List of Publications by Year in descending order

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#	Article	IF	CITATIONS
1	On-chip natural assembly of silicon photonic bandgap crystals. Nature, 2001, 414, 289-293.	27.8	1,575
2	Active control of slow light on a chip with photonic crystal waveguides. Nature, 2005, 438, 65-69.	27.8	1,219
3	Ultracompact optical buffers on a silicon chip. Nature Photonics, 2007, 1, 65-71.	31.4	1,033
4	Losses in single-mode silicon-on-insulator strip waveguides and bends. Optics Express, 2004, 12, 1622.	3.4	897
5	Ultra-low loss photonic integrated circuit with membrane-type photonic crystal waveguides. Optics Express, 2003, 11, 2927.	3.4	755
6	Ultra-compact, low RF power, 10 Gb/s silicon Mach-Zehnder modulator. Optics Express, 2007, 15, 17106.	3.4	677
7	Reinventing germanium avalanche photodetector for nanophotonic on-chip optical interconnects. Nature, 2010, 464, 80-84.	27.8	500
8	High-throughput silicon nanophotonic wavelength-insensitive switch for on-chip optical networks. Nature Photonics, 2008, 2, 242-246.	31.4	420
9	Ultra-compact high order ring resonator filters using submicron silicon photonic wires for on-chip optical interconnects. Optics Express, 2007, 15, 11934.	3.4	399
10	Mid-infrared optical parametric amplifier using silicon nanophotonic waveguides. Nature Photonics, 2010, 4, 557-560.	31.4	377
11	Cascaded Mach-Zehnder wavelength filters in silicon photonics for low loss and flat pass-band WDM (de-)multiplexing. Optics Express, 2013, 21, 11652.	3.4	367
12	Synthesis of Photonic Crystals for Optical Wavelengths from Semiconductor Quantum Dots. Advanced Materials, 1999, 11, 165-169.	21.0	355
13	Chemical Approaches to Three-Dimensional Semiconductor Photonic Crystals. Advanced Materials, 2001, 13, 371-376.	21.0	336
14	Silicon CMOS-integrated nano-photonics for computer and data communications beyond 100G. , 2012, 50, s67-s72.		283
15	Group index and group velocity dispersion in silicon-on-insulator photonic wires. Optics Express, 2006, 14, 3853.	3.4	259
16	Low-power, 2×2 silicon electro-optic switch with 110-nm bandwidth for broadband reconfigurable optical networks. Optics Express, 2009, 17, 24020.	3.4	249
17	Manifestation of intrinsic defects in optical properties of self-organized opal photonic crystals. Physical Review E, 2000, 61, 5784-5793.	2.1	246
18	Raman amplification in ultrasmall silicon-on-insulator wire waveguides. Optics Express, 2004, 12, 3713.	3.4	244

