

Bolin Liao

List of Publications by Year in descending order

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53
papers

2,782
citations

257450

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182427

51
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54
all docs

54
docs citations

54
times ranked

3657
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|--|------|-----------|
| 1 | High thermoelectric performance by resonant dopant indium in nanostructured SnTe. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 13261-13266. | 7.1 | 632 |
| 2 | Significant Reduction of Lattice Thermal Conductivity by the Electron-Phonon Interaction in Silicon with High Carrier Concentrations: A First-Principles Study. Physical Review Letters, 2015, 114, 115901. | 7.8 | 229 |
| 3 | <i>Ab initio</i> study of electron-phonon interaction in phosphorene. Physical Review B, 2015, 91, . | 3.2 | 175 |
| 4 | A Microporous and Naturally Nanostructured Thermoelectric Metal-Organic Framework with Ultralow Thermal Conductivity. Joule, 2017, 1, 168-177. | 24.0 | 159 |
| 5 | First-principles simulation of electron mean-free-path spectra and thermoelectric properties in silicon. Europhysics Letters, 2015, 109, 57006. | 2.0 | 144 |
| 6 | 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 |
| 7 | Large thermoelectric power factor from crystal symmetry-protected non-bonding orbital in half-Heuslers. Nature Communications, 2018, 9, 1721. | 12.8 | 111 |
| 8 | High-temporal-resolution electron microscopy for imaging ultrafast electron dynamics. Nature Photonics, 2017, 11, 425-430. | 31.4 | 90 |
| 9 | <i>Ab initio</i> optimization of phonon drag effect for lower-temperature thermoelectric energy conversion. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 14777-14782. | 7.1 | 75 |
| 10 | Entropic and Near-Field Improvements of Thermoradiative Cells. Scientific Reports, 2016, 6, 34837. | 3.3 | 74 |
| 11 | Enhancing the Thermoelectric Power Factor by Using Invisible Dopants. Advanced Materials, 2013, 25, 1577-1582. | 21.0 | 61 |
| 12 | 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 |
| 13 | Cloaking Core-Shell Nanoparticles from Conducting Electrons in Solids. Physical Review Letters, 2012, 109, 126806. | 7.8 | 58 |
| 14 | Heat meets light on the nanoscale. Nanophotonics, 2016, 5, 134-160. | 6.0 | 58 |
| 15 | Spatial-Temporal Imaging of Anisotropic Photocarrier Dynamics in Black Phosphorus. Nano Letters, 2017, 17, 3675-3680. | 9.1 | 56 |
| 16 | First-principles calculations of thermal, electrical, and thermoelectric transport properties of semiconductors. Semiconductor Science and Technology, 2016, 31, 043001. | 2.0 | 51 |
| 17 | Photo-excited hot carrier dynamics in hydrogenated amorphous silicon imaged by 4D electron microscopy. Nature Nanotechnology, 2017, 12, 871-876. | 31.5 | 48 |
| 18 | Photo-excited charge carriers suppress sub-terahertz phonon mode in silicon at room temperature. Nature Communications, 2016, 7, 13174. | 12.8 | 47 |

| # | ARTICLE | IF | CITATIONS |
|----|---|------|-----------|
| 19 | Nanocomposites for thermoelectrics and thermal engineering. MRS Bulletin, 2015, 40, 746-752. | 3.5 | 40 |
| 20 | 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 |
| 21 | Isotropic and energy-selective electron cloaks on graphene. Physical Review B, 2013, 88, . | 3.2 | 30 |
| 22 | Generalized Two-Temperature Model for Coupled Phonon-Magnon Diffusion. Physical Review Letters, 2014, 113, 025902. | 7.8 | 27 |
| 23 | Widely Tunable Optical and Thermal Properties of Dirac Semimetal Cd_3As_2 . Advanced Optical Materials, 2020, 8, 1901192. | 7.3 | 27 |
| 24 | Soft phonons and ultralow lattice thermal conductivity in the Dirac semimetal Cd_3As_2 . Physical Review Research, 2019, 1, . | 3.3 | 26 |
| 25 | Controlling thermal conductivity of two-dimensional materials via externally induced phonon-electron interaction. Physical Review B, 2019, 100, . | 3.2 | 24 |
| 26 | First-principles study of thermal transport in $FeSb_2$. Physical Review B, 2014, 89, . | 3.2 | 23 |
| 27 | Impact of Electron-Phonon Interaction on Thermal Transport: A Review. Nanoscale and Microscale Thermophysical Engineering, 2021, 25, 73-90. | 2.6 | 22 |
| 28 | Crystal symmetry based selection rules for anharmonic phonon-phonon scattering from a group theory formalism. Physical Review B, 2021, 103, . | 3.2 | 20 |
| 29 | Reduced thermal conductivity of epitaxial GaAs on Si due to symmetry-breaking biaxial strain. Physical Review Materials, 2019, 3, . | 2.4 | 20 |
| 30 | Imaging surface acoustic wave dynamics in semiconducting polymers by scanning ultrafast electron microscopy. Ultramicroscopy, 2018, 184, 46-50. | 1.9 | 18 |
| 31 | Origins of significant reduction of lattice thermal conductivity in graphene allotropes. Physical Review B, 2019, 100, . | 3.2 | 18 |
| 32 | 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 |
| 33 | Scanning ultrafast electron microscopy: Four-dimensional imaging of materials dynamics in space and time. MRS Bulletin, 2018, 43, 491-496. | 3.5 | 16 |
| 34 | Electric field effect on the thermal conductivity of wurtzite GaN. Applied Physics Letters, 2021, 118, . | 3.3 | 16 |
| 35 | Hydrodynamic Phonon Transport Perpendicular to Diffuse-Gray Boundaries. Nanoscale and Microscale Thermophysical Engineering, 2019, 23, 25-35. | 2.6 | 14 |
| 36 | Photon-Induced Near-Field Electron Microscopy of Eukaryotic Cells. Angewandte Chemie - International Edition, 2017, 56, 11498-11501. | 13.8 | 13 |

