

Daoai Wang

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

118
papers

4,293
citations

37
h-index

62
g-index

122
ext. papers

5,290
ext. citations

9.9
avg, IF

5.86
L-index

#	Paper	IF	Citations
118	Control methods and applications of interface contact electrification of triboelectric nanogenerators: a review. <i>Materials Research Letters</i> , 2022 , 10, 97-123	7.4	6
117	Mechanism and regulation of peeling-electrification in adhesive interface. <i>Nano Energy</i> , 2022 , 95, 107011	17.1	0
116	Hydrophobic MAO/FSG coating based TENG for self-healable energy harvesting and self-powered cathodic protection. <i>Science China Technological Sciences</i> , 2022 , 65, 726	3.5	3
115	Surface engineering and on-site charge neutralization for the regulation of contact electrification. <i>Nano Energy</i> , 2022 , 91, 106687	17.1	2
114	A new strategy for tube leakage and blockage detection using bubble motion-based solid-liquid triboelectric sensor. <i>Science China Technological Sciences</i> , 2022 , 65, 282	3.5	2
113	Highly wearable, machine-washable, and self-cleaning fabric-based triboelectric nanogenerator for wireless drowning sensors. <i>Nano Energy</i> , 2022 , 93, 106835	17.1	10
112	A new SiP QDs/TiO ₂ NRs composite catalyst with Al ₂ O ₃ passivation layer for enhanced photoelectrochemical water splitting. <i>Chemical Engineering Journal</i> , 2022 , 429, 132248	14.7	2
111	A New Self-Healing Triboelectric Nanogenerator Based on Polyurethane Coating and Its Application for Self-Powered Cathodic Protection.. <i>ACS Applied Materials & Interfaces</i> , 2022 , 14, 10498-10507	9.5	7
110	Interfacial triboelectrification-modulated self-recoverable and thermally stable mechanoluminescence in mixed-anion compounds. <i>Nano Energy</i> , 2022 , 96, 107075	17.1	4
109	Ice-based triboelectric nanogenerator with low friction and self-healing properties for energy harvesting and ice broken warning. <i>Nano Energy</i> , 2022 , 97, 107144	17.1	3
108	A New Reversible Thermosensitive Liquid-Solid TENG Based on a P(NIPAM-MMA) Copolymer for Triboelectricity Regulation and Temperature Monitoring.. <i>Small</i> , 2022 , e2201442	11	4
107	Tribological-behaviour-controlled Direct-current Triboelectric Nanogenerator Based on the Tribovoltaic Effect under High Contact Pressure. <i>Nano Energy</i> , 2022 , 107370	17.1	2
106	A new synergetic system based on triboelectric nanogenerator and corrosion inhibitor for enhanced anticorrosion performance. <i>Nano Energy</i> , 2021 , 91, 106696	17.1	8
105	Hydrophobic organic coating based water-solid TENG for water-flow energy collection and self-powered cathodic protection. <i>Frontiers of Materials Science</i> , 2021 , 15, 601	2.5	2
104	Green plant-based triboelectricity system for green energy harvesting and contact warning. <i>EcoMat</i> , 2021 , 3, e12145	9.4	3
103	An asymmetric AC electric field of triboelectric nanogenerator for efficient water/oil emulsion separation. <i>Nano Energy</i> , 2021 , 90, 106641	17.1	6
102	Control of triboelectricity by mechanoluminescence in ZnS/Mn-containing polymer films. <i>Nano Energy</i> , 2021 , 90, 106646	17.1	12

