

# Hua Cheng

## List of Publications by Year in descending order

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100  
papers

5,205  
citations

61984

43  
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88630

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g-index

100  
all docs

100  
docs citations

100  
times ranked

3568  
citing authors

#	ARTICLE	IF	CITATIONS
1	Deep-learning-based colorimetric polarization-angle detection with metasurfaces. <i>Optica</i> , 2022, 9, 217.	9.3	22
2	Inverse Design of Few-Layer Metasurfaces Empowered by the Matrix Theory of Multilayer Optics. <i>Physical Review Applied</i> , 2022, 17, .	3.8	7
3	Transmission-Reflection-Integrated Multifunctional Continuously Tunable Metasurfaces for Decoupled Modulation of Acoustic Waves. <i>Physical Review Applied</i> , 2022, 17, .	3.8	8
4	Flexible Confinement and Manipulation of Mie Resonances via Nano Rectangular Hollow Metasurfaces. <i>Advanced Optical Materials</i> , 2022, 10, .	7.3	7
5	Deep Learning Enabled Multicolor Meta-Holography. <i>Advanced Optical Materials</i> , 2022, 10, .	7.3	9
6	Few-layer metasurfaces with engineered structural symmetry. <i>Science China: Physics, Mechanics and Astronomy</i> , 2021, 64, 1.	5.1	3
7	Multi-band on-chip photonic spin Hall effect and selective excitation of whispering gallery modes with metasurface-integrated microcavity. <i>Optics Letters</i> , 2021, 46, 3528.	3.3	6
8	High Performance Transmission Structural Colors Generated by Hybrid Metal-Dielectric Metasurfaces. <i>Advanced Optical Materials</i> , 2021, 9, 2100895.	7.3	20
9	Multiband quasibound states in the continuum engineered by space-group-invariant metasurfaces. <i>Physical Review B</i> , 2021, 104, .	3.2	25
10	Tunable dual-band and high-quality-factor perfect absorption based on VO <sub>2</sub> -assisted metasurfaces. <i>Optics Express</i> , 2021, 29, 31488.	3.4	13
11	Rapid capturing of oil-degrading bacteria by engineered attapulgite and their synergistic remediation for oil spill. <i>Journal of Colloid and Interface Science</i> , 2021, 604, 272-280.	9.4	10
12	Electromagnetic wave manipulation based on few-layer metasurfaces and polyatomic metasurfaces. <i>ChemPhysMater</i> , 2021, 1, 6-6.	2.8	8
13	Full Complex Amplitude Modulation of Second Harmonic Generation with Nonlinear Metasurfaces. <i>Laser and Photonics Reviews</i> , 2021, 15, 2100207.	8.7	18
14	A Review of Topological Semimetal Phases in Photonic Artificial Microstructures. <i>Frontiers in Physics</i> , 2021, 9, .	2.1	7
15	Metasurface Empowered Optical Multiplexing and Multifunction. <i>Advanced Materials</i> , 2020, 32, e1805912.	21.0	169
16	Multi-functional magnetic bacteria as efficient and economical Pickering emulsifiers for encapsulation and removal of oil from water. <i>Journal of Colloid and Interface Science</i> , 2020, 560, 349-358.	9.4	29
17	Giant Intrinsic Chirality in Curled Metasurfaces. <i>ACS Photonics</i> , 2020, 7, 3415-3422.	6.6	30
18	Frequency-Selected Bifunctional Coding Acoustic Metasurfaces. <i>Physical Review Applied</i> , 2020, 14, .	3.8	28

