

Youfan Hu

List of Publications by Year in descending order

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Version: 2024-02-01

80
papers

10,787
citations

57719

44
h-index

66879

78
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84
all docs

84
docs citations

84
times ranked

9877
citing authors

#	ARTICLE	IF	CITATIONS
1	Theoretical study of contact-mode triboelectric nanogenerators as an effective power source. <i>Energy and Environmental Science</i> , 2013, 6, 3576.	15.6	1,380
2	Pyroelectric Nanogenerators for Harvesting Thermoelectric Energy. <i>Nano Letters</i> , 2012, 12, 2833-2838.	4.5	639
3	Theory of Sliding-Mode Triboelectric Nanogenerators. <i>Advanced Materials</i> , 2013, 25, 6184-6193.	11.1	581
4	Gigantic enhancement in response and reset time of ZnO UV nanosensor by utilizing Schottky contact and surface functionalization. <i>Applied Physics Letters</i> , 2009, 94, 191103.	1.5	515
5	Theoretical Investigation and Structural Optimization of Single-Electrode Triboelectric Nanogenerators. <i>Advanced Functional Materials</i> , 2014, 24, 3332-3340.	7.8	513
6	Segmentally Structured Disk Triboelectric Nanogenerator for Harvesting Rotational Mechanical Energy. <i>Nano Letters</i> , 2013, 13, 2916-2923.	4.5	437
7	Self-Powered System with Wireless Data Transmission. <i>Nano Letters</i> , 2011, 11, 2572-2577.	4.5	385
8	Recent progress in piezoelectric nanogenerators as a sustainable power source in self-powered systems and active sensors. <i>Nano Energy</i> , 2015, 14, 3-14.	8.2	330
9	Machine-Washable Textile Triboelectric Nanogenerators for Effective Human Respiratory Monitoring through Loom Weaving of Metallic Yarns. <i>Advanced Materials</i> , 2016, 28, 10267-10274.	11.1	328
10	Doping-Free Fabrication of Carbon Nanotube Based Ballistic CMOS Devices and Circuits. <i>Nano Letters</i> , 2007, 7, 3603-3607.	4.5	319
11	Supersensitive, Fast-Response Nanowire Sensors by Using Schottky Contacts. <i>Advanced Materials</i> , 2010, 22, 3327-3332.	11.1	311
12	Replacing a Battery by a Nanogenerator with 20 V Output. <i>Advanced Materials</i> , 2012, 24, 110-114.	11.1	256
13	High-Output Nanogenerator by Rational Unipolar Assembly of Conical Nanowires and Its Application for Driving a Small Liquid Crystal Display. <i>Nano Letters</i> , 2010, 10, 5025-5031.	4.5	244
14	A Nanogenerator for Energy Harvesting from a Rotating Tire and its Application as a Self-Powered Pressure/Speed Sensor. <i>Advanced Materials</i> , 2011, 23, 4068-4071.	11.1	235
15	Lateral nanowire/nanobelt based nanogenerators, piezotronics and piezo-phototronics. <i>Materials Science and Engineering Reports</i> , 2010, 70, 320-329.	14.8	223
16	Ordered Nanowire Array Blue/Near-UV Light Emitting Diodes. <i>Advanced Materials</i> , 2010, 22, 4749-4753.	11.1	206
17	Designing the Electric Transport Characteristics of ZnO Micro/Nanowire Devices by Coupling Piezoelectric and Photoexcitation Effects. <i>ACS Nano</i> , 2010, 4, 1234-1240.	7.3	205
18	Triboelectric Nanogenerator Built on Suspended 3D Spiral Structure as Vibration and Positioning Sensor and Wave Energy Harvester. <i>ACS Nano</i> , 2013, 7, 10424-10432.	7.3	204

