Eric Pop

List of Publications by Year
in descending order

321 papers	24,617 citations	6250 80 h-index	7736 150 g-index
325 all docs	325 docs citations	325 times ranked	24263 citing authors

#	Article	IF	Citations
1	Thermal Conductance of an Individual Single-Wall Carbon Nanotube above Room Temperature. Nano Letters, 2006, 6, 96-100.	4.5	1,562
2	Thermal properties of graphene: Fundamentals and applications. MRS Bulletin, 2012, 37, 1273-1281.	1.7	1,309
3	Nanoscale thermal transport. II. 2003â€“2012. Applied Physics Reviews, 2014, 1, 011305.	5.5	1,277
4	Energy dissipation and transport in nanoscale devices. Nano Research, 2010, 3, 147-169.	5.8	952
5	Heat Generation and Transport in Nanometer-Scale Transistors. Proceedings of the IEEE, 2006, 94, 1587-1601.	16.4	512
6	Low-Power Switching of Phase-Change Materials with Carbon Nanotube Electrodes. Science, 2011, 332, 568-570.	6.0	474
7	Electronic synapses made of layered two-dimensional materials. Nature Electronics, 2018, 1, 458-465.	13.1	459
8	Recommended Methods to Study Resistive Switching Devices. Advanced Electronic Materials, 2019, 5, 1800143.	2.6	452
9	Effects of Polycrystalline Cu Substrate on Graphene Growth by Chemical Vapor Deposition. Nano Letters, 2011, 11, 4547-4554.	4.5	426
10	Mobility and saturation velocity in graphene on SiO2. Applied Physics Letters, 2010, 97, .	1.5	411
11	Phase change materials and phase change memory. MRS Bulletin, 2014, 39, 703-710.	1.7	404
12	Improved Contacts to MoS₂ Transistors by Ultra-High Vacuum Metal Deposition. Nano Letters, 2016, 16, 3824-3830.	4.5	394
13	Negative Differential Conductance and Hot Phonons in Suspended Nanotube Molecular Wires. Physical Review Letters, 2005, 95, 155505.	2.9	393
14	Heat Conduction across Monolayer and Few-Layer Graphenes. Nano Letters, 2010, 10, 4363-4368.	4.5	354
15	Transistors based on two-dimensional materials for future integrated circuits. Nature Electronics, 2021, 4, 786-799.	13.1	335
16	Impact of Phonon-Surface Roughness Scattering on Thermal Conductivity of Thin Si Nanowires. Physical Review Letters, 2009, 102, 125503.	2.9	322
17	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
18	Electrical and thermal transport in metallic single-wall carbon nanotubes on insulating substrates. Journal of Applied Physics, 2007, 101, 093710.	1.1	310

#	Article	IF	Citations
19	Stretchable, Transparent Graphene Interconnects for Arrays of Microscale Inorganic Light Emitting Diodes on Rubber Substrates. Nano Letters, 2011, 11, 3881-3886.	4.5	307
20	Bright visible light emission from graphene. Nature Nanotechnology, 2015, 10, 676-681.	15.6	284
21	Nanoscale Joule heating, Peltier cooling and current crowding at grapheneâ€“metal contacts. Nature Nanotechnology, 2011, 6, 287-290.	15.6	275
22	Ballistic to diffusive crossover of heat flow in graphene ribbons. Nature Communications, 2013, 4, 1734.	5.8	263
23	Molecular dynamics simulation of thermal boundary conductance between carbon nanotubes and<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mtext>SiO</mml:mtext></mml:mrow><mml:mn>2</mml:mn></mml:ms Physical Review B, 2010, 81, .	1.1	262
24	Kinetic Study of Hydrogen Evolution Reaction over Strained MoS₂ with Sulfur Vacancies Using Scanning Electrochemical Microscopy. Journal of the American Chemical Society, 2016, 138, 5123-5129.	6.6	244
25	Effect of substrate modes on thermal transport in supported graphene. Physical Review B, 2011, 84, .	1.1	228
26	HfSe ₂ and ZrSe ₂ : Two-dimensional semiconductors with native high-Îº oxides. Science Advances, 2017, 3, e1700481.	4.7	197
27	Metal-semiconductor-metal photodetectors based on graphene/<i>p</i>-type silicon Schottky junctions. Applied Physics Letters, 2013, 102, .	1.5	191
28	Thermally Limited Current Carrying Ability of Graphene Nanoribbons. Physical Review Letters, 2011, 106, 256801.	2.9	190
29	Stacked Graphene-Al₂O₃ Nanopore Sensors for Sensitive Detection of DNA and DNAâ€“Protein Complexes. ACS Nano, 2012, 6, 441-450.	7.3	189
30	A Compact Virtual-Source Model for Carbon Nanotube FETs in the Sub-10-nm Regimeâ€"Part I: Intrinsic Elements. IEEE Transactions on Electron Devices, 2015, 62, 3061-3069.	1.6	187
31	Polycrystalline Graphene Ribbons as Chemiresistors. Advanced Materials, 2012, 24, 53-57.	11.1	177
32	Energy Dissipation in Monolayer MoS₂ Electronics. Nano Letters, 2017, 17, 3429-3433.	4.5	177
33	Thermal Properties of Metal-Coated Vertically Aligned Single-Wall Nanotube Arrays. Journal of Heat Transfer, 2008, 130, .	1.2	176
34	Electrically driven thermal light emission from individual single-walled carbon nanotubes. Nature Nanotechnology, 2007, 2, 33-38.	15.6	167
35	Using nanoscale thermocapillary flows to create arrays of purely semiconducting single-walled carbon nanotubes. Nature Nanotechnology, 2013, 8, 347-355.	15.6	167
36	GST-on-silicon hybrid nanophotonic integrated circuits: a non-volatile quasi-continuously reprogrammable platform. Optical Materials Express, 2018, 8, 1551.	1.6	166

