Chris Dames

List of Publications by Year
in descending order

59 papers	5,555 citations	159358 30 h-index	143772 57 g-index
59 all docs	59 docs citations	59 times ranked	8050 citing authors

#	Article	IF	Citations
1	Structured illumination with thermal imaging (SI-TI): A dynamically reconfigurable metrology for parallelized thermal transport characterization. Applied Physics Reviews, 2022, 9, .	5.5	3
2	A non-volatile thermal switch for building energy savings. Cell Reports Physical Science, 2022, 3, 100960.	2.8	4
3	Anisotropic thermal conductivity tensor measurements using beam-offset frequency domain thermoreflectance (BO-FDTR) for materials lacking in-plane symmetry. International Journal of Heat and Mass Transfer, 2021, 164, 120600.	2.5	14
4	Advances in thermal conductivity for energy applications: a review. Progress in Energy, 2021, 3, 012002.	4.6	24
5	Melting Point Depression and Phase Identification of Sugar Alcohols Encapsulated in ZIF Nanopores. Journal of Physical Chemistry C, 2021, 125, 10001-10010.	1.5	2
6	Processing and Thermal Conductivity of Bulk Nanocrystalline Aluminum Nitride. Materials, 2021, 14, 5565.	1.3	1
7	Integrated cooling (i-Cool) textile of heat conduction and sweat transportation for personal perspiration management. Nature Communications, 2021, 12, 6122.	5.8	86
8	A Thermal Radiation Modulation Platform by Emissivity Engineering with Graded Metalâ€“Insulator Transition. Advanced Materials, 2020, 32, e1907071.	11.1	75
9	Size and shape effects on the measured peak temperatures of nanoscale hotspots. Journal of Applied Physics, 2020, 128, .	1.1	4
10	Leveraging Anisotropy for Coupled Optimization of Thermal Transport and Light Transmission in Microâ€Structured Materials for Highâ€Power Laser Applications. Advanced Theory and Simulations, 2020, 3, 2000036.	1.3	5
11	Analysis and improvement of the hot disk transient plane source method for low thermal conductivity materials. International Journal of Heat and Mass Transfer, 2020, 151, 119331.	2.5	69
12	Adapting the Electron Beam from SEM as a Quantitative Heating Source for Nanoscale Thermal Metrology. Nano Letters, 2020, 20, 3019-3029.	4.5	7
13	A multi-frequency 3Ï‰ method for tracking moving phase boundaries. Review of Scientific Instruments, 2019, 90, 094903.	0.6	7
14	Modified Ballisticâ€“Diffusive Equations for Obtaining Phonon Mean Free Path Spectrum from Ballistic Thermal Resistance: II. Derivation of Integral Equation Based on Ballistic Thermal Resistance. Nanoscale and Microscale Thermophysical Engineering, 2019, 23, 334-347.	1.4	1
15	Quantifying Intrinsic, Extrinsic, Dielectric, and Secondary Pyroelectric Responses in PbZr_{1â€“<i>x</i>}Ti_{<i>x</i>}O₃ Thin Films. ACS Applied Materials & Interfaces, 2019, 11, 35146-35154.	4.0	16
16	New approach to waste-heat energy harvesting: pyroelectric energy conversion. NPG Asia Materials, 2019, 11, .	3.8	78
17	Modified ballisticâ€“diffusive equations for obtaining phonon mean free path spectrum from ballistic thermal resistance: I. Introduction and validation of the equations. Nanoscale and Microscale Thermophysical Engineering, 2019, 23, 259-273.	1.4	1
18	Electric-Field-Controlled Thermal Switch in Ferroelectric Materials Using First-Principles Calculations and Domain-Wall Engineering. Physical Review Applied, 2019, 11, .	1.5	42

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19	Double-negative-index ceramic aerogels for thermal superinsulation. Science, 2019, 363, 723-727.	6.0	429
20	Understanding the Role of Ferroelastic Domains on the Pyroelectric and Electrocaloric Effects in Ferroelectric Thin Films. Advanced Materials, 2019, 31, e1803312.	11.1	34
21	Pyroelectric energy conversion with large energy and power density in relaxor ferroelectric thin films. Nature Materials, 2018, 17, 432-438.	13.3	198
22	Thermoelectric properties and performance of flexible reduced graphene oxide films up to 3,000 K. Nature Energy, 2018, 3, 148-156.	19.8	96
23	Apparent self-heating of individual upconverting nanoparticle thermometers. Nature Communications, 2018, 9, 4907.	5.8	82
24	Measuring temperature-dependent thermal diffuse scattering using scanning transmission electron microscopy. Applied Physics Letters, 2018, 113, .	1.5	18
25	Efficient thermal management of Li-ion batteries with a passive interfacial thermal regulator based on a shape memory alloy. Nature Energy, 2018, 3, 899-906.	19.8	154
26	Large Thermal Conductivity Switch Ratio in Barium Titanate Under Electric Field through Firstâ€Principles Calculation. Advanced Theory and Simulations, 2018, 1, 1800098.	1.3	23
27	Ultrahigh thermal conductivity confirmed in boron arsenide. Science, 2018, 361, 549-550.	6.0	42
28	Investigation of phonon coherence and backscattering using silicon nanomeshes. Nature Communications, 2017, 8, 14054.	5.8	123
29	Anomalously low electronic thermal conductivity in metallic vanadium dioxide. Science, 2017, 355, 371-374.	6.0	307
30	Direct Measurement of Pyroelectric and Electrocaloric Effects in Thin Films. Physical Review Applied, 2017, 7, .	1.5	54
31	Correspondence: Reply to â€˜The experimental requirements for a photon thermal diodeâ€™. Nature Communications, 2017, 8, .	5.8	8
32	Thermal diodes, regulators, and switches: Physical mechanisms and potential applications. Applied Physics Reviews, 2017, 4, 041304.	5.5	322
33	Nanocarbon Paper: Flexible, High Temperature, Planar Lighting with Large Scale Printable Nanocarbon Paper (Adv. Mater. 23/2016). Advanced Materials, 2016, 28, 4566-4566.	11.1	3
34	Flexible, High Temperature, Planar Lighting with Large Scale Printable Nanocarbon Paper. Advanced Materials, 2016, 28, 4684-4691.	11.1	59
35	Far-field optical nanothermometry using individual sub-50 nm upconverting nanoparticles. Nanoscale, 2016, 8, 11611-11616.	2.8	24
36	A Micro-Thermal Sensor for Focal Therapy Applications. Scientific Reports, 2016, 6, 21395.	1.6	13

