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List of Publications by Year
in descending order

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134 papers	4,579 citations	147726 31 h-index	118793 62 g-index
134 all docs	134 docs citations	134 times ranked	3839 citing authors

#	Article	IF	Citations
1	High Responsivity Si-Ge Waveguide Avalanche Photodiodes Enhanced by Loop Reflector. IEEE Journal of Selected Topics in Quantum Electronics, 2022, 28, 1-8.	1.9	20
2	Small-Signal Analysis of All-Si Microring Resonator Photodiode. Electronics (Switzerland), 2022, 11, 183.	1.8	8
3	Avalanche photodiodes on silicon photonics. Journal of Semiconductors, 2022, 43, 021301.	2.0	10
4	A 100 Gb/s PAM4 Two-Segment Silicon Microring Resonator Modulator Using a Standard Foundry Process. ACS Photonics, 2022, 9, 1165-1171.	3.2	24
5	OSNR Sensitivity Analysis for Si-Ge Avalanche Photodiodes. IEEE Photonics Technology Letters, 2022, 34, 321-324.	1.3	6
6	An Energy-Efficient and Bandwidth-Scalable DWDM Heterogeneous Silicon Photonics Integration Platform. IEEE Journal of Selected Topics in Quantum Electronics, 2022, 28, 1-19.	1.9	21
7	Energy Efficiency and Yield Optimization for Optical Interconnects via Transceiver Grouping. Journal of Lightwave Technology, 2021, 39, 1567-1578.	2.7	5
8	An Open Silicon Photonics Ecosystem for Computercom Applications. Topics in Applied Physics, 2021, , 491-506.	0.4	0
9	Multifaced Roles of HDL in Sepsis and SARS-CoV-2 Infection: Renal Implications. International Journal of Molecular Sciences, 2021, 22, 5980.	1.8	21
10	Wafer-level testing of inverse-designed and adjoint-inspired vertical grating coupler designs compatible with DUV lithography. Optics Express, 2021, 29, 37021.	1.7	7
11	Loop Reflector Assisted Si-Ge Waveguide Avalanche Photodiodes. , 2021, , .		1
12	High-Speed Si/Ge Avalanche Photodiodes with Enhanced Responsivity. , 2021, , .		1
13	A 100 Gb/s PAM4 Two-Segment Silicon Microring Resonator Modulator. , 2021, , .		1
14	3D-Integrated DWDM Silicon Photonics Receiver. , 2021, , .		3
15	Experimental characterization of Inverse-Designed Vertical Grating Couplers in the O-band. , 2021, , .		1
16	Energy Efficiency Analysis of Comb Source Carrier-Injection Ring-Based Silicon Photonic Link. IEEE Journal of Selected Topics in Quantum Electronics, 2020, 26, 1-13.	1.9	18
17	Statistical Behavioral Models of Silicon Ring Resonators at a Commercial CMOS Foundry. IEEE Journal of Selected Topics in Quantum Electronics, 2020, 26, 1-10.	1.9	10
18	Fully-Integrated Heterogeneous DML Transmitters for High-Performance Computing. Journal of Lightwave Technology, 2020, 38, 3322-3337.	2.7	18

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19	A Low-Voltage Si-Ge Avalanche Photodiode for High-Speed and Energy Efficient Silicon Photonic Links. Journal of Lightwave Technology, 2020, 38, 3156-3163.	2.7	42
20	Performance Requirements for Terabit-Class Silicon Photonic Links Based on Cascaded Microring Resonators. Journal of Lightwave Technology, 2020, 38, 3469-3477.	2.7	17
21	Design Considerations for Energy Efficient DWDM PAM4 Transceivers Employing Avalanche Photodiodes. Laser and Photonics Reviews, 2020, 14, 2000142.	4.4	11
22	64 Gbps PAM4 Si-Ge Waveguide Avalanche Photodiodes With Excellent Temperature Stability. Journal of Lightwave Technology, 2020, 38, 4857-4866.	2.7	15
23	Adjoint-method-inspired grating couplers for CWDM O-band applications. Optics Express, 2020, 28, 3756.	1.7	10
24	Glomerulonephritis in AKI: From Pathogenesis to Therapeutic Intervention. Frontiers in Medicine, 2020, 7, 582272.	1.2	16
25	Detachable 1x8 single mode optical interface for DWDM microring silicon photonic transceivers. , 2020, , .		12
26	Integrated Green DWDM Photonics For Next-Gen High-Performance Computing. , 2020, , .		15
27	64Gbps PAM4 Modulation for a Low Energy Si-Ge Waveguide APD with Distributed Bragg Reflectors. , 2020, , .		3
28	64â€‰â€‰Gb/s low-voltage waveguide SiGe avalanche photodiodes with distributed Bragg reflectors. Photonics Research, 2020, 8, 1118.	3.4	25
29	Characterization and Applications of Spatial Variation Models for Silicon Microring-Based Optical Transceivers. , 2020, , .		3
30	A Compact Circuit Model for Si-Ge Avalanche Photodiodes over a Wide Range of Gain. , 2019, , .		0
31	Energy Efficiency Analysis of Frequency Comb Sources for Silicon Photonic Interconnects. , 2019, , .		6
32	A Compact Model for Si-Ge Avalanche Photodiodes Over a Wide Range of Multiplication Gain. Journal of Lightwave Technology, 2019, 37, 3229-3235.	2.7	15
33	Bidirectional tuning of microring-based silicon photonic transceivers for optimal energy efficiency. , 2019, , .		6
34	Low-voltage Si-Ge Avalanche Photodiodes for Datacom. , 2019, , .		2
35	A Compact Circuit Model for Si-Ge Avalanche Photodiodes over a Wide Range of Gain. , 2019, , .		1
36	50 Gb/s PAM4 Low-Voltage Si-Ge Avalanche Photodiode. , 2019, , .		5

