Qing Hu

List of Publications by Year
in descending order

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75 papers	4,152 citations	185998 28 h-index	118652 62 g-index
75 all docs	75 docs citations	75 times ranked	2008 citing authors

#	Article	IF	Citations
1	Terahertz laser frequency combs. Nature Photonics, 2014, 8, 462-467.	15.6	409
2	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.	1.7	402
3	3.4-THz quantum cascade laser based on longitudinal-optical-phonon scattering for depopulation. Applied Physics Letters, 2003, 82, 1015-1017.	1.5	384
4	186 K operation of terahertz quantum-cascade lasers based on a diagonal design. Applied Physics Letters, 2009, 94, .	1.5	300
5	High-power portable terahertz laser systems. Nature Photonics, 2021, 15, 16-20.	15.6	228
6	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.	1.3	226
7	A 1.8-THz quantum cascade laser operating significantly above the temperature of â„Ï‰/kB. Nature Physics, 2011, 7, 166-171.	6.5	216
8	Electromagnetic modeling of terahertz quantum cascade laser waveguides and resonators. Journal of Applied Physics, 2005, 97, 053106.	1.1	191
9	Importance of coherence for electron transport in terahertz quantum cascade lasers. Journal of Applied Physics, 2005, 98, 104505.	1.1	168
10	Intrawell and interwell intersubband transitions in multiple quantum wells for farâ€infrared sources. Journal of Applied Physics, 1996, 79, 9305-9320.	1.1	145
11	Tuning a terahertz wire laser. Nature Photonics, 2009, 3, 732-737.	15.6	125
12	Computational multiheterodyne spectroscopy. Science Advances, 2016, 2, e1601227.	4.7	80
13	Manipulating Terahertz Plasmonic Vortex Based on Geometric and Dynamic Phase. Advanced Optical Materials, 2019, 7, 1801328.	3.6	77
14	Two-well terahertz quantum-cascade laser with direct intrawell-phonon depopulation. Applied Physics Letters, 2009, 95, .	1.5	73
15	MEMS-based tunable terahertz wire-laser over 330â€‰GHz. Optics Letters, 2011, 36, 692.	1.7	65
16	Farâ€infrared photonâ€induced current in a quantum point contact. Applied Physics Letters, 1993, 63, 1522-1524.	1.5	64
17	Ground state terahertz quantum cascade lasers. Applied Physics Letters, 2012, 101, .	1.5	60
18	THz Near-Field Imaging of Extreme Subwavelength Metal Structures. ACS Photonics, 2020, 7, 687-694.	3.2	58

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19	Photonâ€assisted quantum transport in quantum point contacts. Applied Physics Letters, 1993, 62, 837-839.	1.5	54
20	Phase-locked laser arrays through global antenna mutual coupling. Nature Photonics, 2016, 10, 541-546.	15.6	54
21	A terahertz pulse emitter monolithically integrated with a quantum cascade laser. Applied Physics Letters, 2011, 98, .	1.5	45
22	Room temperature negative differential resistance in terahertz quantum cascade laser structures. Applied Physics Letters, 2016, 109, .	1.5	45
23	Phase-locked arrays of surface-emitting terahertz quantum-cascade lasers. Applied Physics Letters, 2010, 96, .	1.5	44
24	Carrier leakage into the continuum in diagonal GaAs/Al0.15GaAs terahertz quantum cascade lasers. Applied Physics Letters, 2015, 107, .	1.5	43
25	Investigating temperature degradation in THz quantum cascade lasers by examination of temperature dependence of output power. Applied Physics Letters, 2015, 106, .	1.5	39
26	Terahertz Spectroscopy of Gas Mixtures with Dual Quantum Cascade Laser Frequency Combs. ACS Photonics, 2020, 7, 1082-1087.	3.2	33
27	Two-well terahertz quantum cascade lasers with suppressed carrier leakage. Applied Physics Letters, 2017, 111, .	1.5	32
28	Tradeoffs between oscillator strength and lifetime in terahertz quantum cascade lasers. Applied Physics Letters, 2016, 109, .	1.5	31
29	Split-well direct-phonon terahertz quantum cascade lasers. Applied Physics Letters, 2019, 114, .	1.5	29
30	Broadband all-electronically tunable MEMS terahertz quantum cascade lasers. Optics Letters, 2014, 39, 3480.	1.7	28
31	Micromachined roomâ€temperature microbolometers for millimeterâ€wave detection. Applied Physics Letters, 1996, 68, 2020-2022.	1.5	26
32	Direct Nanoscale Imaging of Evolving Electric Field Domains in Quantum Structures. Scientific Reports, 2014, 4, 7183.	1.6	26
33	Optimized energy separation for phonon scattering in three-level terahertz intersubband lasers. Journal of Applied Physics, 2001, 90, 5504-5511.	1.1	24
34	Non-equilibrium longitudinal and transverse optical phonons in terahertz quantum cascade lasers. Applied Physics Letters, 2012, 100, .	1.5	24
35	Tall-barrier terahertz quantum cascade lasers. Applied Physics Letters, 2013, 103, .	1.5	23
36	Unidirectional photonic wire laser. Nature Photonics, 2017, 11, 555-559.	15.6	23

