

# Denis L Nika

## List of Publications by Citations

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61  
papers

7,139  
citations

32  
h-index

66  
g-index

66  
ext. papers

7,881  
ext. citations

4.5  
avg, IF

6.06  
L-index

#	Paper	IF	Citations
61	Extremely high thermal conductivity of graphene: Prospects for thermal management applications in nanoelectronic circuits. <i>Applied Physics Letters</i> , <b>2008</b> , 92, 151911	3.4	1469
60	Dimensional crossover of thermal transport in few-layer graphene. <i>Nature Materials</i> , <b>2010</b> , 9, 555-8	27	1028
59	Phonon thermal conduction in graphene: Role of Umklapp and edge roughness scattering. <i>Physical Review B</i> , <b>2009</b> , 79,	3.3	740
58	Lattice thermal conductivity of graphene flakes: Comparison with bulk graphite. <i>Applied Physics Letters</i> , <b>2009</b> , 94, 203103	3.4	404
57	Strongly Anisotropic Thermal Conductivity of Free-Standing Reduced Graphene Oxide Films Annealed at High Temperature. <i>Advanced Functional Materials</i> , <b>2015</b> , 25, 4664-4672	15.6	369
56	Two-dimensional phonon transport in graphene. <i>Journal of Physics Condensed Matter</i> , <b>2012</b> , 24, 233203	1.8	274
55	Anomalous size dependence of the thermal conductivity of graphene ribbons. <i>Nano Letters</i> , <b>2012</b> , 12, 3238-44	11.5	225
54	Thermal conductivity of graphene laminate. <i>Nano Letters</i> , <b>2014</b> , 14, 5155-61	11.5	219
53	Phononics in low-dimensional materials. <i>Materials Today</i> , <b>2012</b> , 15, 266-275	21.8	209
52	Graphene Thermal Properties: Applications in Thermal Management and Energy Storage. <i>Applied Sciences (Switzerland)</i> , <b>2014</b> , 4, 525-547	2.6	208
51	Phonons and thermal transport in graphene and graphene-based materials. <i>Reports on Progress in Physics</i> , <b>2017</b> , 80, 036502	14.4	197
50	Heat conduction in graphene: experimental study and theoretical interpretation. <i>New Journal of Physics</i> , <b>2009</b> , 11, 095012	2.9	187
49	Thermal conductivity of graphene with defects induced by electron beam irradiation. <i>Nanoscale</i> , <b>2016</b> , 8, 14608-16	7.7	144
48	Phonons in twisted bilayer graphene. <i>Physical Review B</i> , <b>2013</b> , 88,	3.3	119
47	Thermal conductivity of twisted bilayer graphene. <i>Nanoscale</i> , <b>2014</b> , 6, 13402-8	7.7	99
46	Acoustic-phonon propagation in rectangular semiconductor nanowires with elastically dissimilar barriers. <i>Physical Review B</i> , <b>2005</b> , 72,	3.3	91
45	Phonon Engineering in Hetero- and Nanostructures. <i>Journal of Nanoelectronics and Optoelectronics</i> , <b>2007</b> , 2, 140-170	1.3	86