101	Influence of interface liquid lubrication on triboelectrification of point contact friction pair. <i>Tribology International</i> , 2021 , 165, 107323	4.9	4
100	Manipulating Electrical Properties of Silica-Based Materials via Atomic Oxygen Irradiation. <i>ACS Applied Materials & Interfaces</i> , 2021 , 13, 15344-15352	9.5	3
99	An Anodized Titanium/Sol-Gel Composite Coating with Self-Healable Superhydrophobic and Oleophobic Property. <i>Frontiers in Materials</i> , 2021 , 8,	4	5
98	Concealed Wireless Warning Sensor Based on Triboelectrification and Human-Plant Interactive Induction. <i>Research</i> , 2021 , 2021, 9870936	7.8	7
97	New starch capsules with antistatic, anti-wear and superlubricity properties. <i>Frontiers of Materials Science</i> , 2021 , 15, 266-279	2.5	2
96	Gas-solid two-phase flow-driven triboelectric nanogenerator for wind-sand energy harvesting and self-powered monitoring sensor. <i>Nano Energy</i> , 2021 , 85, 106023	17.1	10
95	Conductive elastic sponge-based triboelectric nanogenerator (TEG) for effective random mechanical energy harvesting and ammonia sensing. <i>Nano Energy</i> , 2021 , 79, 105422	17.1	22
94	Research methods of contact electrification: Theoretical simulation and experiment. <i>Nano Energy</i> , 2021 , 79, 105501	17.1	9
93	Liquid-solid triboelectric nanogenerators array and its applications for wave energy harvesting and self-powered cathodic protection. <i>Energy</i> , 2021 , 217, 119388	7.9	16
92	Leaf-like MXene nanosheets intercalated TiO ₂ nanorod array photoelectrode with enhanced photoelectrochemical performance. <i>Journal of Power Sources</i> , 2021 , 484, 229236	8.9	10
91	New Hydrogen Bonding Enhanced Polyvinyl Alcohol Based Self-Charged Medical Mask with Superior Charge Retention and Moisture Resistance Performances. <i>Advanced Functional Materials</i> , 2021 , 31, 2009172	15.6	25
90	Reversible Temperature-Sensitive Liquid-Solid Triboelectrification with Polycaprolactone Material for Wetting Monitoring and Temperature Sensing. <i>Advanced Functional Materials</i> , 2021 , 31, 2010220	15.6	10
89	A triboelectric/electromagnetic hybrid generator for efficient wind energy collection and power supply for electronic devices. <i>Science China Technological Sciences</i> , 2021 , 64, 2003-2011	3.5	7
88	A new method for the electrostatic manipulation of droplet movement by triboelectric nanogenerator. <i>Nano Energy</i> , 2021 , 86, 106115	17.1	5
87	Humidity-resistant triboelectric nanogenerator and its applications in wind energy harvesting and self-powered cathodic protection. <i>Electrochimica Acta</i> , 2021 , 391, 138994	6.7	7
86	Controlling the tribological behavior at the friction interface by regulating the triboelectrification. <i>Nano Energy</i> , 2021 , 87, 106183	17.1	6
85	Triboelectrification of interface controlled by photothermal materials based on electron transfer. <i>Nano Energy</i> , 2021 , 89, 106336	17.1	4
84	Complete Prevention of Contact Electrification by Molecular Engineering. <i>Matter</i> , 2021 , 4, 290-301	12.7	7

