Deyu Li

List of Publications by Year
in descending order

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141	12,635	50276	23533
papers	citations	46 h-index	111 g-index

141	141	141	14018
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Thermal conductivity of individual silicon nanowires. Applied Physics Letters, 2003, 83, 2934-2936.	3.3	1,536
2	Vertically Aligned Graphene Sheets Membrane for Highly Efficient Solar Thermal Generation of Clean Water. ACS Nano, 2017, 11, 5087-5093.	14.6	871
3	Thermal Conductance and Thermopower of an Individual Single-Wall Carbon Nanotube. Nano Letters, 2005, 5, 1842-1846.	9.1	795
4	Measuring Thermal and Thermoelectric Properties of One-Dimensional Nanostructures Using a Microfabricated Device. Journal of Heat Transfer, 2003, 125, 881-888.	2.1	698
5	A novel concept for convective heat transfer enhancement. International Journal of Heat and Mass Transfer, 1998, 41, 2221-2225.	4.8	666
6	Electrostatic Control of Ions and Molecules in Nanofluidic Transistors. Nano Letters, 2005, 5, 943-948.	9.1	595
7	Cancer-associated fibroblasts promote directional cancer cell migration by aligning fibronectin. Journal of Cell Biology, 2017, 216, 3799-3816.	5.2	402
8	Thermal conductivity of Si/SiGe superlattice nanowires. Applied Physics Letters, 2003, 83, 3186-3188.	3.3	355
9	Isotope Effect on the Thermal Conductivity of Boron Nitride Nanotubes. Physical Review Letters, 2006, 97, 085901.	7.8	349
10	Recreating blood-brain barrier physiology and structure on chip: A novel neurovascular microfluidic bioreactor. Biomicrofluidics, 2015, 9, 054124.	2.4	326
11	Pathways and challenges for efficient solar-thermal desalination. Science Advances, 2019, 5, eaax0763.	10.3	311
12	DNA Translocation in Inorganic Nanotubes. Nano Letters, 2005, 5, 1633-1637.	9.1	297
13	Dense Vertically Aligned Multiwalled Carbon Nanotube Arrays as Thermal Interface Materials. IEEE Transactions on Components and Packaging Technologies, 2007, 30, 92-100.	1.3	292
14	Predicting the Thermal Conductivity of Si and Ge Nanowires. Nano Letters, 2003, 3, 1713-1716.	9.1	268
15	TDP-43 is intercellularly transmitted across axon terminals. Journal of Cell Biology, 2015, 211, 897-911.	5.2	263
16	Fabrication of Silica Nanotube Arrays from Vertical Silicon Nanowire Templates. Journal of the American Chemical Society, 2003, 125, 5254-5255.	13.7	257
17	Monte Carlo Simulation of Silicon Nanowire Thermal Conductivity. Journal of Heat Transfer, 2005, 127, 1129-1137.	2.1	200
18	Energy Dissipation Mechanisms in Carbon Nanotube Oscillators. Physical Review Letters, 2003, 91, 175504.	7.8	190

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19	Enhanced Thermopower of Graphene Films with Oxygen Plasma Treatment. ACS Nano, 2011, 5, 2749-2755.	14.6	181
20	Minimum superlattice thermal conductivity from molecular dynamics. Physical Review B, 2005, 72, .	3.2	167
21	Molecular Dynamics Study of Solid Thin-Film Thermal Conductivity. Journal of Heat Transfer, 2000, 122, 536-543.	2.1	155
22	Contact thermal resistance between individual multiwall carbon nanotubes. Applied Physics Letters, 2010, 96, .	3.3	134
23	Thermal Properties of Two Dimensional Layered Materials. Advanced Functional Materials, 2017, 27, 1604134.	14.9	130
24	Enhanced and switchable nanoscale thermal conduction due to van der Waals interfaces. Nature Nanotechnology, 2012, 7, 91-95.	31.5	120
25	Co-culture of neurons and glia in a novel microfluidic platform. Journal of Neuroscience Methods, 2011, 196, 38-44.	2.5	110
26	Thermoelectrics of Nanowires. Chemical Reviews, 2019, 119, 9260-9302.	47.7	110
27	Thermal conductivity of electrospun polyethylene nanofibers. Nanoscale, 2015, 7, 16899-16908.	5.6	103
28	Glia co-culture with neurons in microfluidic platforms promotes the formation and stabilization of synaptic contacts. Lab on A Chip, 2013, 13, 3008.	6.0	99
29	Molecular dynamics study of the lattice thermal conductivity of Kr/Ar superlattice nanowires. Physica B: Condensed Matter, 2004, 349, 270-280.	2.7	95
30	A versatile valve-enabled microfluidic cell co-culture platform and demonstration of its applications to neurobiology and cancer biology. Biomedical Microdevices, 2011, 13, 539-548.	2.8	94
31	Analysis of the size effect in electroplated fine copper wires and a realistic assessment to model copper resistivity. Journal of Applied Physics, 2007, 101, 063703.	2.5	79
32	Measurement of the Intrinsic Thermal Conductivity of a Multiwalled Carbon Nanotube and Its Contact Thermal Resistance with the Substrate. Small, 2011, 7, 2334-2340.	10.0	75
33	Stretching Fibroblasts Remodels Fibronectin and Alters Cancer Cell Migration. Scientific Reports, 2015, 5, 8334.	3.3	72
34	On-chip counting the number and the percentage of CD4+ T lymphocytes. Lab on A Chip, 2008, 8, 309-315.	6.0	71
35	Electroosmotic Flow in Nanotubes with High Surface Charge Densities. Nano Letters, 2008, 8, 42-48.	9.1	67
36	Phonon mean free path of graphite along thec-axis. Applied Physics Letters, 2014, 104, 081903.	3.3	67

