

Paul Dean

List of Publications by Year in descending order

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133
papers

2,284
citations

218677

26
h-index

243625

44
g-index

136
all docs

136
docs citations

136
times ranked

1306
citing authors

#	ARTICLE	IF	CITATIONS
1	Terahertz quantum cascade lasers with >1 W output powers. Electronics Letters, 2014, 50, 309-311.	1.0	235
2	Terahertz imaging through self-mixing in a quantum cascade laser. Optics Letters, 2011, 36, 2587.	3.3	149
3	Terahertz imaging using quantum cascade lasers—a review of systems and applications. Journal Physics D: Applied Physics, 2014, 47, 374008.	2.8	141
4	Swept-frequency feedback interferometry using terahertz frequency QCLs: a method for imaging and materials analysis. Optics Express, 2013, 21, 22194.	3.4	91
5	Multi-Watt high-power THz frequency quantum cascade lasers. Electronics Letters, 2017, 53, 799-800.	1.0	82
6	Apertureless near-field terahertz imaging using the self-mixing effect in a quantum cascade laser. Applied Physics Letters, 2016, 108, .	3.3	67
7	Demonstration of a self-mixing displacement sensor based on terahertz quantum cascade lasers. Applied Physics Letters, 2011, 99, .	3.3	63
8	Coherent terahertz photonics. Optics Express, 2013, 21, 22988.	3.4	61
9	Absorption-sensitive diffuse reflection imaging of concealed powders using a terahertz quantum cascade laser. Optics Express, 2008, 16, 5997.	3.4	56
10	Sensing and imaging using laser feedback interferometry with quantum cascade lasers. Applied Physics Reviews, 2019, 6, 021320.	11.3	52
11	Increasing the sensitivity of terahertz split ring resonator metamaterials for dielectric sensing by localized substrate etching. Optics Express, 2019, 27, 23164.	3.4	52
12	Self-Mixing Interferometry With Terahertz Quantum Cascade Lasers. IEEE Sensors Journal, 2013, 13, 37-43.	4.7	46
13	Coherent three-dimensional terahertz imaging through self-mixing in a quantum cascade laser. Applied Physics Letters, 2013, 103, .	3.3	45
14	Dual-frequency imaging using an electrically tunable terahertz quantum cascade laser. Optics Express, 2009, 17, 20631.	3.4	42
15	High-contrast coherent terahertz imaging of porcine tissue via swept-frequency feedback interferometry. Biomedical Optics Express, 2014, 5, 3981.	2.9	41
16	Design and Characterization of 1.8–3.2 THz Schottky-Based Harmonic Mixers. IEEE Transactions on Terahertz Science and Technology, 2016, 6, 737-746.	3.1	39
17	Terahertz inverse synthetic aperture radar imaging using self-mixing interferometry with a quantum cascade laser. Optics Letters, 2014, 39, 2629.	3.3	36
18	Three-dimensional terahertz imaging using swept-frequency feedback interferometry with a quantum cascade laser. Optics Letters, 2015, 40, 994.	3.3	35