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19	Engineering nonlinearities in nanoscale optical systems: physics and applications in dispersion-engineered silicon nanophotonic wires. Advances in Optics and Photonics, 2009, 1, 162.	25.5	221
20	C-band wavelength conversion in silicon photonic wire waveguides. Optics Express, 2005, 13, 4341.	3.4	212
21	Optical spectroscopy of opal matrices with CdS embedded in its pores: Quantum confinement and photonic band gap effects. Nuovo Cimento Della Societa Italiana Di Fisica D - Condensed Matter, Atomic, Molecular and Chemical Physics, Biophysics, 1995, 17, 1349-1354.	0.4	203
22	Existence of a photonic pseudogap for visible light in synthetic opals. Physical Review B, 1997, 55, R13357-R13360.	3.2	198
23	Self-phase-modulation in submicron silicon-on-insulator photonic wires. Optics Express, 2006, 14, 5524.	3.4	198
24	Enhancement of optical gain of semiconductors embedded in three-dimensional photonic crystals. Applied Physics Letters, 1997, 71, 1616-1618.	3.3	180
25	Supercontinuum generation in silicon photonic wires. Optics Express, 2007, 15, 15242.	3.4	180
26	CMOS-integrated high-speed MSM germanium waveguide photodetector. Optics Express, 2010, 18, 4986.	3.4	171
27	Non-Blocking 4x4 Electro-Optic Silicon Switch for On-Chip Photonic Networks. Optics Express, 2011, 19, 47.	3.4	160
28	Monolithic Silicon Integration of Scaled Photonic Switch Fabrics, CMOS Logic, and Device Driver Circuits. Journal of Lightwave Technology, 2014, 32, 743-751.	4.6	154
29	Photonic crystal slab sensor with enhanced surface area. Optics Express, 2010, 18, 27930.	3.4	153
30	A 25 Gbps silicon microring modulator based on an interleaved junction. Optics Express, 2012, 20, 26411.	3.4	153
31	Silicon Photonic Switches Hybrid-Integrated With CMOS Drivers. IEEE Journal of Solid-State Circuits, 2012, 47, 345-354.	5.4	149
32	Coupling into the slow light mode in slab-type photonic crystal waveguides. Optics Letters, 2006, 31, 50.	3.3	143
33	Different regimes of light localization in a disordered photonic crystal. Physical Review B, 1999, 60, 1555-1562.	3.2	142
34	Ultrafast-pulse self-phase modulation and third-order dispersion in Si photonic wire-waveguides. Optics Express, 2006, 14, 12380.	3.4	134
35	Ultrahigh-Bandwidth Silicon Photonic Nanowire Waveguides for On-Chip Networks. IEEE Photonics Technology Letters, 2008, 20, 398-400.	2.5	128
36	Single-domain spectroscopy of self-assembled photonic crystals. Applied Physics Letters, 2000, 76, 1627-1629.	3.3	124

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37	Mode conversion losses in silicon-on-insulator photonic wire based racetrack resonators. Optics Express, 2006, 14, 3872.	3.4	122
38	Conjugated-Polymer Photonic Crystals. Advanced Materials, 2000, 12, 1176-1180.	21.0	120
39	Coupling modulation of microrings at rates beyond the linewidth limit. Optics Express, 2013, 21, 9722.	3.4	118
40	Cross-phase modulation-induced spectral and temporal effects on co-propagating femtosecond pulses in silicon photonic wires. Optics Express, 2007, 15, 1135.	3.4	107
41	Nonlinear-Optical Phase Control in Dispersion-Engineered Si Photonic Wires. Optics Express, 2008, 16, 1280.	3.4	93
42	Neural coding in barrel cortex during whisker-guided locomotion. ELife, 2015, 4, .	6.0	93
43	Coupled resonator optical waveguides based on silicon-on-insulator photonic wires. Applied Physics Letters, 2006, 89, 041122.	3.3	90
44	High-speed receiver based on waveguide germanium photodetector wire-bonded to 90nm SOI CMOS amplifier. Optics Express, 2012, 20, 18145.	3.4	88
45	CMOS-Integrated Optical Receivers for On-Chip Interconnects. IEEE Journal of Selected Topics in Quantum Electronics, 2010, 16, 1376-1385.	2.9	82
46	A Novel Approach to Photonic Packaging Leveraging Existing High-Throughput Microelectronic Facilities. IEEE Journal of Selected Topics in Quantum Electronics, 2016, 22, 455-466.	2.9	77
47	Photonic band gaps in 3D ordered fcc silica matrices. Physics Letters, Section A: General, Atomic and Solid State Physics, 1996, 222, 349-353.	2.1	75
48	A 90nm CMOS integrated Nano-Photonics technology for 25Gbps WDM optical communications applications. , 2012, , .		75
49	Statistics of light transport in 235-ring silicon coupled-resonator optical waveguides. Optics Express, 2010, 18, 26505.	3.4	74
50	Silicon-on-Insulator Echelle Grating WDM Demultiplexers With Two Stigmatic Points. IEEE Photonics Technology Letters, 2009, 21, 1743-1745.	2.5	69
51	Integrated NiSi waveguide heaters for CMOS-compatible silicon thermo-optic devices. Optics Letters, 2010, 35, 1013.	3.3	69
52	Conformal dielectric overlayers for engineering dispersion and effective nonlinearity of silicon nanophotonic wires. Optics Letters, 2008, 33, 2889.	3.3	68
53	Design of a digital, ultra-broadband electro-optic switch for reconfigurable optical networks-on-chip. Optics Express, 2009, 17, 23793.	3.4	67
54	Multichannel High-Bandwidth Coupling of Ultradense Silicon Photonic Waveguide Array to Standard-Pitch Fiber Array. Journal of Lightwave Technology, 2011, 29, 475-482.	4.6	67

