Angel Valle

List of Publications by Year
in descending order

139	1,930	218677	289244
papers	citations	26 h-index	40 g-index

139	139	139	562
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Spatial holeburning effects on the dynamics of vertical cavity surface-emitting laser diodes. IEEE Journal of Quantum Electronics, 1995, 31, 1423-1431.	1.9	170
2	Nonlinear dynamics induced by parallel and orthogonal optical injection in 1550 nm Vertical-Cavity Surface-Emitting Lasers (VCSELs). Optics Express, 2010, 18, 9423.	3.4	105
3	Polarization behavior of birefringent multitransverse mode vertical-cavity surface-emitting lasers. IEEE Photonics Technology Letters, 1997, 9, 557-559.	2.5	72
4	Selection and modulation of high-order transverse modes in vertical-cavity surface-emitting lasers. IEEE Journal of Quantum Electronics, 1998, 34, 1924-1932.	1.9	66
5	Polarization selection in birefringent vertical-cavity surface emitting lasers. Journal of Lightwave Technology, 1996, 14, 2062-2068.	4.6	58
6	Dynamical characterisation of laser diode subject to double optical feedback for chaotic optical communications. IEE Proceedings: Optoelectronics, 2005, 152, 97.	0.8	55
7	Dynamics of transverse mode competition in vertical cavity surface emitting laser diodes. Optics Communications, 1995, 115, 297-302.	2.1	54
8	Measurement of the Intrinsic Parameters of Single-Mode VCSELs. Journal of Lightwave Technology, 2014, 32, 1601-1607.	4.6	53
9	Transverse Mode Switching and Locking in Vertical-Cavity Surface-Emitting Lasers Subject to Orthogonal Optical Injection. IEEE Journal of Quantum Electronics, 2007, 43, 322-333.	1.9	52
10	Polarization Switching in Long-Wavelength VCSELs Subject to Orthogonal Optical Injection. IEEE Journal of Quantum Electronics, 2011, 47, 92-99.	1.9	49
11	Polarization Bistability in 1550 nm Wavelength Single-Mode Vertical-Cavity Surface-Emitting Lasers Subject to Orthogonal Optical Injection. IEEE Journal of Selected Topics in Quantum Electronics, 2008, 14, 895-902.	2.9	48
12	High-frequency microwave signal generation using multi-transverse mode VCSELs subject to two-frequency optical injection. Optics Express, 2012, 20, 13390.	3.4	47
13	Polarization selection and sensitivity of external cavity vertical-cavity surface-emitting laser diodes. IEEE Photonics Technology Letters, 1998, 10, 639-641.	2.5	44
14	Power and wavelength polarization bistability with very wide hysteresis cycles in a 1550nm-VCSEL subject to orthogonal optical injection. Optics Express, 2009, 17, 23637.	3.4	42
15	Polarization- and Transverse-Mode Dynamics in Optically Injected and Gain-Switched Vertical-Cavity Surface-Emitting Lasers. IEEE Journal of Quantum Electronics, 2009, 45, 1473-1481.	1.9	41
16	Experimental study of optical frequency comb generation in gain-switched semiconductor lasers. Optics and Laser Technology, 2018, 108, 542-550.	4.6	40
17	Polarization-resolved characterization of long-wavelength vertical-cavity surface-emitting laser parameters. Journal of the Optical Society of America B: Optical Physics, 2014, 31, 2574.	2.1	38
18	Numerical and Experimental Analysis of Optical Frequency Comb Generation in Gain-Switched Semiconductor Lasers. IEEE Journal of Quantum Electronics, 2019, 55, 1-12.	1.9	38

