

Federico Capasso

List of Publications by Year in descending order

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319
papers

47,711
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3955

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324
all docs

324
docs citations

324
times ranked

19076
citing authors

#	ARTICLE	IF	CITATIONS
1	Light Propagation with Phase Discontinuities: Generalized Laws of Reflection and Refraction. Science, 2011, 334, 333-337.	12.8	7,240
2	Quantum Cascade Laser. Science, 1994, 264, 553-556.	12.8	4,380
3	Flat optics with designer metasurfaces. Nature Materials, 2014, 13, 139-150.	28.1	4,358
4	Metalenses at visible wavelengths: Diffraction-limited focusing and subwavelength resolution imaging. Science, 2016, 352, 1190-1194.	12.8	2,435
5	Aberration-Free Ultrathin Flat Lenses and Axicons at Telecom Wavelengths Based on Plasmonic Metasurfaces. Nano Letters, 2012, 12, 4932-4936.	9.3	1,528
6	A broadband achromatic metalens for focusing and imaging in the visible. Nature Nanotechnology, 2018, 13, 220-226.	32.1	1,190
7	A Broadband, Background-Free Quarter-Wave Plate Based on Plasmonic Metasurfaces. Nano Letters, 2012, 12, 6328-6333.	9.3	1,065
8	Metasurface Polarization Optics: Independent Phase Control of Arbitrary Orthogonal States of Polarization. Physical Review Letters, 2017, 118, 113901.	7.9	1,033
9	Multiwavelength achromatic metasurfaces by dispersive phase compensation. Science, 2015, 347, 1342-1345.	12.8	868
10	Recent advances in planar optics: from plasmonic to dielectric metasurfaces. Optica, 2017, 4, 139.	9.4	837
11	Arbitrary spin-to-orbital angular momentum conversion of light. Science, 2017, 358, 896-901.	12.8	828
12	High-Power Directional Emission from Microlasers with Chaotic Resonators. Science, 1998, 280, 1556-1564.	12.8	709
13	Metalenses: Versatile multifunctional photonic components. Science, 2017, 358, .	12.8	671
14	Polarization-Insensitive Metalenses at Visible Wavelengths. Nano Letters, 2016, 16, 7229-7234.	9.3	532
15	Ultra-thin perfect absorber employing a tunable phase change material. Applied Physics Letters, 2012, 101, .	3.4	519
16	Out-of-Plane Reflection and Refraction of Light by Anisotropic Optical Antenna Metasurfaces with Phase Discontinuities. Nano Letters, 2012, 12, 1702-1706.	9.3	506
17	Matrix Fourier optics enables a compact full-Stokes polarization camera. Science, 2019, 365, .	12.8	471
18	Achromatic Metalens over 60 nm Bandwidth in the Visible and Metalens with Reverse Chromatic Dispersion. Nano Letters, 2017, 17, 1819-1824.	9.3	453

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19	Ultra-thin plasmonic optical vortex plate based on phase discontinuities. Applied Physics Letters, 2012, 100, .	3.4	451
20	Broadband high-efficiency dielectric metasurfaces for the visible spectrum. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 10473-10478.	7.2	417
21	Flat optics with dispersion-engineered metasurfaces. Nature Reviews Materials, 2020, 5, 604-620.	49.6	411
22	The Casimir effect in microstructured geometries. Nature Photonics, 2011, 5, 211-221.	32.0	387
23	Achromatic Metasurface Lens at Telecommunication Wavelengths. Nano Letters, 2015, 15, 5358-5362.	9.3	367
24	Multispectral Chiral Imaging with a Metalens. Nano Letters, 2016, 16, 4595-4600.	9.3	360
25	Meta-Lens Doublet in the Visible Region. Nano Letters, 2017, 17, 4902-4907.	9.3	328
26	A broadband achromatic polarization-insensitive metalens consisting of anisotropic nanostructures. Nature Communications, 2019, 10, 355.	13.0	297
27	Terahertz quantum-cascade-laser source based on intracavity difference-frequency generation. Nature Photonics, 2007, 1, 288-292.	32.0	283
28	Adaptive metalenses with simultaneous electrical control of focal length, astigmatism, and shift. Science Advances, 2018, 4, eaap9957.	10.5	275
29	Broadband and chiral binary dielectric meta-holograms. Science Advances, 2016, 2, e1501258.	10.5	266
30	Quantum cascade lasers: ultrahigh-speed operation, optical wireless communication, narrow linewidth, and far-infrared emission. IEEE Journal of Quantum Electronics, 2002, 38, 511-532.	1.9	265
31	Holographic optical metasurfaces: a review of current progress. Reports on Progress in Physics, 2015, 78, 024401.	20.3	263
32	Flat Optics: Controlling Wavefronts With Optical Antenna Metasurfaces. IEEE Journal of Selected Topics in Quantum Electronics, 2013, 19, 4700423-4700423.	3.0	258
33	Nano-optic endoscope for high-resolution optical coherence tomography in vivo. Nature Photonics, 2018, 12, 540-547.	32.0	255
34	Giant intrinsic chiro-optical activity in planar dielectric nanostructures. Light: Science and Applications, 2018, 7, 17158-17158.	17.0	234
35	High-purity orbital angular momentum states from a visible metasurface laser. Nature Photonics, 2020, 14, 498-503.	32.0	230
36	Laser action in nanowires: Observation of the transition from amplified spontaneous emission to laser oscillation. Applied Physics Letters, 2008, 93, .	3.4	223

