

# Benjamin S. Williams

## List of Publications by Year in descending order

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61  
papers

6,693  
citations

109321

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123424

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62  
docs citations

62  
times ranked

3183  
citing authors

#	ARTICLE	IF	CITATIONS
1	Terahertz quantum-cascade lasers. <i>Nature Photonics</i> , 2007, 1, 517-525.	31.4	1,413
2	Quantum cascade lasers: 20 years of challenges. <i>Optics Express</i> , 2015, 23, 5167.	3.4	412
3	Operation of terahertz quantum-cascade lasers at 164 K in pulsed mode and at 117 K in continuous-wave mode. <i>Optics Express</i> , 2005, 13, 3331.	3.4	402
4	3.4-THz quantum cascade laser based on longitudinal-optical-phonon scattering for depopulation. <i>Applied Physics Letters</i> , 2003, 82, 1015-1017.	3.3	384
5	Terahertz quantum-cascade laser at $\lambda = 100 \mu\text{m}$ using metal waveguide for mode confinement. <i>Applied Physics Letters</i> , 2003, 83, 2124-2126.	3.3	306
6	High-power terahertz quantum-cascade lasers. <i>Electronics Letters</i> , 2006, 42, 89.	1.0	244
7	Real-time imaging using a 4.3-THz quantum cascade laser and a $320 \times 240$ microbolometer focal-plane array. <i>IEEE Photonics Technology Letters</i> , 2006, 18, 1415-1417.	2.5	226
8	Real-time terahertz imaging over a standoff distance ( $>25$ meters). <i>Applied Physics Letters</i> , 2006, 89, 1411-1415.	3.3	221
9	Electromagnetic modeling of terahertz quantum cascade laser waveguides and resonators. <i>Journal of Applied Physics</i> , 2005, 97, 053106.	2.5	191
10	Continuous-wave operation of terahertz quantum-cascade lasers above liquid-nitrogen temperature. <i>Applied Physics Letters</i> , 2004, 84, 2494-2496.	3.3	175
11	Surface-emitting distributed feedback terahertz quantum-cascade lasers in metal-metal waveguides. <i>Optics Express</i> , 2007, 15, 113.	3.4	173
12	Terahertz heterodyne receiver based on a quantum cascade laser and a superconducting bolometer. <i>Applied Physics Letters</i> , 2005, 86, 244104.	3.3	167
13	Magnetic-field-assisted terahertz quantum cascade laser operating up to 225 K. <i>Nature Photonics</i> , 2009, 3, 41-45.	31.4	137
14	Terahertz quantum-cascade laser operating up to 137 K. <i>Applied Physics Letters</i> , 2003, 83, 5142-5144.	3.3	128
15	Tuning a terahertz wire laser. <i>Nature Photonics</i> , 2009, 3, 732-737.	31.4	125
16	Measurement of subband electronic temperatures and population inversion in THz quantum-cascade lasers. <i>Applied Physics Letters</i> , 2005, 86, 111115.	3.3	123
17	Importance of electron-impurity scattering for electron transport in terahertz quantum-cascade lasers. <i>Applied Physics Letters</i> , 2004, 84, 645-647.	3.3	111
18	Surface Plasmon-Enhanced Nanopillar Photodetectors. <i>Nano Letters</i> , 2011, 11, 5279-5283.	9.1	108

#	ARTICLE	IF	CITATIONS
19	Beam patterns of terahertz quantum cascade lasers with subwavelength cavity dimensions. Applied Physics Letters, 2006, 88, 151105.	3.3	104
20	Frequency and phase-lock control of a 3THz quantum cascade laser. Optics Letters, 2005, 30, 1837.	3.3	100
21	Analysis of transport properties of tetrahertz quantum cascade lasers. Applied Physics Letters, 2003, 83, 207-209.	3.3	99
22	1.9THz quantum-cascade lasers with one-well injector. Applied Physics Letters, 2006, 88, 121123.	3.3	94
23	Resonant-phonon-assisted THz quantum-cascade lasers with metal-metal waveguides. Semiconductor Science and Technology, 2005, 20, S228-S236.	2.0	78
24	Effect of doping concentration on the performance of terahertz quantum-cascade lasers. Applied Physics Letters, 2005, 87, 141102.	3.3	75
25	Antenna Model for Wire Lasers. Physical Review Letters, 2006, 96, 173904.	7.8	71
26	Mixing of a passive scalar in magnetically forced two-dimensional turbulence. Physics of Fluids, 1997, 9, 2061-2080.	4.0	70
27	Metasurface external cavity laser. Applied Physics Letters, 2015, 107, .	3.3	70
28	Narrow-linewidth terahertz intersubband emission from three-level systems. Applied Physics Letters, 1999, 75, 2927-2929.	3.3	67
29	Resonant-phonon terahertz quantum-cascade laser operating at 2.1THz ( $\lambda = 141\mu\text{m}$ ). Electronics Letters, 2004, 40, 431.	1.0	67
30	Distributed-feedback terahertz quantum-cascade lasers with laterally corrugated metal waveguides. Optics Letters, 2005, 30, 2909.	3.3	67
31	Broadband continuous single-mode tuning of a short-cavity quantum-cascade VECSEL. Nature Photonics, 2019, 13, 855-859.	31.4	66
32	Terahertz quantum cascade lasers with double-resonant-phonon depopulation. Applied Physics Letters, 2006, 88, 261101.	3.3	61
33	Phase locking and spectral linewidth of a two-mode terahertz quantum cascade laser. Applied Physics Letters, 2006, 89, 031115.	3.3	49
34	Terahertz quantum cascade VECSEL with watt-level output power. Applied Physics Letters, 2018, 113, .	3.3	46
35	Zero-Index Terahertz Quantum-Cascade Metamaterial Lasers. IEEE Journal of Quantum Electronics, 2010, 46, 1091-1098.	1.9	37
36	Radiation Model for Terahertz Transmission-Line Metamaterial Quantum-Cascade Lasers. IEEE Transactions on Terahertz Science and Technology, 2012, 2, 323-332.	3.1	34

