Alexander A Balandin

List of Publications by Year
in descending order

328 papers	47,607 citations	3919 88 h-index	1627 215 g-index
328 all docs	328 docs citations	328 times ranked	38127 citing authors

#	Article	IF	Citations
1	Superior Thermal Conductivity of Single-Layer Graphene. Nano Letters, 2008, 8, 902-907.	4.5	11,726
2	Thermal properties of graphene and nanostructured carbon materials. Nature Materials, 2011, 10, 569-581.	13.3	5,065
3	Extremely high thermal conductivity of graphene: Prospects for thermal management applications in nanoelectronic circuits. Applied Physics Letters, 2008, 92, .	1.5	1,745
4	Grapheneâ€“Multilayer Graphene Nanocomposites as Highly Efficient Thermal Interface Materials. Nano Letters, 2012, 12, 861-867.	4.5	1,238
5	Dimensional crossover of thermal transport in few-layer graphene. Nature Materials, 2010, 9, 555-558.	13.3	1,198
6	Temperature Dependence of the Raman Spectra of Graphene and Graphene Multilayers. Nano Letters, 2007, 7, 2645-2649.	4.5	1,057
7	Thermal conductivity of isotopically modifiedÂgraphene. Nature Materials, 2012, 11, 203-207.	13.3	846
8	Phonon thermal conduction in graphene: Role of Umklapp and edge roughness scattering. Physical Review B, 2009, 79, .	1.1	836
9	Thermal properties of graphene and multilayer graphene: Applications in thermal interface materials. Solid State Communications, 2012, 152, 1331-1340.	0.9	689
10	Phonon heat conduction in a semiconductor nanowire. Journal of Applied Physics, 2001, 89, 2932-2938.	1.1	589
11	Significant decrease of the lattice thermal conductivity due to phonon confinement in a free-standing semiconductor quantum well. Physical Review B, 1998, 58, 1544-1549.	1.1	573
12	Micro-Raman investigation of optical phonons in ZnO nanocrystals. Journal of Applied Physics, 2005, 97, 124313.	1.1	556
13	Low-frequency 1/f noise in graphene devices. Nature Nanotechnology, 2013, 8, 549-555.	15.6	505
14	Strongly Anisotropic Thermal Conductivity of Freeâ€Standing Reduced Graphene Oxide Films Annealed at High Temperature. Advanced Functional Materials, 2015, 25, 4664-4672.	7.8	462
15	Lattice thermal conductivity of graphene flakes: Comparison with bulk graphite. Applied Physics Letters, 2009, 94, 203103.	1.5	461
16	Graphene quilts for thermal management of high-power GaN transistors. Nature Communications, 2012, 3, 827.	5.8	435
17	Graphene-enhanced hybrid phase change materials for thermal management of Li-ion batteries. Journal of Power Sources, 2014, 248, 37-43.	4.0	409
18	Exfoliation and Characterization of Bismuth Telluride Atomic Quintuples and Quasi-Two-Dimensional Crystals. Nano Letters, 2010, 10, 1209-1218.	4.5	405

