Hao Huang

List of Publications by Year in descending order

85 papers	10,399 citations	172457 29 h-index	197818 49 g-index
86 all docs	86 docs citations	86 times ranked	4949 citing authors

#	Article	IF	Citations
1	Terabit free-space data transmission employing orbital angular momentum multiplexing. Nature Photonics, 2012, 6, 488-496.	31.4	3,471
2	Terabit-Scale Orbital Angular Momentum Mode Division Multiplexing in Fibers. Science, 2013, 340, 1545-1548.	12.6	2,330
3	High-capacity millimetre-wave communications with orbital angular momentum multiplexing. Nature Communications, 2014, 5, 4876.	12.8	972
4	100â€‰â€‰Tbit/s free-space data link enabled by three-dimensional multiplexing of orbital angular momentum, polarization, and wavelength. Optics Letters, 2014, 39, 197.	3.3	443
5	4 Ã— 20â€‰â€‰Gbit/s mode division multiplexing over free space using vector modes and a q-plate mode (de)multiplexer. Optics Letters, 2015, 40, 1980.	3.3	372
6	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
7	Mode division multiplexing using an orbital angular momentum mode sorter and MIMO-DSP over a graded-index few-mode optical fibre. Scientific Reports, 2015, 5, 14931.	3.3	216
8	Mode Properties and Propagation Effects of Optical Orbital Angular Momentum (OAM) Modes in a Ring Fiber. IEEE Photonics Journal, 2012, 4, 535-543.	2.0	180
9	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
10	Performance metrics and design considerations for a free-space optical orbital-angular-momentumâ€“multiplexed communication link. Optica, 2015, 2, 357.	9.3	164
11	Adaptive optics compensation of multiple orbital angular momentum beams propagating through emulated atmospheric turbulence. Optics Letters, 2014, 39, 2845.	3.3	138
12	Experimental characterization of a 400â€‰â€‰Gbit/s orbital angular momentum multiplexed free-space optical link over 120 m. Optics Letters, 2016, 41, 622.	3.3	136
13	Line-of-Sight Millimeter-Wave Communications Using Orbital Angular Momentum Multiplexing Combined With Conventional Spatial Multiplexing. IEEE Transactions on Wireless Communications, 2017, 16, 3151-3161.	9.2	130
14	A Different Angle on Light Communications. Science, 2012, 337, 655-656.	12.6	126
15	Crosstalk mitigation in a free-space orbital angular momentum multiplexed communication link using 4Ã—4 MIMO equalization. Optics Letters, 2014, 39, 4360.	3.3	116
16	Octave-spanning supercontinuum generation of vortices in an As_2S_3 ring photonic crystal fiber. Optics Letters, 2012, 37, 1889.	3.3	111
17	Phase correction for a distorted orbital angular momentum beam using a Zernike polynomials-based stochastic-parallel-gradient-descent algorithm. Optics Letters, 2015, 40, 1197.	3.3	101
18	Experimental demonstration of a 200-Gbit/s free-space optical link by multiplexing Laguerreâ€“Gaussian beams with different radial indices. Optics Letters, 2016, 41, 3447.	3.3	85