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37	Focusing metasurface quantum-cascade laser with a near diffraction-limited beam. Optics Express, 2016, 24, 24117.	3.4	32
38	Terahertz quantum-cascade laser with active leaky-wave antenna. Applied Physics Letters, 2011, 99, .	3.3	31
39	Terahertz heterodyne spectrometer using a quantum cascade laser. Applied Physics Letters, 2010, 97, 161105.	3.3	30
40	Nanoscale heat transfer in quantum cascade lasers. Physica E: Low-Dimensional Systems and Nanostructures, 2008, 40, 1780-1784.	2.7	25
41	Optimized energy separation for phonon scattering in three-level terahertz intersubband lasers. Journal of Applied Physics, 2001, 90, 5504-5511.	2.5	24
42	Density matrix model for polarons in a terahertz quantum dot cascade laser. Physical Review B, 2014, 90, .	3.2	21
43	Terahertz Metasurface Quantum-Cascade VECSELS: Theory and Performance. IEEE Journal of Selected Topics in Quantum Electronics, 2017, 23, 1-12.	2.9	21
44	Strain-compensated GaInAs/AlInAs/InP quantum cascade laser materials. Journal of Crystal Growth, 2010, 312, 1157-1164.	1.5	20
45	Feasibility of graphene CRLH metamaterial waveguides and leaky wave antennas. Journal of Applied Physics, 2016, 120, .	2.5	20
46	Terahertz composite right-left handed transmission-line metamaterial waveguides. Applied Physics Letters, 2012, 100, .	3.3	18
47	Active terahertz quantum-cascade composite right/left-handed metamaterial. Applied Physics Letters, 2013, 102, 021103.	3.3	18
48	Leaky and bound modes in terahertz metasurfaces made of transmission-line metamaterials. Journal of Applied Physics, 2013, 113, .	2.5	18
49	Seeding layer assisted selective-area growth of As-rich InAsP nanowires on InP substrates. Nanoscale, 2017, 9, 8220-8228.	5.6	16
50	3.4 THz quantum cascade laser operating above liquid nitrogen temperature. Electronics Letters, 2003, 39, 915.	1.0	15
51	Magnetotunneling spectroscopy of resonant anticrossing in terahertz intersubband emitters. Applied Physics Letters, 2001, 79, 4444-4446.	3.3	13
52	Terahertz quantum-cascade patch-antenna VECSEL with low power dissipation. Applied Physics Letters, 2020, 116, .	3.3	13
53	High performance terahertz metasurface quantum-cascade VECSEL with an intra-cryostat cavity. Applied Physics Letters, 2017, 111, 101101.	3.3	12
54	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

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55	Robust Density Matrix Simulation of Terahertz Quantum Cascade Lasers. IEEE Transactions on Terahertz Science and Technology, 2018, 8, 492-501.	3.1	10
56	Thin THz QCL active regions for improved continuous-wave operating temperature. AIP Advances, 2021, 11, .	1.3	10
57	THz time-domain characterization of amplifying quantum-cascade metasurface. Applied Physics Letters, 2021, 119, .	3.3	6
58	Multi-mode lasing in terahertz metasurface quantum-cascade VECSELS. Applied Physics Letters, 2021, 119, 111103.	3.3	3
59	Thresholdless coherent light scattering from subband polaritons in a strongly coupled microcavity. Physical Review B, 2010, 82, .	3.2	2
60	Design strategy for terahertz quantum dot cascade lasers. Optics Express, 2016, 24, 25471.	3.4	2
61	Transmission-line metamaterial antennas for THz quantum-cascade lasers. , 2012, , .		1