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19	Modification of graphene properties due to electron-beam irradiation. Applied Physics Letters, 2009, 94, .	1.5	394
20	Photoluminescence investigation of the carrier recombination processes in ZnO quantum dots and nanocrystals. Physical Review B, 2006, 73, .	1.1	392
21	Selective Gas Sensing with a Single Pristine Graphene Transistor. Nano Letters, 2012, 12, 2294-2298.	4.5	361
22	Thermal conductivity of GaN films: Effects of impurities and dislocations. Journal of Applied Physics, 2002, 92, 2534-2539.	1.1	349
23	Origin of the optical phonon frequency shifts in ZnO quantum dots. Applied Physics Letters, 2005, 86, 053103.	1.5	347
24	Thermal properties of the hybrid graphene-metal nano-micro-composites: Applications in thermal interface materials. Applied Physics Letters, 2012, 100, .	1.5	338
25	Two-dimensional phonon transport in graphene. Journal of Physics Condensed Matter, 2012, 24, 233203.	0.7	333
26	Thermal Conductivity of Graphene Laminate. Nano Letters, 2014, 14, 5155-5161.	4.5	268
27	Micro-Raman spectroscopy of mechanically exfoliated few-quintuple layers of Bi2Te3, Bi2Se3, and Sb2Te3 materials. Journal of Applied Physics, 2012, 111, .	1.1	267
28	Origin of ultraviolet photoluminescence in ZnO quantum dots: Confined excitons versus surface-bound impurity exciton complexes. Applied Physics Letters, 2004, 85, 5971-5973.	1.5	266
29	Phononics in low-dimensional materials. Materials Today, 2012, 15, 266-275.	8.3	262
30	Thermal Properties of Grapheneâ€“Copperâ€“Graphene Heterogeneous Films. Nano Letters, 2014, 14, 1497-1503.	4.5	260
31	Graphene Thermal Properties: Applications in Thermal Management and Energy Storage. Applied Sciences (Switzerland), 2014, 4, 525-547.	1.3	258
32	Towards Ultrathick Battery Electrodes: Aligned Carbon Nanotube â€“ Enabled Architecture. Advanced Materials, 2012, 24, 533-537.	11.1	257
33	Phonons and thermal transport in graphene and graphene-based materials. Reports on Progress in Physics, 2017, 80, 036502.	8.1	249
34	Anomalous Size Dependence of the Thermal Conductivity of Graphene Ribbons. Nano Letters, 2012, 12, 3238-3244.	4.5	247
35	Thermal Percolation Threshold and Thermal Properties of Composites with High Loading of Graphene and Boron Nitride Fillers. ACS Applied Materials & Interfaces, 2018, 10, 37555-37565.	4.0	243
36	Ultraviolet Raman microscopy of single and multilayer graphene. Journal of Applied Physics, 2009, 106, .	1.1	218

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37	Thermal conduction in AlxGa1â^'xN alloys and thin films. Journal of Applied Physics, 2005, 97, 073710.	1.1	215
38	The effect of substrates on the Raman spectrum of graphene: Graphene- on-sapphire and graphene-on-glass. Applied Physics Letters, 2007, 91, 201904.	1.5	213
39	Heat conduction in graphene: experimental study and theoretical interpretation. New Journal of Physics, 2009, 11, 095012.	1.2	213
40	Effect of phonon confinement on the thermoelectric figure of merit of quantum wells. Journal of Applied Physics, 1998, 84, 6149-6153.	1.1	209
41	High-temperature quenching of electrical resistance in graphene interconnects. Applied Physics Letters, 2008, 92, .	1.5	205
42	Effects of Functionalization on Thermal Properties of Single-Wall and Multi-Wall Carbon Nanotubeâ€"Polymer Nanocomposites. ACS Nano, 2013, 7, 5114-5121.	7.3	205
43	Excitonic properties of strained wurtzite and zinc-blende GaN/AlxGa1â^'xN quantum dots. Journal of Applied Physics, 2003, 94, 7178-7186.	1.1	202
44	Thermal conductivity of diamond-like carbon films. Applied Physics Letters, 2006, 89, 161921.	1.5	202
45	Miniband formation in a quantum dot crystal. Journal of Applied Physics, 2001, 89, 5509-5515.	1.1	187
46	Thermal conductivity of graphene with defects induced by electron beam irradiation. Nanoscale, 2016, 8, 14608-14616.	2.8	187
47	Dualâ€Functional Graphene Composites for Electromagnetic Shielding and Thermal Management. Advanced Electronic Materials, 2019, 5, 1800558.	2.6	183
48	Thermal Properties of the Binaryâ€Filler Hybrid Composites with Graphene and Copper Nanoparticles. Advanced Functional Materials, 2020, 30, 1904008.	7.8	179
49	A charge-density-wave oscillator based on an integrated tantalum disulfideâ€"boron nitrideâ€"graphene device operating at room temperature. Nature Nanotechnology, 2016, 11, 845-850.	15.6	170
50	Triple-Mode Single-Transistor Graphene Amplifier and Its Applications. ACS Nano, 2010, 4, 5532-5538.	7.3	168
51	Intermediate-band solar cells based on quantum dot supracrystals. Applied Physics Letters, 2007, 91, .	1.5	167
52	Phonons in twisted bilayer graphene. Physical Review B, 2013, 88, .	1.1	167
53	Magnetically-functionalized self-aligning graphene fillers for high-efficiency thermal management applications. Materials and Design, 2015, 88, 214-221.	3.3	166
54	Variable temperature Raman microscopy as a nanometrology tool for graphene layers and graphene-based devices. Applied Physics Letters, 2007, 91, .	1.5	163

