

Baile Zhang

List of Publications by Year in descending order

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127
papers

8,074
citations

53660

45
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49773

87
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128
all docs

128
docs citations

128
times ranked

5016
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|---|------|-----------|
| 1 | Topological Acoustics. Physical Review Letters, 2015, 114, 114301. | 2.9 | 963 |
| 2 | Acoustic higher-order topological insulator on a kagome lattice. Nature Materials, 2019, 18, 108-112. | 13.3 | 603 |
| 3 | Terahertz topological photonics for on-chip communication. Nature Photonics, 2020, 14, 446-451. | 15.6 | 449 |
| 4 | Topologically protected refraction of robust kink states in valley photonic crystals. Nature Physics, 2018, 14, 140-144. | 6.5 | 355 |
| 5 | Electrically pumped topological laser with valley edge modes. Nature, 2020, 578, 246-250. | 13.7 | 341 |
| 6 | Ultrathin Three-Dimensional Thermal Cloak. Physical Review Letters, 2014, 112, 054301. | 2.9 | 340 |
| 7 | Realization of a three-dimensional photonic topological insulator. Nature, 2019, 565, 622-626. | 13.7 | 254 |
| 8 | Probing topological protection using a designer surface plasmon structure. Nature Communications, 2016, 7, 11619. | 5.8 | 210 |
| 9 | Performing optical logic operations by a diffractive neural network. Light: Science and Applications, 2020, 9, 59. | 7.7 | 171 |
| 10 | Realization of an Acoustic Third-Order Topological Insulator. Physical Review Letters, 2019, 122, 244301. | 2.9 | 160 |
| 11 | Ab initio study of electronic and optical behavior of two-dimensional silicon carbide. Journal of Materials Chemistry C, 2013, 1, 2131. | 2.7 | 148 |
| 12 | All-angle negative refraction of highly squeezed plasmon and phonon polaritons in graphene-boron nitride heterostructures. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 6717-6721. | 3.3 | 144 |
| 13 | Acoustic non-Hermitian skin effect from twisted winding topology. Nature Communications, 2021, 12, 6297. | 5.8 | 125 |
| 14 | Acoustic Type-II Weyl Nodes from Stacking Dimerized Chains. Physical Review Letters, 2016, 117, 224301. | 2.9 | 119 |
| 15 | Valley surface-wave photonic crystal and its bulk/edge transport. Physical Review B, 2017, 96, . | 1.1 | 119 |
| 16 | Observation of an acoustic octupole topological insulator. Nature Communications, 2020, 11, 2442. | 5.8 | 117 |
| 17 | Spoof Plasmonics: From Metamaterial Concept to Topological Description. Advanced Materials, 2018, 30, e1706683. | 11.1 | 111 |
| 18 | Topologically enhanced harmonic generation in a nonlinear transmission line metamaterial. Nature Communications, 2019, 10, 1102. | 5.8 | 95 |

| # | ARTICLE | IF | CITATIONS |
|----|--|-----|-----------|
| 19 | Circuit implementation of a four-dimensional topological insulator. Nature Communications, 2020, 11, 2356. | 5.8 | 90 |
| 20 | Topological triply degenerate point with double Fermi arcs. Nature Physics, 2019, 15, 645-649. | 6.5 | 89 |
| 21 | Controlling Cherenkov angles with resonance transition radiation. Nature Physics, 2018, 14, 816-821. | 6.5 | 88 |
| 22 | Experimental Observation of Superscattering. Physical Review Letters, 2019, 122, 063901. | 2.9 | 88 |
| 23 | Non-Hermitian route to higher-order topology in an acoustic crystal. Nature Communications, 2021, 12, 1888. | 5.8 | 79 |
| 24 | Splashing transients of 2D plasmons launched by swift electrons. Science Advances, 2017, 3, e1601192. | 4.7 | 69 |
| 25 | Topological Anderson Insulator in Disordered Photonic Crystals. Physical Review Letters, 2020, 125, 133603. | 2.9 | 66 |
| 26 | Multifrequency Superscattering from Subwavelength Hyperbolic Structures. ACS Photonics, 2018, 5, 1506-1511. | 3.2 | 63 |
| 27 | Topological Valley Photonics: Physics and Device Applications. Advanced Photonics Research, 2021, 2, 2100013. | 1.7 | 63 |
| 28 | Engineering Valley Polarization of Monolayer WS_2 : A Physical Doping Approach. Small, 2019, 15, e1805503. | 5.2 | 62 |
| 29 | Valley-Hall Photonic Topological Insulators with Dual-Band Kink States. Advanced Optical Materials, 2019, 7, 1900036. | 3.6 | 61 |
| 30 | Non-Hermitian Dirac Cones. Physical Review Letters, 2020, 124, 236403. | 2.9 | 61 |
| 31 | Observation of a topological nodal surface and its surface-state arcs in an artificial acoustic crystal. Nature Communications, 2019, 10, 5185. | 5.8 | 59 |
| 32 | Broadband surface-wave transformation cloak. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 7635-7638. | 3.3 | 58 |
| 33 | Photonic amorphous topological insulator. Light: Science and Applications, 2020, 9, 133. | 7.7 | 58 |
| 34 | Observation of topological edge states induced solely by non-Hermiticity in an acoustic crystal. Physical Review B, 2020, 101, . | 1.1 | 58 |
| 35 | Valley Kink States and Topological Channel Intersections in Substrate-Integrated Photonic Circuitry. Laser and Photonics Reviews, 2019, 13, 1900159. | 4.4 | 57 |
| 36 | Controlling photonic spin Hall effect via exceptional points. Physical Review B, 2019, 100, . | 1.1 | 55 |