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37	Casimir Forces and Quantum Electrodynamical Torques: Physics and Nanomechanics. IEEE Journal of Selected Topics in Quantum Electronics, 2007, 13, 400-414.	3.0	219
38	Small-divergence semiconductor lasers by plasmonic collimation. Nature Photonics, 2008, 2, 564-570.	32.0	216
39	Generation of wavelength-independent subwavelength Bessel beams using metasurfaces. Light: Science and Applications, 2017, 6, e16259-e16259.	17.0	213
40	Metasurface optics for on-demand polarization transformations along the optical path. Nature Photonics, 2021, 15, 287-296.	32.0	212
41	Widely tunable mode-hop free external cavity quantum cascade lasers for high resolution spectroscopy and chemical sensing. Applied Physics B: Lasers and Optics, 2008, 92, 305-311.	2.2	202
42	Room temperature terahertz quantum cascade laser source based on intracavity difference-frequency generation. Applied Physics Letters, 2008, 92, .	3.4	199
43	Optical absorbers based on strong interference in ultra-thin films. Laser and Photonics Reviews, 2016, 10, 735-749.	8.9	194
44	Active Optical Metasurfaces Based on Defect-Engineered Phase-Transition Materials. Nano Letters, 2016, 16, 1050-1055.	9.3	186
45	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.	7.2	185
46	Multimode regimes in quantum cascade lasers: From coherent instabilities to spatial hole burning. Physical Review A, 2008, 77, .	2.5	184
47	Ultracompact metasurface in-line polarimeter. Optica, 2016, 3, 42.	9.4	183
48	Lateral chirality-sorting optical forces. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 13190-13194.	7.2	182
49	3 W continuous-wave room temperature single-facet emission from quantum cascade lasers based on nonresonant extraction design approach. Applied Physics Letters, 2009, 95, .	3.4	180
50	Super-Dispersive Off-Axis Meta-Lenses for Compact High Resolution Spectroscopy. Nano Letters, 2016, 16, 3732-3737.	9.3	179
51	Inverse design of large-area metasurfaces. Optics Express, 2018, 26, 33732.	3.4	177
52	Giant birefringence in optical antenna arrays with widely tailorable optical anisotropy. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 12364-12368.	7.2	176
53	1.6 W high wall plug efficiency, continuous-wave room temperature quantum cascade laser emitting at 4.6 μ m. Applied Physics Letters, 2008, 92, .	3.4	171
54	Mode-locked pulses from mid-infrared Quantum Cascade Lasers. Optics Express, 2009, 17, 12929.	3.4	168

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55	Single-Layer Metasurface with Controllable Multiwavelength Functions. Nano Letters, 2018, 18, 2420-2427.	9.3	165
56	All-Glass, Large Metalens at Visible Wavelength Using Deep-Ultraviolet Projection Lithography. Nano Letters, 2019, 19, 8673-8682.	9.3	165
57	Aberrations of flat lenses and aplanatic metasurfaces. Optics Express, 2013, 21, 31530.	3.4	163
58	Large area metalenses: design, characterization, and mass manufacturing. Optics Express, 2018, 26, 1573.	3.4	162
59	Spin-to-orbital angular momentum conversion in dielectric metasurfaces. Optics Express, 2017, 25, 377.	3.4	160
60	Immersion Meta-Lenses at Visible Wavelengths for Nanoscale Imaging. Nano Letters, 2017, 17, 3188-3194.	9.3	155
61	Tunable structured light with flat optics. Science, 2022, 376, eabi6860.	12.8	147
62	Continuous angle-tunable birefringence with freeform metasurfaces for arbitrary polarization conversion. Science Advances, 2020, 6, eaba3367.	10.5	143
63	Meta-optics achieves RGB-achromatic focusing for virtual reality. Science Advances, 2021, 7, .	10.5	142
64	Broadband Achromatic Metasurface-Refractive Optics. Nano Letters, 2018, 18, 7801-7808.	9.3	138
65	Topology-Optimized Multilayered Metaoptics. Physical Review Applied, 2018, 9, .	3.8	129
66	Dynamic metasurface lens based on MEMS technology. APL Photonics, 2018, 3, .	5.7	120
67	Torque on birefringent plates induced by quantum fluctuations. Physical Review A, 2005, 71, .	2.5	119
68	Controlled steering of Cherenkov surface plasmon wakes with a one-dimensional metamaterial. Nature Nanotechnology, 2015, 10, 804-809.	32.1	119
69	Coherent instabilities in a semiconductor laser with fast gain recovery. Physical Review A, 2007, 75, .	2.5	117
70	Designing large, high-efficiency, high-numerical-aperture, transmissive meta-lenses for visible light. Optics Express, 2016, 24, 5110.	3.4	117
71	High efficiency near diffraction-limited mid-infrared flat lenses based on metasurface reflectarrays. Optics Express, 2016, 24, 18024.	3.4	114
72	Kilohertz linewidth from frequency-stabilized mid-infrared quantum cascade lasers. Optics Letters, 1999, 24, 1844.	3.4	113

