

Nanfang Yu

List of Publications by Year in descending order

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Version: 2024-02-01

91
papers

27,786
citations

38742

50
h-index

71685

76
g-index

94
all docs

94
docs citations

94
times ranked

17868
citing authors

#	ARTICLE	IF	CITATIONS
1	Light Propagation with Phase Discontinuities: Generalized Laws of Reflection and Refraction. Science, 2011, 334, 333-337.	12.6	7,240
2	Flat optics with designer metasurfaces. Nature Materials, 2014, 13, 139-150.	27.5	4,358
3	Coaxial silicon nanowires as solar cells and nanoelectronic power sources. Nature, 2007, 449, 885-889.	27.8	2,791
4	Aberration-Free Ultrathin Flat Lenses and Axicons at Telecom Wavelengths Based on Plasmonic Metasurfaces. Nano Letters, 2012, 12, 4932-4936.	9.1	1,528
5	A review of metasurfaces: physics and applications. Reports on Progress in Physics, 2016, 79, 076401.	20.1	1,524
6	Hierarchically porous polymer coatings for highly efficient passive daytime radiative cooling. Science, 2018, 362, 315-319.	12.6	1,120
7	A Broadband, Background-Free Quarter-Wave Plate Based on Plasmonic Metasurfaces. Nano Letters, 2012, 12, 6328-6333.	9.1	1,065
8	Broad Electrical Tuning of Graphene-Loaded Plasmonic Antennas. Nano Letters, 2013, 13, 1257-1264.	9.1	558
9	Out-of-Plane Reflection and Refraction of Light by Anisotropic Optical Antenna Metasurfaces with Phase Discontinuities. Nano Letters, 2012, 12, 1702-1706.	9.1	506
10	Keeping cool: Enhanced optical reflection and radiative heat dissipation in Saharan silver ants. Science, 2015, 349, 298-301.	12.6	473
11	Ultra-thin plasmonic optical vortex plate based on phase discontinuities. Applied Physics Letters, 2012, 100, .	3.3	451
12	Broadband achromatic dielectric metalenses. Light: Science and Applications, 2018, 7, 85.	16.6	449
13	Controlling propagation and coupling of waveguide modes using phase-gradient metasurfaces. Nature Nanotechnology, 2017, 12, 675-683.	31.5	323
14	Dielectric metasurfaces for complete and independent control of the optical amplitude and phase. Light: Science and Applications, 2019, 8, 92.	16.6	278
15	Designer spoof surface plasmon structures collimate terahertz laser beams. Nature Materials, 2010, 9, 730-735.	27.5	260
16	Flat Optics: Controlling Wavefronts With Optical Antenna Metasurfaces. IEEE Journal of Selected Topics in Quantum Electronics, 2013, 19, 4700423-4700423.	2.9	258
17	Paints as a Scalable and Effective Radiative Cooling Technology for Buildings. Joule, 2020, 4, 1350-1356.	24.0	257
18	Small-divergence semiconductor lasers by plasmonic collimation. Nature Photonics, 2008, 2, 564-570.	31.4	216

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19	Whispering-gallery mode resonators for highly unidirectional laser action. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 22407-22412.	7.1	185
20	Porous Polymers with Switchable Optical Transmittance for Optical and Thermal Regulation. Joule, 2019, 3, 3088-3099.	24.0	175
21	Colored and paintable bilayer coatings with high solar-infrared reflectance for efficient cooling. Science Advances, 2020, 6, eaaz5413.	10.3	148
22	Bowtie plasmonic quantum cascade laser antenna. Optics Express, 2007, 15, 13272.	3.4	146
23	Perovskite nickelates as electric-field sensors in salt water. Nature, 2018, 553, 68-72.	27.8	146
24	Spoof plasmon analogue of metal-insulator-metal waveguides. Optics Express, 2011, 19, 14860.	3.4	145
25	Chiral Quasi-Bound States in the Continuum. Physical Review Letters, 2021, 126, 073001.	7.8	145
26	Modulation of mid-infrared light using graphene-metal plasmonic antennas. Applied Physics Letters, 2013, 102, .	3.3	144
27	Metasurface-assisted phase-matching-free second harmonic generation in lithium niobate waveguides. Nature Communications, 2017, 8, 2098.	12.8	137
28	Effect of radiation damping on the spectral response of plasmonic components. Optics Express, 2011, 19, 21748.	3.4	129
29	Selection rules for quasibound states in the continuum. Physical Review B, 2020, 102, .	3.2	129
30	$\text{Li}_4\text{Ti}_5\text{O}_{12}$: A Visible-to-Infrared Broadband Electrochromic Material for Optical and Thermal Management. Advanced Functional Materials, 2018, 28, 1802180.	14.9	123
31	Scalable, Dip-and-Dry-Fabrication of a Wide-Angle Plasmonic Selective Absorber for High-Efficiency Solar-Thermal Energy Conversion. Advanced Materials, 2017, 29, 1702156.	21.0	119
32	High efficiency near diffraction-limited mid-infrared flat lenses based on metasurface reflectarrays. Optics Express, 2016, 24, 18024.	3.4	114
33	Plasmonic Laser Antennas and Related Devices. IEEE Journal of Selected Topics in Quantum Electronics, 2008, 14, 1448-1461.	2.9	111
34	Multifunctional Nonlocal Metasurfaces. Physical Review Letters, 2020, 125, 017402.	7.8	109
35	Designing Mesoporous Photonic Structures for High-Performance Passive Daytime Radiative Cooling. Nano Letters, 2021, 21, 1412-1418.	9.1	106
36	Directional emission and universal far-field behavior from semiconductor lasers with limaçon-shaped microcavity. Applied Physics Letters, 2009, 94, .	3.3	103

