

# Yun Lai

## List of Publications by Year in descending order

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Version: 2024-02-01

122  
papers

5,592  
citations

109321

35  
h-index

82547

72  
g-index

122  
all docs

122  
docs citations

122  
times ranked

3336  
citing authors

#	ARTICLE	IF	CITATIONS
1	Nesting and degeneracy of Mie resonances of dielectric cavities within zero-index materials. Journal of Optics (United Kingdom), 2022, 24, 025401.	2.2	4
2	Hermitian and Non-Hermitian Dirac-Like Cones in Photonic and Phononic Structures. Frontiers in Physics, 2022, 10, .	2.1	14
3	Ultracompact Photonic Circuits without Cladding Layers. Physical Review X, 2022, 12, .	8.9	8
4	Realization of broadband coherent perfect absorption of spoof surface plasmon polaritons. Applied Physics Letters, 2022, 120, .	3.3	7
5	Flip-component metasurfaces for camouflaged meta-domes. Optics Express, 2022, 30, 17321.	3.4	4
6	Ultra-wideband Luneburg lens with high performance based on gradient metamaterials. Journal Physics D: Applied Physics, 2022, 55, 355109.	2.8	8
7	Through-Wall Wireless Communication Enabled by a Metalens. Physical Review Applied, 2022, 17, .	3.8	12
8	Low-frequency and broadband muffler via cascaded labyrinthine metasurfaces. Applied Physics Letters, 2022, 120, .	3.3	14
9	Acoustic three-terminal controller with amplitude control for nonlinear seismic metamaterials. AIP Advances, 2022, 12, 075312.	1.3	0
10	Pseudo-Non-Hermitian Systems Constructed by Transformation Optics with Robustly Balanced Loss and Gain. Advanced Photonics Research, 2021, 2, 2000081.	3.6	13
11	Modified Luneburg Lens for Achromatic Subdiffraction Focusing and Directional Emission. IEEE Transactions on Antennas and Propagation, 2021, 69, 7930-7934.	5.1	8
12	Polycrystalline Few-Layer Graphene as a Durable Anticorrosion Film for Copper. Nano Letters, 2021, 21, 1161-1168.	9.1	39
13	Pseudo-Non-Hermitian Systems Constructed by Transformation Optics with Robustly Balanced Loss and Gain. Advanced Photonics Research, 2021, 2, 2170005.	3.6	0
14	Ultrabroadband compact lens antenna with high performance based on a transmission gradient index medium. Journal Physics D: Applied Physics, 2021, 54, 175101.	2.8	5
15	Transforming zero-index media into geometry-invariant coherent perfect absorbers via embedded conductive films. Optics Express, 2021, 29, 5247.	3.4	13
16	Conformally Mapped Mikaelian Lens for Broadband Achromatic High Resolution Focusing. Laser and Photonics Reviews, 2021, 15, 2000564.	8.7	13
17	Ventilative meta-window with broadband low-frequency acoustic insulation. Journal of Applied Physics, 2021, 129, .	2.5	13
18	Deep-learning-enabled inverse engineering of multi-wavelength invisibility-to-superscattering switching with phase-change materials. Optics Express, 2021, 29, 10527.	3.4	18