83	New inorganic coating-based triboelectric nanogenerators with anti-wear and self-healing properties for efficient wave energy harvesting. <i>Applied Materials Today</i> , 2020 , 20, 100645	6.6	11
82	New Self-Healing Triboelectric Nanogenerator Based on Simultaneous Repair Friction Layer and Conductive Layer. <i>ACS Applied Materials & Interfaces</i> , 2020 , 12, 30390-30398	9.5	35
81	New Hydrophobic Organic Coating Based Triboelectric Nanogenerator for Efficient and Stable Hydropower Harvesting. <i>ACS Applied Materials & Interfaces</i> , 2020 , 12, 31351-31359	9.5	22
80	New Coating TENG with Antiwear and Healing Functions for Energy Harvesting. <i>ACS Applied Materials & Interfaces</i> , 2020 , 12, 9387-9394	9.5	12
79	Enhanced Photoelectrochemical Water-Splitting Property on TiO Nanotubes by Surface Chemical Modification and Wettability Control. <i>ACS Applied Materials & Interfaces</i> , 2020 , 12, 20110-20118	9.5	20
78	Oleic-acid enhanced triboelectric nanogenerator with high output performance and wear resistance. <i>Nano Energy</i> , 2020 , 69, 104435	17.1	27
77	Regulation and influence factors of triboelectricity at the solid-liquid interface. <i>Nano Energy</i> , 2020 , 78, 105370	17.1	24
76	Biofilm material based triboelectric nanogenerator with high output performance in 95% humidity environment. <i>Nano Energy</i> , 2020 , 77, 105088	17.1	25
75	Carbon quantum dots (CQDs) modified TiO ₂ nanorods photoelectrode for enhanced photocathodic protection of Q235 carbon steel. <i>Corrosion Science</i> , 2020 , 176, 108919	6.8	18
74	Ta ₂ O ₅ NTs-TiO ₂ nanodots heterostructure photocatalyst material for enhanced photodegradation and photoelectrochemical performance under simulated solar light. <i>Journal of Nanoparticle Research</i> , 2020 , 22, 1	2.3	3
73	Solid-Liquid Triboelectrification Control and Antistatic Materials Design Based on Interface Wettability Control. <i>Advanced Functional Materials</i> , 2019 , 29, 1903587	15.6	36
72	Water-solid triboelectrification with self-repairable surfaces for water-flow energy harvesting. <i>Nano Energy</i> , 2019 , 61, 454-461	17.1	49
71	TiO ₂ hollow spheres with separated Au and RuO ₂ co-catalysts for efficient photocatalytic water splitting. <i>International Journal of Hydrogen Energy</i> , 2019 , 44, 13221-13231	6.7	25
70	New Method for the Corrosion Resistance of AZ31 Mg Alloy with a Porous Micro-Arc Oxidation Membrane as an Ionic Corrosion Inhibitor Container. <i>Langmuir</i> , 2019 , 35, 1134-1145	4	29
69	Anti-corrosion of amphoteric metal enhanced by MAO/corrosion inhibitor composite in acid, alkaline and salt solutions. <i>Journal of Colloid and Interface Science</i> , 2019 , 554, 488-499	9.3	33
68	Controllable TiO ₂ core-shell phase heterojunction for efficient photoelectrochemical water splitting under solar light. <i>Applied Catalysis B: Environmental</i> , 2019 , 244, 519-528	21.8	46
67	Synergistic effect of hydrophobic film and porous MAO membrane containing alkynol inhibitor for enhanced corrosion resistance of magnesium alloy. <i>Surface and Coatings Technology</i> , 2019 , 357, 515-525	4.4	28
66	Leaves based triboelectric nanogenerator (TENG) and TENG tree for wind energy harvesting. <i>Nano Energy</i> , 2019 , 55, 260-268	17.1	104

