Feng Xiong

List of Publications by Year
in descending order

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55 papers	5,825 citations	185998 28 h-index	253896 43 g-index
56 all docs	56 docs citations	56 times ranked	9133 citing authors

#	Article	IF	Citations
1	Verticalâ€Grapheneâ€Reinforced Titanium Alloy Bipolar Plates in Fuel Cells. Advanced Materials, 2022, 34, e2110565.	11.1	31
2	Designing fast and efficient electrically driven phase change photonics using foundry compatible waveguide-integrated microheaters. Optics Express, 2022, 30, 13673.	1.7	13
3	Roadmap on emerging hardware and technology for machine learning. Nanotechnology, 2021, 32, 012002.	1.3	104
4	Copper Sulfide Nanodisk-Doped Solidâ€“Solid Phase Change Materials for Full Spectrum Solar-Thermal Energy Harvesting and Storage. ACS Applied Materials & Interfaces, 2021, 13, 1377-1385.	4.0	46
5	Tuning electrical and interfacial thermal properties of bilayer MoS₂ via electrochemical intercalation. Nanotechnology, 2021, 32, 265202.	1.3	3
6	Lowâ€Voltage Electrochemical Li_xWO₃ Synapses with Temporal Dynamics for Spiking Neural Networks. Advanced Intelligent Systems, 2021, 3, 2100021.	3.3	9
7	Tuning the flexibility and thermal storage capacity of solidâ€“solid phase change materials towards wearable applications. Journal of Materials Chemistry A, 2020, 8, 20133-20140.	5.2	119
8	Enhancing Thermal Interface Conductance to Graphene Using Niâ€“Pd Alloy Contacts. ACS Applied Materials & Interfaces, 2020, 12, 34317-34322.	4.0	5
9	Temperature-Dependent Contact Resistance to Nonvolatile Memory Materials. IEEE Transactions on Electron Devices, 2019, 66, 3816-3821.	1.6	15
10	Emerging Artificial Synaptic Devices for Neuromorphic Computing. Advanced Materials Technologies, 2019, 4, 1900037.	3.0	175
11	Quasi-Ballistic Thermal Transport Across MoS₂ Thin Films. Nano Letters, 2019, 19, 2434-2442.	4.5	61
12	(Bi0.2Sb0.8)2Te3 based dynamic synapses with programmable spatio-temporal dynamics. APL Materials, 2019, 7, 101107.	2.2	8
13	Thermal transport across graphene step junctions. 2D Materials, 2019, 6, 011005.	2.0	15
14	(Invited) Electrochemically-Tunable and Low-Power 2D Synapses for Neuromorphic Computing. ECS Meeting Abstracts, 2019, , .	0.0	0
15	An electrochemical thermal transistor. Nature Communications, 2018, 9, 4510.	5.8	105
16	Artificial Synapses: Lowâ€Power, Electrochemically Tunable Graphene Synapses for Neuromorphic Computing (Adv. Mater. 36/2018). Advanced Materials, 2018, 30, 1870273.	11.1	11
17	Lowâ€Power, Electrochemically Tunable Graphene Synapses for Neuromorphic Computing. Advanced Materials, 2018, 30, e1802353.	11.1	209
18	Electrical Transport and Power Dissipation in Aerosol-Jet-Printed Graphene Interconnects. Scientific Reports, 2018, 8, 10842.	1.6	25

