

Wenshan Cai

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/5442947/publications.pdf>

Version: 2024-02-01

87
papers

17,432
citations

71061

41
h-index

85498

71
g-index

87
all docs

87
docs citations

87
times ranked

17745
citing authors

#	ARTICLE	IF	CITATIONS
1	Plasmonics for extreme light concentration and manipulation. Nature Materials, 2010, 9, 193-204.	13.3	3,773
2	Optical cloaking with metamaterials. Nature Photonics, 2007, 1, 224-227.	15.6	1,887
3	3D self-assembly of aluminium nanoparticles for plasmon-enhanced solar desalination. Nature Photonics, 2016, 10, 393-398.	15.6	1,669
4	Negative index of refraction in optical metamaterials. Optics Letters, 2005, 30, 3356.	1.7	1,536
5	Self-limited plasmonic welding of silver nanowire junctions. Nature Materials, 2012, 11, 241-249.	13.3	1,002
6	Optical Metamaterials. , 2010, , .		619
7	Generative Model for the Inverse Design of Metasurfaces. Nano Letters, 2018, 18, 6570-6576.	4.5	562
8	Deep learning for the design of photonic structures. Nature Photonics, 2021, 15, 77-90.	15.6	512
9	Semiconductor Nanowire Optical Antenna Solar Absorbers. Nano Letters, 2010, 10, 439-445.	4.5	486
10	Phase-Coupled Plasmon-Induced Transparency. Physical Review Letters, 2010, 104, 243902.	2.9	390
11	Compact, High-Speed and Power-Efficient Electrooptic Plasmonic Modulators. Nano Letters, 2009, 9, 4403-4411.	4.5	323
12	Nonmagnetic cloak with minimized scattering. Applied Physics Letters, 2007, 91, .	1.5	272
13	Giant Chiral Optical Response from a Twisted-Arc Metamaterial. Nano Letters, 2014, 14, 1021-1025.	4.5	268
14	Metamagnetics with rainbow colors. Optics Express, 2007, 15, 3333.	1.7	265
15	The Ag dielectric function in plasmonic metamaterials. Optics Express, 2008, 16, 1186.	1.7	254
16	Electrically Controlled Nonlinear Generation of Light with Plasmonics. Science, 2011, 333, 1720-1723.	6.0	240
17	Circular Dichroism Metamirrors with Near-Perfect Extinction. ACS Photonics, 2016, 3, 2096-2101.	3.2	240
18	Plasmonic Dye-Sensitized Solar Cells. Advanced Energy Materials, 2011, 1, 52-57.	10.2	217

#	ARTICLE	IF	CITATIONS
19	A negative permeability material at red light. <i>Optics Express</i> , 2007, 15, 1076.	1.7	192
20	Dual-band negative index metamaterial: double negative at 813 nm and single negative at 772 nm. <i>Optics Letters</i> , 2007, 32, 1671.	1.7	188
21	Designs for optical cloaking with high-order transformations. <i>Optics Express</i> , 2008, 16, 5444.	1.7	168
22	Nonlinear Imaging and Spectroscopy of Chiral Metamaterials. <i>Advanced Materials</i> , 2014, 26, 6157-6162.	11.1	138
23	Highly Reproducible Organometallic Halide Perovskite Microdevices based on Top-Down Lithography. <i>Advanced Materials</i> , 2017, 29, 1606205.	11.1	138
24	Measurement of the polarization state of light using an integrated plasmonic polarimeter. <i>Nanophotonics</i> , 2012, 1, 125-129.	2.9	126
25	Stable, high-performance sodium-based plasmonic devices in the near-infrared. <i>Nature</i> , 2020, 581, 401-405.	13.7	125
26	Electrically driven reprogrammable phase-change metasurface reaching 80% efficiency. <i>Nature Communications</i> , 2022, 13, 1696.	5.8	125
27	Preserving Spin States upon Reflection: Linear and Nonlinear Responses of a Chiral Meta-Mirror. <i>Nano Letters</i> , 2017, 17, 7102-7109.	4.5	124
28	Elements for Plasmonic Nanocircuits with Three-Dimensional Slot Waveguides. <i>Advanced Materials</i> , 2010, 22, 5120-5124.	11.1	109
29	Electrifying photonic metamaterials for tunable nonlinear optics. <i>Nature Communications</i> , 2014, 5, 4680.	5.8	90
30	Compounding Meta-Atoms into Metamolecules with Hybrid Artificial Intelligence Techniques. <i>Advanced Materials</i> , 2020, 32, e1904790.	11.1	90
31	Tackling Photonic Inverse Design with Machine Learning. <i>Advanced Science</i> , 2021, 8, 2002923.	5.6	86
32	Dynamic Hybrid Metasurfaces. <i>Nano Letters</i> , 2021, 21, 1238-1245.	4.5	85
33	Visualizing Optical Phase Anisotropy in Black Phosphorus. <i>ACS Photonics</i> , 2016, 3, 1176-1181.	3.2	84
34	Backward phase-matching for nonlinear optical generation in negative-index materials. <i>Nature Materials</i> , 2015, 14, 807-811.	13.3	73
35	An Active Metamaterial Platform for Chiral Responsive Optoelectronics. <i>Advanced Materials</i> , 2015, 27, 4377-4383.	11.1	70
36	Intensity-dependent modulation of optically active signals in a chiral metamaterial. <i>Nature Communications</i> , 2017, 8, .	5.8	69