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37	Gain measurements of scattering-assisted terahertz quantum cascade lasers. Applied Physics Letters, 2012, 100, .	1.5	21
38	Phase-locked photonic wire lasers by Ï€ coupling. Nature Photonics, 2019, 13, 47-53.	15.6	21
39	Magnetotunneling spectroscopy in wide In0.53Ga0.47As/In0.52Al0.48As double quantum wells. Applied Physics Letters, 1993, 63, 2225-2227.	1.5	19
40	Antenna coupled photonic wire lasers. Optics Express, 2015, 23, 17091.	1.7	18
41	A 3Ã—3 millimeter-wave micromachined imaging array with superconductorâ€“insulatorâ€“superconductor mixers. Applied Physics Letters, 1999, 75, 868-870.	1.5	17
42	Pseudorandom dynamics of frequency combs in free-running quantum cascade lasers. Optical Engineering, 2017, 57, 1.	0.5	17
43	Efficient Detection of 3 THz Radiation from Quantum Cascade Laser Using Silicon CMOS Detectors. Journal of Infrared, Millimeter, and Terahertz Waves, 2017, 38, 1183-1188.	1.2	15
44	Terahertz quantum cascade lasers based on resonant phonon scattering for depopulation. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2004, 362, 233-249.	1.6	10
45	Low-temperature-grown GaAs coplanar waveguide single-photon/two photon absorption autocorrelator. Journal of Applied Physics, 2004, 95, 2230-2237.	1.1	10
46	Amplifiers of free-space terahertz radiation. Optica, 2017, 4, 713.	4.8	10
47	Grating coupling for intersubband emission. Applied Physics Letters, 1997, 70, 2511-2513.	1.5	9
48	A Tunable Unidirectional Source for GUSTOâ€™s Local Oscillator at 4.74 THz. IEEE Transactions on Terahertz Science and Technology, 2022, 12, 144-150.	2.0	8
49	Fabrication of highâ€quality superconductorâ€insulatorâ€superconductor junctions on thin SiN membranes. Applied Physics Letters, 1993, 63, 1002-1004.	1.5	7
50	A lowâ€noise micromachined millimeterâ€wave heterodyne mixer using Nb superconducting tunnel junctions. Applied Physics Letters, 1996, 68, 1862-1864.	1.5	7
51	3.9 THz spatial filter based on a back-to-back Si-lens system. Optics Express, 2020, 28, 32693.	1.7	7
52	Focused ion beam fabrication of single grain Bi2Sr2Ca1Cu2Oxsubmicron bridges. Applied Physics Letters, 1991, 59, 727-729.	1.5	6
53	Investigation of possible microcavity effect on lasing threshold of nonradiative-scattering-dominated semiconductor lasers. Applied Physics Letters, 2012, 100, .	1.5	6
54	Microelectromechanical control of the state of quantum cascade laser frequency combs. Applied Physics Letters, 2019, 115, 021105.	1.5	6

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55	Development of a 3Ã—3 micromachined millimeter wave SIS imaging array. IEEE Transactions on Applied Superconductivity, 1997, 7, 3593-3596.	1.1	5
56	High-power terahertz quantum cascade lasers. , 2006, , .		5
57	Introduction to the Special Issue on THz Materials, Devices, and Applications. IEEE Journal of Selected Topics in Quantum Electronics, 2008, 14, 257-259.	1.9	5
58	Linewidth of the laser optical frequency comb with arbitrary temporal profile. Applied Physics Letters, 2018, 113, 131104.	1.5	5
59	Lateral Heterogeneous Integration of Quantum Cascade Lasers. ACS Photonics, 2018, 5, 2742-2747.	3.2	4
60	Numerical study of a GaAs-based heterojunction bipolar transistor with stepwise alloy-graded base. Journal of Applied Physics, 2002, 91, 5400-5410.	1.1	3
61	Real-time imaging using a 4.3-THz quantum cascade laser and a 240Ã—320 element focal-plane array. , 2006, , .		3
62	Quantum-Cascade Lasers with One-Well Injector Operating at 1.59 THz (λ = 188.5 μm). , 2007, , .		3
63	Response to â€œComment on â€˜Energy level schemes for far-infrared quantum well lasersâ€™â€‰â€•[Appl. Phys. Lett. 74, 2555 (1999)]. Applied Physics Letters, 1999, 74, 3065-3065.	1.5	2
64	Real-Time, Transmission-Mode, Terahertz Imaging Over a 25-meter Distance. , 2007, , .		2
65	Thresholdless coherent light scattering from subband polaritons in a strongly coupled microcavity. Physical Review B, 2010, 82, .	1.1	2
66	Frequency Tuning of Third-Order Distributed Feedback Terahertz Quantum Cascade Lasers by SiO2 and PMMA. IEEE Transactions on Terahertz Science and Technology, 2016, 6, 851-857.	2.0	2
67	Terahertz Quantum Cascade Lasers. , 2007, , .		1
68	Single-Mode Surface-Emitting Terahertz Quantum-Cascade Lasers Operating up to ~ 150 K. , 2007, , .		1
69	Terahertz multiheterodyne spectroscopy with quantum cascade lasers â€” A feasibility study. , 2017, , .		1
70	Generation of Terahertz Emission Based on Intersubband Transitions. International Journal of High Speed Electronics and Systems, 2002, 12, 995-1024.	0.3	0
71	Resonant-phonon terahertz quantum-cascade lasers using metal-metal waveguides. , 0, , .		0
72	High-temperature and high-power terahertz quantum cascade lasers. , 2006, , .		0

#	Article	IF	Citations
73	Long wavelength terahertz quantum-cascade lasers with one-well injector. , 2006, , .		0
74	High-Power Metal-Metal Waveguide Terahertz Quantum-Cascade Laser with a Hyperhemispherical Lens. , 2007, , .		0
75	Single-mode surface-emitting terahertz quantum-cascade lasers operating up to ~ 150 K. , 2007, , .		0