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55	Femtosecond measurements of the time of flight of photons in a three-dimensional photonic crystal. Physical Review E, 1999, 60, 1030-1035.	2.1	60
56	Mapping the optical properties of slab-type two-dimensional photonic crystal waveguides. Physical Review B, 2005, 72, .	3.2	50
57	Silicon photonics for next generation computing systems. , 2008, , .		49
58	Spontaneous Raman scattering in ultrasmall silicon waveguides. Optics Letters, 2004, 29, 2755.	3.3	47
59	Self-phase modulation and nonlinear loss in silicon nanophotonic wires near the mid-infrared two-photon absorption edge. Optics Express, 2011, 19, 7778.	3.4	47
60	Observation of surface states in a truncated photonic crystal slab. Optics Letters, 2004, 29, 2175.	3.3	45
61	Transmission of slow light through photonic crystal waveguide bends. Optics Letters, 2006, 31, 745.	3.3	45
62	All-Optical Format Conversion of NRZ-OOK to RZ-OOK in a Silicon Nanowire Utilizing Either XPM or FWM and Resulting in a Receiver Sensitivity Gain of \$sim\$2.5 dB. IEEE Journal of Selected Topics in Quantum Electronics, 2010, 16, 234-249.	2.9	40
63	Optical modulation using anti-crossing between paired amplitude and phase resonators. Optics Express, 2007, 15, 17264.	3.4	38
64	Demonstration of a High Extinction Ratio Monolithic CMOS Integrated Nanophotonic Transmitter and 16 Gb/s Optical Link. IEEE Journal of Selected Topics in Quantum Electronics, 2015, 21, 212-222.	2.9	34
65	Conversion of 10 Gb/s NRZ-OOK to RZ-OOK utilizing XPM in a Si nanowire. Optics Express, 2009, 17, 12987.	3.4	30
66	Mode mixing in asymmetric double-trench photonic crystal waveguides. Journal of Applied Physics, 2004, 95, 4538-4544.	2.5	29
67	Tunable Wavelength Conversion by XPM in a Silicon Nanowire, and the Potential for XPM-Multicasting. Journal of Lightwave Technology, 2010, 28, 2499-2511.	4.6	26
68	Assembly of mechanically compliant interfaces between optical fibers and nanophotonic chips. , 2014, ,		25
69	Demonstration of Error-Free 32-Gb/s Operation From Monolithic CMOS Nanophotonic Transmitters. IEEE Photonics Technology Letters, 2016, 28, 1410-1413.	2.5	25
70	Demonstration of a Digital CMOS Driver Codesigned and Integrated With a Broadband Silicon Photonic Switch. Journal of Lightwave Technology, 2011, 29, 1136-1142.	4.6	22
71	CMOS-Integrated 40GHz Germanium Waveguide Photodetector for On-chip Optical Interconnects. , 2009, , .		21
72	CMOS Integrated Nanophotonics – Enabling Technology for Exascale Computing Systems. , 2011, , .		19

