Robert W Boyd

List of Publications by Year
in descending order

337 papers	19,467 citations	12330 69 h-index	12946 131 g-index
342 all docs	342 docs citations	342 times ranked	11520 citing authors

#	Article	IF	Citations
1	Large optical nonlinearity of indium tin oxide in its epsilon-near-zero region. Science, 2016, 352, 795-797.	12.6	796
2	Superluminal and Slow Light Propagation in a Room-Temperature Solid. Science, 2003, 301, 200-202.	12.6	746
3	Generating optical orbital angular momentum at visible wavelengths using a plasmonic metasurface. Light: Science and Applications, 2014, 3, e167-e167.	16.6	665
4	Quantum Correlations in Optical Angleâ€“Orbital Angular Momentum Variables. Science, 2010, 329, 662-665.	12.6	508
5	High-dimensional quantum cryptography with twisted light. New Journal of Physics, 2015, 17, 033033.	2.9	475
6	Coupled-resonator-induced transparency. Physical Review A, 2004, 69, .	2.5	457
7	Realization of the Einstein-Podolsky-Rosen Paradox Using Momentum- and Position-Entangled Photons from Spontaneous Parametric Down Conversion. Physical Review Letters, 2004, 92, 210403.	7.8	412
8	Efficient separation of the orbital angular momentum eigenstates of light. Nature Communications, 2013, 4, 2781.	12.8	364
9	Nonlinear optical effects in epsilon-near-zero media. Nature Reviews Materials, 2019, 4, 535-551.	48.7	345
10	High-dimensional intracity quantum cryptography with structured photons. Optica, 2017, 4, 1006.	9.3	330
11	Stored Light in an Optical Fiber via Stimulated Brillouin Scattering. Science, 2007, 318, 1748-1750.	12.6	327
12	Imaging with a small number of photons. Nature Communications, 2015, 6, 5913.	12.8	327
13	Observation of optical polarization MÃ¶bius strips. Science, 2015, 347, 964-966.	12.6	322
14	The physics of ghost imaging. Quantum Information Processing, 2012, 11, 949-993.	2.2	303
15	Influence of atmospheric turbulence on the propagation of quantum states of light carrying orbital angular momentum. Optics Letters, 2009, 34, 142.	3.3	288
16	Controlling the Velocity of Light Pulses. Science, 2009, 326, 1074-1077.	12.6	283
17	Large optical nonlinearity of nanoantennas coupled to an epsilon-near-zero material. Nature Photonics, 2018, 12, 79-83.	31.4	276
18	â€œSlowâ€•and â€œfastâ€•light. Progress in Optics, 2002, 43, 497-530.	0.6	274

#	Article	IF	Citations
19	Influence of atmospheric turbulence on optical communications using orbital angular momentum for encoding. Optics Express, 2012, 20, 13195.	3.4	272
20	Optical Properties of Nanostructured Optical Materials. Chemistry of Materials, 1996, 8, 1807-1819.	6.7	247
21	Creating High-Harmonic Beams with Controlled Orbital Angular Momentum. Physical Review Letters, 2014, 113, 153901.	7.8	244
22	Atmospheric turbulence effects on the performance of a free space optical link employing orbital angular momentum multiplexing. Optics Letters, 2013, 38, 4062.	3.3	233
23	Exact solution to simultaneous intensity and phase encryption with a single phase-only hologram. Optics Letters, 2013, 38, 3546.	3.3	229
24	Observation of Backward Pulse Propagation Through a Medium with a Negative Group Velocity. Science, 2006, 312, 895-897.	12.6	223
25	Divergence of an orbital-angular-momentum-carrying beam upon propagation. New Journal of Physics, 2015, 17, 023011.	2.9	215
26	Ultra-high-Q resonances in plasmonic metasurfaces. Nature Communications, 2021, 12, 974.	12.8	212
27	Rapid generation of light beams carrying orbital angular momentum. Optics Express, 2013, 21, 30196.	3.4	200
28	Dispersion of silicon nonlinearities in the near infrared region. Applied Physics Letters, 2007, 91, .	3.3	197
29	The third-order nonlinear optical susceptibility of gold. Optics Communications, 2014, 326, 74-79.	2.1	194
30	Influence of atmospheric turbulence on states of light carrying orbital angular momentum. Optics Letters, 2012, 37, 3735.	3.3	192
31	Enhanced Nonlinear Optical Response of Composite Materials. Physical Review Letters, 1995, 74, 1871-1874.	7.8	190
32	Direct measurement of a 27-dimensional orbital-angular-momentum state vector. Nature Communications, 2014, 5, 3115.	12.8	187
33	SLOW AND STOPPED LIGHT 'Slow' and 'fast' light in resonator-coupled waveguides. Journal of Modern Optics, 2002, 49, 2629-2636.	1.3	178
34	Adaptive-optics-based simultaneous pre- and post-turbulence compensation of multiple orbital-angular-momentum beams in a bidirectional free-space optical link. Optica, 2014, 1, 376.	9.3	177
35	Enhanced Nonlinear Optical Response of One-Dimensional Metal-Dielectric Photonic Crystals. Physical Review Letters, 2004, 93, 123902.	7.8	174
36	Breaking Lorentz reciprocity to overcome the time-bandwidth limit in physics and engineering. Science, 2017, 356, 1260-1264.	12.6	174