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19	Non-Hermitian effective medium theory and complex Dirac-like cones. <i>Optics Express</i> , 2021, 29, 14345.	3.4	10
20	Ultra-broadband reflectionless Brewster absorber protected by reciprocity. <i>Light: Science and Applications</i> , 2021, 10, 89.	16.6	43
21	Parity-Time Symmetric Optoelectronic Oscillator Based on an Integrated Mode-Locked Laser. <i>IEEE Journal of Quantum Electronics</i> , 2021, 57, 1-9.	1.9	10
22	Band engineering method to create Dirac cones of accidental degeneracy in general photonic crystals without symmetry. <i>Optics Express</i> , 2021, 29, 18070.	3.4	10
23	Highly Efficient Gradient Solid Immersion Lens with Large Numerical Aperture for Broadband Achromatic Deep Subwavelength Focusing and Magnified Far Field. <i>Advanced Optical Materials</i> , 2021, 9, 2100509.	7.3	3
24	Invisible surfaces enabled by the coalescence of anti-reflection and wavefront controllability in ultrathin metasurfaces. <i>Nature Communications</i> , 2021, 12, 4523.	12.8	34
25	Three-Dimensional Soundproof Acoustic Metacage. <i>Physical Review Letters</i> , 2021, 127, 084301.	7.8	41
26	Flat distorting mirrors via metasurfaces. <i>Optics Letters</i> , 2021, 46, 4738.	3.3	1
27	Three-Dimensional Electromagnetic Void Space. <i>Physical Review Letters</i> , 2021, 127, 123902.	7.8	20
28	Diffuse reflection and reciprocity-protected transmission via a random-flip metasurface. <i>Science Advances</i> , 2021, 7, eabj0935.	10.3	41
29	Wave Steering by Relaying Interface States in a Valley-Hall-Derived Photonic Superlattice. <i>Physical Review Applied</i> , 2021, 16, .	3.8	4
30	Broadband Bidirectional and Multi-Channel Unidirectional Acoustic Insulation by Mode-Conversion Phased Units. <i>Frontiers in Materials</i> , 2021, 8, .	2.4	2
31	Optical Brewster Metasurfaces Exhibiting Ultrabroadband Reflectionless Absorption and Extreme Angular Asymmetry. <i>Physical Review Applied</i> , 2021, 16, .	3.8	19
32	A panel acoustic energy harvester based on the integration of acoustic metasurface and Helmholtz resonator. <i>Applied Physics Letters</i> , 2021, 119, .	3.3	6
33	Wide-Angle Broadband Nonreflecting Acoustic Metamaterial Fence. <i>Physical Review Applied</i> , 2020, 13, .	3.8	11
34	Twisted Quadrupole Topological Photonic Crystals. <i>Laser and Photonics Reviews</i> , 2020, 14, 2000010.	8.7	42
35	Bidirectional acoustic negative refraction based on a pair of metasurfaces with both local and global PT-symmetries. <i>Scientific Reports</i> , 2020, 10, 10794.	3.3	13
36	Observation of wide-angle impedance matching in terahertz photonic crystals. <i>New Journal of Physics</i> , 2020, 22, 023033.	2.9	15

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37	Three-Dimensional Acoustic Double-Zero-Index Medium with a Fourfold Degenerate Dirac-like Point. <i>Physical Review Letters</i> , 2020, 124, 074501.	7.8	51
38	Perfect absorbers based on dielectric optical mirrors and ultrathin absorptive films. <i>Applied Physics Express</i> , 2020, 13, 032001.	2.4	3
39	Theory and experimental observation of hyperbolic media based on structural dispersions. <i>Physical Review Materials</i> , 2020, 4, .	2.4	9
40	Bendable disordered metamaterials for broadband terahertz invisibility. <i>Optics Express</i> , 2020, 28, 3552.	3.4	7
41	Numerical design of frequency-split Weyl points in Weyl metamaterial. <i>Wuli Xuebao/Acta Physica Sinica</i> , 2020, 69, 154204.	0.5	1
42	Pseudo-local effect medium theory. <i>Wuli Xuebao/Acta Physica Sinica</i> , 2020, 69, 154203.	0.5	0
43	Near-perfect absorption by photonic crystals with a broadband and omnidirectional impedance-matching property. <i>Optics Express</i> , 2019, 27, 15800.	3.4	26
44	Beam splitting and unidirectional cloaking using anisotropic zero-index photonic crystals. <i>Applied Physics Letters</i> , 2019, 114, .	3.3	19
45	Switchable omnidirectional acoustic insulation through open window structures with ultrathin metasurfaces. <i>Physical Review Materials</i> , 2019, 3, .	2.4	37
46	Extremely anisotropic epsilon-near-zero media in waveguide metamaterials. <i>Optics Express</i> , 2019, 27, 19463.	3.4	20
47	Enhanced absorption of CVD grown molybdenum disulfide monolayers via surface plasmon resonance with silver nano-triangles. <i>OSA Continuum</i> , 2019, 2, 1401.	1.8	1
48	Topological transitions in continuously deformed photonic crystals. <i>Physical Review B</i> , 2018, 97, .	3.2	70
49	Hybrid Solar Absorber-Emitter by Coherence-Enhanced Absorption for Improved Solar Thermophotovoltaic Conversion. <i>Advanced Optical Materials</i> , 2018, 6, 1800813.	7.3	33
50	Controlling the effective bending stiffness via out-of-plane rotational resonances in elastic metamaterial thin plates. <i>New Journal of Physics</i> , 2018, 20, 103043.	2.9	15
51	Photonic-doped Zero-index Media as Coherent Perfect Absorbers. , 2018, , .		1
52	A meta-prism for high-efficiency coupling between free space and optical waveguides with different angular momentums. <i>Europhysics Letters</i> , 2018, 123, 38001.	2.0	0
53	Roadmap on transformation optics. <i>Journal of Optics (United Kingdom)</i> , 2018, 20, 063001.	2.2	64
54	Topological node lines in mechanical metacrystals. <i>Physical Review B</i> , 2018, 97, .	3.2	16