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37	Analytic band Monte Carlo model for electron transport in Si including acoustic and optical phonon dispersion. Journal of Applied Physics, 2004, 96, 4998-5005.	1.1	163
38	Imaging, Simulation, and Electrostatic Control of Power Dissipation in Graphene Devices. Nano Letters, 2010, 10, 4787-4793.	4.5	163
39	Energy-Efficient Abundant-Data Computing: The N3XT 1,000x. Computer, 2015, 48, 24-33.	1.2	156
40	Nonvolatile Electrically Reconfigurable Integrated Photonic Switch Enabled by a Silicon PIN Diode Heater. Advanced Materials, 2020, 32, e2001218.	11.1	152
41	Ultrahigh thermal isolation across heterogeneously layered two-dimensional materials. Science Advances, 2019, 5, eaax1325.	4.7	149
42	Low Variability in Synthetic Monolayer MoS₂ Devices. ACS Nano, 2017, 11, 8456-8463.	7.3	147
43	High-Field Electrical and Thermal Transport in Suspended Graphene. Nano Letters, 2013, 13, 4581-4586.	4.5	145
44	ELECTRICAL TRANSPORT PROPERTIES AND FIELD EFFECT TRANSISTORS OF CARBON NANOTUBES. Nano, 2006, 01, 1-13.	0.5	142
45	Atomic-Scale Evidence for Potential Barriers and Strong Carrier Scattering at Graphene Grain Boundaries: A Scanning Tunneling Microscopy Study. ACS Nano, 2013, 7, 75-86.	7.3	132
46	Reliably Counting Atomic Planes of Few-Layer Graphene (<i>n</i> > 4). ACS Nano, 2011, 5, 269-274.	7.3	127
47	Effect of grain boundaries on thermal transport in graphene. Applied Physics Letters, 2013, 102, .	1.5	127
48	The Role of External Defects in Chemical Sensing of Graphene Field-Effect Transistors. Nano Letters, 2013, 13, 1962-1968.	4.5	125
49	Temperature-Dependent Thermal Boundary Conductance of Monolayer MoS₂ by Raman Thermometry. ACS Applied Materials & Interfaces, 2017, 9, 43013-43020.	4.0	125
50	Electrically driven reprogrammable phase-change metasurface reaching 80% efficiency. Nature Communications, 2022, 13, 1696.	5.8	125
51	A Compact Virtual-Source Model for Carbon Nanotube FETs in the Sub-10-nm Regimeâ€"Part II: Extrinsic Elements, Performance Assessment, and Design Optimization. IEEE Transactions on Electron Devices, 2015, 62, 3070-3078.	1.6	123
52	Energy-Efficient Phase-Change Memory with Graphene as a Thermal Barrier. Nano Letters, 2015, 15, 6809-6814.	4.5	121
53	Reduced Thermal Conductivity in Nanoengineered Rough Ge and GaAs Nanowires. Nano Letters, 2010, 10, 1120-1124.	4.5	120
54	Rapid Flame Synthesis of Atomically Thin MoO₃ down to Monolayer Thickness for Effective Hole Doping of WSe₂. Nano Letters, 2017, 17, 3854-3861.	4.5	120

