Alexander A Balandin

List of Publications by Year in Descending Order

293 papers	39,610 citations	81 h-index	198 g-index
328 ext. papers	43,957 ext. citations	6 avg, IF	8.07 L-index

#	Paper	IF	Citations
293	Efficient terahertz radiation absorption by dilute graphene composites. *Applied Physics Letters*, **2022**, 120, 063104	3.4	3
292	Excess noise in high-current diamond diodes. *Applied Physics Letters*, **2022**, 120, 062103	3.4	5
291	Low-frequency noise characteristics of GaN vertical PIN diodes: Effects of design, current, and temperature. *Applied Physics Letters*, **2021**, 119, 243505	3.4	3
290	Specifics of Thermal Transport in Graphene Composites: Effect of Lateral Dimensions of Graphene Fillers. *ACS Applied Materials & Interfaces*, **2021**,	9.5	9
289	Evidence for a thermally driven charge-density-wave transition in 1T-TaS2 thin-film devices: Prospects for GHz switching speed. *Applied Physics Letters*, **2021**, 118, 093102	3.4	5
288	Electromagnetic-Polarization-Selective Composites with Quasi-1D Van der Waals Fillers: Nanoscale Material Functionality That Mimics Macroscopic Systems. *ACS Applied Materials & Interfaces*, **2021**, 13, 21527-21533	9.5	4
287	Room temperature depinning of the charge-density waves in quasi-two-dimensional 1T-TaS2 devices. *Applied Physics Letters*, **2021**, 118, 223101	3.4	5
286	Noncured Graphene Thermal Interface Materials for High-Power Electronics: Minimizing the Thermal Contact Resistance. *Nanomaterials*, **2021**, 11,	5.4	7
285	Advances in Brillouin–Mandelstam light-scattering spectroscopy. *Nature Photonics*, **2021**, 15, 720-731	33.9	13
284	Electrically Insulating Flexible Films with Quasi-1D van der Waals Fillers as Efficient Electromagnetic Shields in the GHz and Sub-THz Frequency Bands. *Advanced Materials*, **2021**, 33, e2007286	24	22
283	Printed Electronic Devices with Inks of TiS Quasi-One-Dimensional van der Waals Material. *ACS Applied Materials & Interfaces*, **2021**, 13, 47033-47042	9.5	3
282	Thermal interface materials with graphene fillers: review of the state of the art and outlook for future applications. *Nanotechnology*, **2021**, 32, 142003	3.4	37
281	Graphene Epoxy-Based Composites as Efficient Electromagnetic Absorbers in the Extremely High-Frequency Band. *ACS Applied Materials & Interfaces*, **2020**, 12, 28635-28644	9.5	27
280	Power Cycling and Reliability Testing of Epoxy-Based Graphene Thermal Interface Materials. *Journal of Carbon Research*, **2020**, 6, 26	3.3	15
279	High-frequency current oscillations in charge-density-wave 1T-TaS2 devices: Revisiting the narrow band noise concept. *Applied Physics Letters*, **2020**, 116, 163101	3.4	10
278	Noncuring Graphene Thermal Interface Materials for Advanced Electronics. *Advanced Electronic Materials*, **2020**, 6, 1901303	6.4	46
277	Brillouin-Mandelstam spectroscopy of stress-modulated spatially confined spin waves in Ni thin films on piezoelectric substrates. *Journal of Magnetism and Magnetic Materials*, **2020**, 501, 166440	2.8	2

276	Phonon and Thermal Properties of Quasi-Two-Dimensional FePS and MnPS Antiferromagnetic Semiconductors. *ACS Nano*, **2020**, 14, 2424-2435	16.7	24
275	Phononic and photonic properties of shape-engineered silicon nanoscale pillar arrays. *Nanotechnology*, **2020**, 31, 30LT01	3.4	6
274	Phononics of Graphene and Related Materials. *ACS Nano*, **2020**, 14, 5170-5178	16.7	91
273	Coexistence of Magnetic Orders in Two-Dimensional Magnet CrI. *Nano Letters*, **2020**, 20, 553-558	11.5	40
272	Non-Curing Thermal Interface Materials with Graphene Fillers for Thermal Management of Concentrated Photovoltaic Solar Cells. *Journal of Carbon Research*, **2020**, 6, 2	3.3	13
271	Strain-Controlled Superconductivity in Few-Layer NbSe. *ACS Applied Materials & Interfaces*, **2020**, 12, 38744-38750	9.5	2
270	Multifunctional Graphene Composites for Electromagnetic Shielding and Thermal Management at Elevated Temperatures. *Advanced Electronic Materials*, **2020**, 6, 2000520	6.4	33
269	Graphene related materials for thermal management. *2D Materials*, **2020**, 7, 012001	5.9	82
268	Thermal Properties of the Binary-Filler Hybrid Composites with Graphene and Copper Nanoparticles. *Advanced Functional Materials*, **2020**, 30, 1904008	15.6	110
267	Low Resistivity and High Breakdown Current Density of 10 nm Diameter van der Waals TaSe Nanowires by Chemical Vapor Deposition. *Nano Letters*, **2019**, 19, 4355-4361	11.5	32
266	Bias-Voltage Driven Switching of the Charge-Density-Wave and Normal Metallic Phases in 1T-TaS Thin-Film Devices. *ACS Nano*, **2019**, 13, 7231-7240	16.7	38
265	Ultrastiff, Strong, and Highly Thermally Conductive Crystalline Graphitic Films with Mixed Stacking Order. *Advanced Materials*, **2019**, 31, e1903039	24	27
264	Thermal and electrical conductivity control in hybrid composites with graphene and boron nitride fillers. *Materials Research Express*, **2019**, 6, 085325	1.7	76
263	The discrete noise of magnons. *Applied Physics Letters*, **2019**, 114, 090601	3.4	10
262	Low-frequency noise spectroscopy of charge-density-wave phase transitions in vertical quasi-2D 1T-TaS2 devices. *Applied Physics Express*, **2019**, 12, 037001	2.4	19
261	Proton-irradiation-immune electronics implemented with two-dimensional charge-density-wave devices. *Nanoscale*, **2019**, 11, 8380-8386	7.7	22
260	Strong Hot Carrier Effects in Single Nanowire Heterostructures. *Nano Letters*, **2019**, 19, 5062-5069	11.5	8
259	Low-frequency electronic noise in superlattice and random-packed thin films of colloidal quantum dots. *Nanoscale*, **2019**, 11, 20171-20178	7.7	7