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37	Optical Metasurfaces and Prospect of Their Applications Including Fiber Optics. <i>Journal of Lightwave Technology</i> , 2015, 33, 2344-2358.	4.6	102
38	Optical conductivity-based ultrasensitive mid-infrared biosensing on a hybrid metasurface. <i>Light: Science and Applications</i> , 2018, 7, 67.	16.6	98
39	Modeling nanoscale V-shaped antennas for the design of optical phased arrays. <i>Physical Review B</i> , 2012, 85, .	3.2	96
40	Physical and behavioral adaptations to prevent overheating of the living wings of butterflies. <i>Nature Communications</i> , 2020, 11, 551.	12.8	95
41	Dimerized high contrast gratings. <i>Nanophotonics</i> , 2018, 7, 1157-1168.	6.0	93
42	Indium Tin Oxide Broadband Metasurface Absorber. <i>ACS Photonics</i> , 2018, 5, 3526-3533.	6.6	78
43	Tunability of indium tin oxide materials for mid-infrared plasmonics applications. <i>Optical Materials Express</i> , 2017, 7, 2727.	3.0	74
44	Scalable Aqueous Processing-Based Passive Daytime Radiative Cooling Coatings. <i>Advanced Functional Materials</i> , 2021, 31, 2010334.	14.9	74
45	Correlated Perovskites as a New Platform for Super-Broadband-Tunable Photonics. <i>Advanced Materials</i> , 2016, 28, 9117-9125.	21.0	72
46	Plasmonic quantum cascade laser antenna. <i>Applied Physics Letters</i> , 2007, 91, 173113.	3.3	70
47	Semiconductor lasers with integrated plasmonic polarizers. <i>Applied Physics Letters</i> , 2009, 94, .	3.3	64
48	Nanostructured fibers as a versatile photonic platform: radiative cooling and waveguiding through transverse Anderson localization. <i>Light: Science and Applications</i> , 2018, 7, 37.	16.6	60
49	Quantum cascade lasers with integrated plasmonic antenna-array collimators. <i>Optics Express</i> , 2008, 16, 19447.	3.4	54
50	Robust, efficient, micrometre-scale phase modulators at visible wavelengths. <i>Nature Photonics</i> , 2021, 15, 908-913.	31.4	53
51	Small divergence edge-emitting semiconductor lasers with two-dimensional plasmonic collimators. <i>Applied Physics Letters</i> , 2008, 93, .	3.3	51
52	Coherent Coupling of Multiple Transverse Modes in Quantum Cascade Lasers. <i>Physical Review Letters</i> , 2009, 102, 013901.	7.8	50
53	Hybrid Metasurface-Based Mid-Infrared Biosensor for Simultaneous Quantification and Identification of Monolayer Protein. <i>ACS Photonics</i> , 2019, 6, 501-509.	6.6	47
54	High-Performance Quantum Cascade Lasers Grown by Metal-Organic Vapor Phase Epitaxy and Their Applications to Trace Gas Sensing. <i>Journal of Lightwave Technology</i> , 2008, 26, 3534-3555.	4.6	46

