David A B Miller

List of Publications by Year
in descending order

429 papers	32,728 citations	4146 87 h-index	4117 175 g-index
432 all docs	432 docs citations	432 times ranked	14055 citing authors

#	Article	IF	Citations
1	Electric field dependence of optical absorption near the band gap of quantum-well structures. Physical Review B, 1985, 32, 1043-1060.	3.2	1,837
2	Device Requirements for Optical Interconnects to Silicon Chips. Proceedings of the IEEE, 2009, 97, 1166-1185.	21.3	1,642
3	Band-Edge Electroabsorption in Quantum Well Structures: The Quantum-Confined Stark Effect. Physical Review Letters, 1984, 53, 2173-2176.	7.8	1,558
4	Linear and nonlinear optical properties of semiconductor quantum wells. Advances in Physics, 1989, 38, 89-188.	14.4	1,064
5	Theory of the linear and nonlinear optical properties of semiconductor microcrystallites. Physical Review B, 1987, 35, 8113-8125.	3.2	1,003
6	Rationale and challenges for optical interconnects to electronic chips. Proceedings of the IEEE, 2000, 88, 728-749.	21.3	965
7	Theory of transient excitonic optical nonlinearities in semiconductor quantum-well structures. Physical Review B, 1985, 32, 6601-6609.	3.2	770
8	Strong quantum-confined Stark effect in germanium quantum-well structures on silicon. Nature, 2005, 437, 1334-1336.	27.8	725
9	Room temperature excitonic nonlinear absorption and refraction in GaAs/AlGaAs multiple quantum well structures. IEEE Journal of Quantum Electronics, 1984, 20, 265-275.	1.9	710
10	Solid-state low-loss intracavity saturable absorber for Nd:YLF lasers: an antiresonant semiconductor Fabryâ€"Perot saturable absorber. Optics Letters, 1992, 17, 505.	3.3	624
11	Nanometre-scale germanium photodetector enhanced by a near-infrared dipole antenna. Nature Photonics, 2008, 2, 226-229.	31.4	606
12	Programmable photonic circuits. Nature, 2020, 586, 207-216.	27.8	598
13	Novel hybrid optically bistable switch: The quantum well selfâ€electroâ€optic effect device. Applied Physics Letters, 1984, 45, 13-15.	3.3	538
14	Optical investigation of Bloch oscillations in a semiconductor superlattice. Physical Review B, 1992, 46, 7252-7255.	3.2	521
15	The quantum well self-electrooptic effect device: Optoelectronic bistability and oscillation, and self-linearized modulation. IEEE Journal of Quantum Electronics, 1985, 21, 1462-1476.	1.9	520
16	Attojoule Optoelectronics for Low-Energy Information Processing and Communications. Journal of Lightwave Technology, 2017, 35, 346-396.	4.6	464
17	Are optical transistors the logical next step?. Nature Photonics, 2010, 4, 3-5.	31.4	436
18	Coherent submillimeter-wave emission from charge oscillations in a double-well potential. Physical Review Letters, 1992, 68, 2216-2219.	7.8	421

