

Larry A Coldren

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

105
papers

2,289
citations

22
h-index

45
g-index

128
ext. papers

2,835
ext. citations

3.6
avg, IF

4.97
L-index

#	Paper	IF	Citations
105	Gallium Arsenide Photonic Integrated Circuit Platform for Tunable Laser Applications. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2022 , 28, 1-9	3.8	2
104	Dual Laser Indium Phosphide Photonic Integrated Circuit for Integrated Path Differential Absorption Lidar. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2022 , 28, 1-8	3.8	2
103	A Review of Photonic Systems-on-Chip Enabled by Widely Tunable Lasers. <i>IEEE Journal of Quantum Electronics</i> , 2022 , 1-1	2	0
102	SGDBR tunable laser on gallium arsenide for 1030 nm lidar applications 2021 ,		1
101	Heterogeneously Integrated O-band SG-DBR Lasers for Short Reach Analog Coherent Links 2021 ,		1
100	INTREPID program: technology and architecture for next-generation, energy-efficient, hyper-scale data centers [Invited]. <i>Journal of Optical Communications and Networking</i> , 2021 , 13, 347	4.1	2
99	. <i>Journal of Lightwave Technology</i> , 2021 , 39, 520-531	4	20
98	Photonic Integrated Circuits for Precision Spectroscopy 2020 ,		3
97	High-Power Indium Phosphide Photonic Integrated Circuits. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2019 , 25, 1-10	3.8	14
96	. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2019 , 25, 1-7	3.8	22
95	Wideband and Continuously Tunable Microwave Photonic Phase Shifter Based on an Active InP/InGaAsP Microring Resonator 2019 ,		2
94	Integrated Micro-Photonics for Remote Earth Science Sensing (Impress) Lidar 2019 ,		1
93	Evolution of Chip-Scale Heterodyne Optical Phase-Locked Loops Toward Watt Level Power Consumption. <i>Journal of Lightwave Technology</i> , 2018 , 36, 258-264	4	3
92	Advanced InP Photonic Integrated Circuits for Communication and Sensing. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2018 , 24, 1-12	3.8	39
91	Indium Phosphide Photonic Integrated Circuits for Free Space Optical Links. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2018 , 24,	3.8	12
90	High-Power Integrated Indium Phosphide Transmitter for Free Space Optical Communications 2018		4
89	Widely Tunable Integrated Laser Transmitter for Free Space Optical Communications 2018 ,		1

88	Indium Phosphide Photonic Integrated Circuit Transmitter with Integrated Linewidth Narrowing for Laser Communications and Sensing 2018 ,		3
87	Indium Phosphide Photonic Integrated Circuits: Technology and Applications 2018 ,		10
86	Integrated Indium Phosphide Transmitter for Free Space Optical Link 2018 ,		3
85	An integrated parity-time symmetric wavelength-tunable single-mode microring laser. <i>Nature Communications</i> , 2017 , 8, 15389	17.4	63
84	Compact Low-Power Consumption Single-Mode Coupled Cavity Lasers. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2017 , 23, 1-9	3.8	3
83	Optical synthesis using Kerr frequency combs 2017 ,		1
82	Towards chip-scale optical frequency synthesis based on optical heterodyne phase-locked loop. <i>Optics Express</i> , 2017 , 25, 681-695	3.3	30
81	A Chip-Scale Heterodyne Optical Phase-Locked Loop with Low-Power Consumption 2017 ,		4
80	Efficient and Accurate Modeling of Multiwavelength Propagation in SOAs: A Generalized Coupled-Mode Approach. <i>Journal of Lightwave Technology</i> , 2016 , 34, 2188-2197	4	2
79	A fully reconfigurable photonic integrated signal processor. <i>Nature Photonics</i> , 2016 , 10, 190-195	33.9	195
78	First Monolithically Integrated Dual-Pumped Phase-Sensitive Amplifier Chip Based on a Saturated Semiconductor Optical Amplifier. <i>IEEE Journal of Quantum Electronics</i> , 2016 , 52, 1-12	2	4
77	A Wavelength Tunable Optical Buffer Based on Self-Pulsation in an Active Microring Resonator. <i>Journal of Lightwave Technology</i> , 2016 , 34, 3466-3472	4	10
76	Polarization degenerate solid-state cavity quantum electrodynamics. <i>Physical Review B</i> , 2015 , 91,	3.3	13
75	A Photonic Temporal Integrator With an Ultra-Long Integration Time Window Based on an InP-InGaAsP Integrated Ring Resonator. <i>Journal of Lightwave Technology</i> , 2014 , 32, 3654-3659	4	17
74	Ultrafast electrical polarization modulation in VCSEL with asymmetric current injection 2014 ,		2
73	An Integrated Heterodyne Optical Phase-locked Loop with Record Offset Locking Frequency 2014 ,		7
72	A 100-GHz All-Digital InP HBT Optical Wavelength Synthesis IC. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2013 , 61, 570-580	4.1	7
71	Monolithic Integration of a High-Speed Widely Tunable Optical Coherent Receiver. <i>IEEE Photonics Technology Letters</i> , 2013 , 25, 1077-1080	2.2	17

