Youfan Hu

List of Publications by Year in descending order

80 papers	10,787 citations	57631 44 h-index	66788 78 g-index
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. Energy and Environmental Science, 2013, 6, 3576.	15.6	1,380
2	Pyroelectric Nanogenerators for Harvesting Thermoelectric Energy. Nano Letters, 2012, 12, 2833-2838.	4.5	639
3	Theory of Slidingâ€Mode Triboelectric Nanogenerators. Advanced Materials, 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. Applied Physics Letters, 2009, 94, 191103.	1.5	515
5	Theoretical Investigation and Structural Optimization of Singleâ€Electrode Triboelectric Nanogenerators. Advanced Functional Materials, 2014, 24, 3332-3340.	7.8	513
6	Segmentally Structured Disk Triboelectric Nanogenerator for Harvesting Rotational Mechanical Energy. Nano Letters, 2013, 13, 2916-2923.	4.5	437
7	Self-Powered System with Wireless Data Transmission. Nano Letters, 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. Nano Energy, 2015, 14, 3-14.	8.2	330
9	Machineâ€Washable Textile Triboelectric Nanogenerators for Effective Human Respiratory Monitoring through Loom Weaving of Metallic Yarns. Advanced Materials, 2016, 28, 10267-10274.	11.1	328
10	Doping-Free Fabrication of Carbon Nanotube Based Ballistic CMOS Devices and Circuits. Nano Letters, 2007, 7, 3603-3607.	4.5	319
11	Supersensitive, Fastâ€Response Nanowire Sensors by Using Schottky Contacts. Advanced Materials, 2010, 22, 3327-3332.	11.1	311
12	Replacing a Battery by a Nanogenerator with 20 V Output. Advanced Materials, 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. Nano Letters, 2010, 10, 5025-5031.	4.5	244
14	A Nanogenerator for Energy Harvesting from a Rotating Tire and its Application as a Selfâ€Powered Pressure/Speed Sensor. Advanced Materials, 2011, 23, 4068-4071.	11.1	235
15	Lateral nanowire/nanobelt based nanogenerators, piezotronics and piezo-phototronics. Materials Science and Engineering Reports, 2010, 70, 320-329.	14.8	223
16	Ordered Nanowire Array Blue/Nearâ€UV Light Emitting Diodes. Advanced Materials, 2010, 22, 4749-4753.	11.1	206
17	Designing the Electric Transport Characteristics of ZnO Micro/Nanowire Devices by Coupling Piezoelectric and Photoexcitation Effects. ACS Nano, 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. ACS Nano, 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 ZnSnO₃ 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 Roomâ€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 Piezoâ€Phototronicâ€Effectâ€Enhanced Lightâ€Emitting Diodes and Pressure Imaging. Advanced Materials, 2016, 28, 1535-1552.	11.1	110
32	Individual Bi₂S₃ Nanowire-Based Room-Temperature H₂ 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. Journal of Materials Chemistry C, 2018, 6, 7714-7727.	2.7	77
38	Temperature Dependence of the Piezotronic Effect in ZnO Nanowires. Nano Letters, 2013, 13, 5026-5032.	4.5	76
39	High output nanogenerator based on assembly of GaN nanowires. Nanotechnology, 2011, 22, 475401.	1.3	65
40	Piezo-Phototronic Effect on Electroluminescence Properties of p-Type GaN Thin Films. Nano Letters, 2012, 12, 3851-3856.	4.5	58
41	An elastic-spring-substrated nanogenerator as an active sensor for self-powered balance. Energy and Environmental Science, 2013, 6, 1164.	15.6	53
42	Kirigamiâ€Inspired Deformable 3D Structures Conformable to Curved Biological Surface. Advanced Science, 2018, 5, 1801070.	5.6	51
43	Temperature Dependence of the Piezophototronic Effect in CdS Nanowires. Advanced Functional Materials, 2015, 25, 5277-5284.	7.8	50
44	Carbon Nanotube Field-Effect Transistor-Based Chemical and Biological Sensors. Sensors, 2021, 21, 995.	2.1	47
45	Quantitative Fitting of Nonlinear Currentâ€“Voltage Curves and Parameter Retrieval of Semiconducting Nanowire, Nanotube and Nanoribbon Devices. Journal of Nanoscience and Nanotechnology, 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 Bandâ€Bending. Advanced Functional Materials, 2009, 19, 2380-2387.	7.8	43
