

Zhe Cheng

List of Publications by Year in descending order

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citations

361413

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36
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48
all docs

48
docs citations

48
times ranked

1487
citing authors

#	ARTICLE	IF	CITATIONS
1	\hat{I}^2 -Gallium oxide power electronics. APL Materials, 2022, 10, .	5.1	184
2	Temperature Dependence of Electrical and Thermal Conduction in Single Silver Nanowire. Scientific Reports, 2015, 5, 10718.	3.3	149
3	Interfacial Thermal Conductance across Room-Temperature-Bonded GaN/Diamond Interfaces for GaN-on-Diamond Devices. ACS Applied Materials & Interfaces, 2020, 12, 8376-8384.	8.0	109
4	Thermal conductance across \hat{I}^2 -Ga ₂ O ₃ -diamond van der Waals heterogeneous interfaces. APL Materials, 2019, 7, .	5.1	87
5	High Thermal Boundary Conductance across Bonded Heterogeneous GaN-SiC Interfaces. ACS Applied Materials & Interfaces, 2019, 11, 33428-33434.	8.0	82
6	Integration of polycrystalline Ga ₂ O ₃ on diamond for thermal management. Applied Physics Letters, 2020, 116, .	3.3	68
7	Thermal Transport across Ion-Cut Monocrystalline \hat{I}^2 -Ga ₂ O ₃ Thin Films and Bonded \hat{I}^2 -Ga ₂ O ₃ -SiC Interfaces. ACS Applied Materials & Interfaces, 2020, 12, 44943-44951.	8.0	66
8	Simultaneous determination of the lattice thermal conductivity and grain/grain thermal resistance in polycrystalline diamond. Acta Materialia, 2017, 139, 215-225.	7.9	60
9	Experimental observation of high intrinsic thermal conductivity of AlN. Physical Review Materials, 2020, 4, .	2.4	60
10	High In-Plane Thermal Conductivity of Aluminum Nitride Thin Films. ACS Nano, 2021, 15, 9588-9599.	14.6	58
11	Thermal Boundary Conductance Across Heteroepitaxial ZnO/GaN Interfaces: Assessment of the Phonon Gas Model. Nano Letters, 2018, 18, 7469-7477.	9.1	53
12	Probing Growth-Induced Anisotropic Thermal Transport in High-Quality CVD Diamond Membranes by Multifrequency and Multiple-Spot-Size Time-Domain Thermoreflectance. ACS Applied Materials & Interfaces, 2018, 10, 4808-4815.	8.0	52
13	The defect level and ideal thermal conductivity of graphene uncovered by residual thermal reffusivity at the 0 K limit. Nanoscale, 2015, 7, 10101-10110.	5.6	50
14	Tunable Thermal Energy Transport across Diamond Membranes and Diamond-Si Interfaces by Nanoscale Graphoepitaxy. ACS Applied Materials & Interfaces, 2019, 11, 18517-18527.	8.0	49
15	Thermal Conductivity of Ultrahigh Molecular Weight Polyethylene Crystal: Defect Effect Uncovered by 0 K Limit Phonon Diffusion. ACS Applied Materials & Interfaces, 2015, 7, 27279-27288.	8.0	48
16	Experimental observation of localized interfacial phonon modes. Nature Communications, 2021, 12, 6901.	12.8	46
17	Thermal conductance across harmonic-matched epitaxial Al-sapphire heterointerfaces. Communications Physics, 2020, 3, .	5.3	41
18	Thermoelectric properties of solution-synthesized n-type Bi ₂ Te ₃ nanocomposites modulated by Se: An experimental and theoretical study. Nano Research, 2016, 9, 117-127.	10.4	36

