Mattias Beck

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

246 papers	8,461 citations	46 h-index	83 g-index
416 ext. papers	10,239 ext. citations	5.4 avg, IF	5.88 L-index

#	Paper	IF	Citations
246	Ultra-low threshold lasing through phase front engineering via a metallic circular aperture.. *Nature Communications*, **2022**, 13, 230	17.4	1
245	Absolute frequency referencing in the long wave infrared using a quantum cascade laser frequency comb.. *Optics Express*, **2022**, 30, 12891-12901	3.3	1
244	Breakdown of topological protection by cavity vacuum fields in the integer quantum Hall effect.. *Science*, **2022**, 375, 1030-1034	33.3	3
243	Dissipative Kerr solitons in semiconductor ring lasers. *Nature Photonics*, **2022**, 16, 142-147	33.9	5
242	An ultrastrongly coupled single terahertz meta-atom.. *Nature Communications*, **2022**, 13, 2528	17.4	0
241	Controlling Quantum Cascade Laser Optical Frequency Combs through Microwave Injection. *Laser and Photonics Reviews*, **2021**, 15, 2100242	8.3	3
240	Femtosecond pulses from a mid-infrared quantum cascade laser.. *Nature Photonics*, **2021**, 15, 919-924	33.9	7
239	Ultra-low Threshold Quantum Cascade Laser **2021**,		1
238	Regenerative terahertz quantum detectors. *APL Photonics*, **2021**, 6, 106102	5.2	2
237	THz intersubband electroluminescence from n-type Ge/SiGe quantum cascade structures. *Applied Physics Letters*, **2021**, 118, 101101	3.4	4
236	Controlling and Phase-Locking a THz Quantum Cascade Laser Frequency Comb by Small Optical Frequency Tuning. *Laser and Photonics Reviews*, **2021**, 15, 2000417	8.3	2
235	Coherently-averaged dual comb spectrometer at 7.7 μm with master and follower quantum cascade lasers. *Optics Express*, **2021**, 29, 19126-19139	3.3	3
234	Mid-infrared quantum cascade laser frequency combs with a microstrip-like line waveguide geometry. *Applied Physics Letters*, **2021**, 118, 071101	3.4	8
233	Self-starting harmonic comb emission in THz quantum cascade lasers. *Applied Physics Letters*, **2021**, 118, 131112	3.4	12
232	Polaritonic nonlocality in light–matter interaction. *Nature Photonics*, **2021**, 15, 690-695	33.9	11
231	THz Ultrastrong Coupling in an Engineered Fabry–Perot Cavity. *ACS Photonics*, **2021**, 8, 2692-2698	6.3	1
230	Landau polaritons in highly nonparabolic two-dimensional gases in the ultrastrong coupling regime. *Physical Review B*, **2020**, 101,	3.3	11

229	RF Injection of THz QCL Combs at 80 K Emitting over 700 GHz Spectral Bandwidth. *Photonics*, **2020**, 7, 9	2.2	6
228	Photon-Driven Broadband Emission and Frequency Comb RF Injection Locking in THz Quantum Cascade Lasers. *ACS Photonics*, **2020**, 7, 784-791	6.3	19
227	An antipodal Vivaldi antenna for improved far-field properties and polarization manipulation of broadband terahertz quantum cascade lasers. *Applied Physics Letters*, **2020**, 116, 161105	3.4	1
226	High-resolution and gapless dual comb spectroscopy with current-tuned quantum cascade lasers. *Optics Express*, **2020**, 28, 6197-6208	3.3	28
225	Frequency noise correlation between the offset frequency and the mode spacing in a mid-infrared quantum cascade laser frequency comb. *Optics Express*, **2020**, 28, 8200-8210	3.3	6
224	Mid-infrared frequency comb from a ring quantum cascade laser. *Optica*, **2020**, 7, 162	8.6	32
223	Two-dimensional spectroscopy on a THz quantum cascade structure. *Nanophotonics*, **2020**, 10, 171-180	6.3	5
222	Ridge-width dependence of the dispersion and performance of mid-infrared quantum cascade laser frequency combs **2020**,		1
221	Mid-infrared quantum cascade laser frequency combs based on multi-section waveguides. *Optics Letters*, **2020**, 45, 6462-6465	3	3
220	Mixing Properties of Room Temperature Patch-Antenna Receivers in a Mid-Infrared (□9□m) Heterodyne System. *Laser and Photonics Reviews*, **2020**, 14, 1900207	8.3	5
219	Topological charge of finite-size photonic crystal modes. *Physical Review B*, **2020**, 102,	3.3	3
218	Room temperature surface emission on large-area photonic crystal quantum cascade lasers. *Applied Physics Letters*, **2019**, 114, 031102	3.4	13
217	Retrieval of phase relation and emission profile of quantum cascade laser frequency combs. *Nature Photonics*, **2019**, 13, 562-568	33.9	35
216	Microelectromechanical control of the state of quantum cascade laser frequency combs. *Applied Physics Letters*, **2019**, 115, 021105	3.4	5
215	An electrically pumped phonon-polariton laser. *Science Advances*, **2019**, 5, eaau1632	14.3	21
214	Multi-wavelength distributed feedback quantum cascade lasers for broadband trace gas spectroscopy. *Semiconductor Science and Technology*, **2019**, 34, 083001	1.8	4
213	Thermoelectrically cooled THz quantum cascade laser operating up to 210 K. *Applied Physics Letters* , **2019**, 115, 010601	3.4	104
212	Optimization and Fabrication of Two-Quantum Well THz QCLs Operating above 200 K **2019**,		1