70	Large-scale InP photonic integrated circuit packaged with ball grid array for 2D optical beam steering 2013 ,		2
69	Integrated Linewidth Reduction of a Tunable SG-DBR Laser 2013 ,		4
68	Multivalued Stability Map of an Injection-Locked Semiconductor Laser. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2013 , 19, 1501408-1501408	3.8	10
67	Two-Dimensional Optical Beam Steering With InP-Based Photonic Integrated Circuits. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2013 , 19, 6100212-6100212	3.8	48
66	Monolithic Linewidth Narrowing of a Tunable SG-DBR Laser 2013 ,		7
65	A Heterodyne Optical Phase-locked Loop for Multiple Applications 2013 ,		2
64	Spurious-Free Dynamic Range in Photonic Integrated Circuit Filters With Semiconductor Optical Amplifiers. <i>IEEE Journal of Quantum Electronics</i> , 2012 , 48, 269-278	2	7
63	Indium Phosphide Photonic Integrated Circuits for Coherent Optical Links. <i>IEEE Journal of Quantum Electronics</i> , 2012 , 48, 279-291	2	17
62	Monolithically Integrated Gain-Flattened Ring Mode-Locked Laser for Comb-Line Generation. <i>IEEE Photonics Technology Letters</i> , 2012 , 24, 131-133	2.2	19
61	InP photonic integrated circuit with on-chip monitors for optical beam steering 2012 ,		2
60	Highly integrated optical heterodyne phase-locked loop with phase/frequency detection. <i>Optics Express</i> , 2012 , 20, 9736-41	3.3	44
59	40Gbit/s coherent optical receiver using a Costas loop. <i>Optics Express</i> , 2012 , 20, B197-203	3.3	32
58	Single-chip integrated transmitters and receivers. <i>Optics Express</i> , 2012 , 20, B377-85	3.3	5
57	2012 ,		632
56	High Performance InP-Based Photonic ICs A Tutorial. <i>Journal of Lightwave Technology</i> , 2011 , 29, 554-570	4	129
55	Integrated coherent receiver for linear optical phase demodulation. <i>Microwave and Optical Technology Letters</i> , 2011 , 53, 2343-2345	1.2	2
54	InP/InGaAsP Flattened Ring Lasers With Low-Loss Etched Beam Splitters. <i>IEEE Photonics Technology Letters</i> , 2011 , 23, 573-575	2.2	7
53	A Monolithically Integrated ACP-OPLL Receiver for RF/Photonic Links. <i>IEEE Photonics Technology Letters</i> , 2011 , 23, 1475-1477	2.2	15

