Federico Capasso

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Harvard University
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29 Oxford Street
Cambridge MA 02138

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PERSONAL: Married; two children

CITIZENSHIP: Italian and U.S. (Naturalized; 09/23/1992)

EDUCATION:

1973	Doctor of Physics, Summa Cum Laude University of Rome, La Sapienza, Italy
1973-1974	Postdoctoral Fellow Fondazione Bordoni, Rome, Italy

ACADEMIC APPOINTMENTS

Jan. 2003- Present Robert Wallace Professor of Applied Physics
Vinton Hayes Senior Research Fellow in Electrical Engineering, John A. Paulson, School of Engineering and Applied Sciences, Harvard University,

PROFESSIONAL POSITIONS:

2000 – 2002	Vice President of Physical Research, Bell Laboratories Lucent Technologies, Murray Hill, NJ
1997- 2000	Department Head, Semiconductor Physics Research, Bell Laboratories Lucent Technologies, Murray Hill, NJ.
1987- 1997	Department Head, Quantum Phenomena and Device Research, Bell Laboratories Lucent Technologies (formerly AT&T Bell Labs, until 1996), Murray Hill, NJ
1984 – 1987	Distinguished Member of Technical Staff, Bell Laboratories, Murray Hill, NJ
1977 – 1984	Member of Technical Staff, Bell Laboratories, Murray Hill, NJ
1976 – 1977	Visiting Scientist, Bell Laboratories, Holmdel, NJ
1974 – 1976	Research Physicist, Fondazione Bordoni, Rome, Italy

Citations (Google Scholar)
Over 93000
H-index (G*oogl*e Scholar) 144

Publications
Over 500 hundred peer reviewed journals

Patents
70 US patents

KEY ACHIEVEMENTS

1. Bandstructure Engineering and Quantum Cascade Lasers (QCLs)

Capasso and his Bell Labs collaborators over a 20-year period pioneered *band-structure engineering,* a technique to design and implement artificially structured ("man-made") semiconductor, materials, and related phenomena/ devices, which revolutionized heterojunction devices in photonics and electronics. Quantum Cascade lasers represent the most important highlight of this research. Invented and demonstrated by Capasso and his group (*Science 264, 553 (1994)*, *over 6000 citations*). Unlike diode laser they are unipolar lases based on new operating principle. Their emission wavelength can be tailored over an extreme broad range by changing nanometer layer thickness while using the same materials. They have revolutionized mid-infrared photonics, as they represent the first high performance and reliable semiconductor lasers for this technologically and scientifically important spectral region. They are finding widespread use in scientific and industrial applications: high-resolution spectroscopy, chemical sensing and trace gas analysis, atmospheric chemistry, combustion and medical diagnostics. They are widely commercialized by many companies.

2. Metasurfaces and Flat optics

The seminal paper (*Science 334 333 (2011), over 5500 citations*) of Capasso and his group is widely recognized has the one which introduced subwavelength structured surfaces (metasurfaces) as a powerful and flexible tool for wavefront control by judicious design of the local phase, amplitude and polarization. This paper generalized the textbook laws of reflection and refraction and demonstrated them for a general class of designer metasurfaces. Capasso pioneered the use of metasurfaces as a platform for Flat Optics demonstrating metalenses with superior aberration control compared to conventional diffractive optics (Fresnel) and refractive optics, with much less thickness and complexity and ease of optical alignment. Highlights are the first high performance diffraction limited dielectric metalens in the visible (*Science 352, 1190 (2016), over 1750 citations*), the first single broadband achromatic lens and the correction of third order aberration including field curvature with a single metaoptic. This work triggered a large scale scientific and industrial effort, propelled by Capasso's vision that since metaoptic can be fabricated by large scale fabrication techniques of semiconductor industry (DUV lithography), this will lead to a convergence of CMOS technology and lens making. Metasurfaces have therefore major advantages with respect to bulk metamaterials in terms of technological impact. The latter suffer from major fabrication complexities at optical wavelengths, greatly limiting their application potential.

In the area of polarization, the impact of flat optics has also been major leading to new compact high performance in line and terminating polarimeters. A powerful generalization of Fourier optics introduced (Matrix Fourier Optics) by Capasso' and his team has led them to the demonstration of a new single shot ultracompact polarization sensitive camera consisting of a single metasurface and a

sensor, which pixel by pixel reconstruct in real time the full Stokes vector of the scene, exhibiting superior performance to existing cameras based on division of amplitude, time and focal plane (*Science 365, DOI: 10.1126/science.aax1839 (2019*), 130 citations)
Capasso has published many seminal breakthrough papers on plasmonic metasurfaces. He demonstrated collimators on the facet of semiconductor laser for beam shaping in the near- and far-field, the earliest successful application of metasurfaces in active devices. He has obtained fundamental new results on the propagation of surface plasmons, such as the polarization controlled directional coupling of surface plasmon polaritons leading him to the first direct evidence of spin momentum locking in optics, and the demonstration of a localized long-range nondiffracting surface wave, the Cosine-Gauss plasmon beam.

In a highly cited paper (*Science 328 1135 (2010), 1440 citations*) he and Naomi Halas group demonstrated core-shell nanoparticles clusters (trimers, quadrumers and heptamers) as building blocks of a new class of optical materials, exhibiting magnetic activity in the near infrared and giant Fano resonances

3. Casimir forces

This research has focused on basic studies of the Casimir effect, i.e. the attractive force between uncharged metals and dielectrics, with the goal of designing these quantum electrodynamical forces by control of quantum fluctuations through changes (shapes and materials) of the boundary conditions of the electromagnetic fields. Highlights of this highly cited work are:

- Demonstration of actuators using the Casimir force, based on MEMS (Science 291, 1941 (2001) 1000 citations). This work explored the limits imposed by QED on MEMS technology and its potential in modifying and designing these forces
- First measurement of the repulsive Casimir-Lifshitz force (*Nature 457 170, (2009), 660 citations*) an effect first predicted in the nineteen sixties, the Capasso proposed as a tool to control friction in new ways.

Entrepreneurship

2010 Cofounded *EOS Photonics* to market Quantum Cascade Laser based sensors of gases for security; standoff detection of hazardous vapors and condensed phase materials; molecular spectroscopy and power scaling. It merged in 2015 with *Pendar Medical* to form *Pendar Technologies* (http://www.pendartechnologies.com/) which is focused on bringing breakthrough portable analysis and monitoring systems to market.

2016 Cofounded *Metalenz* (http://metalenz.com) focused on bringing to market metalenses for high-volume applications (cell phones and sensors). It is supported by major strategic investors such as Intel, 3M and Applied Materials and had in 2021 its first major product launch:
https://www.metalenz.com/press-release-metalenz-launches-orion-the-worlds-simplest-most-compact-dot-pattern-projector/

Honors

Awards:

2021 Frederick Yves Medal and Jarus Quinn Prize, Optical Society
2020 Honorary Award, IEEE Italy Section
2019 Matteucci Medal, Accademia Nazionale delle Scienze, detta dei XL
2018 Fermi Prize of the Italian Physical Society
2017 Kenneth Button Prize, International Society of Infrared, Millimeter and Terahertz Waves and Institute of Physics (UK)
2016 Balzan Prize for Applied Photonics, Balzan Foundation
2015 Rumford Prize, American Academy of Arts and Science
2013 Gold Medal of SPIE
2013 European Physical Society Quantum Electronics and Optics Award
2013 Humboldt Research Award
2011 Jan Czochralski Award of the European Materials Research Society
2011 Galileo Galilei Medal of the Italian Society for Optics and Photonics
2010 Julius Springer Prize in Applied Physics
2010 Berthold Leibinger Zukunft Prize (Future prize)
2005 King Faisal International Prize for Science
2005 Gold Medal of the President of Italy for meritorious achievement in science
2004 Edison Medal, Institute of Electrical and Electronic Engineers (IEEE)
2004 Arthur Schawlow Prize in Laser Science, American Physical Society
2004 Tommasoni & Chisesi Prize for Outstanding Achievements in Physics
2003 Goff Smith Prize and Lecture, University of Michigan
2002 Duddell Medal and Prize of the Institute of Physics (London, UK)
2001 Robert Wood Prize of the Optical Society
2000 Willis E. Lamb Medal for Laser Physics and Quantum Optics
2000 NASA Group Achievement Award
1998 IEEE/Laser & Electrooptics Society W. Streifer Award for Scientific Achievement
1998 Rank Prize in Optoelectronics (UK)
1998 Capitolium Prize of the Mayor of Rome, Italy
1997 Wetherill Medal of the Franklin Institute
1997 Bell Laboratories Fellow Award
1995 Materials Research Society Medal
1995 Moet Hennessy&Louis Vuitton “Leonardo da Vinci” Award of Excellence
1995 Newcomb Cleveland Prize of the American Association for the Advancement of Science (AAAS) for best paper published in Science
1995 Electronics Letters Prize of the Institute of Electrical Engineers (London, UK)
1994 Heinrich Welker Memorial Medal (Germany) & International Compound Semiconductors Symposium Award
1993 The New York Academy of Sciences Award
1991 IEEE David Sarnoff Award in Electronics
1984 Bell Laboratories Distinguished Member of Technical Staff Award

Memberships/Fellowships

2019 Fellow, National Academy of Inventors
2015 Member, Academia Europaea

2012 Foreign Member, Accademia dei Lincei
1995 Member, National Academy of Sciences
1996 Member, National Academy of Engineering
1998 Fellow, American Academy of Arts and Sciences
1999 Fellow, Institute of Physics (UK)
1997- Honorary Member, of the Franklin Institute
1992 Fellow, American Association for the Advancement of Science
1991 Fellow, International Society for Optical Engineering (SPIE)
1989 Fellow, Optical Society of America
1987 Fellow, Institute of Electrical and Electronic Engineers
1986 Fellow, American Physical Society

Honorary Doctorates and Other Honors

2019 Honorary issue of *Nanophotonics* (Volume 7, Issue 6, Jun 2018) for Federico Capasso on "Metamaterials & Metasurfaces"
2011 Honorary Doctorate University Paris Diderot, France
2011 Honorary Doctor of Technology, Lund University, Sweden
2011 Honorary Doctorate in Materials Science, University of Roma III, Italy
2003 Honorary Doctorate in Electrical Engineering, University of Bologna, Italy
2004 Commendatore of the Italian Republic

