Xianlong Wei

List of Publications by Year
in descending order

84 papers	3,466 citations	147801 31 h-index	138484 58 g-index
84 all docs	84 docs citations	84 times ranked	5423 citing authors

#	Article	IF	Citations
1	Efficient and Dense Electron Emission from a SiO₂ Tunneling Diode with Low Poisoning Sensitivity. Nano Letters, 2022, 22, 1270-1277.	9.1	7
2	A Vacuum Transistor Based on Field-Assisted Thermionic Emission from a Multiwalled Carbon Nanotube. Electronics (Switzerland), 2022, 11, 399.	3.1	1
3	Pressure Sensitivity of Electron Emission from SiO_x Tunneling Diodes and their Outstanding Emission Performance under Rough Vacuum. Advanced Electronic Materials, 2022, 8, .	5.1	5
4	SiO_x Tunneling Diode Arrays With Uniform Electron Emission. IEEE Electron Device Letters, 2022, 43, 1339-1342.	3.9	5
5	A Cascade Electron Source Based on Series Horizontal Tunneling Junctions. IEEE Transactions on Electron Devices, 2021, 68, 818-821.	3.0	4
6	A Miniature Ionization Vacuum Sensor With a SiOâ‚“-Based Tunneling Electron Source. IEEE Transactions on Electron Devices, 2021, 68, 5127-5132.	3.0	3
7	Cascade Electron Source Based on Horizontal Tunneling Junction. , 2021, , .		0
8	Performance Enhancement of Photoconductive Antenna Using Saw-Toothed Plasmonic Contact Electrodes. Electronics (Switzerland), 2021, 10, 2693.	3.1	4
9	On-Chip Electron Sources Based on Horizontal Tunneling Junction. , 2021, , .		1
10	Highâ€Performance Onâ€Chip Thermionic Electron Microâ€Emitter Arrays Based on Superâ€Aligned Carbon Nanotube Films. Advanced Functional Materials, 2020, 30, 1907814.	14.9	8
11	Interlayer Binding Energy of Hexagonal MoS2 as Determined by an In Situ Peeling-to-Fracture Method. Journal of Physical Chemistry C, 2020, 124, 23419-23425.	3.1	23
12	Wafer-Scale Fabricated On-Chip Thermionic Electron Sources With an Integrated Extraction Gate. IEEE Transactions on Electron Devices, 2020, 67, 5132-5137.	3.0	3
13	A New Emission Mechanism for Island-Metal-Film-Based Electron Sources. IEEE Transactions on Electron Devices, 2020, 67, 5119-5124.	3.0	1
14	Highâ€Performance Onâ€Chip Electron Sources Based on Electroformed Silicon Oxide. Advanced Electronic Materials, 2020, 6, 2000268.	5.1	10
15	Controlling the Facet of ZnO during Wet Chemical Etching Its (0001Â¯) Oâ€Terminated Surface. Small, 2020, 16, e1906435.	10.0	8
16	Wet Etching: Controlling the Facet of ZnO during Wet Chemical Etching Its (0001Â¯) Oâ€Terminated Surface (Small 14/2020). Small, 2020, 16, 2070076.	10.0	0
17	Choice of Si doping type for optimizing the performances of a SiOx-based tunneling electron source fabricated on SiOx/Si substrate. Nano Express, 2020, 1, 030019.	2.4	1
18	Highly Efficient Horizontal Tunnel Diode Electron Sources. , 2020, , .		0

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19	Silicon Oxide Based on-Chip Electron Sources. , 2020, , .		0
20	On-Chip Thermionic Electron Sources Based on Graphene and Carbon Nanotubes. , 2020, , .		0
21	A High-Efficiency Electron-Emitting Diode Based on Horizontal Tunneling Junction. IEEE Electron Device Letters, 2019, 40, 1201-1204.	3.9	16
22	Crystallographic-orientation dependent Li ion migration and reactions in layered MoSe ₂. 2D Materials, 2019, 6, 035027.	4.4	13
23	On-Chip Thermionic Electron Emitter Arrays Based on Horizontally Aligned Single-Walled Carbon Nanotubes. IEEE Transactions on Electron Devices, 2019, 66, 1069-1074.	3.0	10
24	Mechanical Properties of 2D Materials Studied by In Situ Microscopy Techniques. Advanced Materials Interfaces, 2018, 5, 1701246.	3.7	71
25	Configurable multifunctional integrated circuits based on carbon nanotube dual-material gate devices. Nanoscale, 2018, 10, 21857-21864.	5.6	9
26	On-Chip Thermionic Electron Emitter Based on Single-Walled Carbon Nanotube. , 2018, , .		0
27	Controlling the Growth of Single Nanowires in a Nanowire Forest for near-Infrared Photodetection. ACS Applied Nano Materials, 2018, 1, 3035-3041.	5.0	4
28	Silicon Oxide Electronâ€Emitting Nanodiodes. Advanced Electronic Materials, 2018, 4, 1800136.	5.1	15
29	Interlayer electrical resistivity of rotated graphene layers studied by in-situ scanning electron microscopy. Ultramicroscopy, 2018, 193, 90-96.	1.9	8
30	1D Piezoelectric Material Based Nanogenerators: Methods, Materials and Property Optimization. Nanomaterials, 2018, 8, 188.	4.1	46
31	Constant-rate dissolution of InAs nanowires in radiolytic water observed by <i>in situ</i> liquid cell TEM. Nanoscale, 2018, 10, 19733-19741.	5.6	28
32	Direct Observation of the Layer-by-Layer Growth of ZnO Nanopillar by In situ High Resolution Transmission Electron Microscopy. Scientific Reports, 2017, 7, 40911.	3.3	17
33	Influence of water vapor on the electronic property of MoS₂ field effect transistors. Nanotechnology, 2017, 28, 204003.	2.6	7
34	Superlubricity between MoS₂ Monolayers. Advanced Materials, 2017, 29, 1701474.	21.0	220
35	Single-walled carbon nanotube thermionic electron emitters with dense, efficient and reproducible electron emission. Nanoscale, 2017, 9, 17814-17820.	5.6	12
36	Thermionic electron emission from single carbon nanostructures and its applications in vacuum nanoelectronics. MRS Bulletin, 2017, 42, 493-499.	3.5	7