44	Suppression of phonon heat conduction in cross-section-modulated nanowires. <i>Physical Review B</i> , <b>2012</b> , 85,	3.3	68
43	Thermal properties of graphene and few-layer graphene: applications in electronics. <i>IET Circuits, Devices and Systems</i> , <b>2015</b> , 9, 4-12	1.1	64
42	Theoretical description of thermal transport in graphene: The issues of phonon cut-off frequencies and polarization branches. <i>Physica Status Solidi (B): Basic Research</i> , <b>2011</b> , 248, 2609-2614	1.3	63
41	Phonon spectrum and group velocities in AlN/GaN/AlN and related heterostructures. <i>Superlattices and Microstructures</i> , <b>2003</b> , 33, 155-171	2.8	61
40	Acoustic phonon engineering in coated cylindrical nanowires. <i>Superlattices and Microstructures</i> , <b>2005</b> , 38, 168-183	2.8	61
39	Specific heat of twisted bilayer graphene: Engineering phonons by atomic plane rotations. <i>Applied Physics Letters</i> , <b>2014</b> , 105, 031904	3.4	58
38	Reduction of lattice thermal conductivity in one-dimensional quantum-dot superlattices due to phonon filtering. <i>Physical Review B</i> , <b>2011</b> , 84,	3.3	56
37	Direct observation of confined acoustic phonon polarization branches in free-standing semiconductor nanowires. <i>Nature Communications</i> , <b>2016</b> , 7, 13400	17.4	51
36	Thermal conductivity inhibition in phonon engineered core-shell cross-section modulated Si/Ge nanowires. <i>Applied Physics Letters</i> , <b>2013</b> , 102, 213109	3.4	51
35	Thermal Conduction in Suspended Graphene Layers. <i>Fullerenes Nanotubes and Carbon Nanostructures</i> , <b>2010</b> , 18, 474-486	1.8	50
34	Breakdown current density in h-BN-capped quasi-1D TaSe <sub>3</sub> metallic nanowires: prospects of interconnect applications. <i>Nanoscale</i> , <b>2016</b> , 8, 15774-82	7.7	49
33	A phonon depletion effect in ultrathin heterostructures with acoustically mismatched layers. <i>Applied Physics Letters</i> , <b>2004</b> , 85, 825-827	3.4	44
32	Built-in field effect on the electron mobility in AlN/GaN/AlN quantum wells. <i>Applied Physics Letters</i> , <b>2006</b> , 89, 113508	3.4	42
31	Engineering of the thermodynamic properties of bilayer graphene by atomic plane rotations: the role of the out-of-plane phonons. <i>Nanoscale</i> , <b>2015</b> , 7, 12851-9	7.7	41
30	Confined electron-confined phonon scattering rates in wurtzite AlN/GaN/AlN heterostructures. <i>Journal of Applied Physics</i> , <b>2004</b> , 95, 5626-5632	2.5	38
29	Electron mobility enhancement in AlN/GaN/AlN heterostructures with InGaN nanogrooves. <i>Applied Physics Letters</i> , <b>2006</b> , 89, 112110	3.4	26
28	Ultra-low thermal conductivity of nanogranular indium tin oxide films deposited by spray pyrolysis. <i>Applied Physics Letters</i> , <b>2017</b> , 110, 071904	3.4	25
27	Charge-carrier states and light absorption in ordered quantum dot superlattices. <i>Physical Review B</i> , <b>2007</b> , 76,	3.3	25