Federico Capasso

Harvard University

physics
optics and photonics
nanotechnology
QED

	All	Since 2016
Citations	93423	41789
h-index	144	88
i10-index	696	396

TITLE	CITED BY	YEAR
Engineering phase and polarization singularity sheets SWD Lim, JS Park, ML Meretska, AH Dorrah, F Capasso Nature Communications 12 (1), 1-10		2021
Multifunctional wide-angle optics and lasing based on supercell metasurfaces C Spägele, M Tamagnone, D Kazakov, M Ossiander, M Piccardo, ... Nature Communications 12 (1), 1-10		2021
Soliton dynamics of ring quantum cascade lasers with injected signal F Prati, M Brambilla, M Piccardo, LL Columbo, C Silvestri, M Gioannini, ... Frontiers in Optics and Photonics, 197-210	2	2021
A quantum cascade laser-pumped molecular laser tunable over 1 THz A Amirzhan, P Chevalier, J Rowlette, HT Stinson, M Pushkarsky, T Day, ... arXiv preprint arXiv:2105.13326		2021
Meta-lens doublet for aberration correction B Groever, WT Chen, F Capasso US Patent App. 16/610,896		2021
Planar achromatic and dispersion-tailored meta-surfaces in visible spectrum WT Chen, V Sanjeev, AY Zhu, M Khorasaninejad, SHI Zhujun, F Capasso US Patent App. 16/616,915		2021
Slow Light Nanocoatings for Ultrashort Pulse Shaping M Ossiander, YW Huang, WT Chen, Z Wang, X Yin, YA Ibrahim, ... arXiv preprint arXiv:2105.06805		2021
Ultra-compact, aberration corrected, visible chiral spectrometer with meta-lenses AY Zhu, WT Chen, M Khorasaninejad, J Oh, A Zaidi, RC Devlin, ... US Patent App. 16/471,549		2021
Reply to: Reconsidering metasurface lasers H Sroor, YW Huang, B Sephton, D Naidoo, A Vallés, V Ginis, CW Qiu, ... Nature Photonics 15 (5), 339-340		2021
Unifying Frequency Combs in Active and Passive Cavities: Temporal Solitons in Externally Driven Ring Lasers	4	2021

TITLE	CITED BY	YEAR
L Columbo, M Piccardo, F Prati, LA Lugiato, M Brambilla, A Gatti, ... Physical Review Letters 126 (17), 173903		
Inverse design enables large-scale high-performance meta-optics reshaping virtual reality Z Li, R Pestourie, JS Park, YW Huang, SG Johnson, F Capasso arXiv preprint arXiv:2104.09702	1	2021
Achromatic Metasurface Optical Components by Dispersive Phase Compensation F Aieta, M Kats, P Genevet, F Capasso, M Khorasaninejad US Patent App. 17/029,157		2021
Spectrally resolved linewidth enhancement factor of a semiconductor frequency comb N Opačak, F Pilat, D Kazakov, SD Cin, G Ramer, B Lendl, F Capasso, ... arXiv preprint arXiv:2104.05747		2021
Aberration correctors based on dispersion-engineered metasurfaces WT Chen, AY Zhu, JFG Sisler, F Capasso US Patent App. 16/971,150		2021
Roadmap on multimode light shaping M Piccardo, V Ginis, A Forbes, S Mahler, AA Friesem, N Davidson, H Ren, ... arXiv preprint arXiv:2104.03550	1	2021
Metasurface optics for on-demand polarization transformations along the optical path AH Dorrah, NA Rubin, A Zaidi, M Tamagnone, F Capasso Nature Photonics 15 (4), 287-296	9	2021
On-chip optical tweezers based on freeform optics S Yu, J Lu, V Ginis, S Kheifets, SWD Lim, M Qiu, T Gu, J Hu, F Capasso Optica 8 (3), 409-414	2	2021
Endoscopic imaging using nanoscale metasurfaces H Pahlevaninezhad, M Khorasaninejad, YW Huang, SHI Zhujun, M Suter, ... US Patent App. 16/772,644		2021
Will flat optics appear in everyday life anytime soon? WT Chen, F Capasso Applied Physics Letters 118 (10), 100503	3	2021
Manipulating frequency comb regimes in semiconductor ring lasers D Kazakov, M Piccardo, B Schwarz, N Opacak, M Beiser, Y Wang, S Jha, ... Novel In-Plane Semiconductor Lasers XX 11705, 117050R		2021
Monolithic focusing metasurfaces ML Meretska, SWD Lim, F Capasso High Contrast Metastructures X 11695, 1169509		2021

TITLE	CITED BY	YEAR
Frequency comb seeding of a single-mode near-infrared semiconductor laser J Lautenschläger, D Auth, C Weber, L Wegert, D Kazakov, A Klehr, ... Novel In-Plane Semiconductor Lasers XX 11705, 1170504		2021
Arbitrary control of Jones matrix properties in a metasurface diffraction grating using matrix Fourier optics A Zaidi, NA Rubin, A Dorrah, JS Park, F Capasso High Contrast Metastructures X 11695, 116951K		2021
Polarization-controlled holography using dielectric metasurfaces A Zaidi, N Rubin, A Dorrah, F Capasso Practical Holography XXXV: Displays, Materials, and Applications 11710, 1171006		2021
Electrically tunable metasurfaces by a single electro-optic layer IC Benea-Chelmus, M Meretska, M Tamagnone, DL Elder, LR Dalton, ... Optical Components and Materials XVIII 11682, 1168211		2021
Frequency combs and temporal solitons in a coherently driven ring quantum cascade laser LL Columbo, F Prati, LA Lugiato, A Gatti, M Gioannini, C Silvestri, ... Novel In-Plane Semiconductor Lasers XX 11705, 117050Y		2021
Polarization-dependent holography with metasurfaces NA Rubin, A Zaidi, A Dorrah, Z Shi, F Capasso High Contrast Metastructures X 11695, 116951I		2021
Singularity engineering: sculpting the dark SWD Lim, JS Park, ML Meretska, AH Dorrah, F Capasso Physics and Simulation of Optoelectronic Devices XXIX 11680, 1168018		2021
Mid-infrared frequency combs based on semiconductor lasers B Schwarz, M Beiser, S Dal Cin, J Hillbrand, N Opacak, G Strasser, ... Novel In-Plane Semiconductor Lasers XX 11705, 117050S		2021
Transvers to longitudinal structuring of light with metasurfaces F Capasso, AH Dorrah, NA Rubin, M Tamagnone, A Zaidi High Contrast Metastructures X 11695, 116950F		2021
How a near-infrared frequency-modulated semiconductor comb laser turns into an amplitude-modulated comb L Wegert, D Kazakov, M Ossiander, D Auth, J Hillbrand, VV Korenev, ... Novel In-Plane Semiconductor Lasers XX 11705, 1170507		2021
Harmonic mode-locking order and pulse width control of an amplitude-modulated frequency comb by optical self-injection S Meinecke, D Auth, M Ossiander, D Kazakov, C Weber, L Jaurigue, ... Novel In-Plane Semiconductor Lasers XX 11705, 117050A		2021
Polarization state generation with a metasurface NA Rubin, F Capasso US Patent App. 16/964,058		2021

TITLE	CITED BY	YEAR
Meta-optics achieves RGB-achromatic focusing for virtual reality Z Li, P Lin, YW Huang, JS Park, WT Chen, Z Shi, CW Qiu, JX Cheng, ... Science Advances 7 (5), eabe4458	5	2021
Jones matrix holography with metasurfaces NA Rubin, A Zaidi, A Dorrah, Z Shi, F Capasso arXiv preprint arXiv:2012.14874	1	2020
Band-structure engineering of new photonic materials: high performance mid-infrared quantum cascade lasers F Capasso Semiconductor Quantum Optoelectronics, 391-432	3	2020
Broadband multifunctional efficient meta-gratings based on dielectric waveguide phase shifters M Khorasaninejad, F Capasso US Patent 10,866,360		2020
Second harmonic generation in AlInAs/GaInAs asymmetric coupled quantum wells C Sirtori, F Capasso, DL Sivco, AY Cho Gallium Arsenide and Related Compounds 1991, 625-630		2020
Mode-locked short pulses from an 8 μm wavelength semiconductor laser J Hillbrand, N Opačak, M Piccardo, H Schneider, G Strasser, F Capasso, ... Nature communications 11 (1), 1-7	9	2020
Improving the light collection efficiency of silicon photomultipliers through the use of metalenses AAL Villalpando, J Martín-Albo, WT Chen, R Guenette, C Lego, JS Park, ... Journal of Instrumentation 15 (11), P11021	2	2020
Achromatic metasurface optical components by dispersive phase compensation F Aieta, M Kats, P Genevet, F Capasso, M Khorasaninejad US Patent 10,816,815	4	2020
Widely-tunable harmonic frequency comb in a quantum cascade laser M Piccardo, D Kazakov, F Capasso, P Chevalier US Patent App. 16/956,294		2020
Metasurface flat optics: from high-performance components to cameras F Capasso Nanophotonics and Micro/Nano Optics VI 11556, 1155602		2020
Response to Comment on Widely tunable compact terahertz gas lasers P Chevalier, A Amirzhan, F Wang, M Piccardo, SG Johnson, F Capasso, ... arXiv preprint arXiv:2008.11691	1	2020
Compact mode-division multiplexing with folded metasurfaces J Oh, WT Chen, K Li, J Yang, MJ Li, P Dainese, F Capasso Metamaterials, Metadevices, and Metasystems 2020 11460, 114602N		2020