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55	Electromagnetic Impurity-Immunity Induced by Parity-Time Symmetry. <i>Physical Review X</i> , 2018, 8, .	8.9	41
56	A hybrid invisibility cloak based on integration of transparent metasurfaces and zero-index materials. <i>Light: Science and Applications</i> , 2018, 7, 50.	16.6	156
57	Side scattering shadow and energy concentration effects of epsilon-near-zero media. <i>Optics Letters</i> , 2018, 43, 1738.	3.3	5
58	Coherent Perfect Absorption via Photonic Doping of Zero-Index Media. <i>Laser and Photonics Reviews</i> , 2018, 12, 1800001.	8.7	51
59	Broadband unidirectional and omnidirectional bidirectional acoustic insulation through an open window structure with a metasurface of ultrathin hooklike meta-atoms. <i>Applied Physics Letters</i> , 2018, 112, .	3.3	38
60	Acoustic metamaterials with broadband and wide-angle impedance matching. <i>Physical Review Materials</i> , 2018, 2, .	2.4	36
61	Efficiency-improved silicon thermo-optic switches with deep trenches. , 2018, , .		0
62	Configurable Dirac-like conical dispersions in complex photonic crystals. <i>Physical Review B</i> , 2017, 95, .	3.2	10
63	A Metacoupler for Converting Propagating Waves to Guided Waves in Wire Waveguides. <i>IEEE Photonics Journal</i> , 2017, 9, 1-7.	2.0	2
64	Illusion optics via one-dimensional ultratransparent photonic crystals with shifted spatial dispersions. <i>Optics Express</i> , 2017, 25, 30931.	3.4	15
65	Photonic crystals with broadband, wide-angle, and polarization-insensitive transparency. <i>Optics Letters</i> , 2016, 41, 5106.	3.3	31
66	Elastic metamaterial beam with remotely tunable stiffness. <i>Journal of Applied Physics</i> , 2016, 119, .	2.5	18
67	Simultaneous realization of a coherent perfect absorber and laser by zero-index media with both gain and loss. <i>Physical Review A</i> , 2016, 94, .	2.5	51
68	Sound-impenetrable holes in water based on acoustic complementary medium. <i>Europhysics Letters</i> , 2016, 115, 58002.	2.0	10
69	Ultratransparent Media and Transformation Optics with Shifted Spatial Dispersions. <i>Physical Review Letters</i> , 2016, 117, 223901.	7.8	63
70	Loss/gain-induced ultrathin antireflection coatings. <i>Scientific Reports</i> , 2016, 6, 28681.	3.3	9
71	Polarization bandgaps and fluid-like elasticity in fully solid elastic metamaterials. <i>Nature Communications</i> , 2016, 7, 13536.	12.8	96
72	Multi-channel coherent perfect absorbers. <i>Europhysics Letters</i> , 2016, 114, 28003.	2.0	16