#	ARTICLE	IF	CITATIONS
19	Dielectric Resonance-Based Optical Metasurfaces: From Fundamentals to Applications. <i>IScience</i> , 2020, 23, 101868.	4.1	37
20	Spin-Selective Full-Dimensional Manipulation of Optical Waves with Chiral Mirror. <i>Advanced Materials</i> , 2020, 32, e1907983.	21.0	52
21	Few-layer metasurfaces with arbitrary scattering properties. <i>Science China: Physics, Mechanics and Astronomy</i> , 2020, 63, 1.	5.1	16
22	Metasurfaces: Metasurface-Empowered Optical Multiplexing and Multifunction (Adv. Mater. 3/2020). <i>Advanced Materials</i> , 2020, 32, 2070022.	21.0	10
23	A Bilayer Plasmonic Metasurface for Polarization-Insensitive Bidirectional Perfect Absorption. <i>Advanced Theory and Simulations</i> , 2020, 3, 1900216.	2.8	12
24	Multiplexed Nondiffracting Nonlinear Metasurfaces. <i>Advanced Functional Materials</i> , 2020, 30, 1910744.	14.9	16
25	Diffractional metalens: from fundamentals, practical applications to current trends. <i>Advances in Physics: X</i> , 2020, 5, 1742584.	4.1	22
26	Dirac points and the transition towards Weyl points in three-dimensional sonic crystals. <i>Light: Science and Applications</i> , 2020, 9, 201.	16.6	18
27	Aberration-corrected three-dimensional positioning with a single-shot metalens array. <i>Optica</i> , 2020, 7, 1706.	9.3	43
28	Optical Information Multiplexing with Nonlinear Coding Metasurfaces. <i>Laser and Photonics Reviews</i> , 2019, 13, 1900045.	8.7	41
29	Energy-Tailorable Spin-Selective Multifunctional Metasurfaces with Full Fourier Components. <i>Advanced Materials</i> , 2019, 31, e1901729.	21.0	69
30	Arbitrary Manipulation of Light Intensity by Bilayer Aluminum Metasurfaces. <i>Advanced Optical Materials</i> , 2019, 7, 1900260.	7.3	26
31	Metasurfaces: From Single-Dimensional to Multidimensional Manipulation of Optical Waves with Metasurfaces (Adv. Mater. 16/2019). <i>Advanced Materials</i> , 2019, 31, 1970118.	21.0	4
32	Acoustic Topological Transport and Refraction in a Kekulé Lattice. <i>Physical Review Applied</i> , 2019, 11, .	3.8	28
33	Empowered Layer Effects and Prominent Properties in Few-Layer Metasurfaces. <i>Advanced Optical Materials</i> , 2019, 7, 1801477.	7.3	52
34	Anomalous reflection and vortex beam generation by multi-bit coding acoustic metasurfaces. <i>Applied Physics Letters</i> , 2019, 114, .	3.3	51
35	Experimental Realization of Type-II Weyl Points and Fermi Arcs in Phononic Crystal. <i>Physical Review Letters</i> , 2019, 122, 104302.	7.8	57
36	From Single-Dimensional to Multidimensional Manipulation of Optical Waves with Metasurfaces. <i>Advanced Materials</i> , 2019, 31, e1802458.	21.0	127

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37	Structural colors in metasurfaces: principle, design and applications. <i>Materials Chemistry Frontiers</i> , 2019, 3, 750-761.	5.9	69
38	Ultrahighly Saturated Structural Colors Enhanced by Multipolar-Modulated Metasurfaces. <i>Nano Letters</i> , 2019, 19, 4221-4228.	9.1	146
39	Spin-Selective and Wavelength-Selective Demultiplexing Based on Waveguide-Integrated All-Dielectric Metasurfaces. <i>Advanced Optical Materials</i> , 2019, 7, 1801273.	7.3	36
40	Giant spin-selective asymmetric transmission in multipolar-modulated metasurfaces. <i>Optics Letters</i> , 2019, 44, 3805.	3.3	32
41	Metasurface Enabled Wide-Angle Fourier Lens. <i>Advanced Materials</i> , 2018, 30, e1706368.	21.0	112
42	Dynamically Tunable Deep Subwavelength High-Order Anomalous Reflection Using Graphene Metasurfaces. <i>Advanced Optical Materials</i> , 2018, 6, 1701047.	7.3	42
43	Polarization-Sensitive Structural Colors with Hue and Saturation Tuning Based on All-Dielectric Nanopixels. <i>Advanced Optical Materials</i> , 2018, 6, 1701009.	7.3	95
44	Nonlinear Metasurfaces: Tripling the Capacity of Optical Vortices by Nonlinear Metasurface (Laser) <i>Tj ETQq0 0 0 rgBTj/Overlock 10 Tf 50</i>	8.7	44
45	Tripling the Capacity of Optical Vortices by Nonlinear Metasurface. <i>Laser and Photonics Reviews</i> , 2018, 12, 1800164.	8.7	44
46	High-quality-factor multiple Fano resonances for refractive index sensing. <i>Optics Letters</i> , 2018, 43, 1842.	3.3	170
47	Breaking the Diffraction Limit with Radially Polarized Light Based on Dielectric Metalenses. <i>Advanced Optical Materials</i> , 2018, 6, 1800795.	7.3	62
48	Phase Manipulation of Electromagnetic Waves with Metasurfaces and Its Applications in Nanophotonics. <i>Advanced Optical Materials</i> , 2018, 6, 1800104.	7.3	103
49	Multiband Asymmetric Transmission of Airborne Sound by Coded Metasurfaces. <i>Physical Review Applied</i> , 2017, 7, .	3.8	71
50	Metasurfaces: Coding Acoustic Metasurfaces (Adv. Mater. 6/2017). <i>Advanced Materials</i> , 2017, 29, .	21.0	1
51	Bidirectional Perfect Absorber Using Free Substrate Plasmonic Metasurfaces. <i>Advanced Optical Materials</i> , 2017, 5, 1700152.	7.3	52
52	Integrating polarization conversion and nearly perfect absorption with multifunctional metasurfaces. <i>Applied Physics Letters</i> , 2017, 110, .	3.3	49
53	The enhanced stability and biodegradation of dispersed crude oil droplets by Xanthan Gum as an additive of chemical dispersant. <i>Marine Pollution Bulletin</i> , 2017, 118, 275-280.	5.0	31
54	Coding Acoustic Metasurfaces. <i>Advanced Materials</i> , 2017, 29, 1603507.	21.0	207