#	Article	IF	Citations
19	Inference in artificial intelligence with deep optics and photonics. Nature, 2020, 588, 39-47.	27.8	418
20	Large roomâ€temperature optical nonlinearity in GaAs/Ga1â^'xâ€‰AlxAs multiple quantum well structures. Applied Physics Letters, 1982, 41, 679-681.	3.3	396
21	Highâ€speed optical modulation with GaAs/GaAlAs quantum wells in apâ€iâ€ndiode structure. Applied Physics Letters, 1984, 44, 16-18.	3.3	389
22	Femtosecond Excitation of Nonthermal Carrier Populations in GaAs Quantum Wells. Physical Review Letters, 1986, 56, 1191-1193.	7.8	387
23	Self-configuring universal linear optical component [Invited]. Photonics Research, 2013, 1, 1.	7.0	331
24	Femtosecond Dynamics of Resonantly Excited Excitons in Room-Temperature GaAs Quantum Wells. Physical Review Letters, 1985, 54, 1306-1309.	7.8	300
25	Optical interconnects to silicon. IEEE Journal of Selected Topics in Quantum Electronics, 2000, 6, 1312-1317.	2.9	298
26	Quantum well carrier sweep out: relation to electroabsorption and exciton saturation. IEEE Journal of Quantum Electronics, 1991, 27, 2281-2295.	1.9	297
27	Relation between electroabsorption in bulk semiconductors and in quantum wells: The quantum-confined Franz-Keldysh effect. Physical Review B, 1986, 33, 6976-6982.	3.2	296
28	Electric-field dependence of linear optical properties in quantum well structures: Waveguide electroabsorption and sum rules. IEEE Journal of Quantum Electronics, 1986, 22, 1816-1830.	1.9	290
29	Band-Gapâ€"Resonant Nonlinear Refraction in III-V Semiconductors. Physical Review Letters, 1981, 47, 197-200.	7.8	270
30	GaAs MQW modulators integrated with silicon CMOS. IEEE Photonics Technology Letters, 1995, 7, 360-362.	2.5	239
31	Perfect optics with imperfect components. Optica, 2015, 2, 747.	9.3	234
32	Optics for low-energy communication inside digital processors: quantum detectors, sources, and modulators as efficient impedance converters. Optics Letters, 1989, 14, 146.	3.3	229
33	On perfect cloaking. Optics Express, 2006, 14, 12457.	3.4	229
34	Symmetric self-electrooptic effect device: optical set-reset latch, differential logic gate, and differential modulator/detector. IEEE Journal of Quantum Electronics, 1989, 25, 1928-1936.	1.9	228
35	Limit to the Bit-Rate Capacity of Electrical Interconnects from the Aspect Ratio of the System Architecture. Journal of Parallel and Distributed Computing, 1997, 41, 42-52.	4.1	226
36	Free carrier and many-body effects in absorption spectra of modulation-doped quantum wells. IEEE Journal of Quantum Electronics, 1988, 24, 1677-1689.	1.9	218

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37	Effect of low-power nonlinear refraction on laser-beam propagation in InSb. Optics Letters, 1979, 4, 331.	3.3	203
38	A micromachining-based technology for enhancing germanium light emission via tensile strain. Nature Photonics, 2012, 6, 398-405.	31.4	190
39	Scaling optoelectronic-VLSI circuits into the 21st century: a technology roadmap. IEEE Journal of Selected Topics in Quantum Electronics, 1996, 2, 55-76.	2.9	189
40	Dynamic non-linear optical processes in semiconductors. Advances in Physics, 1981, 30, 697-800.	14.4	188
41	Optical modulator on silicon employing germanium quantum wells. Optics Express, 2007, 15, 5851.	3.4	187
42	Energy consumption in optical modulators for interconnects. Optics Express, 2012, 20, A293.	3.4	182
43	Communicating with waves between volumes: evaluating orthogonal spatial channels and limits on coupling strengths. Applied Optics, 2000, 39, 1681.	2.1	180
44	Optical interconnects to electronic chips. Applied Optics, 2010, 49, F59.	2.1	179
45	Direct measurement of resonant and nonresonant tunneling times in asymmetric coupled quantum wells. Physical Review B, 1989, 40, 3028-3031.	3.2	177
46	Quadratic electroâ€optic effect due to the quantumâ€confined Stark effect in quantum wells. Applied Physics Letters, 1987, 50, 842-844.	3.3	175
47	Refractive Fabry-Perot bistability with linear absorption: Theory of operation and cavity optimization. IEEE Journal of Quantum Electronics, 1981, 17, 306-311.	1.9	170
48	Electromagnetic degrees of freedom of an optical system. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2000, 17, 892.	1.5	169
49	Roomâ€temperature excitons in 1.6â€Î¼m bandâ€gap GaInAs/AlInAs quantum wells. Applied Physics Letters, 1985, 46, 619-621.	3.3	167
50	Femtosecond ac Stark effect in semiconductor quantum wells: Extreme low- and high-intensity limits. Physical Review Letters, 1989, 62, 1189-1192.	7.8	162
51	Electroabsorption of highly confined systems: Theory of the quantumâ€confined Franzâ€"Keldysh effect in semiconductor quantum wires and dots. Applied Physics Letters, 1988, 52, 2154-2156.	3.3	161
52	Multiple quantum well reflection modulator. Applied Physics Letters, 1987, 50, 1119-1121.	3.3	158
53	QUANTUM WELL OPTOELECTRONIC SWITCHING DEVICES. International Journal of High Speed Electronics and Systems, 1990, 01, 19-46.	0.7	156
54	Ultra-compact photonic crystal waveguide spatial mode converter and its connection to the optical diode effect. Optics Express, 2012, 20, 28388.	3.4	156