#	ARTICLE	IF	CITATIONS
37	All-Optical Control of Light in Micro- and Nanophotonics. ACS Photonics, 2019, 6, 1082-1093.	3.2	68
38	Hot-Electron-Assisted Femtosecond All-Optical Modulation in Plasmonics. Advanced Materials, 2018, 30, 1704915.	11.1	61
39	Ultrafast Control of Phase and Polarization of Light Expedited by Hot-Electron Transfer. Nano Letters, 2018, 18, 5544-5551.	4.5	60
40	Metasurfaces for Near-Eye Augmented Reality. ACS Photonics, 2019, 6, 864-870.	3.2	57
41	A Hybrid Strategy for the Discovery and Design of Photonic Structures. IEEE Journal on Emerging and Selected Topics in Circuits and Systems, 2020, 10, 126-135.	2.7	52
42	Metamaterials Enable Chiral-Selective Enhancement of Two-Photon Luminescence from Quantum Emitters. Advanced Materials, 2015, 27, 1124-1130.	11.1	46
43	Broadband Sharp 90-degree Bends and T-Splitters in Plasmonic Coaxial Waveguides. Nano Letters, 2013, 13, 4753-4758.	4.5	42
44	Building Multifunctional Metasystems via Algorithmic Construction. ACS Nano, 2021, 15, 2318-2326.	7.3	42
45	Optical Metamagnetism and Negative-Index Metamaterials. MRS Bulletin, 2008, 33, 921-926.	1.7	34
46	Topological encoding method for data-driven photonics inverse design. Optics Express, 2020, 28, 4825.	1.7	31
47	In operando plasmonic monitoring of electrochemical evolution of lithium metal. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 11168-11173.	3.3	28
48	Electrically Biased Silicon Metasurfaces with Magnetic Mie Resonance for Tunable Harmonic Generation of Light. ACS Photonics, 2019, 6, 2663-2670.	3.2	27
49	Transient Second-Order Nonlinear Media: Breaking the Spatial Symmetry in the Time Domain via Hot-Electron Transfer. Physical Review Letters, 2020, 124, 013901.	2.9	24
50	Synthetic Engineering of Morphology and Electronic Band Gap in Lateral Heterostructures of Monolayer Transition Metal Dichalcogenides. ACS Nano, 2020, 14, 6323-6330.	7.3	24
51	Photocarrier-Induced Active Control of Second-Order Optical Nonlinearity in Monolayer MoS ₂ . Small, 2020, 16, e1906347.	5.2	24
52	Tunable Light Emission by Electrically Excited Plasmonic Antenna. ACS Photonics, 2019, 6, 2392-2396.	3.2	23
53	3D Volumetric Energy Deposition of Focused Helium Ion Beam Lithography: Visualization, Modeling, and Applications in Nanofabrication. Advanced Materials Interfaces, 2018, 5, 1800203.	1.9	22
54	Experimental demonstration of pattern effect compensation using an asymmetrical Mach-Zehnder interferometer with SOAs. IEEE Photonics Technology Letters, 2001, 13, 1325-1327.	1.3	20

