

# Denis L Nika

## List of Publications by Year in descending order

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66  
papers

8,506  
citations

136740

32  
h-index

138251

58  
g-index

66  
all docs

66  
docs citations

66  
times ranked

8141  
citing authors

#	ARTICLE	IF	CITATIONS
1	Extremely high thermal conductivity of graphene: Prospects for thermal management applications in nanoelectronic circuits. Applied Physics Letters, 2008, 92, .	1.5	1,745
2	Dimensional crossover of thermal transport in few-layer graphene. Nature Materials, 2010, 9, 555-558.	13.3	1,198
3	Phonon thermal conduction in graphene: Role of Umklapp and edge roughness scattering. Physical Review B, 2009, 79, .	1.1	836
4	Strongly Anisotropic Thermal Conductivity of Free-standing Reduced Graphene Oxide Films Annealed at High Temperature. Advanced Functional Materials, 2015, 25, 4664-4672.	7.8	462
5	Lattice thermal conductivity of graphene flakes: Comparison with bulk graphite. Applied Physics Letters, 2009, 94, 203103.	1.5	461
6	Two-dimensional phonon transport in graphene. Journal of Physics Condensed Matter, 2012, 24, 233203.	0.7	333
7	Thermal Conductivity of Graphene Laminate. Nano Letters, 2014, 14, 5155-5161.	4.5	268
8	Phononics in low-dimensional materials. Materials Today, 2012, 15, 266-275.	8.3	262
9	Graphene Thermal Properties: Applications in Thermal Management and Energy Storage. Applied Sciences (Switzerland), 2014, 4, 525-547.	1.3	258
10	Phonons and thermal transport in graphene and graphene-based materials. Reports on Progress in Physics, 2017, 80, 036502.	8.1	249
11	Anomalous Size Dependence of the Thermal Conductivity of Graphene Ribbons. Nano Letters, 2012, 12, 3238-3244.	4.5	247
12	Heat conduction in graphene: experimental study and theoretical interpretation. New Journal of Physics, 2009, 11, 095012.	1.2	213
13	Thermal conductivity of graphene with defects induced by electron beam irradiation. Nanoscale, 2016, 8, 14608-14616.	2.8	187
14	Phonons in twisted bilayer graphene. Physical Review B, 2013, 88, .	1.1	167
15	Thermal conductivity of twisted bilayer graphene. Nanoscale, 2014, 6, 13402-13408.	2.8	136
16	Phonon Engineering in Hetero- and Nanostructures. Journal of Nanoelectronics and Optoelectronics, 2007, 2, 140-170.	0.1	98
17	Acoustic-phonon propagation in rectangular semiconductor nanowires with elastically dissimilar barriers. Physical Review B, 2005, 72, .	1.1	97
18	Thermal properties of graphene and few-layer graphene: applications in electronics. IET Circuits, Devices and Systems, 2015, 9, 4-12.	0.9	82

#	ARTICLE	IF	CITATIONS
19	Breakdown current density in h-BN-capped quasi-1D TaSe <sub>3</sub> metallic nanowires: prospects of interconnect applications. <i>Nanoscale</i> , 2016, 8, 15774-15782.	2.8	79
20	Phonon spectrum and group velocities in AlN/GaN/AlN and related heterostructures. <i>Superlattices and Microstructures</i> , 2003, 33, 155-171.	1.4	74
21	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> , 2011, 248, 2609-2614.	0.7	72
22	Suppression of phonon heat conduction in cross-section-modulated nanowires. <i>Physical Review B</i> , 2012, 85, .	1.1	72
23	Direct observation of confined acoustic phonon polarization branches in free-standing semiconductor nanowires. <i>Nature Communications</i> , 2016, 7, 13400.	5.8	71
24	Specific heat of twisted bilayer graphene: Engineering phonons by atomic plane rotations. <i>Applied Physics Letters</i> , 2014, 105, .	1.5	70
25	Acoustic phonon engineering in coated cylindrical nanowires. <i>Superlattices and Microstructures</i> , 2005, 38, 168-183.	1.4	69
26	Reduction of lattice thermal conductivity in one-dimensional quantum-dot superlattices due to phonon filtering. <i>Physical Review B</i> , 2011, 84, .	1.1	64
27	Thermal Conduction in Suspended Graphene Layers. <i>Fullerenes Nanotubes and Carbon Nanostructures</i> , 2010, 18, 474-486.	1.0	60
28	Thermal conductivity inhibition in phonon engineered core-shell cross-section modulated Si/Ge nanowires. <i>Applied Physics Letters</i> , 2013, 102, .	1.5	54
29	Engineering of the thermodynamic properties of bilayer graphene by atomic plane rotations: the role of the out-of-plane phonons. <i>Nanoscale</i> , 2015, 7, 12851-12859.	2.8	53
30	Confined electron-confined phonon scattering rates in wurtzite AlN/GaN/AlN heterostructures. <i>Journal of Applied Physics</i> , 2004, 95, 5626-5632.	1.1	45
31	A phonon depletion effect in ultrathin heterostructures with acoustically mismatched layers. <i>Applied Physics Letters</i> , 2004, 85, 825-827.	1.5	44
32	Built-in field effect on the electron mobility in AlN <sup>+</sup> GaN <sup>-</sup> AlN quantum wells. <i>Applied Physics Letters</i> , 2006, 89, 113508.	1.5	44
33	Ultra-low thermal conductivity of nanogranular indium tin oxide films deposited by spray pyrolysis. <i>Applied Physics Letters</i> , 2017, 110, .	1.5	32
34	Charge-carrier states and light absorption in ordered quantum dot superlattices. <i>Physical Review B</i> , 2007, 76, .	1.1	30
35	Phonon-engineered mobility enhancement in the acoustically mismatched silicon/diamond transistor channels. <i>Applied Physics Letters</i> , 2008, 93, 173111.	1.5	27
36	Electron mobility enhancement in AlN <sup>+</sup> GaN <sup>-</sup> AlN heterostructures with InGaN nanogrooves. <i>Applied Physics Letters</i> , 2006, 89, 112110.	1.5	26