258	Dual-Functional Graphene Composites for Electromagnetic Shielding and Thermal Management. *Advanced Electronic Materials*, **2019**, 5, 1800558	6.4	133
257	Brillouin-Mandelstam spectroscopy of standing spin waves in a ferrite waveguide. *AIP Advances*, **2018**, 8, 056017	1.5	3
256	Effects of the magnetic field variation on the spin wave interference in a magnetic cross junction. *AIP Advances*, **2018**, 8, 056619	1.5	2
255	Monoclinic structures of niobium trisulfide. *APL Materials*, **2018**, 6, 026602	5.7	19
254	Design of lithium cobalt oxide electrodes with high thermal conductivity and electrochemical performance using carbon nanotubes and diamond particles. *Carbon*, **2018**, 129, 702-710	10.4	20
253	Current Carrying Capacity of Quasi-1D ZrTe3 Van Der Waals Nanoribbons. *IEEE Electron Device Letters*, **2018**, 39, 735-738	4.4	40
252	Raman-based technique for measuring thermal conductivity of graphene and related materials. *Journal of Raman Spectroscopy*, **2018**, 49, 106-120	2.3	74
251	Transistor-Less Logic Circuits Implemented With 2-D Charge Density Wave Devices. *IEEE Electron Device Letters*, **2018**, 39, 1449-1452	4.4	25
250	Unique features of the generation-recombination noise in quasi-one-dimensional van der Waals nanoribbons. *Nanoscale*, **2018**, 10, 19749-19756	7.7	21
249	Graphene Applications in Advanced Thermal Management **2018**, 823-865		
248	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	9.5	173
247	Plasmonic Core–Shell Zirconium Nitride–Silicon Oxynitride Nanoparticles. *ACS Energy Letters*, **2018**, 3, 2349-2356	20.1	36
246	High-Vacuum Particulate-Free Deposition of Wafer-Scale Mono-, Bi-, and Trilayer Molybdenum Disulfide with Superior Transport Properties. *ACS Applied Materials & Interfaces*, **2018**, 10, 33457-33463	9.5	5
245	Acoustic phonon spectrum engineering in bulk crystals via incorporation of dopant atoms. *Applied Physics Letters*, **2018**, 112, 191902	3.4	13
244	Low-Frequency Current Fluctuations and Sliding of the Charge Density Waves in Two-Dimensional Materials. *Nano Letters*, **2018**, 18, 3630-3636	11.5	36
243	Thermal and magnetic properties of nanostructured densified ferrimagnetic composites with graphene - graphite fillers. *Materials and Design*, **2017**, 118, 75-80	8.1	58
242	Phonons and thermal transport in graphene and graphene-based materials. *Reports on Progress in Physics*, **2017**, 80, 036502	14.4	197
241	Magnonic interferometric switch for multi-valued logic circuits. *Journal of Applied Physics*, **2017**, 121, 024504	2.5	25

240	Two-Dimensional Oscillatory Neural Network Based on Room-Temperature Charge-Density-Wave Devices. *IEEE Nanotechnology Magazine*, **2017**, 16, 860-867	2.6	25
239	Reliability characterization of SiON and MGHK MOSFETs using flicker noise and its correlation with the bias temperature instability. *Solid-State Electronics*, **2017**, 135, 37-42	1.7	6
238	Magnetic and thermal transport properties of SrFe12O19 permanent magnets with anisotropic grain structure. *Materials and Design*, **2017**, 125, 62-68	8.1	21
237	Magnonic holographic imaging of magnetic microstructures. *Journal of Magnetism and Magnetic Materials*, **2017**, 428, 348-356	2.8	6
236	A Magnetometer Based on a Spin Wave Interferometer. *Scientific Reports*, **2017**, 7, 11539	4.9	19
235	Variable-temperature inelastic light scattering spectroscopy of nickel oxide: Disentangling phonons and magnons. *Applied Physics Letters*, **2017**, 110, 202406	3.4	29
234	Raman spectra of twisted CVD bilayer graphene. *Carbon*, **2017**, 123, 302-306	10.4	35
233	**2017**,		2
232	Two-Dimensional Thermal Transport in Graphene **2017**, 57-84		
231	Low-Frequency Electronic Noise in Quasi-1D TaSe van der Waals Nanowires. *Nano Letters*, **2017**, 17, 377-383	13	51
230	Spin-phonon coupling in antiferromagnetic nickel oxide. *Applied Physics Letters*, **2017**, 111, 252402	3.4	70
229	Total-Ionizing-Dose Effects on Threshold Switching in $1{T}$ -TaS2 Charge Density Wave Devices. *IEEE Electron Device Letters*, **2017**, 38, 1724-1727	4.4	27
228	Thermal Management of Concentrated Multi-Junction Solar Cells with Graphene-Enhanced Thermal Interface Materials. *Applied Sciences (Switzerland)*, **2017**, 7, 589	2.6	46
227	Breakdown current density in h-BN-capped quasi-1D TaSe3 metallic nanowires: prospects of interconnect applications. *Nanoscale*, **2016**, 8, 15774-82	7.7	49
226	Grain-to-Grain Compositional Variations and Phase Segregation in Copper-Zinc-Tin-Sulfide Films. *ACS Applied Materials & Interfaces*, **2016**, 8, 22971-6	9.5	10
225	Thermal conductivity of graphene with defects induced by electron beam irradiation. *Nanoscale*, **2016**, 8, 14608-16	7.7	144
224	Direct observation of confined acoustic phonon polarization branches in free-standing semiconductor nanowires. *Nature Communications*, **2016**, 7, 13400	17.4	51
223	Metal-induced rapid transformation of diamond into single and multilayer graphene on wafer scale. *Nature Communications*, **2016**, 7, 12099	17.4	51