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73	Silicon-nitride surface passivation of submicrometer silicon waveguides for low-power optical switches. Optics Letters, 2009, 34, 1534.	3.3	18
74	All-Optical Wavelength Conversion of 10 Gb/s RZ-OOK Data in a Silicon Nanowire via Cross-Phase Modulation: Experiment and Theoretical Investigation. IEEE Journal of Selected Topics in Quantum Electronics, 2010, 16, 1448-1459.	2.9	18
75	Automated, self-aligned assembly of 12 fibers per nanophotonic chip with standard microelectronics assembly tooling. , 2015, , .		18
76	Echelle grating WDM (de-)multiplexers in SOI technology, based on a design with two stigmatic points. Proceedings of SPIE, 2008, , .	0.8	17
77	Drive-noise-tolerant broadband silicon electro-optic switch. Optics Express, 2011, 19, 11568.	3.4	17
78	Optical Demonstration of a Compliant Polymer Interface between Standard Fibers and Nanophotonic Waveguides. , 2015, , .		17
79	Optical technologies for data communication in large parallel systems. Journal of Instrumentation, 2011, 6, C01012-C01012.	1.2	16
80	Droplet Microfluidics with MALDI-MS Detection: The Effects of Oil Phases in GABA Analysis. ACS Measurement Science Au, 2021, 1, 147-156.	4.4	16
81	High-order dispersion in photonic crystal waveguides. Optics Express, 2007, 15, 17562.	3.4	15
82	Deterministic tuning of slow-light in photonic-crystal waveguides through the C and L bands by atomic layer deposition. Applied Physics Letters, 2010, 96, .	3.3	15
83	Monolithically Integrated Silicon Nanophotonics Receiver in 90nm CMOS Technology Node. , 2013, , .		15
84	Optimized light–matter interaction and defect hole placement in photonic crystal cavity sensors. Optics Letters, 2012, 37, 2850.	3.3	14
85	Binary phase-shift keying by coupling modulation of microrings. Optics Express, 2014, 22, 20252.	3.4	13
86	Optical gain of CdS quantum dots embedded in 3D photonic crystals. Thin Solid Films, 1998, 318, 93-95.	1.8	12
87	Monolithic integration of silicon nanophotonics with CMOS. , 2012, , .		10
88	Four- and Eight-Port Photonic Switches Monolithically Integrated with Digital CMOS Logic and Driver Circuits. , 2013, , .		10
89	Ultra-compact reconfigurable silicon optical devices using micron-scale localized thermal heating. , 2007, , .		9
90	Droplet-assisted electrospray phase separation using an integrated silicon microfluidic platform. Lab on A Chip, 2021, 22, 40-46.	6.0	9

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91	28 Gb/s Silicon Microring Modulation Beyond the Linewidth Limit by Coupling Modulation. , 2012, , .		8
92	Ultra-compact silicon WDM optical filters with flat - top response for on-chip optical interconnects. , 2007, , .		7
93	Low-Power 30 Gbps Silicon Microring Modulator. , 2011, , .		7
94	Group index and group velocity dispersion in silicon-on-insulator photonic wires: errata. Optics Express, 2006, 14, 6372.	3.4	6
95	Silicon micro-resonators for on-chip optical networks. , 2008, , .		6
96	An optically pumped nanophotonic InP/InGaAlAs optical amplifier integrated on a SOI waveguide circuit. Optical and Quantum Electronics, 2012, 44, 513-519.	3.3	6
97	20Gbps Receiver Based on Germanium Photodetector Hybrid-Integrated with 90nm CMOS Amplifier. , 2011, , .		6
98	Spontaneous Raman scattering in a silicon wire waveguide. , 2004, , .		6
99	Photonic band structure of 3D ordered silica matrices. Superlattices and Microstructures, 1997, 22, 393-397.	3.1	5
100	Demonstration of 300 Gbps Error-Free Transmission of WDM Data Stream in Silicon Photonic Wires. , 2007, , .		5
101	Supercontinuum generation in silicon photonic wires. , 2008, , .		5
102	High-Throughput Silicon Nanophotonic Deflection Switch for On-Chip Optical Networks. , 2008, , .		5
103	Silicon photonic WDM devices: simulation, design, and implementation. , 2009, , .		5
104	Photonic Crystal Defects with Increased Surface Area for Improved Refractive Index Sensing. , 2010, , .		5
105	250 Gbps 10-channel WDM silicon photonics receiver. , 2012, , .		5
106	Photonic Packaging in High-Throughput Microelectronic Assembly Lines for Cost-Efficiency and Scalability. , 2015, , .		5
107	Four- and Eight-Port Photonic Switches Monolithically Integrated with Digital CMOS Logic and Driver Circuits. , 2013, , .		5