211	Pulses from a mid-infrared quantum cascade laser frequency comb using an external compressor. *Journal of the Optical Society of America B: Optical Physics*, **2019**, 36, 1676	1.7	6
210	Large area photonic crystal quantum cascade laser with 5 W surface-emitting power. *Optics Express*, **2019**, 27, 22708-22716	3.3	13
209	Magneto-transport controlled by Landau polariton states. *Nature Physics*, **2019**, 15, 186-190	16.2	61
208	Two-well quantum cascade laser optimization by non-equilibrium Green's function modelling. *Applied Physics Letters*, **2018**, 112, 021104	3.4	37
207	Coupled-Waveguides for Dispersion Compensation in Semiconductor Lasers. *Laser and Photonics Reviews*, **2018**, 12, 1700323	8.3	10
206	Room-temperature nine-μm-wavelength photodetectors and GHz-frequency heterodyne receivers. *Nature*, **2018**, 556, 85-88	50.4	124
205	Heterogeneous terahertz quantum cascade lasers exceeding 1.9 THz spectral bandwidth and featuring dual comb operation. *Nanophotonics*, **2018**, 7, 237-242	6.3	36
204	Room-Temperature, Wide-Band, Quantum Well Infrared Photodetector for Microwave Optical Links at 4.9 μm Wavelength. *ACS Photonics*, **2018**, 5, 3689-3694	6.3	18
203	Tunable dispersion compensation of quantum cascade laser frequency combs. *Optics Letters*, **2018**, 43, 1746-1749	3	20
202	Coexisting frequency combs spaced by an octave in a monolithic quantum cascade laser. *Optics Express*, **2018**, 26, 23167-23177	3.3	7
201	Evidence of linear chirp in mid-infrared quantum cascade lasers. *Optica*, **2018**, 5, 948	8.6	53
200	Octave-Spaced, Dual-Frequency Comb Quantum Cascade Laser Source in a Single Monolithic Waveguide **2018**,		1
199	Gain dynamics in a heterogeneous terahertz quantum cascade laser. *Applied Physics Letters*, **2018**, 113, 181102	3.4	17
198	High Tc Superconducting THz Metamaterial for Ultrastrong Coupling in a Magnetic Field. *ACS Photonics*, **2018**, 5, 3977-3983	6.3	9
197	Dual-comb spectroscopy using plasmon-enhanced-waveguide dispersion-compensated quantum cascade lasers. *Optics Letters*, **2018**, 43, 4522	3	12
196	Dual-wavelength DFB quantum cascade lasers: sources for multi-species trace gas spectroscopy. *Applied Physics B: Lasers and Optics*, **2018**, 124, 1	1.9	11
195	High-Power Growth-Robust InGaAs/InAlAs Terahertz Quantum Cascade Lasers. *ACS Photonics*, **2017**, 4, 957-962	6.3	16
194	Energy dependence of the electron-boson coupling strength in the electron-doped cuprate superconductor Pr1.85Ce0.15CuO4 *Physical Review B*, **2017**, 95,	3.3	4

