Zhe Cheng

List of Publications by Year
in descending order

45 papers	1,558 citations	361045 20 h-index	344852 36 g-index
48 all docs	48 docs citations	48 times ranked	1487 citing authors

#	Article	IF	Citations
1	Î²-Gallium oxide power electronics. APL Materials, 2022, 10, .	2.2	184
2	Temperature Dependence of Electrical and Thermal Conduction in Single Silver Nanowire. Scientific Reports, 2015, 5, 10718.	1.6	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.	4.0	109
4	Thermal conductance across Î²-Ga2O3-diamond van der Waals heterogeneous interfaces. APL Materials, 2019, 7, .	2.2	87
5	High Thermal Boundary Conductance across Bonded Heterogeneous GaNâ€“SiC Interfaces. ACS Applied Materials & Interfaces, 2019, 11, 33428-33434.	4.0	82
6	Integration of polycrystalline Ga2O3 on diamond for thermal management. Applied Physics Letters, 2020, 116, .	1.5	68
7	Thermal Transport across Ion-Cut Monocrystalline Î²-Ga₂O₃ Thin Films and Bonded Î²-Ga₂O₃â€“SiC Interfaces. ACS Applied Materials & Interfaces, 2020, 12, 44943-44951.	4.0	66
8	Simultaneous determination of the lattice thermal conductivity and grain/grain thermal resistance in polycrystalline diamond. Acta Materialia, 2017, 139, 215-225.	3.8	60
9	Experimental observation of high intrinsic thermal conductivity of AlN. Physical Review Materials, 2020, 4, .	0.9	60
10	High In-Plane Thermal Conductivity of Aluminum Nitride Thin Films. ACS Nano, 2021, 15, 9588-9599.	7.3	58
11	Thermal Boundary Conductance Across Heteroepitaxial ZnO/GaN Interfaces: Assessment of the Phonon Gas Model. Nano Letters, 2018, 18, 7469-7477.	4.5	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.	4.0	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.	2.8	50
14	Tunable Thermal Energy Transport across Diamond Membranes and Diamondâ€“Si Interfaces by Nanoscale Graphoepitaxy. ACS Applied Materials & Interfaces, 2019, 11, 18517-18527.	4.0	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.	4.0	48
16	Experimental observation of localized interfacial phonon modes. Nature Communications, 2021, 12, 6901.	5.8	46
17	Thermal conductance across harmonic-matched epitaxial Al-sapphire heterointerfaces. Communications Physics, 2020, 3, .	2.0	41
18	Thermoelectric properties of solution-synthesized n-type Bi2Te3 nanocomposites modulated by Se: An experimental and theoretical study. Nano Research, 2016, 9, 117-127.	5.8	36

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19	Good Solidâ€State Electrolytes Have Low, Glassâ€Like Thermal Conductivity. Small, 2021, 17, e2101693.	5.2	23
20	Significantly reduced thermal conductivity in <i>Î²</i> -(Al0.1Ga0.9)2O3/Ga2O3 superlattices. Applied Physics Letters, 2019, 115, .	1.5	22
21	Bulk-like Intrinsic Phonon Thermal Conductivity of Micrometer-Thick AlN Films. ACS Applied Materials & Interfaces, 2020, 12, 29443-29450.	4.0	22
22	Thermal Transport across Metal/Î²-Ga₂O₃ Interfaces. ACS Applied Materials & Interfaces, 2021, 13, 29083-29091.	4.0	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. RSC Advances, 2016, 6, 90674-90681.	1.7	20
25	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.	4.0	19
26	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, .	0.9	18
27	Perspective on thermal conductance across heterogeneously integrated interfaces for wide and ultrawide bandgap electronics. Applied Physics Letters, 2022, 120, .	1.5	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-5â€‰nm Ir film: Defect-electron scattering quantified by residual thermal resistivity. Journal of Applied Physics, 2015, 117, .	1.1	9
30	Thermophysical Properties of Lignocellulose: A Cell-Scale Study Down to 41K. PLoS ONE, 2014, 9, e114821.	1.1	9
31	Thermal rectification in thin films driven by gradient grain microstructure. Journal of Applied Physics, 2018, 123, .	1.1	8
32	Quasi-ballistic thermal conduction in 6Hâ€"SiC. Materials Today Physics, 2021, 20, 100462.	2.9	7
33	Steady-state methods for measuring in-plane thermal conductivity of thin films for heat spreading applications. Review of Scientific Instruments, 2021, 92, 044907.	0.6	6
34	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.	1.9	6
35	Thermal science and engineering of Î²-Ga2O3 materials and devices. Semiconductors and Semimetals, 2021, , 77-99.	0.4	5
36	Simultaneous Evaluation of Heat Capacity and In-plane Thermal Conductivity of Nanocrystalline Diamond Thin Films. Nanoscale and Microscale Thermophysical Engineering, 2021, 25, 166-178.	1.4	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.	4.0	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.	0.2	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