65	Soft/Hard-Coupled Amphiphilic Polymer Nanospheres for Water Lubrication. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 9178-9187	9.5	34
64	Hierarchical WO ₃ /TiO ₂ nanotube nanocomposites for efficient photocathodic protection of 304 stainless steel under visible light. <i>Journal of Alloys and Compounds</i> , 2018 , 749, 741-749	5.7	43
63	Self-powered ammonia nanosensor based on the integration of the gas sensor and triboelectric nanogenerator. <i>Nano Energy</i> , 2018 , 49, 31-39	17.1	101
62	Synthesis of Hollow Mesoporous TiO Microspheres with Single and Double Au Nanoparticle Layers for Enhanced Visible-Light Photocatalysis. <i>Chemistry - an Asian Journal</i> , 2018 , 13, 432-439	4.5	13
61	High lubricity and electrical responsiveness of solvent-free ionic SiO ₂ nanofluids. <i>Journal of Materials Chemistry A</i> , 2018 , 6, 2817-2827	13	39
60	Triboelectrification based on double-layered polyaniline nanofibers for self-powered cathodic protection driven by wind. <i>Nano Research</i> , 2018 , 11, 1873-1882	10	50
59	Nanoflower like SnO ₂ -TiO ₂ nanotubes composite photoelectrode for efficient photocathodic protection of 304 stainless steel. <i>Applied Surface Science</i> , 2018 , 457, 516-521	6.7	35
58	Alumina anchored CQDs/TiO ₂ nanorods by atomic layer deposition for efficient photoelectrochemical water splitting under solar light. <i>Journal of Materials Chemistry A</i> , 2018 , 6, 18293-18303	13	24
57	In situ growth of single-crystal TiO ₂ nanorod arrays on Ti substrate: Controllable synthesis and photoelectro-chemical water splitting. <i>Nano Research</i> , 2017 , 10, 1021-1032	10	13
56	A new protocol toward high output TENG with polyimide as charge storage layer. <i>Nano Energy</i> , 2017 , 38, 467-476	17.1	78
55	Preparation of Gold Shells on Hollow Mesoporous Silica Nanospheres and Application to Photothermal-Chemotherapy. <i>ChemistrySelect</i> , 2017 , 2, 3969-3975	1.8	8
54	Hollow hematite single crystals deposited with ultra-thin AlO by atom layer deposition for improved photoelectrochemical performance. <i>Dalton Transactions</i> , 2017 , 46, 10635-10640	4.3	7
53	Enhancement of photoelectrochemical and photocathodic protection properties of TiO ₂ nanotube arrays by simple surface UV treatment. <i>Applied Surface Science</i> , 2017 , 394, 440-445	6.7	43
52	Preparation of hollow mesoporous silica nanospheres: controllable template synthesis and their application in drug delivery. <i>New Journal of Chemistry</i> , 2017 , 41, 14122-14129	3.6	23
51	Solid-liquid triboelectrification in smart U-tube for multifunctional sensors. <i>Nano Energy</i> , 2017 , 40, 95-106	17.1	59
50	3D hierarchical WO ₃ grown on TiO ₂ nanotube arrays and their photoelectrochemical performance for water splitting. <i>Journal of Alloys and Compounds</i> , 2017 , 695, 2154-2159	5.7	16
49	Hydrogenated TiO ₂ nanotube arrays with enhanced photoelectrochemical property for photocathodic protection under visible light. <i>Materials Letters</i> , 2016 , 185, 81-84	3.3	31
48	Paper-based triboelectric nanogenerators and their application in self-powered anticorrosion and antifouling. <i>Journal of Materials Chemistry A</i> , 2016 , 4, 18022-18030	13	55