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37	Thermal Transport in Quasi-1D van der Waals Crystal Ta₂Pd₃Se₈ Nanowires: Size and Length Dependence. ACS Nano, 2018, 12, 2634-2642.	14.6	61
38	Phonon Transport through Point Contacts between Graphitic Nanomaterials. Physical Review Letters, 2014, 112, .	7.8	60
39	Microfluidic differential resistive pulse sensors. Electrophoresis, 2008, 29, 2754-2759.	2.4	59
40	Retina-on-a-chip: a microfluidic platform for point access signaling studies. Biomedical Microdevices, 2015, 17, 114.	2.8	58
41	Experimental evidence of very long intrinsic phonon mean free path along the c-axis of graphite. Applied Physics Letters, 2015, 106, .	3.3	58
42	Neurovascular unit on a chip: implications for translational applications. Stem Cell Research and Therapy, 2013, 4, S18.	5.5	56
43	Cation Dynamics Governed Thermal Properties of Lead Halide Perovskite Nanowires. Nano Letters, 2018, 18, 2772-2779.	9.1	55
44	Thermal conductivity of individual silicon nanoribbons. Nanoscale, 2016, 8, 17895-17901.	5.6	54
45	Angiocrine Factors Modulate Tumor Proliferation and Motility through EphA2 Repression of Slit2 Tumor Suppressor Function in Endothelium. Cancer Research, 2011, 71, 976-987.	0.9	52
46	Reconfigurable Metasurface for Image Processing. Nano Letters, 2021, 21, 8715-8722.	9.1	51
47	SiO2-coated porous anodic alumina membranes for high flow rate electroosmotic pumping. Nanotechnology, 2007, 18, 275705.	2.6	47
48	Phonon Dynamics at Surfaces and Interfaces and Its Implications in Energy Transport in Nanostructured Materialsâ€"An opinion Paper. Nanoscale and Microscale Thermophysical Engineering, 2015, 19, 166-182.	2.6	46
49	Drastically Reduced Ion Mobility in a Nanopore Due to Enhanced Pairing and Collisions between Dehydrated Ions. Journal of the American Chemical Society, 2019, 141, 4264-4272.	13.7	46
50	Thermoelectric characterization of individual bismuth selenide topological insulator nanoribbons. Nanoscale, 2015, 7, 6683-6690.	5.6	43
51	Observation of superdiffusive phonon transport in aligned atomic chains. Nature Nanotechnology, 2021, 16, 764-768.	31.5	43
52	Simultaneous On-Chip DC Dielectrophoretic Cell Separation and Quantitative Separation Performance Characterization. Analytical Chemistry, 2012, 84, 2017-2024.	6.5	42
53	Ballistic Phonon Penetration Depth in Amorphous Silicon Dioxide. Nano Letters, 2017, 17, 7218-7225.	9.1	42
54	Thermal Transport in Nanostructured Solid-State Cooling Devices. Journal of Heat Transfer, 2005, 127, 108-114.	2.1	40

