

Wenshan Cai

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.

73
papers

13,375
citations

36
h-index

87
g-index

87
ext. papers

15,785
ext. citations

13.1
avg, IF

6.59
L-index

#	Paper	IF	Citations
73	Electrically driven reprogrammable phase-change metasurface reaching 80% efficiency.. <i>Nature Communications</i> , 2022 , 13, 1696	17.4	21
72	A Comprehensive Framework for Analysis of Time-Dependent Performance-Reliability Degradation of SRAM Cache Memory. <i>IEEE Transactions on Very Large Scale Integration (VLSI) Systems</i> , 2021 , 29, 857-870	2.6	0
71	Reversible Photochemical Switching via Plasmonically Enhanced Upconversion Photoluminescence. <i>Advanced Optical Materials</i> , 2021 , 9, 2100776	8.1	3
70	Ultrasensitive Molecular Detection by Imaging of Centimeter-Scale Metasurfaces with a Deterministic Gradient Geometry. <i>Advanced Materials</i> , 2021 , 33, e2100270	24	3
69	Deep learning for the design of photonic structures. <i>Nature Photonics</i> , 2021 , 15, 77-90	33.9	168
68	Building Multifunctional Metasystems Algorithmic Construction. <i>ACS Nano</i> , 2021 , 15, 2318-2326	16.7	11
67	Dynamic Hybrid Metasurfaces. <i>Nano Letters</i> , 2021 , 21, 1238-1245	11.5	33
66	Tackling Photonic Inverse Design with Machine Learning. <i>Advanced Science</i> , 2021 , 8, 2002923	13.6	29
65	Artificial Intelligence Meets Engineered Photonic Materials: introduction to special issue. <i>Optical Materials Express</i> , 2021 , 11, 3431	2.6	
64	Synthetic Engineering of Morphology and Electronic Band Gap in Lateral Heterostructures of Monolayer Transition Metal Dichalcogenides. <i>ACS Nano</i> , 2020 , 14, 6323-6330	16.7	14
63	Stable, high-performance sodium-based plasmonic devices in the near-infrared. <i>Nature</i> , 2020 , 581, 401-405	45.4	53
62	A Hybrid Strategy for the Discovery and Design of Photonic Structures. <i>IEEE Journal on Emerging and Selected Topics in Circuits and Systems</i> , 2020 , 10, 126-135	5.2	23
61	Photocurrent-Induced Active Control of Second-Order Optical Nonlinearity in Monolayer MoS ₂ . <i>Small</i> , 2020 , 16, e1906347	11	16
60	Topological encoding method for data-driven photonics inverse design. <i>Optics Express</i> , 2020 , 28, 4825-4835	9.5	18
59	Transient Second-Order Nonlinear Media: Breaking the Spatial Symmetry in the Time Domain via Hot-Electron Transfer. <i>Physical Review Letters</i> , 2020 , 124, 013901	7.4	10
58	Compounding Meta-Atoms into Metamolecules with Hybrid Artificial Intelligence Techniques. <i>Advanced Materials</i> , 2020 , 32, e1904790	24	55
57	Inverse Design of FinFET SRAM Cells 2020 ,		1

