

Feng Miao

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116
papers

23,173
citations

50
h-index

126
g-index

126
ext. papers

26,265
ext. citations

9.8
avg. IF

6.61
L-index

#	Paper	IF	Citations
116	Superior thermal conductivity of single-layer graphene. <i>Nano Letters</i> , 2008 , 8, 902-7	11.5	9908
115	Extremely high thermal conductivity of graphene: Prospects for thermal management applications in nanoelectronic circuits. <i>Applied Physics Letters</i> , 2008 , 92, 151911	3.4	1469
114	Controlled ripple texturing of suspended graphene and ultrathin graphite membranes. <i>Nature Nanotechnology</i> , 2009 , 4, 562-6	28.7	1053
113	Temperature dependence of the Raman spectra of graphene and graphene multilayers. <i>Nano Letters</i> , 2007 , 7, 2645-9	11.5	909
112	Strong photoluminescence enhancement of MoS ₂ through defect engineering and oxygen bonding. <i>ACS Nano</i> , 2014 , 8, 5738-45	16.7	774
111	Hopping transport through defect-induced localized states in molybdenum disulphide. <i>Nature Communications</i> , 2013 , 4, 2642	17.4	740
110	The mechanism of electroforming of metal oxide memristive switches. <i>Nanotechnology</i> , 2009 , 20, 215203-4	3.4	591
109	Phase-coherent transport in graphene quantum billiards. <i>Science</i> , 2007 , 317, 1530-3	33.3	562
108	High switching endurance in TaO _x memristive devices. <i>Applied Physics Letters</i> , 2010 , 97, 232102	3.4	467
107	Integrated digital inverters based on two-dimensional anisotropic ReS ₂ field-effect transistors. <i>Nature Communications</i> , 2015 , 6, 6991	17.4	417
106	Robust memristors based on layered two-dimensional materials. <i>Nature Electronics</i> , 2018 , 1, 130-136	28.4	348
105	Anatomy of a nanoscale conduction channel reveals the mechanism of a high-performance memristor. <i>Advanced Materials</i> , 2011 , 23, 5633-40	24	338
104	Two-dimensional quasi-freestanding molecular crystals for high-performance organic field-effect transistors. <i>Nature Communications</i> , 2014 , 5, 5162	17.4	270
103	Room temperature high-detectivity mid-infrared photodetectors based on black arsenic phosphorus. <i>Science Advances</i> , 2017 , 3, e1700589	14.3	269
102	Van der Waals epitaxial growth and optoelectronics of large-scale WSe ₂ /SnS vertical bilayer p-n junctions. <i>Nature Communications</i> , 2017 , 8, 1906	17.4	258
101	Broadband Photovoltaic Detectors Based on an Atomically Thin Heterostructure. <i>Nano Letters</i> , 2016 , 16, 2254-9	11.5	248
100	High Responsivity Phototransistors Based on Few-Layer ReS ₂ for Weak Signal Detection. <i>Advanced Functional Materials</i> , 2016 , 26, 1938-1944	15.6	217