47	Recent progress in red semiconductor photocatalysts for solar energy conversion and utilization. <i>Nanotechnology Reviews</i> , 2016 , 5,	6.3	8
46	High output polypropylene nanowire array triboelectric nanogenerator through surface structural control and chemical modification. <i>Nano Energy</i> , 2016 , 19, 48-57	17.1	104
45	Self-assembled super-hydrophobic multilayer films with corrosion resistance on copper substrate. <i>RSC Advances</i> , 2016 , 6, 2379-2386	3.7	18
44	Liquid-Solid contact triboelectrification and its use in self-powered nanosensor for detecting organics in water. <i>Nano Energy</i> , 2016 , 30, 321-329	17.1	55
43	Conducting polymer PPy nanowire-based triboelectric nanogenerator and its application for self-powered electrochemical cathodic protection. <i>Chemical Science</i> , 2016 , 7, 6477-6483	9.4	61
42	Adhesion: Gecko-Inspired but Chemically Switched Friction and Adhesion on Nanofibrillar Surfaces (Small 9-10/2015). <i>Small</i> , 2015 , 11, 1130-1130	11	1
41	Surface engineering for an enhanced photoelectrochemical response of TiO ₂ nanotube arrays by simple surface air plasma treatment. <i>Chemical Communications</i> , 2015 , 51, 16940-3	5.8	24
40	Ag Nanoparticle-Loaded Hierarchical Superamphiphobic Surface on an Al Substrate with Enhanced Anticorrosion and Antibacterial Properties. <i>Journal of Physical Chemistry C</i> , 2015 , 119, 25449-25456	3.8	59
39	Integration of Self-Lubrication and Near-Infrared Photothermogenesis for Excellent Anti-Icing/Deicing Performance. <i>Advanced Functional Materials</i> , 2015 , 25, 4237-4245	15.6	121
38	Nanoporous Substrate-Infiltrated Hydrogels: a Bioinspired Regenerable Surface for High Load Bearing and Tunable Friction. <i>Advanced Functional Materials</i> , 2015 , 25, 7366-7374	15.6	61
37	Antifouling on Gecko's Feet Inspired Fibrillar Surfaces: Evolving from Land to Marine and from Liquid Repellency to Algae Resistance. <i>Advanced Materials Interfaces</i> , 2015 , 2, 1500257	4.6	47
36	Effect of Boundary Slippage on Foul Release 2015 , 151-175		
35	Polypyrrole nanowire/TiO ₂ nanotube nanocomposites as photoanodes for photocathodic protection of Ti substrate and 304 stainless steel under visible light. <i>Corrosion Science</i> , 2015 , 98, 471-477	6.8	76
34	Preparation and characterization of magnetic nanocomposite catalysts with double Au nanoparticle layers. <i>RSC Advances</i> , 2015 , 5, 99697-99705	3.7	7
33	Molybdenum-doped and anatase/rutile mixed-phase TiO ₂ nanotube photoelectrode for high photoelectrochemical performance. <i>Journal of Power Sources</i> , 2015 , 281, 411-416	8.9	44
32	Electrostatic Self-Assembly of Au Nanoparticles onto Thermosensitive Magnetic Core-Shell Microgels for Thermally Tunable and Magnetically Recyclable Catalysis. <i>Small</i> , 2015 , 11, 2807-16	11	95
31	Bioinspired Self-Healing Organic Materials: Chemical Mechanisms and Fabrications. <i>Journal of Bionic Engineering</i> , 2015 , 12, 1-16	2.7	28
30	Rabbit hair regenerative superhydrophobicity. <i>RSC Advances</i> , 2014 , 4, 3611-3614	3.7	5