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55	Mechanically-exfoliated stacks of thin films of Bi2Te3 topological insulators with enhanced thermoelectric performance. Applied Physics Letters, 2010, 97, .	1.5	163
56	Graphene-on-Diamond Devices with Increased Current-Carrying Capacity: Carbon sp²-on-sp³ Technology. Nano Letters, 2012, 12, 1603-1608.	4.5	163
57	Graphene related materials for thermal management. 2D Materials, 2020, 7, 012001.	2.0	161
58	Crystal symmetry breaking in few-quintuple Bi2Te3 films: Applications in nanometrology of topological insulators. Applied Physics Letters, 2010, 96, .	1.5	159
59	Nanophononics: Phonon Engineering in Nanostructures and Nanodevices. Journal of Nanoscience and Nanotechnology, 2005, 5, 1015-1022.	0.9	154
60	Charge Density Waves in Exfoliated Films of van der Waals Materials: Evolution of Raman Spectrum in TiSe₂. Nano Letters, 2012, 12, 5941-5945.	4.5	154
61	Phononics of Graphene and Related Materials. ACS Nano, 2020, 14, 5170-5178.	7.3	154
62	Mechanism for thermoelectric figure-of-merit enhancement in regimented quantum dot superlattices. Applied Physics Letters, 2003, 82, 415-417.	1.5	152
63	Interface and confined optical phonons in wurtzite nanocrystals. Physical Review B, 2004, 70, .	1.1	145
64	Thermal conductivity of twisted bilayer graphene. Nanoscale, 2014, 6, 13402-13408.	2.8	136
65	Atomically-thin crystalline films and ribbons of bismuth telluride. Applied Physics Letters, 2010, 96, .	1.5	125
66	Low-frequency electronic noise in the double-gate single-layer graphene transistors. Applied Physics Letters, 2009, 95, .	1.5	124
67	Growth of large-area graphene films from metal-carbon melts. Journal of Applied Physics, 2010, 108, .	1.1	123
68	Effect of dislocations on thermal conductivity of GaN layers. Applied Physics Letters, 2001, 79, 4316-4318.	1.5	121
69	ZnO Quantum Dots: Physical Properties and Optoelectronic Applications. Journal of Nanoelectronics and Optoelectronics, 2006, 1, 19-38.	0.1	121
70	Ramanâ€based technique for measuring thermal conductivity of graphene and related materials. Journal of Raman Spectroscopy, 2018, 49, 106-120.	1.2	119
71	Temperature dependence of thermal conductivity of AlxGa1â^'xN thin films measured by the differential 3Ï‰ technique. Applied Physics Letters, 2004, 85, 5230-5232.	1.5	115
72	Raman nanometrology of graphene: Temperature and substrate effects. Solid State Communications, 2009, 149, 1132-1135.	0.9	115

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73	Radiative lifetime of excitons in ZnO nanocrystals: The dead-layer effect. Physical Review B, 2004, 70, .	1.1	112
74	Selective chemical vapor sensing with few-layer MoS2 thin-film transistors: Comparison with graphene devices. Applied Physics Letters, 2015, 106, .	1.5	112
75	Heat Removal in Silicon-on-Insulator Integrated Circuits With Graphene Lateral Heat Spreaders. IEEE Electron Device Letters, 2009, 30, 1281-1283.	2.2	110
76	Spin-phonon coupling in antiferromagnetic nickel oxide. Applied Physics Letters, 2017, 111, .	1.5	109
77	Electrical and noise characteristics of graphene field-effect transistors: ambient effects, noise sources and physical mechanisms. Journal of Physics Condensed Matter, 2010, 22, 395302.	0.7	106
78	Flicker Noise in Bilayer Graphene Transistors. IEEE Electron Device Letters, 2009, 30, 288-290.	2.2	105
79	Low-frequency 1/f noise in MoS2 transistors: Relative contributions of the channel and contacts. Applied Physics Letters, 2014, 104, .	1.5	104
80	Electron and phonon energy spectra in a three-dimensional regimented quantum dot superlattice. Physical Review B, 2002, 66, .	1.1	102
81	Thermal and electrical conductivity control in hybrid composites with graphene and boron nitride fillers. Materials Research Express, 2019, 6, 085325.	0.8	101
82	Origin of 1/f noise in graphene multilayers: Surface vs. volume. Applied Physics Letters, 2013, 102, 093111.	1.5	100
83	Phonon Engineering in Hetero- and Nanostructures. Journal of Nanoelectronics and Optoelectronics, 2007, 2, 140-170.	0.1	98
84	Exciton states and optical transitions in colloidal CdS quantum dots: Shape and dielectric mismatch effects. Physical Review B, 2002, 66, .	1.1	97
85	Acoustic-phonon propagation in rectangular semiconductor nanowires with elastically dissimilar barriers. Physical Review B, 2005, 72, .	1.1	97
86	Electrothermal simulation of the self-heating effects in GaN-based field-effect transistors. Journal of Applied Physics, 2006, 100, 054501.	1.1	94
87	Zone-Folded Phonons and the Commensurateâ€“Incommensurate Charge-Density-Wave Transition in 1T-TaSe₂ Thin Films. Nano Letters, 2015, 15, 2965-2973.	4.5	94
88	The influence of chemical reactivity of surface defects on ambient-stable InSe-based nanodevices. Nanoscale, 2016, 8, 8474-8479.	2.8	92
89	Suppression of 1/f noise in near-ballistic h-BN-graphene-h-BN heterostructure field-effect transistors. Applied Physics Letters, 2015, 107, .	1.5	85
90	Thermal properties of graphene and fewâ€layer graphene: applications in electronics. IET Circuits, Devices and Systems, 2015, 9, 4-12.	0.9	82