TITLE	CITED BY	YEAR
Optical properties of metasurfaces infiltrated with liquid crystals A Lininger, AY Zhu, JS Park, G Palermo, S Chatterjee, J Boyd, F Capasso, ... Proceedings of the National Academy of Sciences 117 (34), 20390-20396	16	2020
Roll-to-roll dielectric metasurfaces X Yin, JS Park, KK Stensvad, RL Brott, N Rubin, MB Wolk, F Capasso Metamaterials, Metadevices, and Metasystems 2020 11460, 114600S		2020
40-3: *Invited Paper:* A Large RGB-achromatic Metalens for Virtual/Augmented Reality Applications Z Li, P Lin, YW Huang, JS Park, WT Chen, Z Shi, JX Cheng, F Capasso SID Symposium Digest of Technical Papers 51 (1), 575-578		2020
Flat optics with dispersion-engineered metasurfaces WT Chen, AY Zhu, F Capasso Nature Reviews Materials 5 (8), 604-620	79	2020
High-purity orbital angular momentum states from a visible metasurface laser H Sroor, YW Huang, B Sephton, D Naidoo, A Valles, V Ginis, CW Qiu, ... Nature Photonics 14 (8), 498-503	58	2020
Remote structuring of near-field landscapes V Ginis, M Piccardo, M Tamagnone, J Lu, M Qiu, S Kheifets, F Capasso Science 369 (6502), 436-440	6	2020
Enhancing the modal purity of orbital angular momentum photons I Nape, B Sephton, YW Huang, A Vallés, CW Qiu, A Ambrosio, F Capasso, ... APL Photonics 5 (7), 070802	6	2020
Ultrashort pulses from a 8 μm wavelength semiconductor laser J Hillbrand, N Opačak, M Piccardo, H Schneider, G Strasser, F Capasso, ... Optics and Photonics for Sensing the Environment, EW4H. 3		2020
Tunable quantum-cascade laser pumped molecular lasers for terahertz imaging P Chevalier, A Amirzhan, F Wang, M Piccardo, SG Johnson, F Capasso, ... Optical Sensors, SM3E. 2		2020
Topology optimized multi-layered meta-optics Z Lin, F Capasso, AW Rodriguez, M Loncar, B Groever US Patent App. 16/623,378		2020
Continuous angle-tunable birefringence with freeform metasurfaces for arbitrary polarization conversion Z Shi, AY Zhu, Z Li, YW Huang, WT Chen, CW Qiu, F Capasso Science Advances 6 (23), eaba3367	23	2020
Frequency combs induced by phase turbulence M Piccardo, B Schwarz, D Kazakov, M Beiser, N Opačak, Y Wang, S Jha, ... Nature 582 (7812), 360-364	26	2020

TITLE	CITED BY	YEAR
Imaging of surface plasmon polaritons in low-loss highly metallic titanium nitride thin films in visible and infrared regimes MN Gadalla, K Chaudhary, CM Zgrabik, F Capasso, EL Hu Optics express 28 (10), 14536-14546	12	2020
Room Temperature Compact Terahertz Laser Tunable over 1 THz A Amirzhan, P Chevalier, F Wang, M Piccardo, SG Johnson, HO Everitt, ... 2020 Conference on Lasers and Electro-Optics (CLEO), 1-2		2020
Ring Laser Frequency Combs Enabled by Phase Turbulence and Their Connection to Kerr Combs M Piccardo, B Schwarz, D Kazakov, M Beiser, N Opačak, Y Wang, S Jha, ... 2020 Conference on Lasers and Electro-Optics (CLEO), 1-2		2020
A metalens-based virtual reality (VR)/augmented reality (AR) system Z Li, P Lin, YW Huang, JS Park, WT Chen, Z Shi, JX Cheng, F Capasso CLEO: Applications and Technology, ATh4I. 2		2020
High Q-factor resonators and nanoantennas based on phonon polaritons in van der Waals materials M Tamagnone, M Meretska, K Chaudhary, CM Spagele, A Zhu, J Li, ... CLEO: QELS_Fundamental Science, FTh4N. 2		2020
Longitudinally variable polarization optics AH Dorrah, NA Rubin, A Zaidi, M Tamagnone, F Capasso 2020 Conference on Lasers and Electro-Optics (CLEO), 1-2	1	2020
Total Angular Momentum Management of Three Dimensional Vortices with a Single Plate AH Dorrah, NA Rubin, A Zaidi, M Tamagnone, F Capasso CLEO: QELS_Fundamental Science, FM2B. 1		2020
Designer Structured Light with Metasurfaces F Capasso CLEO: Science and Innovations, JM3N. 1		2020
Metasurface-based external cavity diode laser CM Spägele, M Tamagnone, D Kazakov, M Piccardo, F Capasso 2020 Conference on Lasers and Electro-Optics (CLEO), 1-2		2020
Shaping harmonic frequency combs in ring injection lasers by defect engineering D Kazakov, M Piccardo, M Beiser, N Opacak, Y Wang, A Belyanin, ... CLEO: Science and Innovations, STh3E. 8	1	2020
Controlling dispersion in multifunctional metasurfaces J Sisler, WT Chen, AY Zhu, F Capasso APL Photonics 5 (5), 056107	7	2020
Hot-carrier extraction in nanowire-nanoantenna photovoltaic devices IJ Chen, S Limpert, W Metaferia, C Thelander, L Samuelson, F Capasso, ... Nano letters 20 (6), 4064-4072	11	2020

TITLE	CITED BY	YEAR
Super-dispersive off-axis meta-lenses for high resolution compact spectroscopy M Khorasaninejad, F Capasso, WT Chen, J Oh US Patent 10,634,557	1	2020
Imaging with high-efficiency and multifunctional metalenses (Conference Presentation) WT Chen, F Capasso Image Sensing Technologies: Materials, Devices, Systems, and Applications …		2020
Immersion meta-lens at visible wavelengths for diffraction-limited imaging WT Chen, AY Zhu, M Khorasaninejad, SHI Zhujun, F Capasso, V Sanjeev US Patent App. 16/499,838		2020
Matrix Fourier optics and compact full-Stokes polarization imaging with metasurfaces (Conference Presentation) NA Rubin, G D'Aversa, P Chevalier, Z Shi, WT Chen, F Capasso Nanophotonics VIII 11345, 1134502		2020
Recent advances in metasurface flat optics (Conference Presentation) F Capasso Photonic and Phononic Properties of Engineered Nanostructures X 11289, 1128901		2020
Ultrahigh Angular Selectivity of Disorder-Engineered Metasurfaces M Haghtalab, M Tamagnone, AY Zhu, S Safavi-Naeini, F Capasso ACS Photonics 7 (4), 991-1000	3	2020
Ultrafast gain dynamics in quantum cascade lasers: new coherent phenomena and their applications (Conference Presentation) F Capasso Novel In-Plane Semiconductor Lasers XIX 11301, 1130115		2020
High purity twisted light from a metasurface solid state resonator H Sroor, YW Huang, B Sephton, D Naidoo, A Vallés, V Ginis, Q Zhan, ... Solid State Lasers XXIX: Technology and Devices 11259, 112590H		2020
Generation of arbitrary higher order Poincaré beams from a visible metasurface laser H Sroor, YW Huang, B Sephton, D Naidoo, A Valles, V Ginis, Q Zhan, ... Laser Resonators, Microresonators, and Beam Control XXII 11266, 112660L		2020
Inverse design of absorptive chiral metasurfaces (Conference Presentation) AY Zhu, Z Shi, WT Chen, YW Huang, CW Qiu, F Capasso Photonic and Phononic Properties of Engineered Nanostructures X 11289, 112890Q		2020
Stimulated Raman scattering imaging by an achromatic metalens (Conference Presentation) P Lin, WT Chen, KMA Yousef, AY Zhu, J Marchioni, J Wu, F Capasso, ... Advanced Chemical Microscopy for Life Science and Translational Medicine …		2020

TITLE	CITED BY	YEAR
Picosecond pulses from an actively mode-locked quantum cascade laser (Conference Presentation) B Schwarz, J Hillbrand, M Piccardo, AM Andrews, H Detz, H Schneider, ... Quantum Sensing and Nano Electronics and Photonics XVII 11288, 112881O		2020
Polarization-sensitive nano-optic endoscope (Conference Presentation) H Pahlevaninezhad, YW Huang, DC Adams, M Khorasaninejad, Z Shi, ... Endoscopic Microscopy XV 11214, 112140U		2020
In-water fiber-optic evanescent wave sensing in the mid-infrared P Chevalier, M Piccardo, F Capasso Photonic Instrumentation Engineering VII 11287, 1128711		2020
In-phase and anti-phase synchronization in a laser frequency comb J Hillbrand, D Auth, M Piccardo, N Opačak, E Gornik, G Strasser, ... Physical review letters 124 (2), 023901	28	2020
Widely tunable compact terahertz gas lasers (vol 366, pg 856, 2019) P Chevalier, A Amirzhan, F Wang, M Piccardo, SG Johnson, F Capasso, ... Science 368 (6491)		2020
Purity and efficiency of hybrid orbital angular momentum-generating metasurfaces B Sephton, YW Huang, A Ambrosio, CW Qiu, A Vallés, T Omatsu, ... Journal of Nanophotonics 14 (1), 016005	5	2020
Active metasurfaces for advanced wavefront engineering and waveguiding F Capasso, A Boltasseva, M Brongersma, M Loncar, N Engheta, N Yu, ... HARVARD COLL CAMBRIDGE MA CAMBRIDGE United States	1	2019
Widely tunable compact terahertz gas lasers P Chevalier, A Amirzhan, F Wang, M Piccardo, SG Johnson, F Capasso, ... Science 366 (6467), 856-860	27	2019
All-glass, large metalens at visible wavelength using deep-ultraviolet projection lithography JS Park, S Zhang, A She, WT Chen, P Lin, KMA Yousef, JX Cheng, ... Nano letters 19 (12), 8673-8682	58	2019
Optical devices including rotary variable optical elements AJ She, S Zhang, F Capasso US Patent App. 16/479,204		2019
Compact single-shot metalens depth sensors inspired by eyes of jumping spiders Q Guo, Z Shi, YW Huang, E Alexander, CW Qiu, F Capasso, T Zickler Proceedings of the National Academy of Sciences 116 (46), 22959-22965	32	2019
Dielectric multi-momentum meta-transformer in the visible L Jin, YW Huang, Z Jin, RC Devlin, Z Dong, S Mei, M Jiang, WT Chen, ... Nature communications 10 (1), 1-6	32	2019

