Kuang Zhang

List of Publications by Year
in descending order

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127 papers	3,322 citations	236833 25 h-index	155592 55 g-index
127 all docs	127 docs citations	127 times ranked	1923 citing authors

#	Article	IF	Citations
1	Ultrathin Pancharatnamâ€“Berry Metasurface with Maximal Crossâ€Polarization Efficiency. Advanced Materials, 2015, 27, 1195-1200.	11.1	431
2	Independent phase modulation for quadruplex polarization channels enabled by chirality-assisted geometric-phase metasurfaces. Nature Communications, 2020, 11, 4186.	5.8	274
3	Phase-engineered metalenses to generate converging and non-diffractive vortex beam carrying orbital angular momentum in microwave region. Optics Express, 2018, 26, 1351.	1.7	222
4	A Fully Phaseâ€Modulated Metasurface as An Energyâ€Controllable Circular Polarization Router. Advanced Science, 2020, 7, 2001437.	5.6	191
5	High-Efficiency Metalenses with Switchable Functionalities in Microwave Region. ACS Applied Materials & Interfaces, 2019, 11, 28423-28430.	4.0	177
6	Polarizationâ€Engineered Noninterleaved Metasurface for Integer and Fractional Orbital Angular Momentum Multiplexing. Laser and Photonics Reviews, 2021, 15, .	4.4	160
7	Huygens Metasurface Holograms with the Modulation of Focal Energy Distribution. Advanced Optical Materials, 2018, 6, 1800121.	3.6	128
8	Metasurface holographic image projection based on mathematical properties of Fourier transform. PhotoniX, 2020, 1, .	5.5	127
9	Complementary transmissive ultra-thin meta-deflectors for broadband polarization-independent refractions in the microwave region. Photonics Research, 2019, 7, 80.	3.4	127
10	Generating Dual-Polarized Vortex Beam by Detour Phase: From Phase Gradient Metasurfaces to Metagratings. IEEE Transactions on Microwave Theory and Techniques, 2022, 70, 200-209.	2.9	107
11	A Review of Orbital Angular Momentum Vortex Beams Generation: From Traditional Methods to Metasurfaces. Applied Sciences (Switzerland), 2020, 10, 1015.	1.3	73
12	Dual-polarized multiplexed meta-holograms utilizing coding metasurface. Nanophotonics, 2020, 9, 3605-3613.	2.9	66
13	Properties and Sensing Performance of All-Dielectric Metasurface THz Absorbers. IEEE Transactions on Terahertz Science and Technology, 2020, 10, 599-605.	2.0	61
14	Single-layer spatial analog meta-processor for imaging processing. Nature Communications, 2022, 13, 2188.	5.8	58
15	High-efficiency surface plasmonic polariton waveguides with enhanced low-frequency performance in microwave frequencies. Optics Express, 2017, 25, 2121.	1.7	50
16	Coding Huygensâ€™ metasurface for enhanced quality holographic imaging. Optics Express, 2019, 27, 7108.	1.7	48
17	Perfect Control of Diffraction Patterns with Phase-Gradient Metasurfaces. ACS Applied Materials & Interfaces, 2022, 14, 16856-16865.	4.0	46
18	Broadband high-order mode of spoof surface plasmon polaritons supported by compact complementary structure with high efficiency. Optics Letters, 2018, 43, 3176.	1.7	44