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91	Breakdown current density in h-BN-capped quasi-1D TaSe₃metallic nanowires: prospects of interconnect applications. Nanoscale, 2016, 8, 15774-15782.	2.8	79
92	Polar optical phonons in wurtzite spheroidal quantum dots: theory and application to ZnO and ZnO/MgZnO nanostructures. Journal of Physics Condensed Matter, 2005, 17, 1085-1097.	0.7	78
93	Giant Enhancement of the Carrier Mobility in Silicon Nanowires with Diamond Coating. Nano Letters, 2006, 6, 2442-2446.	4.5	78
94	Multifunctional Graphene Composites for Electromagnetic Shielding and Thermal Management at Elevated Temperatures. Advanced Electronic Materials, 2020, 6, 2000520.	2.6	78
95	Thermal conduction in nanocrystalline diamond films: Effects of the grain boundary scattering and nitrogen doping. Applied Physics Letters, 2006, 89, 171915.	1.5	77
96	Thermal interface materials with graphene fillers: review of the state of the art and outlook for future applications. Nanotechnology, 2021, 32, 142003.	1.3	76
97	Phonon spectrum and group velocities in AlN/GaN/AlN and related heterostructures. Superlattices and Microstructures, 2003, 33, 155-171.	1.4	74
98	Phonon and thermal properties of exfoliated TaSe2 thin films. Journal of Applied Physics, 2013, 114, .	1.1	74
99	Coexistence of Magnetic Orders in Two-Dimensional Magnet CrI₃. Nano Letters, 2020, 20, 553-558.	4.5	74
100	Low-Frequency Electronic Noise in Quasi-1D TaSe₃ van der Waals Nanowires. Nano Letters, 2017, 17, 377-383.	4.5	73
101	Tuning of Graphene Properties via Controlled Exposure to Electron Beams. IEEE Nanotechnology Magazine, 2011, 10, 865-870.	1.1	72
102	Theoretical description of thermal transport in graphene: The issues of phonon cutâ€•off frequencies and polarization branches. Physica Status Solidi (B): Basic Research, 2011, 248, 2609-2614.	0.7	72
103	Suppression of phonon heat conduction in cross-section-modulated nanowires. Physical Review B, 2012, 85, .	1.1	72
104	Noncuring Graphene Thermal Interface Materials for Advanced Electronics. Advanced Electronic Materials, 2020, 6, 1901303.	2.6	72
105	Selective Sensing of Individual Gases Using Graphene Devices. IEEE Sensors Journal, 2013, 13, 2818-2822.	2.4	71
106	Direct observation of confined acoustic phonon polarization branches in free-standing semiconductor nanowires. Nature Communications, 2016, 7, 13400.	5.8	71
107	Specific heat of twisted bilayer graphene: Engineering phonons by atomic plane rotations. Applied Physics Letters, 2014, 105, .	1.5	70
108	Metal-induced rapid transformation of diamond into single and multilayer graphene on wafer scale. Nature Communications, 2016, 7, 12099.	5.8	70

