

Peter M Smowton

List of Publications by Year in descending order

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docs citations

99
times ranked

1944
citing authors

#	ARTICLE	IF	CITATIONS
1	Multi-wavelength 128 Gbit s ¹ PAM4 optical transmission enabled by a 100 GHz quantum dot mode-locked optical frequency comb. Journal Physics D: Applied Physics, 2022, 55, 144001.	1.3	8
2	The role of different types of dopants in 1.3 μ m InAs/GaAs quantum-dot lasers. Journal Physics D: Applied Physics, 2022, 55, 215105.	1.3	6
3	Optical gain and absorption of 1.55 μ m InAs quantum dash lasers on silicon substrate. Applied Physics Letters, 2021, 118, .	1.5	5
4	Modeling the effects of p-modulation doping in InAs quantum dot devices. , 2021, , .		1
5	All-MBE grown InAs/GaAs quantum dot lasers with thin Ge buffer layer on Si substrates. Journal Physics D: Applied Physics, 2021, 54, 035103.	1.3	23
6	Quick Fabrication VCSELs for Characterisation of Epitaxial Material. Applied Sciences (Switzerland), 2021, 11, 9369.	1.3	1
7	Sub-mA Threshold Current Vertical Cavity Surface Emitting Lasers with a Simple Fabrication Process. , 2021, , .		2
8	The limits to peak modal gain in p-modulation doped indium arsenide quantum dot laser diodes. , 2021, , .		0
9	Inversion Boundary Annihilation in GaAs Monolithically Grown on On-axis Silicon (001). Advanced Optical Materials, 2020, 8, 2000970.	3.6	22
10	Monolithic InP Quantum Dot Mode-Locked Lasers Emitting at 730 nm. IEEE Photonics Technology Letters, 2020, 32, 1073-1076.	1.3	7
11	Colloidal quantum dot hybrids: an emerging class of materials for ambient lighting. Journal of Materials Chemistry C, 2020, 8, 10676-10695.	2.7	46
12	Electrically pumped continuous-wave O-band quantum-dot superluminescent diode on silicon. Optics Letters, 2020, 45, 5468.	1.7	4
13	Temperature Dependent Behavior of the Optical Gain and Electroabsorption Modulation Properties of an InAs/GaAs Quantum Dot Epistucture. , 2019, , .		1
14	Degradation of III-V Quantum Dot Lasers Grown Directly on Silicon Substrates. IEEE Journal of Selected Topics in Quantum Electronics, 2019, 25, 1-6.	1.9	10
15	Monolithic Growth of InAs Quantum Dots Lasers on (001) Silicon Emitting at 1.55 μ m. , 2019, , .		0
16	InP Quantum Dot Mode-Locked Lasers and Materials Studies. , 2019, , .		0
17	12.5-GHz InP Quantum Dot Monolithically Mode-Locked Lasers Emitting at 740 nm. , 2019, , .		0
18	Increasing Maximum Gain in InAs Quantum Dot Lasers on GaAs and Si. , 2018, , .		0

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19	Low-noise 1.3- μm InAs/GaAs quantum dot laser monolithically grown on silicon. <i>Photonics Research</i> , 2018, 6, 1062.	3.4	35
20	Deep-etched III-V lasers grown directly on silicon substrates. , 2016, , .		0
21	Analysing radiative and non-radiative recombination in InAs QDs on Si for integrated laser applications. <i>Proceedings of SPIE</i> , 2016, , .	0.8	0
22	In situ annealing enhancement of the optical properties and laser device performance of InAs quantum dots grown on Si substrates. <i>Optics Express</i> , 2016, 24, 6196.	1.7	26
23	Electrically pumped continuous-wave III-V quantum dot lasers on silicon. <i>Nature Photonics</i> , 2016, 10, 307-311.	15.6	665
24	A two-stage surface treatment for the long-term stability of hydrophilic SU-8. <i>Surface and Interface Analysis</i> , 2015, 47, 1174-1179.	0.8	7
25	Improving the Optical Bandwidth of Passively Mode-Locked InAs Quantum Dot Lasers. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2015, 21, 674-680.	1.9	2
26	Manufacturing-tolerant compact red-emitting laser diode designs for next generation applications. <i>IET Optoelectronics</i> , 2015, 9, 75-81.	1.8	1
27	InAsP quantum dot lasers grown by MOVPE. <i>Optics Express</i> , 2015, 23, 27282.	1.7	16
28	Continuous-wave emission of III-V quantum dot lasers grown directly on Si substrates. , 2015, , .		0
29	Exploring the wavelength range of InP/AlGaInP QDs and application to dual-state lasing. <i>Semiconductor Science and Technology</i> , 2015, 30, 044002.	1.0	10
30	Reducing Thermal Carrier Spreading in InP Quantum Dot Lasers. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2015, 21, 668-673.	1.9	10
31	Radiative recombination rate measurement by the optically pumped variable stripe length method. <i>Optics Express</i> , 2015, 23, 3308.	1.7	2
32	Effects of temperature and difference-wavelength on mode stability in Dual- λ QD lasers. <i>Proceedings of SPIE</i> , 2015, , .	0.8	0
33	Improved laser performance in NIR InP Dot Based Structures with Strained Layers. , 2014, , .		0
34	InAs/GaAs Quantum-Dot Superluminescent Light-Emitting Diode Monolithically Grown on a Si Substrate. <i>ACS Photonics</i> , 2014, 1, 638-642.	3.2	66
35	III-V semiconductor devices integrated with silicon. <i>Semiconductor Science and Technology</i> , 2013, 28, 090301.	1.0	17
36	Comparison of catastrophic optical damage in InP/(Al)GaInP quantum dot and quantum well diode lasers. , 2013, , .		0

