

Zhuomin M Zhang

List of Publications by Year in descending order

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62
papers

2,631
citations

257450

24
h-index

189892

50
g-index

63
all docs

63
docs citations

63
times ranked

1446
citing authors

#	ARTICLE	IF	CITATIONS
1	Nanoscale radiation heat transfer for silicon at different doping levels. <i>International Journal of Heat and Mass Transfer</i> , 2006, 49, 1703-1718.	4.8	254
2	Performance analysis of near-field thermophotovoltaic devices considering absorption distribution. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2008, 109, 305-316.	2.3	252
3	Nano/Microscale Heat Transfer. <i>Mechanical Engineering Series</i> , 2020, , .	0.2	183
4	Near-field heat transfer between graphene/hBN multilayers. <i>Physical Review B</i> , 2017, 95, .	3.2	155
5	Strong Plasmonic Coupling between Graphene Ribbon Array and Metal Gratings. <i>ACS Photonics</i> , 2015, 2, 1611-1618.	6.6	137
6	A dual-layer structure with record-high solar reflectance for daytime radiative cooling. <i>Solar Energy</i> , 2018, 169, 316-324.	6.1	131
7	Near-field radiative heat transfer with doped-silicon nanostructured metamaterials. <i>International Journal of Heat and Mass Transfer</i> , 2014, 73, 389-398.	4.8	126
8	Near-Field Thermal Radiation: Recent Progress and Outlook. <i>Nanoscale and Microscale Thermophysical Engineering</i> , 2015, 19, 98-126.	2.6	116
9	Near-Perfect Photon Tunneling by Hybridizing Graphene Plasmons and Hyperbolic Modes. <i>ACS Photonics</i> , 2014, 1, 785-789.	6.6	106
10	Near-Field Thermal Radiation between Metasurfaces. <i>ACS Photonics</i> , 2015, 2, 1320-1326.	6.6	89
11	Near-field radiative thermoelectric energy converters: a review. <i>Frontiers in Energy</i> , 2018, 12, 5-21.	2.3	71
12	A perfect absorber design using a natural hyperbolic material for harvesting solar energy. <i>Solar Energy</i> , 2018, 159, 329-336.	6.1	71
13	Near-Field Radiative Heat Transfer Between Two $\hat{\pm}$ -MoO ₃ Biaxial Crystals. <i>Journal of Heat Transfer</i> , 2020, 142, .	2.1	68
14	Perfect mid-infrared absorption by hybrid phonon-plasmon polaritons in hBN/metal-grating anisotropic structures. <i>International Journal of Heat and Mass Transfer</i> , 2017, 106, 1025-1034.	4.8	61
15	Thermal radiative properties of metamaterials and other nanostructured materials: A review. <i>Frontiers of Energy and Power Engineering in China</i> , 2009, 3, 11-26.	0.4	59
16	Frequency-Dependent Electrical and Thermal Response of Heated Atomic Force Microscope Cantilevers. <i>Journal of Microelectromechanical Systems</i> , 2007, 16, 213-222.	2.5	45
17	Influence of hBN orientation on the near-field radiative heat transfer between graphene/hBN heterostructures. <i>Journal of Photonics for Energy</i> , 2018, 9, 1.	1.3	44
18	Thermal radiation in systems of many dipoles. <i>Physical Review B</i> , 2019, 100, .	3.2	39

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19	Collective near-field thermal emission from polaritonic nanoparticle arrays. <i>Physical Review Materials</i> , 2017, 1, .	2.4	34
20	Resonance perfect absorption by exciting hyperbolic phonon polaritons in 1D hBN gratings. <i>Optics Express</i> , 2017, 25, 7791.	3.4	33
21	Absorption Coefficients of Crystalline Silicon at Wavelengths from 500 nm to 1000 nm. <i>International Journal of Thermophysics</i> , 2013, 34, 213-225.	2.1	31
22	Lateral Shifts in Near-Field Thermal Radiation with Surface Phonon Polaritons. <i>Nanoscale and Microscale Thermophysical Engineering</i> , 2008, 12, 238-250.	2.6	26
23	Thermoradiative device enhanced by near-field coupled structures. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2017, 196, 10-16.	2.3	26
24	Performance comparison between photovoltaic and thermoradiative devices. <i>Journal of Applied Physics</i> , 2017, 122, .	2.5	26
25	Measurement of flow properties coupled to experimental and numerical analyses of dense, granular flows for solar thermal energy storage. <i>Solar Energy</i> , 2020, 207, 77-90.	6.1	25
26	Near-field photonic thermal diode based on hBN and InSb films. <i>Applied Physics Letters</i> , 2021, 119, .	3.3	23
27	Spectral Radiative Properties of Ceramic Particles for Concentrated Solar Thermal Energy Storage Applications. <i>International Journal of Thermophysics</i> , 2020, 41, 1.	2.1	22
28	Spectral emittance measurements of micro/nanostructures in energy conversion: a review. <i>Frontiers in Energy</i> , 2020, 14, 482-509.	2.3	22
29	Near-field enhancement of thermoradiative devices. <i>Journal of Applied Physics</i> , 2017, 122, .	2.5	20
30	An experimental study of a nearly perfect absorber made from a natural hyperbolic material for harvesting solar energy. <i>Journal of Applied Physics</i> , 2020, 127, .	2.5	20
31	Radiative Properties of Ceramic Al_2O_3 , AlN, and Si_3N_4 : I. Experiments. <i>International Journal of Thermophysics</i> , 2016, 37, 1.	2.1	19
32	Radiative Properties of Ceramic Al_2O_3 , AlN and Si_3N_4 : II: Modeling. <i>International Journal of Thermophysics</i> , 2017, 38, 1.	2.1	18
33	Reexamination of the Statistical Derivations of Fourier's Law and Cattaneo's Equation. <i>Nanoscale and Microscale Thermophysical Engineering</i> , 2011, 15, 220-228.	2.6	17
34	Comparison of kinetic theory and fluctuational electrodynamics for radiative heat transfer in nanoparticle chains. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2020, 246, 106947.	2.3	17
35	Enhancement and Manipulation of Near-Field Radiative Heat Transfer Using an Intermediate Modulator. <i>Physical Review Applied</i> , 2020, 13, .	3.8	17
36	Near-field radiation between graphene-covered carbon nanotube arrays. <i>AIP Advances</i> , 2015, 5, 053501.	1.3	16

