

Ke Xu

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/8107893/publications.pdf>

Version: 2024-02-01

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	High-responsivity graphene/silicon-heterostructure waveguide photodetectors. Nature Photonics, 2013, 7, 888-891.	31.4	731
2	Mid-infrared Suspended Membrane Waveguide and Ring Resonator on Silicon-on-Insulator. IEEE Photonics Journal, 2012, 4, 1510-1519.	2.0	151
3	Arbitrarily routed mode-division multiplexed photonic circuits for dense integration. Nature Communications, 2019, 10, 3263.	12.8	147
4	Integrated photonic power divider with arbitrary power ratios. Optics Letters, 2017, 42, 855.	3.3	130
5	Mode-Division Multiplexing for Silicon Photonic Network-on-Chip. Journal of Lightwave Technology, 2017, 35, 3223-3228.	4.6	86
6	Dual-Wavelength Soliton Mode-Locked Fiber Laser With a WS ₂ -Based Fiber Taper. IEEE Photonics Technology Letters, 2016, 28, 323-326.	2.5	77
7	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
8	Very sharp adiabatic bends based on an inverse design. Optics Letters, 2018, 43, 2482.	3.3	66
9	Apodized focusing subwavelength grating couplers for suspended membrane waveguides. Applied Physics Letters, 2012, 101, .	3.3	65
10	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
11	Mid-Infrared Grating Couplers for Silicon-on-Sapphire Waveguides. IEEE Photonics Journal, 2012, 4, 104-113.	2.0	54
12	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
13	Broadband focusing grating couplers for suspended-membrane waveguides. Optics Letters, 2012, 37, 5181.	3.3	52
14	2- μ m Wavelength Grating Coupler, Bent Waveguide, and Tunable Microring on Silicon Photonic MPW. IEEE Photonics Technology Letters, 2018, 30, 471-474.	2.5	48
15	Compatibility of Silicon Mach-Zehnder Modulators for Advanced Modulation Formats. Journal of Lightwave Technology, 2013, 31, 2550-2554.	4.6	46
16	End-fire injection of light into high-Q silicon microdisks. Optica, 2018, 5, 612.	9.3	44
17	Highly Compact and Efficient Four-Mode Multiplexer Based on Pixelated Waveguides. IEEE Photonics Technology Letters, 2020, 32, 166-169.	2.5	44
18	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

#	ARTICLE	IF	CITATIONS
19	High-speed silicon photonic Mach-Zehnder modulator at 2 μ m. Photonics Research, 2021, 9, 535.	7.0	37
20	Subwavelength polarization splitter-rotator with ultra-compact footprint. Optics Letters, 2019, 44, 4495.	3.3	36
21	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
22	Design of a barcode-like waveguide nanostructure for efficient chip-fiber coupling. Photonics Research, 2016, 4, 209.	7.0	34
23	High speed single-wavelength modulation and transmission at 2 μ m under bandwidth-constrained condition. Optics Express, 2017, 25, 4528.	3.4	31
24	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
25	Ultra-Compact Mode-Division Multiplexed Photonic Integrated Circuit for Dual Polarizations. Journal of Lightwave Technology, 2021, 39, 5925-5932.	4.6	28
26	Inversely Designed 1-4 Power Splitter With Arbitrary Ratios at 2 μ m Spectral Band. IEEE Photonics Journal, 2018, 10, 1-6.	2.0	27
27	Characterization of Mid-Infrared Silicon-on-Sapphire Microring Resonators With Thermal Tuning. IEEE Photonics Journal, 2012, 4, 1095-1102.	2.0	26
28	Highly Efficient Silicon Photonic Microheater Based on Black Arsenic-Phosphorus. Advanced Optical Materials, 2020, 8, 1901526.	7.3	26
29	Transmission of IM/DD Signals at 2 μ m Wavelength Using PAM and CAP. IEEE Photonics Journal, 2016, 8, 1-7.	2.0	24
30	3-104 Gb/s Single-Interconnect of Mode-Division Multiplexed Network With a Multicore Fiber. Journal of Lightwave Technology, 2018, 36, 318-324.	4.6	24
31	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
32	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
33	Frequency-resolved adaptive probabilistic shaping for DMT-modulated IM-DD optical interconnects. Optics Express, 2019, 27, 12241.	3.4	23
34	High-speed silicon microring modulator at the 2 μ m waveband with analysis and observation of optical bistability. Photonics Research, 2022, 10, A35.	7.0	23
35	Second-order few-mode Raman amplifier for mode-division multiplexed optical communication systems. Optics Express, 2017, 25, 810.	3.4	22
36	Ultra-broadband 3-dB power splitter from 1.55 to 2 μ m wave band. Optics Letters, 2021, 46, 4232.	4.3	22