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|----|---|-----|-----------|
| 37 | Superlight inverse Doppler effect. <i>Nature Physics</i> , 2018, 14, 1001-1005. | 6.5 | 54 |
| 38 | Groupâ€Velocityâ€Controlled and Gateâ€Tunable Directional Excitation of Polaritons in Grapheneâ€Boron Nitride Heterostructures. <i>Laser and Photonics Reviews</i> , 2018, 12, 1800049. | 4.4 | 51 |
| 39 | Ideal Unconventional Weyl Point in a Chiral Photonic Metamaterial. <i>Physical Review Letters</i> , 2020, 125, 143001. | 2.9 | 51 |
| 40 | Chiral Plasmons with Twisted Atomic Bilayers. <i>Physical Review Letters</i> , 2020, 125, 077401. | 2.9 | 51 |
| 41 | Observation of an unpaired photonic Dirac point. <i>Nature Communications</i> , 2020, 11, 1873. | 5.8 | 51 |
| 42 | Acoustic valley edge states in a graphene-like resonator system. <i>Journal of Applied Physics</i> , 2018, 123, . | 1.1 | 48 |
| 43 | Observation of Photonic Antichiral Edge States. <i>Physical Review Letters</i> , 2020, 125, 263603. | 2.9 | 47 |
| 44 | Time-periodic corner states from Floquet higher-order topology. <i>Nature Communications</i> , 2022, 13, 11. | 5.8 | 47 |
| 45 | Electrodynamics of transformation-based invisibility cloaking. <i>Light: Science and Applications</i> , 2012, 1, e32-e32. | 7.7 | 46 |
| 46 | Strain-Induced Gauge Field and Landau Levels in Acoustic Structures. <i>Physical Review Letters</i> , 2017, 118, 194301. | 2.9 | 46 |
| 47 | Localized spoof surface plasmons in textured open metal surfaces. <i>Optics Letters</i> , 2016, 41, 2181. | 1.7 | 45 |
| 48 | Observation of Protected Photonic Edge States Induced by Real-Space Topological Lattice Defects. <i>Physical Review Letters</i> , 2020, 124, 243602. | 2.9 | 44 |
| 49 | Topological water wave states in a one-dimensional structure. <i>Scientific Reports</i> , 2016, 6, 29202. | 1.6 | 41 |
| 50 | Dispersion-tunable designer-plasmonic resonator with enhanced high-order resonances. <i>Optics Express</i> , 2015, 23, 6896. | 1.7 | 40 |
| 51 | Ab initio optical study of graphene on hexagonal boron nitride and fluorographene substrates. <i>Journal of Materials Chemistry C</i> , 2013, 1, 1618. | 2.7 | 39 |
| 52 | Transformation-Invariant Metamaterials. <i>Physical Review Letters</i> , 2019, 123, 067701. | 2.9 | 39 |
| 53 | Projectively Enriched Symmetry and Topology in Acoustic Crystals. <i>Physical Review Letters</i> , 2022, 128, 116802. | 2.9 | 39 |
| 54 | Atomically thin nonreciprocal optical isolation. <i>Scientific Reports</i> , 2014, 4, 4190. | 1.6 | 38 |