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55	Near-field imaging of quantum cascade laser transverse modes. <i>Optics Express</i> , 2007, 15, 13227.	3.4	41
56	Active nonlocal metasurfaces. <i>Nanophotonics</i> , 2020, 10, 655-665.	6.0	40
57	Deformed microcavity quantum cascade lasers with directional emission. <i>New Journal of Physics</i> , 2009, 11, 125018.	2.9	33
58	A Scalable Dealloying Technique To Create Thermally Stable Plasmonic Nickel Selective Solar Absorbers. <i>ACS Applied Energy Materials</i> , 2019, 2, 6551-6557.	5.1	30
59	The evolution of red color vision is linked to coordinated rhodopsin tuning in lycaenid butterflies. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	7.1	30
60	Targeted Sub-Attomole Cancer Biomarker Detection Based on Phase Singularity 2D Nanomaterial-Enhanced Plasmonic Biosensor. <i>Nano-Micro Letters</i> , 2021, 13, 96.	27.0	30
61	Multi-wavelength mid-infrared plasmonic antennas with single nanoscale focal point. <i>Optics Express</i> , 2011, 19, 22113.	3.4	29
62	Gain competition in dual wavelength quantum cascade lasers. <i>Optics Express</i> , 2010, 18, 9900.	3.4	28
63	Planar nonlinear metasurface optics and their applications. <i>Reports on Progress in Physics</i> , 2020, 83, 126101.	20.1	22
64	Multi-beam multi-wavelength semiconductor lasers. <i>Applied Physics Letters</i> , 2009, 95, .	3.3	21
65	Controlled modification of erbium lifetime in silicon dioxide with metallic overlayers. <i>Applied Physics Letters</i> , 2007, 91, 131103.	3.3	20
66	Design and experiment of a sun-powered smart building envelope with automatic control. <i>Energy and Buildings</i> , 2020, 223, 110173.	6.7	19
67	Plasmonic Metasensors Based on 2D Hybrid Atomically Thin Perovskite Nanomaterials. <i>Nanomaterials</i> , 2020, 10, 1289.	4.1	18
68	High-power low-divergence tapered quantum cascade lasers with plasmonic collimators. <i>Applied Physics Letters</i> , 2013, 102, .	3.3	14
69	Self-Synchronization of Laser Modes and Multistability in Quantum Cascade Lasers. <i>Physical Review Letters</i> , 2011, 106, 133902.	7.8	13
70	Nonlinear optical interactions of laser modes in quantum cascade lasers. <i>Journal of Modern Optics</i> , 2011, 58, 727-742.	1.3	12
71	Enhanced harmonic generation in gases using an all-dielectric metasurface. <i>Nanophotonics</i> , 2020, 10, 733-740.	6.0	11
72	Nonlinear coupling of transverse modes in quantum cascade lasers. <i>Optical Engineering</i> , 2010, 49, 111114.	1.0	8

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73	Resonance for Analog Recurrent Neural Network. ACS Photonics, 2022, 9, 1647-1654.	6.6	5
74	Nonlinear dynamics of coupled transverse modes in quantum cascade lasers. Journal of Modern Optics, 2010, 57, 1892-1899.	1.3	3
75	Selective Solar Absorbers: Scalable, "Dip" and "Dry" Fabrication of a Wide-Angle Plasmonic Selective Absorber for High-Efficiency Solar Thermal Energy Conversion (Adv. Mater. 41/2017). Advanced Materials, 2017, 29, .	21.0	2
76	Micron-scale, Efficient, Robust Phase Modulators in the Visible. , 2019, , .		2
77	Coaxial silicon nanowires as solar cells and nanoelectronic power sources. , 2010, , 58-62.		1
78	Free-Space Modulators Based on Dimerized High Contrast Gratings. , 2019, , .		1
79	Variable Emissivity Coatings Based on Plasmonic Metasurfaces Integrated with Phase-Transition Materials. , 2017, , .		1
80	Symmetry-Broken High Contrast Gratings. , 2019, , .		1
81	Robust Miniature Pure-Phase Modulators at $k = 488$ nm. , 2020, , .		1
82	Controlled Modification of Erbium Lifetime in Silicon Dioxide Film with Chromium or Titanium Coatings. Materials Research Society Symposia Proceedings, 2007, 1055, 1.	0.1	0
83	Plasmonic quantum cascade laser antenna. , 2007, , .		0
84	Low divergence semiconductor lasers by plasmonic collimation. , 2008, , .		0
85	Coherent coupling of multiple transverse modes in a quantum cascade laser. , 2008, , .		0
86	Wavefront engineering of semiconductor lasers using plasmonics. , 2010, , .		0
87	Active metasurface devices based on correlated perovskites. , 2016, , .		0
88	Tunable mid-infrared biosensors based on graphene metasurfaces. , 2017, , .		0
89	Multifunctional Resonant Wavefront-Shaping Meta-Optics. , 2021, , .		0
90	Structured Polymers for High-Performance Passive Daytime Radiative Cooling. , 2019, , .		0

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91	Enhancement of harmonic generation in gases using an all-dielectric metasurface. , 2019, , .		0