#	ARTICLE	IF	CITATIONS
37	Design of Mid-infrared electro-optic modulators based on aluminum nitride waveguides. Journal of Lightwave Technology, 2016, , 1-1.	4.6	21
38	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
39	Chalcogenide glass photonic integration for improved 2- μ m optical interconnection. Photonics Research, 2020, 8, 1484.	7.0	19
40	Inverse design of a dual-mode 3-dB optical power splitter with a 445-nm bandwidth. Optics Express, 2022, 30, 26266.	3.4	19
41	QAM classification methods by SVM machine learning for improved optical interconnection. Optics Communications, 2019, 444, 1-8.	2.1	18
42	Tunable integrated variable bit-rate DPSK silicon receiver. Optics Letters, 2012, 37, 4738.	3.3	17
43	High-Speed Traveling-Wave Modulator Based on Graphene and Microfiber. Journal of Lightwave Technology, 2018, 36, 4730-4735.	4.6	17
44	Subwavelength Engineering in Silicon Photonic Devices. IEEE Journal of Selected Topics in Quantum Electronics, 2019, 25, 1-13.	2.9	17
45	Thermo-Optic Tunable Silicon Arrayed Waveguide Grating at 2- μ m Wavelength Band. IEEE Photonics Journal, 2020, 12, 1-8.	2.0	17
46	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
47	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
48	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
49	Optical Fiber Humidity Sensor Based on Water Absorption Peak Near 2- μ m Waveband. IEEE Photonics Journal, 2019, 11, 1-8.	2.0	15
50	On-Chip Selective Dual-Mode Switch for 2- μ m Wavelength High-Speed Optical Interconnection. IEEE Photonics Technology Letters, 2021, 33, 483-486.	2.5	14
51	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
52	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
53	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
54	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

#	ARTICLE	IF	CITATIONS
55	Adiabatic and Ultracompact Waveguide Tapers Based on Digital Metamaterials. IEEE Journal of Selected Topics in Quantum Electronics, 2019, 25, 1-6.	2.9	11
56	Silicon photonic arrayed waveguide grating with 64 channels for the 2 Åµm spectral range. Optics Letters, 2022, 47, 1186.	3.3	11
57	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
58	Amplitude and Phase Modulation of UWB Monocycle Pulses on a Silicon Photonic Chip. IEEE Photonics Technology Letters, 2016, 28, 248-251.	2.5	10
59	Increase of the grating coupler bandwidth with a graphene overlay. Applied Physics Letters, 2014, 104, .	3.3	9
60	Femtosecond Soliton Erbium-Doped Fiber Laser With a Symmetrical GIMFâ€™SIMFâ€™GIMF Saturable Absorber. IEEE Photonics Journal, 2019, 11, 1-9.	2.0	8
61	Wavelength-switchable and multi-pulse bound state based on a hybrid mode-locked mechanism. Optics Express, 2022, 30, 10732.	3.4	7
62	A Low-power BitStream Controller for H.264/AVC Baseline Decoding. , 2006, , .		6
63	An Ultracompact OSNR Monitor Based on an Integrated Silicon Microdisk Resonator. IEEE Photonics Journal, 2012, 4, 1365-1371.	2.0	6
64	Deformed Microdisk-Based End-Fire Injection and Collection Resonant Device. Journal of Lightwave Technology, 2015, 33, 3698-3703.	4.6	6
65	Machine Learning Assisted Inverse Design for Ultrafine, Dynamic and Arbitrary Gain Spectrum Shaping of Raman Amplification. Photonics, 2021, 8, 260.	2.0	6
66	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
67	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
68	Orbital angular momentum density characteristics of tightly focused polarized Laguerreâ€™Gaussian beam. Applied Optics, 2020, 59, 7396.	1.8	5
69	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
70	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
71	UWB monocycle pulse generation based on colourless silicon photonic integrated circuit. Electronics Letters, 2013, 49, 1291-1293.	1.0	4
72	Machine Learning Detection for DMT Modulated 112-Gbps VCSEL-MMF Optical Interconnection. , 2018, , .		4

