
3	Liquid-Metal-Based Super-Stretchable and Structure-Designable Triboelectric Nanogenerator for Wearable Electronics. <i>ACS Nano</i> , 2018, 12, 2027-2034.	14.6	353
4	A Wrinkled PEDOT:PSS Film Based Stretchable and Transparent Triboelectric Nanogenerator for Wearable Energy Harvesters and Active Motion Sensors. <i>Advanced Functional Materials</i> , 2018, 28, 1803684.	14.9	286
5	Largely enhanced triboelectric nanogenerator for efficient harvesting of water wave energy by soft contacted structure. <i>Nano Energy</i> , 2019, 57, 432-439.	16.0	278
6	Integrating a Silicon Solar Cell with a Triboelectric Nanogenerator <i>via</i> a Mutual Electrode for Harvesting Energy from Sunlight and Raindrops. <i>ACS Nano</i> , 2018, 12, 2893-2899.	14.6	229
7	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.	13.8	186
8	Highly efficient self-healable and dual responsive hydrogel-based deformable triboelectric nanogenerators for wearable electronics. <i>Journal of Materials Chemistry A</i> , 2019, 7, 13948-13955.	10.3	163
9	Micro triboelectric ultrasonic device for acoustic energy transfer and signal communication. <i>Nature Communications</i> , 2020, 11, 4143.	12.8	156
10	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.	10.3	128
11	Toward High Areal Energy and Power Density Electrode for Li-Ion Batteries via Optimized 3D Printing Approach. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 39794-39801.	8.0	126
12	An anti-freezing hydrogel based stretchable triboelectric nanogenerator for biomechanical energy harvesting at sub-zero temperature. <i>Journal of Materials Chemistry A</i> , 2020, 8, 13787-13794.	10.3	126
13	Thin-Layer Fe ₂ TiO ₅ on Hematite for Efficient Solar Water Oxidation. <i>ACS Nano</i> , 2015, 9, 5348-5356.	14.6	121
14	Nanogenerators for Self-Powered Gas Sensing. <i>Nano-Micro Letters</i> , 2017, 9, 45.	27.0	119
15	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.	16.0	117
16	Spiral Steel Wire-Based Fiber-Shaped Stretchable and Tailorable Triboelectric Nanogenerator for Wearable Power Source and Active Gesture Sensor. <i>Nano-Micro Letters</i> , 2019, 11, 39.	27.0	114
17	Aqueous Solution Synthesis of Pt-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.	8.0	110
18	Coaxial Triboelectric Nanogenerator and Supercapacitor Fiber-Based Self-Charging Power Fabric. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 42356-42362.	8.0	108

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19	Ti-doped hematite nanostructures for solar water splitting with high efficiency. <i>Journal of Applied Physics</i> , 2012, 112, .	2.5	106
20	Enhancing proliferation and migration of fibroblast cells by electric stimulation based on triboelectric nanogenerator. <i>Nano Energy</i> , 2019, 57, 600-607.	16.0	106
21	Promoted self-construction of $\hat{1}^2$ -NiOOH in amorphous high entropy electrocatalysts for the oxygen evolution reaction. <i>Applied Catalysis B: Environmental</i> , 2022, 301, 120764.	20.2	103
22	High-Valent Nickel Promoted by Atomically Embedded Copper for Efficient Water Oxidation. <i>ACS Catalysis</i> , 2020, 10, 9725-9734.	11.2	100
23	All flexible electrospun papers based self-charging power system. <i>Nano Energy</i> , 2017, 38, 210-217.	16.0	97
24	Self-Powered Vehicle Emission Testing System Based on Coupling of Triboelectric and Chemoresistive Effects. <i>Advanced Functional Materials</i> , 2018, 28, 1703420.	14.9	95
25	Triboelectric-Electromagnetic Hybrid Generator for Harvesting Blue Energy. <i>Nano-Micro Letters</i> , 2018, 10, 54.	27.0	92
26	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.	10.3	91
27	Hydrogen-treated hematite nanostructures with low onset potential for highly efficient solar water oxidation. <i>Journal of Materials Chemistry A</i> , 2014, 2, 6727.	10.3	87