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55	Electroabsorption in GaAs/AlGaAs coupled quantum well waveguides. Applied Physics Letters, 1987, 50, 1098-1100.	3.3	150
56	Quantum-Confined Stark Effect in Ge/SiGe Quantum Wells on Si for Optical Modulators. IEEE Journal of Selected Topics in Quantum Electronics, 2006, 12, 1503-1513.	2.9	150
57	Self-aligning universal beam coupler. Optics Express, 2013, 21, 6360.	3.4	149
58	Unscrambling lightâ€"automatically undoing strong mixing between modes. Light: Science and Applications, 2017, 6, e17110-e17110.	16.6	149
59	Highly anisotropic optical properties of single quantum well waveguides. Applied Physics Letters, 1985, 47, 664-667.	3.3	148
60	Electroabsorption by Stark effect on roomâ€temperature excitons in GaAs/GaAlAs multiple quantum well structures. Applied Physics Letters, 1983, 42, 864-866.	3.3	147
61	131 ps optical modulation in semiconductor multiple quantum wells (MQW's). IEEE Journal of Quantum Electronics, 1985, 21, 117-118.	1.9	146
62	Exciton Greenâ€™s-function approach to optical absorption in a quantum well with an applied electric field. Physical Review B, 1991, 43, 1500-1509.	3.2	144
63	Quantumâ€confined Stark effect in InGaAs/InP quantum wells grown by organometallic vapor phase epitaxy. Applied Physics Letters, 1987, 50, 1010-1012.	3.3	140
64	Symmetric selfâ€electroâ€optic effect device: Optical setâ€reset latch. Applied Physics Letters, 1988, 52, 1419-1421.	3.3	140
65	Strong polarizationâ€sensitive electroabsorption in GaAs/AlGaAs quantum well waveguides. Applied Physics Letters, 1985, 47, 1148-1150.	3.3	136
66	Multiple-Wavelength Focusing of Surface Plasmons with a Nonperiodic Nanoslit Coupler. Nano Letters, 2011, 11, 2693-2698.	9.1	133
67	Modal analysis and coupling in metal-insulator-metal waveguides. Physical Review B, 2009, 79, .	3.2	124
68	Observation of roomâ€temperature blue shift and bistability in a strained InGaAsâ€GaAs ã€ˆ111ã€‰ selfâ€electroâ€optic effect device. Applied Physics Letters, 1990, 56, 715-717.	3.3	123
69	Evolution of the SEED technology: bistable logic gates to optoelectronic smart pixels. IEEE Journal of Quantum Electronics, 1993, 29, 655-669.	1.9	120
70	Transmission Line and Equivalent Circuit Models for Plasmonic Waveguide Components. IEEE Journal of Selected Topics in Quantum Electronics, 2008, 14, 1462-1472.	2.9	119
71	Strained germanium thin film membrane on silicon substrate for optoelectronics. Optics Express, 2011, 19, 25866.	3.4	114
72	Roomâ€temperature electroabsorption and switching in a GaAs/AlGaAs superlattice. Applied Physics Letters, 1989, 55, 340-342.	3.3	112