193	Lateral interdot coupling among dense ensemble of InAs quantum dots grown on InP substrate observed at cryogenic temperatures. *Journal of Physics: Conference Series*, **2017**, 906, 012008	0.3	
192	Combining a fully switchable THz superconducting metamaterial with a 2DEG for ultra-strong coupling. *European Physical Journal Plus*, **2017**, 132, 1	3.1	4
191	Intensity autocorrelation measurements of frequency combs in the terahertz range. *Physical Review A*, **2017**, 96,	2.6	10
190	Asymmetry in polariton dispersion as function of light and matter frequencies in the ultrastrong coupling regime. *New Journal of Physics*, **2017**, 19, 043022	2.9	7
189	Gate and magnetic field tunable ultrastrong coupling between a magnetoplasmon and the optical mode of an LC cavity. *Physical Review B*, **2017**, 95,	3.3	8
188	Dual comb operation of □ 8.2 □m quantum cascade laser frequency comb with 1 W optical power. *Applied Physics Letters*, **2017**, 111, 141102	3.4	38
187	Anomalous Coulomb drag between bilayer graphene and a GaAs electron gas. *New Journal of Physics*, **2017**, 19, 103042	2.9	6
186	Waveguide Embedding of a Double-Metal 1.9-THz Quantum Cascade Laser: Design, Manufacturing, and Results. *IEEE Transactions on Terahertz Science and Technology*, **2017**, 7, 609-613	3.4	1
185	Broadband monolithic extractor for metal-metal waveguide based terahertz quantum cascade laser frequency combs. *Applied Physics Letters*, **2017**, 111, 021106	3.4	5
184	Few-Electron Ultrastrong Light-Matter Coupling at 300 GHz with Nanogap Hybrid LC Microcavities. *Nano Letters*, **2017**, 17, 7410-7415	11.5	30
183	Upgrade of the ultracold neutron source at the pulsed reactor TRIGA Mainz. *European Physical Journal A*, **2017**, 53, 1	2.5	8
182	Mode stabilization in quantum cascade lasers via an intra-cavity cascaded nonlinearity. *Optics Express*, **2017**, 25, 1847-1855	3.3	2
181	On the lateral decomposition, growth mode and defect nucleation in the InxGa1-xAs channel of HEMT devices depending on the growth temperature, well thickness and mismatch **2017**, 491-494		
180	Subcycle measurement of intensity correlations in the terahertz frequency range. *Physical Review A* , **2016**, 93,	2.6	23
179	Strain-Compensated InGaAs Terahertz Quantum Cascade Lasers. *ACS Photonics*, **2016**, 3, 2297-2302	6.3	6
178	3.36 □m single-mode quantum cascade laser with a dissipation below 250 mW. *Optics Express*, **2016**, 24, 662-71	3.3	10
177	Measuring intensity correlations of a THz quantum cascade laser around its threshold at sub-cycle timescales **2016**,		2
176	Single-Mode Quantum Cascade Laser Array Emitting From a Single Facet. *IEEE Photonics Technology Letters*, **2016**, 28, 1197-1200	2.2	6

175	Advanced Fabrication of Single-Mode and Multi-Wavelength MIR-QCLs. *Photonics*, **2016**, 3, 26	2.2	9
174	Dual-Section DFB-QCLs for Multi-Species Trace Gas Analysis. *Photonics*, **2016**, 3, 24	2.2	13
173	Dispersion engineering of quantum cascade laser frequency combs. *Optica*, **2016**, 3, 252	8.6	58
172	Negative free carrier absorption in terahertz quantum cascade lasers. *Applied Physics Letters*, **2016**, 108, 091102	3.4	4
171	Dispersion in a broadband terahertz quantum cascade laser. *Applied Physics Letters*, **2016**, 109, 221107	3.4	16
170	Pulse generation and spectral optimization of broadband terahertz quantum cascade lasers **2016**,		1
169	High performance 4.7 THz GaAs quantum cascade lasers based on four quantum wells. *New Journal of Physics*, **2016**, 18, 123004	2.9	12
168	On-chip, self-detected terahertz dual-comb source. *Applied Physics Letters*, **2016**, 108, 171104	3.4	43
167	Far-Infrared Quantum Cascade Lasers Operating in the AlAs Phonon Reststrahlen Band. *ACS Photonics*, **2016**, 3, 2280-2284	6.3	26
166	A patch-array antenna single-mode low electrical dissipation continuous wave terahertz quantum cascade laser. *Applied Physics Letters*, **2016**, 109, 201103	3.4	18
165	Rf-modulation of mid-infrared distributed feedback quantum cascade lasers. *Optics Express*, **2016**, 24, 3294-312	3.3	29
164	Quantum Cascade Laser Frequency Combs. *Nanophotonics*, **2016**, 5, 272-291	6.3	105
163	Room temperature operation of a deep etched buried heterostructure photonic crystal quantum cascade laser. *Laser and Photonics Reviews*, **2016**, 10, 843-848	8.3	8
162	Short pulse generation and mode control of broadband terahertz quantum cascade lasers. *Optica*, **2016**, 3, 1087	8.6	38
161	Broadband terahertz amplification in a heterogeneous quantum cascade laser. *Optics Express*, **2015**, 23, 3117-25	3.3	8
160	InGaAs/AlInGaAs THz quantum cascade lasers operating up to 195 K in strong magnetic field. *New Journal of Physics*, **2015**, 17, 023050	2.9	14
159	Hydride vapour phase epitaxy assisted buried heterostructure quantum cascade lasers for sensing applications **2015**,		2
158	Surface emitting multi-wavelength array of single frequency quantum cascade lasers. *Applied Physics Letters*, **2015**, 106, 071104	3.4	23