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19	Energy Dissipation in Monolayer MoS₂ Electronics. Nano Letters, 2017, 17, 3429-3433.	4.5	177
20	Temperature-Dependent Thermal Boundary Conductance of Monolayer MoS₂ by Raman Thermometry. ACS Applied Materials & Interfaces, 2017, 9, 43013-43020.	4.0	125
21	Spatially Resolved Thermometry of Resistive Memory Devices. Scientific Reports, 2017, 7, 15360.	1.6	41
22	SANTA: Self-aligned nanotrench ablation via Joule heating for probing sub-20 nm devices. Nano Research, 2016, 9, 2950-2959.	5.8	3
23	Entrapment of Polysulfides by a Blackâ€Phosphorusâ€Modified Separator for Lithiumâ€“Sulfur Batteries. Advanced Materials, 2016, 28, 9797-9803.	11.1	453
24	Selective deposition and stable encapsulation of lithium through heterogeneous seeded growth. Nature Energy, 2016, 1, .	19.8	1,516
25	Vertical Heterostructure of Two-Dimensional MoS₂ and WSe₂ with Vertically Aligned Layers. Nano Letters, 2015, 15, 1031-1035.	4.5	194
26	Lateral and Vertical Two-Dimensional Layered Topological Insulator Heterostructures. ACS Nano, 2015, 9, 10916-10921.	7.3	30
27	Li Intercalation in MoS₂: In Situ Observation of Its Dynamics and Tuning Optical and Electrical Properties. Nano Letters, 2015, 15, 6777-6784.	4.5	312
28	Nanoscale phase change memory with graphene ribbon electrodes. Applied Physics Letters, 2015, 107, .	1.5	35
29	Phase change materials and phase change memory. MRS Bulletin, 2014, 39, 703-710.	1.7	404
30	Ultrafast terahertz-induced response of GeSbTe phase-change materials. Applied Physics Letters, 2014, 104, .	1.5	38
31	Energy efficiency and conversion in 1D and 2D electronics. , 2014, , .		0
32	Hysteresis-Free Nanosecond Pulsed Electrical Characterization of Top-Gated Graphene Transistors. IEEE Transactions on Electron Devices, 2014, 61, 1583-1589.	1.6	31
33	Self-Aligned Cu Etch Mask for Individually Addressable Metallic and Semiconducting Carbon Nanotubes. ACS Nano, 2014, 8, 6500-6508.	7.3	2
34	3D-nHD: A HydroDynamic model for trap-limited conduction in a 3D network. , 2013, , .		2
35	Ballistic to diffusive crossover of heat flow in graphene ribbons. Nature Communications, 2013, 4, 1734.	5.8	263
36	Using nanoscale thermocapillary flows to create arrays of purely semiconducting single-walled carbon nanotubes. Nature Nanotechnology, 2013, 8, 347-355.	15.6	167

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37	Resistive Random Access Memory Enabled by Carbon Nanotube Crossbar Electrodes. ACS Nano, 2013, 7, 5360-5366.	7.3	77
38	Self-Aligned Nanotubeâ€“Nanowire Phase Change Memory. Nano Letters, 2013, 13, 464-469.	4.5	118
39	Conductive preferential paths of hot carriers in amorphous phase-change materials. Applied Physics Letters, 2013, 103, .	1.5	25
40	Direct observation of nanometer-scale Joule and Peltier effects in phase change memory devices. Applied Physics Letters, 2013, 102, .	1.5	30
41	Novel 3D random-network model for threshold switching of phase-change memories. , 2013, , .		6
42	Nanowire phase change memory with carbon nanotube electrodes. , 2012, , .		2
43	Atomic-scale study of scattering and electronic properties of CVD graphene grain boundaries. , 2012, , .		1
44	Energy-efficiency and thermal management in nanoscale devices. , 2012, , .		2
45	Nanoscale power and heat management in electronics. , 2012, , .		0
46	Pulsed nanosecond characterization of graphene transistors. , 2012, , .		5
47	Effects of tip-nanotube interactions on atomic force microscopy imaging of carbon nanotubes. Nano Research, 2012, 5, 235-247.	5.8	15
48	Polycrystalline Graphene Ribbons as Chemiresistors. Advanced Materials, 2012, 24, 53-57.	11.1	177
49	Graphene Sensors: Polycrystalline Graphene Ribbons as Chemiresistors (Adv. Mater. 1/2012). Advanced Materials, 2012, 24, 52-52.	11.1	2
50	Low-Power Switching of Phase-Change Materials with Carbon Nanotube Electrodes. Science, 2011, 332, 568-570.	6.0	474
51	Thermal dissipation and variability in electrical breakdown of carbon nanotube devices. Physical Review B, 2010, 82, .	1.1	89
52	Integrating carbon-based nanoelectronics with chalcogenide phase change memory. , 2010, , .		1
53	Ultra-low power phase change memory with carbon nanotube interconnects. , 2010, , .		3
54	Inducing chalcogenide phase change with ultra-narrow carbon nanotube heaters. Applied Physics Letters, 2009, 95, .	1.5	51

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55	Chalcogenide phase change induced with single-wall carbon nanotube heaters. , 2009, , .		0