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|----|---|------|-----------|
| 55 | Enhancing and controlling valley magnetic response in MoS ₂ /WS ₂ heterostructures by all-optical route. <i>Nature Communications</i> , 2019, 10, 4226. | 5.8 | 38 |
| 56 | Invisibility Dips of Near-Field Energy Transport in a Spoof Plasmonic Metadimer. <i>Advanced Functional Materials</i> , 2016, 26, 8307-8312. | 7.8 | 37 |
| 57 | Image reconstruction through a multimode fiber with a simple neural network architecture. <i>Scientific Reports</i> , 2021, 11, 896. | 1.6 | 37 |
| 58 | Vertical transport of subwavelength localized surface electromagnetic modes. <i>Laser and Photonics Reviews</i> , 2015, 9, 571-576. | 4.4 | 36 |
| 59 | Broadband enhancement of on-chip single-photon extraction via tilted hyperbolic metamaterials. <i>Applied Physics Reviews</i> , 2020, 7, 021403. | 5.5 | 36 |
| 60 | Polarization Shaping of Free-Electron Radiation by Gradient Bianisotropic Metasurfaces. <i>Laser and Photonics Reviews</i> , 2021, 15, 2000426. | 4.4 | 36 |
| 61 | Observation of Dislocation-Induced Topological Modes in a Three-Dimensional Acoustic Topological Insulator. <i>Physical Review Letters</i> , 2021, 127, 214301. | 2.9 | 35 |
| 62 | SUPERSCATTERING OF LIGHT IN REFRACTIVE-INDEX NEAR-ZERO ENVIRONMENTS. <i>Progress in Electromagnetics Research</i> , 2020, 168, 15-23. | 1.6 | 34 |
| 63 | Ideal type-II Weyl points in topological circuits. <i>National Science Review</i> , 2021, 8, nwaa192. | 4.6 | 34 |
| 64 | Higher-order Dirac semimetal in a photonic crystal. <i>Physical Review B</i> , 2022, 105, . | 1.1 | 33 |
| 65 | Forward/Backward Switching of Plasmonic Wave Propagation Using Sign-Reversal Coupling. <i>Advanced Materials</i> , 2017, 29, 1700018. | 11.1 | 31 |
| 66 | Vortex states in an acoustic Weyl crystal with a topological lattice defect. <i>Nature Communications</i> , 2021, 12, 3654. | 5.8 | 31 |
| 67 | Broadband Negative Refraction of Highly Squeezed Hyperbolic Polaritons in 2D Materials. <i>Research</i> , 2018, 2018, 2532819. | 2.8 | 31 |
| 68 | Guiding, bending, and splitting of coupled defect surface modes in a surface-wave photonic crystal. <i>Applied Physics Letters</i> , 2016, 108, 041105. | 1.5 | 30 |
| 69 | Complementary structure for designer localized surface plasmons. <i>Applied Physics Letters</i> , 2015, 107, . | 1.5 | 29 |
| 70 | Demonstration of topological wireless power transfer. <i>Science Bulletin</i> , 2021, 66, 974-980. | 4.3 | 29 |
| 71 | Surface Dyakonov-Cherenkov radiation. <i>ELight</i> , 2022, 2, . | 11.9 | 29 |
| 72 | Nonlocality Induced Cherenkov Threshold. <i>Laser and Photonics Reviews</i> , 2020, 14, 2000149. | 4.4 | 27 |