#	Article	IF	Citations
37	Full characterization of polarization states of light via direct measurement. Nature Photonics, 2013, 7, 316-321.	31.4	173
38	Maximum time delay achievable on propagation through a slow-light medium. Physical Review A, 2005, 71, .	2.5	170
39	Amplification of Angular Rotations Using Weak Measurements. Physical Review Letters, 2014, 112, .	7.8	157
40	Quantum walks and wavepacket dynamics on a lattice with twisted photons. Science Advances, 2015, 1, e1500087.	10.3	148
41	Free-space propagation of high-dimensional structured optical fields in an urban environment. Science Advances, 2017, 3, e1700552.	10.3	147
42	Adaptive optics compensation of multiple orbital angular momentum beams propagating through emulated atmospheric turbulence. Optics Letters, 2014, 39, 2845.	3.3	138
43	Slow and fast light: fundamentals and applications. Journal of Modern Optics, 2009, 56, 1908-1915.	1.3	134
44	Reconstructing the topology of optical polarization knots. Nature Physics, 2018, 14, 1079-1082.	16.7	126
45	Material slow light and structural slow light: similarities and differences for nonlinear optics [Invited]. Journal of the Optical Society of America B: Optical Physics, 2011, 28, A38.	2.1	124
46	Controlling the orbital angular momentum of high harmonic vortices. Nature Communications, 2017, 8, 14970.	12.8	124
47	Broadband frequency translation through time refraction in an epsilon-near-zero material. Nature Communications, 2020, 11, 2180.	12.8	121
48	Tomography of the quantum state of photons entangled in high dimensions. Physical Review A, 2011, 84, .	2.5	117
49	Structured quantum waves. Nature Physics, 2015, 11, 629-634.	16.7	117
50	Highly efficient electron vortex beams generated by nanofabricated phase holograms. Applied Physics Letters, 2014, 104, .	3.3	111
51	Ultraslow waves on the nanoscale. Science, 2017, 358, .	12.6	107
52	Nonlinear optical properties of nanocomposite materials. Journal of Optics, 1996, 5, 505-512.	0.5	98
53	Sorting Photons by Radial Quantum Number. Physical Review Letters, 2017, 119, 263602.	7.8	97
54	Classical entanglement?. Science, 2015, 350, 1172-1173.	12.6	90

#	Article	IF	Citations
55	Polarization Shaping for Control of Nonlinear Propagation. Physical Review Letters, 2016, 117, 233903.	7.8	87
56	Compensation-free high-dimensional free-space optical communication using turbulence-resilient vector beams. Nature Communications, 2021, 12, 1666.	12.8	86
57	Entangled-photon compressive ghost imaging. Physical Review A, 2011, 84, .	2.5	85
58	Exploring the quantum nature of the radial degree of freedom of a photon via Hong-Ou-Mandel interference. Physical Review A, 2014, 89, .	2.5	85
59	Simulating thick atmospheric turbulence in the lab with application to orbital angular momentum communication. New Journal of Physics, 2014, 16, 033020.	2.9	85
60	Radial quantum number of Laguerre-Gauss modes. Physical Review A, 2014, 89, .	2.5	84
61	Compressive Direct Measurement of the Quantum Wave Function. Physical Review Letters, 2014, 113, 090402.	7.8	84
62	High-dimensional quantum cloning and applications to quantum hacking. Science Advances, 2017, 3, e1601915.	10.3	82
63	Quantum ghost imaging through turbulence. Physical Review A, 2011, 83, .	2.5	78
64	Strong, spectrally-tunable chirality in diffractive metasurfaces. Scientific Reports, 2015, 5, 13034.	3.3	78
65	Holographic Generation of Highly Twisted Electron Beams. Physical Review Letters, 2015, 114, 034801.	7.8	78
66	Quantum cryptography with twisted photons through an outdoor underwater channel. Optics Express, 2018, 26, 22563.	3.4	77
67	Weak Value Amplification Can Outperform Conventional Measurement in the Presence of Detector Saturation. Physical Review Letters, 2017, 118, 070802.	7.8	76
68	Generation of Nondiffracting Electron Bessel Beams. Physical Review X, 2014, 4, .	8.9	71
69	Measuring the orbital angular momentum spectrum of an electron beam. Nature Communications, 2017, 8, 15536.	12.8	71
70	Beyond the perturbative description of the nonlinear optical response of low-index materials. Optics Letters, 2017, 42, 3225.	3.3	71
71	Compressive object tracking using entangled photons. Applied Physics Letters, 2013, 102, .	3.3	68
72	Chiral optical response of planar and symmetric nanotrimers enabled by heteromaterial selection. Nature Communications, 2016, 7, 13117.	12.8	68

#	Article	IF	Citations
73	Order-of-magnitude estimates of the nonlinear optical susceptibility. Journal of Modern Optics, 1999, 46, 367-378.	1.3	67
74	Supersensitive measurement of angular displacements using entangled photons. Physical Review A, 2011, 83, .	2.5	64
75	Quantum-limited estimation of the axial separation of two incoherent point sources. Optica, 2019, 6, 534.	9.3	64
76	Optical response of dipole antennas on an epsilon-near-zero substrate. Physical Review A, 2016, 93, .	2.5	63
77	Multiresonant High-Q Plasmonic Metasurfaces. Nano Letters, 2019, 19, 6429-6434.	9.1	63
78	Experimental investigation of high-dimensional quantum key distribution protocols with twisted photons. Quantum - the Open Journal for Quantum Science, 0, 2, 111.	0.0	63
79	Q-plates as higher order polarization controllers for orbital angular momentum modes of fiber. Optics Letters, 2015, 40, 1729.	3.3	59
80	Experimental demonstration of 20â€‰â€‰Gbit/s data encoding and 2â€‰â€‰ns channel hopping using orbital angular momentum modes. Optics Letters, 2015, 40, 5810.	3.3	59
81	Secure information capacity of photons entangled in many dimensions. Physical Review A, 2012, 85, .	2.5	58
82	State transfer based on classical nonseparability. Physical Review A, 2015, 92, .	2.5	57
83	Fourier relationship between the angle and angular momentum of entangled photons. Physical Review A, 2008, 78, .	2.5	56
84	Slow- and fast-light: fundamental limitations. Journal of Modern Optics, 2007, 54, 2403-2411.	1.3	55
85	STIMULATED BRILLOUIN SCATTERING IN THE PRESENCE OF EXTERNAL FEEDBACK. Journal of Nonlinear Optical Physics and Materials, 1992, 01, 581-594.	1.8	54
86	Fiber-Based Slow-Light Technologies. Journal of Lightwave Technology, 2008, 26, 3752-3762.	4.6	54
87	Thermal ghost imaging with averaged speckle patterns. Physical Review A, 2012, 86, .	2.5	53
88	Single-shot measurement of the orbital-angular-momentum spectrum of light. Nature Communications, 2017, 8, 1054.	12.8	53
89	Perspectives on advances in high-capacity, free-space communications using multiplexing of orbital-angular-momentum beams. APL Photonics, 2021, 6, .	5.7	53
90	Prediction of an extremely large nonlinear refractive index for crystals at terahertz frequencies. Physical Review A, 2015, 92, .	2.5	52