99	Spatially resolved spectroscopy of monolayer graphene on SiO ₂ . <i>Physical Review B</i> , 2009 , 79,	3.3	206
98	The effect of substrates on the Raman spectrum of graphene: Graphene- on-sapphire and graphene-on-glass. <i>Applied Physics Letters</i> , 2007 , 91, 201904	3.4	197
97	Gate-tunable negative longitudinal magnetoresistance in the predicted type-II Weyl semimetal WTe. <i>Nature Communications</i> , 2016 , 7, 13142	17.4	166
96	Engineering nonlinearity into memristors for passive crossbar applications. <i>Applied Physics Letters</i> , 2012 , 100, 113501	3.4	162
95	Electrical performance and scalability of Pt dispersed SiO ₂ nanometallic resistance switch. <i>Nano Letters</i> , 2013 , 13, 3213-7	11.5	146
94	Variable temperature Raman microscopy as a nanometrology tool for graphene layers and graphene-based devices. <i>Applied Physics Letters</i> , 2007 , 91, 071913	3.4	145
93	Strain effects on borophene: ideal strength, negative Poisson's ratio and phonon instability. <i>New Journal of Physics</i> , 2016 , 18, 073016	2.9	141
92	Metal/TiO ₂ interfaces for memristive switches. <i>Applied Physics A: Materials Science and Processing</i> , 2011 , 102, 785-789	2.6	128
91	State Dynamics and Modeling of Tantalum Oxide Memristors. <i>IEEE Transactions on Electron Devices</i> , 2013 , 60, 2194-2202	2.9	120
90	Electron-hole asymmetry of spin injection and transport in single-layer graphene. <i>Physical Review Letters</i> , 2009 , 102, 137205	7.4	113
89	Raman vibrational spectra of bulk to monolayer ReS ₂ with lower symmetry. <i>Physical Review B</i> , 2015 , 92,	3.3	110
88	Van der Waals Heterostructures for High-Performance Device Applications: Challenges and Opportunities. <i>Advanced Materials</i> , 2020 , 32, e1903800	24	109
87	Continuous electrical tuning of the chemical composition of TaO(x)-based memristors. <i>ACS Nano</i> , 2012 , 6, 2312-8	16.7	100
86	Raman nanometrology of graphene: Temperature and substrate effects. <i>Solid State Communications</i> , 2009 , 149, 1132-1135	1.6	100
85	Observation of ballistic avalanche phenomena in nanoscale vertical InSe/BP heterostructures. <i>Nature Nanotechnology</i> , 2019 , 14, 217-222	28.7	99
84	Reconfigurable logic and neuromorphic circuits based on electrically tunable two-dimensional homojunctions. <i>Nature Electronics</i> , 2020 , 3, 383-390	28.4	81
83	Spectromicroscopy of tantalum oxide memristors. <i>Applied Physics Letters</i> , 2011 , 98, 242114	3.4	77
82	Negative Photoconductance in van der Waals Heterostructure-Based Floating Gate Phototransistor. <i>ACS Nano</i> , 2018 , 12, 9513-9520	16.7	75

81	Boron nitride as two dimensional dielectric: Reliability and dielectric breakdown. <i>Applied Physics Letters</i> , 2016 , 108, 012905	3.4	72
80	A label-free and portable graphene FET aptasensor for children blood lead detection. <i>Scientific Reports</i> , 2016 , 6, 21711	4.9	70
79	Quantized conductance coincides with state instability and excess noise in tantalum oxide memristors. <i>Nature Communications</i> , 2016 , 7, 11142	17.4	69
78	Recent Progress on Two-Dimensional Materials. <i>Wuli Huaxue Xuebao/Acta Physico - Chimica Sinica</i> , 2021 , 2108017-0	3.8	69
77	Gate-tunable van der Waals heterostructure for reconfigurable neural network vision sensor. <i>Science Advances</i> , 2020 , 6, eaba6173	14.3	66
76	Pressure-Tunable Ambipolar Conduction and Hysteresis in Thin Palladium Diselenide Field Effect Transistors. <i>Advanced Functional Materials</i> , 2019 , 29, 1902483	15.6	65
75	Tunable, ultralow-power switching in memristive devices enabled by a heterogeneous graphene-oxide interface. <i>Advanced Materials</i> , 2014 , 26, 3275-81	24	62
74	Observation of two resistance switching modes in TiO ₂ memristive devices electroformed at low current. <i>Nanotechnology</i> , 2011 , 22, 254007	3.4	62
73	Carrier Modulation of Ambipolar Few-Layer MoTe ₂ Transistors by MgO Surface Charge Transfer Doping. <i>Advanced Functional Materials</i> , 2018 , 28, 1704539	15.6	62
72	In situ observation of electrostatic and thermal manipulation of suspended graphene membranes. <i>Nano Letters</i> , 2012 , 12, 5470-4	11.5	60
71	Highly efficient and ultrastable visible-light photocatalytic water splitting over ReS ₂ . <i>Physical Chemistry Chemical Physics</i> , 2016 , 18, 14222-7	3.6	58
70	Phase-controllable growth of ultrathin 2D magnetic FeTe crystals. <i>Nature Communications</i> , 2020 , 11, 3729	17.4	57
69	Gate-Induced Interfacial Superconductivity in 1T-SnSe. <i>Nano Letters</i> , 2018 , 18, 1410-1415	11.5	54
68	2D Layered Materials for Memristive and Neuromorphic Applications. <i>Advanced Electronic Materials</i> , 2020 , 6, 1901107	6.4	53
67	Topological transport and atomic tunnelling-clustering dynamics for aged Cu-doped Bi ₂ Te ₃ crystals. <i>Nature Communications</i> , 2014 , 5, 5022	17.4	50
66	Experimental Identification of Critical Condition for Drastically Enhancing Thermoelectric Power Factor of Two-Dimensional Layered Materials. <i>Nano Letters</i> , 2018 , 18, 7538-7545	11.5	50
65	Low-Temperature Eutectic Synthesis of PtTe ₂ with Weak Antilocalization and Controlled Layer Thinning. <i>Advanced Functional Materials</i> , 2018 , 28, 1803746	15.6	47
64	Electronic structure and transport measurements of amorphous transition-metal oxides: observation of Fermi glass behavior. <i>Applied Physics A: Materials Science and Processing</i> , 2012 , 107, 1-11	2.6	47