108 Intrinsic diffraction losses in 2D SOI photonic crystal waveguides. , 2004, , IThL4.

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109	235-ring Coupled-Resonator Optical Waveguides. , 2010, , .		4
110	A 3.9ns 8.9mW 4×4 silicon photonic switch hybrid integrated with CMOS driver. , 2011, , .		4
111	Demonstration of Error Free Operation Up To 32 Gb/s From a CMOS Integrated Monolithic Nano-Photonic Transmitter. , 2015, , .		4
112	Generation of a telecom-to-mid-infrared spanning supercontinuum using silicon-on-insulator wire waveguides. , 2011, , .		3
113	Mid-infrared pulse dynamics in Si nanophotonic wires near the two-photon absorption edge. , 2009, , .		3
114	Controlled Coupling in Silicon Microrings for High-Speed, High Extinction Ratio, and Low-Chirp Modulation. , 2011, , .		3
115	Monolithically Integrated Photonic Switches Driven by Digital CMOS. , 2013, , .		3
116	Introduction. Optics Express, 2004, 12, 1476.	3.4	2
117	Ultra-compact wavelength division multiplexing devices using silicon photonic wires for on-chip interconnects. , 2007, , .		2
118	Mid-infrared nonlinear optics in silicon photonic wire waveguides. , 2010, , .		2
119	Grating couplers as optical probe pads in a standard CMOS process. , 2011, , .		2
120	CMOS Integrated Nanophotonics for future computing systems. , 2011, , .		2
121	Mid-Infrared Silicon Photonics. , 2013, , .		2
122	Picoliter Droplet Generation for Fast Monitoring the Brain Chemistry with Scaled Silicon Nanodyalisis Probe. , 2019, , .		2
123	Silicon Electro-Optic 4×4 Non-Blocking Switch Array for On-Chip Photonic Networks. , 2011, , .		2
124	CMOS-Integrated Small-Capacitance Germanium Waveguide Photodetector for Optical Interconnects. , 2009, , .		2
125	CMOS Integrated Silicon Nanophotonics: An Enabling Technology for Exascale Computing. , 2011, , .		2
126	Controlled Coupling in Silicon Microrings for High-Speed, High Extinction Ratio, and Low-Chirp Modulation. , 2011, , .		2

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127	Broad bandwidth double-trench waveguides in silicon-on-insulator photonic crystal slabs. , 2004, , .		1
128	Ultrahigh-Bandwidth WDM Signal Integrity in Silicon-on-Insulator Nanowire Waveguides. Conference Proceedings - Lasers and Electro-Optics Society Annual Meeting-LEOS, 2007, , .	0.0	1
129	Silicon modulator based on anti-crossing between paired amplitude and phase tunable microring resonators. , 2007, , .		1
130	Silicon photonic wire circuits for on-chip optical interconnects. Proceedings of SPIE, 2008, , .	0.8	1
131	Ultra-Broadband, Low-Power, 2 $ ilde{A}$ —2 Electro-Optic Switch using Sub-Micron Silicon Waveguides. , 2010, , .		1
132	CMOS-Integrated Low-Noise Germanium Waveguide Avalanche Photodetector Operating at 40Gbps. , 2010, , .		1
133	Monolithic integration of CMOS and nanophotonic devices for massively parallel optical interconnects in supercomputers. , $2011, , .$		1
134	20Gbps Receiver Based on Germanium Photodetector Hybrid-Integrated with 90nm CMOS Amplifier. , 2011, , .		1
135	Nonlinear silicon nanophotonics for mid-infrared applications. , 2011, , .		1
136	Breaking the Conventional Limitations of Microrings. , 2014, , .		1
137	Silicon integrated nanophotonics: from fundamental science to manufacturable technology (Presentation Video). , 2015, , .		1
138	Controlled Coupling in Silicon Microrings for High-Speed, High Extinction Ratio, and Low-Chirp Modulation. , 2011, , .		1
139	Dispersion engineering of silicon nanophotonic wires using a thin film cladding. , 2008, , .		1
140	Mid-Infrared Broadband Modulation Instability and 50 dB Raman Assisted Parametric Gain in Silicon Photonic Wires. , 2011, , .		1
141	Coupling-modulated microrings for DPSK modulation. , 2013, , .		1
142	Fiber on a chip: Nonlinear optics in silicon photonic wires. , 2006, , .		0
143	Ultrafast Optical-pulse Propagation on Si Chips. , 2006, , .		Ο
144	Determination of Third-Order Dispersion Coefficient and Observation of Soliton Radiation in Si-Wire Waveguides. , 2007, , .		0

