Zhe Cheng

List of Publications by Year
in descending order

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45 papers	1,558 citations	361413 20 h-index	345221 36 g-index
48 all docs	48 docs citations	48 times ranked	1487 citing authors

#	Article	IF	Citations
1	Battery absorbs heat during charging uncovered by ultra-sensitive thermometry. Journal of Power Sources, 2022, 518, 230762.	7.8	4
2	Perspective on thermal conductance across heterogeneously integrated interfaces for wide and ultrawide bandgap electronics. Applied Physics Letters, 2022, 120, .	3.3	14
3	Î²-Gallium oxide power electronics. APL Materials, 2022, 10, .	5.1	184
4	Fundamental understanding of thermal transport across solid interfaces. , 2022, , 69-82.		1
5	Room-temperature bonded thermally conductive semiconductor interfaces. , 2022, , 359-377.		0
6	High In-Plane Thermal Conductivity of Aluminum Nitride Thin Films. ACS Nano, 2021, 15, 9588-9599.	14.6	58
7	Steady-state methods for measuring in-plane thermal conductivity of thin films for heat spreading applications. Review of Scientific Instruments, 2021, 92, 044907.	1.3	6
8	Thermal conductivity mapping of oxidized SiC/SiC composites by timeâ€domain thermoreflectance with heterodyne detection. Journal of the American Ceramic Society, 2021, 104, 4773-4781.	3.8	6
9	Thermal Transport across Metal/Î²-Ga₂O₃ Interfaces. ACS Applied Materials & Interfaces, 2021, 13, 29083-29091.	8.0	21
10	Good Solidâ€State Electrolytes Have Low, Glassâ€Like Thermal Conductivity. Small, 2021, 17, e2101693.	10.0	23
11	Thermal Visualization of Buried Interfaces Enabled by Ratio Signal and Steady-State Heating of Time-Domain Thermoreflectance. ACS Applied Materials & Interfaces, 2021, 13, 31843-31851.	8.0	19
12	Quasi-ballistic thermal conduction in 6Hâ€“SiC. Materials Today Physics, 2021, 20, 100462.	6.0	7
13	Thermal science and engineering of Î²-Ga2O3 materials and devices. Semiconductors and Semimetals, 2021, , 77-99.	0.7	5
14	Simultaneous Evaluation of Heat Capacity and In-plane Thermal Conductivity of Nanocrystalline Diamond Thin Films. Nanoscale and Microscale Thermophysical Engineering, 2021, 25, 166-178.	2.6	5
15	Experimental observation of localized interfacial phonon modes. Nature Communications, 2021, 12, 6901.	12.8	46
16	Thermal science and engineering in third-generation semiconductor materials and devices. Wuli Xuebao/Acta Physica Sinica, 2021, 70, 236502.	0.5	2
17	Creating Low Thermal Resistance Interfaces in Wide Bandgap Semiconductors Through Bonding. , 2021, , .		2
18	Thermal conductance across harmonic-matched epitaxial Al-sapphire heterointerfaces. Communications Physics, 2020, 3, .	5.3	41

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19	Thermal Transport across Ion-Cut Monocrystalline Î²-Ga₂O₃ Thin Films and Bonded Î²-Ga₂O₃â€“SiC Interfaces. ACS Applied Materials & Interfaces, 2020, 12, 44943-44951.	8.0	66
20	Bulk-like Intrinsic Phonon Thermal Conductivity of Micrometer-Thick AlN Films. ACS Applied Materials & Interfaces, 2020, 12, 29443-29450.	8.0	22
21	Integration of polycrystalline Ga2O3 on diamond for thermal management. Applied Physics Letters, 2020, 116, .	3.3	68
22	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
23	Experimental observation of high intrinsic thermal conductivity of AlN. Physical Review Materials, 2020, 4, .	2.4	60
24	High Thermal Boundary Conductance across Bonded Heterogeneous GaNâ€“SiC Interfaces. ACS Applied Materials & Interfaces, 2019, 11, 33428-33434.	8.0	82
25	Significantly reduced thermal conductivity in Î² -(Al0.1Ga0.9)2O3/Ga2O3 superlattices. Applied Physics Letters, 2019, 115, .	3.3	22
26	Tunable Thermal Energy Transport across Diamond Membranes and Diamondâ€“Si Interfaces by Nanoscale Graphoepitaxy. ACS Applied Materials & Interfaces, 2019, 11, 18517-18527.	8.0	49
27	Thermal conductance across Î²-Ga2O3-diamond van der Waals heterogeneous interfaces. APL Materials, 2019, 7, .	5.1	87
28	Diffuson-driven ultralow thermal conductivity in amorphous <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi mathvariant="normal">N</mml:mi><mml:msub><mml:mi mathvariant="normal">b</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:msub><mml:mi mathvariant="normal">O</mml:mi><mml:mn>5</mml:mn></mml:msub></mml:mrow></mml:math> thin films. Physical Review Materials, 2019, 3, .	2.4	18
29	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
30	Thermal rectification in thin films driven by gradient grain microstructure. Journal of Applied Physics, 2018, 123, .	2.5	8
31	Thermal Boundary Conductance Across Heteroepitaxial ZnO/GaN Interfaces: Assessment of the Phonon Gas Model. Nano Letters, 2018, 18, 7469-7477.	9.1	53
32	PROBING LOCAL THERMAL CONDUCTIVITY VARIATIONS IN CVD DIAMOND WITH LARGE GRAINS BY TIME-DOMAIN THERMOREFLECTANCE. , 2018, , .		1
33	Investigation of the Heterogeneous Thermal Conductivity in Bulk CVD Diamond for Use in Electronics Thermal Management. , 2017, , .		2
34	Simultaneous determination of the lattice thermal conductivity and grain/grain thermal resistance in polycrystalline diamond. Acta Materialia, 2017, 139, 215-225.	7.9	60
35	Experimental considerations of CVD diamond film measurements using time domain thermoreflectance. , 2017, , .		4
36	Thermal conductivity measurements on suspended diamond membranes using picosecond and femtosecond time-domain thermoreflectance. , 2017, , .		10

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37	Characterization of the Thermal Conductivity of CVD Diamond for GaN-on-Diamond Devices. , 2016, , .		20
38	Strongly anisotropic thermal and electrical conductivities of a self-assembled silver nanowire network. RSC Advances, 2016, 6, 90674-90681.	3.6	20
39	Thermoelectric properties of solution-synthesized n-type Bi2Te3 nanocomposites modulated by Se: An experimental and theoretical study. Nano Research, 2016, 9, 117-127.	10.4	36
40	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
41	Temperature Dependence of Electrical and Thermal Conduction in Single Silver Nanowire. Scientific Reports, 2015, 5, 10718.	3.3	149
42	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
43	Temperature dependent behavior of thermal conductivity of sub-5â€‰nm Ir film: Defect-electron scattering quantified by residual thermal resistivity. Journal of Applied Physics, 2015, 117, .	2.5	9
44	Thermophysical Properties of Lignocellulose: A Cell-Scale Study Down to 41K. PLoS ONE, 2014, 9, e114821.	2.5	9
45	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