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73	Non-linear optical effects in InSb with a c.w. CO laser. Optics Communications, 1978, 27, 133-136.	2.1	111
74	Excitonic effects in coupled quantum wells. Physical Review B, 1991, 44, 6231-6242.	3.2	107
75	Degenerate fourâ€wave mixing in roomâ€temperature GaAs/GaAlAs multiple quantum well structures. Applied Physics Letters, 1983, 42, 925-927.	3.3	105
76	Mechanism for enhanced optical nonlinearities and bistability by combined dielectricâ€“electronic confinement in semiconductor microcrystallites. Optics Letters, 1986, 11, 522.	3.3	105
77	Integrated quantum well selfâ€electroâ€optic effect device: 2Ã—2 array of optically bistable switches. Applied Physics Letters, 1986, 49, 821-823.	3.3	103
78	3-D integration of MQW modulators over active submicron CMOS circuits: 375 Mb/s transimpedance receiver-transmitter circuit. IEEE Photonics Technology Letters, 1995, 7, 1288-1290.	2.5	103
79	Wavelength-division multiplexing with femtosecond pulses. Optics Letters, 1995, 20, 1166.	3.3	101
80	Optical bistability due to increasing absorption. Optics Letters, 1984, 9, 162.	3.3	100
81	100 ps waveguide multiple quantum well (MQW) optical modulator with 10:1 on/off ratio. Electronics Letters, 1985, 21, 693.	1.0	100
82	All linear optical devices are mode converters. Optics Express, 2012, 20, 23985.	3.4	98
83	Passive mode locking of a semiconductor diode laser. Optics Letters, 1984, 9, 507.	3.3	97
84	Fast escape of photocreated carriers out of shallow quantum wells. Applied Physics Letters, 1991, 59, 66-68.	3.3	97
85	Matrix Optimization on Universal Unitary Photonic Devices. Physical Review Applied, 2019, 11, .	3.8	97
86	Experimental band structure spectroscopy along a synthetic dimension. Nature Communications, 2019, 10, 3122.	12.8	95
87	THz pulses from the creation of polarized electronâ€hole pairs in biased quantum wells. Applied Physics Letters, 1992, 61, 2009-2011.	3.3	94
88	Universal modal radiation laws for all thermal emitters. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 4336-4341.	7.1	93
89	Waves, modes, communications, and optics: a tutorial. Advances in Optics and Photonics, 2019, 11, 679.	25.5	92
90	C-shaped nanoaperture-enhanced germanium photodetector. Optics Letters, 2006, 31, 1519.	3.3	90

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91	60â€‰â€‰dB high-extinction auto-configured Machâ€"Zehnder interferometer. Optics Letters, 2016, 41, 5318.	3.3	87
92	33 ps optical switching of symmetric selfâ€electroâ€optic effect devices. Applied Physics Letters, 1990, 57, 1843-1845.	3.3	86
93	Multilayer thin-film structures with high spatial dispersion. Applied Optics, 2003, 42, 1330.	2.1	85
94	Demonstration of systematic photonic crystal device design and optimization by low-rank adjustments: an extremely compact mode separator. Optics Letters, 2005, 30, 141.	3.3	85
95	Generation of ultrashort electrical pulses through screening by virtual populations in biased quantum wells. Physical Review Letters, 1987, 59, 1018-1021.	7.8	82
96	Fundamental Limit to Linear One-Dimensional Slow Light Structures. Physical Review Letters, 2007, 99, 203903.	7.8	82
97	Low-energy ultrafast fiber soliton logic gates. Optics Letters, 1990, 15, 909.	3.3	81
98	The benefits of ultrashort optical pulses in optically interconnected systems. IEEE Journal of Selected Topics in Quantum Electronics, 2003, 9, 477-485.	2.9	79
99	Metal-dielectric-metal plasmonic waveguide devices for manipulating light at the nanoscale. Chinese Optics Letters, 2009, 7, 302-308.	2.9	79
100	Ge/SiGe Quantum Well Waveguide Modulator Monolithically Integrated With SOI Waveguides. IEEE Photonics Technology Letters, 2012, 24, 461-463.	2.5	78
101	Effect of collisions and relaxation on coherent resonant tunneling: Hole tunneling in GaAs/AlxGa1â^'xAs double-quantum-well structures. Physical Review B, 1990, 42, 7065-7068.	3.2	73
102	Simultaneous measurements of electron and hole sweep-out from quantum wells and modeling of photoinduced field screening dynamics. IEEE Journal of Quantum Electronics, 1992, 28, 2486-2497.	1.9	73
103	Use of a dielectric stack as a one-dimensional photonic crystal for wavelength demultiplexing by beam shifting. Optics Letters, 2000, 25, 1502.	3.3	67
104	Fundamental limit for optical components. Journal of the Optical Society of America B: Optical Physics, 2007, 24, A1.	2.1	65
105	Reconfigurable add-drop multiplexer for spatial modes. Optics Express, 2013, 21, 20220.	3.4	64
106	A 40-GHz-bandwidth, 4-bit, time-interleaved A/D converter using photoconductive sampling. IEEE Journal of Solid-State Circuits, 2003, 38, 2021-2030.	5.4	63
107	Receiver-less optical clock injection for clock distribution networks. IEEE Journal of Selected Topics in Quantum Electronics, 2003, 9, 400-409.	2.9	62
108	Material Properties of Si-Ge/Ge Quantum Wells. IEEE Journal of Selected Topics in Quantum Electronics, 2008, 14, 1082-1089.	2.9	61