47	Enhanced performance of GaN nanobelt-based photodetectors by means of piezotronic effects. Nano Research, 2013, 6, 758-766.	5.8	42
48	Synthesis and characterization of large scale potassium titanate nanowires with good Li-intercalation performance. Chemical Physics Letters, 2005, 406, 95-100.	1.2	38
49	Piezo-phototronic effect on optoelectronic nanodevices. MRS Bulletin, 2018, 43, 952-958.	1.7	38
50	Waferâ€Scale Fabrication of Ultrathin Flexible Electronic Systems via Capillaryâ€Assisted Electrochemical Delamination. Advanced Materials, 2018, 30, e1805408.	11.1	38
51	Gold nanostructure-programmed flexible electrochemical biosensor for detection of glucose and lactate in sweat. Journal of Electroanalytical Chemistry, 2021, 882, 115029.	1.9	38
52	Visible Light Response of Unintentionally Doped ZnO Nanowire Field Effect Transistors. Journal of Physical Chemistry C, 2009, 113, 16796-16801.	1.5	36
53	Synthesis and Characterizations of Amorphous Carbon Nanotubes by Pyrolysis of Ferrocene Confined within AAM Templates. Journal of Physical Chemistry B, 2006, 110, 8263-8267.	1.2	32
54	A bioinspired three-dimensional integrated e-skin for multiple mechanical stimuli recognition. Nano Energy, 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. Applied Physics Letters, 2010, 97, 033509.	1.5	23
56	Performance Boosting of Flexible ZnO UV Sensors with Rational Designed Absorbing Antireflection Layer and Humectant Encapsulation. ACS Applied Materials & Interfaces, 2016, 8, 381-389.	4.0	23
57	Converse Piezoelectric Effect Induced Transverse Deflection of a Free-Standing ZnO Microbelt. Nano Letters, 2009, 9, 2661-2665.	4.5	22
58	Recent progress in piezo-phototronics with extended materials, application areas and understanding. Semiconductor Science and Technology, 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. Applied Physics Letters, 2007, 90, 223116.	1.5	21
60	Ultrasensitive triboelectric nanogenerator for weak ambient energy with rational unipolar stacking structure and low-loss power management. Nano Energy, 2017, 41, 351-358.	8.2	19
61	Waferâ€Scale Highâ€Yield Manufacturing of Degradable Electronics for Environmental Monitoring. Advanced Functional Materials, 2019, 29, 1905518.	7.8	19
62	Flexible Integrated Circuits Based on Carbon Nanotubes. Accounts of Materials Research, 2020, 1, 88-99.	5.9	18
63	Sensation and Perception of a Bioinspired Flexible Smart Sensor System. ACS Nano, 2021, 15, 9238-9243.	7.3	17
64	A Flexible Integrated Bending Strain and Pressure Sensor System for Motion Monitoring. Sensors, 2021, 21, 3969.	2.1	16
65	Carbon nanotube dual-material gate devices for flexible configurable multifunctional electronics. Carbon, 2020, 161, 656-664.	5.4	15
66	Electrical characteristics of amorphous carbon nanotube and effects of contacts. Applied Physics Letters, 2006, 88, 063113.	1.5	14
67	Ultrathin, flexible and transparent graphene-based triboelectric nanogenerators for attachable curvature monitoring. Journal Physics D: Applied Physics, 2019, 52, 314002.	1.3	12
68	A Tubular Flexible Triboelectric Nanogenerator with a Superhydrophobic Surface for Human Motion Detecting. Sensors, 2021, 21, 3634.	2.1	11
69	Quantitative Study on the Effect of Surface Treatments on the Electric Characteristics of ZnO Nanowires. Journal of Physical Chemistry C, 2008, 112, 14225-14228.	1.5	10
70	Carbon Nanotube-Based Flexible Ferroelectric Synaptic Transistors for Neuromorphic Computing. ACS Applied Materials & Interfaces, 2022, 14, 30124-30132.	4.0	10
71	Configurable multifunctional integrated circuits based on carbon nanotube dual-material gate devices. Nanoscale, 2018, 10, 21857-21864.	2.8	9
72	A Flexible Two-Sensor System for Temperature and Bending Angle Monitoring. Materials, 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: Waferâ€Scale Highâ€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