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19	Electrically tunable terahertz quantum-cascade laser with a heterogeneous active region. Applied Physics Letters, 2009, 95, 181101.	3.3	33
20	Efficient prediction of terahertz quantum cascade laser dynamics from steady-state simulations. Applied Physics Letters, 2015, 106, .	3.3	32
21	Coherent imaging using laser feedback interferometry with pulsed-mode terahertz quantum cascade lasers. Optics Express, 2019, 27, 10221.	3.4	31
22	Gain recovery time in a terahertz quantum cascade laser. Applied Physics Letters, 2016, 108, .	3.3	28
23	Injection locking of a terahertz quantum cascade laser to a telecommunications wavelength frequency comb. Optica, 2017, 4, 1059.	9.3	28
24	Discrete Vernier tuning in terahertz quantum cascade lasers using coupled cavities. Optics Express, 2014, 22, 16595.	3.4	27
25	Laser Feedback Interferometry as a Tool for Analysis of Granular Materials at Terahertz Frequencies: Towards Imaging and Identification of Plastic Explosives. Sensors, 2016, 16, 352.	3.8	27
26	High-speed modulation of a terahertz quantum cascade laser by coherent acoustic phonon pulses. Nature Communications, 2020, 11, 835.	12.8	26
27	Terahertz time domain spectroscopy of phonon-depopulation based quantum cascade lasers. Applied Physics Letters, 2009, 94, 251108.	3.3	24
28	Terahertz ambipolar dual-wavelength quantum cascade laser. Optics Express, 2009, 17, 19926.	3.4	23
29	Measuring the sampling coherence of a terahertz quantum cascade laser. Optics Express, 2012, 20, 16662.	3.4	21
30	Free-space terahertz radiation from a LT-GaAs-on-quartz large-area photoconductive emitter. Optics Express, 2016, 24, 26986.	3.4	21
31	Silver-based surface plasmon waveguide for terahertz quantum cascade lasers. Optics Express, 2018, 26, 3814.	3.4	21
32	Methodology for materials analysis using swept-frequency feedback interferometry with terahertz frequency quantum cascade lasers. Optics Express, 2014, 22, 18633.	3.4	20
33	Simple Electrical Modulation Scheme for Laser Feedback Imaging. IEEE Sensors Journal, 2016, 16, 1937-1942.	4.7	20
34	Measurement of the emission spectrum of a semiconductor laser using laser-feedback interferometry. Scientific Reports, 2017, 7, 7236.	3.3	20
35	Full-field coherence-gated holographic imaging through scattering media using a photorefractive polymer composite device. Applied Physics Letters, 2004, 85, 363-365.	3.3	19
36	Generation of Bessel beams using a terahertz quantum cascade laser. Optics Letters, 2009, 34, 1030.	3.3	19

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37	Observation of optical feedback dynamics in single-mode terahertz quantum cascade lasers: Transient instabilities. <i>Physical Review A</i> , 2021, 103, .	2.5	19
38	Demonstration of the self-mixing effect in interband cascade lasers. <i>Applied Physics Letters</i> , 2013, 103, .	3.3	17
39	Quasi-continuous frequency tunable terahertz quantum cascade lasers with coupled cavity and integrated photonic lattice. <i>Optics Express</i> , 2017, 25, 486.	3.4	17
40	Continuous Frequency Tuning with near Constant Output Power in Coupled Y-Branched Terahertz Quantum Cascade Lasers with Photonic Lattice. <i>ACS Photonics</i> , 2018, 5, 2912-2920.	6.6	17
41	Photoconductive arrays on insulating substrates for high-field terahertz generation. <i>Optics Express</i> , 2020, 28, 17219.	3.4	17
42	Model for a pulsed terahertz quantum cascade laser under optical feedback. <i>Optics Express</i> , 2016, 24, 20554.	3.4	16
43	Ultrafast switch-on dynamics of frequency-tuneable semiconductor lasers. <i>Nature Communications</i> , 2018, 9, 3076.	12.8	16
44	Mechanically robust waveguideâ€”integration and beam shaping of terahertz quantum cascade lasers. <i>Electronics Letters</i> , 2015, 51, 919-921.	1.0	15
45	Multi-spectral terahertz sensing: proposal for a coupled-cavity quantum cascade laser based optical feedback interferometer. <i>Optics Express</i> , 2017, 25, 10153.	3.4	15
46	Laser feedback interferometry in multi-mode terahertz quantum cascade lasers. <i>Optics Express</i> , 2020, 28, 14246.	3.4	15
47	Detection sensitivity of laser feedback interferometry using a terahertz quantum cascade laser. <i>Optics Letters</i> , 2019, 44, 3314.	3.3	15
48	Terahertz quantum cascade lasers with thin resonant-phonon depopulation active regions and surface-plasmon waveguides. <i>Journal of Applied Physics</i> , 2013, 113, 113110.	2.5	14
49	Coherent terahertz microscopy of modal field distributions in micro-resonators. <i>APL Photonics</i> , 2021, 6, .	5.7	14
50	A Simple Interferometer for the Analysis of Terahertz Sources and Detectors. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2008, 14, 443-448.	2.9	13
51	External cavity terahertz quantum cascade laser with a metamaterial/graphene optoelectronic mirror. <i>Applied Physics Letters</i> , 2020, 117, .	3.3	13
52	Dual resonance phononâ€”photonâ€”phonon terahertz quantum-cascade laser: physics of the electron transport and temperature performance optimization. <i>Optics Express</i> , 2020, 28, 38788.	3.4	13
53	Terahertz radar crossâ€”section characterisation using laser feedback interferometry with quantum cascade laser. <i>Electronics Letters</i> , 2015, 51, 1774-1776.	1.0	12
54	Mode Selection and Tuning Mechanisms in Coupled-Cavity Terahertz Quantum Cascade Lasers. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2017, 23, 1-12.	2.9	12