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55	Self-Aligned Nanotubeâ€"Nanowire Phase Change Memory. Nano Letters, 2013, 13, 464-469.	4.5	118
56	Intrinsic electrical transport and performance projections of synthetic monolayer MoS ₂ devices. 2D Materials, 2017, 4, 011009.	2.0	117
57	High-performance flexible nanoscale transistors based on transition metal dichalcogenides. Nature Electronics, 2021, 4, 495-501.	13.1	117
58	High Current Density in Monolayer MoS₂ Doped by AlO_{<i>x</i>}. ACS Nano, 2021, 15, 1587-1596.	7.3	116
59	Annealing free, clean graphene transfer using alternative polymer scaffolds. Nanotechnology, 2015, 26, 055302.	1.3	114
60	Thickness and stoichiometry dependence of the thermal conductivity of GeSbTe films. Applied Physics Letters, 2007, 91, .	1.5	112
61	Microstructural origin of resistanceâ€"strain hysteresis in carbon nanotube thin film conductors. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 1986-1991.	3.3	107
62	Electrochemistry at the Edge of a Single Graphene Layer in a Nanopore. ACS Nano, 2013, 7, 834-843.	7.3	105
63	An electrochemical thermal transistor. Nature Communications, 2018, 9, 4510.	5.8	105
64	High-Field Transport and Velocity Saturation in Synthetic Monolayer MoS₂. Nano Letters, 2018, 18, 4516-4522.	4.5	103
65	Scanning Tunneling Microscopy Study and Nanomanipulation of Graphene-Coated Water on Mica. Nano Letters, 2012, 12, 2665-2672.	4.5	102
66	In_{<i>x</i>}Ga_{1â€"<i>x</i>}As Nanowire Growth on Graphene: van der Waals Epitaxy Induced Phase Segregation. Nano Letters, 2013, 13, 1153-1161.	4.5	101
67	Reduction of hysteresis for carbon nanotube mobility measurements using pulsed characterization. Nanotechnology, 2010, 21, 085702.	1.3	100
68	High Current Density and Low Thermal Conductivity of Atomically Thin Semimetallic WTe₂. ACS Nano, 2016, 10, 7507-7514.	7.3	100
69	Transport in Nanoribbon Interconnects Obtained from Graphene Grown by Chemical Vapor Deposition. Nano Letters, 2012, 12, 4424-4430.	4.5	99
70	The role of electrical and thermal contact resistance for Joule breakdown of single-wall carbon nanotubes. Nanotechnology, 2008, 19, 295202.	1.3	95
71	Ultra-low-energy programmable non-volatile silicon photonics based on phase-change materials with graphene heaters. Nature Nanotechnology, 2022, 17, 842-848.	15.6	94
72	Thermal Phenomena in Nanoscale Transistors. Journal of Electronic Packaging, Transactions of the ASME, 2006, 128, 102-108.	1.2	89