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19	Mode-Division-Multiplexing of Multiple Bessel-Gaussian Beams Carrying Orbital-Angular-Momentum for Obstruction-Tolerant Free-Space Optical and Millimetre-Wave Communication Links. Scientific Reports, 2016, 6, 22082.	3.3	63
20	Multicasting in a spatial division multiplexing system based on optical orbital angular momentum. Optics Letters, 2013, 38, 3930.	3.3	60
21	Efficient generation and multiplexing of optical orbital angular momentum modes in a ring fiber by using multiple coherent inputs. Optics Letters, 2012, 37, 3645.	3.3	58
22	Perspectives on advances in high-capacity, free-space communications using multiplexing of orbital-angular-momentum beams. APL Photonics, 2021, 6, .	5.7	53
23	Phase-shift interference-based wavefront characterization for orbital angular momentum modes. Optics Letters, 2013, 38, 2348.	3.3	48
24	Turbulence compensation of an orbital angular momentum and polarization-multiplexed link using a data-carrying beacon on a separate wavelength. Optics Letters, 2015, 40, 2249.	3.3	46
25	Multipath Effects in Millimetre-Wave Wireless Communication using Orbital Angular Momentum Multiplexing. Scientific Reports, 2016, 6, 33482.	3.3	37
26	2â€‰â€‰Tbit/s free-space data transmission on two orthogonal orbital-angular-momentum beams each carrying 25 WDM channels. Optics Letters, 2012, 37, 4753.	3.3	34
27	Silicon-on-Nitride Waveguide With Ultralow Dispersion Over an Octave-Spanning Mid-Infrared Wavelength Range. IEEE Photonics Journal, 2012, 4, 126-132.	2.0	34
28	Orbital-angular-momentum-based reconfigurable optical switching and routing. Photonics Research, 2016, 4, B5.	7.0	31
29	Reconfigurable switching of orbital-angular-momentum-based free-space data channels. Optics Letters, 2013, 38, 5118.	3.3	29
30	Orbital-angular-momentum-multiplexed free-space optical communication link using transmitter lenses. Applied Optics, 2016, 55, 2098.	2.1	27
31	Tunable orbital angular momentum mode filter based on optical geometric transformation. Optics Letters, 2014, 39, 1689.	3.3	23
32	Air-Core Ring Fiber With >1000 Radially Fundamental OAM Modes Across O, E, S, C, and L Bands. IEEE Access, 2020, 8, 68280-68287.	4.2	23
33	100 Tbit/s Free-Space Data Link using Orbital Angular Momentum Mode Division Multiplexing Combined with Wavelength Division Multiplexing. , 2013, , .		22
34	Reconfigurable 2 Ã— 2 orbital angular momentum based optical switching of 50-Gbaud QPSK channels. Optics Express, 2014, 22, 756.	3.4	22
35	Liquid-crystal-on-silicon-based optical add/drop multiplexer for orbital-angular-momentum-multiplexed optical links. Optics Letters, 2013, 38, 5142.	3.3	21
36	Experimental measurements of multipath-induced intra- and inter-channel crosstalk effects in a millimeter-wave communications link using orbital-angular-momentum multiplexing. , 2015, , .		18

#	Article	IF	Citations
37	1.6-Octave Coherent OAM Supercontinuum Generation in As₂S₃ Photonic Crystal Fiber. IEEE Access, 2020, 8, 168177-168185.	4.2	18
38	Experimental demonstration of 16 Gbit/s millimeter-wave communications using MIMO processing of 2 OAM modes on each of two transmitter/receiver antenna apertures. , 2014, , .		17
39	Experimental demonstration of 16-Gbit/s millimeter-wave communications link using thin metamaterial plates to generate data-carrying orbital-angular-momentum beams. , 2015, , .		17
40	Demonstration of a 280â€‰â€‰Gbit/s free-space space-division-multiplexing communications link utilizing plane-wave spatial multiplexing. Optics Letters, 2016, 41, 851.	3.3	17
41	Beyond Two-Octave Coherent OAM Supercontinuum Generation in Air-Core As₂S₃ Ring Fiber. IEEE Access, 2020, 8, 96543-96549.	4.2	16
42	Multimode Communications Using Orbital Angular Momentum. , 2013, , 569-615.		15
43	Two-Octave Supercontinuum Generation of High-Order OAM Modes in Air-Core Asâ„Sâ‚f Ring Fiber. IEEE Access, 2020, 8, 114135-114142.	4.2	15
44	Dipolar bright solitons and solitary vortices in a radial lattice. Physical Review A, 2017, 96, .	2.5	14
45	Three-Octave Supercontinuum Generation Using SiO₂ Cladded Si₃N₄ Slot Waveguide With All-Normal Dispersion. Journal of Lightwave Technology, 2020, 38, 3431-3438.	4.6	14
46	Reconfigurable orbital angular momentum and polarization manipulation of 100â€‰â€‰Gbit/s QPSK data channels. Optics Letters, 2013, 38, 5240.	3.3	13
47	Highly dispersive coupled ring-core fiber for orbital angular momentum modes. Applied Physics Letters, 2020, 117, .	3.3	13
48	400-Gbit/s Free-Space Optical Communications Link Over 120-meter Using Multiplexing of 4 Collocated Orbital-Angular-Momentum Beams. , 2015, , .		12
49	Demonstration of 8-mode 32-Gbit/s millimeter-wave free-space communication link using 4 orbital-angular-momentum modes on 2 polarizations. , 2014, , .		11
50	Hollow Ring-Core Photonic Crystal Fiber With >500 OAM Modes Over 360-nm Communications Bandwidth. IEEE Access, 2021, 9, 66999-67005.	4.2	9
51	Space division multiplexing in a basis of vector modes. , 2014, , .		6
52	Performance metrics and design parameters for an FSO communications link based on multiplexing of multiple orbital-angular-momentum beams. , 2014, , .		6
53	Polarization Beam Splitter Based on Si3N4/SiO2 Horizontal Slot Waveguides for On-Chip High-Power Applications. Sensors, 2020, 20, 2862.	3.8	6
54	Highly Dispersive Germanium-Doped Coupled Ring-Core Fiber for Vortex Modes. Journal of Lightwave Technology, 2022, 40, 2144-2150.	4.6	6