63	Growth of atomically smooth MgO films on graphene by molecular beam epitaxy. <i>Applied Physics Letters</i> , 2008 , 93, 183107	3.4	40
62	Gate-tunable rectification inversion and photovoltaic detection in graphene/WSe2 heterostructures. <i>Applied Physics Letters</i> , 2016 , 108, 223501	3.4	39
61	Pressure-induced metallization and superconducting phase in ReS 2. <i>Npj Quantum Materials</i> , 2017 , 2,	5	38
60	Strain-Sensitive Magnetization Reversal of a van der Waals Magnet. <i>Advanced Materials</i> , 2020 , 32, e2004523	5.3	38
59	Force modulation of tunnel gaps in metal oxide memristive nanoswitches. <i>Applied Physics Letters</i> , 2009 , 95, 113503	3.4	36
58	Room-temperature valleytronic transistor. <i>Nature Nanotechnology</i> , 2020 , 15, 743-749	28.7	33
57	The positive piezoconductive effect in graphene. <i>Nature Communications</i> , 2015 , 6, 8119	17.4	32
56	Spectroscopic raman nanometrology of graphene and graphene multilayers on arbitrary substrates. <i>Journal of Physics: Conference Series</i> , 2008 , 109, 012008	0.3	30
55	Graphene nanoribbon superlattices fabricated via He ion lithography. <i>Applied Physics Letters</i> , 2014 , 104, 193114	3.4	29
54	Raman spectra of few-layer phosphorene studied from first-principles calculations. <i>Journal of Physics Condensed Matter</i> , 2015 , 27, 185302	1.8	29
53	Networking retinomorph sensor with memristive crossbar for brain-inspired visual perception. <i>National Science Review</i> , 2021 , 8, nwa172	10.8	28
52	Cleavage tendency of anisotropic two-dimensional materials: ReX2 (X=S,Se) and WTe2. <i>Physical Review B</i> , 2017 , 96,	3.3	26
51	Gated tuned superconductivity and phonon softening in monolayer and bilayer MoS2. <i>Npj Quantum Materials</i> , 2017 , 2,	5	26
50	Proximity-Induced Superconductivity with Subgap Anomaly in Type II Weyl Semi-Metal WTe. <i>Nano Letters</i> , 2018 , 18, 7962-7968	11.5	26
49	High temperature Raman investigation of few-layer MoTe2. <i>Applied Physics Letters</i> , 2016 , 108, 091902	3.4	25
48	2022 roadmap on neuromorphic computing and engineering. <i>Neuromorphic Computing and Engineering</i> ,		24
47	Direct Evidence for Charge Compensation-Induced Large Magnetoresistance in Thin WTe. <i>Nano Letters</i> , 2019 , 19, 3969-3975	11.5	23
46	Nanoscale characterization of resistive switching using advanced conductive atomic force microscopy based setups. <i>Journal of Electroceramics</i> , 2017 , 39, 94-108	1.5	22