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37	Coupled Charge and Radiation Transport Processes in Thermophotovoltaic and Thermoradiative Cells. <i>Physical Review Applied</i> , 2021, 15, .	3.8	16
38	Measurements of scattering and absorption properties of submillimeter bauxite and silica particles. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2021, 276, 107923.	2.3	16
39	Compact mid-infrared broadband absorber based on hBN/metal metasurface. <i>International Journal of Thermal Sciences</i> , 2018, 130, 192-199.	4.9	15
40	Numerical analyses of high temperature dense, granular flows coupled to high temperature flow property measurements for solar thermal energy storage. <i>Solar Energy</i> , 2021, 213, 350-360.	6.1	15
41	Radiative properties of materials with surface scattering or volume scattering: A review. <i>Frontiers of Energy and Power Engineering in China</i> , 2009, 3, 60-79.	0.4	14
42	Effect of Evanescent Waves on the Dark Current of Thermophotovoltaic Cells. <i>Nanoscale and Microscale Thermophysical Engineering</i> , 2020, 24, 1-19.	2.6	14
43	A coherent description of thermal radiative devices and its application on the near-field negative electroluminescent cooling. <i>Energy</i> , 2018, 147, 177-186.	8.8	13
44	Spatial profiles of photon chemical potential in near-field thermophotovoltaic cells. <i>Journal of Applied Physics</i> , 2021, 129, .	2.5	13
45	Natural anisotropic nanoparticles with a broad absorption spectrum for solar energy harvesting. <i>International Communications in Heat and Mass Transfer</i> , 2018, 96, 109-113.	5.6	12
46	Photonic thermal conduction by infrared plasmonic resonators in semiconductor nanowires. <i>Applied Physics Letters</i> , 2019, 114, 163104.	3.3	10
47	Improved performance of a near-field thermophotovoltaic device by a back gapped reflector. <i>Solar Energy Materials and Solar Cells</i> , 2022, 237, 111562.	6.2	10
48	Further Investigation of Coherent Thermal Emission from Single Negative Materials. <i>Nanoscale and Microscale Thermophysical Engineering</i> , 2008, 12, 83-97.	2.6	9
49	Temperature and Doping Dependence of The Radiative Properties of Silicon: Drude Model Revisited. , 0, , .		7
50	Anisotropic Diffraction from Inclined Silver Nanorod Arrays on Grating Templates. <i>Nanoscale and Microscale Thermophysical Engineering</i> , 2012, 16, 18-36.	2.6	7
51	Experimental Demonstration of the Effect of Magnetic Polaritons on the Radiative Properties of Deep Aluminum Gratings. <i>Journal of Heat Transfer</i> , 2019, 141, .	2.1	7
52	RAD-PRO: Effective Software for Modeling Radiative Properties in Rapid Thermal Processing. , 0, , .		6
53	Sub-diffractive waveguiding by mid-infrared plasmonic resonators in semiconductor nanowires. <i>Nanoscale</i> , 2018, 10, 5708-5716.	5.6	5
54	Development of experimentally validated optical property models for silicon and related materials. , 0, , .		4

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55	Spectral Radiative Properties of Polydispersed SiO ₂ Particle Beds. Journal of Thermophysics and Heat Transfer, 2022, 36, 858-869.	1.6	4
56	Temperature-dependent spectral emittance of bauxite and silica particle beds. Experimental Heat Transfer, 2023, 36, 826-844.	3.2	4
57	Comments on "Absolute linearity measurements on a PbS detector in the infrared". Applied Optics, 2007, 46, 6483.	2.1	1
58	Vandal Glass Heat Distribution and the Effect of Glass Gap Adjustments in Outdoor Digital Display Components. Journal of Electronic Packaging, Transactions of the ASME, 2020, 142, .	1.8	1
59	Radiative Properties of Nanomaterials. Mechanical Engineering Series, 2020, , 497-622.	0.2	1
60	Study of the radiative properties of silicon-based materials for thermal processing and control. , 0, , .		0
61	Visible light response of tin oxide nanobelts. , 2007, , .		0
62	Near-Field Energy Transfer. Mechanical Engineering Series, 2020, , 623-722.	0.2	0