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55	Two-dimensional coherent spectroscopy of a THz quantum cascade laser: observation of multiple harmonics. <i>Optics Express</i> , 2017, 25, 21753.	3.4	12
56	Gas spectroscopy with integrated frequency monitoring through self-mixing in a terahertz quantum-cascade laser. <i>Optics Letters</i> , 2018, 43, 2225.	3.3	12
57	Transient Analysis of THz-QCL Pulses Using NbN and YBCO Superconducting Detectors. <i>IEEE Transactions on Terahertz Science and Technology</i> , 2013, 3, 172-179.	3.1	11
58	Origin of terminal voltage variations due to self-mixing in terahertz frequency quantum cascade lasers. <i>Optics Express</i> , 2016, 24, 21948.	3.4	10
59	Extraction-controlled terahertz frequency quantum cascade lasers with a diagonal LO-phonon extraction and injection stage. <i>Optics Express</i> , 2016, 24, 28583.	3.4	10
60	Generation of continuous wave terahertz frequency radiation from metal-organic chemical vapour deposition grown Fe-doped InGaAs and InGaAsP. <i>Journal of Applied Physics</i> , 2016, 119, 153103.	2.5	10
61	Frequency Tunability and Spectral Control in Terahertz Quantum Cascade Lasers With Phase-Adjusted Finite-Defect-Site Photonic Lattices. <i>IEEE Transactions on Terahertz Science and Technology</i> , 2017, 7, 360-367.	3.1	10
62	Gas spectroscopy through multimode self-mixing in a double-metal terahertz quantum cascade laser. <i>Optics Letters</i> , 2018, 43, 5933.	3.3	10
63	Narrow-band injection seeding of a terahertz frequency quantum cascade laser: Selection and suppression of longitudinal modes. <i>Applied Physics Letters</i> , 2014, 105, 111113.	3.3	9
64	Active phase-nulling of the self-mixing phase in a terahertz frequency quantum cascade laser. <i>Optics Letters</i> , 2015, 40, 950.	3.3	9
65	Frequency Tuning Range Control in Pulsed Terahertz Quantum-Cascade Lasers: Applications in Interferometry. <i>IEEE Journal of Quantum Electronics</i> , 2018, 54, 1-8.	1.9	9
66	Determining Ethanol Content of Liquid Solutions Using Laser Feedback Interferometry with a Terahertz Quantum Cascade Laser. , 2018, 2, 1-4.		9
67	Wideband Electrically Controlled Vernier Frequency Tunable Terahertz Quantum Cascade Laser. <i>ACS Photonics</i> , 2020, 7, 765-773.	6.6	8
68	Depth-resolved holographic imaging through scattering media by use of a photorefractive polymer composite device in the near infrared. <i>Optics Letters</i> , 2005, 30, 1941.	3.3	7
69	Temperature-Dependent High-Speed Dynamics of Terahertz Quantum Cascade Lasers. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2017, 23, 1-9.	2.9	7
70	All-Electronic Phase-Resolved THz Microscopy Using the Self-Mixing Effect in a Semiconductor Laser. <i>ACS Photonics</i> , 2021, 8, 1001-1006.	6.6	7
71	Terahertz photonic integrated circuit for frequency tuning and power modulation. <i>Optics Express</i> , 2020, 28, 4374.	3.4	7
72	Prospects of temperature performance enhancement through higher resonant phonon transition designs in GaAs-based terahertz quantum-cascade lasers. <i>New Journal of Physics</i> , 2022, 24, 033047.	2.9	7