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19	Versatile Airy-Beam Generation Using a 1-Bit Coding Programmable Reflective Metasurface. Physical Review Applied, 2020, 14, .	1.5	42
20	Three-Dimensional Microwave Holography Based on Broadband Huygens' Metasurface. Physical Review Applied, 2020, 13, .	1.5	40
21	Multi-focus hologram utilizing Pancharatnamâ€“Berry phase elements based metamirror. Optics Letters, 2019, 44, 2189.	1.7	40
22	High-efficiency broadband excitation and propagation of second-mode spoof surface plasmon polaritons by a complementary structure. Optics Letters, 2017, 42, 2766.	1.7	37
23	A Compact Wideband Filter Based on Spoof Surface Plasmon Polaritons With a Wide Upper Rejection Band. IEEE Photonics Technology Letters, 2020, 32, 1511-1514.	1.3	37
24	Multi-band terahertz resonant absorption based on an all-dielectric grating metasurface for chlorpyrifos sensing. Optics Express, 2021, 29, 13563.	1.7	32
25	Transmissionâ€“Reflection-Integrated Multiplexed Janus Metasurface. ACS Applied Electronic Materials, 2021, 3, 2638-2645.	2.0	31
26	Deep learning-enabled compact optical trigonometric operator with metasurface. PhotoniX, 2022, 3, .	5.5	27
27	Omnidirectional non-radiative wireless power transfer with rotating magnetic field and efficiency improvement by metamaterial. Applied Physics A: Materials Science and Processing, 2014, 116, 1579-1586.	1.1	26
28	Dynamically Controlling Spatial Energy Distribution with a Holographic Metamirror for Adaptive Focusing. Physical Review Applied, 2020, 13, .	1.5	26
29	Planar Vortex Beam Generator for Circularly Polarized Incidence Based on FSS. IEEE Transactions on Antennas and Propagation, 2020, 68, 1514-1522.	3.1	24
30	Efficient propagation of spoof surface plasmon polaritons supported by substrate integrated waveguide with bandpass features. Journal Physics D: Applied Physics, 2020, 53, 425104.	1.3	23
31	Metasurface Holography in the Microwave Regime. Photonics, 2021, 8, 135.	0.9	22
32	Ultrathin Metasurface for Controlling Electromagnetic Wave With Broad Bandwidth. IEEE Transactions on Magnetics, 2015, 51, 1-4.	1.2	21
33	Carbon nanotube-based flexible metamaterials for THz sensing. Optical Materials Express, 2021, 11, 1470.	1.6	20
34	Compact logic operator utilizing a single-layer metasurface. Photonics Research, 2022, 10, 316.	3.4	19
35	Designed Circularly Polarized Two-Port Microstrip MIMO Antenna for WLAN Applications. Applied Sciences (Switzerland), 2022, 12, 1068.	1.3	19
36	Vanadium Dioxide-Based Terahertz Metamaterial Devices Switchable between Transmission and Absorption. Micromachines, 2022, 13, 715.	1.4	19

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37	Experimental validation of active holographic metasurface for electrically beam steering. Optics Express, 2018, 26, 6316.	1.7	18
38	A novel terahertz metasurface based on a single-walled carbon nanotube film for sensing application. Journal of Materials Chemistry A, 2022, 10, 1780-1787.	5.2	18
39	A Magnetic Coupling Dipole for UHF Near-Field RFID Reader. IEEE Transactions on Magnetics, 2012, 48, 4305-4308.	1.2	17
40	Short-circuited stub-loaded spoof surface plasmon polariton transmission lines with flexibly controllable lower out-of-band rejections. Optics Letters, 2021, 46, 4354.	1.7	17
41	Metamaterials With Tunable Negative Permeability Based on Mie Resonance. IEEE Transactions on Magnetics, 2012, 48, 4289-4292.	1.2	15
42	A Novel Four-Face Polarization Twister Based on Three-Dimensional Magnetic Toroidal Dipoles. IEEE Transactions on Magnetics, 2014, 50, 1-4.	1.2	15
43	Spacial Energy Distribution Manipulation with Multi-focus Huygens Metamirror. Scientific Reports, 2017, 7, 9081.	1.6	15
44	Coding metasurface holography with polarization-multiplexed functionality. Journal of Applied Physics, 2021, 129, .	1.1	14
45	Polarization-multiplexed Huygens metasurface holography. Optics Letters, 2020, 45, 5488.	1.7	14
46	Total transmission and total reflection of electromagnetic waves by anisotropic epsilon-near-zero metamaterials embedded with dielectric defects. Journal of Applied Physics, 2013, 113, .	1.1	13
47	Planar Efficient Metasurface for Vortex Beam Generating and Converging in Microwave Region. IEEE Transactions on Magnetics, 2017, 53, 1-4.	1.2	13
48	Compact transition enabled broadband propagation of spoof surface plasmon polaritons based on the equivalent circuit model. Journal Physics D: Applied Physics, 2022, 55, 165101.	1.3	13
49	A Dual-Beam Leaky-Wave Antenna Based on Squarely Modulated Reactance Surface. Applied Sciences (Switzerland), 2020, 10, 962.	1.3	11
50	Generation of High-Efficiency Vortex Beam Carrying OAM Mode Based on Miniaturized Element Frequency Selective Surfaces. IEEE Transactions on Magnetics, 2019, 55, 1-4.	1.2	10
51	Metasurface for Bending the Reflected Wave Under Oblique Incidence. IEEE Transactions on Magnetics, 2019, 55, 1-4.	1.2	10
52	Generation and deflection control of a 2D Airy beam utilizing metasurfaces. Optics Letters, 2021, 46, 5220.	1.7	10
53	Generating Bessel Beams Efficiently in Microwave With High Transmission Metasurfaces. IEEE Transactions on Magnetics, 2021, 57, 1-5.	1.2	9
54	Dualâ€Polarized Triâ€Channel Encrypted Holography Based on Geometric Phase Metasurface. Advanced Photonics Research, 2020, 1, 2000022.	1.7	9