28	Advances in self-powered triboelectric pressure sensors. <i>Journal of Materials Chemistry A</i> , 2021, 9, 20100-20130.	10.3	85
29	Synchrotron Soft X-ray Absorption Spectroscopy Study of Carbon and Silicon Nanostructures for Energy Applications. <i>Advanced Materials</i> , 2014, 26, 7786-7806.	21.0	84
30	Metal-organic framework derived copper catalysts for CO ₂ to ethylene conversion. <i>Journal of Materials Chemistry A</i> , 2020, 8, 11117-11123.	10.3	82
31	Flexible Self-Powered Real-Time Ultraviolet Photodetector by Coupling Triboelectric and Photoelectric Effects. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 19384-19392.	8.0	80
32	Flexible self-charging power units for portable electronics based on folded carbon paper. <i>Nano Research</i> , 2018, 11, 4313-4322.	10.4	78
33	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.	10.3	77
34	Triboelectric Nanogenerator Driven Self-Powered Photoelectrochemical Water Splitting Based on Hematite Photoanodes. <i>ACS Nano</i> , 2018, 12, 8625-8632.	14.6	76
35	$\hat{1}^3$ -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.	6.7	73
36	Intermediate layer for enhanced triboelectric nanogenerator. <i>Nano Energy</i> , 2021, 79, 105439.	16.0	70

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37	Carbon-coated Fe_2O_3 nanostructures for efficient anode of Li-ion battery. <i>Journal of Materials Chemistry A</i> , 2015, 3, 5183-5188.	10.3	67
38	Atmospheric pressure difference driven triboelectric nanogenerator for efficiently harvesting ocean wave energy. <i>Nano Energy</i> , 2018, 54, 156-162.	16.0	65
39	Abrasion and Fracture Self-Healable Triboelectric Nanogenerator with Ultrahigh Stretchability and Long-Term Durability. <i>Advanced Functional Materials</i> , 2021, 31, 2105380.	14.9	65
40	$\text{NiO-Co}_3\text{O}_4$ nanoplate composite as efficient anode in Li-ion battery. <i>Electrochimica Acta</i> , 2015, 178, 590-596.	5.2	63
41	Self-powered on-line ion concentration monitor in water transportation driven by triboelectric nanogenerator. <i>Nano Energy</i> , 2019, 62, 442-448.	16.0	63
42	Lowering the Onset Potential of $\text{Fe}_2\text{TiO}_5/\text{Fe}_2\text{O}_3$ Photoanodes by Interface Structures: F- and Rh-Based Treatments. <i>ACS Catalysis</i> , 2017, 7, 4062-4069.	11.2	61
43	High-performance flexible and broadband photodetectors based on PbS quantum dots/ZnO nanoparticles heterostructure. <i>Science China Materials</i> , 2019, 62, 225-235.	6.3	56
44	Loading the FeNiOOH cocatalyst on Pt-modified hematite nanostructures for efficient solar water oxidation. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 10453-10458.	2.8	55
45	A liquid PEDOT:PSS electrode-based stretchable triboelectric nanogenerator for a portable self-charging power source. <i>Nanoscale</i> , 2019, 11, 7513-7519.	5.6	55
46	Blue Energy Collection toward All-Days Self-Powered Chemical Energy Conversion. <i>Advanced Energy Materials</i> , 2020, 10, 2001041.	19.5	54
47	Boride-derived oxygen-evolution catalysts. <i>Nature Communications</i> , 2021, 12, 6089.	12.8	51
48	Fe_2TiO_5 -incorporated hematite with surface P-modification for high-efficiency solar water splitting. <i>Nano Energy</i> , 2017, 32, 526-532.	16.0	50
49	Self-driven photodetection based on impedance matching effect between a triboelectric nanogenerator and a MoS_2 nanosheets photodetector. <i>Nano Energy</i> , 2019, 59, 492-499.	16.0	50
50	Impedance Matching Effect between a Triboelectric Nanogenerator and a Piezoresistive Pressure Sensor Induced Self-Powered Weighing. <i>Advanced Materials Technologies</i> , 2018, 3, 1800054.	5.8	49
51	Identification of dual-active sites in cobalt phthalocyanine for electrochemical carbon dioxide reduction. <i>Nano Energy</i> , 2020, 67, 104163.	16.0	48
52	Surface Engineering for Enhanced Triboelectric Nanogenerator. <i>Nanoenergy Advances</i> , 2021, 1, 58-80.	7.7	47