45	Tuning Electrical Conductance in Bilayer MoS through Defect-Mediated Interlayer Chemical Bonding. <i>ACS Nano</i> , 2020 , 14, 10265-10275	16.7	22
44	Premature switching in graphene Josephson transistors. <i>Solid State Communications</i> , 2009 , 149, 1046-1048	10.0	21
43	Characteristics and transport mechanisms of triple switching regimes of TaOx memristor. <i>Applied Physics Letters</i> , 2017 , 110, 173504	3.4	20
42	Analog Circuit Applications Based on Ambipolar Graphene/MoTe2 Vertical Transistors. <i>Advanced Electronic Materials</i> , 2018 , 4, 1700662	6.4	20
41	Damage-free and rapid transfer of CVD-grown two-dimensional transition metal dichalcogenides by dissolving sacrificial water-soluble layers. <i>Nanoscale</i> , 2017 , 9, 19124-19130	7.7	20
40	Photodetecting and light-emitting devices based on two-dimensional materials. <i>Chinese Physics B</i> , 2017 , 26, 036801	1.2	19
39	Plasmon Excited Ultrahot Carriers and Negative Differential Photoresponse in a Vertical Graphene van der Waals Heterostructure. <i>Nano Letters</i> , 2019 , 19, 3295-3304	11.5	19
38	Gate-tunable weak antilocalization in a few-layer InSe. <i>Physical Review B</i> , 2018 , 98,	3.3	18
37	BiWO-BiOCl heterostructure with enhanced photocatalytic activity for efficient degradation of oxytetracycline. <i>Scientific Reports</i> , 2020 , 10, 18401	4.9	17
36	Intrinsic p-type W-based transition metal dichalcogenide by substitutional Ta-doping. <i>Applied Physics Letters</i> , 2017 , 111, 043502	3.4	16
35	Quantum conductance oscillations in metal/molecule/metal switches at room temperature. <i>Physical Review Letters</i> , 2008 , 101, 016802	7.4	16
34	Vertical WS/SnS van der Waals Heterostructure for Tunneling Transistors. <i>Scientific Reports</i> , 2018 , 8, 17755	4.9	16
33	Broadband convolutional processing using band-alignment-tunable heterostructures. <i>Nature Electronics</i> , 2022 , 5, 248-254	28.4	16
32	Robust Impact-Ionization Field-Effect Transistor Based on Nanoscale Vertical Graphene/Black Phosphorus/Indium Selenide Heterostructures. <i>ACS Nano</i> , 2020 , 14, 434-441	16.7	15
31	Scalable massively parallel computing using continuous-time data representation in nanoscale crossbar array. <i>Nature Nanotechnology</i> , 2021 , 16, 1079-1085	28.7	15
30	Edge-Epitaxial Growth of InSe Nanowires toward High-Performance Photodetectors. <i>Small</i> , 2020 , 16, e1905902	11	14
29	Electrically tunable optical properties of few-layer black arsenic phosphorus. <i>Nanotechnology</i> , 2018 , 29, 484001	3.4	14
28	Topological Phase Transition-Induced Triaxial Vector Magnetoresistance in (BiIn)Se Nanodevices. <i>ACS Nano</i> , 2018 , 12, 1537-1543	16.7	11

