

# Ke Xu

## List of Publications by Year in descending order

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114  
papers

2,944  
citations

218677

26  
h-index

175258

52  
g-index

114  
all docs

114  
docs citations

114  
times ranked

3367  
citing authors

#	ARTICLE	IF	CITATIONS
1	Different types of noise-like pulse in a nonlinear multimodal interference based mode-locked fiber laser. Optics and Laser Technology, 2022, 147, 107681.	4.6	12
2	High-speed silicon microring modulator at the 2-µm waveband with analysis and observation of optical bistability. Photonics Research, 2022, 10, A35.	7.0	23
3	Silicon photonic arrayed waveguide grating with 64 channels for the 2-µm spectral range. Optics Letters, 2022, 47, 1186.	3.3	11
4	Scalable and Compact Silicon Mode Multiplexer Via Tilt Waveguide Junctions With Shallow Etched Slots. Journal of Lightwave Technology, 2022, 40, 4682-4688.	4.6	6
5	Wavelength-switchable and multi-pulse bound state based on a hybrid mode-locked mechanism. Optics Express, 2022, 30, 10732.	3.4	7
6	An Ultra-Broadband Polarization Beam Splitter Based on the Digital Meta-Structure at the 2-µm Waveband. Photonics, 2022, 9, 361.	2.0	3
7	Inverse design of a dual-mode 3-dB optical power splitter with a 445-nm bandwidth. Optics Express, 2022, 30, 26266.	3.4	19
8	Active learning aided four-mode fiber design with equalized zero dispersion for short-reach MDM optical communications. Journal of the Optical Society of America B: Optical Physics, 2022, 39, 1958.	2.1	1
9	Ultrahigh extinction ratio silicon micro-ring modulator by MDM resonance for high speed PAM-4 and PAM-8 signaling. Optics Express, 2022, 30, 25672.	3.4	6
10	Generation of high-order solitons with order continuously adjustable in a fiber laser based on GIMF saturable absorber. Optics Communications, 2021, 479, 126441.	2.1	12
11	High-speed silicon photonic Mach-Zehnder modulator at 2-µm. Photonics Research, 2021, 9, 535.	7.0	37
12	Evolutions of Q-switched mode-locked square noise-like pulse with different cavity lengths. Applied Optics, 2021, 60, 3641.	1.8	4
13	Millimeter-Long Silicon Photonic Antenna for Optical Phased Arrays at 2-µm Wavelength Band. IEEE Photonics Journal, 2021, 13, 1-7.	2.0	0
14	On-Chip Selective Dual-Mode Switch for 2-µm Wavelength High-Speed Optical Interconnection. IEEE Photonics Technology Letters, 2021, 33, 483-486.	2.5	14
15	Machine Learning Assisted Inverse Design for Ultrafine, Dynamic and Arbitrary Gain Spectrum Shaping of Raman Amplification. Photonics, 2021, 8, 260.	2.0	6
16	Ultra-broadband 3-dB power splitter from 1.55 to 2-µm wave band. Optics Letters, 2021, 46, 423.	4.2	22
17	Ultra-Compact Mode-Division Multiplexed Photonic Integrated Circuit for Dual Polarizations. Journal of Lightwave Technology, 2021, 39, 5925-5932.	4.6	28
18	Evolutions of versatile wavelength-dependent bound solitons. Optical Fiber Technology, 2021, 66, 102643.	2.7	4