222	Thermal Conductivity of Segmented Nanowires. *Nanoscience and Technology*, **2016**, 507-531	0.6	
221	The influence of chemical reactivity of surface defects on ambient-stable InSe-based nanodevices. *Nanoscale*, **2016**, 8, 8474-9	7.7	79
220	A charge-density-wave oscillator based on an integrated tantalum disulfide-boron nitride-graphene device operating at room temperature. *Nature Nanotechnology*, **2016**, 11, 845-850	28.7	123
219	Thermal Transport in Graphene, Few-Layer Graphene and Graphene Nanoribbons. *Lecture Notes in Physics*, **2016**, 339-363	0.8	9
218	Selective chemical vapor sensing with few-layer MoS2 thin-film transistors: Comparison with graphene devices. *Applied Physics Letters*, **2015**, 106, 023115	3.4	97
217	Engineering of the thermodynamic properties of bilayer graphene by atomic plane rotations: the role of the out-of-plane phonons. *Nanoscale*, **2015**, 7, 12851-9	7.7	41
216	1/ f Noise Characteristics of MoS2 Thin-Film Transistors: Comparison of Single and Multilayer Structures. *IEEE Electron Device Letters*, **2015**, 36, 517-519	4.4	35
215	Zone-Folded Phonons and the Commensurate-Incommensurate Charge-Density-Wave Transition in 1T-TaSe2 Thin Films. *Nano Letters*, **2015**, 15, 2965-73	11.5	73
214	Strongly Anisotropic Thermal Conductivity of Free-Standing Reduced Graphene Oxide Films Annealed at High Temperature. *Advanced Functional Materials*, **2015**, 25, 4664-4672	15.6	369
213	Thermal properties of graphene and few-layer graphene: applications in electronics. *IET Circuits, Devices and Systems*, **2015**, 9, 4-12	1.1	64
212	Magnetically-functionalized self-aligning graphene fillers for high-efficiency thermal management applications. *Materials and Design*, **2015**, 88, 214-221	8.1	141
211	Selective Gas Sensing With h -BN Capped MoS2 Heterostructure Thin-Film Transistors. *IEEE Electron Device Letters*, **2015**, 36, 1202-1204	4.4	55
210	Suppression of 1/f noise in near-ballistic h-BN-graphene-h-BN heterostructure field-effect transistors. *Applied Physics Letters*, **2015**, 107, 023106	3.4	74
209	Acoustic phonon spectrum and thermal transport in nanoporous alumina arrays. *Applied Physics Letters*, **2015**, 107, 171904	3.4	32
208	Phonon Spectrum Engineering in Rolled-up Micro- and Nano-Architectures. *Applied Sciences (Switzerland)*, **2015**, 5, 728-746	2.6	6
207	(Invited) Graphene Heat Spreaders and Interconnects for Advanced Electronic Applications. *ECS Transactions*, **2015**, 67, 167-172	1	2
206	High-temperature performance of MoS2 thin-film transistors: Direct current and pulse current-voltage characteristics. *Journal of Applied Physics*, **2015**, 117, 064301	2.5	29
205	Thermal properties of graphene-copper-graphene heterogeneous films. *Nano Letters*, **2014**, 14, 1497-503	11.5	210

204	Graphene-enhanced phase change materials for thermal management of battery packs **2014**,		1
203	Thermal conductivity of twisted bilayer graphene. *Nanoscale*, **2014**, 6, 13402-8	7.7	99
202	Thermal conductivity of graphene laminate. *Nano Letters*, **2014**, 14, 5155-61	11.5	219
201	Toward lithium ion batteries with enhanced thermal conductivity. *ACS Nano*, **2014**, 8, 7202-7	16.7	43
200	Specific heat of twisted bilayer graphene: Engineering phonons by atomic plane rotations. *Applied Physics Letters*, **2014**, 105, 031904	3.4	58
199	Low-frequency 1/f noise in MoS2 transistors: Relative contributions of the channel and contacts. *Applied Physics Letters*, **2014**, 104, 153104	3.4	87
198	Graphene Thermal Properties: Applications in Thermal Management and Energy Storage. *Applied Sciences (Switzerland)*, **2014**, 4, 525-547	2.6	208
197	Phonon engineering in graphene and van der Waals materials. *MRS Bulletin*, **2014**, 39, 817-823	3.2	20
196	Selective gas sensing with MoS2 thin film transistors **2014**,		3
195	A comparative study of the thermal interface materials with graphene and boron nitride fillers **2014**,		5
194	Graphene-enhanced hybrid phase change materials for thermal management of Li-ion batteries. *Journal of Power Sources*, **2014**, 248, 37-43	8.9	305
193	All-metallic electrically gated 2H-TaSe2 thin-film switches and logic circuits. *Journal of Applied Physics*, **2014**, 115, 034305	2.5	35
192	Low-frequency 1/f noise in graphene devices. *Nature Nanotechnology*, **2013**, 8, 549-55	28.7	376
191	Phonons in twisted bilayer graphene. *Physical Review B*, **2013**, 88,	3.3	119
190	. *Proceedings of the IEEE*, **2013**, 101, 1670-1688	14.3	25
189	Plasmonic and bolometric terahertz detection by graphene field-effect transistor. *Applied Physics Letters*, **2013**, 103, 181114	3.4	46
188	Plasmonic and bolometric terahertz graphene sensors **2013**,		2
187	Origin of 1/f noise in graphene multilayers: Surface vs. volume. *Applied Physics Letters*, **2013**, 102, 093111	3.4	80