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145	Silicon integrated nanophotonics for on-chip optical interconnects. , 2008, , .		Ο
146	Nonlinear optics in Si wires on an SOI platform. , 2008, , .		0
147	Broadband digital optical switches based on a SOI Mach-Zehnder lattice. , 2008, , .		Ο
148	Broadband ultra-compact nanophotonic optical modulators and switches. , 2008, , .		0
149	Demonstrations of an air-slot photonic crystal nanocavity with ultrasmall mode volumes for enhanced light-matter interactions. , 2009, , .		Ο
150	Silicon integrated nanophotonics for on-chip optical interconnects. , 2009, , .		0
151	Integration of nanophotonic devices for on-chip optical interconnects. , 2009, , .		0
152	Waveguide-Integrated Low-Noise Germanium Avalanche Photodetector with 6dB Sensitivity Improvement. , 2010, , .		0
153	Experimental and Theoretical Demonstration of Wavelength Conversion of 10 Gb/s RZ-OOK in a Si nanowire via XPM. , 2010, , .		0
154	Introduction to the Issue on Enabling Technologies for Digital Optical Communication Systems. IEEE Journal of Selected Topics in Quantum Electronics, 2010, 16, 1048-1050.	2.9	0
155	High-gain Si-chip optical parametric mixing beyond two-photon absorption. , 2010, , .		Ο
156	(Invited) Integration of Germanium Avalanche Photodetectors on Silicon for On-Chip Optical Interconnects. ECS Transactions, 2010, 33, 749-756.	0.5	0
157	Waveguide-integrated Germanium avalanche photodetector for low-noise and high-speed operation. , 2010, , .		0
158	CMOS integrated silicon nanophotonics for future exascale systems. , 2011, , .		0
159	Four-Wave-Mixing Gain and All-optical Signal Processing in Silicon Nanowires. , 2011, , .		0
160	Statistics of photon transport in hundreds of coupled resonators. , 2011, , .		0
161	Optimization of Defect Hole Placement in Resonant Cavities. , 2011, , .		0
162	Correlations between light at spectrally distant wavelengths in coupled microring resonator waveguides. , 2011, , .		0

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163	Ultra-dense monolithic integration of optical and electrical functions on silicon for optical interconnects. , 2011, , .		0
164	CMOS Integrated Nanophotonics for Future Computing Systems. , 2011, , .		0
165	Heralded single photons from a silicon nanophotonic chip. , 2012, , .		0
166	A 16-channel monolithic silicon nanophotonic receiver. , 2013, , .		0
167	Redesigning active and passive microring resonators. , 2013, , .		0
168	Quantum Dot Photonic Crystals. Nanostructure Science and Technology, 2003, , 239-260.	0.1	0
169	Slow-Light in Photonic-Crystal Waveguides and Cavities. , 2008, , .		0
170	Dispersion engineering in silicon photonic wires using thin Si3N4 conformal dielectric coating. , 2008, , .		0
171	Design and fabrication of an ultra-compact silicon on insulator demultiplexer based on arrayed waveguide gratings. , 2008, , .		0
172	Digital deterministic control of slow light in photonic crystal waveguide membranes through atomic layer deposition. , 2009, , .		0
173	Silicon-Nitride Surface Passivation of Sub-Micron Silicon Waveguides for Low-Power Optical Switches. , 2009, , .		0
174	Silicon nanophotonic mid-infrared optical parametric amplifier with 25 dB gain. , 2010, , .		0
175	Intra- and Inter-band Four-wave Mixing in Silicon Coupled Resonator Optical Waveguides. , 2011, , .		0
176	CMOS Integrated Silicon Nanophotonics for Exascale Computing. , 2011, , .		0
177	20Gbps Receiver Based on Germanium Photodetector Hybrid-Integrated with 90nm CMOS Amplifier. , 2011, , .		0
178	Hybrid-Integrated Germanium Photodetector and CMOS Receiver Operating at 15 Gb/s. , 2011, , .		0
179	40Gbps Optical Receiver Based on Germanium Waveguide Photodetector Hybrid-Integrated with 90nm CMOS Amplifier. , 2012, , .		0
180	Dense CMOS-Photonics Integration in sub-100nm Technology Node. , 2013, , .		0