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|----|---|------|-----------|
| 73 | Caustic graphene plasmons with Kelvin angle. <i>Physical Review B</i> , 2015, 92, . | 1.1 | 26 |
| 74 | Design, implementation, and extension of thermal invisibility cloaks. <i>AIP Advances</i> , 2015, 5, . | 0.6 | 25 |
| 75 | Confined transverse electric phonon polaritons in hexagonal boron nitrides. <i>2D Materials</i> , 2018, 5, 015018. | 2.0 | 25 |
| 76 | Topological slow light via coupling chiral edge modes with flatbands. <i>Applied Physics Letters</i> , 2021, 118, . | 1.5 | 25 |
| 77 | Type-I hyperbolic metasurfaces for highly-squeezed designer polaritons with negative group velocity. <i>Nature Communications</i> , 2019, 10, 2002. | 5.8 | 24 |
| 78 | A Brewster route to Cherenkov detectors. <i>Nature Communications</i> , 2021, 12, 5554. | 5.8 | 24 |
| 79 | Topological refraction in dual-band valley sonic crystals. <i>Physical Review B</i> , 2021, 103, . | 1.1 | 23 |
| 80 | Observation of Topological Edge States in Thermal Diffusion. <i>Advanced Materials</i> , 2022, 34, . | 11.1 | 22 |
| 81 | Deep-subwavelength magnetic-coupling-dominant interaction among magnetic localized surface plasmons. <i>Physical Review B</i> , 2016, 93, . | 1.1 | 21 |
| 82 | Optical bistability in a nonlinear-shell-coated metallic nanoparticle. <i>Scientific Reports</i> , 2016, 6, 21741. | 1.6 | 21 |
| 83 | Tunable excitonic emission of monolayer WS ₂ for the optical detection of DNA nucleobases. <i>Nano Research</i> , 2018, 11, 1744-1754. | 5.8 | 20 |
| 84 | Multi-directional plasmonic surface-wave splitters with full bandwidth isolation. <i>Applied Physics Letters</i> , 2016, 108, . | 1.5 | 19 |
| 85 | High-order spoof localized surface plasmons supported on a complementary metallic spiral structure. <i>Scientific Reports</i> , 2016, 6, 24447. | 1.6 | 18 |
| 86 | Topology-Controlled Photonic Cavity Based on the Near-Conservation of the Valley Degree of Freedom. <i>Physical Review Letters</i> , 2020, 125, 213902. | 2.9 | 18 |
| 87 | Fermi-Arc-Induced Vortex Structure in Weyl Beam Shifts. <i>Physical Review Letters</i> , 2019, 122, 066602. | 2.9 | 17 |
| 88 | Toggling Near-Field Directionality via Polarization Control of Surface Waves. <i>Laser and Photonics Reviews</i> , 2021, 15, 2000388. | 4.4 | 17 |
| 89 | Invisibility cloaks from forward design to inverse design. <i>Science China Information Sciences</i> , 2013, 56, 1-11. | 2.7 | 16 |
| 90 | Flexible Photonic Topological Insulator. <i>Advanced Optical Materials</i> , 2018, 6, 1800532. | 3.6 | 16 |

| # | ARTICLE | IF | CITATIONS |
|-----|--|-----|-----------|
| 91 | Aperiodic Metagratings for High-Performance Multifunctional Acoustic Lenses. <i>Advanced Materials Technologies</i> , 2020, 5, 2000542. | 3.0 | 16 |
| 92 | Realization of deep subwavelength resolution with singular media. <i>Scientific Reports</i> , 2015, 4, 5212. | 1.6 | 15 |
| 93 | Frequency-selective propagation of localized spoof surface plasmons in a graded plasmonic resonator chain. <i>Scientific Reports</i> , 2016, 6, 25576. | 1.6 | 15 |
| 94 | Normal Doppler Frequency Shift in Negative Refractive-Index Systems. <i>Laser and Photonics Reviews</i> , 2019, 13, 1900081. | 4.4 | 15 |
| 95 | Confined transverse-electric graphene plasmons in negative refractive-index systems. <i>Npj 2D Materials and Applications</i> , 2020, 4, . | 3.9 | 15 |
| 96 | Interferenceless Polarization Splitting Through Nanoscale van der Waals Heterostructures. <i>Physical Review Applied</i> , 2018, 10, . | 1.5 | 14 |
| 97 | Demonstration of negative refraction induced by synthetic gauge fields. <i>Science Advances</i> , 2021, 7, eabj2062. | 4.7 | 13 |
| 98 | Realizing type-II Weyl points in an optical lattice. <i>Physical Review B</i> , 2017, 95, . | 1.1 | 12 |
| 99 | Antichiral edge states in an acoustic resonator lattice with staggered air flow. <i>Journal of Applied Physics</i> , 2021, 129, . | 1.1 | 11 |
| 100 | Non-Hermitian topological systems with eigenvalues that are always real. <i>Physical Review B</i> , 2022, 105, . | 1.1 | 11 |
| 101 | Electromagnetic Detection of a Perfect Carpet Cloak. <i>Scientific Reports</i> , 2015, 5, 10401. | 1.6 | 10 |
| 102 | Directing Cherenkov photons with spatial nonlocality. <i>Nanophotonics</i> , 2020, 9, 3435-3442. | 2.9 | 10 |
| 103 | Three-dimensional photonic topological insulator without spin-orbit coupling. <i>Nature Communications</i> , 2022, 13, . | 5.8 | 9 |
| 104 | Amplification of quantum signals by the non-Hermitian skin effect. <i>Physical Review B</i> , 2022, 106, . | 1.1 | 9 |
| 105 | A metamaterial-free fluid-flow cloak. <i>National Science Review</i> , 2022, 9, . | 4.6 | 8 |
| 106 | Spin Momentum-Locked Surface States in Metamaterials without Topological Transition. <i>Laser and Photonics Reviews</i> , 2018, 12, 1800002. | 4.4 | 7 |
| 107 | Giant Enhancement of Unconventional Photon Blockade in a Dimer Chain. <i>Physical Review Letters</i> , 2021, 127, 240402. | 2.9 | 7 |
| 108 | Topological phase transition induced by gain and loss in a photonic Chern insulator. <i>Physical Review A</i> , 2022, 105, . | 1.0 | 7 |