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109	High-Throughput Large-Area Automated Identification and Quality Control of Graphene and Few-Layer Graphene Films. ACS Nano, 2011, 5, 914-922.	7.3	69
110	Thermal conductivity of ultrathin tetrahedral amorphous carbon films. Applied Physics Letters, 2008, 93, .	1.5	68
111	Epitaxial Graphene Nanoribbon Array Fabrication Using BCP-Assisted Nanolithography. ACS Nano, 2012, 6, 6786-6792.	7.3	68
112	Thermal and magnetic properties of nanostructured densified ferrimagnetic composites with graphene - graphite fillers. Materials and Design, 2017, 118, 75-80.	3.3	68
113	Thermoelectric effects in wurtzite GaN and AlxGa1â^'xN alloys. Journal of Applied Physics, 2005, 97, 123705.	1.1	67
114	Low-Frequency Current Fluctuations in â€œGraphene-likeâ€•Exfoliated Thin-Films of Bismuth Selenide Topological Insulators. ACS Nano, 2011, 5, 2657-2663.	7.3	67
115	Plasmonic and bolometric terahertz detection by graphene field-effect transistor. Applied Physics Letters, 2013, 103, 181114.	1.5	66
116	Reduction of 1/f noise in graphene after electron-beam irradiation. Applied Physics Letters, 2013, 102, .	1.5	65
117	Reduction of lattice thermal conductivity in one-dimensional quantum-dot superlattices due to phonon filtering. Physical Review B, 2011, 84, .	1.1	64
118	Selective Gas Sensing With h -BN Capped MoS2 Heterostructure Thin-Film Transistors. IEEE Electron Device Letters, 2015, 36, 1202-1204.	2.2	62
119	Thermal Conduction in Suspended Graphene Layers. Fullerenes Nanotubes and Carbon Nanostructures, 2010, 18, 474-486.	1.0	60
120	Graphene-based non-Boolean logic circuits. Journal of Applied Physics, 2013, 114, .	1.1	60
121	Thermal conductivity of nitrogenated ultrananocrystalline diamond films on silicon. Journal of Applied Physics, 2008, 103, .	1.1	59
122	Phonon and Thermal Properties of Quasi-Two-Dimensional FePS₃ and MnPS₃ Antiferromagnetic Semiconductors. ACS Nano, 2020, 14, 2424-2435.	7.3	58
123	ZnO growth on Si with low-temperature ZnO buffer layers by ECR-assisted MBE. Journal of Crystal Growth, 2006, 286, 61-65.	0.7	57
124	Current Carrying Capacity of Quasi-1D ZrTe₃Van Der Waals Nanoribbons. IEEE Electron Device Letters, 2018, 39, 735-738.	2.2	57
125	Bias-Voltage Driven Switching of the Charge-Density-Wave and Normal Metallic Phases in 1T-TaS₂ Thin-Film Devices. ACS Nano, 2019, 13, 7231-7240.	7.3	57
126	Phonon Confinement Effects in Hybrid Virus-Inorganic Nanotubes for Nanoelectronic Applications. Nano Letters, 2005, 5, 1920-1923.	4.5	56