27	Vapor phase fabrication of three-dimensional arrayed BiI ₃ nanosheets for cost-effective solar cells. <i>Information Materials</i> , 2020 , 2, 975-983	23.1	11
26	A selector device based on graphene-oxide heterostructures for memristor crossbar applications. <i>Applied Physics A: Materials Science and Processing</i> , 2015 , 120, 403-407	2.6	9
25	Multifunctional Polymer Memory via Bi-Interfacial Topography for Pressure Perception Recognition. <i>Advanced Science</i> , 2020 , 7, 1902864	13.6	9
24	Ultraviolet Raman spectra of double-resonant modes of graphene. <i>Carbon</i> , 2016 , 101, 235-238	10.4	9
23	A Braitenberg Vehicle Based on Memristive Neuromorphic Circuits. <i>Advanced Intelligent Systems</i> , 2020 , 2, 1900103	6	9
22	Straintronics with van der Waals materials. <i>Npj Quantum Materials</i> , 2021 , 6,	5	9
21	S-Type Negative Differential Resistance in Semiconducting Transition-Metal Dichalcogenides. <i>Advanced Electronic Materials</i> , 2019 , 5, 1800853	6.4	9
20	Observation of Negative Terahertz Photoconductivity in Large Area Type-II Dirac Semimetal PtTe ₂ . <i>Physical Review Letters</i> , 2021 , 126, 227402	7.4	8
19	Extremely high thermal conductivity of graphene: Prospects for thermal management applications in silicon nanoelectronics 2008 ,		6
18	Engineered Recombinant Proteins for Aqueous Ultrasonic Exfoliation and Dispersion of Biofunctionalized 2D Materials. <i>Chemistry - A European Journal</i> , 2019 , 25, 7991-7997	4.8	5
17	Characterization of quantum conducting channels in metal/molecule/metal devices using pressure-modulated conductance microscopy. <i>Applied Physics A: Materials Science and Processing</i> , 2011 , 102, 943-948	2.6	5
16	Reset switching statistics of TaOx-based Memristor. <i>Journal of Electroceramics</i> , 2017 , 39, 132-136	1.5	4
15	Spin valley and giant quantum spin Hall gap of hydrofluorinated bismuth nanosheet. <i>Scientific Reports</i> , 2018 , 8, 7436	4.9	4
14	Raman nanometrology of graphene on arbitrary substrates and at variable temperature 2008 ,		4
13	2 step of conductance fluctuations due to the broken time-reversal symmetry in bulk-insulating BiSbTeSe ₂ devices. <i>Applied Physics Letters</i> , 2018 , 112, 243106	3.4	3
12	Temperature-sensitive spatial distribution of defects in PdSe ₂ flakes. <i>Physical Review Materials</i> , 2021 , 5,	3.2	3
11	Tunable photoresponse with small drain voltage in few-layer graphene-WSe ₂ heterostructures. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2016 , 380, 2575-2579	2.3	3
10	Chemical vapor deposition synthesis of two-dimensional freestanding transition metal oxychloride for electronic applications. <i>Science China Information Sciences</i> , 2019 , 62, 1	3.4	3

9	Uniform photoresponse in thermally oxidized Ni and MoS ₂ heterostructures. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2017 , 214, 1700151	1.6	2
8	Set transition statistics of different switching regimes of TaOx memristor. <i>Journal of Electroceramics</i> , 2019 , 42, 118-123	1.5	2
7	Experimental observation on a temperature-induced decoupling between the surface states in topological insulator nanoplates Bi ₂ O ₃ (TeSe) _{3+0.15} . <i>Applied Physics A: Materials Science and Processing</i> , 2016 , 122, 1	2.6	1
6	In-situ TEM Characterization of Ultra-robust Memristors Based on Fully Layered Two-dimensional Materials. <i>Microscopy and Microanalysis</i> , 2018 , 24, 1886-1887	0.5	1
5	Reconfigurable vertical field-effect transistor based on graphene/MoTe ₂ /graphite heterostructure. <i>Science China Information Sciences</i> , 2020 , 63, 1	3.4	1
4	Nanoscale Characterization of Resistive Switching Using Advanced Conductive Atomic Force Microscopy Based Setups. <i>Kluwer International Series in Electronic Materials: Science and Technology</i> , 2022 , 121-145		0
3	Vertical Transistors: Analog Circuit Applications Based on Ambipolar Graphene/MoTe ₂ Vertical Transistors (Adv. Electron. Mater. 3/2018). <i>Advanced Electronic Materials</i> , 2018 , 4, 1870015	6.4	
2	Engineered Recombinant Proteins for Aqueous Ultrasonic Exfoliation and Dispersion of Biofunctionalized 2D Materials. <i>Chemistry - A European Journal</i> , 2019 , 25, 7957-7957	4.8	
1	Reset Switching Statistics of TaOx-Based Memristor. <i>Kluwer International Series in Electronic Materials: Science and Technology</i> , 2022 , 187-195		