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73	The future and promise of flat optics: a personal perspective. <i>Nanophotonics</i> , 2018, 7, 953-957.	6.1	113
74	Plasmonic Laser Antennas and Related Devices. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2008, 14, 1448-1461.	3.0	111
75	High-Temperature Operation of Terahertz Quantum Cascade Laser Sources. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2009, 15, 952-967.	3.0	111
76	Ultra-compact visible chiral spectrometer with meta-lenses. <i>APL Photonics</i> , 2017, 2, .	5.7	108
77	Concepts in quantum state tomography and classical implementation with intense light: a tutorial. <i>Advances in Optics and Photonics</i> , 2019, 11, 67.	25.9	107
78	Polariton nanophotonics using phase-change materials. <i>Nature Communications</i> , 2019, 10, 4487.	13.0	106
79	Compact single-shot metalens depth sensors inspired by eyes of jumping spiders. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 22959-22965.	7.2	105
80	Directional emission and universal far-field behavior from semiconductor lasers with limaçon-shaped microcavity. <i>Applied Physics Letters</i> , 2009, 94, .	3.4	103
81	Optical Metasurfaces and Prospect of Their Applications Including Fiber Optics. <i>Journal of Lightwave Technology</i> , 2015, 33, 2344-2358.	4.6	102
82	Ultra-confined mid-infrared resonant phonon polaritons in van der Waals nanostructures. <i>Science Advances</i> , 2018, 4, eaat7189.	10.5	100
83	Broadband Multifunctional Efficient Meta-Gratings Based on Dielectric Waveguide Phase Shifters. <i>Nano Letters</i> , 2015, 15, 6709-6715.	9.3	99
84	Modeling nanoscale V-shaped antennas for the design of optical phased arrays. <i>Physical Review B</i> , 2012, 85, .	3.2	96
85	Optical nanorod antennas as dispersive one-dimensional Fabry-Pérot resonators for surface plasmons. <i>Applied Physics Letters</i> , 2009, 95, .	3.4	95
86	DFB Quantum Cascade Laser Arrays. <i>IEEE Journal of Quantum Electronics</i> , 2009, 45, 554-565.	1.9	94
87	Optimized second-harmonic generation in quantum cascade lasers. <i>IEEE Journal of Quantum Electronics</i> , 2003, 39, 1345-1355.	1.9	93
88	Exciton-related electroluminescence from ZnO nanowire light-emitting diodes. <i>Applied Physics Letters</i> , 2009, 94, .	3.4	90
89	Epsilon-Near-Zero Substrate Engineering for Ultrathin-Film Perfect Absorbers. <i>Physical Review Applied</i> , 2017, 8, .	3.8	88
90	Polarization state generation and measurement with a single metasurface. <i>Optics Express</i> , 2018, 26, 21455.	3.4	88

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91	Frequency combs induced by phase turbulence. <i>Nature</i> , 2020, 582, 360-364.	28.1	87
92	Quantum cascade disk lasers. <i>Applied Physics Letters</i> , 1996, 69, 2456-2458.	3.4	86
93	Gain Recovery Dynamics and Photon-Driven Transport in Quantum Cascade Lasers. <i>Physical Review Letters</i> , 2008, 100, 167401.	7.9	85
94	Dielectric multi-momentum meta-transformer in the visible. <i>Nature Communications</i> , 2019, 10, 4789.	13.0	82
95	Inverse design enables large-scale high-performance meta-optics reshaping virtual reality. <i>Nature Communications</i> , 2022, 13, 2409.	13.0	82
96	Tetrahedral Colloidal Clusters from Random Parking of Bidisperse Spheres. <i>Physical Review Letters</i> , 2013, 110, 148303.	7.9	80
97	Selective excitation and imaging of ultraslow phonon polaritons in thin hexagonal boron nitride crystals. <i>Light: Science and Applications</i> , 2018, 7, 27.	17.0	75
98	Self-starting harmonic frequency comb generation in a quantum cascade laser. <i>Nature Photonics</i> , 2017, 11, 789-792.	32.0	74
99	Measurement of bound states in the continuum by a detector embedded in a photonic crystal. <i>Light: Science and Applications</i> , 2016, 5, e16147-e16147.	17.0	73
100	Holographic Metalens for Switchable Focusing of Surface Plasmons. <i>Nano Letters</i> , 2015, 15, 3585-3589.	9.3	72
101	High performance quantum cascade lasers based on three-phonon-resonance design. <i>Applied Physics Letters</i> , 2009, 94, .	3.4	71
102	Single-mode instability in standing-wave lasers: The quantum cascade laser as a self-pumped parametric oscillator. <i>Physical Review A</i> , 2016, 94, .	2.5	71
103	Engineering phonon polaritons in van der Waals heterostructures to enhance in-plane optical anisotropy. <i>Science Advances</i> , 2019, 5, eaau7171.	10.5	71
104	High power thermoelectrically cooled and uncooled quantum cascade lasers with optimized reflectivity facet coatings. <i>Applied Physics Letters</i> , 2009, 95, .	3.4	70
105	Scalable, ultra-resistant structural colors based on network metamaterials. <i>Light: Science and Applications</i> , 2017, 6, e16233-e16233.	17.0	70
106	Widely tunable compact terahertz gas lasers. <i>Science</i> , 2019, 366, 856-860.	12.8	69
107	Jones matrix holography with metasurfaces. <i>Science Advances</i> , 2021, 7, .	10.5	67
108	Solid-immersion metalenses for infrared focal plane arrays. <i>Applied Physics Letters</i> , 2018, 113, .	3.4	66