#	ARTICLE	IF	CITATIONS
55	Electrically Tunable Harmonic Generation of Light from Plasmonic Structures in Electrolytes. Nano Letters, 2016, 16, 5074-5079.	4.5	19
56	Maximized Frequency Doubling through the Inverse Design of Nonlinear Metamaterials. ACS Nano, 2022, 16, 3926-3933.	7.3	18
57	Ultrasensitive Molecular Detection by Imaging of Centimeter-Scale Metasurfaces with a Deterministic Gradient Geometry. Advanced Materials, 2021, 33, e2100270.	11.1	15
58	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.	1.3	13
59	Tuning harmonics with excitons. Nature Nanotechnology, 2015, 10, 387-388.	15.6	13
60	Plasmonics gets transformed. Nature Nanotechnology, 2010, 5, 485-486.	15.6	12
61	Plasmonic Back Reflectors: Plasmonic Dye-Sensitized Solar Cells. Advanced Energy Materials, 2011, 1, 51-51.	10.2	11
62	Dark plasmonic modes in diatomic gratings for plasmoelectronics. Laser and Photonics Reviews, 2017, 11, 1600312.	4.4	11
63	Fast Non-Line-Of-Sight Imaging with Two-Step Deep Remapping. ACS Photonics, 2022, 9, 2046-2055.	3.2	8
64	Reply to 'The merits of plasmonic desalination'. Nature Photonics, 2017, 11, 70-71.	15.6	7
65	Reversible Photochemical Switching via Plasmonically Enhanced Upconversion Photoluminescence. Advanced Optical Materials, 2021, 9, 2100776.	3.6	6
66	Impact of front-end wearout mechanisms on FinFET SRAM soft error rate. Microelectronics Reliability, 2019, 100-101, 113487.	0.9	5
67	A Comprehensive Framework for Analysis of Time-Dependent Performance-Reliability Degradation of SRAM Cache Memory. IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 2021, 29, 857-870.	2.1	3
68	Suppression of waveform distortion in semiconductor optical amplifier using internal birefringence and slope filtering. Electronics Letters, 2001, 37, 704.	0.5	3
69	A library based on deep neural networks for modeling the degradation of FinFET SRAM performance metrics due to aging. Microelectronics Reliability, 2019, 100-101, 113486.	0.9	2
70	Engineering Radiative Energy Transfer and Directional Excitonic Emission in van der Waals Heterostructures. Laser and Photonics Reviews, 2022, 16, .	4.4	2
71	Noninverted wavelength conversion with signal improvement and chirp compression utilizing birefringence in SOAs. Optics Communications, 2001, 191, 229-234.	1.0	1
72	Programmable optical add/drop multiplexer with enhanced temperature sensitivity. Optics Communications, 2001, 200, 153-157.	1.0	1

#	ARTICLE	IF	CITATIONS
73	Inverse Design of FinFET SRAM Cells. , 2020, , .		1
74	A Chiral Metamaterial for Chiral Responsive Optoelectronic Transduction. , 2016, , .		1
75	Enhanced performance with optimized input power and increased dynamic range for wavelength conversion using four-wave mixing in SOAs. Optics Communications, 2001, 193, 245-251.	1.0	0
76	Enhancing the efficiency of solid-state dye-sensitized solar cells with plasmonic back reflectors. , 2011, , .		0
77	Electrifying photonic metamaterials for tunable nonlinear optics and unconventional phase matching schemes. , 2015, , .		0
78	Modulating optically active signals in a chiral metamaterial with varied input intensities. , 2017, , .		0
79	All-optical modulation of ultrasharp lattice plasmons. , 2017, , .		0
80	A Chiral Meta-Mirror Enabled Linear and Nonlinear Chiroptical Responses. , 2018, , .		0
81	Metasurfaces, Metadevices, and Metasystems: Hierarchical Photonics via Machine Learning. , 2020, , .		0
82	Building Multi-functional Meta-optic Systems through Deep Learning. , 2021, , .		0
83	Artificial Intelligence Meets Engineered Photonic Materials: introduction to special issue. Optical Materials Express, 2021, 11, 3431.	1.6	0
84	Enhancement of Two-Photon Luminescence from Quantum Emitters: Metamaterial-Enabled Chiral Selectivity. , 2015, , .		0
85	Achiral Nanoprobes Extract Chiral Signals from within Chiral Metamaterials. , 2016, , .		0
86	Optical Tuning of Second-Order Optical Nonlinearity in Transition Metal Dichalcogenides. , 2020, , .		0
87	Breaking the Inversion Symmetry via Hot-Electron Transport. , 2020, , .		0