157	Electrically tunable terahertz quantum cascade lasers based on a two-sections interdigitated distributed feedback cavity. *Applied Physics Letters*, **2015**, 106, 131107	3.4	20
156	Octave-spanning semiconductor laser. *Nature Photonics*, **2015**, 9, 42-47	33.9	161
155	Spin pairs in a weakly coupled many-electron quantum dot. *Physical Review B*, **2015**, 92,	3.3	3
154	On-chip dual-comb based on quantum cascade laser frequency combs. *Applied Physics Letters*, **2015**, 107, 251104	3.4	37
153	Dynamics of ultra-broadband terahertz quantum cascade lasers for comb operation. *Optics Express*, **2015**, 23, 33270-94	3.3	49
152	Continuously tunable ultrastrong light-matter interaction **2015**,		1
151	Electrical laser frequency tuning by three terminal terahertz quantum cascade lasers. *Applied Physics Letters*, **2014**, 104, 011107	3.4	18
150	Injection locking of mid-infrared quantum cascade laser at 14 GHz, by direct microwave modulation. *Laser and Photonics Reviews*, **2014**, 8, 443-449	8.3	31
149	Integrated patch and slot array antenna for terahertz quantum cascade lasers at 4.7 THz. *Applied Physics Letters*, **2014**, 104, 161102	3.4	12
148	Performance of the solid deuterium ultra-cold neutron source at the pulsed reactor TRIGA Mainz. *European Physical Journal A*, **2014**, 50, 1	2.5	16
147	Dual-wavelength quantum cascade laser for trace gas spectroscopy. *Applied Physics Letters*, **2014**, 105, 161109	3.4	27
146	Superconducting complementary metasurfaces for THz ultrastrong light-matter coupling. *New Journal of Physics*, **2014**, 16, 033005	2.9	20
145	Distributed-feedback quantum cascade laser emitting at 3.2 Ħh. *Optics Express*, **2014**, 22, 2111-8	3.3	7
144	Terahertz intersubband polariton tuning by electrical gating. *Optics Express*, **2014**, 22, 2126-31	3.3	5
143	Spectral gain profile of a multi-stack terahertz quantum cascade laser. *Applied Physics Letters*, **2014**, 105, 181118	3.4	20
142	Double metal waveguide InGaAs/AlInAs quantum cascade lasers emitting at 24 Ħh. *Applied Physics Letters*, **2014**, 105, 121115	3.4	19
141	Ultrastrong coupling in the near field of complementary split-ring resonators. *Physical Review B*, **2014**, 90,	3.3	96
140	Continuous-wave vertically emitting photonic crystal terahertz laser. *Laser and Photonics Reviews*, **2013**, 7, L45-L50	8.3	17

139	Terahertz LC Microcavities: From Quantum Cascade Lasers to Ultrastrong Light-Matter Coupling. *Journal of Infrared, Millimeter, and Terahertz Waves*, **2013**, 34, 393-404	2.2	3
138	Terahertz quantum cascade lasers based on quaternary AlInGaAs barriers. *Applied Physics Letters*, **2013**, 103, 041103	3.4	16
137	Transient increase of the energy gap of superconducting NbN thin films excited by resonant narrow-band terahertz pulses. *Physical Review Letters*, **2013**, 110, 267003	7.4	49
136	High frequency modulation of mid-infrared quantum cascade lasers embedded into microstrip line. *Applied Physics Letters*, **2013**, 102, 181114	3.4	34
135	Test of the fluctuation theorem for single-electron transport. *Journal of Applied Physics*, **2013**, 113, 136507	2.5	6
134	Terahertz intersubband electroluminescence from InAs quantum cascade light emitting structures. *Applied Physics Letters*, **2013**, 102, 141113	3.4	1
133	Synchrotron infrared transmission spectroscopy of a quantum cascade laser correlated to gain models. *Applied Physics Letters*, **2013**, 102, 012112	3.4	6
132	Four-wave mixing in a quantum cascade laser amplifier. *Applied Physics Letters*, **2013**, 102, 222104	3.4	46
131	Ultrastrong light-matter coupling at terahertz frequencies with split ring resonators and inter-Landau level transitions. *Journal of Applied Physics*, **2013**, 113, 136510	2.5	23
130	Low-bias active control of terahertz waves by coupling large-area CVD graphene to a terahertz metamaterial. *Nano Letters*, **2013**, 13, 3193-8	11.5	139
129	Broadband external cavity tuning in the 3-4 μm window. *Applied Physics Letters*, **2013**, 103, 031108	3.4	26
128	Electrically driven nanopillars for THz quantum cascade lasers. *Optics Express*, **2013**, 21, 10917-23	3.3	32
127	Quantum cascade laser in a master oscillator power amplifier configuration with Watt-level optical output power. *Optics Express*, **2013**, 21, 19180-6	3.3	19
126	Physical Origin of Frequency Noise and Linewidth in Mid-IR DFB Quantum Cascade Lasers **2013**,		2
125	Influence of resonator design on ultrastrong coupling between a two-dimensional electron gas and a THz metamaterial **2013**,		2
124	Recent progress on single-mode quantum cascade lasers **2013**,		1
123	Continuous tuning of terahertz distributed feedback quantum cascade laser by gas condensation and dielectric deposition. *Applied Physics Letters*, **2013**, 102, 181113	3.4	21
122	Three Operation Modes for Tb/s All-Optical Switching With Intersubband Transitions in InGaAs/AlAs/AlAsSb Quantum Wells. *IEEE Journal of Quantum Electronics*, **2012**, 48, 885-890	2	7