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37	Absorption, Gain, and Threshold in InP/AlGaInP Quantum Dot Laser Diodes. IEEE Journal of Quantum Electronics, 2013, 49, 389-394.	1.0	7
38	The effect of strained confinement layers in InP self-assembled quantum dot material. Semiconductor Science and Technology, 2012, 27, 094008.	1.0	13
39	Strained confinement layers in InP quantum dot lasers. , 2012, , .		2
40	700nm InP quantum dot lasers with strained confinement layers. , 2012, , .		0
41	Catastrophic optical bulk damage in InP 7xx emitting quantum dot diode lasers. Semiconductor Science and Technology, 2012, 27, 102001.	1.0	3
42	Optical Gain in GaInNAs and GaInNAsSb Quantum Wells. IEEE Journal of Quantum Electronics, 2011, 47, 870-877.	1.0	20
43	Temperature-Dependent Threshold Current in InP Quantum-Dot Lasers. IEEE Journal of Selected Topics in Quantum Electronics, 2011, 17, 1343-1348.	1.9	15
44	Random population of InAs-GaAs quantum dots. Proceedings of SPIE, 2010, , .	0.8	0
45	Polarization Properties of Columnar Quantum Dots: Effects of Aspect Ratio and Compositional Contrast. IEEE Journal of Quantum Electronics, 2010, 46, 197-204.	1.0	19
46	Random Population of Quantum Dots in InAs-GaAs Laser Structures. IEEE Journal of Quantum Electronics, 2010, 46, 525-532.	1.0	33
47	Time resolved studies of catastrophic optical mirror damage in red-emitting laser diodes. Journal of Applied Physics, 2010, 107, 123116.	1.1	14
48	Ultrafast gain dynamics in InP quantum-dot optical amplifiers. Applied Physics Letters, 2010, 97, 211103.	1.5	13
49	Quantum Dot Lasers. , 2010, , 9-1-9-35.		2
50	Self-pulsing 1050 nm quantum dot edge emitting laser diodes. Applied Physics Letters, 2009, 95, 101111.	1.5	6
51	Self pulsing quantum dot lasers for optical coherence tomography. , 2009, , .		0
52	Introduction to the Issue on Solid-State Lighting. IEEE Journal of Selected Topics in Quantum Electronics, 2009, 15, 1025-1027.	1.9	2
53	Low-Temperature Nonthermal Population of InAs-GaAs Quantum Dots. IEEE Journal of Quantum Electronics, 2009, 45, 380-387.	1.0	20
54	Higher power density limit at COMD in GaInP/AlGaInP in quantum dots than in wells. , 2009, , .		2