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19	T-Branch Waveguide Mirror for Multimode Optical Splitter With Arbitrary Power Ratios. IEEE Journal of Quantum Electronics, 2021, 57, 1-6.	1.9	3
20	Dual-polarization and six-mode waveguide crossing based on dielectric metasurface. , 2021, , .		0
21	Four-modes waveguide crossing utilizing phase-gradient slot array. , 2021, , .		0
22	Inverse design of an ultra-compact 3 dB splitter for four modes with dual polarizations. , 2021, , .		0
23	Ultra-compact and broadband 3-dB power splitter based on subwavelength grating at 2- $\frac{1}{4}$ $\mu$ m. , 2021, , .		2
24	Topology optimization of sharp waveguide bends for mode-division multiplexing. , 2021, , .		1
25	Four-mode waveguide crossing via digitized meta-structure. , 2021, , .		1
26	High-speed silicon micro-ring modulator at 2- $\frac{1}{4}$ $\mu$ m waveband. , 2021, , .		1
27	Scalable and Compact Silicon Mode Multiplexer via Tilt Waveguide Junctions with Shallow Etched Slots. , 2021, , .		0
28	Highly Efficient Silicon Photonic Microheater Based on Black Arsenic-Phosphorus. Advanced Optical Materials, 2020, 8, 1901526.	7.3	26
29	Highly Compact and Efficient Four-Mode Multiplexer Based on Pixelated Waveguides. IEEE Photonics Technology Letters, 2020, 32, 166-169.	2.5	44
30	Thermo-Optic Tunable Silicon Arrayed Waveguide Grating at 2- $\frac{1}{4}$ $\mu$ m Wavelength Band. IEEE Photonics Journal, 2020, 12, 1-8.	2.0	17
31	Accurate phase retrieval algorithm based on normalized vector of three interferograms. Optik, 2020, 207, 164453.	2.9	1
32	An Ultra-Compact 3-dB Power Splitter for Three Modes Based on Pixelated Meta-Structure. IEEE Photonics Technology Letters, 2020, 32, 341-344.	2.5	43
33	Low-Latency and High-Speed Hollow-Core Fiber Optical Interconnection at 2-Micron Waveband. Journal of Lightwave Technology, 2020, 38, 3874-3882.	4.6	35
34	Orbital angular momentum density characteristics of tightly focused polarized Laguerre-Gaussian beam. Applied Optics, 2020, 59, 7396.	1.8	5
35	Rapid and precise phase retrieval from two-frame tilt-shift based on Lissajous ellipse fitting and ellipse standardization. Optics Express, 2020, 28, 3952.	3.4	5
36	Intelligent gain flattening in wavelength and space domain for FMF Raman amplification by machine learning based inverse design. Optics Express, 2020, 28, 11911.	3.4	19

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37	Demonstration of an ultra-compact bend for four modes based on pixelated meta-structure. , 2020, , .		3
38	Chalcogenide glass photonic integration for improved 2- $\mu$ m optical interconnection. Photonics Research, 2020, 8, 1484.	7.0	19
39	Chalcogenide Photonic Integration at 2 Micron with Improved Wavelength and Fabrication Dependency. , 2020, , .		2
40	Inverse design of integrated four-channel mode multiplexer with dual polarizations. , 2020, , .		0
41	Dual-mode arbitrary-ratio power splitter based on a T-branch embedded with nanoholes. , 2020, , .		1
42	50 Gbit/s silicon modulator operated at 1950 nm. , 2020, , .		2
43	Ultra-broadband Power Splitter using subwavelength grating. , 2020, , .		0
44	Adiabatic and Ultracompact Waveguide Tapers Based on Digital Metamaterials. IEEE Journal of Selected Topics in Quantum Electronics, 2019, 25, 1-6.	2.9	11
45	Dyadic Probabilistic Shaping of PAM-4 and PAM-8 for Cost-Effective VCSEL-MMF Optical Interconnection. IEEE Photonics Journal, 2019, 11, 1-11.	2.0	16
46	Arbitrarily routed mode-division multiplexed photonic circuits for dense integration. Nature Communications, 2019, 10, 3263.	12.8	147
47	Intelligent 2-Dimensional Soft Decision Enabled by K-Means Clustering for VCSEL-Based 112-Gbps PAM-4 and PAM-8 Optical Interconnection. Journal of Lightwave Technology, 2019, 37, 6133-6146.	4.6	16
48	Enabling Equalization and Soft Decision by k-Means for VCSEL-Based PAM-4 Optical Interconnection. IEEE Photonics Journal, 2019, 11, 1-11.	2.0	2
49	QAM classification methods by SVM machine learning for improved optical interconnection. Optics Communications, 2019, 444, 1-8.	2.1	18
50	Subwavelength Engineering in Silicon Photonic Devices. IEEE Journal of Selected Topics in Quantum Electronics, 2019, 25, 1-13.	2.9	17
51	Optical Fiber Humidity Sensor Based on Water Absorption Peak Near 2- $\mu$ m Waveband. IEEE Photonics Journal, 2019, 11, 1-8.	2.0	15
52	Femtosecond Soliton Erbium-Doped Fiber Laser With a Symmetrical GIMF- $\mu$ SIMF- $\mu$ GIMF Saturable Absorber. IEEE Photonics Journal, 2019, 11, 1-9.	2.0	8
53	Frequency-resolved adaptive probabilistic shaping for DMT-modulated IM-DD optical interconnects. Optics Express, 2019, 27, 12241.	3.4	23
54	Topology Optimized Y-junction with Arbitrary Split Ratios. , 2019, , .		1