121	Quantum dot admittance probed at microwave frequencies with an on-chip resonator. *Physical Review B*, **2012**, 86,	3.3	51
120	Investigation of coherent acoustic phonons in terahertz quantum cascade laser structures using femtosecond pump-probe spectroscopy. *Journal of Applied Physics*, **2012**, 112, 033517	2.5	9
119	Direct surface cyclotron resonance terahertz emission from a quantum cascade structure. *Applied Physics Letters*, **2012**, 100, 102103	3.4	9
118	Room-temperature transverse-electric polarized intersubband electroluminescence from InAs/AlInAs quantum dashes. *Applied Physics Letters*, **2012**, 101, 261113	3.4	10
117	Room temperature terahertz polariton emitter. *Applied Physics Letters*, **2012**, 101, 141118	3.4	40
116	Singlemode quantum cascade lasers with power dissipation below 1 W. *Electronics Letters*, **2012**, 48, 646	1.1	30
115	Dipole coupling of a double quantum dot to a microwave resonator. *Physical Review Letters*, **2012**, 108, 046807	7.4	241
114	Fully automatized quantum cascade laser design by genetic optimization. *Applied Physics Letters*, **2012**, 101, 021103	3.4	35
113	Ultrastrong coupling of the cyclotron transition of a 2D electron gas to a THz metamaterial. *Science* , **2012**, 335, 1323-6	33.3	334
112	Ultrastrong coupling regime and plasmon polaritons in parabolic semiconductor quantum wells. *Physical Review Letters*, **2012**, 108, 106402	7.4	142
111	Sb-free quantum cascade lasers in the 3 4 m spectral range. *Semiconductor Science and Technology*, **2012**, 27, 045013	1.8	19
110	Operation of a Wideband Terahertz Superconducting Bolometer Responding to Quantum Cascade Laser Pulses. *Journal of Low Temperature Physics*, **2012**, 167, 911-916	1.3	2
109	Quantum dot occupation and electron dwell time in the cotunneling regime. *New Journal of Physics* , **2012**, 14, 083003	2.9	5
108	Stand-alone system for high-resolution, real-time terahertz imaging. *Optics Express*, **2012**, 20, 2772-8	3.3	35
107	Irreversibility on the Level of Single-Electron Tunneling. *Physical Review X*, **2012**, 2,	9.1	73
106	Optimization of sample-chip design for stub-matched radio-frequency reflectometry measurements. *Applied Physics Letters*, **2012**, 101, 042112	3.4	10
105	Characterization of a microwave frequency resonator via a nearby quantum dot. *Applied Physics Letters*, **2011**, 98, 262105	3.4	21
104	Energy-gap dynamics of superconducting NbN thin films studied by time-resolved terahertz spectroscopy. *Physical Review Letters*, **2011**, 107, 177007	7.4	83

103	Complex-coupled photonic crystal THz lasers with independent loss and refractive index modulation. *Optics Express*, **2011**, 19, 10707-13	3.3	26
102	Purcell effect in the inductor-capacitor laser. *Optics Letters*, **2011**, 36, 2623-5	3	13
101	Loss mechanisms of quantum cascade lasers operating close to optical phonon frequencies. *Journal of Applied Physics*, **2011**, 109, 102407	2.5	12
100	Influence of the growth temperature on the performances of strain-balanced quantum cascade lasers. *Applied Physics Letters*, **2011**, 98, 091105	3.4	23
99	High power Sb-free quantum cascade laser emitting at 3.3 μm above 350 K. *Applied Physics Letters*, **2011**, 98, 191104	3.4	34
98	CO2 isotope sensor using a broadband infrared source, a spectrally narrow 4.4 μm quantum cascade detector, and a Fourier spectrometer. *Applied Physics B: Lasers and Optics*, **2011**, 103, 967-970	1.9	18
97	InAs/AlInAs quantum-dash cascade structures with electroluminescence in the mid-infrared. *Journal of Crystal Growth*, **2011**, 323, 491-495	1.6	5
96	Photoinduced melting of superconductivity in the high-Tc superconductor La2−xSrxCuO4 probed by time-resolved optical and terahertz techniques. *Physical Review B*, **2011**, 83,	3.3	25
95	Ultra-broadband heterogeneous quantum cascade laser emitting from 2.2 to 3.2 THz. *Applied Physics Letters*, **2011**, 99, 191104	3.4	47
94	Electrically tunable, high performance quantum cascade laser. *Applied Physics Letters*, **2010**, 96, 141105	3.4	43
93	Thermo-optic detection of terahertz radiation from a quantum cascade laser. *Applied Physics Letters*, **2010**, 97, 251103	3.4	3
92	Midinfrared electroluminescence from InAs/InP quantum dashes. *Applied Physics Letters*, **2010**, 97, 221109	3.4	10
91	Strong light-matter coupling at terahertz frequencies at room temperature in electronic LC resonators. *Applied Physics Letters*, **2010**, 97, 191107	3.4	34
90	Highly tunable hybrid quantum dots with charge detection. *Applied Physics Letters*, **2010**, 97, 152109	3.4	9
89	Large-area laser-driven terahertz emitters. *Electronics Letters*, **2010**, 46, S24	1.1	5
88	Characterization of Si volume- and delta-doped InGaAs grown by molecular beam epitaxy. *Journal of Applied Physics*, **2010**, 107, 093710	2.5	17
87	Terahertz emission from lateral photo-Dember currents. *Optics Express*, **2010**, 18, 4939-47	3.3	100
86	Low divergence Terahertz photonic-wire laser. *Optics Express*, **2010**, 18, 6390-5	3.3	61

