

Bin Liang

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

88

papers

4,464

citations

32

h-index

66

g-index

94

ext. papers

5,357

ext. citations

5.2

avg, IF

5.83

L-index

#	Paper	IF	Citations
88	Machine learning-assisted low-frequency and broadband sound absorber with coherently coupled weak resonances. <i>Applied Physics Letters</i> , 2022 , 120, 033501	3.4	1
87	Twisting Linear to Orbital Angular Momentum in an Ultrasonic Motor.. <i>Advanced Materials</i> , 2022 , e2201575	17.5	0
86	Efficient nonreciprocal mode transitions in spatiotemporally modulated acoustic metamaterials. <i>Science Advances</i> , 2021 , 7, eabj1198	14.3	6
85	Compact acoustic monolayered metadecoder for efficient and flexible orbital angular momentum demultiplexing. <i>Applied Physics Letters</i> , 2021 , 119, 213502	3.4	3
84	Machine-Learning-Assisted Acoustic Consecutive Fano Resonances: Application to a Tunable Broadband Low-Frequency Metasilencer. <i>Physical Review Applied</i> , 2021 , 16,	4.3	3
83	Tunable low-frequency and broadband acoustic metamaterial absorber. <i>Journal of Applied Physics</i> , 2021 , 129, 094502	2.5	10
82	Tunable asymmetric acoustic transmission via binary metasurface and zero-index metamaterials. <i>Applied Physics Letters</i> , 2021 , 118, 113501	3.4	5
81	Experimental demonstration of a three-dimensional acoustic hyperlens for super-resolution imaging. <i>Applied Physics Letters</i> , 2021 , 118, 203504	3.4	3
80	Focusing a Two-Dimensional Acoustic Vortex Beyond Diffraction Limit on an Ultrathin Structured Surface. <i>Physical Review Applied</i> , 2021 , 15,	4.3	3
79	Experimental demonstration of a three-dimensional omnidirectional and broadband acoustic concentrator using an anisotropic metamaterial. <i>Science China: Physics, Mechanics and Astronomy</i> , 2021 , 64, 1	3.6	6
78	Acoustic skin meta-muffler. <i>Science China: Physics, Mechanics and Astronomy</i> , 2021 , 64, 1	3.6	4
77	Meta-neural-network for real-time and passive deep-learning-based object recognition. <i>Nature Communications</i> , 2020 , 11, 6309	17.4	23
76	Generation of Non-aliased Two-dimensional Acoustic Vortex with Enclosed Metasurface. <i>Scientific Reports</i> , 2020 , 10, 3827	4.9	6
75	Broadband thin sound absorber based on hybrid labyrinthine metastructures with optimally designed parameters. <i>Scientific Reports</i> , 2020 , 10, 10705	4.9	5
74	Wavelength-dependent multi-functional wavefront manipulation for reflected acoustic waves. <i>Applied Physics Express</i> , 2020 , 13, 094003	2.4	2
73	Tunable annular acoustic metasurface for transmitted wavefront modulation. <i>Applied Physics Express</i> , 2020 , 13, 014002	2.4	5
72	Inverse design of acoustic metamaterials based on machine learning using a GaussBayesian model. <i>Journal of Applied Physics</i> , 2020 , 128, 134902	2.5	13

71	A new mechanism of waves-matter interaction. <i>Science China: Physics, Mechanics and Astronomy</i> , 2020 , 63, 1	3.6	
70	Two-way collinear mixing of a longitudinal and a transverse plane wave in materials with cubic nonlinearity. <i>Waves in Random and Complex Media</i> , 2020 , 1-20	1.9	1
69	Topological Interface States in the Low-Frequency Band Gap of One-Dimensional Phononic Crystals. <i>Physical Review Applied</i> , 2020 , 14,	4.3	6
68	An ultrathin planar acoustic metasurface diffuser with narrowband uniform reflection. <i>AIP Advances</i> , 2020 , 10, 085122	1.5	1
67	Topology-Optimized Omnidirectional Broadband Acoustic Ventilation Barrier. <i>Physical Review Applied</i> , 2020 , 14,	4.3	11
66	High-efficiency collimation of airborne sound through a single deep-subwavelength aperture in an ultra-thin planar plate. <i>Applied Physics Express</i> , 2019 , 12, 027002	2.4	1
65	Voltage-controlled membrane-type active acoustic metasurfaces with ultrathin thickness. <i>Applied Physics Express</i> , 2019 , 12, 064501	2.4	9
64	Ultrathin Planar Metasurface-based Acoustic Energy Harvester with Deep Subwavelength Thickness and Mechanical Rigidity. <i>Scientific Reports</i> , 2019 , 9, 11152	4.9	16
63	Ultrathin Acoustic Parity-Time Symmetric Metasurface Cloak. <i>Research</i> , 2019 , 2019, 8345683	7.8	21
62	Illusion for Airborne Sound Source by a Closed Layer with Subwavelength Thickness. <i>Scientific Reports</i> , 2019 , 9, 1750	4.9	8
61	Experimental Demonstration of Acoustic Chern Insulators. <i>Physical Review Letters</i> , 2019 , 122, 014302	7.4	113
60	Fine manipulation of sound via lossy metamaterials with independent and arbitrary reflection amplitude and phase. <i>Nature Communications</i> , 2018 , 9, 1632	17.4	101
59	Twisted Acoustics: Metasurface-Enabled Multiplexing and Demultiplexing. <i>Advanced Materials</i> , 2018 , 30, e1800257	24	84
58	Converting a Monopole Emission into a Dipole Using a Subwavelength Structure. <i>Physical Review Applied</i> , 2018 , 9,	4.3	10
57	Acoustic planar antireflective focusing lens with sub-diffraction-limit resolution based on metamaterials. <i>Journal of Applied Physics</i> , 2018 , 123, 091717	2.5	9
56	Wavefront manipulation by acoustic metasurfaces: from physics and applications. <i>Nanophotonics</i> , 2018 , 7, 1191-1205	6.3	24
55	Acoustic metasurfaces. <i>Nature Reviews Materials</i> , 2018 , 3, 460-472	73.3	290
54	Broadband compact acoustic absorber with high-efficiency ventilation performance. <i>Applied Physics Letters</i> , 2018 , 113, 103501	3.4	35

