Benjamin S. Williams

List of Publications by Year
in descending order

61 papers	6,693 citations	109321 35 h-index	123424 61 g-index
62 all docs	62 docs citations	62 times ranked	3183 citing authors

#	Article	IF	Citations
1	Multi-mode lasing in terahertz metasurface quantum-cascade VECSELs. Applied Physics Letters, 2021, 119, 111103.	3.3	3
2	THz time-domain characterization of amplifying quantum-cascade metasurface. Applied Physics Letters, 2021, 119, .	3.3	6
3	Thin THz QCL active regions for improved continuous-wave operating temperature. AIP Advances, 2021, 11, .	1.3	10
4	Terahertz quantum-cascade patch-antenna VECSEL with low power dissipation. Applied Physics Letters, 2020, 116, .	3.3	13
5	Broadband continuous single-mode tuning of a short-cavity quantum-cascade VECSEL. Nature Photonics, 2019, 13, 855-859.	31.4	66
6	Terahertz quantum cascade VECSEL with watt-level output power. Applied Physics Letters, 2018, 113, .	3.3	46
7	Robust Density Matrix Simulation of Terahertz Quantum Cascade Lasers. IEEE Transactions on Terahertz Science and Technology, 2018, 8, 492-501.	3.1	10
8	Terahertz Metasurface Quantum-Cascade VECSELs: Theory and Performance. IEEE Journal of Selected Topics in Quantum Electronics, 2017, 23, 1-12.	2.9	21
9	Seeding layer assisted selective-area growth of As-rich InAsP nanowires on InP substrates. Nanoscale, 2017, 9, 8220-8228.	5.6	16
10	High performance terahertz metasurface quantum-cascade VECSEL with an intra-cryostat cavity. Applied Physics Letters, 2017, 111, 101101.	3.3	12
11	Focusing metasurface quantum-cascade laser with a near diffraction-limited beam. Optics Express, 2016, 24, 24117.	3.4	32
12	Design strategy for terahertz quantum dot cascade lasers. Optics Express, 2016, 24, 25471.	3.4	2
13	Feasibility of graphene CRLH metamaterial waveguides and leaky wave antennas. Journal of Applied Physics, 2016, 120, .	2.5	20
14	Metasurface external cavity laser. Applied Physics Letters, 2015, 107, .	3.3	70
15	Quantum cascade lasers: 20 years of challenges. Optics Express, 2015, 23, 5167.	3.4	412
16	Density matrix model for polarons in a terahertz quantum dot cascade laser. Physical Review B, 2014, 90, .	3.2	21
17	Active terahertz quantum-cascade composite right/left-handed metamaterial. Applied Physics Letters, 2013, 102, 021103.	3.3	18
18	Leaky and bound modes in terahertz metasurfaces made of transmission-line metamaterials. Journal of Applied Physics, 2013, 113, .	2.5	18

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19	Transmission-line metamaterial antennas for THz quantum-cascade lasers. , 2012, , .		1
20	Terahertz composite right-left handed transmission-line metamaterial waveguides. Applied Physics Letters, 2012, 100, .	3.3	18
21	Radiation Model for Terahertz Transmission-Line Metamaterial Quantum-Cascade Lasers. IEEE Transactions on Terahertz Science and Technology, 2012, 2, 323-332.	3.1	34
22	Surface Plasmon-Enhanced Nanopillar Photodetectors. Nano Letters, 2011, 11, 5279-5283.	9.1	108
23	Terahertz quantum-cascade laser with active leaky-wave antenna. Applied Physics Letters, 2011, 99, .	3.3	31
24	Strain-compensated GaInAs/AlInAs/InP quantum cascade laser materials. Journal of Crystal Growth, 2010, 312, 1157-1164.	1.5	20
25	Zero-Index Terahertz Quantum-Cascade Metamaterial Lasers. IEEE Journal of Quantum Electronics, 2010, 46, 1091-1098.	1.9	37
26	Thresholdless coherent light scattering from subband polaritons in a strongly coupled microcavity. Physical Review B, 2010, 82, .	3.2	2
27	Terahertz heterodyne spectrometer using a quantum cascade laser. Applied Physics Letters, 2010, 97, 161105.	3.3	30
28	Magnetic-field-assisted terahertz quantum cascade laser operating up to 225ÂK. Nature Photonics, 2009, 3, 41-45.	31.4	137
29	Tuning a terahertz wire laser. Nature Photonics, 2009, 3, 732-737.	31.4	125
30	Nanoscale heat transfer in quantum cascade lasers. Physica E: Low-Dimensional Systems and Nanostructures, 2008, 40, 1780-1784.	2.7	25
31	Surface-emitting distributed feedback terahertz quantum-cascade lasers in metal-metal waveguides. Optics Express, 2007, 15, 113.	3.4	173
32	Terahertz quantum-cascade lasers. Nature Photonics, 2007, 1, 517-525.	31.4	1,413
33	Beam patterns of terahertz quantum cascade lasers with subwavelength cavity dimensions. Applied Physics Letters, 2006, 88, 151105.	3.3	104
34	High-power terahertz quantum-cascade lasers. Electronics Letters, 2006, 42, 89.	1.0	244
35	Real-time imaging using a 4.3-THz quantum cascade laser and a 320 /spl times/ 240 microbolometer focal-plane array. IEEE Photonics Technology Letters, 2006, 18, 1415-1417.	2.5	226
36	Phase locking and spectral linewidth of a two-mode terahertz quantum cascade laser. Applied Physics Letters, 2006, 89, 031115.	3.3	49