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73	Thermal dissipation and variability in electrical breakdown of carbon nanotube devices. Physical Review B, 2010, 82, .	1.1	89
74	Pressure tuning of the thermal conductance of weak interfaces. Physical Review B, 2011, 84, .	1.1	89
75	High-Velocity Saturation in Graphene Encapsulated by Hexagonal Boron Nitride. ACS Nano, 2017, 11, 9914-9919.	7.3	89
76	Uncovering the Effects of Metal Contacts on Monolayer MoS₂. ACS Nano, 2020, 14, 14798-14808.	7.3	89
77	Carbon nanomaterials for non-volatile memories. Nature Reviews Materials, 2018, 3, .	23.3	87
78	Contact Engineering High-Performance n-Type MoTe₂ Transistors. Nano Letters, 2019, 19, 6352-6362.	4.5	87
79	Monolithic IIIâ€V Nanowire Solar Cells on Graphene via Direct van der Waals Epitaxy. Advanced Materials, 2014, 26, 3755-3760.	11.1	86
80	Role of Pressure in the Growth of Hexagonal Boron Nitride Thin Films from Ammonia-Borane. Chemistry of Materials, 2016, 28, 4169-4179.	3.2	85
81	Dynamic Hybrid Metasurfaces. Nano Letters, 2021, 21, 1238-1245.	4.5	85
82	High-specific-power flexible transition metal dichalcogenide solar cells. Nature Communications, 2021, 12, 7034.	5.8	84
83	Ternary content-addressable memory with MoS2 transistors for massively parallel data search. Nature Electronics, 2019, 2, 108-114.	13.1	83
84	Improved Hysteresis and Reliability of MoS₂Transistors With High-Quality CVD Growth and Al₂O₃Encapsulation. IEEE Electron Device Letters, 2017, 38, 1763-1766.	2.2	81
85	Scaling of High-Field Transport and Localized Heating in Graphene Transistors. ACS Nano, 2011, 5, 7936-7944.	7.3	79
86	S2DS: Physics-based compact model for circuit simulation of two-dimensional semiconductor devices including non-idealities. Journal of Applied Physics, 2016, 120, .	1.1	78
87	Ultralowâ€"switching current density multilevel phase-change memory on a flexible substrate. Science, 2021, 373, 1243-1247.	6.0	78
88	Resistive Random Access Memory Enabled by Carbon Nanotube Crossbar Electrodes. ACS Nano, 2013, 7, 5360-5366.	7.3	77
89	Graphene-Based Platform for Infrared Near-Field Nanospectroscopy of Water and Biological Materials in an Aqueous Environment. ACS Nano, 2015, 9, 7968-7975.	7.3	75
90	Engineering Ultra-Low Work Function of Graphene. Nano Letters, 2015, 15, 6475-6480.	4.5	75

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91	Thermal conductivity of crystalline AlN and the influence of atomic-scale defects. Journal of Applied Physics, 2019, 126, .	1.1	75
92	Role of Joule Heating on Current Saturation and Transient Behavior of Graphene Transistors. IEEE Electron Device Letters, 2013, 34, 166-168.	2.2	70
93	Carbon Nanotube Circuit Integration up to Sub-20 nm Channel Lengths. ACS Nano, 2014, 8, 3434-3443.	7.3	70
94	Non-Equilibrium Phonon Distributions in Sub-100nm Silicon Transistors. Journal of Heat Transfer, 2006, 128, 638-647.	1.2	69
95	Reduction of phonon lifetimes and thermal conductivity of a carbon nanotube on amorphous silica. Physical Review B, 2011, 84, .	1.1	67
96	Gigahertz Integrated Graphene Ring Oscillators. ACS Nano, 2013, 7, 5588-5594.	7.3	67
97	Advanced Data Encryption â€‹using 2D Materials. Advanced Materials, 2021, 33, e2100185.	11.1	67
98	Imaging dissipation and hot spots in carbon nanotube network transistors. Applied Physics Letters, 2011, 98, .	1.5	66
99	Monte Carlo simulation of Joule heating in bulk and strained silicon. Applied Physics Letters, 2005, 86, 082101.	1.5	65
100	Electrical and Thermoelectric Transport by Variable Range Hopping in Thin Black Phosphorus Devices. Nano Letters, 2016, 16, 3969-3975.	4.5	65
101	Compact Model for Carbon Nanotube Field-Effect Transistors Including Nonidealities and Calibrated With Experimental Data Down to 9-nm Gate Length. IEEE Transactions on Electron Devices, 2013, 60, 1834-1843.	1.6	64
102	Quasi-Ballistic Thermal Transport Across MoS₂ Thin Films. Nano Letters, 2019, 19, 2434-2442.	4.5	61
103	Multiband Mobility in Semiconducting Carbon Nanotubes. IEEE Electron Device Letters, 2009, 30, 1078-1080.	2.2	60
104	Approaching ballistic transport in monolayer MoS<inf>2</inf> transistors with self-aligned 10 nm top gates. , 2016, , .		60
105	Effect of carbon nanotube network morphology on thin film transistor performance. Nano Research, 2012, 5, 307-319.	5.8	59
106	Strain- and Strain-Rate-Invariant Conductance in a Stretchable and Compressible 3D Conducting Polymer Foam. Matter, 2019, 1, 205-218.	5.0	58
107	Studies of two-dimensional h-BN and MoS2 for potential diffusion barrier application in copper interconnect technology. Npj 2D Materials and Applications, 2017, 1, .	3.9	57
108	Fast Spiking of a Mott VO₂â€“Carbon Nanotube Composite Device. Nano Letters, 2019, 19, 6751-6755.	4.5	56