TITLE	CITED BY	YEAR
Using the belinfante momentum to retrieve the polarization state of light inside waveguides V Ginis, L Liu, A She, F Capasso Scientific reports 9 (1), 1-6	3	2019
Polariton nanophotonics using phase-change materials K Chaudhary, M Tamagnone, X Yin, CM Spägele, SL Oscurato, J Li, ... Nature communications 10 (1), 1-6	39	2019
Multifunctional metasurfaces with tailored dispersion WT Chen, J Sisler, AY Zhu, F Capasso Frontiers in Optics, JTu3A. 73		2019
Engineering metasurface dispersion for achromatic optics WT Chen, AY Zhu, F Capasso Laser Science, LTu5E. 2		2019
Diamond mirrors for high-power lasers H Atikian, N Sinclair, P Latawiec, X Xiong, S Meesala, S Gauthier, D Wintz, ... arXiv preprint arXiv:1909.06458	6	2019
Metasurfaces for polarization sensing and imaging (Conference Presentation) NA Rubin, P Chevalier, WT Chen, Z Shi, F Capasso Polarization Science and Remote Sensing IX 11132, 111320T		2019
Lighting device including a collimating metalens F Aieta, F Capasso US Patent 10,408,419	7	2019
Achromatic metalens and metalens with reverse chromatic dispersion M Khorasaninejad, SHI Zhujun, AY Zhu, WT Chen, V Sanjeev, F Capasso US Patent 10,408,416	5	2019
Multifunctional flat optics (Conference Presentation) F Capasso Metamaterials, Metadevices, and Metasystems 2019 11080, 1108025		2019
Three-dimensional measurement of the Helicity-dependent forces on a Mie particle (Conference Presentation) L Liu, A Di Donato, V Ginis, S Kheifets, F Capasso Optical Trapping and Optical Micromanipulation XVI 11083, 110831X		2019
Absorptive chiral metasurfaces designed by topological optimization (Conference Presentation) AY Zhu, Z Shi, W Chen, Y Huang, CW Qiu, F Capasso Metamaterials, Metadevices, and Metasystems 2019 11080, 110800P		2019
Radio frequency transmitter based on a laser frequency comb (vol 116, pg 9181, 2019) M Piccardo, M Tamagnone, B Schwarz, P Chevalier, NA Rubin, Y Wang, ... PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED		2019

TITLE	CITED BY	YEAR
STATES OF …		
Metasurface flat optics F Capasso ABSTRACTS OF PAPERS OF THE AMERICAN CHEMICAL SOCIETY 258		2019
Electrically-stretchable planar optical elements using dielectric elastomer actuators AJ She, S Zhang, S Shian, DR Clarke, F Capasso US Patent App. 16/307,935		2019
High performance visible wavelength meta-axicons for generating bessel beams WT Chen, M Khorasaninejad, AY Zhu, J Oh, RC Devlin, MAA Zaidi, ... US Patent App. 16/332,348	3	2019
Low Voltage Imaging of Quantum Materials Imaging the Surface Plasmon Polaritons in Chalcogenides C Ozsoy-Keskinbora, K Chaudhary, M Tamagnone, Y Ou, A Devarakonda, ... Microscopy and Microanalysis 25 (S2), 460-461		2019
Chiral Nanophotonics F Capasso HARVARD COLLEGE PRESIDENT and FELLOWS OF CAMBRIDGE United States		2019
Matrix Fourier optics enables a compact full-Stokes polarization camera NA Rubin, G D'Aversa, P Chevalier, Z Shi, WT Chen, F Capasso Science 365 (6448)	138	2019
Compact aberration-corrected spectrometers in the visible using dispersion-tailored metasurfaces AY Zhu, WT Chen, J Sisler, KMA Yousef, E Lee, YW Huang, CW Qiu, ... Advanced Optical Materials 7 (14), 1801144	26	2019
Microwave or terahertz communication based on quantum cascade laser frequency comb generator M PICCARDO, D KAZAKOV, F CAPASSO, P CHEVALIER		2019
Frequency-modulated combs obey a variational principle M Piccardo, P Chevalier, B Schwarz, D Kazakov, Y Wang, A Belyanin, ... Physical review letters 122 (25), 253901	15	2019
Hybrid metasurface-refractive lenses WT Chen, Y Ibrahim, AY Zhu, F Capasso Optical Fabrication and Testing, OT2A. 4	1	2019
Meta-lenses for sub-wavelength resolution imaging F Capasso, WT Chen, RC Devlin, M Khorasaninejad, J Oh, ... US Patent App. 16/091,104	13	2019
Excitation of strong localized surface plasmon resonances in highly metallic titanium nitride nano-antennas for stable performance at elevated	8	2019

TITLE	CITED BY	YEAR
temperatures MN Gadalla, AS Greenspon, M Tamagnone, F Capasso, EL Hu ACS Applied Nano Materials 2 (6), 3444-3452		
Polarization control and sensing with metasurfaces (Conference Presentation) NA Rubin, G D'Aversa, WT Chen, Z Shi, F Capasso Image Sensing Technologies: Materials, Devices, Systems, and Applications VI …		2019
Imaging performance of polarization-insensitive metalenses M Decker, WT Chen, T Nobis, AY Zhu, M Khorasaninejad, Z Bharwani, ... Acs Photonics 6 (6), 1493-1499	35	2019
Radio frequency transmitter based on a laser frequency comb M Piccardo, M Tamagnone, B Schwarz, P Chevalier, NA Rubin, Y Wang, ... Proceedings of the National Academy of Sciences 116 (19), 9181-9185	14	2019
High quality factor polariton resonators using van der Waals materials M Tamagnone, K Chaudhary, CM Spaegele, A Zhu, M Meretska, J Li, ... arXiv preprint arXiv:1905.02177	6	2019
Large-area, single material metalens in the visible: An approach for mass-production using conventional semiconductor manufacturing techniques JS Park, S Zhang, A She, WT Chen, KMA Yousef, F Capasso CLEO: Science and Innovations, STh1O. 5	2	2019
Self-locked Adiabatic Lasers Solve a Global Optimization Problem M Piccardo, P Chevalier, B Schwarz, D Kazakov, Y Wang, A Belyanin, ... CLEO: QELS_Fundamental Science, FM1D. 3		2019
Dispersion-engineered metasurfaces for aberration-corrected spectroscopy AY Zhu, WT Chen, J Sisler, KMA Yousef, E Lee, YW Huang, CW Qiu, ... CLEO: Science and Innovations, SF3J. 5		2019
Polariton Meta-Optics with Phase-Change Materials M Tamagnone, K Chaudhary, X Yin, C Spagele, J Li, S Oscurato, ... CLEO: QELS_Fundamental Science, FM3C. 2		2019
Reconfigurable mid-infrared optical elements using phase change materials X Yin, CM Spägele, M Tamagnone, K Chaudhary, SL Oscurato, J Li, R Li, ... 2019 Conference on Lasers and Electro-Optics (CLEO), 1-2	1	2019
Light and microwaves in laser frequency combs: an interplay of spatiotemporal phenomena M Piccardo, D Kazakov, B Schwarz, P Chevalier, A Amirzhan, J Hillbrand, ... IEEE Journal of Selected Topics in Quantum Electronics 25 (6), 1-12	8	2019
Engineering phonon polaritons in van der Waals heterostructures to enhance in-plane optical anisotropy K Chaudhary, M Tamagnone, M Rezaee, DK Bediako, A Ambrosio, P Kim, ... Science advances 5 (4), eaau7171	32	2019

TITLE	CITED BY	YEAR
Concepts in quantum state tomography and classical implementation with intense light: a tutorial E Toninelli, B Ndagano, A Vallés, B Sephton, I Nape, A Ambrosio, ... Advances in Optics and Photonics 11 (1), 67-134	55	2019
Characterizing the frequency chirp of pulsed DFB QCLs using a gas-filled Fabry-Perot etalon (Conference Presentation) P Chevalier, M Piccardo, A Amirzhan, F Wang, S Johnson, H Everitt, ... Novel In-Plane Semiconductor Lasers XVIII 10939, 109391M		2019
Metasurface aberration correctors for broadband achromatic refractive optics (Conference Presentation) WT Chen, F Capasso High Contrast Metastructures VIII 10928, 109280C		2019
Parallel polarization state generation and measurement with a single metasurface (Conference Presentation) NA Rubin, A Zaidi, M Juhl, R Li, B Mueller, RC Devlin, K Leósson, ... High Contrast Metastructures VIII 10928, 109280G		2019
High-resolution endoscopic optical coherence tomography of airways (Conference Presentation) H Pahlevaninezhad, M Khorasaninejad, YW Huang, Z Shi, LP Hariri, ... Endoscopic Microscopy XIV 10854, 108540T		2019
Direct thermo-optical tuning of silicon photonic devices (Conference Presentation) P Chevalier, L Koehler, E Shim, B Desiatov, A Shams-Ansari, M Piccardo, ... Silicon Photonics XIV 10923, 1092309		2019
Nano-optic endoscope for high-resolution endoscopic OCT (Conference Presentation) H Pahlevaninezhad, M Khorasaninejad, YW Huang, Z Shi, LP Hariri, ... Optical Coherence Tomography and Coherence Domain Optical Methods in …		2019
Versatile total angular momentum generation using cascaded J-plates YW Huang, NA Rubin, A Ambrosio, Z Shi, RC Devlin, CW Qiu, F Capasso Optics express 27 (5), 7469-7484	19	2019
Substrate-formed metasurface devices AJ She, S Zhang, F Capasso US Patent App. 16/040,488		2019
Highly efficient data representation of dense polygonal structures AJ She, S Zhang, F Capasso US Patent App. 16/040,363	2	2019
Laser radio transmitter M Piccardo, M Tamagnone, B Schwarz, P Chevalier, NA Rubin, Y Wang, ... arXiv preprint arXiv:1901.07054	2	2019

TITLE	CITED BY	YEAR
A broadband achromatic polarization-insensitive metalens consisting of anisotropic nanostructures WT Chen, AY Zhu, J Sisler, Z Bharwani, F Capasso Nature communications 10 (1), 1-7	158	2019
From quantum cascade lasers to flat optics for the twenty-first century F Capasso From quantum cascade lasers to flat optics for the twenty-first century, 1-98		2019
Metallic refractory titanium nitride: An alternative stable metal with tunable optical properties for high temperature plasmonic applications M Gadalla, A Greenspon, M Tamagnone, F Capasso, E Hu APS March Meeting Abstracts 2019, R04. 003	2	2019
Surface Plasmon Polaritons in Chalcogenides C Ozsoy Keskinbora, K Chaudhary, M Tamagnone, Y Ou, A Devarakonda, ... APS March Meeting Abstracts 2019, X11. 009		2019
A new high-efficiency regime for gas-phase terahertz lasers: Experiment and ab-initio theory F Wang, P Chevalier, A Amirzhan, M Piccardo, F Capasso, S Johnson, ... APS March Meeting Abstracts 2019, F23. 010		2019
Mitigating chromatic dispersion with hybrid optical metasurfaces R Sawant, P Bhumkar, AY Zhu, P Ni, F Capasso, P Genevet Advanced Materials 31 (3), 1805555	28	2019
Direct thermo-optical tuning of silicon microresonators for the mid-infrared L Koehler, P Chevalier, E Shim, B Desiatov, A Shams-Ansari, M Piccardo, ... Optics express 26 (26), 34965-34976	6	2018
Inverse design of large-area metasurfaces R Pestourie, C Pérez-Arancibia, Z Lin, W Shin, F Capasso, SG Johnson Optics express 26 (26), 33732-33747	103	2018
Atomic layer deposition process for fabricating dielectric metasurfaces for wavelengths in the visible spectrum RC Devlin, M Khorasaninejad, F Capasso, H Park, AA High US Patent App. 15/778,208	5	2018
Broadband achromatic metasurface-refractive optics WT Chen, AY Zhu, J Sisler, YW Huang, KMA Yousef, E Lee, CW Qiu, ... Nano letters 18 (12), 7801-7808	78	2018
Nanowire-based solar cell structure L Samuelson, M Magnusson, F Capasso US Patent 10,128,394		2018
QCL and ICL frequency combs for miniaturized sensors (Conference Presentation) B Schwarz, J Hillbrand, M Beiser, M Piccardo, P Chevalier, A Schade, ... Infrared Remote Sensing and Instrumentation XXVI 10765, 107650R		2018

