

Cong Liu

List of Publications by Year in descending order

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66
papers

8,489
citations

293460

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67
times ranked

5481
citing authors

#	ARTICLE	IF	CITATIONS
1	Dynamic aerosol and dynamic air-water interface curvature effects on a 2-Gbit/s free-space optical link using orbital-angular-momentum multiplexing. <i>Nanophotonics</i> , 2022, 11, 885-895.	2.9	5
2	Demonstration of Recovering Orbital-Angular-Momentum Multiplexed Channels Using a Tunable, Broadband Pixel-Array-Based Photonic-Integrated-Circuit Receiver. <i>Journal of Lightwave Technology</i> , 2022, 40, 1346-1352.	2.7	4
3	Demonstration of Turbulence Resiliency in a Mode-, Polarization-, and Wavelength-Multiplexed Free-Space Optical Link Using Pilot-Assisted Optoelectronic Beam Mixing. <i>Journal of Lightwave Technology</i> , 2022, 40, 588-596.	2.7	14
4	Experimental Demonstration of a 100-Gbit/s 16-QAM Free-Space Optical Link Using a Structured Optical "Bottle Beam" to Circumvent Obstructions. <i>Journal of Lightwave Technology</i> , 2022, 40, 3277-3284.	2.7	2
5	Demonstration of Turbulence Resilient Self-Coherent Free-Space Optical Communications Using a Pilot Tone and an Array of Smaller Photodiodes for Bandwidth Enhancement. , 2022, , .		2
6	Modal coupling and crosstalk due to turbulence and divergence on free space THz links using multiple orbital angular momentum beams. <i>Scientific Reports</i> , 2021, 11, 2110.	1.6	21
7	Photon Acceleration Using a Time-Varying Epsilon-near-Zero Metasurface. <i>ACS Photonics</i> , 2021, 8, 716-720.	3.2	24
8	Perspectives on advances in high-capacity, free-space communications using multiplexing of orbital-angular-momentum beams. <i>APL Photonics</i> , 2021, 6, .	3.0	53
9	Optical Signal Processing Aided by Optical Frequency Combs. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2021, 27, 1-16.	1.9	22
10	Dependence of the coupling properties between a plasmonic antenna array and a sub-wavelength epsilon-near-zero film on structural and material parameters. <i>Applied Physics Letters</i> , 2021, 118, .	1.5	13
11	Tunable Doppler shift using a time-varying epsilon-near-zero thin film near 1550 nm. <i>Optics Letters</i> , 2021, 46, 3444.	1.7	6
12	Adiabatic Frequency Conversion Using a Time-Varying Epsilon-Near-Zero Metasurface. <i>Nano Letters</i> , 2021, 21, 5907-5913.	4.5	30
13	Demonstration of generating a 100 Gbit/s orbital-angular-momentum beam with a tunable mode order over a range of wavelengths using an integrated broadband pixel-array structure. <i>Optics Letters</i> , 2021, 46, 4765.	1.7	5
14	Modal properties of a beam carrying OAM generated by a circular array of multiple ring-resonator emitters. <i>Optics Letters</i> , 2021, 46, 4722.	1.7	8
15	Simulation of near-diffraction- and near-dispersion-free OAM pulses with controllable group velocity by combining multiple frequencies, each carrying a Bessel mode. <i>Optics Letters</i> , 2021, 46, 4678.	1.7	9
16	Turbulence-resilient pilot-assisted self-coherent free-space optical communications using automatic optoelectronic mixing of many modes. <i>Nature Photonics</i> , 2021, 15, 743-750.	15.6	45
17	Experimental Generation of OAM +1 and +3 Spatiotemporal Beams with a Time-Dependent Beam Radius of ~0.24-to~0.68 mm Using a Coherent Combination of Multiple Frequencies Each Containing Multiple LG Modes. , 2021, , .		0
18	Experimental Mitigation of Atmospheric Turbulence Effect Using Pre-Signal Combining for Uni- and Bi-Directional Free-Space Optical Links With Two 100-Gbit/s OAM-Multiplexed Channels. <i>Journal of Lightwave Technology</i> , 2020, 38, 82-89.	2.7	33