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19	Nonlinear dynamics of current-modulated vertical-cavity surface-emitting lasers. Optics Communications, 2002, 208, 173-182.	2.1	37
20	Inverse synchronization in semiconductor laser diodes. Physical Review A, 2001, 64, .	2.5	35
21	Nonlinear dynamics of the polarization of multitransverse mode vertical-cavity surface-emitting lasers under current modulation. Physical Review E, 2007, 76, 046206.	2.1	33
22	Irregular Pulsating Polarization Dynamics in Gain-Switched Vertical-Cavity Surface-Emitting Lasers. IEEE Journal of Quantum Electronics, 2008, 44, 136-143.	1.9	33
23	Photonic Generation of Microwave Signals Using a Single-Mode VCSEL Subject to Dual-Beam Orthogonal Optical Injection. IEEE Photonics Journal, 2015, 7, 1-14.	2.0	32
24	Theoretical calculation of relative intensity noise of multimode vertical-cavity surface-emitting lasers. IEEE Journal of Quantum Electronics, 2004, 40, 597-606.	1.9	31
25	Polarization switching and injection locking in vertical-cavity surface-emitting lasers subject to parallel optical injection. Optics Letters, 2016, 41, 2664.	3.3	29
26	Very Wide Hysteresis Cycles in 1550-nm VCSELs Subject to Orthogonal Optical Injection. IEEE Photonics Technology Letters, 2009, 21, 1193-1195.	2.5	27
27	Enhanced optical frequency comb generation by pulsed gain-switching of optically injected semiconductor lasers. Optics Express, 2019, 27, 9155.	3.4	25
28	VCSEL-Based Optical Frequency Combs Expansion Induced by Polarized Optical Injection. IEEE Journal of Selected Topics in Quantum Electronics, 2019, 25, 1-9.	2.9	24
29	Relative intensity noise of multitransverse-mode vertical-cavity surface-emitting lasers. IEEE Photonics Technology Letters, 2001, 13, 272-274.	2.5	22
30	Polarization Dynamics in VCSEL-Based Gain Switching Optical Frequency Combs. Journal of Lightwave Technology, 2018, 36, 1798-1806.	4.6	21
31	All-Optical Inverter Based on Polarization Switching in VCSELs Subject to Single and Dual Optical Injection. IEEE Journal of Selected Topics in Quantum Electronics, 2013, 19, 1700408-1700408.	2.9	20
32	Turn-off transients in current-modulated multitransverse-mode vertical-cavity surface-emitting lasers. Applied Physics Letters, 2001, 79, 3914-3916.	3.3	19
33	Polarization-Resolved Nonlinear Dynamics Induced by Orthogonal Optical Injection in Long-Wavelength VCSELs. IEEE Journal of Selected Topics in Quantum Electronics, 2011, 17, 1228-1235.	2.9	17
34	Diffusion in a continuous medium with space-correlated disorder. Physical Review A, 1991, 43, 948-952.	2.5	16
35	Polarization Bistability Induced by Orthogonal Optical Injection in 1550-nm Multimode VCSELs. IEEE Journal of Selected Topics in Quantum Electronics, 2012, 18, 772-778.	2.9	16
36	A theoretical analysis of optical clock extraction using a self-pulsating laser diode. IEEE Journal of Quantum Electronics, 1999, 35, 221-227.	1.9	15

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37	Analytical calculation of transverse-mode characteristics in vertical-cavity surface-emitting lasers. Journal of the Optical Society of America B: Optical Physics, 2002, 19, 1549.	2.1	15
38	Polarization and Transverse Mode Behaviour of VCSELs under Optical Injection. Optical and Quantum Electronics, 2006, 38, 445-465.	3.3	15
39	Polarization dynamics induced by parallel optical injection in a single-mode VCSEL. Optics Letters, 2017, 42, 2130.	3.3	15
40	Dynamic Characteristics of an All-Optical Inverter Based on Polarization Switching in Long-Wavelength VCSELs. IEEE Journal of Quantum Electronics, 2012, 48, 588-595.	1.9	14
41	Nonlinear Dynamics Induced by Optical Injection in Optical Frequency Combs Generated by Gain-Switching of Laser Diodes. IEEE Photonics Journal, 2020, 12, 1-14.	2.0	14
42	Polarization dynamics in a multi-transverse-mode vertical-cavity surface-emitting laser subject to optical feedback. Physical Review A, 2008, 77, .	2.5	13
43	Stabilization of Photonic Microwave Generation in Vertical-Cavity Surface-Emitting Lasers With Optical Injection and Feedback. Journal of Lightwave Technology, 2018, 36, 4347-4353.	4.6	13
44	Analytical calculation of timing jitter in single-mode semiconductor lasers under fast periodic modulation. Optics Letters, 1992, 17, 1523.	3.3	12
45	Effects of spatial hole burning on polarization dynamics in edge-emitting and vertical-cavity surface-emitting laser diodes. Semiconductor Science and Technology, 1996, 11, 587-596.	2.0	12
46	Random polarization switching in gain-switched VCSELs for quantum random number generation. Optics Express, 2022, 30, 10513.	3.4	12
47	Measurement of Temperature-Dependent Polarization Parameters in Long-Wavelength VCSELs. IEEE Journal of Selected Topics in Quantum Electronics, 2015, 21, 636-642.	2.9	11
48	Injection Locking and Polarization Switching Bistability in a 1550 nm VCSEL Subject to Parallel Optical Injection. IEEE Journal of Selected Topics in Quantum Electronics, 2017, 23, 1-10.	2.9	11
49	Experimental Study of Transverse Mode Selection in VCSELs Induced by Parallel Polarized Optical Injection. IEEE Journal of Quantum Electronics, 2010, 46, 467-473.	1.9	10
50	Wavelength-induced polarization bistability in 1550 nm VCSELs subject to orthogonal optical injection. Journal of the Optical Society of America B: Optical Physics, 2010, 27, 2542.	2.1	10
51	Intensity Noise Characteristics of Multimode VCSELs. Journal of Lightwave Technology, 2011, 29, 1039-1045.	4.6	10
52	Photonic generation of high-frequency microwave signals utilizing a multi-transverse-mode vertical-cavity surface-emitting laser subject to two-frequency orthogonaloptical injection. Journal of the Optical Society of America B: Optical Physics, 2012, 29, 3259.	2.1	10
53	Polarization Switching Regions of Optically Injected Long-Wavelength VCSELs. IEEE Journal of Quantum Electronics, 2014, 50, 921-928.	1.9	10
54	Timing jitter reduction in gain-switched VCSELs induced by external optical injection. Optical and Quantum Electronics, 2008, 40, 119-129.	3.3	9