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109	Communications expands its space. Nature Photonics, 2017, 11, 5-8.	31.4	60
110	How fast is excitonic electroabsorption?. Optics Letters, 1990, 15, 60.	3.3	59
111	Wavelength demultiplexer using the spatial dispersion of multilayer thin-film structures. IEEE Photonics Technology Letters, 2003, 15, 1097-1099.	2.5	59
112	C-band side-entry Ge quantum-well electroabsorption modulator on SOI operating at 1â€…V swing. Electronics Letters, 2008, 44, 49.	1.0	57
113	Geâ€"SiGe Quantum-Well Waveguide Photodetectors on Silicon for the Near-Infrared. IEEE Photonics Technology Letters, 2007, 19, 1631-1633.	2.5	56
114	Device Requirements for Optical Interconnects to CMOS Silicon Chips. , 2010, , .		56
115	Exciton saturation in electrically biased quantum wells. Applied Physics Letters, 1990, 57, 2315-2317.	3.3	54
116	Establishing Optimal Wave Communication Channels Automatically. Journal of Lightwave Technology, 2013, 31, 3987-3994.	4.6	53
117	Femtosecond-pulse distortion in quantum wells. Physical Review B, 1993, 48, 17902-17905.	3.2	52
118	Huygens's wave propagation principle corrected. Optics Letters, 1991, 16, 1370.	3.3	50
119	Spatiotemporal control of ultrashort optical pulses by refractiveâ€"diffractiveâ€"dispersive structured optical elements. Optics Letters, 2001, 26, 1373.	3.3	50
120	Standing-wave Fourier transform spectrometer based on integrated MEMS mirror and thin-film photodetector. IEEE Journal of Selected Topics in Quantum Electronics, 2002, 8, 98-105.	2.9	47
121	Meshing optics with applications. Nature Photonics, 2017, 11, 403-404.	31.4	47
122	Excitons in resonant coupling of quantum wells. Physical Review B, 1990, 42, 1841-1844.	3.2	46
123	High-Efficiency p-i-n Photodetectors on Selective-Area-Grown Ge for Monolithic Integration. IEEE Electron Device Letters, 2009, 30, 1161-1163.	3.9	46
124	Low-voltage broad-band electroabsorption from thin Ge/SiGe quantum wells epitaxially grown on silicon. Optics Express, 2013, 21, 867.	3.4	46
125	Low-temperature growth of GaAs on Si used for ultrafast photoconductive switches. IEEE Journal of Quantum Electronics, 2004, 40, 800-804.	1.9	45
126	The role of optics in computing. Nature Photonics, 2010, 4, 406-406.	31.4	45

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127	Design methodology for compact photonic-crystal-based wavelength division multiplexers. Optics Letters, 2011, 36, 591.	3.3	44
128	Setting up meshes of interferometers â€“ reversed local light interference method. Optics Express, 2017, 25, 29233.	3.4	43
129	Measurement and modeling of ultrafast carrier dynamics and transport in germanium/silicon-germanium quantum wells. Optics Express, 2010, 18, 25596.	3.4	42
130	Parallel Programming of an Arbitrary Feedforward Photonic Network. IEEE Journal of Selected Topics in Quantum Electronics, 2020, 26, 1-13.	2.9	42
131	Transform spectrometer based on measuring the periodicity of Talbot self-images. Optics Letters, 2001, 26, 1645.	3.3	40
132	Routing and photodetection in subwavelength plasmonic slot waveguides. Nanophotonics, 2012, 1, 9-16.	6.0	40
133	How complicated must an optical component be?. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2013, 30, 238.	1.5	39
134	Receiver sensitivity improvement by impulsive coding. IEEE Photonics Technology Letters, 1997, 9, 684-686.	2.5	38
135	Firehose Architectures for Free-Space Optically Interconnected VLSI Circuits. Journal of Parallel and Distributed Computing, 1997, 41, 109-114.	4.1	38
136	Wannier basis design and optimization of a photonic crystal waveguide crossing. IEEE Photonics Technology Letters, 2005, 17, 1875-1877.	2.5	38
137	Suppression of the observation of Stark ladders in optical measurements on superlattices by excitonic effects. Physical Review B, 1992, 46, 15365-15376.	3.2	37
138	Silicon integrated circuits shine. Nature, 1996, 384, 307-308.	27.8	37
139	Misalignment-tolerant surface-normal low-voltage modulator for optical interconnects. IEEE Journal of Selected Topics in Quantum Electronics, 2005, 11, 338-342.	2.9	37
140	Optical switching based on high-speed phased array optical beam steering. Applied Physics Letters, 2008, 92, .	3.3	37
141	Tensile-strained germanium-on-insulator substrate fabrication for silicon-compatible optoelectronics. Optical Materials Express, 2011, 1, 1121.	3.0	37
142	Optical logic using electrically connected quantum well PIN diode modulators and detectors. Applied Optics, 1990, 29, 2153.	2.1	36
143	Novel analog self-electrooptic-effect devices. IEEE Journal of Quantum Electronics, 1993, 29, 678-698.	1.9	35
144	Silicon Germanium CMOS Optoelectronic Switching Device: Bringing Light to Latch. IEEE Transactions on Electron Devices, 2007, 54, 3252-3259.	3.0	35