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37	Siliconâ€“germanium avalanche photodiodes with direct control of electric field in charge multiplication region. Optica, 2019, 6, 772.	4.8	45
38	35Gb/s Ultralow-Voltage Three-Terminal Si-Ge Avalanche Photodiode. , 2019, , .		1
39	A Directly Modulated Quantum Dot Microring Laser Transmitter with Integrated CMOS Driver. , 2019, , .		2
40	Error-Free Operation in a Hybrid-Silicon Quantum Dot Comb Laser. IEEE Photonics Technology Letters, 2018, 30, 71-74.	1.3	34
41	Heterogeneous silicon light sources for datacom applications. Optical Fiber Technology, 2018, 44, 43-52.	1.4	19
42	A LIDAR sensor prototype with embedded 14-bit 52Âps resolution ILO-TDC array. Analog Integrated Circuits and Signal Processing, 2018, 94, 369-382.	0.9	4
43	Energy-efficient channel alignment of DWDM silicon photonic transceivers. , 2018, , .		6
44	On-Chip Hybrid Silicon Quantum Dot Comb Laser with 14 Error-Free Channels. , 2018, , .		26
45	A 3D-Integrated 56 Gb/s NRZ/PAM4 Reconfigurable Segmented Mach-Zehnder Modulator-Based Si-Photonics Transmitter. , 2018, , .		22
46	Improving Translation from Preclinical Studies to Clinical Trials in Acute Kidney Injury. Nephron, 2018, 140, 81-85.	0.9	11
47	Pairing of microring-based silicon photonic transceivers for tuning power optimization. , 2018, , .		7
48	Silicon Photonics; Ring Modulator Transmitters. , 2018, , 216-223.		1
49	Long-term survival in patients with septic acute kidney injury is strongly influenced by renal recovery. PLoS ONE, 2018, 13, e0198269.	1.1	50
50	A 14 Gb/s Directly Modulated Hybrid Microring Laser Transmitter. , 2018, , .		2
51	A Fully-integrated Multi-Î» Hybrid DML Transmitter. , 2018, , .		1
52	PAM4 silicon photonic microring resonator-based transceiver circuits. , 2017, , .		5
53	Differences in acute kidney injury ascertainment for clinical and preclinical studies. Nephrology Dialysis Transplantation, 2017, 32, 1789-1805.	0.4	27
54	True Concurrent Modulation of a Multi-Channel Ring Modulator Transmitter Driven by a Comb Laser. , 2017, , .		1