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109	Optical properties of metasurfaces infiltrated with liquid crystals. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 20390-20396.	7.2	66
110	Multifunctional wide-angle optics and lasing based on supercell metasurfaces. Nature Communications, 2021, 12, 3787.	13.0	66
111	Semiconductor lasers with integrated plasmonic polarizers. Applied Physics Letters, 2009, 94, .	3.4	64
112	Broadband Distributed-Feedback Quantum Cascade Laser Array Operating From 8.0 to 9.8 μm . IEEE Photonics Technology Letters, 2009, 21, 914-916.	2.5	63
113	Gigahertz free-space electro-optic modulators based on Mie resonances. Nature Communications, 2022, 13, .	13.0	63
114	Visible Wavelength Planar Metalenses Based on Titanium Dioxide. IEEE Journal of Selected Topics in Quantum Electronics, 2017, 23, 43-58.	3.0	62
115	In-Phase and Anti-Phase Synchronization in a Laser Frequency Comb. Physical Review Letters, 2020, 124, 023901.	7.9	61
116	Layered superconductors as negative-refractive-index metamaterials. Physical Review B, 2010, 81, .	3.2	59
117	Limiting Factors to the Temperature Performance of THz Quantum Cascade Lasers Based on the Resonant-Phonon Depopulation Scheme. IEEE Transactions on Terahertz Science and Technology, 2012, 2, 83-92.	3.1	59
118	Structuring total angular momentum of light along the propagation direction with polarization-controlled meta-optics. Nature Communications, 2021, 12, 6249.	13.0	59
119	Ultrafast Rabi flopping and coherent pulse propagation in a quantum cascade laser. Nature Photonics, 2010, 4, 706-710.	32.0	58
120	Electro-optic spatial light modulator from an engineered organic layer. Nature Communications, 2021, 12, 5928.	13.0	58
121	Imaging Performance of Polarization-Insensitive Metalenses. ACS Photonics, 2019, 6, 1493-1499.	6.8	57
122	Beam engineering of quantum cascade lasers. Laser and Photonics Reviews, 2012, 6, 24-46.	8.9	56
123	Near-Field Imaging of Phased Array Metasurfaces. Nano Letters, 2015, 15, 3851-3858.	9.3	55
124	Empowering Metasurfaces with Inverse Design: Principles and Applications. ACS Photonics, 2022, 9, 2178-2192.	6.8	53
125	Theoretical and experimental study of optical gain and linewidth enhancement factor of type-I quantum-cascade lasers. IEEE Journal of Quantum Electronics, 2004, 40, 1663-1674.	1.9	52
126	Compact Aberration-Corrected Spectrometers in the Visible Using Dispersion-Tailored Metasurfaces. Advanced Optical Materials, 2019, 7, 1801144.	7.4	52

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127	Small divergence edge-emitting semiconductor lasers with two-dimensional plasmonic collimators. Applied Physics Letters, 2008, 93, .	3.4	51
128	Watt-Level Continuous-Wave Emission from a Bifunctional Quantum Cascade Laser/Detector. ACS Photonics, 2017, 4, 1225-1231.	6.8	50
129	Quantum electrodynamics of accelerated atoms in free space and in cavities. Physical Review A, 2006, 74, .	2.5	49
130	Frequency modulation spectroscopy by means of quantum-cascade lasers. Applied Physics B: Lasers and Optics, 2006, 85, 223-229.	2.2	49
131	Mechanical Detection and Imaging of Hyperbolic Phonon Polaritons in Hexagonal Boron Nitride. ACS Nano, 2017, 11, 8741-8746.	14.9	48
132	Polarization in diffractive optics and metasurfaces. Advances in Optics and Photonics, 2021, 13, 836.	25.9	48
133	High-Performance Quantum Cascade Lasers Grown by Metal-Organic Vapor Phase Epitaxy and Their Applications to Trace Gas Sensing. Journal of Lightwave Technology, 2008, 26, 3534-3555.	4.6	46
134	Multi-wavelength quantum cascade laser arrays. Laser and Photonics Reviews, 2015, 9, 452-477.	8.9	45
135	Classical and fluctuation-induced electromagnetic interactions in micron-scale systems: designer bonding, antibonding, and Casimir forces. Annalen Der Physik, 2015, 527, 45-80.	2.4	45
136	Will flat optics appear in everyday life anytime soon?. Applied Physics Letters, 2021, 118, .	3.4	44
137	Low-threshold continuous-wave operation of quantum-cascade lasers grown by metalorganic vapor phase epitaxy. Applied Physics Letters, 2004, 85, 5842-5844.	3.4	43
138	High-Operating-Temperature Direct Ink Writing of Mesoscale Eutectic Architectures. Advanced Materials, 2017, 29, 1604778.	21.5	41
139	Roadmap on multimode light shaping. Journal of Optics (United Kingdom), 2022, 24, 013001.	2.2	41
140	Generation of picosecond pulses and frequency combs in actively mode locked external ring cavity quantum cascade lasers. Applied Physics Letters, 2013, 103, .	3.4	39
141	Time-dependent population inversion gratings in laser frequency combs. Optica, 2018, 5, 475.	9.4	39
142	Versatile total angular momentum generation using cascaded J-plates. Optics Express, 2019, 27, 7469.	3.4	39
143	Control of buckling in large micromembranes using engineered support structures. Journal of Micromechanics and Microengineering, 2012, 22, 065028.	2.6	38
144	A High Aspect Ratio Inverse-Designed Holey Metalens. Nano Letters, 2021, 21, 8642-8649.	9.3	38