56	Tunable Light Emission by Electrically Excited Plasmonic Antenna. <i>ACS Photonics</i> , 2019 , 6, 2392-2396	6.3	12
55	Metasurfaces for Near-Eye Augmented Reality. <i>ACS Photonics</i> , 2019 , 6, 864-870	6.3	23
54	All-Optical Control of Light in Micro- and Nanophotonics. <i>ACS Photonics</i> , 2019 , 6, 1082-1093	6.3	34
53	Impact of front-end wearout mechanisms on FinFET SRAM soft error rate. <i>Microelectronics Reliability</i> , 2019 , 100-101, 113487	1.2	3
52	A library based on deep neural networks for modeling the degradation of FinFET SRAM performance metrics due to aging. <i>Microelectronics Reliability</i> , 2019 , 100-101, 113486	1.2	1
51	Electrically Biased Silicon Metasurfaces with Magnetic Mie Resonance for Tunable Harmonic Generation of Light. <i>ACS Photonics</i> , 2019 , 6, 2663-2670	6.3	13
50	3D Volumetric Energy Deposition of Focused Helium Ion Beam Lithography: Visualization, Modeling, and Applications in Nanofabrication. <i>Advanced Materials Interfaces</i> , 2018 , 5, 1800203	4.6	13
49	Hot-Electron-Assisted Femtosecond All-Optical Modulation in Plasmonics. <i>Advanced Materials</i> , 2018 , 30, 1704915	24	37
48	Ultrafast Control of Phase and Polarization of Light Expedited by Hot-Electron Transfer. <i>Nano Letters</i> , 2018 , 18, 5544-5551	11.5	37
47	In operando plasmonic monitoring of electrochemical evolution of lithium metal. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018 , 115, 11168-11173	11.5	16
46	Generative Model for the Inverse Design of Metasurfaces. <i>Nano Letters</i> , 2018 , 18, 6570-6576	11.5	323
45	Reply to ZThe merits of plasmonic desalinationZ <i>Nature Photonics</i> , 2017 , 11, 70-71	33.9	4
44	Dark plasmonic modes in diatomic gratings for plasmoelectronics. <i>Laser and Photonics Reviews</i> , 2017 , 11, 1600312	8.3	8
43	Intensity-dependent modulation of optically active signals in a chiral metamaterial. <i>Nature Communications</i> , 2017 , 8,	17.4	52
42	Highly Reproducible Organometallic Halide Perovskite Microdevices based on Top-Down Lithography. <i>Advanced Materials</i> , 2017 , 29, 1606205	24	100
41	Preserving Spin States upon Reflection: Linear and Nonlinear Responses of a Chiral Meta-Mirror. <i>Nano Letters</i> , 2017 , 17, 7102-7109	11.5	85
40	Electrically Tunable Harmonic Generation of Light from Plasmonic Structures in Electrolytes. <i>Nano Letters</i> , 2016 , 16, 5074-9	11.5	12
39	A Chiral Metamaterial for Chiral Responsive Optoelectronic Transduction 2016 ,		1

38	Visualizing Optical Phase Anisotropy in Black Phosphorus. <i>ACS Photonics</i> , 2016 , 3, 1176-1181	6.3	68
37	3D self-assembly of aluminium nanoparticles for plasmon-enhanced solar desalination. <i>Nature Photonics</i> , 2016 , 10, 393-398	33.9	123 ⁸
36	Circular Dichroism Metamirrors with Near-Perfect Extinction. <i>ACS Photonics</i> , 2016 , 3, 2096-2101	6.3	162
35	Backward phase-matching for nonlinear optical generation in negative-index materials. <i>Nature Materials</i> , 2015 , 14, 807-11	27	55
34	Nonlinear optics: Tuning harmonics with excitons. <i>Nature Nanotechnology</i> , 2015 , 10, 387-8	28.7	9
33	Metamaterials enable chiral-selective enhancement of two-photon luminescence from quantum emitters. <i>Advanced Materials</i> , 2015 , 27, 1124-30	24	37
32	An Active Metamaterial Platform for Chiral Responsive Optoelectronics. <i>Advanced Materials</i> , 2015 , 27, 4377-83	24	55
31	Giant chiral optical response from a twisted-arc metamaterial. <i>Nano Letters</i> , 2014 , 14, 1021-5	11.5	216
30	Nonlinear imaging and spectroscopy of chiral metamaterials. <i>Advanced Materials</i> , 2014 , 26, 6157-62	24	109
29	Electrifying photonic metamaterials for tunable nonlinear optics. <i>Nature Communications</i> , 2014 , 5, 4680	17.4	67
28	Broadband sharp 90-degree bends and T-splitters in plasmonic coaxial waveguides. <i>Nano Letters</i> , 2013 , 13, 4753-8	11.5	29
27	Measurement of the polarization state of light using an integrated plasmonic polarimeter. <i>Nanophotonics</i> , 2012 , 1, 125-129	6.3	85
26	Self-limited plasmonic welding of silver nanowire junctions. <i>Nature Materials</i> , 2012 , 11, 241-9	27	89 ¹
25	Electrically controlled nonlinear generation of light with plasmonics. <i>Science</i> , 2011 , 333, 1720-3	33.3	194
24	Plasmonic Dye-Sensitized Solar Cells. <i>Advanced Energy Materials</i> , 2011 , 1, 52-57	21.8	206
23	Plasmonic Back Reflectors: Plasmonic Dye-Sensitized Solar Cells. <i>Advanced Energy Materials</i> , 2011 , 1, 51-51	21.8	10
22	Plasmonics for extreme light concentration and manipulation. <i>Nature Materials</i> , 2010 , 9, 193-204	27	311 ⁶
21	Semiconductor nanowire optical antenna solar absorbers. <i>Nano Letters</i> , 2010 , 10, 439-45	11.5	43 ⁸