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73	Measurement and analysis of the diffuse reflectance of powdered samples at terahertz frequencies using a quantum cascade laser. <i>Journal of Chemical Physics</i> , 2011, 134, 134304.	3.0	6
74	Resonant-phonon depopulation terahertz quantum cascade lasers and their application in spectroscopic imaging. <i>Semiconductor Science and Technology</i> , 2012, 27, 094004.	2.0	6
75	Terahertz quantum cascade laser under optical feedback: effects of laser self-pulsations on self-mixing signals. <i>Optics Express</i> , 2021, 29, 39885.	3.4	6
76	Terahertz imaging with self-pulsations in quantum cascade lasers under optical feedback. <i>APL Photonics</i> , 2021, 6, 091301.	5.7	6
77	Integrated injection seeded terahertz source and amplifier for time-domain spectroscopy. <i>Optics Letters</i> , 2012, 37, 731.	3.3	5
78	Time-resolved measurement of pulse-to-pulse heating effects in a terahertz quantum cascade laser using an NbN superconducting detector. <i>Applied Physics Letters</i> , 2013, 103, .	3.3	5
79	Optomechanical response with nanometer resolution in the self-mixing signal of a terahertz quantum cascade laser. <i>Optics Letters</i> , 2019, 44, 5663.	3.3	5
80	Diffuse-Reflectance Spectroscopy Using a Frequency-Switchable Terahertz Quantum Cascade Laser. <i>IEEE Transactions on Terahertz Science and Technology</i> , 2016, 6, 341-347.	3.1	4
81	Improving the Out-Coupling of a Metal-Metal Terahertz Frequency Quantum Cascade Laser Through Integration of a Hybrid Mode Section into the Waveguide. <i>Journal of Infrared, Millimeter, and Terahertz Waves</i> , 2016, 37, 426-434.	2.2	3
82	Exact frequency and phase control of a terahertz laser. <i>Optica</i> , 2020, 7, 1143.	9.3	3
83	Monitoring Water Dynamics in Plants using Laser Feedback Interferometry. , 2020, , .		3
84	Effect of ion implantation on quantum well infrared photodetectors. <i>Infrared Physics and Technology</i> , 2007, 50, 106-112.	2.9	2
85	Development of Terahertz Frequency Quantum Cascade Lasers for the Applications as Local Oscillators. <i>NATO Science for Peace and Security Series B: Physics and Biophysics</i> , 2017, , 123-134.	0.3	2
86	Terahertz generation mechanism in nano-grating electrode photomixers on Fe-doped InGaAsP. <i>Optics Express</i> , 2017, 25, 10177.	3.4	2
87	Photoconductive Arrays for High-Field Terahertz Generation. , 2019, , .		2
88	Three-dimensional characterisation of the non-gaussian focused beam from a terahertz quantum cascade laser. , 2007, , .		1
89	Dual-frequency imaging using an electrically tunable terahertz quantum cascade laser. , 2009, , .		1
90	Self-mixing effect in THz quantum cascade lasers: Applications in sensing and imaging. , 2013, , .		1

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91	Observation of time-resolved gain dynamics in a terahertz quantum cascade laser. , 2015, , .		1
92	Pump-probe measurements of gain in a terahertz quantum cascade laser. , 2016, , .		1
93	Terahertz frequency quantum cascade lasers: Optical feedback effects and applications. , 2016, , .		1
94	High-resolution frequency and phase control of a terahertz laser. , 2019, , .		1
95	Quantum Transmission Line Modeling and Experimental Investigation of the Output Characteristics of a Terahertz Quantum Cascade Laser. IEEE Transactions on Terahertz Science and Technology, 2020, 10, 333-342.	3.1	1
96	Broadband Terahertz Gas Spectroscopy Through Multimode Self-Mixing in a Quantum Cascade Laser. NATO Science for Peace and Security Series B: Physics and Biophysics, 2021, , 35-44.	0.3	1
97	Sub-surface damage detection in marble structures using THz time domain and laser feedback interferometric imaging techniques. , 2021, , .		1
98	Increasing the sensitivity of terahertz metamaterials for dielectric sensing by substrate etching. , 2020, , .		1
99	Three-dimensional Characterisation of the Non-Gaussian Focused Beam from a Terahertz Quantum Cascade Laser. , 2007, , .		0
100	Multiple-frequency imaging using a terahertz quantum cascade laser. , 2010, , .		0
101	Terahertz quantum cascade lasers with angled facets for monolithic integration. , 2010, , .		0
102	Gain studies of phonon-depopulation based terahertz quantum cascade lasers using terahertz time domain spectroscopy. , 2010, , .		0
103	Terahertz sensing and imaging using a quantum cascade laser. , 2011, , .		0
104	Terahertz Time Domain Spectroscopy of Phonon-Depopulation Based Quantum Cascade Lasers. AIP Conference Proceedings, 2011, , .	0.4	0
105	Ultra-fast sampling of terahertz pulses from a quantum cascade laser using superconducting antenna-coupled NbN and YBCO detectors. , 2012, , .		0
106	Thermo-optic detection of quantum cascade laser radiation in the range ∼2.2–2.9THz using a ZnTe crystal. , 2012, , .		0
107	Time domain measurements of the sampling coherence of a terahertz quantum cascade laser. , 2012, , .		0
108	Injection seeding dynamics of THz quantum cascade lasers. , 2012, , .		0