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145	Reply to "Comment on "Precision measurement of the Casimir-Lifshitz force in a fluid" Physical Review A, 2008, 77, .	2.5	37
146	Study of photocurrent generation in InP nanowire-based p+i-n+ photodetectors. Nano Research, 2014, 7, 544-552.	10.5	37
147	Mitigating Chromatic Dispersion with Hybrid Optical Metasurfaces. Advanced Materials, 2019, 31, e1805555.	21.5	37
148	Mode-locked short pulses from an 8 μ m wavelength semiconductor laser. Nature Communications, 2020, 11, 5788.	13.0	37
149	High-efficiency chiral meta-lens. Scientific Reports, 2018, 8, 7240.	3.4	36
150	Instability-induced pattern formation of photoactivated functional polymers. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 17017-17022.	7.2	34
151	Imaging polarimetry through metasurface polarization gratings. Optics Express, 2022, 30, 9389.	3.4	34
152	Mid-infrared two-photon absorption in an extended-wavelength InGaAs photodetector. Applied Physics Letters, 2018, 112, .	3.4	33
153	Optimization of broadband quantum cascade lasers for continuous wave operation. Applied Physics Letters, 2003, 83, 24-26.	3.4	32
154	Design and fabrication of photonic crystal quantum cascade lasers for optofluidics. Optics Express, 2007, 15, 4499.	3.4	31
155	GaAs/Al _{0.15} Ga _{0.85} As terahertz quantum cascade lasers with double-phonon resonant depopulation operating up to 172 K. Applied Physics Letters, 2010, 97, 131111.	3.4	31
156	Master-oscillator power-amplifier quantum cascade laser array. Applied Physics Letters, 2012, 101, .	3.4	31
157	Unifying Frequency Combs in Active and Passive Cavities: Temporal Solitons in Externally Driven Ring Lasers. Physical Review Letters, 2021, 126, 173903.	7.9	31
158	Absolute position total internal reflection microscopy with an optical tweezer. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, E5609-15.	7.2	30
159	The harmonic state of quantum cascade lasers: origin, control, and prospective applications [Invited]. Optics Express, 2018, 26, 9464.	3.4	30
160	Enhancing the modal purity of orbital angular momentum photons. APL Photonics, 2020, 5, 070802.	5.7	28
161	Engineering phase and polarization singularity sheets. Nature Communications, 2021, 12, 4190.	13.0	28
162	Femtosecond dynamics of resonant tunneling and superlattice relaxation in quantum cascade lasers. Applied Physics Letters, 2008, 92, 122114.	3.4	27

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163	Observation of Nanoscale Refractive Index Contrast via Photoinduced Force Microscopy. ACS Photonics, 2017, 4, 846-851.	6.8	27
164	Excitation of Strong Localized Surface Plasmon Resonances in Highly Metallic Titanium Nitride Nano-Antennas for Stable Performance at Elevated Temperatures. ACS Applied Nano Materials, 2019, 2, 3444-3452.	5.1	27
165	Terahertz quantum cascade lasers in a magnetic field. Applied Physics Letters, 2003, 83, 3873-3875.	3.4	26
166	Surface-emitting terahertz quantum cascade laser source based on intracavity difference-frequency generation. Applied Physics Letters, 2008, 93, 161110.	3.4	26
167	Radio frequency transmitter based on a laser frequency comb. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 9181-9185.	7.2	26
168	Electrically pumped semiconductor laser with monolithic control of circular polarization. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, E5623-32.	7.2	25
169	Three-Dimensional Measurement of the Helicity-Dependent Forces on a Mie Particle. Physical Review Letters, 2018, 120, 223901.	7.9	25
170	Sensitivity enhancement of off-axis ICOS using wavelength modulation. Applied Physics B: Lasers and Optics, 2012, 108, 353-359.	2.2	24
171	High-brightness tapered quantum cascade lasers. Applied Physics Letters, 2013, 102, 053503.	3.4	24
172	Metasurface-based bijective illumination collection imaging provides high-resolution tomography in three dimensions. Nature Photonics, 2022, 16, 203-211.	32.0	24
173	Scully et al. Reply. Physical Review Letters, 2004, 93, .	7.9	23
174	Frequency-Modulated Combs Obey a Variational Principle. Physical Review Letters, 2019, 122, 253901.	7.9	23
175	Designing evanescent optical interactions to control the expression of Casimir forces in optomechanical structures. Applied Physics Letters, 2011, 98, .	3.4	22
176	Subfemtonewton Force Spectroscopy at the Thermal Limit in Liquids. Physical Review Letters, 2016, 116, 228001.	7.9	22
177	Multi-beam multi-wavelength semiconductor lasers. Applied Physics Letters, 2009, 95, .	3.4	21
178	External ring-cavity quantum cascade lasers. Applied Physics Letters, 2013, 102, .	3.4	21
179	Hot-Carrier Extraction in Nanowire-Nanoantenna Photovoltaic Devices. Nano Letters, 2020, 20, 4064-4072.	9.3	21
180	Soliton dynamics of ring quantum cascade lasers with injected signal. Nanophotonics, 2020, 10, 195-207.	6.1	21