85	Broadband THz lasing from a photon-phonon quantum cascade structure. *Optics Express*, **2010**, 18, 8043-53	3.3	61
84	Impulsive terahertz radiation with high electric fields from an amplifier-driven large-area photoconductive antenna. *Optics Express*, **2010**, 18, 9251-7	3.3	113
83	Microcavity laser oscillating in a circuit-based resonator. *Science*, **2010**, 327, 1495-7	33.3	104
82	Scattering processes in terahertz InGaAs/InAlAs quantum cascade lasers. *Applied Physics Letters*, **2010**, 97, 221114	3.4	26
81	Magnetically assisted quantum cascade laser emitting from 740 GHz to 1.4 THz. *Applied Physics Letters*, **2010**, 97, 081110	3.4	17
80	Bridging Optics and Electronics with Quantum Cascade Lasers, Antennas, and Circuits **2010**, 75-84		
79	Spectroscopic determination of the doping and mobility of terahertz quantum cascade structures. *Journal of Applied Physics*, **2009**, 106, 093104	2.5	9
78	External cavity quantum cascade laser tunable from 7.6 to 11.4 μm. *Applied Physics Letters*, **2009**, 95, 061103	3.4	162
77	Low-divergence single-mode terahertz quantum cascade laser. *Nature Photonics*, **2009**, 3, 586-590	33.9	158
76	Coupling terahertz radiation between sub-wavelength metal-metal waveguides and free space using monolithically integrated horn antennae. *Optics Express*, **2009**, 17, 18387-93	3.3	18
75	Bound-to-continuum terahertz quantum cascade laser with a single-quantum-well phonon extraction/injection stage. *New Journal of Physics*, **2009**, 11, 125022	2.9	115
74	Step well quantum cascade laser emitting at 3 THz. *Applied Physics Letters*, **2009**, 94, 041114	3.4	27
73	Time-resolved IR spectroscopy of quantum-optics in semiconductors. *Infrared Physics and Technology*, **2008**, 51, 454-457	2.7	
72	Progress in Quantum Cascade Lasers. *NATO Science for Peace and Security Series B: Physics and Biophysics*, **2008**, 171-192	0.2	11
71	Second harmonic generation in (111)-oriented InP-based quantum cascade laser. *Journal of Applied Physics*, **2007**, 101, 103107	2.5	12
70	Doping in quantum cascade lasers. I. InAlAs□hGaAs□hP midinfrared devices. *Journal of Applied Physics*, **2006**, 100, 043101	2.5	48
69	Gain without inversion in semiconductor nanostructures. *Nature Materials*, **2006**, 5, 175-178	27	218
68	ac Stark splitting and quantum interference with intersubband transitions in quantum wells. *Physical Review Letters*, **2005**, 94, 157403	7.4	189