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37	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> , 2007, 102, 054304.	1.1	26
38	Reduced thermal resistance of the silicon-synthetic diamond composite substrates at elevated temperatures. <i>Applied Physics Letters</i> , 2010, 97, .	1.5	21
39	In-Plane Thermal Conductivity of Radial and Planar Si/SiO <sub>2</sub> Hybrid Nanomembrane Superlattices. <i>ACS Nano</i> , 2017, 11, 8215-8222.	7.3	18
40	Engineering of Thermal Fluxes in Phonon Mismatched Heterostructures. <i>Journal of Nanoelectronics and Optoelectronics</i> , 2009, 4, 180-185.	0.1	17
41	Excitons in wurtzite AlGaIn/GaN quantum-well heterostructures. <i>Physical Review B</i> , 2008, 77, .	1.1	16
42	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> , 2015, 107, .	1.5	15
43	Thermal transport in semiconductor nanostructures, graphene, and related two-dimensional materials. <i>Chinese Physics B</i> , 2018, 27, 056301.	0.7	15
44	Extraordinary Thermal Conductivity of Graphene: Possible Applications in Thermal Management. <i>ECS Transactions</i> , 2010, 28, 63-71.	0.3	13
45	Acoustic phonon engineering of thermal properties of silicon-based nanostructures. <i>Journal of Physics: Conference Series</i> , 2007, 92, 012086.	0.3	11
46	Thermal Transport in Graphene, Few-Layer Graphene and Graphene Nanoribbons. <i>Lecture Notes in Physics</i> , 2016, , 339-363.	0.3	11
47	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> , 2016, 81, 49-58.	1.3	9
48	Phonons and Phonon Thermal Conductivity in Silicon Nanolayers. <i>Journal of Nanoelectronics and Optoelectronics</i> , 2012, 7, 370-375.	0.1	7
49	Thermal Conductivity Reduction in Si/Ge Core/Shell Nanowires. <i>Journal of Nanoelectronics and Optoelectronics</i> , 2012, 7, 701-705.	0.1	7
50	Phonon spectrum and group velocities in wurtzite hetero-structures. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2004, 1, 2658-2661.	0.8	6
51	Lattice Thermal Conductivity of Ultra-Thin Freestanding Layers: Face-Centered Cubic Cell Model versus Continuum Approach. <i>Journal of Nanoelectronics and Optoelectronics</i> , 2009, 4, 170-173.	0.1	6
52	Phonons and Thermal Transport in Si/SiO <sub>2</sub> Multishell Nanotubes: Atomistic Study. <i>Applied Sciences (Switzerland)</i> , 2021, 11, 3419.	1.3	5
53	Resonant Terahertz Light Absorption by Virtue of Tunable Hybrid Interface Phonon-Plasmon Modes in Semiconductor Nanoshells. <i>Applied Sciences (Switzerland)</i> , 2019, 9, 1442.	1.3	4
54	Energetic, structural and electronic features of Sn-, Ga-, O-based defect complexes in cubic In <sub>2</sub> O <sub>3</sub> . <i>Journal of Physics Condensed Matter</i> , 2020, 32, 225703.	0.7	3

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55	Thermal Transport Evolution Due to Nanostructural Transformations in Ga-Doped Indium-Tin-Oxide Thin Films. <i>Nanomaterials</i> , 2021, 11, 1126.	1.9	3
56	Electric Current and Heat Propagation in Graphene Ribbons. <i>Journal of Nanoelectronics and Optoelectronics</i> , 2010, 4, 291-295.	0.1	3
57	The size-quantized oscillations of the optical-phonon-limited electron mobility in AlN/GaN/AlN nanoscale heterostructures. <i>Journal of Physics: Conference Series</i> , 2007, 92, 012022.	0.3	2
58	Nonadiabatic theory of excitons in wurtzite AlGaIn/GaN quantum well heterostructures. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2009, 6, 46-49.	0.8	1
59	Extraordinary Thermal Conductivity of Graphene: Prospects of Thermal Management Applications. , 2010, , .		1
60	Two-Dimensional Thermal Transport in Graphene. , 2017, , 57-84.		1
61	Electron-polar optical phonon scattering suppression and mobility enhancement in wurtzite heterostructures. <i>Journal of Physics: Conference Series</i> , 2007, 92, 012050.	0.3	0
62	Phonon engineered silicon - diamond nanoscale heterostructures with enhanced carrier mobility. , 2008, , .		0
63	Strong reduction of the lattice thermal conductivity in superlattices and quantum dot superlattices. , 2012, , .		0
64	Thermal Conductivity of Segmented Nanowires. <i>Nanoscience and Technology</i> , 2016, , 507-531.	1.5	0
65	Nanodimensional Chalcogenide Film-Metal Structure: Numerical Modeling of the Gas Sensitive Properties. <i>Journal of Nanoelectronics and Optoelectronics</i> , 2009, 4, 165-169.	0.1	0
66	&lt;l&gt;A Special Issue on&lt;/l&gt; Physical Properties and Applications of Nanostructures. <i>Journal of Nanoelectronics and Optoelectronics</i> , 2011, 6, 379-380.	0.1	0