53	Interface Engineering for Efficient Raindrop Solar Cell. <i>ACS Nano</i> , 2022, 16, 5292-5302.	14.6	47
54	A Liquid-Solid Interface-Based Triboelectric Tactile Sensor with Ultrahigh Sensitivity of 21.48 Pa^{-1} . <i>Nano-Micro Letters</i> , 2022, 14, 88.	27.0	47

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55	Efficient solar-driven hydrogen generation using colloidal heterostructured quantum dots. <i>Journal of Materials Chemistry A</i> , 2019, 7, 14079-14088.	10.3	46
56	Toward self-powered photodetection enabled by triboelectric nanogenerators. <i>Journal of Materials Chemistry C</i> , 2018, 6, 11893-11902.	5.5	45
57	Frequency-independent self-powered sensing based on capacitive impedance matching effect of triboelectric nanogenerator. <i>Nano Energy</i> , 2019, 65, 103984.	16.0	44
58	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.	10.3	41
59	Cube-like CuCoO nanostructures on reduced graphene oxide for H ₂ generation from ammonia borane. <i>Inorganic Chemistry Frontiers</i> , 2018, 5, 1180-1187.	6.0	39
60	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.	5.6	38
61	A half-wave rectifying triboelectric nanogenerator for self-powered water splitting towards hydrogen production. <i>Nano Energy</i> , 2022, 93, 106870.	16.0	37
62	Transparent, stretchable, temperature-stable and self-healing ionogel-based triboelectric nanogenerator for biomechanical energy collection. <i>Nano Research</i> , 2022, 15, 2060-2068.	10.4	36
63	Electron trapping & blocking effect enabled by MXene/TiO ₂ intermediate layer for charge regulation of triboelectric nanogenerators. <i>Nano Energy</i> , 2022, 98, 107236.	16.0	36
64	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.	14.9	35
65	Bamboo-inspired self-powered triboelectric sensor for touch sensing and sitting posture monitoring. <i>Nano Energy</i> , 2022, 91, 106670.	16.0	35
66	Hybrid Triboelectric Nanogenerators: From Energy Complementation to Integration. <i>Research</i> , 2021, 2021, 9143762.	5.7	32
67	Hybridized Mechanical and Solar Energy-Driven Self-Powered Hydrogen Production. <i>Nano-Micro Letters</i> , 2020, 12, 88.	27.0	31
68	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.	5.5	29
69	PbS Quantum Dots/2D Nonlayered CdS _x Se _{1-x} Nanosheet Hybrid Nanostructure for High-Performance Broadband Photodetectors. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 43887-43895.	8.0	29
70	A self-powered hydrogen leakage sensor based on impedance adjustable windmill-like triboelectric nanogenerator. <i>Nano Energy</i> , 2021, 89, 106453.	16.0	28
71	3D-printed endoplasmic reticulum rGO microstructure based self-powered triboelectric pressure sensor. <i>Chemical Engineering Journal</i> , 2022, 445, 136821.	12.7	28
72	Insight into Ion Diffusion Dynamics/Mechanisms and Electronic Structure of Highly Conductive Sodium-Rich Na _{3-x} La _x Zr ₂ Si ₂ PO ₁₂ (0 ≤ x ≤ 0.5) Solid-State Electrolytes. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 13132-13138.	8.0	27

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73	Boron-passivated surface Fe ^(iv) defects in hematite for highly efficient water oxidation. <i>Nanoscale</i> , 2018, 10, 7033-7039.	5.6	25
74	Surface-microengineering for high-performance triboelectric tactile sensor via dynamically assembled ferrofluid template. <i>Nano Energy</i> , 2021, 87, 106215.	16.0	24
75	Comprehensive electronic structure characterization of pristine and nitrogen/phosphorus doped carbon nanocages. <i>Carbon</i> , 2016, 103, 480-487.	10.3	23
76	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.	4.1	23
77	Organic-Inorganic Hybrid Derived Molybdenum Carbide Nanoladders: Impacts of Surface Oxidation for Hydrogen Evolution Reaction. <i>ChemNanoMat</i> , 2018, 4, 194-202.	2.8	23
78	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.	2.0	22