#	Article	IF	Citations
91	Exotic looped trajectories of photons in three-slit interference. Nature Communications, 2016, 7, 13987.	12.8	52
92	An optic to replace space and its application towards ultra-thin imaging systems. Nature Communications, 2021, 12, 3512.	12.8	52
93	Spatial sampling of terahertz fields with sub-wavelength accuracy via probe-beam encoding. Light: Science and Applications, 2019, 8, 55.	16.6	51
94	Metformin Abrogates Age-Associated Ovarian Fibrosis. Clinical Cancer Research, 2020, 26, 632-642.	7.0	51
95	Enhanced Nonlinear Optical Responses of Layered Epsilon-near-Zero Metamaterials at Visible Frequencies. ACS Photonics, 2021, 8, 125-129.	6.6	51
96	Quantum imaging and information. Reports on Progress in Physics, 2019, 82, 124401.	20.1	48
97	Ultra-strong polarization dependence of surface lattice resonances with out-of-plane plasmon oscillations. Optics Express, 2016, 24, 28279.	3.4	47
98	Observation of nanoscale magnetic fields using twisted electron beams. Nature Communications, 2017, 8, 689.	12.8	47
99	Digital spiral object identification using random light. Light: Science and Applications, 2017, 6, e17013-e17013.	16.6	47
100	Quantum Spatial Superresolution by Optical Centroid Measurements. Physical Review Letters, 2011, 107, 083603.	7.8	46
101	Generation of Caustics and Rogue Waves from Nonlinear Instability. Physical Review Letters, 2017, 119, 203901.	7.8	45
102	Turbulence-resilient pilot-assisted self-coherent free-space optical communications using automatic optoelectronic mixing of many modes. Nature Photonics, 2021, 15, 743-750.	31.4	45
103	Spatial two-photon coherence of the entangled field produced by down-conversion using a partially spatially coherent pump beam. Physical Review A, 2010, 81, .	2.5	44
104	Arbitrary optical wavefront shaping via spin-to-orbit coupling. Journal of Optics (United Kingdom), 2016, 18, 124002.	2.2	44
105	Effects of atmospheric turbulence on the entanglement of spatial two-qubit states. Physical Review A, 2010, 81, .	2.5	43
106	Equivalence of interaction hamiltonians in the electric dipole approximation. Journal of Modern Optics, 2004, 51, 1137-1147.	1.3	42
107	Experimental generation of an optical field with arbitrary spatial coherence properties. Journal of the Optical Society of America B: Optical Physics, 2014, 31, A51.	2.1	42
108	Light-Drag Enhancement by a Highly Dispersive Rubidium Vapor. Physical Review Letters, 2016, 116, 013601.	7.8	41

#	Article	IF	Citations
109	Using surface lattice resonances to engineer nonlinear optical processes in metal nanoparticle arrays. Physical Review A, 2018, 97, .	2.5	41
110	Automated classification of multiphoton microscopy images of ovarian tissue using deep learning. Journal of Biomedical Optics, 2018, 23, 1.	2.6	41
111	Engineering the Frequency Spectrum of Bright Squeezed Vacuum via Group Velocity Dispersion in an SU(1,1) Interferometer. Physical Review Letters, 2016, 117, 183601.	7.8	40
112	Hanbury Brown and Twiss interferometry with twisted light. Science Advances, 2016, 2, e1501143.	10.3	40
113	â€˜Twistedâ€™ electrons. Contemporary Physics, 2018, 59, 126-144.	1.8	40
114	Generation and application of bessel beams in electron microscopy. Ultramicroscopy, 2016, 166, 48-60.	1.9	39
115	Custom-tailored spatial mode sorting by controlled random scattering. Physical Review B, 2017, 95, .	3.2	39
116	Efficient nonlinear metasurfaces by using multiresonant high-Q plasmonic arrays. Journal of the Optical Society of America B: Optical Physics, 2019, 36, E30.	2.1	39
117	Angular Two-Photon Interference and Angular Two-Qubit States. Physical Review Letters, 2010, 104, 010501.	7.8	38
118	Realization of a scalable Laguerreâ€“Gaussian mode sorter based on a robust radial mode sorter. Optics Express, 2018, 26, 33057.	3.4	38
119	Real-time imaging of spin-to-orbital angular momentum hybrid remote state preparation. Physical Review A, 2015, 92, .	2.5	37
120	Characterization of an underwater channel for quantum communications in the Ottawa River. Optics Express, 2019, 27, 26346.	3.4	36
121	Dye-doped cholesteric-liquid-crystal room-temperature single-photon source. Journal of Modern Optics, 2004, 51, 1535-1547.	1.3	35
122	Theoretical analysis of quantum ghost imaging through turbulence. Physical Review A, 2011, 84, .	2.5	35
123	Enhanced electro-optic response of layered composite materials. Applied Physics Letters, 1999, 74, 2417-2419.	3.3	34
124	Using all transverse degrees of freedom in quantum communications based on a generic mode sorter. Optics Express, 2019, 27, 10383.	3.4	33
125	Hermiteâ€“Gaussian mode sorter. Optics Letters, 2018, 43, 5263.	3.3	33
126	Optical activity in diffraction from a planar array of achiral nanoparticles. Physical Review A, 2009, 79, .	2.5	32