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145	Modeling of Plasmonic Waveguide Components and Networks. Journal of Computational and Theoretical Nanoscience, 2009, 6, 1808-1826.	0.4	35
146	Simple Electroabsorption Calculator for Designing 1310 nm and 1550 nm Modulators Using Germanium Quantum Wells. IEEE Journal of Quantum Electronics, 2012, 48, 187-197.	1.9	35
147	Optimization of absorption in symmetric self-electrooptic effect devices: a systems perspective. IEEE Journal of Quantum Electronics, 1991, 27, 2431-2439.	1.9	34
148	Limits on the performance of dispersive thin-film stacks. Applied Optics, 2005, 44, 3349.	2.1	34
149	Selective epitaxial growth of Ge/Si0.15Ge0.85 quantum wells on Si substrate using reduced pressure chemical vapor deposition. Applied Physics Letters, 2011, 98, .	3.3	34
150	Electroabsorption in IIâ€VI multiple quantum wells. Applied Physics Letters, 1991, 58, 334-336.	3.3	32
151	Characteristic Impedance Model for Plasmonic Metal Slot Waveguides. IEEE Journal of Selected Topics in Quantum Electronics, 2008, 14, 1473-1478.	2.9	31
152	Optical detection of resonant tunnelling of electrons in quantum wells. Semiconductor Science and Technology, 1990, 5, 549-556.	2.0	30
153	Multilayer Thin-Film Stacks With Steplike Spatial Beam Shifting. Journal of Lightwave Technology, 2004, 22, 612-618.	4.6	30
154	Sorting out light. Science, 2015, 347, 1423-1424.	12.6	30
155	Interleaved-contact electroabsorption modulator using doping-selective electrodes with 25 degrees C to 95 degrees C operating range. IEEE Photonics Technology Letters, 1993, 5, 181-184.	2.5	29
156	Spatial channels for communicating with waves between volumes. Optics Letters, 1998, 23, 1645.	3.3	29
157	Plasmonic device in silicon CMOS. Electronics Letters, 2009, 45, 706.	1.0	28
158	Arrays of optoelectronic switching nodes comprised of flip-chip-bonded MQW modulators and detectors on silicon CMOS circuitry. IEEE Photonics Technology Letters, 1996, 8, 221-223.	2.5	27
159	Designing for beam propagation in periodic and nonperiodic photonic nanostructures: Extended Hamiltonian method. Physical Review E, 2004, 70, 036612.	2.1	27
160	Systematic Photonic Crystal Device Design: Global and Local Optimization and Sensitivity Analysis. IEEE Journal of Quantum Electronics, 2006, 42, 266-279.	1.9	27
161	Nanoscale resonant-cavity-enhanced germanium photodetectors with lithographically defined spectral response for improved performance at telecommunications wavelengths. Optics Express, 2013, 21, 10228.	3.4	27
162	Adapting Machâ€"Zehnder Mesh Equalizers in Direct-Detection Mode-Division-Multiplexed Links. Journal of Lightwave Technology, 2020, 38, 723-735.	4.6	27