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55	Individually immobilized and surface-modified hydrocarbon-degrading bacteria for oil emulsification and biodegradation. <i>Marine Pollution Bulletin</i> , 2017, 125, 433-439.	5.0	16
56	Manipulation of the Photonic Spin Hall Effect with High Efficiency in Goldâ€Nanorodâ€Based Metasurfaces. <i>Advanced Optical Materials</i> , 2017, 5, 1700413.	7.3	37
57	Ultrathin polarization-insensitive wide-angle broadband near-perfect absorber in the visible regime based on few-layer MoS2 films. <i>Applied Physics Letters</i> , 2017, 111, 111109.	3.3	27
58	Spin-Selective Transmission and Devisable Chirality in Two-Layer Metasurfaces. <i>Scientific Reports</i> , 2017, 7, 8204.	3.3	42
59	Single-Layer Plasmonic Metasurface Half-Wave Plates with Wavelength-Independent Polarization Conversion Angle. <i>ACS Photonics</i> , 2017, 4, 2061-2069.	6.6	48
60	Fano-resonance-based mode-matching hybrid metasurface for enhanced second-harmonic generation. <i>Optics Letters</i> , 2017, 42, 3117.	3.3	34
61	Momentum Analysis for Metasurfaces. <i>Physical Review Applied</i> , 2017, 8, .	3.8	16
62	Plasmonic Airy Beam Generation by Both Phase and Amplitude Modulation with Metasurfaces. <i>Advanced Optical Materials</i> , 2016, 4, 1230-1235.	7.3	102
63	Controllable optical activity with non-chiral plasmonic metasurfaces. <i>Light: Science and Applications</i> , 2016, 5, e16096-e16096.	16.6	70
64	Simultaneous generation of high-efficiency broadband asymmetric anomalous refraction and reflection waves with few-layer anisotropic metasurface. <i>Scientific Reports</i> , 2016, 6, 35485.	3.3	45
65	Highâ€Efficiency Mutual Dualâ€Band Asymmetric Transmission of Circularly Polarized Waves with Fewâ€Layer Anisotropic Metasurfaces. <i>Advanced Optical Materials</i> , 2016, 4, 2028-2034.	7.3	86
66	Optical Polarization Encoding Using Grapheneâ€Loaded Plasmonic Metasurfaces. <i>Advanced Optical Materials</i> , 2016, 4, 91-98.	7.3	100
67	Polarization: Optical Polarization Encoding Using Grapheneâ€Loaded Plasmonic Metasurfaces (Advanced Optical Materials 1/2016). <i>Advanced Optical Materials</i> , 2016, 4, 2-2.	7.3	0
68	Tunable dual-band asymmetric transmission for circularly polarized waves with graphene planar chiral metasurfaces. <i>Optics Letters</i> , 2016, 41, 3142.	3.3	86
69	Realizing Broadband and Invertible Linear-to-circular Polarization Converter with Ultrathin Single-layer Metasurface. <i>Scientific Reports</i> , 2016, 5, 18106.	3.3	128
70	Interferometric Control of Signal Light Intensity by Anomalous Refraction with Plasmonic Metasurface. <i>Plasmonics</i> , 2016, 11, 353-358.	3.4	5
71	Refraction: Dynamically Tunable Broadband Infrared Anomalous Refraction Based on Graphene Metasurfaces (Advanced Optical Materials 12/2015). <i>Advanced Optical Materials</i> , 2015, 3, 1743-1743.	7.3	4
72	Emergent Functionality and Controllability in Fewâ€Layer Metasurfaces. <i>Advanced Materials</i> , 2015, 27, 5410-5421.	21.0	102