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55	Two-frequency injection on a multimode vertical-cavity surface-emitting laser. Optics Express, 2011, 19, 22437.	3.4	9
56	Investigation of elliptically polarized injection locked states in VCSELs subject to orthogonal optical injection. Optics Express, 2014, 22, 4880.	3.4	9
57	Analysis of the polarization of single-mode vertical-cavity surface-emitting lasers subject to parallel optical injection. Journal of the Optical Society of America B: Optical Physics, 2017, 34, 447.	2.1	9
58	Transverse Mode Selection in Vertical-Cavity Surface-Emitting Lasers With Optical Injected Signal. IEEE Journal of Quantum Electronics, 2010, 46, 105-111.	1.9	8
59	Enhancement of Chaotic Signal Bandwidth in VCSELs Induced by Polarized Optical Injection. IEEE Journal of Quantum Electronics, 2015, 51, 1-7.	1.9	8
60	Transient statistics for a good-cavity laser with swept losses. Physical Review A, 1992, 45, 5243-5250.	2.5	7
61	Delay-time identification in chaotic optical systems with two delays. , 2006, , .		7
62	Analysis of the polarization dynamics in a multitransverse-mode vertical-cavity surface-emitting laser with isotropic optical feedback. Physical Review A, 2008, 78, .	2.5	7
63	Correlation properties and time-resolved dynamics of linear polarizations emitted by single-mode vertical-cavity surface-emitting lasers subject to orthogonal optical injection. Journal of the Optical Society of America B: Optical Physics, 2011, 28, 2765.	2.1	7
64	Polarization dynamics of a multimode vertical-cavity surface-emitting laser subject to orthogonal optical injection. Journal of the Optical Society of America B: Optical Physics, 2012, 29, 867.	2.1	7
65	Enhancement of Chaos Bandwidth in VCSELs Induced by Simultaneous Orthogonal Optical Injection and Optical Feedback. IEEE Journal of Quantum Electronics, 2016, 52, 1-9.	1.9	7
66	Simple method for estimating the memory diagram in single mode semiconductor lasers. IEE Proceedings: Optoelectronics, 1994, 141, 109-113.	0.8	6
67	Transverse mode competition effects on the dynamics of gain-switched vertical-cavity surface-emitting lasers. Applied Physics Letters, 2008, 93, 131103.	3.3	6
68	Attractor hopping between polarization dynamical states in a vertical-cavity surface-emitting laser subject to parallel optical injection. Physical Review E, 2018, 97, 032201.	2.1	6
69	Relaxation from a marginal state in optical bistability. Anomalous fluctuations and first-passage time statistics. Optics Communications, 1990, 79, 156-164.	2.1	5
70	Polarization instabilities in a multi-transverse-mode vertical-cavity surface-emitting laser with polarized optical feedback. Optics Communications, 2010, 283, 1424-1433.	2.1	5
71	Polarization dynamics induced by orthogonal optical injection close to the lasing mode of a single-transverse-mode VCSEL. Journal of the Optical Society of America B: Optical Physics, 2014, 31, 2901.	2.1	5
72	Polarization Effects on Photonic Microwave Generation in VCSELs Under Optical Injection. IEEE Photonics Technology Letters, 2018, 30, 1266-1269.	2.5	5