#	Article	IF	Citations
127	Fundamental Radiative Processes in Near-Zero-Index Media of Various Dimensionalities. ACS Photonics, 2020, 7, 1965-1970.	6.6	32
128	Properties of bright squeezed vacuum at increasing brightness. Physical Review Research, 2020, 2, .	3.6	32
129	Temporal coherence and indistinguishability in two-photon interference effects. Physical Review A, 2008, 77, .	2.5	30
130	Twisting neutrons may reveal their internal structure. Nature Physics, 2018, 14, 1-2.	16.7	30
131	Realization of the Einstein-Podolsky-Rosen Paradox Using Radial Position and Radial Momentum Variables. Physical Review Letters, 2019, 123, 060403.	7.8	30
132	Ultrabroadband 3D invisibility with fast-light cloaks. Nature Communications, 2019, 10, 4859.	12.8	30
133	Adiabatic Frequency Conversion Using a Time-Varying Epsilon-Near-Zero Metasurface. Nano Letters, 2021, 21, 5907-5913.	9.1	30
134	Quantum lithography: status of the field. Quantum Information Processing, 2012, 11, 891-901.	2.2	29
135	Anomalies in optical harmonic generation using high-intensity laser radiation. Physical Review A, 1990, 41, 3822-3825.	2.5	28
136	Implementation of sub-Rayleigh-resolution lithography using anN-photon absorber. Journal of Modern Optics, 2006, 53, 2271-2277.	1.3	28
137	Organic photonic bandgap microcavities doped with semiconductor nanocrystals for room-temperature on-demand single-photon sources. Journal of Modern Optics, 2009, 56, 167-174.	1.3	28
138	Partial angular coherence and the angular Schmidt spectrum of entangled two-photon fields. Physical Review A, 2011, 84, .	2.5	28
139	Self-phase-modulation of surface plasmon polaritons. Physical Review A, 2014, 89, .	2.5	28
140	Wigner Distribution of Twisted Photons. Physical Review Letters, 2016, 116, 130402.	7.8	28
141	Phase sensitivity of gain-unbalanced nonlinear interferometers. Physical Review A, 2017, 96, .	2.5	28
142	Room temperature source of single photons of definite polarization. Journal of Modern Optics, 2007, 54, 417-429.	1.3	27
143	High-fidelity spatial mode transmission through a 1-km-long multimode fiber via vectorial time reversal. Nature Communications, 2021, 12, 1866.	12.8	27
144	Experimental demonstration of superresolution of partially coherent light sources using parity sorting. Optics Express, 2021, 29, 22034.	3.4	27

#	Article	IF	Citations
145	Influence of atmospheric turbulence on the propagation of quantum states of light using plane-wave encoding. Optics Express, 2011, 19, 18310.	3.4	26
146	Giant Third-Order Nonlinear Response of Liquids at Terahertz Frequencies. Physical Review Applied, 2021, 15, .	3.8	26
147	Influence of pump coherence on the generation of position-momentum entanglement in optical parametric down-conversion. Optics Express, 2019, 27, 20745.	3.4	26
148	Quantum Weirdness in the Lab. Science, 2007, 317, 1874-1875.	12.6	25
149	Dynamic spatiotemporal beams that combine two independent and controllable orbital-angular-momenta using multiple optical-frequency-comb lines. Nature Communications, 2020, 11, 4099.	12.8	25
150	Discriminating orthogonal single-photon images. Physical Review A, 2009, 79, .	2.5	24
151	Hardy's paradox tested in the spin-orbit Hilbert space of single photons. Physical Review A, 2014, 89, .	2.5	24
152	Nondestructive Measurement of Orbital Angular Momentum for an Electron Beam. Physical Review Letters, 2016, 117, 154801.	7.8	24
153	Bright squeezed vacuum in a nonlinear interferometer: Frequency and temporal Schmidt-mode description. Physical Review A, 2018, 97, .	2.5	24
154	Photon Acceleration Using a Time-Varying Epsilon-near-Zero Metasurface. ACS Photonics, 2021, 8, 716-720.	6.6	24
155	Robust organic lasers comprising glassy-cholesteric pentafluorene doped with a red-emitting oligofluorene. Applied Physics Letters, 2009, 94, 041111.	3.3	23
156	Measurement of the orbital-angular-momentum spectrum of fields with partial angular coherence using double-angular-slit interference. Physical Review A, 2012, 86, .	2.5	22
157	Spatially multiplexed orbital-angular-momentum-encoded single photon and classical channels in a free-space optical communication link. Optics Letters, 2017, 42, 4881.	3.3	22
158	Nanofabrication of optical structures and devices for photonics and biophotonics. Journal of Modern Optics, 2003, 50, 2543-2550.	1.3	21
159	Experimental demonstration of Klyshkoâ€™s advanced-wave picture using a coincidence-count based, camera-enabled imaging system. Journal of Modern Optics, 2014, 61, 547-551.	1.3	21
160	Performance of real-time adaptive optics compensation in a turbulent channel with high-dimensional spatial-mode encoding. Optics Express, 2020, 28, 15376.	3.4	21
161	Single-End Adaptive Optics Compensation for Emulated Turbulence in a Bi-Directional 10-Mbit/s per Channel Free-Space Quantum Communication Link Using Orbital-Angular-Momentum Encoding. Research, 2019, 2019, 8326701.	5.7	21
162	Recent progress in quantum and nonlinear optical lithography. Journal of Modern Optics, 2006, 53, 713-718.	1.3	20