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55	Ultra-compact and polarization-insensitive MMI coupler based on inverse design. , 2019, , .		2
56	Subwavelength polarization splitter-rotator with ultra-compact footprint. Optics Letters, 2019, 44, 4495.	3.3	36
57	Inverse Design of On-chip Optical Attenuators via Artificial Neural Networks. , 2019, , .		1
58	K-means assisted soft decision of PAM4 to mitigate level nonlinearity and level-dependent noise for VCSEL-based 100-Gbps 100-m MMF optical interconnection. , 2019, , .		5
59	Integrated Thermo-optic Switch for 2- $\mu\text{m}$ Spectral Band. , 2019, , .		2
60	2- $\mu\text{m}$ Wavelength Grating Coupler, Bent Waveguide, and Tunable Microring on Silicon Photonic MPW. IEEE Photonics Technology Letters, 2018, 30, 471-474.	2.5	48
61	Nonlinear Distortion Mitigation by Machine Learning of SVM Classification for PAM-4 and PAM-8 Modulated Optical Interconnection. Journal of Lightwave Technology, 2018, 36, 650-657.	4.6	61
62	3- $\mu\text{m}$ 104 Gb/s Single-Mode Interconnect of Mode-Division Multiplexed Network With a Multicore Fiber. Journal of Lightwave Technology, 2018, 36, 318-324.	4.6	24
63	Machine Learning Detection for DMT Modulated 112-Gbps VCSEL-MMF Optical Interconnection. , 2018, , .		4
64	On-chip Optical Attenuators Designed by Artificial Neural Networks. , 2018, , .		3
65	SVM Classification Comparison for QAM Modulated Optical Interconnection. , 2018, , .		4
66	Machine Learning Adaptive Receiver for PAM-4 Modulated Optical Interconnection Based on Silicon Microring Modulator. Journal of Lightwave Technology, 2018, 36, 4106-4113.	4.6	24
67	High speed and small footprint silicon micro-ring modulator assembly for space-division-multiplexed 100-Gbps optical interconnection. Optics Express, 2018, 26, 13721.	3.4	13
68	End-fire injection of light into high-Q silicon microdisks. Optica, 2018, 5, 612.	9.3	44
69	Very sharp adiabatic bends based on an inverse design. Optics Letters, 2018, 43, 2482.	3.3	66
70	High-Speed Traveling-Wave Modulator Based on Graphene and Microfiber. Journal of Lightwave Technology, 2018, 36, 4730-4735.	4.6	17
71	Inversely Designed 1-4 Power Splitter With Arbitrary Ratios at 2- $\mu\text{m}$ Spectral Band. IEEE Photonics Journal, 2018, 10, 1-6.	2.0	27
72	Ultra-compact dual-mode Waveguide Bend based on an Inverse Design. , 2018, , .		1

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73	Mode-Division Multiplexing for Silicon Photonic Network-on-Chip. Journal of Lightwave Technology, 2017, 35, 3223-3228.	4.6	86
74	Scalable Ultra-Wideband Pulse Generation Based on Silicon Photonic Integrated Circuits. IEEE Photonics Technology Letters, 2017, 29, 1896-1899.	2.5	3
75	Second-order few-mode Raman amplifier for mode-division multiplexed optical communication systems. Optics Express, 2017, 25, 810.	3.4	22
76	High speed single-wavelength modulation and transmission at 2 $\mu$ m under bandwidth-constrained condition. Optics Express, 2017, 25, 4528.	3.4	31
77	Integrated photonic power divider with arbitrary power ratios. Optics Letters, 2017, 42, 855.	3.3	130
78	Design of a barcode-like waveguide nanostructure for efficient chip-to-fiber coupling. Photonics Research, 2016, 4, 209.	7.0	34
79	128-Gb/s Line Rate OFDM Signal Modulation Using an Integrated Silicon Microring Modulator. IEEE Photonics Technology Letters, 2016, 28, 2058-2061.	2.5	23
80	Design of Mid-infrared electro-optic modulators based on aluminum nitride waveguides. Journal of Lightwave Technology, 2016, , 1-1.	4.6	21
81	Transmission of IM/DD Signals at 2 $\mu$ m Wavelength Using PAM and CAP. IEEE Photonics Journal, 2016, 8, 1-7.	2.0	24
82	Amplitude and Phase Modulation of UWB Monocycle Pulses on a Silicon Photonic Chip. IEEE Photonics Technology Letters, 2016, 28, 248-251.	2.5	10
83	Dual-Wavelength Soliton Mode-Locked Fiber Laser With a WS <sub>2</sub> -Based Fiber Taper. IEEE Photonics Technology Letters, 2016, 28, 323-326.	2.5	77
84	Deformed Microdisk-Based End-Fire Injection and Collection Resonant Device. Journal of Lightwave Technology, 2015, 33, 3698-3703.	4.6	6
85	Stabilization of a multiwavelength erbium-doped fiber laser using a nonlinear silicon waveguide. Applied Physics B: Lasers and Optics, 2014, 114, 367-371.	2.2	12
86	Increase of the grating coupler bandwidth with a graphene overlay. Applied Physics Letters, 2014, 104, .	3.3	9
87	In-Plane Optical Absorption and Free Carrier Absorption in Graphene-on-Silicon Waveguides. IEEE Journal of Selected Topics in Quantum Electronics, 2014, 20, 43-48.	2.9	75
88	High-responsivity graphene/silicon-heterostructure waveguide photodetectors. Nature Photonics, 2013, 7, 888-891.	31.4	731
89	Mode-locked fiber laser using graphene on silicon waveguide. , 2013, , .		2
90	Apodized focusing subwavelength gratings for simultaneous coupling of TE and TM modes. , 2013, , .		0

