

Bolin Liao

List of Publications by Year in descending order

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papers

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257450

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54
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54
docs citations

54
times ranked

3657
citing authors

#	ARTICLE	IF	CITATIONS
1	Electric field effect on the thermal conductivity of wurtzite GaN. Applied Physics Letters, 2021, 118, .	3.3	16
2	Impact of Electron-Phonon Interaction on Thermal Transport: A Review. Nanoscale and Microscale Thermophysical Engineering, 2021, 25, 73-90.	2.6	22
3	Crystal symmetry based selection rules for anharmonic phonon-phonon scattering from a group theory formalism. Physical Review B, 2021, 103, .	3.2	20
4	Spatiotemporal Imaging of Thickness-Induced Band-Bending Junctions. Nano Letters, 2021, 21, 5745-5753.	9.1	6
5	Carrier density oscillation in the photoexcited semiconductor. Journal Physics D: Applied Physics, 2021, 54, 125102.	2.8	2
6	Transient Strain-Induced Electronic Structure Modulation in a Semiconducting Polymer Imaged by Scanning Ultrafast Electron Microscopy. Nano Letters, 2021, 21, 9146-9152.	9.1	6
7	Scanning ultrafast electron microscopy reveals photovoltage dynamics at a deeply buried $\text{p}^+\text{Si}^-\text{SiO}_2$ interface. Physical Review B, 2021, 104, .	3.2	6
8	Characterizing microscale energy transport in materials with transient grating spectroscopy. Journal of Applied Physics, 2021, 130, .	2.5	11
9	Nitrogen-Doped graphene coated FeS ₂ microsphere composite as high-performance anode materials for sodium-ion batteries enhanced by the chemical and structural synergistic effect. Applied Surface Science, 2020, 505, 144633.	6.1	18
10	Doping molecular organic semiconductors by diffusion from the vapor phase. Materials Chemistry Frontiers, 2020, 4, 3632-3639.	5.9	13
11	Probing the Surface Photovoltage Effect by Imaging Photo-assisted Secondary Electron Emission. Microscopy and Microanalysis, 2020, 26, 1156-1156.	0.4	0
12	Probing Surface Photovoltage Effect Using Photoassisted Secondary Electron Emission. Journal of Physical Chemistry A, 2020, 124, 5246-5252.	2.5	12
13	Widely Tunable Optical and Thermal Properties of Dirac Semimetal Cd ₃ As ₂ . Advanced Optical Materials, 2020, 8, 1901192.	7.3	27
14	Phonon softening near topological phase transitions. Physical Review B, 2020, 102, .	3.2	10
15	Transient grating spectroscopy of photocarrier dynamics in semiconducting polymer thin films. Applied Physics Letters, 2020, 117, .	3.3	2
16	Origins of significant reduction of lattice thermal conductivity in graphene allotropes. Physical Review B, 2019, 100, .	3.2	18
17	Controlling thermal conductivity of two-dimensional materials via externally induced phonon-electron interaction. Physical Review B, 2019, 100, .	3.2	24
18	Hydrodynamic Phonon Transport Perpendicular to Diffuse-Gray Boundaries. Nanoscale and Microscale Thermophysical Engineering, 2019, 23, 25-35.	2.6	14