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| 109 | Negative refraction of ultra-squeezed in-plane hyperbolic designer polaritons. <i>Photonics Research</i> , 2021, 9, 1540. | 3.4 | 5 |
| 110 | Phase-preserved macroscopic visible light carpet cloaking beyond two dimensions. <i>Laser and Photonics Reviews</i> , 2015, 9, 399-404. | 4.4 | 4 |
| 111 | A conformal transformation approach to wide-angle illusion device and absorber. <i>Nanophotonics</i> , 2020, 9, 3243-3249. | 2.9 | 4 |
| 112 | Subwavelength wave manipulation in a thin surface-wave bandgap crystal. <i>Optics Letters</i> , 2018, 43, 50. | 1.7 | 3 |
| 113 | Metamaterials: Giant Asymmetric Radiation from an Ultrathin Bianisotropic Metamaterial (<i>Adv. Sci.</i>) Tj ETQq1 1 0.784314 rgBT /Overlo | 5.6 | 3 |
| 114 | Deterministic and Scalable Generation of Exciton Emitters in 2D Semiconductor Nanodisks. <i>Advanced Optical Materials</i> , 2022, 10, . | 3.6 | 3 |
| 115 | Waveguide design and application with transformation optics. <i>Science China Information Sciences</i> , 2013, 56, 1-11. | 2.7 | 2 |
| 116 | Experimental demonstration of broadband reflectionless diffraction-free electromagnetic wave routing. <i>Physical Review B</i> , 2016, 94, . | 1.1 | 2 |
| 117 | Resolution criteria in double-slit microscopic imaging experiments. <i>Scientific Reports</i> , 2016, 6, 33764. | 1.6 | 2 |
| 118 | Experimental demonstration of Fabry-Perot open resonators in a surface-wave bandgap crystal. <i>Applied Physics Letters</i> , 2017, 111, . | 1.5 | 2 |
| 119 | Audible Landau levels. <i>Nature Physics</i> , 2019, 15, 307-308. | 6.5 | 2 |
| 120 | Mode-selective single-dipole excitation and controlled routing of guided waves in a multi-mode topological waveguide. <i>Applied Physics Letters</i> , 2022, 120, . | 1.5 | 2 |
| 121 | Transformation cloaks for surface electromagnetic waves. , 2015, , . | | 1 |
| 122 | Implementation of the GRIN solid immersion lens. , 2012, , . | | 0 |
| 123 | Large scale cylindrical cloak in free space without superluminal propagation. , 2012, , . | | 0 |
| 124 | Translation and Rotation of Transformation Media under Electromagnetic Pulse. <i>Scientific Reports</i> , 2016, 6, 28346. | 1.6 | 0 |
| 125 | Revisit Cherenkov Radiation in the Hyperbolic Metamaterials. , 2019, , . | | 0 |
| 126 | Non-Hermitian and time-modulated topological sound. , 2021, , . | | 0 |

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|-----|---|----|-----------|
| 127 | Some topological phases for sound. , 2018, , 25-48. | | 0 |