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73	High-Performance Broadband Circularly Polarized Beam Deflector by Mirror Effect of Multinorod Metasurfaces. <i>Advanced Functional Materials</i> , 2015, 25, 5428-5434.	14.9	69
74	Dynamically Tunable Broadband Infrared Anomalous Refraction Based on Graphene Metasurfaces. <i>Advanced Optical Materials</i> , 2015, 3, 1744-1749.	7.3	108
75	Beam Deflectors: High-Performance Broadband Circularly Polarized Beam Deflector by Mirror Effect of Multinorod Metasurfaces ( <i>Adv. Funct. Mater.</i> 34/2015). <i>Advanced Functional Materials</i> , 2015, 25, 5567-5567.	14.9	0
76	High Performance Broadband Asymmetric Polarization Conversion Due to Polarization-dependent Reflection. <i>Plasmonics</i> , 2015, 10, 1703-1711.	3.4	31
77	Dynamically Tunable Plasmonic Lens between the Near and Far Fields Based on Composite Nanorings Illuminated with Radially Polarized Light. <i>Plasmonics</i> , 2015, 10, 625-631.	3.4	8
78	Discovery of 1,2,4-triazole-1,3-disulfonamides as dual inhibitors of mitochondrial complex II and complex III. <i>New Journal of Chemistry</i> , 2015, 39, 7281-7292.	2.8	30
79	Generation of vector beams with arbitrary spatial variation of phase and linear polarization using plasmonic metasurfaces. <i>Optics Letters</i> , 2015, 40, 3229.	3.3	82
80	Metasurfaces: Simultaneous Control of Light Polarization and Phase Distributions Using Plasmonic Metasurfaces ( <i>Adv. Funct. Mater.</i> 5/2015). <i>Advanced Functional Materials</i> , 2015, 25, 824-824.	14.9	1
81	Realization of broadband cross-polarization conversion in transmission mode in the terahertz region using a single-layer metasurface. <i>Optics Letters</i> , 2015, 40, 3185.	3.3	212
82	Simultaneous Control of Light Polarization and Phase Distributions Using Plasmonic Metasurfaces. <i>Advanced Functional Materials</i> , 2015, 25, 704-710.	14.9	178
83	Fully interferometric controllable anomalous refraction efficiency using cross modulation with plasmonic metasurfaces. <i>Optics Letters</i> , 2014, 39, 6763.	3.3	19
84	Polarization-insensitive and wide-angle broadband nearly perfect absorber by tunable planar metamaterials in the visible regime. <i>Journal of Optics (United Kingdom)</i> , 2014, 16, 125107.	2.2	63
85	Broadband diodelike asymmetric transmission of linearly polarized light in ultrathin hybrid metamaterial. <i>Applied Physics Letters</i> , 2014, 105, .	3.3	54
86	Indirectly Manipulating Nanoscale Localized Fields of Bowtie Nanoantennas with Asymmetric Nanoapertures. <i>Plasmonics</i> , 2013, 8, 495-499.	3.4	5
87	Dynamically tunable plasmonically induced transparency in periodically patterned graphene nanostrips. <i>Applied Physics Letters</i> , 2013, 103, 203112.	3.3	249
88	Realization of near-field linear nano-polarizer by asymmetric nanoaperture and bowtie nanoantenna. <i>Optics Express</i> , 2013, 21, 10342.	3.4	6
89	Dynamically tunable broadband mid-infrared cross polarization converter based on graphene metamaterial. <i>Applied Physics Letters</i> , 2013, 103, .	3.3	152
90	Mid-infrared tunable optical polarization converter composed of asymmetric graphene nanocrosses. <i>Optics Letters</i> , 2013, 38, 1567.	3.3	110

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91	Co-enhancing and -confining the electric and magnetic fields of the broken-nanoring and the composite nanoring by azimuthally polarized excitation. Optics Express, 2013, 21, 20611.	3.4	15
92	Dynamically tunable plasmonically induced transparency by planar hybrid metamaterial. Optics Letters, 2013, 38, 483.	3.3	61
93	Polarization-insensitive and wide-angle plasmonically induced transparency by planar metamaterials. Applied Physics Letters, 2012, 101, .	3.3	66
94	A polarization insensitive and wide-angle dual-band nearly perfect absorber in the infrared regime. Journal of Optics (United Kingdom), 2012, 14, 085102.	2.2	70
95	Polarization insensitive and omnidirectional broadband near perfect planar metamaterial absorber in the near infrared regime. Applied Physics Letters, 2011, 99, .	3.3	137
96	Large enhancement and uniform distribution of optical near field through combining periodic bowtie nanoantenna with rectangular nanoaperture array. Optics Letters, 2011, 36, 4014.	3.3	16
97	Analysis of optical trapping and propulsion of Rayleigh particles using Airy beam. Optics Express, 2010, 18, 20384.	3.4	79
98	Nonparaxial Split-Step Method With Local One-Dimensional Scheme for Three-Dimensional Wide-Angle Beam Propagation. Journal of Lightwave Technology, 2009, 27, 2717-2723.	4.6	1
99	Applications of laser precisely processing technology in solar cells. Optoelectronics Letters, 2007, 3, 385-387.	0.8	2
100	Polarization State Manipulation of Electromagnetic Waves with Metamaterials and Its Applications in Nanophotonics. , 0, , .		4