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19	A theoretical study of grating structured triboelectric nanogenerators. Energy and Environmental Science, 2014, 7, 2339-2349.	15.6	194
20	Ultrahigh Sensitive Piezotronic Strain Sensors Based on a ZnSnO ₃ Nanowire/Microwire. ACS Nano, 2012, 6, 4369-4374.	7.3	176
21	Transparent flexible nanogenerator as self-powered sensor for transportation monitoring. Nano Energy, 2013, 2, 75-81.	8.2	171
22	Tunable, Ultrasensitive, and Flexible Pressure Sensors Based on Wrinkled Microstructures for Electronic Skins. ACS Applied Materials & Interfaces, 2019, 11, 21218-21226.	4.0	151
23	Machine-washable and breathable pressure sensors based on triboelectric nanogenerators enabled by textile technologies. Nano Energy, 2020, 70, 104528.	8.2	151
24	Gallium Nitride Nanowire Based Nanogenerators and Light-Emitting Diodes. ACS Nano, 2012, 6, 5687-5692.	7.3	150
25	Expandable microsphere-based triboelectric nanogenerators as ultrasensitive pressure sensors for respiratory and pulse monitoring. Nano Energy, 2019, 59, 295-301.	8.2	148
26	Enhanced Performance of Flexible ZnO Nanowire Based Room-Temperature Oxygen Sensors by Piezotronic Effect. Advanced Materials, 2013, 25, 3701-3706.	11.1	146
27	Progress in textile-based triboelectric nanogenerators for smart fabrics. Nano Energy, 2019, 56, 16-24.	8.2	122
28	Optimizing the Power Output of a ZnO Photocell by Piezopotential. ACS Nano, 2010, 4, 4220-4224.	7.3	121
29	Hybridizing Triboelectrification and Electromagnetic Induction Effects for High-Efficient Mechanical Energy Harvesting. ACS Nano, 2014, 8, 7442-7450.	7.3	112
30	Smart textile triboelectric nanogenerators: Current status and perspectives. MRS Bulletin, 2021, 46, 512-521.	1.7	111
31	Progress in Piezo-Phototronic-Enhanced Light-Emitting Diodes and Pressure Imaging. Advanced Materials, 2016, 28, 1535-1552.	11.1	110
32	Individual Bi ₂ S ₃ Nanowire-Based Room-Temperature H ₂ Sensor. Journal of Physical Chemistry C, 2008, 112, 8721-8724.	1.5	108
33	High-Performance Carbon Nanotube Complementary Electronics and Integrated Sensor Systems on Ultrathin Plastic Foil. ACS Nano, 2018, 12, 2773-2779.	7.3	90
34	Low-power carbon nanotube-based integrated circuits that can be transferred to biological surfaces. Nature Electronics, 2018, 1, 237-245.	13.1	86
35	Development and progress in piezotronics. Nano Energy, 2015, 14, 276-295.	8.2	84
36	Recent Advances in Flexible and Stretchable Sensing Systems: From the Perspective of System Integration. ACS Nano, 2020, 14, 6449-6469.	7.3	82

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37	Carbon nanotube-based flexible electronics. <i>Journal of Materials Chemistry C</i> , 2018, 6, 7714-7727.	2.7	77
38	Temperature Dependence of the Piezotronic Effect in ZnO Nanowires. <i>Nano Letters</i> , 2013, 13, 5026-5032.	4.5	76
39	High output nanogenerator based on assembly of GaN nanowires. <i>Nanotechnology</i> , 2011, 22, 475401.	1.3	65
40	Piezo-Phototronic Effect on Electroluminescence Properties of <i>p-i-n</i> -Type GaN Thin Films. <i>Nano Letters</i> , 2012, 12, 3851-3856.	4.5	58
41	An elastic-spring-substrated nanogenerator as an active sensor for self-powered balance. <i>Energy and Environmental Science</i> , 2013, 6, 1164.	15.6	53
42	Kirigami-Inspired Deformable 3D Structures Conformable to Curved Biological Surface. <i>Advanced Science</i> , 2018, 5, 1801070.	5.6	51
43	Temperature Dependence of the Piezophototronic Effect in CdS Nanowires. <i>Advanced Functional Materials</i> , 2015, 25, 5277-5284.	7.8	50
44	Carbon Nanotube Field-Effect Transistor-Based Chemical and Biological Sensors. <i>Sensors</i> , 2021, 21, 995.	2.1	47
45	Quantitative Fitting of Nonlinear Current-Voltage Curves and Parameter Retrieval of Semiconducting Nanowire, Nanotube and Nanoribbon Devices. <i>Journal of Nanoscience and Nanotechnology</i> , 2008, 8, 252-258.	0.9	45
46	Observation of a 2D Electron Gas and the Tuning of the Electrical Conductance of ZnO Nanowires by Controllable Surface Band-Bending. <i>Advanced Functional Materials</i> , 2009, 19, 2380-2387.	7.8	43
47	Enhanced performance of GaN nanobelt-based photodetectors by means of piezotronic effects. <i>Nano Research</i> , 2013, 6, 758-766.	5.8	42
48	Synthesis and characterization of large scale potassium titanate nanowires with good Li-intercalation performance. <i>Chemical Physics Letters</i> , 2005, 406, 95-100.	1.2	38
49	Piezo-phototronic effect on optoelectronic nanodevices. <i>MRS Bulletin</i> , 2018, 43, 952-958.	1.7	38
50	Wafer-Scale Fabrication of Ultrathin Flexible Electronic Systems via Capillary-Assisted Electrochemical Delamination. <i>Advanced Materials</i> , 2018, 30, e1805408.	11.1	38
51	Gold nanostructure-programmed flexible electrochemical biosensor for detection of glucose and lactate in sweat. <i>Journal of Electroanalytical Chemistry</i> , 2021, 882, 115029.	1.9	38
52	Visible Light Response of Unintentionally Doped ZnO Nanowire Field Effect Transistors. <i>Journal of Physical Chemistry C</i> , 2009, 113, 16796-16801.	1.5	36
53	Synthesis and Characterizations of Amorphous Carbon Nanotubes by Pyrolysis of Ferrocene Confined within AAM Templates. <i>Journal of Physical Chemistry B</i> , 2006, 110, 8263-8267.	1.2	32
54	A bioinspired three-dimensional integrated e-skin for multiple mechanical stimuli recognition. <i>Nano Energy</i> , 2022, 92, 106777.	8.2	25