TITLE	CITED BY	YEAR
Versatile total angular momentum generation using cascaded J-plates (Conference Presentation) YW Huang, NA Rubin, A Ambrosio, RC Devlin, CW Qiu, F Capasso Metamaterials, Metadevices, and Metasystems 2018 10719, 107192O		2018
Broadband dispersion-compensated and chiral meta-holograms M Khorasaninejad, F Capasso, A Ambrosio US Patent App. 15/755,519	1	2018
Solid-immersion metalenses for infrared focal plane arrays S Zhang, A Soibel, SA Keo, D Wilson, SB Rafol, DZ Ting, A She, ... Applied Physics Letters 113 (11), 111104	36	2018
Metasurface flat optics: Unifying semiconductor manufacturing and lens making (Conference Presentation) F Capasso Metamaterials, Metadevices, and Metasystems 2018 10719, 1071902	1	2018
Nano-optic endoscope for high-resolution optical coherence tomography in vivo H Pahlevaninezhad, M Khorasaninejad, YW Huang, Z Shi, LP Hariri, ... Nature photonics 12 (9), 540-547	117	2018
Polarization state generation and measurement with a single metasurface NA Rubin, A Zaidi, M Juhl, RP Li, JPB Mueller, RC Devlin, K Leósson, ... Optics express 26 (17), 21455-21478	56	2018
Radiative thermal runaway due to negative-differential thermal emission across a solid-solid phase transition DM Bierman, A Lenert, MA Kats, Y Zhou, S Zhang, M De La Ossa, ... Physical Review Applied 10 (2), 021001	19	2018
New nano-photonics based on vdW materials A Ambrosio, M Tamagnone, K Chaudhary, LA Jauregui, P Kim, W Wilson, ... 2018 Conference on Lasers and Electro-Optics Pacific Rim (CLEO-PR), 1-2		2018
Widely tunable harmonic frequency comb in a quantum cascade laser M Piccardo, P Chevalier, S Anand, Y Wang, D Kazakov, EA Mejia, F Xie, ... Applied Physics Letters 113 (3), 031104	9	2018
Negative Refraction Based on Guided-Mode Assisted Meta-Gratings M Hauhtalab, M Tamagnone, S Safavi-Naeini, F Capasso 2018 IEEE International Symposium on Antennas and Propagation & USNC/URSI …		2018
Selective excitation and imaging of ultraslow phonon polaritons in thin hexagonal boron nitride crystals A Ambrosio, M Tamagnone, K Chaudhary, LA Jauregui, P Kim, WL Wilson, ... Light: Science & Applications 7 (1), 1-9	55	2018
Ultra-confined mid-infrared resonant phonon polaritons in van der Waals nanostructures M Tamagnone, A Ambrosio, K Chaudhary, LA Jauregui, P Kim, WL Wilson, ...	65	2018

TITLE	CITED BY	YEAR
Science advances 4 (6), eaat7189		
The future and promise of flat optics: a personal perspective F Capasso Nanophotonics 7 (6), 953-957	66	2018
In-water fiber-optic evanescent wave sensing with quantum cascade lasers P Chevalier, M Piccardo, GM de Naurois, I Gabay, A Katzir, F Capasso Sensors and Actuators B: Chemical 262, 195-199	11	2018
Three-dimensional measurement of the helicity-dependent forces on a mie particle L Liu, A Di Donato, V Ginis, S Kheifets, A Amirzhan, F Capasso Physical review letters 120 (22), 223901	18	2018
Wide field-of-view waveguide displays enabled by polarization-dependent metagratings Z Shi, WT Chen, F Capasso Digital Optics for Immersive Displays 10676, 1067615	18	2018
Polarization-dependent metasurfaces for 2D/3D switchable displays Z Shi, F Capasso Digital Optics for Immersive Displays 10676, 1067618	2	2018
Special Issue on “Ultra-capacity Metasurfaces with Low Dimension and High Efficiency” CW Qiu, S Zhang, F Capasso, Y Kivshar ACS Photonics 5 (5), 1640-1642	8	2018
Giant intrinsic chiro-optical activity in planar nanostructures AY Zhu, WT Chen, A Zaidi, YW Huang, M Khorasaninejad, V Sanjeev, ... 2018 Conference on Lasers and Electro-Optics (CLEO), 1-2		2018
Waveguide Polarimetry using Belinfante Forces V Ginis, L Liu, A She, F Capasso 2018 Conference on Lasers and Electro-Optics (CLEO), 1-2	1	2018
High-resolution optical coherence tomography in vivo using a nano-optic endoscope H Pahlevaninezhad, M Khorasaninejad, YW Huang, Z Shi, LP Hariri, ... CLEO: Applications and Technology, AM1J. 6		2018
Metasurfaces with wavelength-controlled functions Z Shi, M Khorasaninejad, YW Huang, C Roques-Carmes, AY Zhu, ... CLEO: Applications and Technology, JW2A. 101	1	2018
Measuring the spin-dependent lateral force in evanescent fields L Liu, S Kheifets, V Ginis, A Di Donato, A Amirzhan, F Capasso CLEO: QELS_Fundamental Science, FF3E. 6	1	2018
Imaging of Ultra-Confined Phonon Polaritons in Hexagonal Boron Nitride on Gold A Ambrosio, M Tamagnone, K Chaudhary, LA Jauregui, P Kim, WL Wilson, ...		2018

TITLE	CITED BY	YEAR
CLEO: QELS_Fundamental Science, FTh1K. 6		
Dispersion engineering of metasurfaces and its applications in the visible WT Chen, AY Zhu, J Sisler, V Sanjeev, E Lee, F Capasso CLEO: QELS_Fundamental Science, FM3J. 1		2018
Tuning the multimode dynamics of Fabry-Perot quantum cascade laser devices with optical injection P Chevalier, M Piccardo, S Anand, EA Mejia, Y Wang, TS Mansuripur, ... 2018 Conference on Lasers and Electro-Optics (CLEO), 1-2		2018
Shaping harmonic frequency combs in quantum cascade lasers M Piccardo, P Chevalier, B Schwarz, Y Wang, D Kazakov, NA Rubin, ... CLEO: QELS_Fundamental Science, FW3E. 6		2018
Self-Aligned Nano-Transfer of Metasurface Polarimeter to an Optical Fiber Tip using UV-Curable Hybrid Polymer M Juhl, C Mendoza, JPB Mueller, F Capasso, K Leósson 2018 Conference on Lasers and Electro-Optics (CLEO), 1-2		2018
High-efficiency chiral meta-lens B Groever, NA Rubin, JPB Mueller, RC Devlin, F Capasso Scientific reports 8 (1), 1-6	16	2018
Ultra-thin optical coatings and devices and methods of using ultra-thin optical coatings MA Kats, R Blanchard, P Genevet, F Capasso US Patent 9,952,096	29	2018
Time-dependent population inversion gratings in laser frequency combs M Piccardo, D Kazakov, NA Rubin, P Chevalier, Y Wang, F Xie, K Lascola, ... Optica 5 (4), 475-478	27	2018
Substrate aberration and correction for meta-lens imaging: an analytical approach B Groever, C Roques-Carmes, SJ Byrnes, F Capasso Applied optics 57 (12), 2973-2980	9	2018
Topology-optimized multilayered metaoptics Z Lin, B Groever, F Capasso, AW Rodriguez, M Lončar Physical Review Applied 9 (4), 044030	122	2018
The harmonic state of quantum cascade lasers: origin, control, and prospective applications M Piccardo, P Chevalier, TS Mansuripur, D Kazakov, Y Wang, NA Rubin, ... Optics express 26 (8), 9464-9483	19	2018
Collimating metalenses and technologies incorporating the same S Byrnes, F Aieta, F Capasso, A Lenef US Patent 9,939,129	30	2018

TITLE	CITED BY	YEAR
Parallel polarization state generation and measurement with a single metasurface (Conference Presentation)(Withdrawal Notice) NA Rubin, A Zaidi, RP Li, M Juhl, JPB Mueller, RC Devlin, K Leosson, ... Proc. SPIE 10539, 1053911		2018
Flat optics: from high-performance metalenses to structured light (Conference Presentation) F Capasso Smart Photonic and Optoelectronic Integrated Circuits XX 10536, 1053607		2018
Polarization-selective scattering antenna arrays based polarimeter JPB Mueller, K Leosson, F Capasso US Patent App. 15/556,995	13	2018
Focus Point on Complex Photonics-Measurements, Theory and Simulations for Extreme Light-Matter Interactions L Pattelli, D Wiersma, M Brongersma, F Capasso The European Physical Journal Plus 133 (3), 114		2018
A broadband achromatic metalens for focusing and imaging in the visible WT Chen, AY Zhu, V Sanjeev, M Khorasaninejad, Z Shi, E Lee, ... Nature nanotechnology 13 (3), 220-226	668	2018
Single-layer metasurface with controllable multiwavelength functions Z Shi, M Khorasaninejad, YW Huang, C Roques-Carmes, AY Zhu, ... Nano letters 18 (4), 2420-2427	121	2018
Method and system for polarization state generation AJ She, F Capasso US Patent App. 15/551,268		2018
Watt-level widely tunable single-mode emission by injection-locking of a multimode Fabry-Perot quantum cascade laser P Chevalier, M Piccardo, S Anand, EA Mejia, Y Wang, TS Mansuripur, ... Applied Physics Letters 112 (6), 061109	4	2018
Giant intrinsic chiro-optical activity in planar dielectric nanostructures AY Zhu, WT Chen, A Zaidi, YW Huang, M Khorasaninejad, V Sanjeev, ... Light: Science & Applications 7 (2), 17158-17158	114	2018
Adaptive metalenses with simultaneous electrical control of focal length, astigmatism, and shift A She, S Zhang, S Shian, DR Clarke, F Capasso Science advances 4 (2), eaap9957	184	2018
Dynamic metasurface lens based on MEMS technology T Roy, S Zhang, IW Jung, M Troccoli, F Capasso, D Lopez Apl Photonics 3 (2), 021302	95	2018
Guided modes of anisotropic van der waals materials investigated by near-field scanning optical microscopy D Wintz, K Chaudhary, K Wang, LA Jauregui, A Ambrosio, M Tamagnone, ...	11	2018