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109	Self-mixing signals in terahertz lasers. , 2012, , .		0
110	Terahertz and mid-infrared photoexpansion nanospectroscopy. Proceedings of SPIE, 2013, , .	0.8	0
111	Photothermoelastic response of zincblende crystals to radiation from a THz-frequency quantum cascade laser. , 2013, , .		0
112	Transient analysis of substrate heating effects in a terahertz quantum cascade laser using an ultrafast NbN superconducting detector. , 2013, , .		0
113	Detection of terahertz frequency radiation via the photothermoelastic response of zincblende crystals. Journal of the Optical Society of America B: Optical Physics, 2013, 30, 3151.	2.1	0
114	Spectroscopic analysis of powders through diffuse-reflectance imaging using a frequency-switchable terahertz quantum cascade laser. , 2013, , .		0
115	A QCL model with integrated thermal and stark rollover mechanisms. , 2014, , .		0
116	Narrow bandwidth injection seeding of a THz quantum cascade laser. , 2014, , .		0
117	Terahertz quantum cascade laser bandwidth prediction. , 2015, , .		0
118	Waveguide-integrated terahertz-frequency quantum cascade lasers for detection of trace-gas species. , 2015, , .		0
119	Terahertz quantum cascade lasers — The past, present, and potential future. , 2015, , .		0
120	Metal-metal terahertz quantum cascade laser with hybrid mode section. , 2015, , .		0
121	Generation of continuous wave terahertz radiation from Fe-doped InGaAs and InGaAsP. , 2015, , .		0
122	Terahertz near-field microscopy using the self-mixing effect in a quantum cascade laser. , 2016, , .		0
123	Terahertz emission mechanism and laser excitation position dependence of nano-grating electrode photomixers. , 2016, , .		0
124	Terahertz frequency quantum cascade lasers for use as waveguide-integrated local oscillators. , 2016, , .		0
125	Investigation into free-space terahertz radiation from a LT-GaAs-on-quartz photoconductive emitter. , 2017, , .		0
126	Probing Ultrafast Switch-on Dynamics of Frequency Tuneable Semiconductor Lasers Using Terahertz Time-domain Spectroscopy. , 2019, , .		0

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127	Electromagnetic-field analysis of diagonal-feedhorn antennas for terahertz-frequency quantum-cascade laser integration. , 2019, , .		0
128	Programmable, Transform-Limited Pulses from a Terahertz Quantum Cascade Laser. ACS Photonics, 2020, 7, 2423-2428.	6.6	0
129	Terahertz time domain spectroscopy of phonondepopulation based quantum cascade lasers. , 2010, , .		0
130	Coherent THz imaging using the self-mixing effect in quantum cascade lasers. , 2014, , .		0
131	Selection of Longitudinal Modes in a Terahertz Quantum Cascade Laser via Narrow-band Injection Seeding. , 2015, , .		0
132	Spectral analysis of a gas-phase reaction using self-mixing in a terahertz quantum cascade laser. , 2020, , .		0
133	Development of a Broadband Multidimensional THz Spectrometer. , 2020, , .		0