52	High verticality InP/InGaAsP etching in Cl ₂ /H ₂ /Ar inductively coupled plasma for photonic integrated circuits. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2011 , 29, 011016	1.3	23
51	Realization of silicon nanopillar arrays with controllable sidewall profiles by holography lithography and a novel single-step deep reactive ion etching. <i>Materials Research Society Symposia Proceedings</i> , 2010 , 1258, 1		4
50	Integrated 30GHz passive ring mode-locked laser with gain flattening filter 2010 ,		5
49	Holographic realization of hexagonal two dimensional photonic crystal structures with elliptical geometry. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2010 , 28, 1030-1038	1.3	11
48	Wide-dynamic-range, fast-response CBr ₄ doping system for molecular beam epitaxy. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2010 , 28, C3F10-C3F15	1.3	2
47	Programmable Photonic Lattice Filters in InGaAsP/InP. <i>IEEE Photonics Technology Letters</i> , 2010 , 22, 109-111		26
46	Ultra-compact integrated coherent receiver for high linearity RF photonic links 2010 ,		3
45	Demonstration of a linear ultra-compact integrated coherent receiver 2010 ,		3
44	Photonic Integrated Circuits for microwave photonics 2010 ,		10
43	Efficient, High-Data-Rate, Tapered Oxide-Aperture Vertical-Cavity Surface-Emitting Lasers. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2009 , 15, 704-715	3.8	70
42	40 Gb/s Field-Modulated Wavelength Converters for All-Optical Packet Switching. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2009 , 15, 494-503	3.8	13
41	High-efficiency, high-speed VCSELs for optical interconnects. <i>Applied Physics A: Materials Science and Processing</i> , 2009 , 95, 1033-1037	2.6	12
40	Novel application of quantum well intermixing implant buffer layer to enable high-density photonic integrated circuits in InP 2009 ,		1
39	Highly Polarized Single-Chip ELED Sources Using Oppositely Strained MQW Emitters and Absorbers. <i>IEEE Photonics Technology Letters</i> , 2008 , 20, 1267-1269	2.2	
38	Transmission Line Characterization of Undercut-Ridge Traveling-Wave Electroabsorption Modulators. <i>IEEE Photonics Technology Letters</i> , 2008 , 20, 1302-1304	2.2	
37	1.5mW/Gbps Low Power Optical Interconnect Transmitter Exploiting High-Efficiency VCSEL and CMOS Driver 2008 ,		10
36	Separate Absorption and Modulation Mach-Zehnder Wavelength Converter. <i>Journal of Lightwave Technology</i> , 2008 , 26, 91-98	4	10
35	. <i>Journal of Lightwave Technology</i> , 2008 , 26, 209-216	4	52

34	Widely Tunable Separate Absorption and Modulation Wavelength Converter With Integrated Microwave Termination. <i>Journal of Lightwave Technology</i> , 2008 , 26, 938-944	4	8
33	Periodic Loading and Selective Undercut Etching for High-Impedance Traveling-Wave Electroabsorption Modulators 2008 ,		1
32	SOA Gate Array Recirculating Buffer for Optical Packet Switching 2008 ,		11
31	Analysis of Digital System Performance in EAM-Based Photocurrent Driven Wavelength Converter. <i>IEEE Photonics Technology Letters</i> , 2007 , 19, 215-217	2.2	1
30	A Dynamic Measurement Technique for Third-Order Distortion in Optical Phase Modulators. <i>IEEE Photonics Technology Letters</i> , 2007 , 19, 170-172	2.2	5
29	High Output Saturation and High-Linearity Uni-Traveling-Carrier Waveguide Photodiodes. <i>IEEE Photonics Technology Letters</i> , 2007 , 19, 149-151	2.2	32
28	High-Confinement Strained MQW for Highly Polarized High-Power Broadband Light Source. <i>IEEE Photonics Technology Letters</i> , 2007 , 19, 771-773	2.2	5
27	Highly Linear Coherent Receiver With Feedback. <i>IEEE Photonics Technology Letters</i> , 2007 , 19, 940-942	2.2	32
26	Increased Modal Overlap for Improved Sensitivity in a Monolithic Intracavity Chemical Sensor. <i>IEEE Photonics Technology Letters</i> , 2007 , 19, 1051-1053	2.2	3
25	40-Gb/s Widely Tunable Transceivers. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2007 , 13, 3-14	3.8	20
24	Analysis of Sampled Optical Phase-Lock Loops 2007 ,		3
23	40-Gb/s Widely Tunable Low-Drive-Voltage Electroabsorption-Modulated Transmitters. <i>Journal of Lightwave Technology</i> , 2007 , 25, 239-248	4	24
22	Linear Coherent Receiver based on a Broadband and Sampling Optical Phase-Locked Loop 2007 ,		15
21	n-AlGaAs/p-GaAs/n-GaN heterojunction bipolar transistor wafer-fused at 550±50 °C. <i>Applied Physics Letters</i> , 2003 , 83, 560-562	3.4	5
20	Wafer-fused n-AlGaAs/p-GaAs/n-GaN Heterojunction Bipolar Transistor with uid-GaAs Base-Collector Setback. <i>Materials Research Society Symposia Proceedings</i> , 2003 , 798, 92		3
19	Wafer-fused AlGaAs/GaAs/GaN heterojunction bipolar transistor. <i>Applied Physics Letters</i> , 2003 , 82, 820-822		9
18	The First Wafer-fused AlGaAs-GaAs-GaN Heterojunction Bipolar Transistor. <i>Materials Research Society Symposia Proceedings</i> , 2002 , 743, L12.10.1		
17	Effect Of AlGaN/GaN Strained Layer Superlattice Period On InGaN MQW Laser Diodes. <i>MRS Internet Journal of Nitride Semiconductor Research</i> , 2000 , 5, 14-19		1