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55	Helicity-switched hologram utilizing a polarization-free multi-bit coding metasurface. Optics Express, 2020, 28, 22669.	1.7	9
56	A silicon-based metasurface for terahertz sensing. Optics Communications, 2022, 506, 127572.	1.0	9
57	Ultra-high Q resonances governed by quasi-bound states in the continuum in all-dielectric THz metamaterials. Optics Communications, 2022, 520, 128555.	1.0	9
58	Bi-functional meta-device with full energy utilization in co- and cross-polarization fields. Applied Physics Letters, 2020, 117, .	1.5	8
59	Optically tunable single narrow band all-dielectric terahertz metamaterials absorber. AIP Advances, 2020, 10, 045039.	0.6	8
60	1 Bit Non-Diffractive Vortex Beam Generator Based on FSS in Microwave Region. IEEE Transactions on Magnetics, 2021, 57, 1-4.	1.2	8
61	Polarization conversion of electromagnetic waves by Faraday chiral media. Journal of Applied Physics, 2010, 107, .	1.1	7
62	Omnidirectional wireless power transfer system supporting mobile devices. Applied Physics A: Materials Science and Processing, 2016, 122, 1.	1.1	7
63	Complementary cloak based on conventional cloak with axial symmetrical cloaked region. Applied Physics A: Materials Science and Processing, 2012, 108, 1001-1005.	1.1	6
64	Perfect anomalous reflection and refraction utilizing binary Pancharatnamâ€“Berry phase elements based metasurfaces. Journal Physics D: Applied Physics, 2020, 53, 065111.	1.3	6
65	Dual-Polarized Dual-Channel Helicity-Switching or Helicity-Preserving Retroreflectors Utilizing 1-Bit Coding Metasurfaces. ACS Applied Electronic Materials, 2020, 2, 3380-3389.	2.0	6
66	A zero index metamaterial lens for gain enhancement of patch antenna and H-plane horn antenna. , 2013, , .		5
67	Electrically tunable array antenna with beam steering from backfire to endfire based on liquid crystal miniaturized phase shifter. , 2016, , .		5
68	2-D Airy Beam Generation and Manipulation Utilizing Metasurface. IEEE Transactions on Magnetics, 2022, 58, 1-5.	1.2	5
69	Carbon Nanotubes Film Integrated With Silicon Microfluidic Channel for a Novel Composite THz Metasurface. IEEE Journal of Selected Topics in Quantum Electronics, 2022, 28, 1-8.	1.9	5
70	Huygens' Metasurface With Stable Transmission Response Under Wide Range of Incidence Angle. IEEE Antennas and Wireless Propagation Letters, 2022, 21, 630-634.	2.4	5
71	Tunable liquid crystal metamaterial filter with polarization-insensitive characteristic. Liquid Crystals, 2022, 49, 1338-1346.	0.9	5
72	Reconfigurable composite right/left-handed magnetic-metamaterial waveguide at sub-wavelength scale. Journal of Applied Physics, 2011, 109, 07A309.	1.1	4

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73	Reconfigurable subwavelength waveguide based on magnetic metamaterial. Applied Physics A: Materials Science and Processing, 2011, 102, 509-515.	1.1	4
74	Tunable Control of Mie Resonances Based on Hybrid VO2 and Dielectric Metamaterial. Symmetry, 2018, 10, 423.	1.1	4
75	An L-band narrowband energy selective surface design. , 2019, , .		4
76	Properties and Sensing Performance of THz Metasurface Based on Carbon Nanotube and Microfluidic Channel. Frontiers in Physics, 2021, 9, .	1.0	4
77	Ultra-Thin Chiral Metasurface-Based Superoscillatory Lens. Frontiers in Materials, 2022, 8, .	1.2	4
78	Multifunctional Polarization Converter Based on Dielectric Metamaterial. Physica Status Solidi (A) Applications and Materials Science, 2018, 215, 1700535.	0.8	3
79	Beam Reconfigurable Antenna Based on Holographic Metasurfaces. , 2018, , .		3
80	Ensemble learning: a bidirectional framework for designing data-driven THz composite metamaterials. Journal of the Optical Society of America B: Optical Physics, 2022, 39, 835.	0.9	3
81	All-silicon periodic and non-periodic THz metasurface for sensing applications. Optical Materials, 2022, 126, 112206.	1.7	3
82	Electromagnetic radiation from carbon nanotube at terahertz frequency. , 2012, , .		2
83	A novel wide band FSS structure based on the double-layered hexagonal unit. , 2014, , .		2
84	Terahertz Wave Electric Field Oscillation from Single-Walled Carbon Nanotube Antenna. Integrated Ferroelectrics, 2014, 153, 120-125.	0.3	2
85	High selective metamaterial resonator based on complementary split ring resonator. , 2016, , .		2
86	A dual band CRLH leaky wave antenna with electrically steerable beam based on liquid crystals. , 2016, , .		2
87	Miniaturized frequency selective surface and broadband frequency selective surface design. , 2016, , .		2
88	Beam scanning range expansion of liquid crystal based leaky wave antennas. , 2018, , .		2
89	Spatial Rotation Operations on Huygens Metasurface Hologram in Microwave Regime. IEEE Transactions on Magnetics, 2019, 55, 1-4.	1.2	2
90	Tailoring the scattering properties of coding metamaterials based on machine learning. EPJ Applied Metamaterials, 2021, 8, 15.	0.8	2