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73	High-frequency beam steering induced by switching of high-order transverse modes in vertical cavity surface emitting lasers. Applied Physics Letters, 1998, 73, 1607-1609.	3.3	4
74	Polarization dynamics of birefringent index-guided vertical-cavity surface-emitting lasers. , 1998, , .		4
75	Mode partition noise in multi-transverse mode vertical-cavity surface-emitting lasers. , 1999, , .		4
76	Diffusive turn-off transients in current modulated multitransverse mode VCSELs. , 2002, 4649, 50.		4
77	Phase diffusion in gain-switched semiconductor lasers for quantum random number generation. Optics Express, 2021, 29, 39473.	3.4	4
78	Diffusion in a random multiplying medium: Exact bounds and simulations. Physical Review A, 1991, 43, 2070-2073.	2.5	3
79	Extraction of nonlinear dynamics for laser diodes with feedback in chaotic regime. , 2004, , .		3
80	Current modulation of multi-transverse mode vertical-cavity surface-emitting lasers. , 0, , .		3
81	Experimental stability maps of a 1550nm-VCSEL subject to polarized optical injection. , 2010, , .		3
82	Polarization and modal dynamics of multimode vertical-cavity surface-emitting lasers subject to optical feedback and current modulation. Optics Communications, 2015, 350, 178-188.	2.1	3
83	Transient statistics for two-mode gas ring lasers. Physical Review A, 1993, 48, 2426-2432.	2.5	2
84	Statistical properties of pulses: Application to modulated gas lasers. Physical Review A, 1993, 47, 4176-4184.	2.5	2
85	<title>Theoretical calculation of turn-on delay time statistics of lasers under PRWM</title>. , 1997, , .		2
86	Nonlinear dynamics of current-modulated multitransverse-mode vertical-cavity surface-emitting lasers. , 2002, 4646, 215.		2
87	Bit error rate performance of vertical-cavity surface-emitting lasers modulated at high speed. , 2004, , .		2
88	Analysis of Bit-Error Rate of Vertical-Cavity Surface-Emitting Lasers Modulated at High Speed. IEEE Journal of Quantum Electronics, 2006, 42, 435-446.	1.9	2
89	Bias level dependence of turn-off oscillations in vertical-cavity surface-emitting lasers. Journal of the Optical Society of America B: Optical Physics, 2006, 23, 2148.	2.1	2
90	Nonlinear dynamics reconstruction with neural networks of chaotic time-delay communication systems. AIP Conference Proceedings, 2007, , .	0.4	2

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91	Polarization bistability in long-wavelength multitransverse-mode VCSELs induced by orthogonal optical injection. Proceedings of SPIE, 2010, , .	0.8	2
92	Transverse Mode Selection and Bistability in Vertical-Cavity Surface-Emitting Lasers Induced by Parallel Polarized Optical Injection. IEEE Journal of Quantum Electronics, 2011, 47, 723-730.	1.9	2
93	1/ f noise in the intensity fluctuations of vertical-cavity surface-emitting lasers subject to parallel optical injection. Physical Review E, 2018, 97, 042105.	2.1	2
94	VCSEL-Based Optical Frequency Combs: Study of its Polarization Dynamics under Gain Switching and Polarization Selective Optical Injection Locking. , 2018, , .		2
95	Statistics of the Optical Phase of a Gain-Switched Semiconductor Laser for Fast Quantum Randomness Generation. Photonics, 2021, 8, 388.	2.0	2
96	Microwave Photonic Signal Generation in an Optically Injected Discrete Mode Semiconductor Laser. Photonics, 2022, 9, 171.	2.0	2
97	<title>Polarization and transverse-mode selection in birefringent vertical-cavity surface-emitting lasers</title>. , 1997, , .		1
98	Experimental study of relative intensity noise of multimode vertical-cavity surface-emitting lasers. , 2010, , .		1
99	Transverse mode selection and injection locking in 1550-nm multimode VCSELs induced by optical injection. Proceedings of SPIE, 2011, , .	0.8	1
100	Spontaneous emission rate and phase diffusion in gain-switched laser diodes. Optics and Laser Technology, 2022, 150, 107992.	4.6	1
101	<title>Polarization selection in external-cavity birefringent vertical-cavity surface-emitting lasers</title>. , 1998, 3286, 182.		0
102	High-frequency beam steering induced by transverse mode switching in VCSELs: optical gain effects. , 1999, , .		0
103	Theoretical analysis of synchronization of chaotic self-pulsating semiconductor lasers. , 2002, , .		0
104	Synchronisation regimes in chaotic optical communication systems. IEE Proceedings: Optoelectronics, 2003, 150, 191-198.	0.8	0
105	Estimation of time delay for laser diodes with feedback in chaotic regime. , 2003, , .		0
106	Analytical theory for the relative intensity noise of multitransverse mode vertical-cavity surface-emitting lasers: influence of spatial effects. , 0, , .		0
107	Nonlinear polarization dynamics of current-modulated vertical-cavity surface-emitting lasers. , 2003, 4986, 273.		0
108	Analytical calculation of the relative intensity noise of multitransverse-mode vertical-cavity surface-emitting lasers. , 2003, , .		0