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19	Demonstration of Tunable Optical Aggregation of QPSK to 16-QAM Over Optically Generated Nyquist Pulse Trains Using Nonlinear Wave Mixing and a Kerr Frequency Comb. Journal of Lightwave Technology, 2020, 38, 359-365.	2.7	23
20	Dynamic spatiotemporal beams that combine two independent and controllable orbital-angular-momenta using multiple optical-frequency-comb lines. Nature Communications, 2020, 11, 4099.	5.8	25
21	Broadband frequency translation through time refraction in an epsilon-near-zero material. Nature Communications, 2020, 11, 2180.	5.8	121
22	Vectorial Phase Conjugation for High-Fidelity Mode Transmission Through Multimode Fiber. , 2020, , .		3
23	Performance of real-time adaptive optics compensation in a turbulent channel with high-dimensional spatial-mode encoding. Optics Express, 2020, 28, 15376.	1.7	21
24	Simultaneous turbulence mitigation and channel demultiplexing for two 100-Gbit/s orbital-angular-momentum multiplexed beams by adaptive wavefront shaping and diffusing. Optics Letters, 2020, 45, 702.	1.7	6
25	Demonstration of using two aperture pairs combined with multiple-mode receivers and MIMO signal processing for enhanced tolerance to turbulence and misalignment in a 10-Gbit/s QPSK FSO link. Optics Letters, 2020, 45, 3042.	1.7	13
26	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.	1.7	10
27	Utilizing phase delays of an integrated pixel-array structure to generate orbital-angular-momentum beams with tunable orders and a broad bandwidth. Optics Letters, 2020, 45, 4144.	1.7	8
28	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 Laguerre-Gaussian modes. Optics Letters, 2020, 45, 6310.	1.7	11
29	Perspective on using multiple orbital-angular-momentum beams for enhanced capacity in free-space optical communication links. Nanophotonics, 2020, 10, 225-233.	2.9	36
30	"Hiding" a low-intensity 50-Gbit/s QPSK free-space OAM beam using an orthogonal coaxial high-intensity 50-Gbit/s QPSK beam. Applied Optics, 2020, 59, 7448.	0.9	1
31	Demonstrating the use of OAM modes to facilitate the networking functions of carrying channel header information and orthogonal channel coding. Optics Letters, 2020, 45, 4381.	1.7	0
32	Demonstration of Turbulence Resiliency in a Mode-, Polarization-, and Wavelength-Multiplexed Free-Space Optical Link using Pilot Tones and Optoelectronic Wave Mixing. , 2020, , .		2
33	Nonlinear Response of ENZ Plasmon Modes near 1550 nm. , 2020, , .		0
34	Switchable detector array scheme to reduce the effect of single-photon detector's deadtime in a multi-bit/photon quantum link. Optics Communications, 2019, 441, 132-137.	1.0	0
35	"Hiding" a Low-Intensity 50-Gbit/s QPSK Free-Space Optical Beam That Co-Axially Propagates on the Same Wavelength with a High-Intensity 50-Gbit/s QPSK Optical Beam using Orthogonal Mode Multiplexing. , 2019, , .		0
36	All-Optical Signal Processing Techniques for Flexible Networks. Journal of Lightwave Technology, 2019, 37, 21-35.	2.7	71