TITLE	CITED BY	YEAR
ACS Photonics 5 (4), 1196-1201		
Mid-infrared two-photon absorption in an extended-wavelength InGaAs photodetector M Piccardo, NA Rubin, L Meadowcroft, P Chevalier, H Yuan, J Kimchi, ... Applied Physics Letters 112 (4), 041106	20	2018
Large area metalenses: design, characterization, and mass manufacturing A She, S Zhang, S Shian, DR Clarke, F Capasso Optics express 26 (2), 1573-1585	112	2018
Quantum state tomography on spatial modes with intense light: concept and implementation E Toninelli, B Ndagano, A Vallés, B Sephton, I Nape, A Ambrosio, ... University of Glasgow		2017
Mid infrared two-photon absorption in a room-temperature extended-wavelength InGaAs photodetector M Piccardo, NA Rubin, L Meadowcroft, P Chevalier, H Yuan, J Kimchi, ... arXiv preprint arXiv:1712.03580		2017
Metalenses: Versatile multifunctional photonic components M Khorasaninejad, F Capasso Science 358 (6367)	407	2017
Self-starting harmonic frequency comb generation in a quantum cascade laser D Kazakov, M Piccardo, Y Wang, P Chevalier, TS Mansuripur, F Xie, ... Nature Photonics 11 (12), 789-792	52	2017
Phase and dispersion engineering of metalenses: broadband achromatic focusing and imaging in the visible WT Chen, AY Zhu, V Sanjeev, M Khorasaninejad, Z Shi, E Lee, ... arXiv preprint arXiv:1711.09343	5	2017
Arbitrary spin-to–orbital angular momentum conversion of light RC Devlin, A Ambrosio, NA Rubin, JPB Mueller, F Capasso Science 358 (6365), 896-901	432	2017
Performance characteristics of 4-port in-plane and out-of-plane in-line metasurface polarimeters M Juhl, C Mendoza, JPB Mueller, F Capasso, K Leosson Optics Express 25 (23), 28697-28709	16	2017
Optical properties of graphene oxide and reduced graphene oxide determined by spectroscopic ellipsometry S Schöche, N Hong, M Khorasaninejad, A Ambrosio, E Orabona, ... Applied Surface Science 421, 778-782	66	2017
InP/InAsP nanowire-based spatially separate absorption and multiplication avalanche photodetectors V Jain, M Heurlin, E Barrigon, L Bosco, A Nowzari, S Shroff, V Boix, ...	20	2017

TITLE	CITED BY	YEAR
ACS Photonics 4 (11), 2693-2698		
Elliptical orbits of microspheres in an evanescent field L Liu, S Kheifets, V Ginis, A Di Donato, F Capasso Proceedings of the National Academy of Sciences 114 (42), 11087-11091	11	2017
Mechanical detection and imaging of hyperbolic phonon polaritons in hexagonal boron nitride A Ambrosio, LA Jauregui, S Dai, K Chaudhary, M Tamagnone, MM Fogler, ... ACS nano 11 (9), 8741-8746	36	2017
Giant higher-order multipoles enable strong intrinsic chirality in planar nanostructures AY Zhu, WT Chen, A Zaidi, YW Huang, M Khorasaninejad, V Sanjeev, ... Laser Science, JW3A. 92	2	2017
Dispersion-tailored Metasurfaces and Meta-lenses WT Chen, V Sanjeev, AY Zhu, Z Shi, M Khorasaninejad, F Capasso Frontiers in Optics, JW3A. 102		2017
Planar Optics with High Numerical Apertures at Visible Wavelengths WT Chen, AY Zhu, M Khorasaninejad, Z Shi, F Capasso Frontiers in Optics, JW3A. 80		2017
Meta-lens doublet in the visible region B Groever, WT Chen, F Capasso Nano letters 17 (8), 4902-4907	198	2017
Large area electrically tunable lenses based on metasurfaces and dielectric elastomer actuators A She, S Zhang, S Shian, DR Clarke, F Capasso arXiv preprint arXiv:1708.01972	8	2017
Electromechanically active flat optical devices T Roy, S Zhang, IW Jung, D Lopez, G Bimonte, R Decca International Conference on Optical MEMS and Nanophotonics (OMN)		2017
High Performance Flat Optics in the Visible F Capasso MDPI AG		2017
Epsilon-near-zero substrate engineering for ultrathin-film perfect absorbers J Rensberg, Y Zhou, S Richter, C Wan, S Zhang, P Schöppe, ... Physical Review Applied 8 (1), 014009	57	2017
Packaged inline metasurface polarimeters with in-plane and out-of-plane detection M Juhl, C Mendoza, JPB Mueller, F Capasso, K Leósson The European Conference on Lasers and Electro-Optics, CK_4_2		2017

TITLE	CITED BY	YEAR
Leonid Keldysh F Capasso, P Corkum, O Kocharovskaya, L Pitaevskii, MV Sadovskii Physics Today 70 (6), 75-76	1	2017
Watt-level continuous-wave emission from a bifunctional quantum cascade laser/detector B Schwarz, CA Wang, L Missaggia, TS Mansuripur, P Chevalier, ... ACS photonics 4 (5), 1225-1231	33	2017
New microscopy technique based on position localization of scattering particles SL Oscurato, F Borbone, RC Devlin, F Capasso, P Maddalena, ... Optics express 25 (10), 11530-11549	5	2017
Large area electrically tunable metasurface lenses A She, S Zhang, S Shian, D Clarke, F Capasso CLEO: QELS_Fundamental Science, FTu3G. 4	1	2017
Achromatic Metalens over 60 nm Bandwidth in the Visible Z Shi, M Khorasaninejad, AY Zhu, WT Chen, V Sanjeev, A Zaidi, ... CLEO: QELS_Fundamental Science, FM1H. 2	3	2017
Metaoptics technology in the visible F Capasso CLEO: QELS_Fundamental Science, JW1G. 2		2017
Harmonically mode-locked quantum cascade lasers for mid-infrared frequency comb generation M Piccardo, D Kazakov, P Chevalier, TS Mansuripur, F Xie, K Lascola, ... CLEO: QELS_Fundamental Science, FW4D. 1		2017
Immersion meta-lenses at visible wavelengths for nanoscale imaging WT Chen, AY Zhu, M Khorasaninejad, Z Shi, V Sanjeev, F Capasso Nano letters 17 (5), 3188-3194	116	2017
Generation of wavelength-independent subwavelength Bessel beams using metasurfaces WT Chen, M Khorasaninejad, AY Zhu, J Oh, RC Devlin, A Zaidi, ... Light: Science & Applications 6 (5), e16259-e16259	130	2017
Scalable, ultra-resistant structural colors based on network metamaterials H Galinski, G Favraud, H Dong, JST Gongora, G Favaro, M Döbeli, ... Light: Science & Applications 6 (5), e16233-e16233	62	2017
Continuous-wave operation of MOVPE grown bi-functional quantum cascade laser/detectors (Conference Presentation) B Schwarz, CA Wang, T Mansuripur, MK Connors, LJ Missaggia, ... Quantum Sensing and Nano Electronics and Photonics XIV 10111, 101112E		2017
Planar dielectric metasurfaces for immersion optics (Conference Presentation) WT Chen, AY Zhu, M Khorasaninejad, Z Shi, J Oh, RC Devlin, F Capasso		2017

TITLE	CITED BY	YEAR
Photonic and Phononic Properties of Engineered Nanostructures VII 10112, 101120M		
Planar optics at visible wavelengths based on titanium dioxide (Conference Presentation) M Khorasaninejad, WT Chen, AY Zhu, J Oh, RC Devlin, ... High Contrast Metastructures VI 10113, 101130G		2017
Observation of nanoscale refractive index contrast via photoinduced force microscopy A Ambrosio, RC Devlin, F Capasso, WL Wilson ACS Photonics 4 (4), 846-851	25	2017
Watt-Level Continuous-Wave Emission from a Bi-Functional Quantum Cascade Laser/Detector CA Wang, B Schwarz, L Missaggia, TS Mansuripur, P Chevalier, ... MIT Lincoln Laboratory Lexington United States		2017
Sensitivity of heterointerfaces on emission wavelength of quantum cascade lasers CA Wang, B Schwarz, DF Siriani, MK Connors, LJ Missaggia, DR Calawa, ... Journal of Crystal Growth 464, 215-220	17	2017
Metasurface polarization optics: independent phase control of arbitrary orthogonal states of polarization JPB Mueller, NA Rubin, RC Devlin, B Groever, F Capasso Physical Review Letters 118 (11), 113901	606	2017
Achromatic metalens over 60 nm bandwidth in the visible and metalens with reverse chromatic dispersion M Khorasaninejad, Z Shi, AY Zhu, WT Chen, V Sanjeev, A Zaidi, ... Nano letters 17 (3), 1819-1824	317	2017
MOVPE growth of LWIR AlInAs/GaInAs/InP quantum cascade lasers: Impact of growth and material quality on laser performance CA Wang, B Schwarz, DF Siriani, LJ Missaggia, MK Connors, ... IEEE Journal of Selected Topics in Quantum Electronics 23 (6), 1-13	12	2017
Controlling the total angular momentum of light and spin to orbital angular momentum conversion in metasurfaces R Devlin, A Ambrosio, N Rubin, B Mueller, F Capasso APS March Meeting Abstracts 2017, R34. 009		2017
Ultra-compact visible chiral spectrometer with meta-lenses AY Zhu, WT Chen, M Khorasaninejad, J Oh, A Zaidi, I Mishra, RC Devlin, ... Apl Photonics 2 (3), 036103	69	2017
Light manipulation in metallic nanowire networks with functional connectivity H Galinski, A Fratalocchi, M Döbeli, F Capasso Advanced Optical Materials 5 (5), 1600580	12	2017
Spin-to-orbital angular momentum conversion in dielectric metasurfaces: erratum	4	2017