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73	Angular selection of incident waves by photonic crystals with position-varying Dirac points at the Brillouin zone boundary. <i>Physical Review B</i> , 2016, 93, .	3.2	17
74	Efficient way to convert propagating waves into guided waves via gradient wire structures. <i>Optics Letters</i> , 2016, 41, 3551.	3.3	5
75	Design of full-k-space flat bands in photonic crystals beyond the tight-binding picture. <i>Scientific Reports</i> , 2015, 5, 18181.	3.3	25
76	Unusual percolation threshold of electromagnetic waves in double-zero medium embedded with random inclusions. <i>Laser and Photonics Reviews</i> , 2015, 9, 523-529.	8.7	31
77	The Applications of Metamaterials. <i>International Journal of Antennas and Propagation</i> , 2015, 2015, 1-2.	1.2	1
78	Omnidirectional impedance matching induced by spatial dispersions. , 2015, , .		0
79	Theoretical requirements for broadband perfect absorption of acoustic waves by ultra-thin elastic meta-films. <i>Scientific Reports</i> , 2015, 5, 12139.	3.3	62
80	Broadband perfect absorption of ultrathin conductive films with coherent illumination: Superabsorption of microwave radiation. <i>Physical Review B</i> , 2015, 91, .	3.2	84
81	Acoustic coherent perfect absorbers. <i>New Journal of Physics</i> , 2014, 16, 033026.	2.9	75
82	Equivalent perfect magnetic conductor based on epsilon-near-zero media. <i>Applied Physics Letters</i> , 2014, 104, .	3.3	28
83	Unified theory for perfect absorption in ultrathin absorptive films with constant tangential electric or magnetic fields. <i>Physical Review B</i> , 2014, 90, .	3.2	45
84	Arbitrary Control of Electromagnetic Flux in Inhomogeneous Anisotropic Media with Near-Zero Index. <i>Physical Review Letters</i> , 2014, 112, 073903.	7.8	84
85	Electromagnetic characteristics of Hilbert curve-based metamaterials. <i>Applied Physics A: Materials Science and Processing</i> , 2014, 117, 445-450.	2.3	10
86	An equivalent realization of coherent perfect absorption under single beam illumination. <i>Scientific Reports</i> , 2014, 4, 7369.	3.3	44
87	Anisotropic zero-index waveguide with arbitrary shapes. <i>Scientific Reports</i> , 2014, 4, 5875.	3.3	43
88	Creating Illusion Effects Using Transformation Optics. , 2014, , 139-165.		0
89	Broadband asymmetric waveguiding of light without polarization limitations. <i>Nature Communications</i> , 2013, 4, 2561.	12.8	100
90	Epsilon-near-zero or mu-near-zero materials composed of dielectric photonic crystals. <i>Science China Information Sciences</i> , 2013, 56, 1-10.	4.3	6