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127	Gating of Singleâ€Layer Graphene with Singleâ€Stranded Deoxyribonucleic Acids. Small, 2010, 6, 1150-1155.	5.2	56
128	Direct Lowâ€Temperature Integration of Nanocrystalline Diamond with GaN Substrates for Improved Thermal Management of Highâ€Power Electronics. Advanced Functional Materials, 2012, 22, 1525-1530.	7.8	56
129	Low Resistivity and High Breakdown Current Density of 10 nm Diameter van der Waals TaSe₃ Nanowires by Chemical Vapor Deposition. Nano Letters, 2019, 19, 4355-4361.	4.5	55
130	Thermal conductivity inhibition in phonon engineered core-shell cross-section modulated Si/Ge nanowires. Applied Physics Letters, 2013, 102, .	1.5	54
131	Toward Lithium Ion Batteries with Enhanced Thermal Conductivity. ACS Nano, 2014, 8, 7202-7207.	7.3	54
132	Low-Frequency Current Fluctuations and Sliding of the Charge Density Waves in Two-Dimensional Materials. Nano Letters, 2018, 18, 3630-3636.	4.5	54
133	Thermoelectric properties of electrically gated bismuth telluride nanowires. Physical Review B, 2010, 81, .	1.1	53
134	Engineering of the thermodynamic properties of bilayer graphene by atomic plane rotations: the role of the out-of-plane phonons. Nanoscale, 2015, 7, 12851-12859.	2.8	53
135	Graphene Epoxy-Based Composites as Efficient Electromagnetic Absorbers in the Extremely High-Frequency Band. ACS Applied Materials & Interfaces, 2020, 12, 28635-28644.	4.0	53
136	Graphene Ambipolar Multiplier Phase Detector. IEEE Electron Device Letters, 2011, 32, 1328-1330.	2.2	52
137	Graphene thickness-graded transistors with reduced electronic noise. Applied Physics Letters, 2012, 100, 033103.	1.5	52
138	Thermal Management of Concentrated Multi-Junction Solar Cells with Graphene-Enhanced Thermal Interface Materials. Applied Sciences (Switzerland), 2017, 7, 589.	1.3	52
139	Plasmonic Coreâ€“Shell Zirconium Nitrideâ€“Silicon Oxynitride Nanoparticles. ACS Energy Letters, 2018, 3, 2349-2356.	8.8	51
140	Electrically Insulating Flexible Films with Quasiâ€1D van der Waals Fillers as Efficient Electromagnetic Shields in the GHz and Subâ€THz Frequency Bands. Advanced Materials, 2021, 33, e2007286.	11.1	51
141	Thermal properties of the optically transparent pore-free nanostructured yttria-stabilized zirconia. Journal of Applied Physics, 2009, 106, .	1.1	50
142	Raman spectra of twisted CVD bilayer graphene. Carbon, 2017, 123, 302-306.	5.4	50
143	Anomalous electron transport in back-gated field-effect transistors with TiTe2 semimetal thin-film channels. Applied Physics Letters, 2012, 100, .	1.5	49
144	Ultrastiff, Strong, and Highly Thermally Conductive Crystalline Graphitic Films with Mixed Stacking Order. Advanced Materials, 2019, 31, e1903039.	11.1	49

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145	One-dimensional van der Waals quantum materials. Materials Today, 2022, 55, 74-91.	8.3	49
146	Vibrational Modes of Nano-Template Viruses. Journal of Biomedical Nanotechnology, 2005, 1, 90-95.	0.5	48
147	Optical properties of wurtzite and zinc-blende GaN/AlN quantum dots. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2004, 22, 2190.	1.6	46
148	Confined Optical Phonon Modes in Aligned Nanorod Arrays Detected by Resonant Inelastic Light Scattering. Nano Letters, 2007, 7, 476-479.	4.5	46
149	Confined electron-confined phonon scattering rates in wurtzite AlN/GaN/AlN heterostructures. Journal of Applied Physics, 2004, 95, 5626-5632.	1.1	45
150	A phonon depletion effect in ultrathin heterostructures with acoustically mismatched layers. Applied Physics Letters, 2004, 85, 825-827.	1.5	44
151	Built-in field effect on the electron mobility in AlNâˆ•GaNâˆ•AlN quantum wells. Applied Physics Letters, 2006, 89, 113508.	1.5	44
152	1/<inline-formula> <tex-math notation="LaTeX">f </tex-math></inline-formula> Noise Characteristics of MoS₂ Thin-Film Transistors: Comparison of Single and Multilayer Structures. IEEE Electron Device Letters, 2015, 36, 517-519.	2.2	43
153	Electrical and Thermal Conductivity of Geâˆ•Si Quantum Dot Superlattices. Journal of the Electrochemical Society, 2005, 152, G432.	1.3	42
154	Advances in Brillouinâ€“Mandelstam light-scattering spectroscopy. Nature Photonics, 2021, 15, 720-731.	15.6	42
155	All-metallic electrically gated 2H-TaSe₂ thin-film switches and logic circuits. Journal of Applied Physics, 2014, 115, 034305.	1.1	41
156	Phonon-hopping thermal conduction in quantum dot superlattices. Applied Physics Letters, 2005, 87, 202105.	1.5	40
157	Capacitanceâ€“Voltage Spectroscopy of Trapping States in GaN/AlGaN Heterostructure Field-Effect Transistors. Journal of Nanoelectronics and Optoelectronics, 2006, 1, 258-263.	0.1	40
158	Spectroscopic raman nanometrology of graphene and graphene multilayers on arbitrary substrates. Journal of Physics: Conference Series, 2008, 109, 012008.	0.3	40
159	Total-Ionizing-Dose Effects on Threshold Switching in $1{T}$ -TaS2 Charge Density Wave Devices. IEEE Electron Device Letters, 2017, 38, 1724-1727.	2.2	39
160	Assembly and characterization of hybrid virus-inorganic nanotubes. Applied Physics Letters, 2005, 86, 253108.	1.5	37
161	Variable-temperature inelastic light scattering spectroscopy of nickel oxide: Disentangling phonons and magnons. Applied Physics Letters, 2017, 110, .	1.5	37
162	Transport study of a single bismuth nanowire fabricated by the silver and silicon nanowire shadow masks. Applied Physics Letters, 2006, 89, 141503.	1.5	36