TITLE	CITED BY	YEAR
RC Devlin, A Ambrosio, D Wintz, SL Oscurato, AY Zhu, M Khorasaninejad, ... Optics express 25 (4), 4239-4239		
Bias-dependent spectral tuning in InP nanowire-based photodetectors V Jain, M Heurlin, M Karimi, L Hussain, M Aghaeipour, A Nowzari, A Berg, ... Nanotechnology 28 (11), 114006	7	2017
High-Operating-Temperature Direct Ink Writing of Mesoscale Eutectic Architectures JW Boley, K Chaudhary, TJ Ober, M Khorasaninejad, WT Chen, ... Advanced Materials 29 (7), 1604778	26	2017
Recent advances in planar optics: from plasmonic to dielectric metasurfaces P Genevet, F Capasso, F Aieta, M Khorasaninejad, R Devlin Optica 4 (1), 139-152	662	2017
Anisotropic surface plasmon polariton generation using bimodal V-antenna based metastructures D Wintz, A Ambrosio, AY Zhu, P Genevet, F Capasso Acs Photonics 4 (1), 22-27	19	2017
Spin-to-orbital angular momentum conversion in dielectric metasurfaces RC Devlin, A Ambrosio, D Wintz, SL Oscurato, AY Zhu, M Khorasaninejad, ... Optics express 25 (1), 377-393	123	2017
MOVPE Growth of LWIR AlInAs/GaInAs/InP Quantum Cascade Lasers: Impact of Growth and Material Quality on Laser Performance TS Mansuripur, DR Calawa, D McNulty, M Nickerson, JP Donnelly, ...		2017
Publications Repository-Helmholtz-Zentrum Dresden-Rossendorf K Subramanian, J Zalucky, M Schubert, D Lucas, U Hampel Chemical Engineering & Technology 40 (11), 2044-2057		2017
Spin-to-orbital angular momentum conversion in dielectric metasurfaces: erratum SL OSCURATO, AY ZHU, M KHORASANINEJAD, J OH, P MADDALENA, ...		2017
Single-mode instability in standing-wave lasers: The quantum cascade laser as a self-pumped parametric oscillator TS Mansuripur, C Vernet, P Chevalier, G Aoust, B Schwarz, F Xie, ... Physical Review A 94 (6), 063807	57	2016
Polarization-insensitive metalenses at visible wavelengths M Khorasaninejad, AY Zhu, C Roques-Carmes, WT Chen, J Oh, I Mishra, ... Nano letters 16 (11), 7229-7234	361	2016
High Performance Quantum Cascade Lasers from the Mid-IR to the Far-IR and their impact on Science and Technology F Capasso Laser Applications Conference, JM1A. 1		2016

TITLE	CITED BY	YEAR
Generation of wavelength-independent and sub-wavelength Bessel beams by meta-axicons WT Chen, M Khorasaninejad, AY Zhu, J Oh, R Devlin, A Zaidi, F Capasso Frontiers in Optics, FTh5B. 6		2016
Compact hyper-spectrometer based on metasurfaces at visible wavelengths AY Zhu, WT Chen, M Khorasaninejad, J Oh, RC Devlin, I Mishra, ... Laser Science, JW4A. 65	2	2016
High Numerical Aperture Meta-lenses at Visible Wavelengths M Khorasaninejad, WT Chen, A Zhu, J Oh, C Roques-Carmes, I Mishra, ... Frontiers in Optics, JW4A. 63		2016
Sensitivity of quantum cascade laser performance to thickness and doping variations DF Siriani, CA Wang, JP Donnelly, MK Connors, LJ Missaggia, ... Journal of Crystal Growth 452, 263-267	2	2016
Visible wavelength planar metalenses based on titanium dioxide M Khorasaninejad, WT Chen, AY Zhu, J Oh, RC Devlin, ... IEEE Journal of Selected Topics in Quantum Electronics 23 (3), 43-58	55	2016
Subwavelength resolution imaging by ultra-thin meta-lens M Khorasaninejad, WT Chen, J Oh, AY Zhu, RC Devlin, F Capasso 2016 IEEE Photonics Conference (IPC), 390-391		2016
Broadband high-efficiency dielectric metasurfaces for the visible spectrum RC Devlin, M Khorasaninejad, WT Chen, J Oh, F Capasso Proceedings of the National Academy of Sciences 113 (38), 10473-10478	364	2016
Measurement of bound states in the continuum by a detector embedded in a photonic crystal R Gansch, S Kalchmair, P Genevet, T Zederbauer, H Detz, AM Andrews, ... Light: Science & Applications 5 (9), e16147-e16147	66	2016
Optical absorbers based on strong interference in ultra-thin films (Laser Photonics Rev. 10 (5)/2016) MA Kats, F Capasso Laser & Photonics Reviews 10 (5), 699-699	24	2016
Optical absorbers based on strong interference in ultra-thin films MA Kats, F Capasso Laser & Photonics Reviews 10 (5), 735-749	117	2016
High-quality-factor planar optical cavities with laterally stopped, slowed, or reversed light SJ Byrnes, M Khorasaninejad, F Capasso Optics express 24 (16), 18399-18407	8	2016
High efficiency near diffraction-limited mid-infrared flat lenses based on metasurface reflectarrays S Zhang, MH Kim, F Aieta, A She, T Mansuripur, I Gabay, ...	107	2016

TITLE	CITED BY	YEAR
Optics express 24 (16), 18024-18034		
In-situ measurement of bound states in the continuum in photonic crystal slabs (Conference Presentation) S Kalchmair, R Gansch, P Genevet, T Zederbauer, D MacFarland, H Detz, ... Photonic Crystal Materials and Devices XII 9885, 98850M		2016
The Quantum Cascade Laser as a Self-Pumped Parametric Oscillator CA Wang, LJ Missaggia, TS Mansuripur, C Vernet, P Chevalier, G Aoust, ... MIT Lincoln Laboratory Lexington United States		2016
Multispectral chiral imaging with a metalens M Khorasaninejad, WT Chen, AY Zhu, J Oh, RC Devlin, D Rousso, ... Nano letters 16 (7), 4595-4600	256	2016
Super-dispersive off-axis meta-lenses for compact high resolution spectroscopy M Khorasaninejad, WT Chen, J Oh, F Capasso Nano letters 16 (6), 3732-3737	143	2016
Broadband visible wavelength high efficiency meta-gratings AY Zhu, M Khorasaninejad, WT Chen, J Oh, RC Devlin, F Capasso 2016 Conference on Lasers and Electro-Optics (CLEO), 1-2	2	2016
Asymmetric surface plasmon wake generation with a metastructure AY Zhu, D Wintz, A Ambrosio, P Genevet, F Capasso 2016 Conference on Lasers and Electro-Optics (CLEO), 1-2		2016
Polarization-switchable visible vortex beams from a dielectric metasurface A Ambrosio, RC Devlin, D Wintz, SL Oscurato, AY Zhu, M Khorasaninejad, ... 2016 Conference on Lasers and Electro-Optics (CLEO), 1-2		2016
Microfluidic metasurface with high tunability for multifunction: Dispersion compensation and beam tracking L Yan, PC Wu, W Zhu, Q Song, W Zhang, DP Tsai, F Capasso, AQ Liu 2016 Conference on Lasers and Electro-Optics (CLEO), 1-2	3	2016
Optical characterization of van der Waals materials via near-field microscopy D Wintz, AY Zhu, K Wang, A Ambrosio, R Devlin, J Crossno, P Kim, ... 2016 Conference on Lasers and Electro-Optics (CLEO), 1-2		2016
Planar lens at visible: Metasurface versus refractive optics M Khorasaninejad, WT Chen, RC Devlin, J Oh, F Capasso CLEO: QELS_Fundamental Science, FTh1D. 4		2016
Metalenses at visible wavelengths: Diffraction-limited focusing and subwavelength resolution imaging M Khorasaninejad, WT Chen, RC Devlin, J Oh, AY Zhu, F Capasso Science 352 (6290), 1190-1194	1746	2016

TITLE	CITED BY	YEAR
Subfemtonewton force spectroscopy at the thermal limit in liquids L Liu, S Kheifets, V Ginis, F Capasso Physical review letters 116 (22), 228001	27	2016
Parallel polarization state generation A She, F Capasso Scientific reports 6 (1), 1-6	8	2016
Planar Lenses at Visible Wavelengths M Khorasaninejad, WT Chen, RC Devlin, J Oh, AY Zhu, F Capasso arXiv preprint arXiv:1605.02248	2	2016
Broadband and chiral binary dielectric meta-holograms M Khorasaninejad, A Ambrosio, P Kanhaiya, F Capasso Science advances 2 (5), e1501258	226	2016
High efficiency dielectric metasurfaces at visible wavelengths RC Devlin, M Khorasaninejad, WT Chen, J Oh, F Capasso arXiv preprint arXiv:1603.02735	19	2016
Designing large, high-efficiency, high-numerical-aperture, transmissive meta-lenses for visible light SJ Byrnes, A Lenef, F Aieta, F Capasso Optics express 24 (5), 5110-5124	98	2016
Designed Quasi-1D Potential Structures Realized in Compositionally Graded $InAs_{1-x}P_x$ Nanowires G Nylund, K Storm, S Lehmann, F Capasso, L Samuelson Nano letters 16 (2), 1017-1021	11	2016
Active optical metasurfaces based on defect-engineered phase-transition materials J Rensberg, S Zhang, Y Zhou, AS McLeod, C Schwarz, M Goldflam, M Liu, ... Nano letters 16 (2), 1050-1055	179	2016
Wavelength beam combining of quantum cascade laser arrays A Goyal, BG Lee, C Pfluegl, L Diehl, M Belkin, A Sanchez-Rubio, ... US Patent 9,246,310	33	2016
Ultracompact metasurface in-line polarimeter JPB Mueller, K Leosson, F Capasso Optica 3 (1), 42-47	148	2016
Dispersion-compensated meta-holograms based on detour phase M Khorasaninejad, A Ambrosio, P Kanhaiya, F Capasso arXiv preprint arXiv:1601.01415	3	2016
Electromechanical control of flat optical devices T Roy, S Zhang, IW Jung, F Capasso, D Lopez APS March Meeting Abstracts 2016, E23. 003		2016