53	One-way Acoustic Beam Splitter. <i>Scientific Reports</i> , 2018 , 8, 13573	4.9	4
52	Broadband transmission-type coding metamaterial for wavefront manipulation for airborne sound. <i>Applied Physics Express</i> , 2018 , 11, 077301	2.4	13
51	Omnidirectional broadband acoustic deflector based on metamaterials. <i>Applied Physics Express</i> , 2017 , 10, 027201	2.4	7
50	Non-blind acoustic invisibility by dual layers of homogeneous single-negative media. <i>Scientific Reports</i> , 2017 , 7, 42533	4.9	12
49	Acoustic broadband metacouplers. <i>Applied Physics Letters</i> , 2017 , 110, 203504	3.4	14
48	Sound Insulation in a Hollow Pipe with Subwavelength Thickness. <i>Scientific Reports</i> , 2017 , 7, 44106	4.9	18
47	Ultra-broadband and planar sound diffuser with high uniformity of reflected intensity. <i>Applied Physics Letters</i> , 2017 , 111, 103502	3.4	12
46	Omnidirectional ventilated acoustic barrier. <i>Applied Physics Letters</i> , 2017 , 111, 203502	3.4	50
45	Ultrathin Acoustic Metasurface-Based Schroeder Diffuser. <i>Physical Review X</i> , 2017 , 7,	9.1	69
44	A broadband low-reflection bending waveguide for airborne sound. <i>Applied Physics Letters</i> , 2017 , 110, 253502	3.4	7
43	Deep-Subwavelength-Scale Directional Sensing Based on Highly Localized Dipolar Mie Resonances. <i>Physical Review Applied</i> , 2016 , 5,	4.3	41
42	Convert Acoustic Resonances to Orbital Angular Momentum. <i>Physical Review Letters</i> , 2016 , 117, 034301	7.4	183
41	Acoustic one-way metasurfaces: Asymmetric Phase Modulation of Sound by Subwavelength Layer. <i>Scientific Reports</i> , 2016 , 6, 28023	4.9	56
40	Three-dimensional broadband acoustic illusion cloak for sound-hard boundaries of curved geometry. <i>Scientific Reports</i> , 2016 , 6, 36936	4.9	14
39	Broadband non-reciprocal transmission of sound with invariant frequency. <i>Scientific Reports</i> , 2016 , 6, 19824	4.9	43
38	Acoustic focusing by symmetrical self-bending beams with phase modulations. <i>Applied Physics Letters</i> , 2016 , 108, 073501	3.4	41
37	Broadband and stable acoustic vortex emitter with multi-arm coiling slits. <i>Applied Physics Letters</i> , 2016 , 108, 203501	3.4	75
36	Broadband convergence of acoustic energy with binary reflected phases on planar surface. <i>Applied Physics Letters</i> , 2016 , 109, 243501	3.4	32