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163	Chill Out. IEEE Spectrum, 2009, 46, 34-39.	0.5	36
164	Growth of graphene and graphite nanocrystals from a molten phase. Journal of Materials Science, 2011, 46, 6255-6263.	1.7	36
165	Transistor-Less Logic Circuits Implemented With 2-D Charge Density Wave Devices. IEEE Electron Device Letters, 2018, 39, 1449-1452.	2.2	36
166	Acoustic phonon spectrum and thermal transport in nanoporous alumina arrays. Applied Physics Letters, 2015, 107, .	1.5	35
167	High-temperature performance of MoS2 thin-film transistors: Direct current and pulse current-voltage characteristics. Journal of Applied Physics, 2015, 117, .	1.1	34
168	Increased thermal conductivity of free-standing low-dislocation-density GaN films. Physica Status Solidi A, 2005, 202, R135-R137.	1.7	33
169	Two-Dimensional Oscillatory Neural Network Based on Room-Temperature Charge-Density-Wave Devices. IEEE Nanotechnology Magazine, 2017, 16, 860-867.	1.1	33
170	Low-frequency vibrational modes of viruses used for nanoelectronic self-assemblies. Physica Status Solidi (B): Basic Research, 2004, 241, R67-R69.	0.7	32
171	Evidence for possible flexoelectricity in tobacco mosaic viruses used as nanotemplates. Applied Physics Letters, 2006, 88, 153902.	1.5	32
172	Unique features of the generationâ€“recombination noise in quasi-one-dimensional van der Waals nanoribbons. Nanoscale, 2018, 10, 19749-19756.	2.8	32
173	Response to â€œComment on â€˜Modification of graphene properties due to electron-beam irradiationâ€™ â€• [Appl. Phys. Lett. 95, 246101(2009)]. Applied Physics Letters, 2009, 95, 246102.	1.5	31
174	Charge-carrier states and light absorption in ordered quantum dot superlattices. Physical Review B, 2007, 76, .	1.1	30
175	Magnonic interferometric switch for multi-valued logic circuits. Journal of Applied Physics, 2017, 121, .	1.1	30
176	Interface and confined polar optical phonons in spherical ZnO quantum dots with wurtzite crystal structure. Physica Status Solidi C: Current Topics in Solid State Physics, 2004, 1, 2650-2653.	0.8	29
177	Variability Effects in Graphene: Challenges and Opportunities for Device Engineering and Applications. Proceedings of the IEEE, 2013, 101, 1670-1688.	16.4	29
178	A Magnetometer Based on a Spin Wave Interferometer. Scientific Reports, 2017, 7, 11539.	1.6	29
179	Proton-irradiation-immune electronics implemented with two-dimensional charge-density-wave devices. Nanoscale, 2019, 11, 8380-8386.	2.8	29
180	Magnetic and thermal transport properties of SrFe12O19 permanent magnets with anisotropic grain structure. Materials and Design, 2017, 125, 62-68.	3.3	28

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181	Phonon-engineered mobility enhancement in the acoustically mismatched silicon/diamond transistor channels. Applied Physics Letters, 2008, 93, 173111.	1.5	27
182	Monoclinic structures of niobium trisulfide. APL Materials, 2018, 6, .	2.2	27
183	Design of lithium cobalt oxide electrodes with high thermal conductivity and electrochemical performance using carbon nanotubes and diamond particles. Carbon, 2018, 129, 702-710.	5.4	27
184	Low-frequency noise spectroscopy of charge-density-wave phase transitions in vertical quasi-2D 1T-TaS₂ devices. Applied Physics Express, 2019, 12, 037001.	1.1	27
185	Charge-density-wave quantum materials and devicesâ€"New developments and future prospects. Applied Physics Letters, 2021, 119, .	1.5	27
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