16	Channeling as a mechanism for dry etch damage in GaN. <i>Applied Physics Letters</i> , 2000 , 76, 3941-3943	3-4	24
15	Improved Characteristics of InGaN Multi-Quantum-Well Laser Diodes Grown on Laterally Epitaxially Overgrown GaN on Sapphire. <i>MRS Internet Journal of Nitride Semiconductor Research</i> , 2000 , 5, 8-13		
14	Large coherent acoustic-phonon oscillation observed in InGaN/GaN multiple-quantum wells. <i>Applied Physics Letters</i> , 1999 , 75, 1249-1251	3-4	38
13	Effect of AlGaIn/GaN Strained Layer Superlattice Period on InGaIn MQW Laser Diodes. <i>Materials Research Society Symposia Proceedings</i> , 1999 , 595, 1		0
12	Improved Characteristics of InGaN Multi-Quantum-Well Laser Diodes Grown on Laterally Epitaxially Overgrown GaN on Sapphire. <i>Materials Research Society Symposia Proceedings</i> , 1999 , 595, 1		
11	Impurity-induced disordering of AlGaInAs quantum wells by low temperature Zn diffusion. <i>Journal of Electronic Materials</i> , 1996 , 25, 565-569	1-9	5
10	Reduced temperature sensitivity of the wavelength of a diode laser in a stress-engineered hydrostatic package. <i>Applied Physics Letters</i> , 1996 , 69, 455-457	3-4	12
9	45 nm wavelength tuning range of an InP/InGaAsP photonic integrated tunable receiver. <i>Applied Physics Letters</i> , 1996 , 69, 3131-3133	3-4	2
8	Investigation of tilted superlattices for quantum-wire laser applications. <i>Applied Physics Letters</i> , 1991 , 59, 3015-3017	3-4	11
7	High-speed InGaAs/GaAs strained multiple quantum well lasers with low damping. <i>Applied Physics Letters</i> , 1991 , 58, 2326-2328	3-4	60
6	Lasing characteristics of a continuous-wave operated folded-cavity surface-emitting laser. <i>Applied Physics Letters</i> , 1990 , 56, 2267-2269	3-4	9
5	Submilliamp threshold vertical-cavity laser diodes. <i>Applied Physics Letters</i> , 1990 , 57, 1605-1607	3-4	99
4	Folded-cavity transverse junction stripe surface-emitting laser. <i>Applied Physics Letters</i> , 1989 , 55, 1053-1055	3-4	22
3	Angled etching of GaAs/AlGaAs by conventional Cl ₂ reactive ion etching. <i>Applied Physics Letters</i> , 1988 , 53, 2549-2551	3-4	25
2	Application of thin silicon films to closed-tube Si and Zn diffusion in GaAs and Al _x Ga _{1-x} As. <i>Journal of Applied Physics</i> , 1988 , 63, 5541-5547	2-5	8
1	Nonselective etching of GaAs/AlGaAs double heterostructure laser facets by Cl ₂ reactive ion etching in a load-locked system. <i>Applied Physics Letters</i> , 1987 , 51, 719-721	3-4	33