#	Article	IF	Citations
163	Response to â€œThe physics of ghost imagingâ€”nonlocal interference or local intensity fluctuation correlation?â€• Quantum Information Processing, 2012, 11, 1003-1011.	2.2	20
164	Tighter spots of light with superposed orbital-angular-momentum beams. Physical Review A, 2016, 94, .	2.5	18
165	Influence of pump coherence on the quantum properties of spontaneous parametric down-conversion. Physica Scripta, 2018, 93, 084001.	2.5	18
166	Dynamic coherent perfect absorption in nonlinear metasurfaces. Optics Letters, 2020, 45, 6414.	3.3	18
167	Giant Asymmetric Second-Harmonic Generation in Bianisotropic Metasurfaces Based on Bound States in the Continuum. ACS Photonics, 2021, 8, 3234-3240.	6.6	18
168	A Comprehensive Multipolar Theory for Periodic Metasurfaces. Advanced Optical Materials, 2022, 10, .	7.3	18
169	Superscattering, Superabsorption, and Nonreciprocity in Nonlinear Antennas. ACS Photonics, 2021, 8, 585-591.	6.6	17
170	Terahertz Nonlinear Spectroscopy of Water Vapor. ACS Photonics, 2021, 8, 1683-1688.	6.6	17
171	Ultrafast modulation of the spectral filtering properties of a THz metasurface. Optics Express, 2020, 28, 20296.	3.4	17
172	Enhancement of third-harmonic generation in a polymer-dispersed liquid-crystal grating. Applied Physics Letters, 2005, 87, 051102.	3.3	16
173	Conditional preparation of states containing a definite number of photons. Physical Review A, 2008, 77, .	2.5	16
174	Free-space communication through turbulence: a comparison of plane-wave and orbital-angular-momentum encodings. Journal of Modern Optics, 2014, 61, 43-48.	1.3	16
175	Vectorizing the spatial structure of high-harmonic radiation from gas. Nature Communications, 2019, 10, 2020.	12.8	16
176	Ultrafast Topological Engineering in Metamaterials. Physical Review Letters, 2020, 125, 037403.	7.8	16
177	Fabrication and photoluminescence properties of porous CdSe. Applied Physics Letters, 2005, 86, 063115.	3.3	15
178	Fair sampling perspective on an apparent violation of duality. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 12337-12341.	7.1	15
179	Quantum Nonlocal Aberration Cancellation. Physical Review Letters, 2019, 123, 143603.	7.8	15
180	High-dimensional quantum key distribution based on mutually partially unbiased bases. Physical Review A, 2020, 101, .	2.5	15

#	Article	IF	Citations
181	Kelvin's chirality of optical beams. Physical Review A, 2021, 103, .	2.5	15
182	Quantifying the impact of proximity error correction on plasmonic metasurfaces [Invited]. Optical Materials Express, 2015, 5, 2798.	3.0	14
183	A primary radiation standard based on quantum nonlinear optics. Nature Physics, 2019, 15, 529-532.	16.7	14
184	Minimalist Mie coefficient model. Optics Express, 2020, 28, 16511.	3.4	14
185	Fast generation and detection of spatial modes of light using an acousto-optic modulator. Optics Express, 2020, 28, 29112.	3.4	14
186	Demonstration of Turbulence Resiliency in a Mode-, Polarization-, and Wavelength-Multiplexed Free-Space Optical Link Using Pilot-Assisted Optoelectronic Beam Mixing. Journal of Lightwave Technology, 2022, 40, 588-596.	4.6	14
187	Porosity-induced blueshift of photoluminescence in CdSe. Journal of Applied Physics, 2006, 100, 053517.	2.5	13
188	Generation of a spin-polarized electron beam by multipole magnetic fields. Ultramicroscopy, 2014, 138, 22-27.	1.9	13
189	Confocal super-resolution microscopy based on a spatial mode sorter. Optics Express, 2021, 29, 11784.	3.4	13
190	Multiprobe Time Reversal for High-Fidelity Vortex-Mode-Division Multiplexing Over a Turbulent Free-Space Link. Physical Review Applied, 2021, 15, .	3.8	13
191	Dependence of the coupling properties between a plasmonic antenna array and a sub-wavelength epsilon-near-zero film on structural and material parameters. Applied Physics Letters, 2021, 118, .	3.3	13
192	Enhanced third-order nonlinear optical response of photonic bandgap materials. Journal of Modern Optics, 1999, 46, 1061-1069.	1.3	12
193	Dynamics of gravity-induced gradients in soap film thicknesses. Applied Physics Letters, 2006, 88, 234104.	3.3	12
194	Direct Tomography of High-Dimensional Density Matrices for General Quantum States of Photons. Physical Review Letters, 2021, 127, 040402.	7.8	12
195	Kerker effect, superscattering, and scattering dark states in atomic antennas. Physical Review Research, 2020, 2, .	3.6	12
196	Single-Shot Direct Tomography of the Complete Transverse Amplitude, Phase, and Polarization Structure of a Light Field. Physical Review Applied, 2019, 12, .	3.8	11
197	Suppression of self-focusing for few-cycle pulses. Journal of the Optical Society of America B: Optical Physics, 2019, 36, G68.	2.1	11
198	Experimental mitigation of the effects of the limited size aperture or misalignment by singular-value-decomposition-based beam orthogonalization in a free-space optical link using Laguerreâ€“Gaussian modes. Optics Letters, 2020, 45, 6310.	3.3	11

#	Article	IF	Citations
199	Fourier-Engineered Plasmonic Lattice Resonances. ACS Nano, 2022, 16, 5696-5703.	14.6	11
200	Relaxed Phase-Matching Constraints in Zero-Index Waveguides. Physical Review Letters, 2022, 128, .	7.8	11
201	To what extent can space be compressed? Bandwidth limits of spaceplates. Optica, 2022, 9, 738.	9.3	11
202	Single-Photon Source for Quantum Information Based on Single Dye Molecule Fluorescence in Liquid Crystal Host. Molecular Crystals and Liquid Crystals, 2006, 454, 1/[403]-14/[416].	0.9	10
203	Tunneling delays in frustrated total internal reflection. Physical Review A, 2012, 85, .	2.5	10
204	Quantum probabilities from quantum entanglement: experimentally unpacking the Born rule. New Journal of Physics, 2016, 18, 053013.	2.9	10
205	Measurement of the Photon-Plasmon Coupling Phase Shift. Physical Review Letters, 2019, 122, 133601.	7.8	10
206	Compressive ultrafast pulse measurement via time-domain single-pixel imaging. Optica, 2021, 8, 1176.	9.3	10
207	Theory of four-wave mixing of cylindrical vector beams in optical fibers. Journal of the Optical Society of America B: Optical Physics, 2020, 37, 1670.	2.1	10
208	Utilizing adaptive optics to mitigate intra-modal-group power coupling of graded-index few-mode fiber in a 200-Gbit/s mode-division-multiplexed link. Optics Letters, 2020, 45, 3577.	3.3	10
209	Dynamically controlling local field enhancement at an epsilon-near-zero/dielectric interface via nonlinearities of an epsilon-near-zero medium. Nanophotonics, 2020, 9, 4831-4837.	6.0	10
210	Nonlinear Optical Interactions in Optical Fibers. Journal of Nonlinear Optical Physics and Materials, 1998, 07, 105-112.	1.8	9
211	Single-photon experiments with liquid crystals for quantum science and quantum engineering applications. Liquid Crystals Reviews, 2014, 2, 111-129.	4.1	9
212	Observation of quantum recoherence of photons by spatial propagation. Scientific Reports, 2015, 5, 15330.	3.3	9
213	Experimental Estimate of the Nonlinear Refractive Index of Crystalline ZnSe in the Terahertz Spectral Range. Bulletin of the Russian Academy of Sciences: Physics, 2018, 82, 1547-1549.	0.6	9
214	Performance analysis of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>d</mml:mi></mml:math> -dimensional quantum cryptography under state-dependent diffraction. Physical Review A, 2019, 100, .	2.5	9
215	Propagation of broadband THz pulses: effects of dispersion, diffraction and time-varying nonlinear refraction. Optics Express, 2020, 28, 3237.	3.4	9
216	Fundamental quantum limits in ellipsometry. Optics Letters, 2020, 45, 4607.	3.3	9