186	Selective Sensing of Individual Gases Using Graphene Devices. *IEEE Sensors Journal*, **2013**, 13, 2818-2822	4	55
185	Reduction of 1/f noise in graphene after electron-beam irradiation. *Applied Physics Letters*, **2013**, 102, 153512	3.4	54
184	Effects of functionalization on thermal properties of single-wall and multi-wall carbon nanotube-polymer nanocomposites. *ACS Nano*, **2013**, 7, 5114-21	16.7	176
183	Thermal conductivity inhibition in phonon engineered core-shell cross-section modulated Si/Ge nanowires. *Applied Physics Letters*, **2013**, 102, 213109	3.4	51
182	Phonon and thermal properties of exfoliated TaSe2 thin films. *Journal of Applied Physics*, **2013**, 114, 204301	2.5	63
181	Graphene-based non-Boolean logic circuits. *Journal of Applied Physics*, **2013**, 114, 154310	2.5	47
180	The effect of a transverse magnetic field on 1/f noise in graphene. *Applied Physics Letters*, **2013**, 103, 173114	3.4	15
179	Surface and volume 1/f noise in multi-layer graphene **2013**,		1
178	Towards ultrathick battery electrodes: aligned carbon nanotube-enabled architecture. *Advanced Materials*, **2012**, 24, 533-7	24	241
177	Charge density waves in exfoliated films of van der Waals materials: evolution of Raman spectrum in TiSe2. *Nano Letters*, **2012**, 12, 5941-5	11.5	132
176	Anomalous size dependence of the thermal conductivity of graphene ribbons. *Nano Letters*, **2012**, 12, 3238-44	11.5	225
175	Selective gas sensing with a single pristine graphene transistor. *Nano Letters*, **2012**, 12, 2294-8	11.5	310
174	Micro-Raman spectroscopy of mechanically exfoliated few-quintuple layers of Bi2Te3, Bi2Se3, and Sb2Te3 materials. *Journal of Applied Physics*, **2012**, 111, 054305	2.5	218
173	Thermal properties of graphene and multilayer graphene: Applications in thermal interface materials. *Solid State Communications*, **2012**, 152, 1331-1340	1.6	578
172	Epitaxial graphene nanoribbon array fabrication using BCP-assisted nanolithography. *ACS Nano*, **2012**, 6, 6786-92	16.7	62
171	Anomalous electron transport in back-gated field-effect transistors with TiTe2 semimetal thin-film channels. *Applied Physics Letters*, **2012**, 100, 043109	3.4	46
170	Two-dimensional phonon transport in graphene. *Journal of Physics Condensed Matter*, **2012**, 24, 233203	1.8	274
169	Phononics in low-dimensional materials. *Materials Today*, **2012**, 15, 266-275	21.8	209

168	Graphene-on-diamond devices with increased current-carrying capacity: carbon sp2-on-sp3 technology. *Nano Letters*, **2012**, 12, 1603-8	11.5	143
167	Thermal properties of the hybrid graphene-metal nano-micro-composites: Applications in thermal interface materials. *Applied Physics Letters*, **2012**, 100, 073113	3.4	297
166	Graphene fillers for ultra-efficient thermal interface materials **2012**,		1
165	Graphene-multilayer graphene nanocomposites as highly efficient thermal interface materials. *Nano Letters*, **2012**, 12, 861-7	11.5	1053
164	Thermal conductivity of isotopically modified graphene. *Nature Materials*, **2012**, 11, 203-7	27	698
163	Direct Low-Temperature Integration of Nanocrystalline Diamond with GaN Substrates for Improved Thermal Management of High-Power Electronics. *Advanced Functional Materials*, **2012**, 22, 1525-1530	15.6	47
162	Graphene thickness-graded transistors with reduced electronic noise. *Applied Physics Letters*, **2012**, 100, 033103	3.4	49
161	Suppression of phonon heat conduction in cross-section-modulated nanowires. *Physical Review B*, **2012**, 85,	3.3	68
160	Graphene quilts for thermal management of high-power GaN transistors. *Nature Communications*, **2012**, 3, 827	17.4	369
159	Graphene Ambipolar Multiplier Phase Detector. *IEEE Electron Device Letters*, **2011**, 32, 1328-1330	4.4	47
158	Electrical and noise characteristics of graphene field-effect transistors **2011**,		3
157	Low-frequency noise in graphene field-effect transistors **2011**,		4
156	In-plane and cross-plane thermal conductivity of graphene: applications in thermal interface materials **2011**,		5
155	Reversible Tuning of the Electronic Properties of Graphene via Controlled Exposure to Electron Beam Irradiation and Annealing. *Materials Research Society Symposia Proceedings*, **2011**, 1344, 1		
154	Large-Area Industrial-Scale Identification and Quality Control of Graphene. *Materials Research Society Symposia Proceedings*, **2011**, 1344, 1		
153	Heat conduction properties of graphene: Prospects of thermal management applications **2011**,		5
152	Tuning of Graphene Properties via Controlled Exposure to Electron Beams. *IEEE Nanotechnology Magazine*, **2011**, 10, 865-870	2.6	63
151	The Heat Is On: Graphene Applications. *IEEE Nanotechnology Magazine*, **2011**, 5, 15-19	1.7	13