67	Broadly-tunable external cavity quantum-cascade lasers **2005**,		1
66	Detection of mid-IR radiation by sum frequency generation for free space optical communication. *Optics and Lasers in Engineering*, **2005**, 43, 537-544	4.6	28
65	Terahertz quantum cascade lasers. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2004**, 362, 215-29; discussion 229-31	3	13
64	Ozone detection by differential absorption spectroscopy at ambient pressure with a 9.6 □m pulsed quantum-cascade laser. *Applied Physics B: Lasers and Optics*, **2004**, 78, 249-256	1.9	17
63	Mid-infrared trace-gas sensing with a quasi- continuous-wave Peltier-cooled distributed feedback quantum cascade laser. *Applied Physics B: Lasers and Optics*, **2004**, 79, 907-913	1.9	61
62	Broadband tuning of external cavity bound-to-continuum quantum-cascade lasers. *Applied Physics Letters*, **2004**, 84, 1659-1661	3.4	123
61	Imaging with a Terahertz quantum cascade laser. *Optics Express*, **2004**, 12, 1879-84	3.3	118
60	High-power and single-frequency quantum cascade lasers for gas sensing **2004**,		3
59	Continuous-wave operation of quantum cascade laser emitting near 5.6 [micro sign]m. *Electronics Letters*, **2003**, 39, 1123	1.1	8
58	Spectroscopic study of the □1 band of SO2 using a continuous-wave DFB QCL at 9.1 □m. *Applied Physics B: Lasers and Optics*, **2003**, 77, 703-706	1.9	22
57	Continuous wave operation of quantum cascade lasers. *Journal of Crystal Growth*, **2003**, 251, 697-700	1.6	6
56	High-frequency modulation of a quantum-cascade laser using a monolithically integrated intracavity modulator. *IEEE Photonics Technology Letters*, **2003**, 15, 1044-1046	2.2	2
55	Free-running 9.1-microm distributed-feedback quantum cascade laser linewidth measurement by heterodyning with a C18O2 laser. *Optics Letters*, **2003**, 28, 704-6	3	21
54	Continuous-wave distributed-feedback quantum-cascade lasers on a Peltier cooler. *Applied Physics Letters*, **2003**, 83, 1929-1931	3.4	46
53	Digital alloy interface grading of an InAlAs/InGaAs quantum cascade laser structure studied by cross-sectional scanning tunneling microscopy. *Applied Physics Letters*, **2003**, 83, 4131-4133	3.4	24
52	Chemical sensing with pulsed QC-DFB lasers operating at 15.6 micrometers. *Applied Physics B: Lasers and Optics*, **2002**, 75, 351-7	1.9	30
51	Terahertz interminiband emission and magneto-transport measurements from a quantum cascade chirped superlattice. *Physica E: Low-Dimensional Systems and Nanostructures*, **2002**, 13, 854-857	3	6
50	Continuous wave operation of a mid-infrared semiconductor laser at room temperature. *Science*, **2002**, 295, 301-5	33.3	572

49	Quantum-cascade-laser structures as photodetectors. *Applied Physics Letters*, **2002**, 81, 2683-2685	3.4	87
48	Terahertz intersubband emission in strong magnetic fields. *Applied Physics Letters*, **2002**, 81, 67-69	3.4	23
47	Chemical sensors based on quantum cascade lasers **2002**,		1
46	Quantum cascade lasers for open- and closed-path measurement of trace gases **2002**, 4817, 22		19
45	Continuous-wave operation of far-infrared quantum cascade lasers. *Electronics Letters*, **2002**, 38, 1675	1.1	41
44	High-performance quantum cascade lasers: physics and applications **2002**,		5
43	Distributed-feedback quantum cascade lasers emitting in the 9-μm band with InP top cladding layers. *IEEE Photonics Technology Letters*, **2002**, 14, 18-20	2.2	2
42	Bound-to-continuum and two-phonon resonance, quantum-cascade lasers for high duty cycle, high-temperature operation. *IEEE Journal of Quantum Electronics*, **2002**, 38, 533-546	2	167
41	Free-space optical data link using Peltier-cooled quantum cascade laser. *Electronics Letters*, **2001**, 37, 778	1.1	68
40	Measurement of far-infrared waveguide loss using a multisection single-pass technique. *Applied Physics Letters*, **2001**, 78, 1967-1969	3.4	30
39	Long-wavelength (λ16 μm), room-temperature, single-frequency quantum-cascade lasers based on a bound-to-continuum transition. *Applied Physics Letters*, **2001**, 79, 4271-4273	3.4	45
38	Photoacoustic spectroscopy with quantum cascade distributed-feedback lasers. *Optics Letters*, **2001**, 26, 887-9	3	81
37	Quantum-cascade lasers based on a bound-to-continuum transition. *Applied Physics Letters*, **2001**, 78, 147-149	3.4	191
36	. *IEEE Journal of Quantum Electronics*, **2001**, 37, 448-455	2	17
35	Continuous wave operation of a 9.3 μm quantum cascade laser on a Peltier cooler. *Applied Physics Letters*, **2001**, 78, 1964-1966	3.4	92
34	High-temperature operation of distributed feedback quantum-cascade lasers at 5.3 μm. *Applied Physics Letters*, **2001**, 78, 396-398	3.4	128
33	Far-infrared intersubband luminescence from quantum cascade sources **2001**, 89-100		
32	Edge- and surface-emitting quantum cascade distributed feedback lasers. *Physica E: Low-Dimensional Systems and Nanostructures*, **2000**, 7, 25-28	3	3