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37	Terahertz quantum cascade lasers with double-resonant-phonon depopulation. Applied Physics Letters, 2006, 88, 261101.	3.3	61
38	1.9THz quantum-cascade lasers with one-well injector. Applied Physics Letters, 2006, 88, 121123.	3.3	94
39	Real-time terahertz imaging over a standoff distance (>25meters). Applied Physics Letters, 2006, 89, 141125.	3.3	221
40	Antenna Model for Wire Lasers. Physical Review Letters, 2006, 96, 173904.	7.8	71
41	Resonant-phonon-assisted THz quantum-cascade lasers with metalâ€“metal waveguides. Semiconductor Science and Technology, 2005, 20, S228-S236.	2.0	78
42	Measurement of subband electronic temperatures and population inversion in THz quantum-cascade lasers. Applied Physics Letters, 2005, 86, 111115.	3.3	123
43	Terahertz heterodyne receiver based on a quantum cascade laser and a superconducting bolometer. Applied Physics Letters, 2005, 86, 244104.	3.3	167
44	Electromagnetic modeling of terahertz quantum cascade laser waveguides and resonators. Journal of Applied Physics, 2005, 97, 053106.	2.5	191
45	Operation of terahertz quantum-cascade lasers at 164 K in pulsed mode and at 117 K in continuous-wave mode. Optics Express, 2005, 13, 3331.	3.4	402
46	Frequency and phase-lock control of a 3?THz quantum cascade laser. Optics Letters, 2005, 30, 1837.	3.3	100
47	Distributed-feedback terahertz quantum-cascade lasers with laterally corrugated metal waveguides. Optics Letters, 2005, 30, 2909.	3.3	67
48	Effect of doping concentration on the performance of terahertz quantum-cascade lasers. Applied Physics Letters, 2005, 87, 141102.	3.3	75
49	Terahertz quantum cascade lasers based on resonant phonon scattering for depopulation. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2004, 362, 233-249.	3.4	10
50	Resonant-phonon terahertz quantum-cascade laser operating at 2.1â€…THz (â‰ƒ141â€…[micro sign]m). Electronics Letters, 2004, 40, 431.	1.0	67
51	Continuous-wave operation of terahertz quantum-cascade lasers above liquid-nitrogen temperature. Applied Physics Letters, 2004, 84, 2494-2496.	3.3	175
52	Importance of electron-impurity scattering for electron transport in terahertz quantum-cascade lasers. Applied Physics Letters, 2004, 84, 645-647.	3.3	111
53	Analysis of transport properties of tetrahertz quantum cascade lasers. Applied Physics Letters, 2003, 83, 207-209.	3.3	99
54	Terahertz quantum-cascade laser operating up to 137 K. Applied Physics Letters, 2003, 83, 5142-5144.	3.3	128

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55	Terahertz quantum-cascade laser at Î»â‰ˆ100â€‰Î¼m using metal waveguide for mode confinement. Applied Physics Letters, 2003, 83, 2124-2126.	3.3	306
56	3.4-THz quantum cascade laser based on longitudinal-optical-phonon scattering for depopulation. Applied Physics Letters, 2003, 82, 1015-1017.	3.3	384
57	3.4â€…THz quantum cascade laser operating above liquid nitrogen temperature. Electronics Letters, 2003, 39, 915.	1.0	15
58	Optimized energy separation for phonon scattering in three-level terahertz intersubband lasers. Journal of Applied Physics, 2001, 90, 5504-5511.	2.5	24
59	Magnetotunneling spectroscopy of resonant anticrossing in terahertz intersubband emitters. Applied Physics Letters, 2001, 79, 4444-4446.	3.3	13
60	Narrow-linewidth terahertz intersubband emission from three-level systems. Applied Physics Letters, 1999, 75, 2927-2929.	3.3	67
61	Mixing of a passive scalar in magnetically forced two-dimensional turbulence. Physics of Fluids, 1997, 9, 2061-2080.	4.0	70