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163	Silicon-Based Micro-Fourier Spectrometer. IEEE Transactions on Electron Devices, 2005, 52, 419-426.	3.0	26
164	Electrically controlled modulation in a photonic crystal nanocavity. Optics Express, 2009, 17, 15409.	3.4	26
165	Indirect absorption in germanium quantum wells. AIP Advances, 2011, 1, .	1.3	26
166	Analyzing and generating multimode optical fields using self-configuring networks. Optica, 2020, 7, 794.	9.3	26
167	Separating arbitrary free-space beams with an integrated photonic processor. Light: Science and Applications, 2022, 11, .	16.6	26
168	Laser tuners and wavelength-sensitive detectors based on absorbers in standing waves. IEEE Journal of Quantum Electronics, 1994, 30, 732-749.	1.9	25
169	Ultrafast differential sample and hold using low-temperature-grown GaAs MSM for photonic A/D conversion. IEEE Photonics Technology Letters, 2001, 13, 717-719.	2.5	25
170	Optically controlled electroabsorption modulators for unconstrained wavelength conversion. Applied Physics Letters, 2004, 84, 469-471.	3.3	25
171	SiGe optoelectronic metal-oxide semiconductor field-effect transistor. Optics Letters, 2007, 32, 2022.	3.3	25
172	Ring oscillators with optical and electrical readout based on hybrid GaAs MQW modulators bonded to 0.8 Âµm silicon VLSI circuits. Electronics Letters, 1995, 31, 1917-1918.	1.0	24
173	High-speed, optically controlled surface-normal optical switch based on diffusive conduction. Applied Physics Letters, 1999, 75, 597-599.	3.3	24
174	Wideband, Low Driving Voltage Traveling-Wave Machâ€"Zehnder Modulator for RF Photonics. IEEE Photonics Technology Letters, 2008, 20, 517-519.	2.5	24
175	Ge/SiGe asymmetric Fabry-Perot quantum well electroabsorption modulators. Optics Express, 2012, 20, 29164.	3.4	24
176	Skew and jitter removal using short optical pulses for optical interconnection. IEEE Photonics Technology Letters, 2000, 12, 714-716.	2.5	23
177	Wavelength division multiplexed optical interconnect using short pulses. IEEE Journal of Selected Topics in Quantum Electronics, 2003, 9, 486-491.	2.9	23
178	Multifunctional integrated photonic switches. IEEE Journal of Selected Topics in Quantum Electronics, 2005, 11, 86-96.	2.9	22
179	Monolithically-integrated long vertical cavity surface emitting laser incorporating a concave micromirror on a glass substrate. Optics Express, 2004, 12, 3967.	3.4	21
180	High-speed optical beam-steering based on phase-arrayed waveguides. Journal of Vacuum Science & Technology B, 2008, 26, 2124-2126.	1.3	21

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181	Highly Tailored Computational Electromagnetics Methods for Nanophotonic Design and Discovery. Proceedings of the IEEE, 2013, 101, 484-493.	21.3	21
182	Silicon sees the light. Nature, 1995, 378, 238-238.	27.8	20
183	Photonic page buffer based on GaAs multiple-quantum-well modulators bonded directly over active silicon complementary-metal-oxide-semiconductor (CMOS) circuits. Applied Optics, 1996, 35, 2439.	2.1	20
184	Photonic A/D conversion using low-temperature-grown gaas msm switches integrated with Si-CMOS. Journal of Lightwave Technology, 2003, 21, 3104-3115.	4.6	20
185	Investigation of Limits to the Optical Performance of Asymmetric Fabry-Perot Electroabsorption Modulators. IEEE Journal of Quantum Electronics, 2012, 48, 198-209.	1.9	20
186	Logic self-electrooptic effect devices: quantum-well optoelectronic multiport logic gates, multiplexers, demultiplexers, and shift registers. IEEE Journal of Quantum Electronics, 1992, 28, 1539-1553.	1.9	19
187	Femtosecond pulse distortion in GaAs quantum wells and its effect on pump-probe or four-wave-mixing experiments. Physical Review B, 1994, 50, 18240-18249.	3.2	19
188	Thin Dielectric Spacer for the Monolithic Integration of Bulk Germanium or Germanium Quantum Wells With Silicon-on-Insulator Waveguides. IEEE Photonics Journal, 2011, 3, 739-747.	2.0	19
189	Surface-Normal Ge/SiGe Asymmetric Fabryâ€"Perot Optical Modulators Fabricated on Silicon Substrates. Journal of Lightwave Technology, 2013, 31, 3995-4003.	4.6	19
190	Relationship between the superprism effect in one-dimensional photonic crystals and spatial dispersion in nonperiodic thin-film stacks. Optics Letters, 2005, 30, 2475.	3.3	18
191	Dual-diode quantum-well modulator for C-band wavelength conversion and broadcasting. Optics Express, 2004, 12, 310.	3.4	17
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