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91	Fourier Convolution Operation on Metasurface-Based Hologram in Microwave Region. Photonics, 2021, 8, 174.	0.9	2
92	A Bidirectional Ensembleâ€Learning Framework for Targetâ€Oriented Metamaterial Designs. Advanced Photonics Research, 2021, 2, 2100158.	1.7	2
93	Three dimensional axiolitic cloak based on coordinate transformation. , 2009, , .		1
94	Substrate integrated waveguide (SIW) based on novel double-sided-complementary spiral resonators (DS-CSRs). , 2012, , .		1
95	A novel double zero metamaterial made by all dielectric resonator. , 2014, , .		1
96	Broadband planar Luneburg lens composed of artificial impedance surfaces. , 2015, , .		1
97	Ultrathin metasurface based on phase discontinuity with maximal cross-polarization efficiency. , 2015, , .		1
98	Planar efficient metasurface for vortex beam generating and converging in microwave region. , 2016, , .		1
99	Metasurface in microwave region: Theory and applications. , 2016, , .		1
100	Design of reflection-type metasurface with phase discontinuities. , 2017, , .		1
101	Multi-Focus Imaging Utilizing Huygens Metasurface. , 2018, , .		1
102	Metalens in microwave region for the generation of orbital angular momentum. , 2018, , .		1
103	Leaky-Wave Antennas with Loaded Complementary Components for High-Performance and Wideband Application. , 2019, , .		1
104	Broadband Propagation of High-order Mode of Spoof Surface Plasmon Polaritons Supported by Compact Complementary Structure. , 2019, , .		1
105	Planar Lens Antenna with Enhanced Directivity Based on Miniaturized Element Frequency Selective Surface. , 2019, , .		1
106	Microwave Metagratings for Generation of Vortex beams Carrying OAM modes. , 2020, , .		1
107	Tunable liquid crystal metasurface with polarization selection characteristic. Journal Physics D: Applied Physics, 2022, 55, 375001.	1.3	1
108	A millimeter-wave conical conformal low sidelobe microstrip antenna array. , 2008, , .		0

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109	The design of a double negative (DNG) composite medium made of all-dielectric square. , 2011, , .		0
110	Complementary medium cylindrical cloak with spatially invariant axial material parameters. , 2011, , .		0
111	Scattering characteristics of metallic single wall carbon nanotubes embedded in dielectric medium. , 2012, , .		0
112	External cloak with axial constitutive parameter as constant. , 2012, , .		0
113	Novel polarization independent and angle consistency absorber based on metal-dielectric metamaterial. , 2015, , .		0
114	N-sided Irregular Polygonal Cavity Camouflage Coating with Homogeneous Parameters. Integrated Ferroelectrics, 2015, 161, 18-26.	0.3	0
115	Generating reflective vortex waves in microwave region by metasurface. , 2016, , .		0
116	High performance plasmonic waveguide with compact transition structure. , 2016, , .		0
117	Experimental validation of ultra-thin metalenses for N-beam emissions based on transformation optics. , 2016, , .		0
118	Metasurface for polarization and phase manipulation of the electromagnetic wave simultaneously. , 2016, , .		0
119	An efficient planar meta-lens as converged vortex beam generator in microwave region. , 2017, , .		0
120	Second-mode Spoof Surface Plasmon Polaritons Based on Complementary Plasmonic Metamaterials. , 2018, , .		0
121	Focal Intensity Distribution Manipulation with Huygens Metamirror. , 2018, , .		0
122	Microwave Meta-lens for Generating Polarization-Independent refracted waves. , 2019, , .		0
123	High-Efficiency Broadband Polarization Rotator for W-Band Applications. , 2019, , .		0
124	Reconfigurable Metasurface for Adaptive Focal Position Lens. , 2019, , .		0
125	Multi-Band Resonant Metasurface and Sensing Applications. , 2021, , .		0
126	Metagrating for Single Order Diffraction with High Efficiency Based on Bianisotropic Particles. , 2020, , .		0

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127	Airy beam generation and manipulation utilizing metasurface. , 2020, , .		0