| # | ARTICLE | IF | CITATIONS |
|----|--|-----|-----------|
| 37 | Doping molecular organic semiconductors by diffusion from the vapor phase. <i>Materials Chemistry Frontiers</i> , 2020, 4, 3632-3639. | 5.9 | 13 |
| 38 | Figure-of-merit enhancement in nanostructured FeSb_2Ag with AgSb nano-inclusions. <i>Nanotechnology</i> , 2012, 23, 505402. | 2.6 | 12 |
| 39 | Electron-phonon interaction and superconductivity in the high-pressure c16 phase of lithium from first principles. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 27125-27130. | 2.8 | 12 |
| 40 | Ultralow thermal conductivity in a two-dimensional material due to surface-enhanced resonant bonding. <i>Materials Today Physics</i> , 2018, 7, 89-95. | 6.0 | 12 |
| 41 | Probing Surface Photovoltage Effect Using Photoassisted Secondary Electron Emission. <i>Journal of Physical Chemistry A</i> , 2020, 124, 5246-5252. | 2.5 | 12 |
| 42 | Characterizing microscale energy transport in materials with transient grating spectroscopy. <i>Journal of Applied Physics</i> , 2021, 130, . | 2.5 | 11 |
| 43 | Phonon softening near topological phase transitions. <i>Physical Review B</i> , 2020, 102, . | 3.2 | 10 |
| 44 | Combinatorial approach to identify electronically cloaked hollow nanoparticles. <i>Physical Review B</i> , 2014, 90, . | 3.2 | 7 |
| 45 | Spatiotemporal Imaging of Thickness-Induced Band-Bending Junctions. <i>Nano Letters</i> , 2021, 21, 5745-5753. | 9.1 | 6 |
| 46 | Transient Strain-Induced Electronic Structure Modulation in a Semiconducting Polymer Imaged by Scanning Ultrafast Electron Microscopy. <i>Nano Letters</i> , 2021, 21, 9146-9152. | 9.1 | 6 |
| 47 | Scanning ultrafast electron microscopy reveals photovoltage dynamics at a deeply buried SiO_2/Si interface. <i>Physical Review B</i> , 2021, 104, . | 3.2 | 6 |
| 48 | Thermal conductivity in self-assembled $\text{CoFe}_2\text{O}_4/\text{BiFeO}_3$ vertical nanocomposite films. <i>Applied Physics Letters</i> , 2018, 113, . | 3.3 | 5 |
| 49 | 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 |
| 50 | Carrier density oscillation in the photoexcited semiconductor. <i>Journal Physics D: Applied Physics</i> , 2021, 54, 125102. | 2.8 | 2 |
| 51 | Transient grating spectroscopy of photocarrier dynamics in semiconducting polymer thin films. <i>Applied Physics Letters</i> , 2020, 117, . | 3.3 | 2 |
| 52 | Photon-induced Near-Field Electron Microscopy of Eukaryotic Cells. <i>Angewandte Chemie</i> , 2017, 129, 11656-11659. | 2.0 | 0 |
| 53 | Probing the Surface Photovoltage Effect by Imaging Photo-assisted Secondary Electron Emission. <i>Microscopy and Microanalysis</i> , 2020, 26, 1156-1156. | 0.4 | 0 |