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55	Electrical and Thermal Transport through Silver Nanowires and Their Contacts: Effects of Elastic Stiffening. Nano Letters, 2020, 20, 7389-7396.	9.1	40
56	Molecular dynamics study of DNA translocation through graphene nanopores. Physical Review E, 2013, 87, 062707.	2.1	38
57	Experimental characterization of a metal-oxide-semiconductor field-effect transistor-based Coulter counter. Journal of Applied Physics, 2008, 103, 104701-10470110.	2.5	37
58	Distinct Signatures of Electronâ€“Phonon Coupling Observed in the Lattice Thermal Conductivity of NbSe₃ Nanowires. Nano Letters, 2019, 19, 415-421.	9.1	37
59	Characterization of heat transfer along a silicon nanowire using thermoreflectance technique. IEEE Nanotechnology Magazine, 2006, 5, 67-74.	2.0	36
60	A compact microfluidic gradient generator using passive pumping. Microfluidics and Nanofluidics, 2012, 12, 887-895.	2.2	36
61	Boron carbide nanowires: low temperature synthesis and structural and thermal conductivity characterization. Journal of Materials Chemistry, 2012, 22, 9853.	6.7	33
62	Decoupling phonon and carrier scattering at carbon nanotube/Bi2Te3 interfaces for improved thermoelectric performance. Carbon, 2020, 170, 191-198.	10.3	33
63	Ionic current modulation from DNA translocation through nanopores under high ionic strength and concentration gradients. Nanoscale, 2017, 9, 930-939.	5.6	32
64	The relationship between the Youngâ€™s modulus and dry etching rate of polydimethylsiloxane (PDMS). Biomedical Microdevices, 2019, 21, 26.	2.8	31
65	Measurement of the volume growth rate of single budding yeast with the MOSFET-based microfluidic Coulter counter. Lab on A Chip, 2010, 10, 2986.	6.0	30
66	Thermal expansion and impurity effects on lattice thermal conductivity of solid argon. Journal of Chemical Physics, 2004, 120, 3841-3846.	3.0	29
67	Wide-spectrum, ultrasensitive fluidic sensors with amplification from both fluidic circuits and metal oxide semiconductor field effect transistors. Applied Physics Letters, 2007, 91, .	3.3	28
68	Metabolic consequences of interleukin-6 challenge in developing neurons and astroglia. Journal of Neuroinflammation, 2014, 11, 183.	7.2	28
69	A novel micro-fabricated thruster for drug release in remote controlled capsule. Sensors and Actuators A: Physical, 2010, 159, 227-232.	4.1	27
70	Biomolecule kinetics measurements in flow cell integrated porous silicon waveguides. Biomedical Optics Express, 2012, 3, 1993.	2.9	27
71	Thermal transport in electrospun vinyl polymer nanofibers: effects of molecular weight and side groups. Soft Matter, 2018, 14, 9534-9541.	2.7	27
72	Thermal effect on the recirculation zone in sudden-expansion gas flows. International Journal of Heat and Mass Transfer, 1996, 39, 2619-2624.	4.8	26

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73	Defect Facilitated Phonon Transport through Kinks in Boron Carbide Nanowires. Nano Letters, 2017, 17, 3550-3555.	9.1	23
74	Retrograde Degenerative Signaling Mediated by the p75 Neurotrophin Receptor Requires p150Glued Deacetylation by Axonal HDAC1. Developmental Cell, 2018, 46, 376-387.e7.	7.0	23
75	Temperature dependence of frictional force in carbon nanotube oscillators. Nanotechnology, 2009, 20, 035704.	2.6	20
76	Molecular dynamics simulation of thermal conductivity of nanocrystalline composite films. International Journal of Heat and Mass Transfer, 2009, 52, 2002-2008.	4.8	20
77	A microfluidic cell co-culture platform with a liquid fluorocarbon separator. Biomedical Microdevices, 2014, 16, 311-323.	2.8	20
78	Impact of Graphene on the Efficacy of Neuron Culture Substrates. Advanced Healthcare Materials, 2018, 7, e1701290.	7.6	20
79	Resonance in Atomic-Scale Sliding Friction. Nano Letters, 2021, 21, 4615-4621.	9.1	20
80	Water structures near charged (100) and (111) silicon surfaces. Applied Physics Letters, 2009, 94, .	3.3	18
81	Understanding thermal conductance across multi-wall carbon nanotube contacts: Role of nanotube curvature. Carbon, 2017, 114, 15-22.	10.3	18
82	Thermal transport through fishbone silicon nanoribbons: unraveling the role of Sharvin resistance. Nanoscale, 2019, 11, 8196-8203.	5.6	17
83	Observation of â€˜hiddenâ€™ planar defects in boron carbide nanowires and identification of their orientations. Nanoscale Research Letters, 2014, 9, 30.	5.7	16
84	Detection of short single-strand DNA homopolymers with ultrathin<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi mathvariant="normal">S</mml:mi><mml:msub><mml:mi mathvariant="normal">i</mml:mi><mml:mn>3</mml:mn></mml:msub><mml:msub><mml:mi mathvariant="normal">N</mml:mi><mml:mn>4</mml:mn></mml:msub></mml:mrow></mml:math>nanopores. Physical Review E, 2015, 92, 022719.	2.1	16
85	A Flexible and Infrared-Transparent Bi₂Te₃-Carbon Nanotube Thermoelectric Hybrid for both Active and Passive Cooling. ACS Applied Electronic Materials, 2020, 2, 3008-3016.	4.3	15
86	Relationship between the recovery factor and the viscous dissipation in a confined, impinging, circular jet of high-Prandtl number liquid. International Journal of Heat and Fluid Flow, 1997, 18, 585-590.	2.4	14
87	Experimental characterization of electrical current leakage in poly(dimethylsiloxane) microfluidic devices. Microfluidics and Nanofluidics, 2009, 6, 589-598.	2.2	14
88	Effects of interfacial roughness on phonon transport in bilayer silicon thin films. Physical Review B, 2015, 92, .	3.2	14
89	Probing electrical signals in the retina via graphene-integrated microfluidic platforms. Nanoscale, 2016, 8, 19043-19049.	5.6	14
90	Bidirectional Modulation of Contact Thermal Resistance between Boron Nitride Nanotubes from a Polymer Interlayer. Nano Letters, 2021, 21, 7317-7324.	9.1	14