#	Article	IF	Citations
217	Designing high-performance propagation-compressing spaceplates using thin-film multilayer stacks. Optics Express, 2022, 30, 2197.	3.4	9
218	Design of negative-refractive-index materials on the basis of rods with a gradient of the dielectric constant. Applied Physics Letters, 2007, 91, 081103.	3.3	8
219	Loss of spatial coherence and limiting of focal plane intensity by small-scale laser-beam filamentation. Physical Review A, 2011, 84, .	2.5	8
220	Phase retrieval of an electron vortex beam using diffraction holography. Applied Physics Letters, 2017, 111, .	3.3	8
221	Measurement of the power distribution during stimulated brillouin scattering with focused gaussian beams. Journal of Modern Optics, 1998, 45, 735-745.	1.3	7
222	Theoretical model for superluminal and slow light in erbium-doped optical fibers: enhancement of the frequency response by pump modulation. Applied Physics B: Lasers and Optics, 2012, 107, 717-732.	2.2	7
223	Weak-value amplification of the fast-light effect in rubidium vapor. Physical Review A, 2016, 93, .	2.5	7
224	Influence of damping on the vanishing of the linear electro-optic effect in chiral isotropic media. Physical Review A, 2003, 67, .	2.5	6
225	Simulating Quantum-Mechanical Barrier Tunneling Phenomena with a Nematic-Liquid-Crystal-Filled Double-Prism Structure. Molecular Crystals and Liquid Crystals, 2014, 595, 136-143.	0.9	6
226	Innovative Phase Plates for Beam Shaping. Microscopy and Microanalysis, 2014, 20, 228-229.	0.4	6
227	Distributed angular double-slit interference with pseudo-thermal light. Applied Physics Letters, 2017, 110, 071107.	3.3	6
228	Plasmonic nanoantennas with liquid crystals for nanocrystal fluorescence enhancement and polarization selectivity of classical and quantum light sources. Molecular Crystals and Liquid Crystals, 2017, 657, 173-183.	0.9	6
229	Light, the universe and everything â€“ 12 Herculean tasks for quantum cowboys and black diamond skiers. Journal of Modern Optics, 2018, 65, 1261-1308.	1.3	6
230	Weak superradiance in arrays of plasmonic nanoantennas. Physical Review A, 2019, 100, .	2.5	6
231	Arbitrarily high time bandwidth performance in a nonreciprocal optical resonator with broken time invariance. Scientific Reports, 2020, 10, 15752.	3.3	6
232	Tunable Doppler shift using a time-varying epsilon-near-zero thin film near 1550â€‰â€‰nm. Optics Letters, 2021, 46, 3444.	3.3	6
233	Simultaneous turbulence mitigation and channel demultiplexing for two 100â€‰â€‰Gbit/s orbital-angular-momentum multiplexed beams by adaptive wavefront shaping and diffusing. Optics Letters, 2020, 45, 702.	3.3	6
234	Nonlinear optics with full three-dimensional illumination. Optica, 2019, 6, 878.	9.3	6

#	Article	IF	Citations
235	STIMULATED SCATTERING OF PICOSECOND OPTICAL PULSES IN THE PRESENCE OF SELF-FOCUSING. Journal of Nonlinear Optical Physics and Materials, 1992, 01, 765-773.	1.8	5
236	Far-Field Patterns from Dye-Doped Planar-Aligned Nematic Liquid Crystals Under Nanosecond Laser Irradiation. Molecular Crystals and Liquid Crystals, 2006, 453, 393-401.	0.9	5
237	Electron holograms encoding amplitude and phase for the generation of arbitrary wavefunctions. Microscopy and Microanalysis, 2015, 21, 503-504.	0.4	5
238	Holograms for the Generation of Vortex States with L=500h Fabricated by Electron Beam Lithography. Microscopy and Microanalysis, 2015, 21, 667-668.	0.4	5
239	Towards polarization-based excitation tailoring for extended Raman spectroscopy. Optics Express, 2020, 28, 10239.	3.4	5
240	Improvement of the photorefractive efficiency of BaTiO3by Î³ irradiation. Applied Physics Letters, 1992, 61, 2015-2017.	3.3	4
241	CUMULATIVE BIREFRINGENCE EFFECTS OF NANOSECOND LASER PULSES IN DYE-DOPED PLANAR NEMATIC LIQUID CRYSTAL LAYERS. Journal of Nonlinear Optical Physics and Materials, 2002, 11, 341-350.	1.8	4
242	Er- and Eu-doped GaP-oxide porous composites for optoelectronic applications. Physica Status Solidi - Rapid Research Letters, 2007, 1, R13-R15.	2.4	4
243	Slow-light enhanced spectrometers on chip. , 2011, , .		4
244	Neutrons with a twist. Nature, 2015, 525, 462-463.	27.8	4
245	Slowly but surely. Nature Physics, 2015, 11, 15-16.	16.7	4
246	Lattice-plasmon-induced asymmetric transmission in two-dimensional chiral arrays. APL Photonics, 2022, 7, .	5.7	4
247	MEASUREMENT OF THE INTENSITY-DEPENDENT REFRACTIVE INDEX USING COMPLETE SPATIO-TEMPORAL PULSE CHARACTERIZATION. Journal of Nonlinear Optical Physics and Materials, 2005, 14, 9-20.	1.8	3
248	Heralded single-photon partial coherence. Physical Review A, 2010, 82, .	2.5	3
249	Introduction to the special issue on quantum imaging. Quantum Information Processing, 2012, 11, 887-889.	2.2	3
250	Recovering full coherence in a qubit by measuring half of its environment. Physical Review A, 2015, 92, .	2.5	3
251	Super-critical phasematching for photon pair generation in structured light modes. Optics Express, 2016, 24, 24495.	3.4	3
252	The duality principle in the presence of postselection. Scientific Reports, 2016, 6, 19944.	3.3	3