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55	Dry Etching of Anisotropic Microstructures for Distributed Bragg Reflectors in AlGaInP/GaAs Laser Structures. IEEE Journal of Selected Topics in Quantum Electronics, 2008, 14, 1098-1103.	1.9	5
56	Origin of Temperature-Dependent Threshold Current in p-Doped and Undoped In(Ga)As Quantum Dot Lasers. IEEE Journal of Selected Topics in Quantum Electronics, 2008, 14, 1162-1170.	1.9	19
57	Spontaneous Radiative Efficiency and Gain Characteristics of Strained-Layer InGaAs/GaAs Quantum-Well Lasers. IEEE Journal of Quantum Electronics, 2008, 44, 732-739.	1.0	16
58	Towards polarization insensitive semiconductor optical amplifiers using InAs/GaAs columnar quantum dots. , 2008, , .		1
59	Maximising the gain: optimising the carrier distribution in InGaAs quantum dot lasers. , 2007, , .		2
60	Optical Gain and Spontaneous Emission in GaAsSb/InGaAs Type-II Quantum-Well Laser Structures. IEEE Journal of Quantum Electronics, 2007, 43, 607-613.	1.0	4
61	Nonradiative Recombination in Multiple Layer In(Ga)As Quantum-Dot Lasers. IEEE Journal of Quantum Electronics, 2007, 43, 698-703.	1.0	7
62	Polarization dependence study of electroluminescence and absorption from InAs/GaAs columnar quantum dots. Applied Physics Letters, 2007, 91, .	1.5	39
63	Temperature-Dependent Gain and Threshold in P-Doped Quantum Dot Lasers. IEEE Journal of Selected Topics in Quantum Electronics, 2007, 13, 1261-1266.	1.9	33
64	Time Evolution of the Screening of Piezoelectric Fields in InGaN Quantum Wells. IEEE Journal of Quantum Electronics, 2006, 42, 1202-1208.	1.0	47
65	Recombination mechanisms in 1.3- μm InAs quantum-dot lasers. IEEE Photonics Technology Letters, 2006, 18, 965-967.	1.3	16
66	Improved performance of 1.3- μm In(Ga)As quantum-dot lasers by modifying the temperature profile of the GaAs spacer layers. IEEE Photonics Technology Letters, 2006, 18, 1557-1559.	1.3	8
67	The effect of p doping in InAs quantum dot lasers. Applied Physics Letters, 2006, 88, 111113.	1.5	52
68	Characterisation of modulation doped quantum dot lasers. , 2006, , .		0
69	Temperature dependence of threshold current in p-doped quantum dot lasers. Applied Physics Letters, 2006, 89, 151118.	1.5	44
70	1.3 μm emitting, self assembled quantum dot lasers. , 2006, , .		0
71	Localised recombination in quantum dot structures. , 2006, , .		0
72	Time evolution of piezoelectric field screening in InGaN quantum wells. , 2005, , .		1

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73	Growth and characterization of multiple layer quantum dot lasers. , 2005, , .		2
74	Dynamics of the wetting-Layer-quantum-dot interaction in InGaAs self-assembled systems. IEEE Journal of Quantum Electronics, 2005, 41, 344-350.	1.0	12
75	The role of high growth temperature GaAs spacer layers in 1.3- μm In(Ga)As quantum-dot lasers. IEEE Photonics Technology Letters, 2005, 17, 2011-2013.	1.3	20
76	Carrier distribution, spontaneous emission, and gain in self-assembled quantum dot lasers. , 2004, 5365, 86.		3
77	Laser dynamics in self-pulsating quantum dot systems. Journal of Applied Physics, 2004, 95, 1036-1041.	1.1	13
78	Mode structure of quantum dot semiconductor lasers. , 2004, , .		0
79	Mode formation in broad area quantum dot lasers at 1060 nm. Optics Communications, 2004, 235, 387-393.	1.0	8
80	Energy distributions of carriers in quantum dot laser structures. , 2004, , .		0
81	Saturable absorber characteristics in quantum dot lasers. , 2004, , .		1
82	Many-body effects in quantum dot lasers. , 2003, , .		0
83	Coupled multi quantum well 650-nm emitting GaInP laser diodes. , 2003, 4995, 152.		2
84	Comparative study of InGaAs quantum dot lasers with different degrees of dot layer confinement. Applied Physics Letters, 2002, 81, 1-3.	1.5	72
85	Filamentation and linewidth enhancement factor in InGaAs quantum dot lasers. Applied Physics Letters, 2002, 81, 3251-3253.	1.5	65
86	Gain characteristics of GaInP quantum well laser structures. , 2002, 4651, 1.		1
87	Experimental investigation of the effect of wetting-layer states on the gainâ€‘current characteristic of quantum-dot lasers. Applied Physics Letters, 2002, 81, 4904-4906.	1.5	205
88	Temperature dependence of gain in multiple-layer quantum dots. , 2001, , .		0
89	Comparison of experimental and theoretical optical properties of GaInP lasers. , 2001, , .		0
90	Optical Spectroscopic Study of Carrier Processes in Self-Assembled In(Ga)As-Ga(Al)As Quantum Dot Lasers. Physica Status Solidi (B): Basic Research, 2001, 224, 123-127.	0.7	2

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91	Dependence of threshold current density on the stacked quantum dot layers. , 2001, , .		0
92	Thermodynamic balance in quantum dot lasers. Semiconductor Science and Technology, 2001, 16, 140-143.	1.0	47
93	Optical mode loss and gain of multiple-layer quantum-dot lasers. Applied Physics Letters, 2001, 78, 2629-2631.	1.5	50
94	Temperature dependence of the lasing wavelength of InGaAs quantum dot lasers. Journal of Applied Physics, 2001, 90, 4859-4861.	1.1	20
95	Modal gain and internal optical mode loss of a quantum dot laser. Applied Physics Letters, 2000, 77, 163-165.	1.5	37
96	Impact of structural nonuniformity on the operation of AlGaInP lasers at high compressive strain. , 1998, , .		0
97	Al _x Ga _{1-x} In _{1-y} As/AlGaAs quantum well lasers at 670 to 750 nm. , 1997, 3001, 153.		0
98	New approach to blue-shifting asymmetric quantum wells. , 1997, , .		1