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37	Thermal Boundary Conductance: A Materials Science Perspective. Annual Review of Materials Research, 2016, 46, 433-463.	4.3	185
38	3Ï‰ Measurements for Tracking Freezing Fronts in Biological Applications. Materials Research Society Symposia Proceedings, 2015, 1779, 15-20.	0.1	2
39	An anisotropic model for the minimum thermal conductivity. Applied Physics Letters, 2015, 107, .	1.5	30
40	Simultaneous Enhancement of Electrical Conductivity and Thermopower of Bi₂Te₃ by Multifunctionality of Native Defects. Advanced Materials, 2015, 27, 3681-3686.	11.1	97
41	A 3 omega method to measure an arbitrary anisotropic thermal conductivity tensor. Review of Scientific Instruments, 2015, 86, 054902.	0.6	41
42	Evaluating Broader Impacts of Nanoscale Thermal Transport Research. Nanoscale and Microscale Thermophysical Engineering, 2015, 19, 127-165.	1.4	69
43	Reusable bi-directional 3<i>Ï‰</i> sensor to measure thermal conductivity of 100-<i>Î¼</i>m thick biological tissues. Review of Scientific Instruments, 2015, 86, 014905.	0.6	45
44	Report on the Eighth USâ€"Japan Joint Seminar on Nanoscale Transport Phenomenaâ€"Science and Engineering. Nanoscale and Microscale Thermophysical Engineering, 2015, 19, 95-97.	1.4	1
45	A photon thermal diode. Nature Communications, 2014, 5, 5446.	5.8	62
46	Reply to the â€˜comment on â€œ$ per W metrics for thermoelectric power generation: beyond ZTâ€â€™ by G. Nunes, Jr, Energy Environ. Sci., 2014, 7, DOI: 10.1039/C3EE43700K. Energy and Environmental Science, 2014, 7, 3441-3442.	15.6	4
47	22pm1-E2 Numerical simulation of effective phonon mean free path in polycrystalline nanostructures. The Proceedings of the Symposium on Micro-Nano Science and Technology, 2014, 2014.6, _22pm1-E2--_22pm1-E2-.	0.0	0
48	$ per W metrics for thermoelectric power generation: beyond ZT. Energy and Environmental Science, 2013, 6, 2561-2571.	15.6	201
49	Comparison of Twoâ€Phase Thermal Conductivity Models with Experiments on Dilute Ceramic Composites. Journal of the American Ceramic Society, 2013, 96, 2935-2942.	1.9	52
50	Negative correlation between in-plane bonding strength and cross-plane thermal conductivity in a model layered material. Applied Physics Letters, 2013, 102, .	1.5	50
51	Thermal Conductivity of an Individual Bismuth Nanowire Covered with a Quartz Template Using a 3-Omega Technique. Journal of Electronic Materials, 2013, 42, 2048-2055.	1.0	11
52	Thermal Conductivity Measurements of Thin Biological Tissues Using a Microfabricated 3-Omega Sensor. Journal of Medical Devices, Transactions of the ASME, 2013, 7, .	0.4	3
53	MEASURING THE THERMAL CONDUCTIVITY OF THIN FILMS: 3 OMEGA AND RELATED ELECTROTHERMAL METHODS. Annual Review of Heat Transfer, 2013, 16, 7-49.	0.3	118
54	Wave packet simulations of phonon boundary scattering at graphene edges. Journal of Applied Physics, 2012, 112, 024328.	1.1	29

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55	Advances in Thermal Conductivity. Annual Review of Materials Research, 2012, 42, 179-209.	4.3	250
56	Thermal Conductivity of Nanocrystalline Silicon: Importance of Grain Size and Frequency-Dependent Mean Free Paths. Nano Letters, 2011, 11, 2206-2213.	4.5	386
57	Thickness-Dependent Thermal Conductivity of Encased Graphene and Ultrathin Graphite. Nano Letters, 2010, 10, 3909-3913.	4.5	304
58	Controlled ripple texturing of suspended graphene and ultrathin graphite membranes. Nature Nanotechnology, 2009, 4, 562-566.	15.6	1,186
59	Thermoelectric Energy Conversion in Nanostructures. , 2006, , .		1