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91	Ionic current through a nanopore three nanometers in diameter. Physical Review E, 2009, 80, 021918.	2.1	13
92	Molecular Dynamics Studies of Homogeneous and Heterogeneous Thermal Bubble Nucleation. Journal of Heat Transfer, 2014, 136, .	2.1	13
93	Array Volume Fraction-Dependent Thermal Transport Properties of Vertically Aligned Carbon Nanotube Arrays. Journal of Heat Transfer, 2016, 138, .	2.1	13
94	Ultrasensitive Graphene Optoelectronic Probes for Recording Electrical Activities of Individual Synapses. Nano Letters, 2018, 18, 5702-5708.	9.1	13
95	Molecular dynamics simulations of ion distribution in nanochannels. Molecular Simulation, 2007, 33, 959-963.	2.0	12
96	Kink effects on thermal transport in silicon nanowires. International Journal of Heat and Mass Transfer, 2019, 137, 573-578.	4.8	12
97	Thermal conductivity of zinc blende and wurtzite CdSe nanostructures. Nanoscale, 2015, 7, 16071-16078.	5.6	11
98	Biomechanics of cell reorientation in a three-dimensional matrix under compression. Experimental Cell Research, 2017, 350, 253-266.	2.6	11
99	Kink as a new degree of freedom to tune the thermal conductivity of Si nanoribbons. Journal of Applied Physics, 2019, 126, .	2.5	11
100	Enhanced thermoelectric performance of van der Waals Tellurium via vacancy engineering. Materials Today Physics, 2021, 18, 100379.	6.0	10
101	Field-Effect Control of Electroosmotic Pumping Using Porous Siliconâ€“Silicon Nitride Membranes. Journal of Microelectromechanical Systems, 2009, 18, 1173-1183.	2.5	9
102	Measuring nanowire thermal conductivity at high temperatures. Measurement Science and Technology, 2018, 29, 025001.	2.6	9
103	A microfluidic diode for sorting and immobilization of Caenorhabditis elegans. Biomedical Microdevices, 2017, 19, 38.	2.8	8
104	Significantly enhanced thermal conductivity of indium arsenide nanowires via sulfur passivation. Scientific Reports, 2017, 7, 13252.	3.3	8
105	The Rho family GEF Asef2 regulates cell migration in three dimensional (3D) collagen matrices through myosin II. Cell Adhesion and Migration, 2014, 8, 460-467.	2.7	7
106	A microfluidic device for generation of chemical gradients. Microsystem Technologies, 2015, 21, 1797-1804.	2.0	7
107	Solid-State Thermal Memory of Temperature-Responsive Polymer Induced by Hydrogen Bonds. Nano Letters, 2021, 21, 3843-3848.	9.1	7
108	Contact Thermal Resistance between Silver Nanowires with Poly(vinylpyrrolidone) Interlayers. Nano Letters, 2021, 21, 4388-4393.	9.1	5