150	Thermal properties of graphene and nanostructured carbon materials. *Nature Materials*, **2011**, 10, 569-81	27	4185
149	Growth of graphene and graphite nanocrystals from a molten phase. *Journal of Materials Science*, **2011**, 46, 6255-6263	4.3	33
148	1/f noise in conducting channels of topological insulator materials. *Physica Status Solidi (A) Applications and Materials Science*, **2011**, 208, 144-146	1.6	15
147	Theoretical description of thermal transport in graphene: The issues of phonon cut-off frequencies and polarization branches. *Physica Status Solidi (B): Basic Research*, **2011**, 248, 2609-2614	1.3	63
146	Graphene nanoribbon crossbar nanomesh **2011**,		1
145	Low-frequency current fluctuations in "graphene-like" exfoliated thin-films of bismuth selenide topological insulators. *ACS Nano*, **2011**, 5, 2657-63	16.7	61
144	High-throughput large-area automated identification and quality control of graphene and few-layer graphene films. *ACS Nano*, **2011**, 5, 914-22	16.7	59
143	Graphene-based thermal interface materials **2011**,		7
142	A comparative analysis of Ag and Cu heat sink layers in L10-FePt films for heat-assisted magnetic recording. *Journal of Applied Physics*, **2011**, 109, 07B763	2.5	9
141	Reduction of lattice thermal conductivity in one-dimensional quantum-dot superlattices due to phonon filtering. *Physical Review B*, **2011**, 84,	3.3	56
140	Thermal Properties of Graphene and Carbon Based Materials: Prospects of Thermal Management Applications. *Materials Research Society Symposia Proceedings*, **2011**, 1344, 1		1
139	Top-Gate Graphene-on-UNCD Transistors with Enhanced Performance. *Materials Research Society Symposia Proceedings*, **2011**, 1344, 1		
138	Graphene-Like Exfoliation of Quasi-2D Crystals of Titanium Ditelluride: A New Route to Charge Density Wave Materials. *Materials Research Society Symposia Proceedings*, **2011**, 1344, 1		
137	Low-Frequency Noise in Graphene-Like Exfoliated Thin Films of Topological Insulators. *Materials Research Society Symposia Proceedings*, **2011**, 1344, 1		
136	Experimental Demonstration of Thermal Management of High-Power GaN Transistors with Graphene Lateral Heat Spreaders. *Materials Research Society Symposia Proceedings*, **2011**, 1344, 1		2
135	Thermal Properties of Graphene: Applications in Thermal Interface Materials. *ECS Transactions*, **2011**, 35, 193-199	1	11
134	"Graphene-Like" Exfoliation and Characterization of the Atomically-Thin Films of Titanium Ditelluride. *ECS Transactions*, **2011**, 35, 205-210	1	
133	DNA Gating effect from single layer graphene. *Materials Research Society Symposia Proceedings*, **2011**, 1344, 1		

132	1/f Noise in Graphene Field-Effect Transistors: Dependence on the Device Channel Area. *Materials Research Society Symposia Proceedings*, **2011**, 1344, 1		
131	Pseudo-Superlattices of Bi2Te3 Topological Insulator Films with Enhanced Thermoelectric Performance. *Materials Research Society Symposia Proceedings*, **2011**, 1344, 1		
130	LOW-FREQUENCY ELECTRONIC NOISE IN GRAPHENE TRANSISTORS: COMPARISON WITH CARBON NANOTUBES. *International Journal of High Speed Electronics and Systems*, **2011**, 20, 161-170	0.5	3
129	Observation of the memory steps in graphene at elevated temperatures. *Applied Physics Letters*, **2011**, 98, 222107	3.4	14
128	Dimensional crossover of thermal transport in few-layer graphene. *Nature Materials*, **2010**, 9, 555-8	27	1028
127	Properties of Quasi-Two-Dimensional Crystals of Titanium Ditelluride. *ECS Transactions*, **2010**, 33, 211-217	1	5
126	Extraordinary Thermal Conductivity of Graphene: Possible Applications in Thermal Management. *ECS Transactions*, **2010**, 28, 63-71	1	11
125	Large-Scale Automated Identification and Quality Control of Exfoliated and CVD Graphene via Image Processing Technique. *ECS Transactions*, **2010**, 33, 201-209	1	3
124	Reduced thermal resistance of the silicon-synthetic diamond composite substrates at elevated temperatures. *Applied Physics Letters*, **2010**, 97, 031904	3.4	15
123	"Graphene-Like" Exfoliation of Atomically-Thin Films of Bi2Te3 and Related Materials: Applications in Thermoelectrics and Topological Insulators. *ECS Transactions*, **2010**, 33, 103-117	1	5
122	Thermal management with graphene lateral heat spreaders: A feasibility study **2010**,		3
121	Electrical and noise characteristics of graphene field-effect transistors: ambient effects, noise sources and physical mechanisms. *Journal of Physics Condensed Matter*, **2010**, 22, 395302	1.8	83
120	Growth of large-area graphene films from metal-carbon melts. *Journal of Applied Physics*, **2010**, 108, 094321	2.5	109
119	Crystal symmetry breaking in few-quintuple Bi2Te3 films: Applications in nanometrology of topological insulators. *Applied Physics Letters*, **2010**, 96, 153103	3.4	141
118	Mechanically-exfoliated stacks of thin films of Bi2Te3 topological insulators with enhanced thermoelectric performance. *Applied Physics Letters*, **2010**, 97, 133117	3.4	142
117	Atomically-thin crystalline films and ribbons of bismuth telluride. *Applied Physics Letters*, **2010**, 96, 053107	3.4	117
116	Thermoelectric properties of electrically gated bismuth telluride nanowires. *Physical Review B*, **2010**, 81,	3.3	43
115	Thermal Conduction in Suspended Graphene Layers. *Fullerenes Nanotubes and Carbon Nanostructures*, **2010**, 18, 474-486	1.8	50