20	Optical Metamaterials 2010 ,		484
19	Phase-coupled plasmon-induced transparency. <i>Physical Review Letters</i> , 2010 , 104, 243902	7.4	346
18	Elements for plasmonic nanocircuits with three-dimensional slot waveguides. <i>Advanced Materials</i> , 2010 , 22, 5120-4	24	91
17	Compact, high-speed and power-efficient electrooptic plasmonic modulators. <i>Nano Letters</i> , 2009 , 9, 4403-11	3.15	268
16	The Ag dielectric function in plasmonic metamaterials. <i>Optics Express</i> , 2008 , 16, 1186-95	3.3	215
15	Designs for optical cloaking with high-order transformations. <i>Optics Express</i> , 2008 , 16, 5444-52	3.3	120
14	Optical Metamagnetism and Negative-Index Metamaterials. <i>MRS Bulletin</i> , 2008 , 33, 921-926	3.2	30
13	Optical cloaking with metamaterials. <i>Nature Photonics</i> , 2007 , 1, 224-227	33.9	1515
12	Nonmagnetic cloak with minimized scattering. <i>Applied Physics Letters</i> , 2007 , 91, 111105	3.4	226
11	Dual-band negative index metamaterial: double negative at 813 nm and single negative at 772 nm. <i>Optics Letters</i> , 2007 , 32, 1671-3	3	160
10	A negative permeability material at red light. <i>Optics Express</i> , 2007 , 15, 1076-83	3.3	161
9	Metamagnetics with rainbow colors. <i>Optics Express</i> , 2007 , 15, 3333-41	3.3	226
8	Negative index of refraction in optical metamaterials. <i>Optics Letters</i> , 2005 , 30, 3356-8	3	1273
7	Noninverted wavelength conversion with signal improvement and chirp compression utilizing birefringence in SOAs. <i>Optics Communications</i> , 2001 , 191, 229-234	2	0
6	Enhanced performance with optimized input power and increased dynamic range for wavelength conversion using four-wave mixing in SOAs. <i>Optics Communications</i> , 2001 , 193, 245-251	2	
5	Programmable optical add/drop multiplexer with enhanced temperature sensitivity. <i>Optics Communications</i> , 2001 , 200, 153-157	2	1
4	Experimental demonstration of pattern effect compensation using an asymmetrical Mach-Zehnder interferometer with SOAs. <i>IEEE Photonics Technology Letters</i> , 2001 , 13, 1325-1327	2.2	14
3	Suppression of waveform distortion in semiconductor optical amplifier using internal birefringence and slope filtering. <i>Electronics Letters</i> , 2001 , 37, 704	1.1	2

- 2 Bit-error-rate performance dependence on pump and signal powers of the wavelength converter based on FWM in semiconductor optical amplifiers. *IEEE Photonics Technology Letters*, **2000**, 12, 855-857^{2.2} 12
- 1 Engineering Radiative Energy Transfer and Directional Excitonic Emission in van der Waals Heterostructures. *Laser and Photonics Reviews*, 2100737 8,3 1