26	Phonon-engineered mobility enhancement in the acoustically mismatched silicon/diamond transistor channels. <i>Applied Physics Letters</i> , <b>2008</b> , 93, 173111	3.4	24
25	Size-quantized oscillations of the electron mobility limited by the optical and confined acoustic phonons in the nanoscale heterostructures. <i>Journal of Applied Physics</i> , <b>2007</b> , 102, 054304	2.5	22
24	In-Plane Thermal Conductivity of Radial and Planar Si/SiO Hybrid Nanomembrane Superlattices. <i>ACS Nano</i> , <b>2017</b> , 11, 8215-8222	16.7	15
23	Reduced thermal resistance of the silicon-synthetic diamond composite substrates at elevated temperatures. <i>Applied Physics Letters</i> , <b>2010</b> , 97, 031904	3.4	15
22	Phonon-engineered thermal transport in Si wires with constant and periodically modulated cross-sections: A crossover between nano- and microscale regimes. <i>Applied Physics Letters</i> , <b>2015</b> , 107, 011904	3.4	14
21	Excitons in wurtzite AlGaInAs quantum-well heterostructures. <i>Physical Review B</i> , <b>2008</b> , 77,	3.3	14
20	Engineering of Thermal Fluxes in Phonon Mismatched Heterostructures. <i>Journal of Nanoelectronics and Optoelectronics</i> , <b>2009</b> , 4, 180-185	1.3	14
19	Extraordinary Thermal Conductivity of Graphene: Possible Applications in Thermal Management. <i>ECS Transactions</i> , <b>2010</b> , 28, 63-71	1	11
18	Acoustic phonon engineering of thermal properties of silicon-based nanostructures. <i>Journal of Physics: Conference Series</i> , <b>2007</b> , 92, 012086	0.3	10
17	Thermal transport in semiconductor nanostructures, graphene, and related two-dimensional materials. <i>Chinese Physics B</i> , <b>2018</b> , 27, 056301	1.2	10
16	Thermal Transport in Graphene, Few-Layer Graphene and Graphene Nanoribbons. <i>Lecture Notes in Physics</i> , <b>2016</b> , 339-363	0.8	9
15	Thermal Conductivity Reduction in Si/Ge Core/Shell Nanowires. <i>Journal of Nanoelectronics and Optoelectronics</i> , <b>2012</b> , 7, 701-705	1.3	7
14	Thermoelectric properties of nano-granular indium tin-oxide within modified electron filtering model with chemisorption-type potential barriers. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , <b>2016</b> , 81, 49-58	3	6
13	Phonon spectrum and group velocities in wurtzite hetero-structures. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , <b>2004</b> , 1, 2658-2661		6
12	Lattice Thermal Conductivity of Ultra-Thin Freestanding Layers: Face-Centered Cubic Cell Model versus Continuum Approach. <i>Journal of Nanoelectronics and Optoelectronics</i> , <b>2009</b> , 4, 170-173	1.3	6
11	Phonons and Phonon Thermal Conductivity in Silicon Nanolayers. <i>Journal of Nanoelectronics and Optoelectronics</i> , <b>2012</b> , 7, 370-375	1.3	6
10	Resonant Terahertz Light Absorption by Virtue of Tunable Hybrid Interface Phonon-Plasmon Modes in Semiconductor Nanoshells. <i>Applied Sciences (Switzerland)</i> , <b>2019</b> , 9, 1442	2.6	2
9	The size-quantized oscillations of the optical-phonon-limited electron mobility in AlN/GaN/AlN nanoscale heterostructures. <i>Journal of Physics: Conference Series</i> , <b>2007</b> , 92, 012022	0.3	2

8	Electric Current and Heat Propagation in Graphene Ribbons. <i>Journal of Nanoelectronics and Optoelectronics</i> , <b>2010</b> , 4, 291-295	1.3	2
7	Extraordinary Thermal Conductivity of Graphene: Prospects of Thermal Management Applications <b>2010</b> ,		1
6	Electron-polar optical phonon scattering suppression and mobility enhancement in wurtzite heterostructures. <i>Journal of Physics: Conference Series</i> , <b>2007</b> , 92, 012050	0.3	1
5	Phonons and Thermal Transport in Si/SiO <sub>2</sub> Multishell Nanotubes: Atomistic Study. <i>Applied Sciences (Switzerland)</i> , <b>2021</b> , 11, 3419	2.6	1
4	Energetic, structural and electronic features of Sn-, Ga-, O-based defect complexes in cubic InO. <i>Journal of Physics Condensed Matter</i> , <b>2020</b> , 32, 225703	1.8	0
3	Thermal Conductivity of Segmented Nanowires. <i>Nanoscience and Technology</i> , <b>2016</b> , 507-531	0.6	
2	Two-Dimensional Thermal Transport in Graphene <b>2017</b> , 57-84		
1	Nonadiabatic theory of excitons in wurtzite AlGa <sub>N</sub> /Ga <sub>N</sub> quantum-well heterostructures. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , <b>2009</b> , 6, 46-49		