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37	Coherent optical wireless communication link employing orbital angular momentum multiplexing in a ballistic and diffusive scattering medium. <i>Optics Letters</i> , 2019, 44, 691.	1.7	15
38	Mitigation for turbulence effects in a 40-Gbit/s orbital-angular-momentum-multiplexed free-space optical link between a ground station and a retro-reflecting UAV using MIMO equalization. <i>Optics Letters</i> , 2019, 44, 5181.	1.7	37
39	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. <i>Research</i> , 2019, 2019, 8326701.	2.8	21
40	Reconfigurable optical generation of nine Nyquist WDM channels with sinc-shaped temporal pulse trains using a single microresonator-based Kerr frequency comb. <i>Optics Letters</i> , 2019, 44, 1852.	1.7	11
41	Atmospheric turbulence compensation in orbital angular momentum communications: Advances and perspectives. <i>Optics Communications</i> , 2018, 408, 68-81.	1.0	77
42	MIMO Equalization to Mitigate Turbulence in a 2-Channel 40-Gbit/s QPSK Free-Space Optical 100-m Round-Trip Orbital-Angular-Momentum-Multiplexed Link Between a Ground Station and a Retro-Reflecting UAV. , 2018, , .		4
43	Experimental demonstration of beaconless beam displacement tracking for an orbital angular momentum multiplexed free-space optical link. <i>Optics Letters</i> , 2018, 43, 2392.	1.7	8
44	400-Gbit/s QPSK free-space optical communication link based on four-fold multiplexing of Hermite-Gaussian or Laguerre-Gaussian modes by varying both modal indices. <i>Optics Letters</i> , 2018, 43, 3889.	1.7	55
45	Demonstration of a 10-Mbit/s quantum communication link by encoding data on two Laguerre-Gaussian modes with different radial indices. <i>Optics Letters</i> , 2018, 43, 5639.	1.7	18
46	High-Capacity Free-Space Optical Communications Between a Ground Transmitter and a Ground Receiver via a UAV Using Multiplexing of Multiple Orbital-Angular-Momentum Beams. <i>Scientific Reports</i> , 2017, 7, 17427.	1.6	81
47	Tunable insertion of multiple lines into a Kerr frequency comb using electro-optical modulators. <i>Optics Letters</i> , 2017, 42, 3765.	1.7	10
48	Pilot-tone-based self-homodyne detection using optical nonlinear wave mixing. <i>Optics Letters</i> , 2017, 42, 1840.	1.7	21
49	Spatial light structuring using a combination of multiple orthogonal orbital angular momentum beams with complex coefficients. <i>Optics Letters</i> , 2017, 42, 991.	1.7	31
50	Orbital Angular Momentum-based Space Division Multiplexing for High-capacity Underwater Optical Communications. <i>Scientific Reports</i> , 2016, 6, 33306.	1.6	156
51	OFDM over mm-Wave OAM Channels in a Multipath Environment with Intersymbol Interference. , 2016, , .		17
52	Invited Article: Division and multiplication of the state order for data-carrying orbital angular momentum beams. <i>APL Photonics</i> , 2016, 1, .	3.0	16
53	Demonstration of Tunable Steering and Multiplexing of Two 28-GHz Data Carrying Orbital Angular Momentum Beams Using Antenna Array. <i>Scientific Reports</i> , 2016, 6, 37078.	1.6	20
54	Communication with a twist. <i>IEEE Spectrum</i> , 2016, 53, 34-39.	0.5	48

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55	Experimental demonstration of a 200-Gbit/s free-space optical link by multiplexing Laguerre-Gaussian beams with different radial indices. <i>Optics Letters</i> , 2016, 41, 3447.	1.7	85
56	Performance metrics and design considerations for a free-space optical orbital-angular-momentum multiplexed communication link. <i>Optica</i> , 2015, 2, 357.	4.8	164
57	100-Tbit/s free-space data link enabled by three-dimensional multiplexing of orbital angular momentum, polarization, and wavelength. <i>Optics Letters</i> , 2014, 39, 197.	1.7	443
58	Demonstration of tunable optical generation of higher-order modulation formats using nonlinearities and coherent frequency comb. <i>Optics Letters</i> , 2014, 39, 4915.	1.7	13
59	Adaptive-optics-based simultaneous pre- and post-turbulence compensation of multiple orbital-angular-momentum beams in a bidirectional free-space optical link. <i>Optica</i> , 2014, 1, 376.	4.8	177
60	Crosstalk mitigation in a free-space orbital angular momentum multiplexed communication link using 4x4 MIMO equalization. <i>Optics Letters</i> , 2014, 39, 4360.	1.7	116
61	Terabit-Scale Orbital Angular Momentum Mode Division Multiplexing in Fibers. <i>Science</i> , 2013, 340, 1545-1548.	6.0	2,330
62	Atmospheric turbulence effects on the performance of a free space optical link employing orbital angular momentum multiplexing. <i>Optics Letters</i> , 2013, 38, 4062.	1.7	233
63	Terabit free-space data transmission employing orbital angular momentum multiplexing. <i>Nature Photonics</i> , 2012, 6, 488-496.	15.6	3,471
64	Spectrally efficient direct-detected OFDM transmission employing an iterative estimation and cancellation technique. <i>Optics Express</i> , 2009, 17, 9099.	1.7	159
65	Physical-Layer Challenges in Stable, High-Capacity Optical Communication Networks. , 2006, , .		0
66	Demonstration of turbulence mitigation in a 200-Gbit/s orbital-angular-momentum multiplexed free-space optical link using simple power measurements for determining the modal crosstalk matrix. <i>Optics Letters</i> , 0, , .	1.7	4