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55	Nondegenerate four-wave-mixing-based radio frequency up/downconversion using a parametric loop mirror. Optics Letters, 2011, 36, 4593.	3.3	5
56	Special Issue on Novel Insights into Orbital Angular Momentum Beams: From Fundamentals, Devices to Applications. Applied Sciences (Switzerland), 2019, 9, 2600.	2.5	3
57	Demonstration of 100-Gbit/s DQPSK data exchange between two different wavelength channels using parametric depletion in a highly nonlinear fiber. , 2010, , .		2
58	Performance analysis of spectrally efficient free-space data link using spatially multiplexed orbital angular momentum beams. Proceedings of SPIE, 2013, , .	0.8	2
59	Performance Enhancement of an Orbital-Angular-Momentum-Based Free-Space Optical Communication Link through Beam Divergence Controlling. , 2015, , .		2
60	Experimental Analysis of Multiplexing/demultiplexing Laguerre Gaussian Beams with Different Radial Index. , 2014, , .		2
61	Simultaneous subchannel data updating for multiple channels of 16-quadrature amplitude modulation signals using a single periodically poled lithium niobate waveguide. Optics Letters, 2012, 37, 4365.	3.3	1
62	Analysis of aperture size for partially receiving and de-multiplexing 100-Gbit/s optical orbital angular momentum channels over free-space link. , 2013, , .		1
63	Data Switching in Communication Networks using Orbital-Angular-Momentum Multiplexing. , 2014, , .		1
64	Demonstration of Distance Emulation for an Orbital-Angular-Momentum Beam. , 2015, , .		1
65	Causes and mitigation of modal crosstalk in OAM multiplexed optical communication links. , 2021, , 259-289.		1
66	Hollow Ring-Core Hybrid Photonic Crystal Fiber Supporting >500 OAM Modes Across O, E, S, C, L Bands. , 2020, , .		1
67	Highly dispersive Ge-doped coupled ring fiber for high-order OAM modes. , 2020, , .		1
68	Reconfigurable 40-Gbit/s tributary selection from a 640-Gbit/s signal using NOLM-based cascaded demultiplexing. , 2010, , .		0
69	Tapped delay-line matched filtering using a high-contrast grating hollow-core waveguide. , 2011, , .		0
70	Reconfigurable orbital-angular-momentum manipulation and switching of polarization-multiplexed 100-Gbit/s QPSK data channels. , 2013, , .		0
71	Experiment Turbulence Compensation of 50-Gbaud/s Orbital-Angular-Momentum QPSK Signals Using Intensity-only based SPGD Algorithm. , 2014, , .		0
72	A Quasi-Optical Tool for the Demultiplexing of Orbital Angular Momentum Carried at Millimeter-Wave Frequencies. , 2014, , .		0

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73	Object Wedge Angle and Direction Identification Using Machine Learning Algorithms. , 2019, , .		0
74	Tunable Filter for Orbital-Angular-Momentum Multiplexed Optical Channels. , 2013, , .		0
75	Orbital-Angular-Momentum-Based Reconfigurable and â€œLosslessâ€•Optical Add/Drop Multiplexing of Multiple 100-Gbit/s Channels. , 2013, , .		0
76	1-Tbit/s Orbital-Angular-Momentum Multiplexed Link Through Emulated Turbulence With a Data-Carrying Beacon on a Separate Wavelength for Compensation. , 2014, , .		0
77	Demonstration of a 280 G-bit/s communications link utilizing plane-wave multiplexing. , 2014, , .		0
78	19-Ring-Core Chalcogenide Fiber Supporting >2000 Radially Fundamental OAM Modes Across C and L Bands. , 2020, , .		0
79	Two-Octave OAM17,1 Supercontinuum Generation in Air-Core Chalcogenide Ring Fiber. , 2020, , .		0
80	Octave-spanning Coherent OAM Supercontinuum Generation Using As2S3 PCF with All-normal Dispersion. , 2020, , .		0
81	Two-octave Supercontinuum Generation of OAM Mode in Air-core AS2S3 Ring Fiber. , 2020, , .		0
82	Extremely Dispersive Schott Glass Fiber with Coupled High-Index Ring for OAM Modes. , 2020, , .		0
83	Ge-doped Coupled Ring Fiber with Large Negative Dispersion for Vortex Modes. , 2020, , .		0
84	Air-core Ring Fiber Supporting >1000 OAM Modes across O, E, S, C, and L Bands. , 2020, , .		0
85	Ge-doped air-core ring fiber supporting >400 radially fundamental OAM modes across O, E, S, C, L bands. , 2020, , .		0