29	A general approach for construction of asymmetric modification membranes for gated flow nanochannels. <i>Journal of Materials Chemistry A</i> , 2014 , 2, 8804-8814	13	32
28	Controlling liquid movement on a surface with a macro-gradient structure and wetting behavior. <i>Journal of Materials Chemistry A</i> , 2014 , 2, 5620	13	22
27	Candle soot as a supercapacitor electrode material. <i>RSC Advances</i> , 2014 , 4, 2586-2589	3.7	45
26	Core/Shell photocatalyst with spatially separated co-catalysts for efficient reduction and oxidation of water. <i>Angewandte Chemie - International Edition</i> , 2013 , 52, 11252-6	16.4	225
25	Parallel array of nanochannels grafted with polymer-brushes-stabilized Au nanoparticles for flow-through catalysis. <i>Nanoscale</i> , 2013 , 5, 11894-901	7.7	25
24	Novel three-dimensional nanoporous alumina as a template for hierarchical TiO ₂ nanotube arrays. <i>Small</i> , 2013 , 9, 1025-9	11	33
23	Hierarchical Structures: Novel Three-Dimensional Nanoporous Alumina as a Template for Hierarchical TiO ₂ Nanotube Arrays (Small 7/2013). <i>Small</i> , 2013 , 9, 1120-1120	11	1
22	Core/Shell Photocatalyst with Spatially Separated Co-Catalysts for Efficient Reduction and Oxidation of Water. <i>Angewandte Chemie</i> , 2013 , 125, 11462-11466	3.6	16
21	Structural engineering of highly ordered TiO ₂ nanotube array by periodic anodization of titanium. <i>Electrochemistry Communications</i> , 2012 , 23, 68-71	5.1	16
20	Fabrication and characterization of extended arrays of Ag ₂ S/Ag nanodot resistive switches. <i>Applied Physics Letters</i> , 2011 , 98, 243109	3.4	40
19	Spontaneous phase and morphology transformations of anodized titania nanotubes induced by water at room temperature. <i>Nano Letters</i> , 2011 , 11, 3649-55	11.5	170
18	Towards chemically bonded p-n heterojunctions through surface initiated electrodeposition of p-type conducting polymer inside TiO ₂ nanotubes. <i>Journal of Materials Chemistry</i> , 2010 , 20, 6910		39
17	Continuous Fabrication of Free-Standing TiO ₂ Nanotube Array Membranes with Controllable Morphology for Depositing Interdigitated Heterojunctions. <i>Chemistry of Materials</i> , 2010 , 22, 6656-6664	9.6	102
16	Engineering a Titanium Surface with Controllable Oleophobicity and Switchable Oil Adhesion. <i>Journal of Physical Chemistry C</i> , 2010 , 114, 9938-9944	3.8	121
15	Synthesis and characterization of anatase TiO ₂ nanotubes and their use in dye-sensitized solar cells. <i>Materials Chemistry and Physics</i> , 2009 , 113, 602-606	4.4	78
14	Microstructured Arrays of TiO ₂ Nanotubes for Improved Photo-Electrocatalysis and Mechanical Stability. <i>Advanced Functional Materials</i> , 2009 , 19, 1930-1938	15.6	84
13	A Novel Protocol Toward Perfect Alignment of Anodized TiO ₂ Nanotubes. <i>Advanced Materials</i> , 2009 , 21, 1964-1967	24	167
12	Polyelectrolyte Brush Templated Multiple Loading of Pd Nanoparticles onto TiO ₂ Nanowires via Regenerative Counterion Exchange Reduction. <i>Journal of Physical Chemistry C</i> , 2009 , 113, 7677-7683	3.8	61

11	TiO ₂ Nanotubes with Tunable Morphology, Diameter, and Length: Synthesis and Photo-Electrical/Catalytic Performance. <i>Chemistry of Materials</i> , 2009 , 21, 1198-1206	9.6	218
10	Electrolyte-modulated electrochemistry and electrocatalysis on ferrocene-terminated polyelectrolyte brushes. <i>Journal of Materials Chemistry</i> , 2009 , 19, 8129		27
9	Highly flexible coaxial nanohybrids made from porous TiO ₂ nanotubes. <i>ACS Nano</i> , 2009 , 3, 1249-57	16.7	73
8	Towards a tunable and switchable water adhesion on a TiO ₂ nanotube film with patterned wettability. <i>Chemical Communications</i> , 2009 , 7018-20	5.8	111
7	Alumina nanowire forests via unconventional anodization and super-repellency plus low adhesion to diverse liquids. <i>Chemical Communications</i> , 2009 , 1043-5	5.8	180
6	Electrochemical Characterization of the Solution Accessibility of CaTiO ₃ Microstructures and Improved Biomineralization. <i>Journal of Physical Chemistry C</i> , 2008 , 112, 16123-16129	3.8	14
5	Synthesis and characterization of silver nanoparticle loaded mesoporous TiO ₂ nanobelts. <i>Microporous and Mesoporous Materials</i> , 2008 , 116, 658-664	5.3	36
4	In situ hydrothermal synthesis of nanolamellate CaTiO ₃ with controllable structures and wettability. <i>Inorganic Chemistry</i> , 2007 , 46, 7707-9	5.1	61
3	Tribological Behaviors of Amorphous Cr Coatings Electrodeposited from Cr(III) Baths under Ionic Liquid Lubrication. <i>Electrochemical and Solid-State Letters</i> , 2007 , 10, D85		18
2	A Cyclodextrin enhanced polyethylene terephthalate film with improved contact charging ability in a high humidity environment. <i>Nanoscale Advances</i> ,	5.1	4
1	Nanotribology of SiP nanosheets: Effect of thickness and sliding velocity. <i>Friction</i> , 1	5.6	1