#	Article	IF	Citations
253	Reply to â€˜Physical limitations on broadband invisibility based on fast-light mediaâ€™. Nature Communications, 2021, 12, 2800.	12.8	3
254	Vectorial Phase Conjugation for High-Fidelity Mode Transmission Through Multimode Fiber. , 2020, , .		3
255	Dependence of the Efficiency of the Nonlinearâ€Optical Response of Materials on their Linear Permittivity and Permeability. Laser and Photonics Reviews, 0, , 2100032.	8.7	3
256	Cross-polarized surface lattice resonances in a rectangular lattice plasmonic metasurface. Optics Letters, 2022, 47, 2105.	3.3	3
257	Enhancement of the Uniformity and Rotation of Large Aperture, Permanent Magnet, Tunable Faraday Rotators. Journal of Modern Optics, 1995, 42, 1137-1143.	1.3	2
258	Third-Order Nonlinear Optical Properties of Selected Composites. ACS Symposium Series, 1997, , 108-124.	0.5	2
259	Enhancing the Spectral Sensitivity and Resolution of Interferometers Using Slow-Light Media. , 2007, , .		2
260	Reply to Comment on â€˜Evidence of slow-light effects from rotary drag of structured beamsâ€™. New Journal of Physics, 2014, 16, 038002.	2.9	2
261	Colossal enhancement of the magnetic dipole moment by exploiting lattice coupling in metasurfaces. Journal of the Optical Society of America B: Optical Physics, 2021, 38, C217.	2.1	2
262	Enhanced third-order nonlinear optical response of photonic bandgap materials. Journal of Modern Optics, 1999, 46, 1061-1069.	1.3	2
263	Plasmonic Nanoantenna-Enhanced Adiabatic Wavelength Conversion using a Time-varying Epsilon-near-zero-based Metasurface. , 2020, , .		2
264	Ultra-High-Q Resonance in a Plasmonic Metasurface. , 2020, , .		2
265	Anisotropic nonlinear response of silicon in the near-infrared region. , 2007, , .		1
266	Surface plasmon resonance in Ag nanoparticles deposited inside porous GaP templates. , 2008, , .		1
267	Single and biphoton imaging and high dimensional quantum communication. Quantum Information Processing, 2012, 11, 925-948.	2.2	1
268	Eigenmode super-resolution imaging in arbitrary optical systems. Journal of Modern Optics, 2013, 60, 1931-1936.	1.3	1
269	Efficient Nonlinear Metasurfaces using Multiresonant High-Q Plasmonic Arrays. , 2019, , .		1
270	Non-local Field Effects in Nonlinear Plasmonic Metasurfaces. , 2020, , .		1

#	Article	IF	Citations
271	Using an Acousto-Optic Modulator as a Fast Spatial Light Modulator. , 2020, , .		1
272	Dye-doped cholesteric-liquid-crystal room-temperature single-photon source. Journal of Modern Optics, 2004, 51, 1535-1547.	1.3	1
273	Generating a Twisted Spatiotemporal Wave Packet Using Coherent Superposition of Structured Beams with Different Frequencies. , 2019, , .		1
274	High-Q resonance train in a plasmonic metasurface. , 2019, , .		1
275	Ultra-High-Q Resonance in a Plasmonic Metasurface. , 2020, , .		1
276	Single-End Adaptive Optics Compensation for Emulated Turbulence in a Bi-Directional 10-Mbit/s per Channel Free-Space Quantum Communication Link Using Orbital-Angular-Momentum Encoding. Research, 2019, 2019, 1-10.	5.7	1
277	Nonlinear plasmonic metasurfaces using multiresonant surface lattice resonances. , 2020, , .		1
278	HIGH-ORDER DIFFRACTION IN PHOTOREFRACTIVE SBN:Ce DUE TO NON-SINUSOIDAL GRATINGS FORMED BY BEAMS OF COMPARABLE INTENSITY. Journal of Nonlinear Optical Physics and Materials, 1993, 02, 221-227.	1.8	0
279	FUNDAMENTALS AND APPLICATIONS OF SLOW AND FAST LIGHT. , 2005, , .		0
280	Observation of exotic pulse propagation in erbium-doped optical fibers. , 2006, , .		0
281	Sub-Rayleigh lithography using an N-photon absorber. , 2006, , .		0
282	Modification of fluorescence decay times in composite materials based on Nd:YAG nanoparticles. , 2006, , .		0
283	Deterministically polarized, room temperature source of single photons based on single-emitter fluorescence in aligned liquid crystal hosts. , 2006, , .		0
284	Cascade-like nonlinearity caused by local-field effects: Extending bloembergen's result. , 2007, , .		0
285	Saturable Absorption in Nanocomposite Gold-Silica Materials with high Gold Fill Fraction. , 2007, , .		0
286	Reducing pulse distortion in fast light pulse propagation by Pulse-on-Background method through an erbium-doped fiber amplifier. , 2007, , .		0
287	Single Photon Source on Demand Based on Single-Colloidal-Quantum-Dot Fluorescence in Chiral Photonic Bandgap Liquid Crystal Hosts. , 2007, , .		0
288	Pulse broadening or compression in fast-light pulse propagation through an erbium-doped fiber amplifier. , 2007, , .		0