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109	Non-monotonic thickness dependent and anisotropic in-plane thermal transport in layered titanium trisulphide. Materials Today Nano, 2022, 17, 100165.	4.6	5
110	Reference channel-based microfluidic resistance sensing for single yeast cell volume growth measurement. Microfluidics and Nanofluidics, 2017, 21, 1.	2.2	4
111	Net negative contributions of free electrons to the thermal conductivity of NbSe₃ nanowires. Physical Chemistry Chemical Physics, 2020, 22, 21131-21138.	2.8	4
112	Remarkable suppression of lattice thermal conductivity by electron-phonon scattering in iridium dioxide nanowires. Materials Today Physics, 2021, 21, 100517.	6.0	4
113	Elastic stiffening induces one-dimensional phonons in thin Ta2Se3 nanowires. Applied Physics Letters, 2022, 120, .	3.3	4
114	From nanowires to super heat conductors. Journal of Applied Physics, 2021, 130, 220901.	2.5	4
115	Hydrodynamic lubrication in nanoscale bearings under high shear velocity. Journal of Chemical Physics, 2006, 125, 084702.	3.0	3
116	A Study of Small Molecule Absorption in Polydimethylsiloxane. , 2012, , .		3
117	Interface Effects on Lattice Thermal Conductivities of Superlattices. Journal of Computational and Theoretical Nanoscience, 2008, 5, 157-164.	0.4	3
118	Unusual thermal transport behavior in self-assembled fullerene nanorods. RSC Advances, 2016, 6, 67509-67513.	3.6	2
119	Experimental Studies of Thermal Transport in Nanostructures. , 2017, , 319-357.		2
120	Thermal transport in molecular beam epitaxy grown Si1â€‰â^'â€‰xGex alloy films with a full spectrum of composition (xâ€‰=â€‰0â€“1). Journal of Applied Physics, 2019, 125, 215109.	2.5	2
121	Effective Lorenz Number of the Point Contact between Silver Nanowires. Nano Letters, 2020, 20, 8576-8583.	9.1	2
122	Non-monotonic boundary resistivity for electron transport in metal nanowires. Applied Physics Letters, 2021, 118, 153105.	3.3	2
123	Charging of flowable electrodes with bimodal distribution of carbon particles. Journal of Engineering Mathematics, 2021, 131, 1.	1.2	2
124	Probing Light-Stimulated Activities in the Retina via Transparent Graphene Electrodes. ACS Applied Bio Materials, 2022, 5, 305-312.	4.6	2
125	Nanochannel Fabrication. , 2008, , 1409-1414.		1
126	Report on the Seventh U.S.â€“Japan Joint Seminar on Nanoscale Transport Phenomenaâ€”Science and Engineering. Nanoscale and Microscale Thermophysical Engineering, 2013, 17, 25-49.	2.6	1

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127	Molecular Dynamics Simulation Method. , 2014, , 1-10.		1
128	Nonmetallic power-law behavior of conductance in Ni-doped NbSe3 nanowires. Materials Today Physics, 2022, 27, 100770.	6.0	1
129	Effects of Ion-Water Potentials in Molecular Dynamics Simulation of Ion Distribution in Nanochannels. , 2006, , 161.		0
130	Molecular Dynamics Simulation of Ion Distribution in Nanochannels. , 2006, , 641.		0
131	Thermal Bubble Nucleation in Nanochannels: Simulations and Strategies for Nanobubble Nucleation and Sensing. Materials Research Society Symposia Proceedings, 2008, 1139, 1.	0.1	0
132	Ionic Current Through a 3 NM in Diameter Nanopore. , 2009, , .		0
133	The Effects of Van Der Waals Bonding Strength on the In-Plane Lattice Thermal Conductivities of Multilayer Thin Films. , 2012, , .		0
134	Measurement of the Intrinsic Thermal Conductivity of Individual Silicon Nanoribbons. , 2012, , .		0
135	Microfluidic Cell Co-Culture Platform With Liquid Fluorocarbon as the Cell Separator. , 2012, , .		0
136	Intertube Thermal Resistance in Double-Wall Carbon Nanotube. , 2012, , .		0
137	Thermal Conductivity of Individual Electrospun Polymer Nanofibers. , 2015, , .		0
138	Nanofluidic Systems for Single-Molecule Detection. , 2014, , 1-8.		0
139	Nanochannel Fabrication. , 2014, , 1-8.		0
140	The Fabrication of Microfluidic Platforms with Pneumatically/Hydraulically Controlled PDMS Valves and Their Use in Neurobiological Research. Neuromethods, 2015, , 3-23.	0.3	0
141	Molecular Dynamics Simulation Method. , 2015, , 2290-2297.		0