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55	Operation and analysis of low-voltage three-terminal avalanche photodiodes. , 2017, , .		0
56	A two-segment optical DAC 40 Gb/s PAM4 silicon microring resonator modulator transmitter in 65nm CMOS. , 2017, , .		11
57	Heterogeneous MOS microring resonators. , 2017, , .		10
58	Low-voltage three-terminal avalanche photodiodes. , 2017, , .		3
59	Robust hybrid quantum dot laser for integrated silicon photonics. Optics Express, 2016, 24, 16167.	1.7	64
60	25â€‰â€‰Gbps low-voltage waveguide Siâ€“Ge avalanche photodiode. Optica, 2016, 3, 793.	4.8	114
61	A 40 Gb/s PAM4 silicon microring resonator modulator transmitter in 65nm CMOS. , 2016, , .		17
62	Inter-channel modulation power penalty for a silicon photonics transmitter. , 2016, , .		0
63	A 52 ps resolution ILO-based time-to-digital converter array for LIDAR sensors. , 2016, , .		5
64	Large color gamut displays with diffraction gratings. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2016, 33, 1133.	0.8	3
65	A 25 Gb/s Hybrid-Integrated Silicon Photonic Source-Synchronous Receiver With Microring Wavelength Stabilization. IEEE Journal of Solid-State Circuits, 2016, 51, 2129-2141.	3.5	54
66	Crosstalk analysis of ring resonator switches for all-optical routing. Optics Express, 2016, 24, 11668.	1.7	7
67	A compact, high-speed, highly efficient hybrid silicon photodetector. , 2016, , .		1
68	Adaptive gain, equalization, and wavelength stabilization techniques for silicon photonic microring resonator-based optical receivers. Proceedings of SPIE, 2016, , .	0.8	0
69	VLSI Photonics for High-Performance Data Centers. Topics in Applied Physics, 2016, , 489-516.	0.4	1
70	A Compact Verilog-A Model of Silicon Carrier-Injection Ring Modulators for Optical Interconnect Transceiver Circuit Design. Journal of Lightwave Technology, 2016, 34, 2996-3005.	2.7	23
71	15 Gb/s Transmission with Wide-FSR Carrier Injection Ring Modulator for Tb/s Optical Links. , 2016, , .		7
72	A Tunable Hybrid Laser With Ultra-High Tuning Efficiency. , 2016, , .		2

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73	A Tunable Hybrid III-V-on-Si MOS Microring Resonator with Negligible Tuning Power Consumption. , 2016, , .		15
74	Error-free DWDM transmission and crosstalk analysis for a silicon photonics transmitter. Optics Express, 2015, 23, 32968.	1.7	18
75	Concurrent multi-channel transmission of a DWDM silicon photonic transmitter based on a comb laser and microring modulators. , 2015, , .		5
76	Silicon Photonic Microring Resonator-Based Transceivers for Compact WDM Optical Interconnects. , 2015, , .		5
77	A comb laser-driven DWDM silicon photonic transmitter based on microring modulators. Optics Express, 2015, 23, 21541.	1.7	50
78	25Gb/s Hybrid-Integrated Silicon Photonic Receiver with Microring Wavelength Stabilization. , 2015, , .		8
79	A 25 Gb/s, 4.4 V-Swing, AC-Coupled Ring Modulator-Based WDM Transmitter with Wavelength Stabilization in 65 nm CMOS. IEEE Journal of Solid-State Circuits, 2015, 50, 3145-3159.	3.5	80
80	DWDM nanophotonic interconnects: toward terabit/s chip-scale serial link. , 2015, , .		2
81	22.6 A 25Gb/s 4.4V-swing AC-coupled Si-photonic microring transmitter with 2-tap asymmetric FFE and dynamic thermal tuning in 65nm CMOS. , 2015, , .		10
82	22.4 A 24Gb/s 0.71pJ/b Si-photonic source-synchronous receiver with adaptive equalization and microring wavelength stabilization. , 2015, , .		13
83	A Comb Laser-Driven DWDM Silicon Photonic Transmitter with Microring Modulator for Optical Interconnect. , 2015, , .		5
84	Building a Robust Hybrid III-V-on-Silicon Transceiver. , 2015, , .		0
85	An Energy-Efficient Silicon Microring Resonator-Based Photonic Transmitter. IEEE Design and Test, 2014, 31, 46-54.	1.1	10
86	Silicon photonic integrated devices for datacenter optical networks. , 2014, , .		0
87	Silicon Photonic Transceiver Circuits With Microring Resonator Bias-Based Wavelength Stabilization in 65 nm CMOS. IEEE Journal of Solid-State Circuits, 2014, 49, 1419-1436.	3.5	92
88	A WDM silicon photonic transmitter based on carrier-injection microring modulators. , 2014, , .		12
89	High efficiency diode comb-laser for DWDM optical interconnects. , 2014, , .		9
90	Sub-Wavelength Grating Lenses With a Twist. IEEE Photonics Technology Letters, 2014, 26, 1375-1378.	1.3	134

