Sihong Wang

List of Publications by Citations

64	16,091	55	66
papers	citations	h-index	g-index
66	18,589	18.5	6.72
ext. papers	ext. citations	avg, IF	L-index

#	Paper	IF	Citations
64	Skin electronics from scalable fabrication of an intrinsically stretchable transistor array. *Nature*, **2018**, 555, 83-88	50.4	1089
63	Theoretical study of contact-mode triboelectric nanogenerators as an effective power source. *Energy and Environmental Science*, **2013**, 6, 3576	35.4	990
62	Nanoscale triboelectric-effect-enabled energy conversion for sustainably powering portable electronics. *Nano Letters*, **2012**, 12, 6339-46	11.5	840
61	Highly stretchable polymer semiconductor films through the nanoconfinement effect. *Science*, **2017**, 355, 59-64	33.3	651
60	Flexible high-output nanogenerator based on lateral ZnO nanowire array. *Nano Letters*, **2010**, 10, 3151-5	11.5	628
59	Freestanding triboelectric-layer-based nanogenerators for harvesting energy from a moving object or human motion in contact and non-contact modes. *Advanced Materials*, **2014**, 26, 2818-24	24	549
58	Triboelectric nanogenerators as self-powered active sensors. *Nano Energy*, **2015**, 11, 436-462	17.1	505
57	Sliding-triboelectric nanogenerators based on in-plane charge-separation mechanism. *Nano Letters*, **2013**, 13, 2226-33	11.5	496
56	A hybrid piezoelectric structure for wearable nanogenerators. *Advanced Materials*, **2012**, 24, 1759-64	24	478
55	Triboelectric active sensor array for self-powered static and dynamic pressure detection and tactile imaging. *ACS Nano*, **2013**, 7, 8266-74	16.7	434
54	Theory of sliding-mode triboelectric nanogenerators. *Advanced Materials*, **2013**, 25, 6184-93	24	430
53	Maximum surface charge density for triboelectric nanogenerators achieved by ionized-air injection: methodology and theoretical understanding. *Advanced Materials*, **2014**, 26, 6720-8	24	368
52	Segmentally structured disk triboelectric nanogenerator for harvesting rotational mechanical energy. *Nano Letters*, **2013**, 13, 2916-23	11.5	368
51	Theoretical Investigation and Structural Optimization of Single-Electrode Triboelectric Nanogenerators. *Advanced Functional Materials*, **2014**, 24, 3332-3340	15.6	364
50	In vivo powering of pacemaker by breathing-driven implanted triboelectric nanogenerator. *Advanced Materials*, **2014**, 26, 5851-6	24	352
49	Progress in nanogenerators for portable electronics. *Materials Today*, **2012**, 15, 532-543	21.8	351
48	Grating-structured freestanding triboelectric-layer nanogenerator for harvesting mechanical energy at 85% total conversion efficiency. *Advanced Materials*, **2014**, 26, 6599-607	24	337

47	Triboelectric-pyroelectric-piezoelectric hybrid cell for high-efficiency energy-harvesting and self-powered sensing. *Advanced Materials*, **2015**, 27, 2340-7	24	331
46	Rectangular bunched rutile TiO2 nanorod arrays grown on carbon fiber for dye-sensitized solar cells. *Journal of the American Chemical Society*, **2012**, 134, 4437-41	16.4	321
45	Quadruple H-Bonding Cross-Linked Supramolecular Polymeric Materials as Substrates for Stretchable, Antitearing, and Self-Healable Thin Film Electrodes. *Journal of the American Chemical Society*, **2018**, 140, 5280-5289	16.4	312
44	Effective energy storage from a triboelectric nanogenerator. *Nature Communications*, **2016**, 7, 10987	17.4	310
43	Skin-Inspired Electronics: An Emerging Paradigm. *Accounts of Chemical Research*, **2018**, 51, 1033-1045	24.3	288
42	Theory of freestanding triboelectric-layer-based nanogenerators. *Nano Energy*, **2015**, 12, 760-774	17.1	283
41	An integrated power pack of dye-sensitized solar cell and Li battery based on double-sided TiO2 nanotube arrays. *Nano Letters*, **2012**, 12, 2520-3	11.5	279
40	A Flexible Fiber-Based Supercapacitor-Triboelectric-Nanogenerator Power System for Wearable Electronics. *Advanced Materials*, **2015**, 27, 4830-6	24	276
39	Rotary triboelectric nanogenerator based on a hybridized mechanism for harvesting wind energy. *ACS Nano*, **2013**, 7, 7119-25	16.7	263
38	A wireless body area sensor network based on stretchable passive tags. *Nature Electronics*, **2019**, 2, 361-368	28.4	258
37	Finger typing driven triboelectric nanogenerator and its use for instantaneously lighting up LEDs. *Nano Energy*, **2013**, 2, 491-497	17.1	222
36	Enhanced triboelectric nanogenerators and triboelectric nanosensor using chemically modified TiO2 nanomaterials. *ACS Nano*, **2013**, 7, 4554-60	16.7	222
35	Hybridizing energy conversion and storage in a mechanical-to-electrochemical process for self-charging power cell. *Nano Letters*, **2012**, 12, 5048-54	11.5	210
34	Pyroelectric nanogenerators for driving wireless sensors. *Nano Letters*, **2012**, 12, 6408-13	11.5	183
33	Molecular surface functionalization to enhance the power output of triboelectric nanogenerators. *Journal of Materials Chemistry A*, **2016**, 4, 3728-3734	13	177
32	Robust triboelectric nanogenerator based on rolling electrification and electrostatic induction at an instantaneous energy conversion efficiency of ~ 55%. *ACS Nano*, **2015**, 9, 922-30	16.7	173
31	Quantitative measurements of vibration amplitude using a contact-mode freestanding triboelectric nanogenerator. *ACS Nano*, **2014**, 8, 12004-13	16.7	169
30	Noncontact free-rotating disk triboelectric nanogenerator as a sustainable energy harvester and self-powered mechanical sensor. *ACS Applied Materials & Interfaces*, **2014**, 6, 3031-8	9.5	168