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181	Radiative Thermal Runaway Due to Negative-Differential Thermal Emission Across a Solid-Solid Phase Transition. <i>Physical Review Applied</i> , 2018, 10, .	3.8	20
182	Pulsed- and continuous-mode operation at high temperature of strained quantum-cascade lasers grown by metalorganic vapor phase epitaxy. <i>Applied Physics Letters</i> , 2006, 88, 041102.	3.4	19
183	Widely tunable harmonic frequency comb in a quantum cascade laser. <i>Applied Physics Letters</i> , 2018, 113, .	3.4	19
184	Active mode locking of broadband quantum cascade lasers. <i>IEEE Journal of Quantum Electronics</i> , 2004, 40, 844-851.	1.9	17
185	Performance characteristics of 4-port in-plane and out-of-plane in-line metasurface polarimeters. <i>Optics Express</i> , 2017, 25, 28697.	3.4	17
186	Remote structuring of near-field landscapes. <i>Science</i> , 2020, 369, 436-440.	12.8	17
187	Defect-engineered ring laser harmonic frequency combs. <i>Optica</i> , 2021, 8, 1277.	9.4	17
188	Single-mode tapered quantum cascade lasers. <i>Applied Physics Letters</i> , 2013, 102, .	3.4	16
189	Laser Frequency Combs with Fast Gain Recovery: Physics and Applications. <i>Laser and Photonics Reviews</i> , 2022, 16, .	8.9	16
190	REPULSIVE CASIMIR AND VAN DER WAALS FORCES: FROM MEASUREMENTS TO FUTURE TECHNOLOGIES. <i>International Journal of Modern Physics A</i> , 2010, 25, 2252-2259.	1.5	15
191	Polarity-controlled visible/infrared electroluminescence in Si-nanocrystal/Si light-emitting devices. <i>Applied Physics Letters</i> , 2010, 97, 071112.	3.4	15
192	Guided Modes of Anisotropic van der Waals Materials Investigated by near-Field Scanning Optical Microscopy. <i>ACS Photonics</i> , 2018, 5, 1196-1201.	6.8	15
193	Ultrahigh Angular Selectivity of Disorder-Engineered Metasurfaces. <i>ACS Photonics</i> , 2020, 7, 991-1000.	6.8	15
194	Optical bistability with a repulsive optical force in coupled silicon photonic crystal membranes. <i>Applied Physics Letters</i> , 2013, 103, .	3.4	14
195	High-power low-divergence tapered quantum cascade lasers with plasmonic collimators. <i>Applied Physics Letters</i> , 2013, 102, .	3.4	14
196	Light Manipulation in Metallic Nanowire Networks with Functional Connectivity. <i>Advanced Optical Materials</i> , 2017, 5, 1600580.	7.4	14
197	Introducing Berry phase gradients along the optical path via propagation-dependent polarization transformations. <i>Nanophotonics</i> , 2022, 11, 713-725.	6.1	14
198	Lasing mode pattern of a quantum cascade photonic crystal surface-emitting microcavity laser. <i>Applied Physics Letters</i> , 2004, 84, 4164-4166.	3.4	13

#	ARTICLE	IF	CITATIONS
199	Purity and efficiency of hybrid orbital angular momentum-generating metasurfaces. Journal of Nanophotonics, 2020, 14, 1.	0.9	13
200	Temperature dependence and single-mode tuning behavior of second-harmonic generation in quantum cascade lasers. Applied Physics Letters, 2004, 84, 2751-2753.	3.4	12
201	Nonlinear optical interactions of laser modes in quantum cascade lasers. Journal of Modern Optics, 2011, 58, 727-742.	1.3	12
202	Elliptical orbits of microspheres in an evanescent field. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 11087-11091.	7.2	12
203	Light and Microwaves in Laser Frequency Combs: An Interplay of Spatiotemporal Phenomena. IEEE Journal of Selected Topics in Quantum Electronics, 2019, 25, 1-12.	3.0	12
204	Slow light nanocoatings for ultrashort pulse compression. Nature Communications, 2021, 12, 6518.	13.0	12
205	Demonstration of a quick process to achieve buried heterostructure quantum cascade laser leading to high power and wall plug efficiency. Optical Engineering, 2014, 53, 087104.	1.0	11
206	Spectrally resolved linewidth enhancement factor of a semiconductor frequency comb. Optica, 2021, 8, 1227.	9.4	11
207	Adjoint-optimized metasurfaces for compact mode-division multiplexing. ACS Photonics, 2022, 9, 929-937.	6.8	11
208	Stability of Pulse Emission and Enhancement of Intracavity Second-Harmonic Generation in Self-Mode-Locked Quantum Cascade Lasers. IEEE Journal of Quantum Electronics, 2004, 40, 197-204.	1.9	10
209	Differential near-field scanning optical microscopy. , 2007, , .		10
210	On the temperature dependence of point-defect-mediated luminescence in silicon. Applied Physics Letters, 2009, 94, 251113.	3.4	10
211	Special Issue on "Ultra-capacity Metasurfaces with Low Dimension and High Efficiency" ACS Photonics, 2018, 5, 1640-1642.	6.8	10
212	Differential Near-Field Scanning Optical Microscopy Using Sensor Arrays. IEEE Journal of Selected Topics in Quantum Electronics, 2007, 13, 1721-1729.	3.0	9
213	Measurement of the ultrafast temporal response of a plasmonic antenna. Annalen Der Physik, 2013, 525, L6.	2.4	9
214	Diamond mirrors for high-power continuous-wave lasers. Nature Communications, 2022, 13, 2610.	13.0	9
215	Coherent nonlinear optics with quantum cascade structures. Journal of Modern Optics, 2005, 52, 2293-2302.	1.3	8
216	Designed Quasi-1D Potential Structures Realized in Compositionally Graded InAs _{1-x} P _x Nanowires. Nano Letters, 2016, 16, 1017-1021.	9.3	8