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91	Nonlocality-Induced Negative Refraction and Subwavelength Imaging by Parabolic Dispersions in Metal-Dielectric Multilayered Structures with Effective Zero Permittivity. Plasmonics, 2013, 8, 1095-1099.	3.4	13
92	Oblique total transmissions through epsilon-near-zero metamaterials with hyperbolic dispersions. Europhysics Letters, 2013, 101, 44001.	2.0	11
93	Hiding objects and obtaining Fano resonances in index-near-zero and epsilon-near-zero metamaterials with Bragg-fiber-like defects. Journal of the Optical Society of America B: Optical Physics, 2013, 30, 1878.	2.1	16
94	Experimental realization of a broadband conformal mapping lens for directional emission. Applied Physics Letters, 2012, 100, 261907.	3.3	21
95	Flux control in inhomogeneous anisotropic epsilon-near-zero metamaterials. , 2012, , .		0
96	Realizing almost perfect bending waveguides with anisotropic epsilon-near-zero metamaterials. Applied Physics Letters, 2012, 100, .	3.3	117
97	Applying effective medium theory in characterizing dielectric constant of solids. , 2012, , .		0
98	An inside-out Eaton lens made of H-fractal metamaterials. Applied Physics Letters, 2012, 101, .	3.3	18
99	APPLYING EFFECTIVE MEDIUM THEORY IN CHARACTERIZING DIELECTRIC CONSTANT OF SOLIDS. Progress in Electromagnetics Research Letters, 2012, 35, 145-153.	0.7	7
100	Manipulate the Transmissions Using Index-Near-Zero or Epsilon-Near-Zero Metamaterials with Coated Defects. Plasmonics, 2012, 7, 353-358.	3.4	48
101	Hybrid elastic solids. Nature Materials, 2011, 10, 620-624.	27.5	386
102	Manipulating sources using transformation optics with "folded geometry"™. Journal of Optics (United Kingdom), 2011, 17, 022001.	2.2	17
103	Elastic Metamaterials with Simultaneously Negative Effective Shear Modulus and Mass Density. Physical Review Letters, 2011, 107, 105506.	7.8	292
104	Dirac cones induced by accidental degeneracy in photonic crystals and zero-refractive-index materials. Nature Materials, 2011, 10, 582-586.	27.5	815
105	Dirac cones at the Brillouin zone center in phononic crystals. Physical Review B, 2011, 84, .	3.2	84
106	Metamaterial slab as a lens, a cloak, or an intermediate. Physical Review B, 2011, 83, .	3.2	25
107	Dirac cone and double zero materials. , 2011, , .		0
108	Illusion optics. Frontiers of Physics in China, 2010, 5, 308-318.	1.0	20

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109	Using metamaterials to create illusion and related subtle optical effects. , 2010, , .		0
110	General transformation for the reduced invisibility cloak. Physical Review B, 2009, 80, .	3.2	11
111	Negative group velocity from quadrupole resonance of plasmonic spheres. Physical Review B, 2009, 79, .	3.2	10
112	Illusion Optics: The Optical Transformation of an Object into Another Object. Physical Review Letters, 2009, 102, 253902.	7.8	565
113	Dirac Spectra and Edge States in Honeycomb Plasmonic Lattices. Physical Review Letters, 2009, 102, 123904.	7.8	77
114	Complementary Media Invisibility Cloak that Cloaks Objects at a Distance Outside the Cloaking Shell. Physical Review Letters, 2009, 102, 093901.	7.8	504
115	Wave propagation in strongly scattered random elastic media: Energy equilibration and crossover from ballistic to diffusive behavior. Physical Review B, 2008, 77, .	3.2	5
116	Anomalous properties of the band-edge states in large two-dimensional photonic quasicrystals. Physical Review B, 2007, 76, .	3.2	10
117	Effective medium theory for elastic metamaterials in two dimensions. Physical Review B, 2007, 76, .	3.2	173
118	Large enhancement of phononic gap in periodic and quasiperiodic elastic composites by using air inclusions. Zeitschrift Fur Kristallographie - Crystalline Materials, 2005, 220, 877-883.	0.8	3
119	Wave transport in two-dimensional random media: The ballistic to diffusive transition and the extrapolation length. Physical Review E, 2005, 72, 036606.	2.1	6
120	Large band gaps in elastic phononic crystals with air inclusions. Applied Physics Letters, 2003, 83, 3900-3902.	3.3	41
121	Large sonic band gaps in 12-fold quasicrystals. Journal of Applied Physics, 2002, 91, 6191-6193.	2.5	32
122	Engineering acoustic band gaps. Applied Physics Letters, 2001, 79, 3224-3226.	3.3	66