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109	Polarization and transverse mode dynamics of vertical-cavity surface-emitting lasers under optical injection. , 0, , .		0
110	Transverse mode selection and dynamic behavior of vertical-cavity surface-emitting lasers subject to optical injection. , 2006, , .		0
111	Mapping of transverse mode locking and switching in VCSELs under orthogonal optical injection. , 2007, , .		0
112	Experimental study of transverse mode dynamics in vertical-cavity surface-emitting lasers under current modulation. Proceedings of SPIE, 2008, , .	0.8	0
113	Polarization bistability in 1.5 micron wavelength single-mode vertical-cavity surface-emitting lasers induced by orthogonal optical injection. Proceedings of SPIE, 2008, , .	0.8	0
114	Chaotic polarization dynamics and chaos synchronization in VCSELs. , 2009, , .		0
115	Nonlinear polarization dynamics induced by orthogonal optical injection in 1550 nm-Vertical-Cavity Surface-Emitting Lasers. , 2009, , .		0
116	Different forms of Polarization Bistability with very wide hysteresis cycles in a 1550nm-VCSEL subject to orthogonal optical injection. , 2009, , .		0
117	Polarization dynamics in vertical-cavity surface-emitting lasers subject to optical injection or current modulation. , 2009, , .		0
118	Modal dynamics above the threshold of higher-order transverse modes in a vertical-cavity surface-emitting laser with isotropic optical feedback. Journal of the Optical Society of America B: Optical Physics, 2010, 27, 2304.	2.1	0
119	Polarization-resolved nonlinear dynamics induced by orthogonal optical injection in 1550 nm-vertical-cavity surface-emitting lasers. , 2010, , .		0
120	Polarization-resolved nonlinear dynamics in long-wavelength single-mode VCSELs subject to orthogonal optical injection. Proceedings of SPIE, 2011, , .	0.8	0
121	All-optical inverter based on polarization switching in long-wavelength VCSELs. , 2011, , .		0
122	High-frequency microwave signal generation using multi-transverse mode VCSELs subject to dual-beam optical injection. , 2012, , .		0
123	Optical spectral analysis of the nonlinear dynamics in long-wavelength single-mode VCSELs subject to orthogonal optical injection. , 2012, , .		0
124	Deterministic and stochastic dynamics of linear polarizations emitted by single-mode VCSELs subject to orthogonal optical injection. Proceedings of SPIE, 2012, , .	0.8	0
125	Polarization switching of transverse modes in VCSELs subject to two-frequency orthogonal optical injection. Proceedings of SPIE, 2012, , .	0.8	0
126	High-frequency signal generation using 1550 nm VCSEL subject to two-frequency optical injection. , 2013, , .		0

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127	Structure of the Polarization Switching Regions in 1550nm VCSELs Subject to Orthogonal Optical Injection. , 2014, , .		0
128	Characterization of the working parameters of a long-wavelength VCSEL. , 2014, , .		0
129	Dynamics of long-wavelength VCSELs subject to dual-beam optical injection. , 2014, , .		0
130	Experimental investigation of elliptically polarized injection-locked VCSELs. Proceedings of SPIE, 2014, , .	0.8	0
131	Microwave Signal Generation Using a 1550 nm VCSEL Subject to Dual-Beam Orthogonal Optical Injection. , 2015, , .		0
132	Free space ranging based on a chaotic long-wavelength VCSEL with optical feedback. , 2015, , .		0
133	Effect of temperature on polarization switching in long-wavelength VCSELs. Proceedings of SPIE, 2015, , .	0.8	0
134	Simultaneous injection locking and polarization switching in vcsels subject to parallel optical injection. , 2017, , .		0
135	VCSEL-based optical frequency combs under parallel, orthogonal and combined optical injection locking: Study of dual-polarization dynamics. , 2017, , .		0
136	Polarization bistability in 1550 nm wavelength single-mode vertical-cavity surface-emitting lasers subject to orthogonal optical injection. , 2008, , .		0
137	Theoretical study of polarization dynamics in VCSEL-based optical frequency combs. , 2018, , .		0
138	Experimental and numerical analysis of optical frequency comb generation in gain-switched semiconductor lasers subject to optical injection. , 2020, , .		0
139	Analysis of bit error rate of an optical clock extraction system based on self pulsating laser diodes. Journal of Modern Optics, 1999, 46, 2187-2202.	1.3	0