#	ARTICLE	IF	CITATIONS
217	Coherent Raman scattering imaging with a near-infrared achromatic metalens. <i>APL Photonics</i> , 2021, 6, 096107.	5.7	8
218	Generalized polarization transformations with metasurfaces. <i>Optics Express</i> , 2021, 29, 39065.	3.4	8
219	A quantum cascade laser-pumped molecular laser tunable over 1 THz. <i>APL Photonics</i> , 2022, 7, .	5.7	8
220	Using the Belinfante momentum to retrieve the polarization state of light inside waveguides. <i>Scientific Reports</i> , 2019, 9, 14879.	3.4	7
221	Double-waveguide quantum cascade laser. <i>Applied Physics Letters</i> , 2012, 100, 033502.	3.4	6
222	Improving the light collection efficiency of silicon photomultipliers through the use of metalenses. <i>Journal of Instrumentation</i> , 2020, 15, P11021-P11021.	1.2	6
223	Achromatic metasurfaces by dispersive phase compensation. , 2015, , .		5
224	Watt-level widely tunable single-mode emission by injection-locking of a multimode Fabry-Perot quantum cascade laser. <i>Applied Physics Letters</i> , 2018, 112, .	3.4	5
225	Global and localised temporal structures in driven ring quantum cascade lasers. <i>Chaos, Solitons and Fractals</i> , 2021, 153, 111537.	5.1	5
226	Multi-line lasing in the broadly tunable ammonia quantum cascade laser pumped molecular laser. <i>Applied Physics Letters</i> , 2022, 120, 081108.	3.4	5
227	Nonlinear optics with quantum cascade lasers. <i>Laser Physics</i> , 2007, 17, 672-679.	1.2	4
228	Microwatt-level terahertz sources based on intra-cavity difference-frequency generation in mid-infrared quantum cascade lasers. , 2008, , .		3
229	Nonlinear dynamics of coupled transverse modes in quantum cascade lasers. <i>Journal of Modern Optics</i> , 2010, 57, 1892-1899.	1.3	3
230	Mode switching in a multi-wavelength distributed feedback quantum cascade laser using an external micro-cavity. <i>Applied Physics Letters</i> , 2014, 104, 051102.	3.4	3
231	Investigation of Tunable Single-Mode Quantum Cascade Lasers Via Surface-Acoustic-Wave Modulation. <i>IEEE Journal of Quantum Electronics</i> , 2013, 49, 1053-1061.	1.9	2
232	Large-area, single material metalens in the visible: An approach for mass-production using conventional semiconductor manufacturing techniques. , 2019, , .		2
233	Shaping harmonic frequency combs in ring injection lasers by defect engineering. , 2020, , .		2
234	Measurements of the magneto-optical properties of thin-film EuS at room temperature in the visible spectrum. <i>Applied Physics Letters</i> , 2022, 120, .	3.4	2

#	ARTICLE	IF	CITATIONS
235	Novel photonic crystal quantum cascade laser platform. , 2006, , .		1
236	Semiconductor nanowires embedded in optical microcavities. , 2006, , .		1
237	Terahertz Quantum Cascade Laser Source Based on Intra-Cavity Difference-Frequency Generation. , 2007, , .		1
238	Coupled metallic antenna nanorod arrays. , 2007, , .		1
239	Current Injection Spiral-Shaped Chaotic Microcavity Quantum Cascade Lasers. , 2007, , .		1
240	Time-Resolved Studies of Gain Dynamics in Quantum Cascade Laser. AIP Conference Proceedings, 2007, , .	0.4	1
241	Optical Nanomaterials: Light Manipulation in Metallic Nanowire Networks with Functional Connectivity (Advanced Optical Materials 5/2017). Advanced Optical Materials, 2017, 5, .	7.4	1
242	Jones Matrix Holography with Metasurfaces. , 2021, , .		1
243	Reply to: Reconsidering metasurface lasers. Nature Photonics, 2021, 15, 339-340.	32.0	1
244	Imaging of Ultra-Confined Phonon Polaritons in Hexagonal Boron Nitride on Gold. , 2018, , .		1
245	REPULSIVE CASIMIR AND VAN DER WAALS FORCES: FROM MEASUREMENTS TO FUTURE TECHNOLOGIES. , 2010, , .		1
246	Reconfigurable mid-infrared optical elements using phase change materials. , 2019, , .		1
247	High Q-factor resonators and nanoantennas based on phonon polaritons in van der Waals materials. , 2020, , .		1
248	Nonlinear light generation in quantum cascade and semiconductor diode lasers. , 0, , .		0
249	"Quantum cascade lasers: widely tailorable light sources for the mid- to far-infrared and their applications". , 0, , .		0
250	Mid-infrared and Terahertz Quantum Cascade Lasers: from quantum design to commercialization. , 2006, , .		0
251	Optofluidic tuning of quantum cascade lasers. , 0, , .		0
252	Quantum cascade photonic crystal lasers: Design, fabrication, and applications. , 2006, , .		0

#	ARTICLE	IF	CITATIONS
253	Active optical antenna. , 2006, , .		0
254	Coherent instabilities and self-pulsations in Quantum Cascade Lasers. , 2006, , .		0
255	Hybrid single nanowire photonic crystal structure. , 2006, , .		0
256	Ultrafast gain dynamics in a quantum cascade laser. , 2006, , .		0
257	High power quantum cascade lasers by MOVPE. , 2006, , .		0
258	Nonlinear Quantum Cascade Lasers: Toward Broad Tunability and Short-Wavelength Operation. , 2007, , .		0
259	Photon-Driven Transport in Quantum Cascade Lasers. , 2007, , .		0
260	Efficient point defect engineered si light-emitting diode at 1.218 μm . , 2007, , .		0
261	Terahertz difference frequency generation in quantum cascade lasers. , 2007, , .		0
262	Low-Divergence Surface-Emitting Terahertz Quantum Cascade Lasers. , 2007, , .		0
263	Efficient point defect engineered si light-emitting diode at 1.218 μm . , 2007, , .		0
264	Plasmonic Quantum Cascade Laser Antenna. , 2007, , .		0
265	Broadly Tunable Single-Mode Quantum Cascade Laser Source. , 2007, , .		0
266	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
267	Quantum cascade lasers: Quantum design, high performance technology for mid- and far-infrared photonics and commercialization. , 2007, , .		0
268	Plasmonic quantum cascade laser antenna. , 2007, , .		0
269	Low divergence semiconductor lasers by plasmonic collimation. , 2008, , .		0
270	Highly collimated and ultra-high-intensity near-field lasers by wavefront engineering. , 2008, , .		0