31	Electrically pumped Terahertz quantum well sources. *Physica E: Low-Dimensional Systems and Nanostructures*, **2000**, 7, 44-47	3	15
30	Long-wavelength (□10.5 □m) quantum cascade lasers based on a photon-assisted tunneling transition in strong magnetic field. *Physica E: Low-Dimensional Systems and Nanostructures*, **2000**, 7, 33-36	3	14
29	Far-infrared emission and Stark-cyclotron resonances in a quantum-cascade structure based on photon-assisted tunneling transition. *Physical Review B*, **2000**, 61, 8369-8374	3.3	24
28	Mid-infrared quantum cascade lasers for flow injection analysis. *Analytical Chemistry*, **2000**, 72, 1645-8	7.8	53
27	Gain measurements on GaAs-based quantum cascade lasers using a two-section cavity technique. *IEEE Journal of Quantum Electronics*, **2000**, 36, 736-741	2	21
26	. *IEEE Photonics Technology Letters*, **2000**, 12, 1610-1612	2.2	14
25	A quantum cascade laser based on an n-i-p-i superlattice. *IEEE Photonics Technology Letters*, **2000**, 12, 263-265	2.2	8
24	Buried heterostructure quantum cascade lasers with a large optical cavity waveguide. *IEEE Photonics Technology Letters*, **2000**, 12, 1450-1452	2.2	31
23	Surface-emitting 10.1 □m quantum-cascade distributed feedback lasers. *Applied Physics Letters*, **1999**, 75, 3769-3771	3.4	68
22	Low-loss Al-free waveguides for unipolar semiconductor lasers. *Applied Physics Letters*, **1999**, 75, 3911-3913	3.4	116
21	Demonstration of high-performance 10.16 □m quantum cascade distributed feedback lasers fabricated without epitaxial regrowth. *Applied Physics Letters*, **1999**, 75, 665-667	3.4	51
20	Experimental observation of the de Haas□an Alphen effect in a multiband quantum-well sample. *Physical Review B*, **1999**, 60, R11277-R11280	3.3	18
19	Electrically tunable, room-temperature quantum-cascade lasers. *Applied Physics Letters*, **1999**, 75, 1509-1511	3.4	34
18	Stress relaxation by surface rippling and dislocation generation in mismatched channels of InGaAs/InAlAs/InP high-electron-mobility transistors. *Applied Physics Letters*, **1999**, 74, 3818-3820	3.4	7
17	Influence of DX centers on the performance of unipolar semiconductor lasers based on GaAs-Al/sub x/Ga/sub 1-x/As. *IEEE Photonics Technology Letters*, **1999**, 11, 1090-1092	2.2	11
16	Five years of quantum cascade lasers: progress and challenges **1999**, 3628, 88		
15	Low-frequency noise properties of selectively dry etched InP HEMTs. *IEEE Transactions on Electron Devices*, **1998**, 45, 1219-1225	2.9	18
14	GaAs/AlxGa1□As quantum cascade lasers. *Applied Physics Letters*, **1998**, 73, 3486-3488	3.4	345

13	Surface roughness in InGaAs channels of high electron mobility transistors depending on the growth temperature: Strain induced or due to alloy decomposition. *Journal of Applied Physics*, **1998**, 83, 7537-7541	2.5	9
12	Far-infrared (□88 □m) electroluminescence in a quantum cascade structure. *Applied Physics Letters*, **1998**, 73, 3724-3726	3.4	131
11	Buried heterostructure quantum cascade lasers **1998**, 3284, 231		6
10	Low frequency noise in dry and wet etched InAlAs/InGaAs HEMTs **1997**,		1
9	Well surface roughness and fault density effects on the Hall mobility of In[sub x]Ga[sub 1□]As/In[sub y]Al[sub 1□]As/InP high electron mobility transistors. *Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena*, **1997**, 15, 1715		8
8	Correlation of electrical anisotropies of HEMT devices with defect distribution and InGaAs well roughness. *Materials Science and Engineering B: Solid-State Materials for Advanced Technology*, **1997**, 44, 325-329	3.1	2
7	High speed, monolithically integrated pin-HEMT photoreceiver fabricated on InP with 18 GHz bandwidth. *Electronics Letters*, **1995**, 31, 1831-1833	1.1	7
6	Magneto-transport investigation of Si-Doped n+ Al0.48In0.52As: Observation of the dx centre. *Solid State Communications*, **1994**, 89, 323-325	1.6	7
5	Room temperature continuous wave operation of quantum cascade lasers		1
4	Influence of growth conditions on mobility and anisotropy of In/sub y/Ga/sub 1-y/As/In/sub 0.52/Al/sub 0.48/As/InP HEMTs with y=0.53 to 0.80		1
3	Monolithic Integration of Mid-Infrared Quantum Cascade Lasers and Frequency Combs with Passive Waveguides. *ACS Photonics*,	6.3	2
2	GaAs quantum cascade lasers		1
1	Quantum cascade lasers based on superlattice active regions and n-i-p-i doping		1