#	ARTICLE	IF	CITATIONS
91	100 GHz passive mode-locked laser based on nonlinear silicon microring resonator. , 2013, , .		1
92	Compatibility of Silicon Mach-Zehnder Modulators for Advanced Modulation Formats. Journal of Lightwave Technology, 2013, 31, 2550-2554.	4.6	46
93	UWB monocycle pulse generation based on colourless silicon photonic integrated circuit. Electronics Letters, 2013, 49, 1291-1293.	1.0	4
94	Polarization dependent loss of graphene-on-silicon waveguides. , 2013, , .		1
95	In-plane saturable absorption of graphene on silicon waveguides. , 2013, , .		2
96	Performance of silicon coupled resonator waveguides for integrated Nyquist filter. , 2013, , .		1
97	Demodulation of 20â€‰%â€‰Gbaud/s differential quadrature phase-shift keying signals using wavelength-tunable silicon microring resonators. Optics Letters, 2012, 37, 3462.	3.3	10
98	Tunable integrated variable bit-rate DPSK silicon receiver. Optics Letters, 2012, 37, 4738.	3.3	17
99	Broadband focusing grating couplers for suspended-membrane waveguides. Optics Letters, 2012, 37, 5181.	3.3	52
100	Mid-infrared Suspended Membrane Waveguide and Ring Resonator on Silicon-on-Insulator. IEEE Photonics Journal, 2012, 4, 1510-1519.	2.0	151
101	Apodized focusing subwavelength grating couplers for suspended membrane waveguides. Applied Physics Letters, 2012, 101, .	3.3	65
102	Mid-infrared suspended membrane waveguides on silicon-on-insulator. , 2012, , .		0
103	Characterization of Mid-Infrared Silicon-on-Sapphire Microring Resonators With Thermal Tuning. IEEE Photonics Journal, 2012, 4, 1095-1102.	2.0	26
104	An Ultracompact OSNR Monitor Based on an Integrated Silicon Microdisk Resonator. IEEE Photonics Journal, 2012, 4, 1365-1371.	2.0	6
105	Monolithic suspended membrane ring resonator for mid-infrared applications. , 2012, , .		0
106	Bit-Rate-Variable DPSK Demodulation Using Silicon Microring Resonators With Electro-Optic Wavelength Tuning. IEEE Photonics Technology Letters, 2012, 24, 1221-1223.	2.5	16
107	Design a Low-Power H.264/AVC Baseline Decoder at All Abstraction Levelsâ€™A Showcase. Journal of Signal Processing Systems, 2012, 67, 317-330.	2.1	2
108	Mid-Infrared Grating Couplers for Silicon-on-Sapphire Waveguides. IEEE Photonics Journal, 2012, 4, 104-113.	2.0	54

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109	Mid-infrared micro-ring resonator on silicon-on-sapphire characterized by thermal tuning. , 2011, , .		1
110	A Five-Stage Pipeline, 204 Cycles/MB, Single-Port SRAM-Based Deblocking Filter for H.264/AVC. IEEE Transactions on Circuits and Systems for Video Technology, 2008, 18, 363-374.	8.3	52
111	A Power-Efficient and Self-Adaptive Prediction Engine for H.264/AVC Decoding. IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 2008, 16, 302-313.	3.1	28
112	Power-Efficient VLSI Realization of a Complex FSM for H.264/AVC Bitstream Parsing. IEEE Transactions on Circuits and Systems II: Express Briefs, 2007, 54, 984-988.	3.0	3
113	A Low-power BitStream Controller for H.264/AVC Baseline Decoding. , 2006, , .		6
114	Power-efficient VLSI implementation of bitstream parsing in H.264/AVC decoder. , 0, , .		3