35	Three-dimensional ultra-broadband focusing flat mirror for airborne sound. <i>Applied Physics Letters</i> , 2016 , 109, 153501	3.4	12
34	Multi-frequency acoustic metasurface for extraordinary reflection and sound focusing. <i>AIP Advances</i> , 2016 , 6, 121702	1.5	28
33	Cloaking an acoustic sensor with single-negative materials. <i>Annals of Physics</i> , 2015 , 358, 83-91	2.5	2
32	Experimental realization of broadband acoustic omnidirectional absorber by homogeneous anisotropic metamaterials. <i>Journal of Applied Physics</i> , 2015 , 117, 074502	2.5	22
31	Acoustic one-way open tunnel by using metasurface. <i>Applied Physics Letters</i> , 2015 , 107, 113501	3.4	83
30	Radiation directivity rotation by acoustic metamaterials. <i>Applied Physics Letters</i> , 2015 , 107, 093506	3.4	7
29	Broadband Acoustic Cloaking within an Arbitrary Hard Cavity. <i>Physical Review Applied</i> , 2015 , 3,	4.3	27
28	Metascreen-Based Acoustic Passive Phased Array. <i>Physical Review Applied</i> , 2015 , 4,	4.3	227
27	One-way acoustic mirror based on anisotropic zero-index media. <i>Applied Physics Letters</i> , 2015 , 107, 213503	3.4	17
26	Dispersionless Manipulation of Reflected Acoustic Wavefront by Subwavelength Corrugated Surface. <i>Scientific Reports</i> , 2015 , 5, 10966	4.9	98
25	Controlling an acoustic wave with a cylindrically-symmetric gradient-index system. <i>Chinese Physics B</i> , 2015 , 24, 024301	1.2	1
24	Three-dimensional ultrathin planar lenses by acoustic metamaterials. <i>Scientific Reports</i> , 2014 , 4, 6830	4.9	110
23	Broadband field rotator based on acoustic metamaterials. <i>Applied Physics Letters</i> , 2014 , 104, 083510	3.4	35
22	Ultra-broadband absorption by acoustic metamaterials. <i>Applied Physics Letters</i> , 2014 , 105, 243505	3.4	96
21	Experimental Realization of Full Control of Reflected Waves with Subwavelength Acoustic Metasurfaces. <i>Physical Review Applied</i> , 2014 , 2,	4.3	284
20	Unidirectional acoustic transmission through a prism with near-zero refractive index. <i>Applied Physics Letters</i> , 2013 , 103, 053505	3.4	134
19	Reflected wavefront manipulation based on ultrathin planar acoustic metasurfaces. <i>Scientific Reports</i> , 2013 , 3, 2546	4.9	364
18	Acoustic illusion near boundaries of arbitrary curved geometry. <i>Scientific Reports</i> , 2013 , 3, 1427	4.9	42

17	Acoustic one-way frequency up-converter with high transmission efficiency. <i>Journal of Applied Physics</i> , 2013 , 114, 134508	2.5	15
16	Controllable acoustic rectification in one-dimensional piezoelectric composite plates. <i>Journal of Applied Physics</i> , 2013 , 114, 164504	2.5	15
15	Extraordinary acoustic transmission through ultrathin acoustic metamaterials by coiling up space. <i>Applied Physics Letters</i> , 2013 , 103, 063509	3.4	99
14	Broadband asymmetric acoustic transmission in a gradient-index structure. <i>Applied Physics Letters</i> , 2012 , 101, 263502	3.4	66
13	Scattering reduction for an acoustic sensor using a multilayered shell comprising a pair of homogeneous isotropic single-negative media. <i>Applied Physics Letters</i> , 2012 , 101, 033509	3.4	19
12	Concealing a Passive Sensing System with Single-Negative Layers. <i>Chinese Physics Letters</i> , 2012 , 29, 014108		6
11	Broadband directional acoustic waveguide with high efficiency. <i>Applied Physics Letters</i> , 2012 , 101, 043503	3.4	63
10	Acoustic focusing by coiling up space. <i>Applied Physics Letters</i> , 2012 , 101, 233508	3.4	232
9	A broadband acoustic omnidirectional absorber comprising positive-index materials. <i>Applied Physics Letters</i> , 2011 , 99, 193507	3.4	67
8	Acoustic cloaking by a superlens with single-negative materials. <i>Physical Review Letters</i> , 2011 , 106, 014301	3.4	148
7	Acoustic band pinning in the phononic crystal plates of anti-symmetric structure. <i>Chinese Physics B</i> , 2011 , 20, 116301	1.2	9
6	One-way mode transmission in one-dimensional phononic crystal plates. <i>Journal of Applied Physics</i> , 2010 , 108, 124909	2.5	91
5	Frequency-dependence of the acoustic rectifying efficiency of an acoustic diode model. <i>Applied Physics Letters</i> , 2010 , 96, 233511	3.4	53
4	Acoustic diode: rectification of acoustic energy flux in one-dimensional systems. <i>Physical Review Letters</i> , 2009 , 103, 104301	7.4	426
3	Effective medium method for sound propagation in a soft medium containing air bubbles. <i>Journal of the Acoustical Society of America</i> , 2008 , 124, 1419-29	2.2	14
2	Acoustic localization in weakly compressible elastic media containing random air bubbles. <i>Physical Review E</i> , 2007 , 75, 016605	2.4	16
1	Effective medium method of slightly compressible elastic media permeated with air-filled bubbles. <i>Frontiers of Physics in China</i> , 2006 , 1, 500-505		2