#	ARTICLE	IF	CITATIONS
19	Good Solid-State Electrolytes Have Low, Glass-Like Thermal Conductivity. <i>Small</i> , 2021, 17, e2101693.	10.0	23
20	Significantly reduced thermal conductivity in $\text{In}^{12}\text{-(Al}_{0.1}\text{Ga}_{0.9})_2\text{O}_3/\text{Ga}_2\text{O}_3$ superlattices. <i>Applied Physics Letters</i> , 2019, 115, .	3.3	22
21	Bulk-like Intrinsic Phonon Thermal Conductivity of Micrometer-Thick AlN Films. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 29443-29450.	8.0	22
22	Thermal Transport across Metal/ $\text{In}^{12}\text{-Ga}_{2\text{O}_3}$ Interfaces. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 29083-29091.	8.0	21
23	Characterization of the Thermal Conductivity of CVD Diamond for GaN-on-Diamond Devices. , 2016, , .		20
24	Strongly anisotropic thermal and electrical conductivities of a self-assembled silver nanowire network. <i>RSC Advances</i> , 2016, 6, 90674-90681.	3.6	20
25	Thermal Visualization of Buried Interfaces Enabled by Ratio Signal and Steady-State Heating of Time-Domain Thermoreflectance. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 31843-31851.	8.0	19
26	Diffuson-driven ultralow thermal conductivity in amorphous N_bO_5 thin films. <i>Physical Review Materials</i> , 2019, 3, .	2.4	18
27	Perspective on thermal conductance across heterogeneously integrated interfaces for wide and ultrawide bandgap electronics. <i>Applied Physics Letters</i> , 2022, 120, .	3.3	14
28	Thermal conductivity measurements on suspended diamond membranes using picosecond and femtosecond time-domain thermoreflectance. , 2017, , .		10
29	Temperature dependent behavior of thermal conductivity of sub-5 nm Ir film: Defect-electron scattering quantified by residual thermal resistivity. <i>Journal of Applied Physics</i> , 2015, 117, .	2.5	9
30	Thermophysical Properties of Lignocellulose: A Cell-Scale Study Down to 41K. <i>PLoS ONE</i> , 2014, 9, e114821.	2.5	9
31	Thermal rectification in thin films driven by gradient grain microstructure. <i>Journal of Applied Physics</i> , 2018, 123, .	2.5	8
32	Quasi-ballistic thermal conduction in 6H-SiC . <i>Materials Today Physics</i> , 2021, 20, 100462.	6.0	7
33	Steady-state methods for measuring in-plane thermal conductivity of thin films for heat spreading applications. <i>Review of Scientific Instruments</i> , 2021, 92, 044907.	1.3	6
34	Thermal conductivity mapping of oxidized SiC/SiC composites by time-domain thermoreflectance with heterodyne detection. <i>Journal of the American Ceramic Society</i> , 2021, 104, 4773-4781.	3.8	6
35	Thermal science and engineering of $\text{In}^{12}\text{-Ga}_2\text{O}_3$ materials and devices. <i>Semiconductors and Semimetals</i> , 2021, , 77-99.	0.7	5
36	Simultaneous Evaluation of Heat Capacity and In-plane Thermal Conductivity of Nanocrystalline Diamond Thin Films. <i>Nanoscale and Microscale Thermophysical Engineering</i> , 2021, 25, 166-178.	2.6	5

#	ARTICLE	IF	CITATIONS
37	Experimental considerations of CVD diamond film measurements using time domain thermoreflectance. , 2017, , .		4
38	Battery absorbs heat during charging uncovered by ultra-sensitive thermometry. Journal of Power Sources, 2022, 518, 230762.	7.8	4
39	Investigation of the Heterogeneous Thermal Conductivity in Bulk CVD Diamond for Use in Electronics Thermal Management. , 2017, , .		2
40	Thermal science and engineering in third-generation semiconductor materials and devices. Wuli Xuebao/Acta Physica Sinica, 2021, 70, 236502.	0.5	2
41	Creating Low Thermal Resistance Interfaces in Wide Bandgap Semiconductors Through Bonding. , 2021, , .		2
42	PROBING LOCAL THERMAL CONDUCTIVITY VARIATIONS IN CVD DIAMOND WITH LARGE GRAINS BY TIME-DOMAIN THERMOREFLECTANCE. , 2018, , .		1
43	Fundamental understanding of thermal transport across solid interfaces. , 2022, , 69-82.		1
44	Flame Stability of Methane/Air Mixture in a Heat-Recirculating-Type Mesoscale Channel with a Bluff-Body. Applied Mechanics and Materials, 2013, 325-326, 12-15.	0.2	0
45	Room-temperature bonded thermally conductive semiconductor interfaces. , 2022, , 359-377.		0