114	Extraordinary Thermal Conductivity of Graphene: Prospects of Thermal Management Applications **2010**,		1
113	Triple-mode single-transistor graphene amplifier and its applications. *ACS Nano*, **2010**, 4, 5532-8	16.7	148
112	Investigation and modeling of space radiation effects in quantum dot solar cells **2010**,		4
111	Exfoliation and characterization of bismuth telluride atomic quintuples and quasi-two-dimensional crystals. *Nano Letters*, **2010**, 10, 1209-18	11.5	371
110	Gating of single-layer graphene with single-stranded deoxyribonucleic acids. *Small*, **2010**, 6, 1150-5	11	48
109	Low-Frequency Electronic Noise in the Back-Gated and Top-Gated Graphene Devices. *NATO Science for Peace and Security Series B: Physics and Biophysics*, **2010**, 205-214	0.2	1
108	Thermal properties of the optically transparent pore-free nanostructured yttria-stabilized zirconia. *Journal of Applied Physics*, **2009**, 106, 113507	2.5	40
107	Response to □comment on □Modification of graphene properties due to electron-beam irradiation□□ [Appl. Phys. Lett. 95, 246101(2009)]. *Applied Physics Letters*, **2009**, 95, 246102	3.4	28
106	Space radiation effects modeling and analysis of quantum dot based photovoltaic cells **2009**,		3
105	Enhancement of the Thermoelectric Figure of Merit in Gated Bismuth Telluride Nanowires. *Materials Research Society Symposia Proceedings*, **2009**, 1166, 9		
104	Raman nanometrology of graphene: Temperature and substrate effects. *Solid State Communications*, **2009**, 149, 1132-1135	1.6	100
103	Heat conduction in graphene: experimental study and theoretical interpretation. *New Journal of Physics*, **2009**, 11, 095012	2.9	187
102	Low-frequency electronic noise in the double-gate single-layer graphene transistors. *Applied Physics Letters*, **2009**, 95, 033103	3.4	115
101	Flicker Noise in Bilayer Graphene Transistors. *IEEE Electron Device Letters*, **2009**, 30, 288-290	4.4	97
100	Ultraviolet Raman microscopy of single and multilayer graphene. *Journal of Applied Physics*, **2009**, 106, 043509	2.5	195
99	Lattice thermal conductivity of graphene flakes: Comparison with bulk graphite. *Applied Physics Letters*, **2009**, 94, 203103	3.4	404
98	. *IEEE Spectrum*, **2009**, 46, 34-39	1.7	31
97	Heat Removal in Silicon-on-Insulator Integrated Circuits With Graphene Lateral Heat Spreaders. *IEEE Electron Device Letters*, **2009**, 30, 1281-1283	4.4	92

96	Modification of graphene properties due to electron-beam irradiation. *Applied Physics Letters*, **2009** , 94, 013101	3.4	359
95	Phonon thermal conduction in graphene: Role of Umklapp and edge roughness scattering. *Physical Review B*, **2009**, 79,	3.3	740
94	Gating of single layer graphene using DNA **2009**,		1
93	Investigation of Thermal Crosstalk Between SOI FETs by the Subthreshold Sensing Technique. *IEEE Transactions on Electron Devices*, **2008**, 55, 1733-1740	2.9	6
92	Multiscale Models of Quantum Dot Based Nanomaterials and Nanodevices for Solar Cells. *Lecture Notes in Computer Science*, **2008**, 242-250	0.9	0
91	Extremely high thermal conductivity of graphene: Prospects for thermal management applications in nanoelectronic circuits. *Applied Physics Letters*, **2008**, 92, 151911	3.4	1469
90	Extremely high thermal conductivity of graphene: Prospects for thermal management applications in silicon nanoelectronics **2008**,		6
89	Raman nanometrology of graphene on arbitrary substrates and at variable temperature **2008**,		4
88	Spectroscopic raman nanometrology of graphene and graphene multilayers on arbitrary substrates. *Journal of Physics: Conference Series*, **2008**, 109, 012008	0.3	30
87	Phonon-engineered mobility enhancement in the acoustically mismatched silicon/diamond transistor channels. *Applied Physics Letters*, **2008**, 93, 173111	3.4	24
86	Thermal conductivity of ultrathin tetrahedral amorphous carbon films. *Applied Physics Letters*, **2008**, 93, 043115	3.4	61
85	High-temperature quenching of electrical resistance in graphene interconnects. *Applied Physics Letters*, **2008**, 92, 202108	3.4	173
84	Thermal conductivity of nitrogenated ultrananocrystalline diamond films on silicon. *Journal of Applied Physics*, **2008**, 103, 083538	2.5	50
83	Superior thermal conductivity of single-layer graphene. *Nano Letters*, **2008**, 8, 902-7	11.5	9908
82	Near-Field Optical Transducer for Heat-Assisted Magnetic Recording for Beyond-10-Tbit/in2 Densities. *Journal of Nanoelectronics and Optoelectronics*, **2008**, 3, 44-54	1.3	12
81	Charge-carrier states and light absorption in ordered quantum dot superlattices. *Physical Review B*, **2007**, 76,	3.3	25
80	Electron-polar optical phonon scattering suppression and mobility enhancement in wurtzite heterostructures. *Journal of Physics: Conference Series*, **2007**, 92, 012050	0.3	1
79	Size-quantized oscillations of the electron mobility limited by the optical and confined acoustic phonons in the nanoscale heterostructures. *Journal of Applied Physics*, **2007**, 102, 054304	2.5	22