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109	Topography and refractometry of nanostructures using spatial light interference microscopy. Optics Letters, 2010, 35, 208.	1.7	55
110	Cascading Wafer-Scale Integrated Graphene Complementary Inverters under Ambient Conditions. Nano Letters, 2012, 12, 3948-3953.	4.5	53
111	Probing the Optical Properties and Strain-Tuning of Ultrathin Mo_{1â€“<i>x</i>}W_{<i>x</i>}Te₂. Nano Letters, 2018, 18, 2485-2491.	4.5	53
112	Avalanche-Induced Current Enhancement in Semiconducting Carbon Nanotubes. Physical Review Letters, 2008, 101, 256804.	2.9	51
113	Inducing chalcogenide phase change with ultra-narrow carbon nanotube heaters. Applied Physics Letters, 2009, 95, .	1.5	51
114	Dense Vertically Aligned Copper Nanowire Composites as High Performance Thermal Interface Materials. ACS Applied Materials & Interfaces, 2017, 9, 42067-42074.	4.0	51
115	Ultra-low contact resistance in graphene devices at the Dirac point. 2D Materials, 2018, 5, 025014.	2.0	50
116	Thermal transport in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>MoS</mml:mi><mml:mn>2</mml:mn></mml:msub></mn from molecular dynamics using different empirical potentials. Physical Review B, 2019, 99, .	1.1	50
117	Thermally and Molecularly Stimulated Relaxation of Hot Phonons in Suspended Carbon Nanotubes. Journal of Physical Chemistry B, 2006, 110, 1502-1505.	1.2	49
118	Electronic, optical and thermal properties of the hexagonal and rocksalt-like Ge2Sb2Te5 chalcogenide from first-principle calculations. Journal of Applied Physics, 2011, 110, .	1.1	49
119	Chemical sensors based on randomly stacked graphene flakes. Applied Physics Letters, 2012, 100, .	1.5	49
120	Direct observation of resistive heating at graphene wrinkles and grain boundaries. Applied Physics Letters, 2014, 105, .	1.5	47
121	Nanoscale Heterogeneities in Monolayer MoSe₂ Revealed by Correlated Scanning Probe Microscopy and Tip-Enhanced Raman Spectroscopy. ACS Applied Nano Materials, 2018, 1, 572-579.	2.4	45
122	Photoresponse of Natural van der Waals Heterostructures. ACS Nano, 2017, 11, 6024-6030.	7.3	44
123	Covalent Functionalization and Electron-Transfer Properties of Vertically Aligned Carbon Nanofibers: The Importance of Edge-Plane Sites. Chemistry of Materials, 2010, 22, 2357-2366.	3.2	43
124	Plasmon-Resonant Enhancement of Photocatalysis on Monolayer WSe₂. ACS Photonics, 2019, 6, 787-792.	3.2	43
125	Forward-bias diode parameters, electronic noise, and photoresponse of graphene/silicon Schottky junctions with an interfacial native oxide layer. Journal of Applied Physics, 2015, 118, .	1.1	41
126	Spatially Resolved Thermometry of Resistive Memory Devices. Scientific Reports, 2017, 7, 15360.	1.6	41