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91	A multi-directional backlight for a wide-angle, glasses-free three-dimensional display. Nature, 2013, 495, 348-351.	13.7	272
92	Hybrid III-V-on-Silicon Microring Lasers. Materials Research Society Symposia Proceedings, 2013, 1538, 363-369.	0.1	1
93	Silicon Photonic Integrated Devices For Optical Interconnects. , 2013, , .		0
94	Reflection-assisted unidirectional hybrid silicon microring lasers. , 2012, , .		1
95	A metal thermal shunt design for hybrid silicon microring laser. , 2012, , .		9
96	Gain-assisted hybrid silicon microring electro-absorption modulators. , 2012, , .		0
97	Teardrop Reflector-Assisted Unidirectional Hybrid Silicon Microring Lasers. IEEE Photonics Technology Letters, 2012, 24, 1988-1990.	1.3	36
98	Hybrid Silicon Micro-cavity Light Source on Silicon-on-Diamond Substrate. , 2012, , .		2
99	Hybrid silicon lasers: progress and perspectives. , 2012, , .		0
100	III–V-on-silicon hybrid integration, materials, devices, and applications. , 2011, , .		0
101	Strong Optical Confinement between Nonperiodic Flat Dielectric Gratings. Physical Review Letters, 2011, 106, 193901.	2.9	18
102	Fabrication of Silicon-on-Diamond Substrate and Low-Loss Optical Waveguides. IEEE Photonics Technology Letters, 2011, 23, 657-659.	1.3	27
103	Reflective silicon binary diffraction grating for visible wavelengths. Optics Letters, 2011, 36, 1515.	1.7	15
104	Hybrid silicon ring lasers. , 2011, , .		3
105	Low Threshold Electrically-Pumped Hybrid Silicon Microring Lasers. IEEE Journal of Selected Topics in Quantum Electronics, 2011, 17, 1528-1533.	1.9	62
106	Hybrid Silicon Laser Technology: A Thermal Perspective. IEEE Journal of Selected Topics in Quantum Electronics, 2011, 17, 1490-1498.	1.9	67
107	CMOS Nanophotonics: Technology, System Implications, and a CMP Case Study. , 2011, , 223-254.		0
108	Reflective silicon binary diffraction grating for visible wavelengths. , 2011, , .		0

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109	Compact hybrid Si microring lasers. , 2010, , .		0
110	Compact, High-Speed Hybrid Silicon Microring Lasers for Computer Interconnects. , 2010, , .		2
111	Flat dielectric grating reflectors with focusing abilities. Nature Photonics, 2010, 4, 466-470.	15.6	445
112	Study of Hybrid Silicon Microring Lasers With Undercut Active Region. , 2010, , .		1
113	Electrically-pumped compact hybrid silicon microring lasers for optical interconnects. Optics Express, 2009, 17, 20355.	1.7	165
114	A single comb laser source for short reach WDM interconnects. , 2009, , .		23
115	Compact sources of polarization-entangled photons. Optics Express, 2008, 16, 20149.	1.7	33
116	Corona: System Implications of Emerging Nanophotonic Technology. , 2008, , .		336
117	Corona. Computer Architecture News, 2008, 36, 153-164.	2.5	226
118	Spontaneous parametric down-conversion in periodically poled KTP waveguides and bulk crystals. Optics Express, 2007, 15, 7479.	1.7	191
119	Spontaneous parametric down conversion in a nanophotonic waveguide. Optics Express, 2007, 15, 8770.	1.7	19
120	Phase-stable source of polarization-entangled photons using a polarization Sagnac interferometer. Physical Review A, 2006, 73, .	1.0	292
121	Phase-stable source of polarization-entangled photons using a polarization Sagnac interferometer. , 2006, , .		0
122	Single-photon two-qubit SWAP gate for entanglement manipulation. Physical Review A, 2005, 72, .	1.0	35
123	Two-Photon Coincident-Frequency Entanglement via Extended Phase Matching. Physical Review Letters, 2005, 94, 083601.	2.9	89
124	Generation of ultrabright tunable polarization entanglement without spatial, spectral, or temporal constraints. Physical Review A, 2004, 69, .	1.0	87
125	Deterministic Controlled-NOT Gate For Single-Photon Two-Qubit Quantum Logic. Physical Review Letters, 2004, 93, 070502.	2.9	117
126	Single-Photon Two-Qubit Logic Gates. AIP Conference Proceedings, 2004, , .	0.3	1

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127	High-flux source of polarization-entangled photons from a periodically poledKTiOPO4parametric down-converter. Physical Review A, 2004, 69, .	1.0	109
128	Soliton squeezing in microstructure fiber. Optics Letters, 2002, 27, 649.	1.7	38
129	Optical parametric oscillator based on four-wave mixing in microstructure fiber. Optics Letters, 2002, 27, 1675.	1.7	136
130	Amplitude squeezing in a Mach-Zehnder fiber interferometer: Numerical analysis of experiments with microstructure fiber. Optics Express, 2002, 10, 128.	1.7	17
131	Fiber-optic sources for quantum communication. , 2002, , .		0
132	Observation of twin-beam-type quantum correlation in optical fiber. Optics Letters, 2001, 26, 367.	1.7	89
133	Four-wave mixing in microstructure fiber. Optics Letters, 2001, 26, 1048.	1.7	146
134	Soliton squeezing in a Mach-Zehnder fiber interferometer. Physical Review A, 2001, 64, .	1.0	36