78	Micro-Raman spectroscopic characterization of ZnO quantum dots, nanocrystals and nanowires **2007**,		19
77	The size-quantized oscillations of the optical-phonon-limited electron mobility in AlN/GaN/AlN nanoscale heterostructures. *Journal of Physics: Conference Series*, **2007**, 92, 012022	0.3	2
76	Acoustic phonon engineering of thermal properties of silicon-based nanostructures. *Journal of Physics: Conference Series*, **2007**, 92, 012086	0.3	10
75	The effect of substrates on the Raman spectrum of graphene: Graphene- on-sapphire and graphene-on-glass. *Applied Physics Letters*, **2007**, 91, 201904	3.4	197
74	Temperature dependence of the Raman spectra of graphene and graphene multilayers. *Nano Letters*, **2007**, 7, 2645-9	11.5	909
73	Variable temperature Raman microscopy as a nanometrology tool for graphene layers and graphene-based devices. *Applied Physics Letters*, **2007**, 91, 071913	3.4	145
72	Intermediate-band solar cells based on quantum dot supracrystals. *Applied Physics Letters*, **2007**, 91, 163503	3.4	116
71	Confined optical phonon modes in aligned nanorod arrays detected by resonant inelastic light scattering. *Nano Letters*, **2007**, 7, 476-9	11.5	44
70	Phonon Engineering in Hetero- and Nanostructures. *Journal of Nanoelectronics and Optoelectronics*, **2007**, 2, 140-170	1.3	86
69	ZnO growth on Si with low-temperature CdO and ZnO buffer layers by molecular-beam epitaxy. *Journal of Electronic Materials*, **2006**, 35, 691-694	1.9	8
68	Capacitance–Voltage Spectroscopy of Trapping States in GaN/AlGaN Heterostructure Field-Effect Transistors. *Journal of Nanoelectronics and Optoelectronics*, **2006**, 1, 258-263	1.3	34
67	Transport study of a single bismuth nanowire fabricated by the silver and silicon nanowire shadow masks. *Applied Physics Letters*, **2006**, 89, 141503	3.4	30
66	Thermal conduction in nanocrystalline diamond films: Effects of the grain boundary scattering and nitrogen doping. *Applied Physics Letters*, **2006**, 89, 171915	3.4	71
65	Evidence for possible flexoelectricity in tobacco mosaic viruses used as nanotemplates. *Applied Physics Letters*, **2006**, 88, 153902	3.4	28
64	Built-in field effect on the electron mobility in AlN–GaN–AlN quantum wells. *Applied Physics Letters*, **2006**, 89, 113508	3.4	42
63	Electron mobility enhancement in AlN–GaN–AlN heterostructures with InGaN nanogrooves. *Applied Physics Letters*, **2006**, 89, 112110	3.4	26
62	Photoluminescence investigation of the carrier recombination processes in ZnO quantum dots and nanocrystals. *Physical Review B*, **2006**, 73,	3.3	362
61	Electrothermal simulation of the self-heating effects in GaN-based field-effect transistors. *Journal of Applied Physics*, **2006**, 100, 054501	2.5	81

60	Giant enhancement of the carrier mobility in silicon nanowires with diamond coating. *Nano Letters*, **2006**, 6, 2442-6	11.5	67
59	ZnO growth on Si with low-temperature ZnO buffer layers by ECR-assisted MBE. *Journal of Crystal Growth*, **2006**, 286, 61-65	1.6	51
58	Thermal conductivity of diamond-like carbon films. *Applied Physics Letters*, **2006**, 89, 161921	3.4	178
57	ZnO Quantum Dots: Physical Properties and Optoelectronic Applications. *Journal of Nanoelectronics and Optoelectronics*, **2006**, 1, 19-38	1.3	106
56	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	1.8	71
55	Origin of the optical phonon frequency shifts in ZnO quantum dots. *Applied Physics Letters*, **2005**, 86, 053103	3.4	314
54	Thermoelectric effects in wurtzite GaN and AlxGa1−xN alloys. *Journal of Applied Physics*, **2005**, 97, 123705	2.5	56
53	Acoustic-phonon propagation in rectangular semiconductor nanowires with elastically dissimilar barriers. *Physical Review B*, **2005**, 72,	3.3	91
52	Thermal conduction in AlxGa1−xN alloys and thin films. *Journal of Applied Physics*, **2005**, 97, 073710	2.5	185
51	Phonon confinement effects in hybrid virus-inorganic nanotubes for nanoelectronic applications. *Nano Letters*, **2005**, 5, 1920-3	11.5	51
50	Electrical and Thermal Conductivity of Ge−Si Quantum Dot Superlattices. *Journal of the Electrochemical Society*, **2005**, 152, G432	3.9	40
49	Comment on "Giant exciton-light coupling in ZnO quantum dots" [Appl. Phys. Lett. 81, 748 (2002)]. *Applied Physics Letters*, **2005**, 86, 226101	3.4	20
48	Micro-Raman investigation of optical phonons in ZnO nanocrystals. *Journal of Applied Physics*, **2005**, 97, 124313	2.5	490
47	Phonon-hopping thermal conduction in quantum dot superlattices. *Applied Physics Letters*, **2005**, 87, 202105	3.4	37
46	High speed nanotechnology-based photodetector **2005**,		1
45	Vibrational Modes of Nano-Template Viruses. *Journal of Biomedical Nanotechnology*, **2005**, 1, 90-95	4	40
44	Increased thermal conductivity of free-standing low-dislocation-density GaN films. *Physica Status Solidi A*, **2005**, 202, R135-R137		32
43	Nanophononics: phonon engineering in nanostructures and nanodevices. *Journal of Nanoscience and Nanotechnology*, **2005**, 5, 1015-22	1.3	133