29	Ultratransparent and stretchable graphene electrodes. *Science Advances*, **2017**, 3, e1700159	14.3	168
28	A theoretical study of grating structured triboelectric nanogenerators. *Energy and Environmental Science*, **2014**, 7, 2339-2349	35.4	154
27	Simulation method for optimizing the performance of an integrated triboelectric nanogenerator energy harvesting system. *Nano Energy*, **2014**, 8, 150-156	17.1	153
26	Multi-scale ordering in highly stretchable polymer semiconducting films. *Nature Materials*, **2019**, 18, 594-601	27	146
25	Dipole-moment-induced effect on contact electrification for triboelectric nanogenerators. *Nano Research*, **2014**, 7, 990-997	10	139
24	Manipulating nanoscale contact electrification by an applied electric field. *Nano Letters*, **2014**, 14, 1567-72	11.5	135
23	Self-Powered Trajectory, Velocity, and Acceleration Tracking of a Moving Object/Body using a Triboelectric Sensor. *Advanced Functional Materials*, **2014**, 24, 7488-7494	15.6	135
22	Enhanced performance of flexible ZnO nanowire based room-temperature oxygen sensors by piezotronic effect. *Advanced Materials*, **2013**, 25, 3701-6	24	130
21	Motion charged battery as sustainable flexible-power-unit. *ACS Nano*, **2013**, 7, 11263-71	16.7	114
20	Optimization of Triboelectric Nanogenerator Charging Systems for Efficient Energy Harvesting and Storage. *IEEE Transactions on Electron Devices*, **2015**, 62, 641-647	2.9	110
19	Sustainable Energy Source for Wearable Electronics Based on Multilayer Elastomeric Triboelectric Nanogenerators. *Advanced Energy Materials*, **2017**, 7, 1602832	21.8	104
18	Strain-gated piezotronic transistors based on vertical zinc oxide nanowires. *ACS Nano*, **2012**, 6, 3760-6	16.7	99
17	A self-powered electrochromic device driven by a nanogenerator. *Energy and Environmental Science* , **2012**, 5, 9462	35.4	96
16	Self-Powered Triboelectric Nanosensor for Microfluidics and Cavity-Confined Solution Chemistry. *ACS Nano*, **2015**, 9, 11056-63	16.7	86
15	Multi-layered disk triboelectric nanogenerator for harvesting hydropower. *Nano Energy*, **2014**, 6, 129-136	17.1	86
14	Largely Improving the Robustness and Lifetime of Triboelectric Nanogenerators through Automatic Transition between Contact and Noncontact Working States. *ACS Nano*, **2015**, 9, 7479-87	16.7	73
13	Highly porous piezoelectric PVDF membrane as effective lithium ion transfer channels for enhanced self-charging power cell. *Nano Energy*, **2015**, 14, 77-86	17.1	73
12	A Streaming Potential/Current-Based Microfluidic Direct Current Generator for Self-Powered Nanosystems. *Advanced Materials*, **2015**, 27, 6482-7	24	71

List of Publications

11	Synthesis of vertically aligned ultra-long ZnO nanowires on heterogeneous substrates with catalyst at the root. *Nanotechnology*, **2012**, 23, 055604	3.4	63
10	Strain-insensitive intrinsically stretchable transistors and circuits. *Nature Electronics*, **2021**, 4, 143-150	28.4	56
9	Nonhalogenated Solvent Processable and Printable High-Performance Polymer Semiconductor Enabled by Isomeric Nonconjugated Flexible Linkers. *Macromolecules*, **2018**, 51, 4976-4985	5.5	49
8	Stretchable transistors and functional circuits for human-integrated electronics. *Nature Electronics*, **2021**, 4, 17-29	28.4	49
7	An elastic-spring-substrated nanogenerator as an active sensor for self-powered balance. *Energy and Environmental Science*, **2013**, 6, 1164	35.4	47
6	Nanostructuring HfO2 Thin Films as Antireflection Coatings. *Journal of the American Ceramic Society*, **2009**, 92, 3077-3080	3.8	22
5	A stretchable and strain-unperturbed pressure sensor for motion interference-free tactile monitoring on skins. *Science Advances*, **2021**, 7, eabi4563	14.3	21
4	Implantable bioelectronics toward long-term stability and sustainability. *Matter*, **2021**, 4, 1125-1141	12.7	12
3	Observation of Stepwise Ultrafast Crystallization Kinetics of Donor/Acceptor Conjugated Polymers and Correlation with Field Effect Mobility. *Chemistry of Materials*, **2021**, 33, 1637-1647	9.6	7
2	Stretchable Redox-active Semiconducting Polymers for High-performance Organic Electrochemical Transistors.. *Advanced Materials*, **2022**, e2201178	24	3
1	A universal and facile approach for building multifunctional conjugated polymers for human-integrated electronics. *Matter*, **2021**, 4, 3015-3029	12.7	2