#	ARTICLE	IF	CITATIONS
73	SVM Classification Comparison for QAM Modulated Optical Interconnection. , 2018, , .		4
74	Evolutions of Q-switched mode-locked square noise-like pulse with different cavity lengths. Applied Optics, 2021, 60, 3641.	1.8	4
75	Evolutions of versatile wavelength-dependent bound solitons. Optical Fiber Technology, 2021, 66, 102643.	2.7	4
76	Power-efficient VLSI implementation of bitstream parsing in H.264/AVC decoder. , 0, , .		3
77	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
78	Scalable Ultra-Wideband Pulse Generation Based on Silicon Photonic Integrated Circuits. IEEE Photonics Technology Letters, 2017, 29, 1896-1899.	2.5	3
79	On-chip Optical Attenuators Designed by Artificial Neural Networks. , 2018, , .		3
80	T-Branch Waveguide Mirror for Multimode Optical Splitter With Arbitrary Power Ratios. IEEE Journal of Quantum Electronics, 2021, 57, 1-6.	1.9	3
81	Demonstration of an ultra-compact bend for four modes based on pixelated meta-structure. , 2020, , .		3
82	An Ultra-Broadband Polarization Beam Splitter Based on the Digital Meta-Structure at the 2 μm Waveband. Photonics, 2022, 9, 361.	2.0	3
83	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
84	Mode-locked fiber laser using graphene on silicon waveguide. , 2013, , .		2
85	In-plane saturable absorption of graphene on silicon waveguides. , 2013, , .		2
86	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
87	Ultra-compact and polarization-insensitive MMI coupler based on inverse design. , 2019, , .		2
88	Integrated Thermo-optic Switch for 2- μm Spectral Band. , 2019, , .		2
89	Chalcogenide Photonic Integration at 2 Micron with Improved Wavelength and Fabrication Dependency. , 2020, , .		2
90	50 Gbit/s silicon modulator operated at 1950 nm. , 2020, , .		2

#	ARTICLE	IF	CITATIONS
91	Ultra-compact and broadband 3-dB power splitter based on subwavelength grating at 2- $\hat{1}$ / ₄ m. , 2021, , .		2
92	Mid-infrared micro-ring resonator on silicon-on-sapphire characterized by thermal tuning. , 2011, , .		1
93	100 GHz passive mode-locked laser based on nonlinear silicon microring resonator. , 2013, , .		1
94	Polarization dependent loss of graphene-on-silicon waveguides. , 2013, , .		1
95	Performance of silicon coupled resonator waveguides for integrated Nyquist filter. , 2013, , .		1
96	Accurate phase retrieval algorithm based on normalized vector of three interferograms. Optik, 2020, 207, 164453.	2.9	1
97	Topology Optimized Y-junction with Arbitrary Split Ratios. , 2019, , .		1
98	Ultra-compact dual-mode Waveguide Bend based on an Inverse Design. , 2018, , .		1
99	Inverse Design of On-chip Optical Attenuators via Artificial Neural Networks. , 2019, , .		1
100	Dual-mode arbitrary-ratio power splitter based on a T-branch embedded with nanoholes. , 2020, , .		1
101	Topology optimization of sharp waveguide bends for mode-division multiplexing. , 2021, , .		1
102	Four-mode waveguide crossing via digitized meta-structure. , 2021, , .		1
103	High-speed silicon micro-ring modulator at 2- $\hat{1}$ / ₄ m waveband. , 2021, , .		1
104	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
105	Mid-infrared suspended membrane waveguides on silicon-on-insulator. , 2012, , .		0
106	Monolithic suspended membrane ring resonator for mid-infrared applications. , 2012, , .		0
107	Apodized focusing subwavelength gratings for simultaneous coupling of TE and TM modes. , 2013, , .		0
108	Millimeter-Long Silicon Photonic Antenna for Optical Phased Arrays at 2- $\hat{1}$ / ₄ m Wavelength Band. IEEE Photonics Journal, 2021, 13, 1-7.	2.0	0

#	ARTICLE	IF	CITATIONS
109	Dual-polarization and six-mode waveguide crossing based on dielectric metasurface. , 2021, , .		0
110	Four-modes waveguide crossing utilizing phase-gradient slot array. , 2021, , .		0
111	Inverse design of an ultra-compact 3 dB splitter for four modes with dual polarizations. , 2021, , .		0
112	Inverse design of integrated four-channel mode multiplexer with dual polarizations. , 2020, , .		0
113	Ultra-broadband Power Splitter using subwavelength grating. , 2020, , .		0
114	Scalable and Compact Silicon Mode Multiplexer via Tilt Waveguide Junctions with Shallow Etched Slots. , 2021, , .		0