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127	Ultra-scaled MoS₂ transistors and circuits fabricated without nanolithography. 2D Materials, 2020, 7, 015018.	2.0	41
128	Unipolar n-Type Black Phosphorus Transistors with Low Work Function Contacts. Nano Letters, 2018, 18, 2822-2827.	4.5	40
129	Theoretical potential for low energy consumption phase change memory utilizing electrostatically-induced structural phase transitions in 2D materials. Npj Computational Materials, 2018, 4, .	3.5	40
130	Reduction of hysteresis in MoS ₂ transistors using pulsed voltage measurements. 2D Materials, 2019, 6, 011004.	2.0	39
131	Ultrafast terahertz-induced response of GeSbTe phase-change materials. Applied Physics Letters, 2014, 104, .	1.5	38
132	Thermal conductivity of chirality-sorted carbon nanotube networks. Applied Physics Letters, 2016, 108, .	1.5	38
133	Large array fabrication of high performance monolayer MoS2 photodetectors. Applied Physics Letters, 2017, 111, .	1.5	38
134	Localized Heating and Switching in MoTe₂-Based Resistive Memory Devices. Nano Letters, 2020, 20, 1461-1467.	4.5	38
135	Nanosoldering Carbon Nanotube Junctions by Local Chemical Vapor Deposition for Improved Device Performance. Nano Letters, 2013, 13, 5844-5850.	4.5	36
136	Theoretical analysis of high-field transport in graphene on a substrate. Journal of Applied Physics, 2014, 116, .	1.1	36
137	High-Gain Graphene Transistors with a Thin AlOx Top-Gate Oxide. Scientific Reports, 2017, 7, 2419.	1.6	36
138	Engineering thermal and electrical interface properties of phase change memory with monolayer MoS2. Applied Physics Letters, 2019, 114, .	1.5	36
139	Frequency and polarization dependence of thermal coupling between carbon nanotubes and SiO2. Journal of Applied Physics, 2010, 108, 103502.	1.1	35
140	High-Field Transport and Thermal Reliability of Sorted Carbon Nanotube Network Devices. ACS Nano, 2013, 7, 482-490.	7.3	35
141	Role of Remote Interfacial Phonon (RIP) Scattering in Heat Transport Across Graphene/SiO₂ Interfaces. Nano Letters, 2016, 16, 6014-6020.	4.5	35
142	Understanding the switching mechanism of interfacial phase change memory. Journal of Applied Physics, 2019, 125, .	1.1	35
143	Monolithic mtesla-level magnetic induction by self-rolled-up membrane technology. Science Advances, 2020, 6, eaay4508.	4.7	35
144	High-Performance pâ€“n Junction Transition Metal Dichalcogenide Photovoltaic Cells Enabled by MoO_{<i>x</i>} Doping and Passivation. Nano Letters, 2021, 21, 3443-3450.	4.5	35

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145	Nanoscale phase change memory with graphene ribbon electrodes. Applied Physics Letters, 2015, 107, .	1.5	35
146	Detection of methylation on dsDNA using nanopores in a MoS₂ membrane. Nanoscale, 2017, 9, 14836-14845.	2.8	34
147	Layer-Dependent Interfacial Transport and Optoelectrical Properties of MoS₂ on Ultraflat Metals. ACS Applied Materials & Interfaces, 2019, 11, 31543-31550.	4.0	33
148	Thermal boundary conductance of two-dimensional MoS2 interfaces. Journal of Applied Physics, 2019, 126, .	1.1	32
149	Hysteresis-Free Nanosecond Pulsed Electrical Characterization of Top-Gated Graphene Transistors. IEEE Transactions on Electron Devices, 2014, 61, 1583-1589.	1.6	31
150	Strongly tunable anisotropic thermal transport in MoS ₂ by strain and lithium intercalation: first-principles calculations. 2D Materials, 2019, 6, 025033.	2.0	31
151	Spatial Separation of Carrier Spin by the Valley Hall Effect in Monolayer WSe₂ Transistors. Nano Letters, 2019, 19, 770-774.	4.5	31
152	Improved Current Density and Contact Resistance in Bilayer MoSe₂ Field Effect Transistors by AlO_{<i>x</i>} Capping. ACS Applied Materials & Interfaces, 2020, 12, 36355-36361.	4.0	31
153	Uncovering Thermal and Electrical Properties of Sb₂Te₃/GeTe Superlattice Films. Nano Letters, 2021, 21, 5984-5990.	4.5	31
154	Direct observation of nanometer-scale Joule and Peltier effects in phase change memory devices. Applied Physics Letters, 2013, 102, .	1.5	30
155	Research Update: Recent progress on 2D materials beyond graphene: From ripples, defects, intercalation, and valley dynamics to straintronics and power dissipation. APL Materials, 2018, 6, .	2.2	30
156	Spectral decomposition of thermal conductivity: Comparing velocity decomposition methods in homogeneous molecular dynamics simulations. Physical Review B, 2021, 103, .	1.1	30
157	Dual-Layer Dielectric Stack for Thermally Isolated Low-Energy Phase-Change Memory. IEEE Transactions on Electron Devices, 2017, 64, 4496-4502.	1.6	29
158	Reduced thermal conductivity of supported and encased monolayer and bilayer MoS₂. 2D Materials, 2021, 8, 011001.	2.0	29
159	Electrical and Thermal Coupling to a Single-Wall Carbon Nanotube Device Using an Electrothermal Nanoprobe. Nano Letters, 2009, 9, 1356-1361.	4.5	28
160	Thermal transport in layer-by-layer assembled polycrystalline graphene films. Npj 2D Materials and Applications, 2019, 3, .	3.9	28
161	Large temperature coefficient of resistance in atomically thin two-dimensional semiconductors. Applied Physics Letters, 2020, 116, .	1.5	26
162	Conductive preferential paths of hot carriers in amorphous phase-change materials. Applied Physics Letters, 2013, 103, .	1.5	25