#	Article	IF	Citations
289	Effects of turbulence on the transverse position-momentum entanglement of biphotons. , 2007, , .		0
290	Saturable absorption in nanocomposite gold-silica materials with high gold fill fraction. , 2007, , .		0
291	Single photon source on demand based on single-colloidal-quantum-dot fluorescence in chiral photonic bandgap liquid crystal hosts. , 2007, , .		0
292	Giant nonlinear optical properties of Bi3.25La0.75Ti3O12 ferroelectric thin films on quartz substrate. , 2007, , .		0
293	Spectral measurements of the third-order nonlinearity of bulk silicon in the near infrared region. , 2007, , .		0
294	Single-Colloidal-Quantum-Dot Fluorescence Antibunching in Chiral Photonic Bandgap Hosts at Room Temperature. , 2007, , .		0
295	Let Quantum Mechanics Improve Your Images. Science, 2008, 321, 501-502.	12.6	0
296	Tailoring the Properties of Light and Matter for Photonics. , 2010, , .		0
297	Major Accomplishments in 2009 on Slow Light. IEEE Photonics Journal, 2010, 2, 229-231.	2.0	0
298	Lasers: The First Fifty Years. Applied Optics, 2010, 49, LF1.	2.1	0
299	Quantum imaging: Enhanced image formation using quantum states of light. , 2011, , .		0
300	The effects of local fields on laser gain of composite optical materials. , 2011, , .		0
301	Full-field quantum measurements and holographic ghost imaging. , 2011, , .		0
302	New results in quantum nonlinear optics. , 2012, , .		0
303	Experiments and Potentialities for the use of Bessel Beam in Superresolution STEM. Microscopy and Microanalysis, 2014, 20, 384-385.	0.4	0
304	Holographic Generation of Highly Twisted Electron Beams. Microscopy and Microanalysis, 2015, 21, 675-676.	0.4	0
305	Nonlinear refractive index for crystals at terahertz frequencies (Invited Paper). , 2015, , .		0
306	Super-critical phase-matching in nonlinear optics. , 2015, , .		0

#	Article	IF	Citations
307	Direct measurement of an one-million-dimensional photonic state. , 2016, , .		0
308	Structured-illumination microscopy with nonlinear optical processes. , 2016, , .		0
309	Nonlinear refractive index for crystals in terahertz spectral range. , 2016, , .		0
310	Broadband slow light in genetically optimized coupled-cavity waveguides with GBP exceeding 0.45. , 2017, , .		0
311	Label-Free Super-Resolution Microscopy with Coherent Nonlinear Structured-Illumination. , 2018, , .		0
312	Overcoming the time-bandwidth limit. , 2018, , .		0
313	Limits of Applicability of the Concept of Critical Power for the Self-Focusing of Light. , 2018, , .		0
314	Optical Delay Beyond the Time-Bandwidth Limit: From Pipe Dream to Reality. , 2019, , .		0
315	Switchable detector array scheme to reduce the effect of single-photon detectorâ€™s deadtime in a multi-bit/photon quantum link. Optics Communications, 2019, 441, 132-137.	2.1	0
316	Multi-Resonant High-Q Plasmonic Metasurface. , 2019, , .		0
317	Towards Efficient Nonlinear Plasmonic Metasurfaces. , 2019, , .		0
318	Plasmonic metasurfaces with high-Q nanocavities. , 2020, , .		0
319	Polarization Entanglement from an Incoherent Pump. , 2020, , .		0
320	Selective excitation of subwavelength atomic clouds. Physical Review Research, 2021, 3, .	3.6	0
321	Demonstration of Wavelength Conversion by FWM Near 1550-nm in a Sub-Wavelength Antenna-ENZ Metasurface. , 2021, , .		0
322	Ultra-High-Q (â‰ˆ2400) Lattice Resonances in Plasmonic Metasurface for Flat Optics. , 2021, , .		0
323	Experimental demonstration of superresolution of partially coherent light sources using parity sorting: erratum. Optics Express, 2021, 29, 35579.	3.4	0
324	SUPERLUMINAL AND ULTRA-SLOW LIGHT PROPAGATION IN ROOM-TEMPERATURE SOLIDS. , 2004, , .		0

#	Article	IF	Citations
325	Non-local angular double-slit ghost diffraction with thermal light. , 2016, , .		0
326	Demonstration of ultra-high time-bandwidth product in a non-reciprocal fiber-optic system. , 2018, , .		0
327	Theoretical and numerical study of the time-bandwidth product in resonant cavities with nonreciprocal coupling. , 2020, , .		0
328	Plasmonic Metasurfaces with Ultra-High-Q (â‰ˆ2400) Lattice Resonances for Sensing, LiDAR Nanolasing and Imaging. , 2021, , .		0
329	Engineering Local Fields in Nonlinear Plasmonic Metasurfaces -INVITED. EPJ Web of Conferences, 2020, 238, 11002.	0.3	0
330	Nonlinear Optics: feature issue introduction. Optical Materials Express, 2020, 10, 774.	3.0	0
331	Nonlinear Optics: feature issue introduction. Optics Express, 2020, 28, 5883.	3.4	0
332	Broadband bandpass THz filters with stacked metasurfaces. , 2021, , .		0
333	Multimode Surface Lattice Resonance Hybridization. , 2021, , .		0
334	Nonlinear Response of ENZ Plasmon Modes near 1550 nm. , 2020, , .		0
335	Experimental Demonstration of Polarization Entanglement from a Spatiotemporally Incoherent Source. , 2021, , .		0
336	Manipulation of Ultrafast Pulses Using Epsilon-Near-Zero Based Plasmonic Nonlinear Metasurface. , 2021, , .		0
337	Observation of an extremely large nonlinear response in crystalline quartz in THz regime. , 2022, , .		0