#	ARTICLE	IF	CITATIONS
19	Reduced thermal conductivity of epitaxial GaAs on Si due to symmetry-breaking biaxial strain. Physical Review Materials, 2019, 3, .	2.4	20
20	Soft phonons and ultralow lattice thermal conductivity in the Dirac semimetal Cd_3As_2 . Physical Review Research, 2019, 1, .	3.3	26
21	Electron mean-free-path filtering in Dirac material for improved thermoelectric performance. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 879-884.	7.1	61
22	Large thermoelectric power factor from crystal symmetry-protected non-bonding orbital in half-Heuslers. Nature Communications, 2018, 9, 1721.	12.8	111
23	Imaging surface acoustic wave dynamics in semiconducting polymers by scanning ultrafast electron microscopy. Ultramicroscopy, 2018, 184, 46-50.	1.9	18
24	Electron-phonon interaction and superconductivity in the high-pressure cd16 phase of lithium from first principles. Physical Chemistry Chemical Physics, 2018, 20, 27125-27130.	2.8	12
25	Ultralow thermal conductivity in a two-dimensional material due to surface-enhanced resonant bonding. Materials Today Physics, 2018, 7, 89-95.	6.0	12
26	Thermal conductivity in self-assembled $\text{CoFe}_2\text{O}_4/\text{BiFeO}_3$ vertical nanocomposite films. Applied Physics Letters, 2018, 113, .	3.3	5
27	Scanning ultrafast electron microscopy: Four-dimensional imaging of materials dynamics in space and time. MRS Bulletin, 2018, 43, 491-496.	3.5	16
28	First-principles mode-by-mode analysis for electron-phonon scattering channels and mean free path spectra in GaAs. Physical Review B, 2017, 95, .	3.2	125
29	Spatial-Temporal Imaging of Anisotropic Photocarrier Dynamics in Black Phosphorus. Nano Letters, 2017, 17, 3675-3680.	9.1	56
30	High-temporal-resolution electron microscopy for imaging ultrafast electron dynamics. Nature Photonics, 2017, 11, 425-430.	31.4	90
31	A Microporous and Naturally Nanostructured Thermoelectric Metal-Organic Framework with Ultralow Thermal Conductivity. Joule, 2017, 1, 168-177.	24.0	159
32	Photon-induced Near-field Electron Microscopy of Eukaryotic Cells. Angewandte Chemie - International Edition, 2017, 56, 11498-11501.	13.8	13
33	Photon-induced Near-field Electron Microscopy of Eukaryotic Cells. Angewandte Chemie, 2017, 129, 11656-11659.	2.0	0
34	Scanning ultrafast electron microscopy: A novel technique to probe photocarrier dynamics with high spatial and temporal resolutions. Materials Today Physics, 2017, 2, 46-53.	6.0	37
35	Photo-excited hot carrier dynamics in hydrogenated amorphous silicon imaged by 4D electron microscopy. Nature Nanotechnology, 2017, 12, 871-876.	31.5	48
36	Photo-excited charge carriers suppress sub-terahertz phonon mode in silicon at room temperature. Nature Communications, 2016, 7, 13174.	12.8	47

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37	Entropic and Near-Field Improvements of Thermoradiative Cells. <i>Scientific Reports</i> , 2016, 6, 34837.	3.3	74
38	Heat meets light on the nanoscale. <i>Nanophotonics</i> , 2016, 5, 134-160.	6.0	58
39	First-principles calculations of thermal, electrical, and thermoelectric transport properties of semiconductors. <i>Semiconductor Science and Technology</i> , 2016, 31, 043001.	2.0	51
40	Nanocomposites for thermoelectrics and thermal engineering. <i>MRS Bulletin</i> , 2015, 40, 746-752.	3.5	40
41	<i>Ab initio</i> study of electron-phonon interaction in phosphorene. <i>Physical Review B</i> , 2015, 91, .	3.2	175
42	Significant Reduction of Lattice Thermal Conductivity by the Electron-Phonon Interaction in Silicon with High Carrier Concentrations: A First-Principles Study. <i>Physical Review Letters</i> , 2015, 114, 115901.	7.8	229
43	First-principles simulation of electron mean-free-path spectra and thermoelectric properties in silicon. <i>Europhysics Letters</i> , 2015, 109, 57006.	2.0	144
44	Ab initio optimization of phonon drag effect for lower-temperature thermoelectric energy conversion. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 14777-14782.	7.1	75
45	Combinatorial approach to identify electronically cloaked hollow nanoparticles. <i>Physical Review B</i> , 2014, 90, .	3.2	7
46	First-principles study of thermal transport in FeSb ₂ . <i>Physical Review B</i> , 2014, 89, .	3.2	23
47	Generalized Two-Temperature Model for Coupled Phonon-Magnon Diffusion. <i>Physical Review Letters</i> , 2014, 113, 025902.	7.8	27
48	Enhancing the Thermoelectric Power Factor by Using Invisible Dopants. <i>Advanced Materials</i> , 2013, 25, 1577-1582.	21.0	61
49	High thermoelectric performance by resonant dopant indium in nanostructured SnTe. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, 13261-13266.	7.1	632
50	Isotropic and energy-selective electron cloaks on graphene. <i>Physical Review B</i> , 2013, 88, .	3.2	30
51	Direct and quantitative broadband absorptance spectroscopy on small objects using Fourier transform infrared spectrometer and bilayer cantilever probes. <i>Applied Physics Letters</i> , 2013, 102, 051901.	3.3	3
52	Figure-of-merit enhancement in nanostructured FeSb ₂ Ag with Ag ₁ Sb nanoinclusions. <i>Nanotechnology</i> , 2012, 23, 505402.	2.6	12
53	Cloaking Core-Shell Nanoparticles from Conducting Electrons in Solids. <i>Physical Review Letters</i> , 2012, 109, 126806.	7.8	58