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163	Scaling of graphene integrated circuits. Nanoscale, 2015, 7, 8076-8083.	2.8	25
164	3D Monolithic Stacked 1T1R cells using Monolayer MoS<inf>2</inf> FET and hBN RRAM Fabricated at Low (150Â°C) Temperature. , 2018, , .		25
165	Localized Triggering of the Insulator-Metal Transition in VO₂ Using a Single Carbon Nanotube. ACS Nano, 2019, 13, 11070-11077.	7.3	25
166	Flexural resonance mechanism of thermal transport across graphene-SiO2 interfaces. Journal of Applied Physics, 2018, 123, .	1.1	24
167	Energy-Efficient Indirectly Heated Phase Change RF Switch. IEEE Electron Device Letters, 2019, 40, 455-458.	2.2	24
168	Quantitative Thermal Imaging of Single-Walled Carbon Nanotube Devices by Scanning Joule Expansion Microscopy. ACS Nano, 2012, 6, 10267-10275.	7.3	23
169	Replacing copper interconnects with graphene at a 7-nm node. , 2017, , .		22
170	ADVANCED COOLING TECHNOLOGIES FOR MICROPROCESSORS. International Journal of High Speed Electronics and Systems, 2006, 16, 301-313.	0.3	21
171	Toward Low-Temperature Solid-Source Synthesis of Monolayer MoS₂. ACS Applied Materials & Interfaces, 2021, 13, 41866-41874.	4.0	21
172	Signatures of dynamic screening in interfacial thermal transport of graphene. Physical Review B, 2013, 87, .	1.1	20
173	Visualization of Defect-Induced Excitonic Properties of the Edges and Grain Boundaries in Synthesized Monolayer Molybdenum Disulfide. Journal of Physical Chemistry C, 2016, 120, 24080-24087.	1.5	20
174	Effective n-type doping of monolayer MoS<inf>2</inf> by AlO<inf>x</inf>. , 2017, , .		20
175	Dry Transfer of van der Waals Crystals to Noble Metal Surfaces To Enable Characterization of Buried Interfaces. ACS Applied Materials & Interfaces, 2019, 11, 38218-38225.	4.0	20
176	Direct measurement of nanoscale filamentary hot spots in resistive memory devices. Science Advances, 2022, 8, eabk1514.	4.7	20
177	Electrical power dissipation in semiconducting carbon nanotubes on single crystal quartz and amorphous SiO2. Applied Physics Letters, 2011, 99, .	1.5	19
178	Tuning Electrical and Thermal Transport in AlGaN/GaN Heterostructures via Buffer Layer Engineering. Advanced Functional Materials, 2018, 28, 1705823.	7.8	19
179	Sub-200 Î©Â·Âµm Alloyed Contacts to Synthetic Monolayer MoS2. , 2021, , .		19
180	Electrically driven light emission from hot single-walled carbon nanotubes at various temperatures and ambient pressures. Applied Physics Letters, 2007, 91, .	1.5	18

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181	Two-Fold Reduction of Switching Current Density in Phase Change Memory Using Biâ,,Teâ,ƒ Thermoelectric Interfacial Layer. IEEE Electron Device Letters, 2020, 41, 1657-1660.	2.2	17
182	Compact Thermal Model for Vertical Nanowire Phase-Change Memory Cells. IEEE Transactions on Electron Devices, 2009, , .	1.6	16
183	A Web Service and Interface for Remote Electronic Device Characterization. IEEE Transactions on Education, 2011, 54, 646-651.	2.0	16
184	Solution-Mediated Selective Nanosoldering of Carbon Nanotube Junctions for Improved Device Performance. ACS Nano, 2015, 9, 4806-4813.	7.3	16
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