#	ARTICLE	IF	CITATIONS
271	Terahertz frequency quantum cascade lasers operating up to 178 K with copper metal-metal waveguides. , 2008, , .		0
272	High performance room temperature quantum cascade lasers based on three-phonon-resonance depopulation. , 2008, , .		0
273	Coherent coupling of multiple transverse modes in a quantum cascade laser. , 2008, , .		0
274	Continuously tunable compact single-mode quantum cascade laser source for chemical sensing. , 2008, , .		0
275	Wide ridge low-divergence metal-metal terahertz quantum cascade lasers. , 2008, , .		0
276	Femtosecond resonant pulse propagation in quantum cascade lasers: Evidence of coherent effects. , 2008, , .		0
277	The bright future of sub-wavelength photonics: From light manipulation to quantum levitation at the nanoscale. , 2009, , .		0
278	Wavefront engineering of semiconductor lasers using plasmonics. , 2010, , .		0
279	GaAs/Al _{0.15} Ga _{0.85} As terahertz quantum cascade lasers with double-phonon resonant depopulation operating up to 172 K. , 2011, , .		0
280	Angle-independent antireflective layer based on buried IR nanoantennas. , 2012, , .		0
281	Broadband wavefront engineering with optical resonator arrays. , 2012, , .		0
282	Phase control from the visible to the TeraHertz: Surface photonics for wavefront engineering. , 2012, , .		0
283	High-brightness quantum cascade laser spectrometers based on master-oscillator-power-amplifier arrays. , 2013, , .		0
284	Metasurface-based half-wave plate. , 2013, , .		0
285	Ultra-Compact Mid-IR Modulators Based on Electrically Tunable Optical Antennas. , 2014, , .		0
286	Controlled steering and focusing of Surface Plasmons with Metasurfaces. , 2015, , .		0
287	Subwavelength resolution imaging by ultra-thin meta-lens. , 2016, , .		0
288	Modeling and design of Al _{0.25} Ga _{0.75} As/GaAs terahertz quantum cascade lasers with a realistic band structure. , 2017, , .		0

#	ARTICLE	IF	CITATIONS
289	Focus Point on Complex Photonics. European Physical Journal Plus, 2018, 133, 1.	2.6	0
290	Negative Refraction Based on Guided-Mode Assisted Meta-Gratings. , 2018, , .		0
291	Low Voltage Imaging of Quantum Materials Imaging the Surface Plasmon Polaritons in Chalcogenides. Microscopy and Microanalysis, 2019, 25, 460-461.	0.4	0
292	Dispersion Engineered Metasurfaces for Broadband Achromatic Optics. , 2019, , .		0
293	Compact, low threshold methyl fluoride terahertz laser pumped by a quantum cascade laser. , 2021, , .		0
294	Compact Incoherent Spatial Frequency Filtering Enabled by Metasurface Engineering. , 2021, , .		0
295	Non-local multifunctional metasurfaces and their external cavity laser application. , 2021, , .		0
296	Evolution of Total Angular Momentum and Berry Phase in 3D Structured Light. , 2021, , .		0
297	Nonlinear Dynamics in Semiconductor Ring Lasers: From Phase Turbulence to Solitons. , 2021, , .		0
298	Low RF line width frequency-modulated and amplitude-modulated combs. , 2021, , .		0
299	Electrical injection-locking dynamics of a frequency-modulated comb. , 2021, , .		0
300	Actively mode-locked pulses from a mid-IR quantum cascade laser. , 2021, , .		0
301	High-purity orbital angular momentum states from a visible metasurface laser. , 2021, , .		0
302	Thin-film lithium niobate integrated circuits for terahertz generation and detection. , 2021, , .		0
303	Extreme Optics: Inverse Design and Experimental Realizations of Ultra-Large-Area Complex Meta-Optics. , 2021, , .		0
304	Terahertz quantum cascade lasers operating up to 178 K with copper metal-metal waveguides. , 2008, , .		0
305	1.3 W quantum cascade lasers with optimized design for continuous-wave operation at room temperature. , 2008, , .		0
306	Engineering metasurface dispersion for achromatic optics. , 2019, , .		0

#	ARTICLE	IF	CITATIONS
307	Polariton Meta-Optics with Phase-Change Materials. , 2019, , .		0
308	Invited Paper: A Large RGB achromatic Metalens for Virtual/Augmented Reality Applications. Digest of Technical Papers SID International Symposium, 2020, 51, 575-578.	0.3	0
309	New approaches to polarization optics and structured light with metasurfaces. , 2021, , .		0
310	Widely tunable quantum cascade laser-pumped methyl fluoride terahertz laser. , 2021, , .		0
311	Room Temperature Compact Terahertz Laser Tunable over 1 THz. , 2020, , .		0
312	A metalens-based virtual reality (VR) / augmented reality (AR) system. , 2020, , .		0
313	Total Angular Momentum Management of Three Dimensional Vortices with a Single Plate. , 2020, , .		0
314	Tunable quantum-cascade laser pumped molecular lasers for terahertz imaging. , 2020, , .		0
315	Longitudinally Variable Polarization Optics. , 2020, , .		0
316	Designer Structured Light with Metasurfaces. , 2020, , .		0
317	Compact Incoherent Spatial Frequency Filtering and Image Differentiation Enabled by Metalens Engineering. , 2021, , .		0
318	Flat Optics Based on Metasurfaces: From Components to Cameras. , 2021, , .		0
319	Accurately Measuring Molecular Rotational Spectra in Excited Vibrational Modes. Applied Spectroscopy, 0, , 000370282211111.	2.2	0