42	Assembly and characterization of hybrid virus-inorganic nanotubes. *Applied Physics Letters*, **2005**, 86, 253108	3.4	29
41	Interpretation of the Phonon Frequency Shifts in ZnO Quantum Dots. *Materials Research Society Symposia Proceedings*, **2005**, 872, 1		
40	Oligonucleotide Metallization for Conductive Bio-Inorganic Interfaces in Self Assembled Nanoelectronics and Nanosystems. *Materials Research Society Symposia Proceedings*, **2005**, 872, 1		1
39	Simulation of Self-Heating and Temperature Effect in GaN-based Metal-Semiconductor Field-Effect Transistor. *Materials Research Society Symposia Proceedings*, **2005**, 892, 258		2
38	Theory and Modeling in Nanostructured Thermoelectrics **2005**, 16-1-16-10		
37	Experimental investigation of Hall mobility in Ge/Si quantum dot superlattices. *Applied Physics Letters*, **2004**, 84, 3355-3357	3.4	13
36	Confined electron-confined phonon scattering rates in wurtzite AlN/GaN/AlN heterostructures. *Journal of Applied Physics*, **2004**, 95, 5626-5632	2.5	38
35	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		45
34	Radiative lifetime of excitons in ZnO nanocrystals: The dead-layer effect. *Physical Review B*, **2004**, 70,	3.3	108
33	A phonon depletion effect in ultrathin heterostructures with acoustically mismatched layers. *Applied Physics Letters*, **2004**, 85, 825-827	3.4	44
32	Optical Properties of Wurtzite GaN and ZnO Quantum Dots. *Materials Research Society Symposia Proceedings*, **2004**, 818, 353		1
31	Low-frequency vibrational modes of viruses used for nanoelectronic self-assemblies. *Physica Status Solidi (B): Basic Research*, **2004**, 241, R67-R69	1.3	27
30	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		27
29	Phonon spectrum and group velocities in wurtzite hetero-structures. *Physica Status Solidi C: Current Topics in Solid State Physics*, **2004**, 1, 2658-2661		6
28	Temperature dependence of thermal conductivity of AlxGa1⊠N thin films measured by the differential 3⊡technique. *Applied Physics Letters*, **2004**, 85, 5230-5232	3.4	98
27	Interface and confined optical phonons in wurtzite nanocrystals. *Physical Review B*, **2004**, 70,	3.3	134
26	Origin of ultraviolet photoluminescence in ZnO quantum dots: Confined excitons versus surface-bound impurity exciton complexes. *Applied Physics Letters*, **2004**, 85, 5971-5973	3.4	250
25	Interplay of confinement, strain, and piezoelectric effects in the optical spectrum of GaN quantum dots. *Journal of Nanoscience and Nanotechnology*, **2003**, 3, 253-6	1.3	15

24	Raman scattering from three-dimensionally regimented quantum dot superlattices. *Superlattices and Microstructures*, **2003**, 33, 95-101	2.8	11
23	Phonon spectrum and group velocities in AlN/GaN/AlN and related heterostructures. *Superlattices and Microstructures*, **2003**, 33, 155-171	2.8	61
22	Mechanism for thermoelectric figure-of-merit enhancement in regimented quantum dot superlattices. *Applied Physics Letters*, **2003**, 82, 415-417	3.4	131
21	Excitonic properties of strained wurtzite and zinc-blende GaN/AlxGa1⊠N quantum dots. *Journal of Applied Physics*, **2003**, 94, 7178-7186	2.5	189
20	Modeling of Thermal Conductivity of Polycrystalline GaN Films. *Materials Research Society Symposia Proceedings*, **2003**, 764, 1		4
19	Theoretical Investigation of Thermal Conductivity in Wurtzite GaN. *Materials Research Society Symposia Proceedings*, **2002**, 731, 5111		3
18	Electron and phonon energy spectra in a three-dimensional regimented quantum dot superlattice. *Physical Review B*, **2002**, 66,	3.3	90
17	Thermal conductivity of GaN films: Effects of impurities and dislocations. *Journal of Applied Physics*, **2002**, 92, 2534-2539	2.5	276
16	Modeling of Phonon Dispersion in a Semiconductor Quantum Dot Crystal. *Materials Research Society Symposia Proceedings*, **2002**, 731, 1041		
15	Exciton states and optical transitions in colloidal CdS quantum dots: Shape and dielectric mismatch effects. *Physical Review B*, **2002**, 66,	3.3	92
14	The Effect of Defects and Dopants on Thermal Conduction in GaN Films. *Materials Research Society Symposia Proceedings*, **2002**, 719, 8251		1
13	Phonon heat conduction in a semiconductor nanowire. *Journal of Applied Physics*, **2001**, 89, 2932-2938	2.5	519
12	Effect of dislocations on thermal conductivity of GaN layers. *Applied Physics Letters*, **2001**, 79, 4316-4318	3.4	110
11	Miniband formation in a quantum dot crystal. *Journal of Applied Physics*, **2001**, 89, 5509-5515	2.5	154
10	Investigation of the Electron Energy Spectrum in a Three Dimensional Regimented Tetragonal Quantum Dot Superlattice. *Materials Research Society Symposia Proceedings*, **2001**, 677, 441		1
9	Development of an Ab-initio Model of the Lattice Thermal Conductivity in Semiconductor Thin Films and Nanowires. *Materials Research Society Symposia Proceedings*, **2001**, 677, 671		4
8	Extraction of Trap Characteristics from Excess Noise in GaN Devices. *Materials Research Society Symposia Proceedings*, **2001**, 680, 1		0
7	Carrier-Density Fluctuation Noise and the Interface Trap Density in GaN/AlGaN HFETs. *Materials Research Society Symposia Proceedings*, **2001**, 680, 1		5

6	Issues of practical realization of a quantum dot register for quantum computing. *Journal of Electronic Materials*, **2000**, 29, 549-553	1.9	12
5	Effect of phonon confinement on the thermoelectric figure of merit of quantum wells. *Journal of Applied Physics*, **1998**, 84, 6149-6153	2.5	187
4	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	3.3	505
3	Thermal Properties of Graphene: From Physics to Applications90-103		
2	Flicker Noise Reduction in GaN Field-Effect Transistors159-188		2
1	Low-Frequency Electronic Noise in Quasi-2D van der Waals Antiferromagnetic Semiconductor FePS3Signatures of Phase Transitions. *Advanced Electronic Materials*,2100408	6.4	9