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37	2D Materials: Superlubricity between MoS₂ Monolayers (Adv. Mater. 27/2017). Advanced Materials, 2017, 29, .	21.0	38
38	Deterministic Line-Shape Programming of Silicon Nanowires for Extremely Stretchable Springs and Electronics. Nano Letters, 2017, 17, 7638-7646.	9.1	41
39	Periodic pulsed electron emission from single hot carbon nanotubes. , 2017, , .		0
40	Edgeâ€States‐Induced Disruption to the Energy Band Alignment at Thicknessâ€Modulated Molybdenum Sulfide Junctions. Advanced Electronic Materials, 2016, 2, 1600048.	5.1	18
41	Whole-journey nanomaterial research in an electron microscope: from material synthesis, composition characterization, property measurements to device construction and tests. Nanotechnology, 2016, 27, 485710.	2.6	3
42	In-situ environmental scanning electron microscopy for probing the properties of advanced energy materials. International Journal of Nanomanufacturing, 2016, 12, 264.	0.3	2
43	Graphene-based micro-emitters and vacuum transistors. , 2016, , .		0
44	Fieldâ€Effect Transistors: Edgeâ€Statesâ€Induced Disruption to the Energy Band Alignment at Thicknessâ€Modulated Molybdenum Sulfide Junctions (Adv. Electron. Mater. 8/2016). Advanced Electronic Materials, 2016, 2, .	5.1	0
45	Tunable graphene micro-emitters with fast temporal response and controllable electron emission. Nature Communications, 2016, 7, 11513.	12.8	48
46	Inâ€Plane Selfâ€Turning and Twin Dynamics Renders Large Stretchability to Monoâ€Like Zigzag Silicon Nanowire Springs. Advanced Functional Materials, 2016, 26, 5352-5359.	14.9	34
47	Ultrafast and reversible electrochemical lithiation of InAs nanowires observed by in-situ transmission electron microscopy. Nano Energy, 2016, 20, 194-201.	16.0	19
48	Crystal Phase- and Orientation-Dependent Electrical Transport Properties of InAs Nanowires. Nano Letters, 2016, 16, 2478-2484.	9.1	38
49	Remarkable influence of slack on the vibration of a single-walled carbon nanotube resonator. Nanoscale, 2016, 8, 8658-8665.	5.6	11
50	The intrinsic origin of hysteresis in MoS₂field effect transistors. Nanoscale, 2016, 8, 3049-3056.	5.6	124
51	A Grapheneâ€Based Vacuum Transistor with a High ON/OFF Current Ratio. Advanced Functional Materials, 2015, 25, 5972-5978.	14.9	40
52	Remarkable and Crystalâ€Structureâ€Dependent Piezoelectric and Piezoresistive Effects of InAs Nanowires. Advanced Materials, 2015, 27, 2852-2858.	21.0	56
53	Charge trapping at the MoS2-SiO2 interface and its effects on the characteristics of MoS2 metal-oxide-semiconductor field effect transistors. Applied Physics Letters, 2015, 106, .	3.3	201
54	Abnormal electron emission from individual self-joule-heated carbon nanotubes. , 2015, , .		0