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55	Effects of piezopotential spatial distribution on local contact dictated transport property of ZnO micro/nanowires. <i>Applied Physics Letters</i> , 2010, 97, 033509.	1.5	23
56	Performance Boosting of Flexible ZnO UV Sensors with Rational Designed Absorbing Antireflection Layer and Humectant Encapsulation. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 381-389.	4.0	23
57	Converse Piezoelectric Effect Induced Transverse Deflection of a Free-Standing ZnO Microbelt. <i>Nano Letters</i> , 2009, 9, 2661-2665.	4.5	22
58	Recent progress in piezo-phototronics with extended materials, application areas and understanding. <i>Semiconductor Science and Technology</i> , 2017, 32, 053002.	1.0	22
59	Fabrication of high performance top-gate complementary inverter using a single carbon nanotube and via a simple process. <i>Applied Physics Letters</i> , 2007, 90, 223116.	1.5	21
60	Ultrasensitive triboelectric nanogenerator for weak ambient energy with rational unipolar stacking structure and low-loss power management. <i>Nano Energy</i> , 2017, 41, 351-358.	8.2	19
61	Wafer-scale High-yield Manufacturing of Degradable Electronics for Environmental Monitoring. <i>Advanced Functional Materials</i> , 2019, 29, 1905518.	7.8	19
62	Flexible Integrated Circuits Based on Carbon Nanotubes. <i>Accounts of Materials Research</i> , 2020, 1, 88-99.	5.9	18
63	Sensation and Perception of a Bioinspired Flexible Smart Sensor System. <i>ACS Nano</i> , 2021, 15, 9238-9243.	7.3	17
64	A Flexible Integrated Bending Strain and Pressure Sensor System for Motion Monitoring. <i>Sensors</i> , 2021, 21, 3969.	2.1	16
65	Carbon nanotube dual-material gate devices for flexible configurable multifunctional electronics. <i>Carbon</i> , 2020, 161, 656-664.	5.4	15
66	Electrical characteristics of amorphous carbon nanotube and effects of contacts. <i>Applied Physics Letters</i> , 2006, 88, 063113.	1.5	14
67	Ultrathin, flexible and transparent graphene-based triboelectric nanogenerators for attachable curvature monitoring. <i>Journal Physics D: Applied Physics</i> , 2019, 52, 314002.	1.3	12
68	A Tubular Flexible Triboelectric Nanogenerator with a Superhydrophobic Surface for Human Motion Detecting. <i>Sensors</i> , 2021, 21, 3634.	2.1	11
69	Quantitative Study on the Effect of Surface Treatments on the Electric Characteristics of ZnO Nanowires. <i>Journal of Physical Chemistry C</i> , 2008, 112, 14225-14228.	1.5	10
70	Carbon Nanotube-Based Flexible Ferroelectric Synaptic Transistors for Neuromorphic Computing. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 30124-30132.	4.0	10
71	Configurable multifunctional integrated circuits based on carbon nanotube dual-material gate devices. <i>Nanoscale</i> , 2018, 10, 21857-21864.	2.8	9
72	A Flexible Two-Sensor System for Temperature and Bending Angle Monitoring. <i>Materials</i> , 2021, 14, 2962.	1.3	7

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73	Wearable Technology: Machine-Washable Textile Triboelectric Nanogenerators for Effective Human Respiratory Monitoring through Loom Weaving of Metallic Yarns (Adv. Mater. 46/2016). Advanced Materials, 2016, 28, 10266-10266.	11.1	6
74	High-Performance Carbon Nanotube-Based Transient Complementary Electronics. ACS Applied Materials & Interfaces, 2022, 14, 12515-12522.	4.0	6
75	Degradable Electronics: Wafer-Scale High-Yield Manufacturing of Degradable Electronics for Environmental Monitoring (Adv. Funct. Mater. 50/2019). Advanced Functional Materials, 2019, 29, 1970339.	7.8	3
76	Textile triboelectric nanogenerator for wearable electronics. Advanced Materials Letters, 2018, 9, 199-204.	0.3	3
77	Piezo-phototronic effect and its applications in flexible optoelectronic and energy technologies. , 2011, , .		2
78	Nanowires for Piezoelectric Nanogenerators. RSC Smart Materials, 2014, , 200-276.	0.1	0
79	Harvesting the hidden energy for self-powered systems. , 2016, , .		0
80	Ultrasoft, mass-permeable, and low-impedance hydrogels for tissue-like skin-device interfaces. Science Bulletin, 2021, 67, 114-114.	4.3	0