79	Self-Powered Active Spherical Triboelectric Sensor for Fluid Velocity Detection. <i>IEEE Nanotechnology Magazine</i> , 2020, 19, 230-235.	2.0	22
80	A Self-Powered Gas Sensor Based on Coupling Triboelectric Screening and Impedance Matching Effects. <i>Advanced Materials Technologies</i> , 2021, 6, 2100310.	5.8	21
81	Tetrahedral DNA mediated direct quantification of exosomes by contact-electrification effect. <i>Nano Energy</i> , 2022, 92, 106781.	16.0	21
82	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.	8.0	20
83	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.	8.0	20
84	The effect of catalysts and underlayer metals on the properties of PECVD-grown carbon nanostructures. <i>Nanotechnology</i> , 2010, 21, 045201.	2.6	19
85	Transition metal pincer complex based self-healable, stretchable and transparent triboelectric nanogenerator. <i>Nano Energy</i> , 2020, 78, 105348.	16.0	19
86	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.	5.5	18
87	Synthesis and Structure-Dependent Optical Properties of ZnO Nanocomb and ZnO Nanoflag. <i>Journal of Physical Chemistry C</i> , 2017, 121, 26076-26085.	3.1	17
88	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.	3.7	16
89	All-in-One Self-Powered Human-Machine Interaction System for Wireless Remote Telemetry and Control of Intelligent Cars. <i>Nanomaterials</i> , 2021, 11, 2711.	4.1	16
90	Highly-rough surface carbon nanofibers film as an effective interlayer for lithium-sulfur batteries. <i>Journal of Semiconductors</i> , 2020, 41, 092701.	3.7	14

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91	Construction of Novel Bimetallic Oxyphosphide as Advanced Anode for Potassium Ion Hybrid Capacitor. <i>Advanced Science</i> , 2022, 9, e2105193.	11.2	14
92	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.	3.1	13
93	Carbon nitride supported Ni _{0.5} Co _{0.5} O nanoparticles with strong interfacial interaction to enhance the hydrolysis of ammonia borane. <i>RSC Advances</i> , 2019, 9, 11552-11557.	3.6	13
94	Highly sensitive and fast-response ethanol sensing of porous Co ₃ O ₄ hollow polyhedra <i>via</i> palladium reined spillover effect. <i>RSC Advances</i> , 2022, 12, 6725-6731.	3.6	12
95	Stable Silicene Wrapped by Graphene in Air. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 40620-40628.	8.0	11
96	Temperature-Dependence Photoelectrochemical Hydrogen Generation Based on Alloyed Quantum Dots. <i>Journal of Physical Chemistry C</i> , 2022, 126, 174-182.	3.1	11
97	Heterostructured core/gradient multi-shell quantum dots for high-performance and durable photoelectrochemical hydrogen generation. <i>Nano Energy</i> , 2022, 100, 107524.	16.0	11
98	Hollow polyhedral ZnCo ₂ O 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.	5.5	10
99	Brightness-enhanced electroluminescence driven by triboelectric nanogenerators through permittivity manipulation and impedance matching. <i>Nano Energy</i> , 2022, 98, 107308.	16.0	10
100	Triboelectric current stimulation alleviates in vitro cell migration and in vivo tumor metastasis. <i>Nano Energy</i> , 2022, 100, 107471.	16.0	10
101	The mechanism of structural changes and crystallization kinetics of amorphous red phosphorus to black phosphorus under high pressure. <i>Chemical Communications</i> , 2019, 55, 8094-8097.	4.1	9
102	Self-Powered Gyroscope Angle Sensor Based on Resistive Matching Effect of Triboelectric Nanogenerator. <i>Advanced Materials Technologies</i> , 2021, 6, 2100797.	5.8	9
103	An Integrated Self-Powered Real-Time Pedometer System with Ultrafast Response and High Accuracy. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 61789-61798.	8.0	6
104	The morphological effect on electronic structure and electrical transport properties of one-dimensional carbon nanostructures. <i>RSC Advances</i> , 2017, 7, 21079-21084.	3.6	2
105	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.	2.6	2