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55	Directly correlating the strain-induced electronic property change to the chirality of individual single-walled and few-walled carbon nanotubes. Nanoscale, 2015, 7, 13116-13124.	5.6	4
56	Comparative Fracture Toughness of Multilayer Graphenes and Boronitrenes. Nano Letters, 2015, 15, 689-694.	9.1	68
57	Amorphization and Directional Crystallization of Metals Confined in Carbon Nanotubes Investigated by in Situ Transmission Electron Microscopy. Nano Letters, 2015, 15, 4922-4927.	9.1	12
58	Polar-surface-driven growth of ZnS microsprings with novel optoelectronic properties. NPG Asia Materials, 2015, 7, e213-e213.	7.9	9
59	Study on the Resistance Distribution at the Contact between Molybdenum Disulfide and Metals. ACS Nano, 2014, 8, 7771-7779.	14.6	80
60	New Insight in Understanding Oxygen Reduction and Evolution in Solid-State Lithiumâ€"Oxygen Batteries Using an in Situ Environmental Scanning Electron Microscope. Nano Letters, 2014, 14, 4245-4249.	9.1	104
61	Breakdown of Richardson's Law in Electron Emission from Individual Self-Joule-Heated Carbon Nanotubes. Scientific Reports, 2014, 4, 5102.	3.3	28
62	Transmission electron microscope as an ultimate tool for nanomaterial property studies. Microscopy (Oxford, England), 2013, 62, 157-175.	1.5	8
63	Revealing the Anomalous Tensile Properties of WS₂ Nanotubes by in Situ Transmission Electron Microscopy. Nano Letters, 2013, 13, 1034-1040.	9.1	40
64	Local Coulomb Explosion of Boron Nitride Nanotubes under Electron Beam Irradiation. ACS Nano, 2013, 7, 3491-3497.	14.6	38
65	Electron emission from a two-dimensional crystal with atomic thickness. AIP Advances, 2013, 3, .	1.3	23
66	Electron Emission from Individual Graphene Nanoribbons Driven by Internal Electric Field. ACS Nano, 2012, 6, 705-711.	14.6	41
67	Mechanical Properties of Si Nanowires as Revealed by in Situ Transmission Electron Microscopy and Molecular Dynamics Simulations. Nano Letters, 2012, 12, 1898-1904.	9.1	151
68	Nanomaterial Engineering and Property Studies in a Transmission Electron Microscope. Advanced Materials, 2012, 24, 177-194.	21.0	43
69	Phonon-Assisted Electron Emission from Individual Carbon Nanotubes. Nano Letters, 2011, 11, 734-739.	9.1	40
70	Electron-Beam-Induced Substitutional Carbon Doping of Boron Nitride Nanosheets, Nanoribbons, and Nanotubes. ACS Nano, 2011, 5, 2916-2922.	14.6	254
71	Local temperature measurements on nanoscale materials using a movable nanothermocouple assembled in a transmission electron microscope. Nanotechnology, 2011, 22, 485707.	2.6	15
72	Mechanical Properties of Bamboo-like Boron Nitride Nanotubes by <i>In Situ</i> TEM and MD Simulations: Strengthening Effect of Interlocked Joint Interfaces. ACS Nano, 2011, 5, 7362-7368.	14.6	63

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73	Simultaneous Electrical and Thermoelectric Parameter Retrieval via Two Terminal Currentâ€“Voltage Measurements on Individual ZnO Nanowires. Advanced Functional Materials, 2011, 21, 3900-3906.	14.9	16
74	Recent Advances in Boron Nitride Nanotubes and Nanosheets. Israel Journal of Chemistry, 2010, 50, 405-416.	2.3	24
75	Tensile Tests on Individual Multiâ€Walled Boron Nitride Nanotubes. Advanced Materials, 2010, 22, 4895-4899.	21.0	154
76	In situ measurements on individual thin carbon nanotubes using nanomanipulators inside a scanning electron microscope. Ultramicroscopy, 2010, 110, 182-189.	1.9	39
77	Post-Synthesis Carbon Doping of Individual Multiwalled Boron Nitride Nanotubes via Electron-Beam Irradiation. Journal of the American Chemical Society, 2010, 132, 13592-13593.	13.7	82
78	â€œWhite Graphenesâ€: Boron Nitride Nanoribbons via Boron Nitride Nanotube Unwrapping. Nano Letters, 2010, 10, 5049-5055.	9.1	723
79	Beam to String Transition of Vibrating Carbon Nanotubes Under Axial Tension. Advanced Functional Materials, 2009, 19, 1753-1758.	14.9	41
80	Towards Entireâ€Carbonâ€Nanotube Circuits: The Fabrication of Singleâ€Walledâ€Carbonâ€Nanotube Fieldâ€Effect Transistors with Local Multiwalledâ€Carbonâ€Nanotube Interconnects. Advanced Materials, 2009, 21, 1339-1343.	21.0	31
81	Strength analysis of clamping in micro/nano scale experiments. Acta Mechanica Solida Sinica, 2009, 22, 584-592.	1.9	5
82	Tensile Loading of Double-Walled and Triple-Walled Carbon Nanotubes and their Mechanical Properties. Journal of Physical Chemistry C, 2009, 113, 17002-17005.	3.1	47
83	Tunable resonant frequencies for determining Youngâ€™s moduli of nanowires. Journal of Applied Physics, 2009, 105, .	2.5	10
84	Cutting and sharpening carbon nanotubes using a carbon nanotube â€˜nanoknifeâ€™. Nanotechnology, 2007, 18, 185503.	2.6	33