TITLE	CITED BY	YEAR
Monolithic DFB QCL array aims at handheld IR spectral analysis MF Witinski, R Blanchard, C Pfluegl, L Diehl, B Li, B Pancy, D Vakhshoori, ... Laser Focus World 51 (11), 36-39	2	2015
Lateral chirality-sorting optical forces A Hayat, JPB Mueller, F Capasso Proceedings of the National Academy of Sciences 112 (43), 13190-13194	154	2015
Broadband multifunctional efficient meta-gratings based on dielectric waveguide phase shifters M Khorasaninejad, F Capasso Nano letters 15 (10), 6709-6715	55	2015
Metagratings for tunable unidirectional steering and focusing of surface plasmons (Presentation Recording) F Capasso, D Wintz, P Genevet, A Ambrosio, A Woolf Metamaterials, Metadevices, and Metasystems 2015 9544, 95442E		2015
Controlled steering and focusing of Surface Plasmons with Metasurfaces A Ambrosio, D Wintz, P Genevet, F Capasso 2015 IEEE Photonics Conference (IPC), 460-461		2015
Achromatic metasurfaces by dispersive phase compensation F Aieta, MA Kats, P Genevet, R Khorasaninejad, F Capasso 2015 IEEE Photonics Conference (IPC), 202-203	3	2015
New frontiers in quantum cascade lasers: high performance room temperature terahertz sources MA Belkin, F Capasso Physica Scripta 90 (11), 118002	164	2015
Ultra-compact In-Line Scattering Polarimetry JP Müller, K Leosson, F Capasso arXiv preprint arXiv:1509.05484	2	2015
Ultra-compact In-Line Scattering Polarimetry JP Balthasar Müller, K Leosson, F Capasso arXiv e-prints, arXiv: 1509.05484		2015
Multi-wavelength quantum cascade laser arrays P Rauter, F Capasso Laser & Photonics Reviews 9 (5), 452-477	42	2015
Controlled steering of Cherenkov surface plasmon wakes with a one-dimensional metamaterial P Genevet, D Wintz, A Ambrosio, A She, R Blanchard, F Capasso Nature Nanotechnology 10 (9), 804-809	108	2015
Wavefront Engineering with Phase Discontinuities: Designer Interfaces for High Performance Planar Optical Components F Capasso President and Fellows of Harvard College Office for Sponsored Programs …		2015

TITLE	CITED BY	YEAR
Achromatic metasurface lens at telecommunication wavelengths M Khorasaninejad, F Aieta, P Kanhaiya, MA Kats, P Genevet, D Rousso, ... Nano letters 15 (8), 5358-5362	344	2015
Metasurfaces based on artificially induced phase coexistence in phase-change materials J Rensberg, S Zhang, AS McLeod, C Schwarz, M Goldflam, R Nawrodt, ... Novel Optical Materials and Applications, NM2C. 4		2015
High tuning stability of sampled grating quantum cascade lasers S Kalchmair, R Blanchard, TS Mansuripur, GM de Naurois, C Pfluegl, ... Optics express 23 (12), 15734-15747	22	2015
Optical metasurfaces and prospect of their applications including fiber optics N Yu, F Capasso Journal of Lightwave Technology 33 (12), 2344-2358	97	2015
Near-field imaging of phased array metasurfaces BJ Bohn, M Schnell, MA Kats, F Aieta, R Hillenbrand, F Capasso Nano letters 15 (6), 3851-3858	53	2015
Holographic metalens for switchable focusing of surface plasmons D Wintz, P Genevet, A Ambrosio, A Woolf, F Capasso Nano letters 15 (5), 3585-3589	68	2015
Nanophotonics based on Metasurfaces F Capasso CLEO: Science and Innovations, SW3I. 1		2015
Dynamic beam steering in micro-fluidic-meta-surface L Yan, PC Wu, Q Song, W Zhu, Z Wu, DP Tsai, F Capasso, LIU Ai-Qun CLEO: QELS_Fundamental Science, FTu1C. 3	7	2015
Achromatic metasurfaces enable multi-wavelength flat optical components: demonstration of a dispersion-less beam deflector F Aieta, F Capasso CLEO: QELS_Fundamental Science, FTu1C. 8	1	2015
Sampled grating quantum cascade lasers with high tuning stability S Kalchmair, R Blanchard, TS Mansuripur, GM De Naurois, L Diehl, ... 2015 Conference on Lasers and Electro-Optics (CLEO), 1-2		2015
Strong mechanical nonlinearity of optomechanically driven suspended photonic crystal membrane PC Hui, A Rodriguez, D Woolf, E Iwase, M Khan, F Capasso, M Lončar CLEO: Science and Innovations, STh4I. 3	1	2015
Surface plasmon polariton control with Metasurfaces P Genevet, D Wintz, A Ambrosio, A She, F Capasso CLEO: QELS_Fundamental Science, FTu1C. 5		2015

TITLE	CITED BY	YEAR
Ultra-broadband tunable polarization converter for micro-fluidic-meta-surfaces PC Wu, L Yan, Q Song, W Zhu, W Zhang, DP Tsai, F Capasso, AQ Liu CLEO: Science and Innovations, STh1M. 6	6	2015
Lasers with distributed loss have sublinear power output TS Mansuripur, GM de Naurois, A Belyanin, F Capasso CLEO: Science and Innovations, SM1F. 4	1	2015
Fiberoptic evanescent wave spectroscopy in water at ppm sensitivity with a tunable quantum cascade laser GM De Naurois, I Gabay, A Katzir, F Capasso CLEO: Science and Innovations, SM2O. 2	2	2015
Multiwavelength achromatic metasurfaces by dispersive phase compensation F Aieta, MA Kats, P Genevet, F Capasso Science 347 (6228), 1342-1345	792	2015
Achromatic metasurface optical components by dispersive phase compensation F Capasso APS March Meeting Abstracts 2015, F6. 001		2015
Holographic optical metasurfaces: a review of current progress P Genevet, F Capasso Reports on Progress in Physics 78 (2), 024401	275	2015
Lasers with distributed loss have a sublinear output power characteristic TS Mansuripur, GM de Naurois, A Belyanin, F Capasso Optica 2 (1), 48-55	5	2015
High-performance continuous-wave room temperature 4.0-Î¼m quantum cascade lasers with single-facet optical emission exceeding 2 W A Lyakh, R Maulini, A Tsekoun, R Go, S Von der Porten, C PflÃ¼gl, ...		2015
Lasers with distributed loss have a sublinear output power characteristic: supplementary material F CAPASSO		2015
Classical and fluctuation-induced electromagnetic interactions in micron-scale systems: designer bonding, antibonding, and Casimir forces AW Rodriguez, PC Hui, DP Woolf, SG Johnson, M Lončar, F Capasso Annalen der Physik 527 (1-2), 45-80	42	2015
Processing and characterization of nanowire arrays for photodetectors V Jain, J Wallentin, A Nowzari, M Heurlin, D Asoli, MT Borgström, ... Nano-Structures for Optics and Photonics, 511-512		2015
Electrically pumped semiconductor laser with monolithic control of circular polarization P Rauter, J Lin, P Genevet, SP Khanna, M Lachab, AG Davies, ...	22	2014

TITLE	CITED BY	YEAR
Proceedings of the National Academy of Sciences 111 (52), E5623-E5632		
Absolute position total internal reflection microscopy with an optical tweezer L Liu, A Woolf, AW Rodriguez, F Capasso Proceedings of the National Academy of Sciences 111 (52), E5609-E5615	39	2014
Instability-induced pattern formation of photoactivated functional polymers H Galinski, A Ambrosio, P Maddalena, I Schenker, R Spolenak, ... Proceedings of the National Academy of Sciences 111 (48), 17017-17022	30	2014
Current-modulated optical properties of vanadium dioxide thin films in the phase transition region S Zhang, MA Kats, Y Cui, Y Zhou, Y Yao, S Ramanathan, F Capasso Applied Physics Letters 105 (21), 211104	41	2014
Achromatic metasurface optical components by dispersive phase compensation F Aieta, MA Kats, P Genevet, F Capasso arXiv preprint arXiv:1411.3966	5	2014
Electrically tunable metasurface perfect absorbers for ultrathin mid-infrared optical modulators Y Yao, R Shankar, MA Kats, Y Song, J Kong, M Loncar, F Capasso Nano letters 14 (11), 6526-6532	527	2014
Polarization Controlled Surface Plasmon Polariton Propagation: Physics and Applications F Capasso Frontiers in Optics, FM3D. 1		2014
Polarization-selective coupling to long-range surface plasmon polariton waveguides JPB Mueller, K Leosson, F Capasso Nano letters 14 (10), 5524-5527	51	2014
Amplitude, phase and polarization plate for photonics N Yu, F Capasso, Z Gaburro, P Genevet, M Kats, F Aieta US Patent 8,848,273	50	2014
Ultra-thin optical interference coatings on rough and flexible substrates MA Kats, F Capasso Applied Physics Letters 105 (13), 131108	39	2014
Lateral chirality-sorting optical spin forces in evanescent fields A Hayat, JP Müller, F Capasso arXiv preprint arXiv:1408.2268	3	2014
Demonstration of a quick process to achieve buried heterostructure quantum cascade laser leading to high power and wall plug efficiency W Metaferia, B Simozrag, C Junesand, YT Sun, M Carras, R Blanchard, ... Optical Engineering 53 (8), 087104	15	2014

TITLE	CITED BY	YEAR
Ultra-compact mid-IR modulators based on electrically tunable optical antennas Y Yao, MA Kats, R Shankar, M Loncar, F Capasso, Y Song, J Kong 2014 IEEE Photonics Society Summer Topical Meeting Series, 51-52		2014
High-responsivity mid-infrared graphene detectors with antenna-enhanced photocarrier generation and collection Y Yao, R Shankar, P Rauter, Y Song, J Kong, M Loncar, F Capasso Nano letters 14 (7), 3749-3754	200	2014
Active hyperspectral imaging using a quantum cascade laser (QCL) array and digital-pixel focal plane array (DFPA) camera A Goyal, T Myers, CA Wang, M Kelly, B Tyrrell, B Gokden, A Sanchez, ... Optics express 22 (12), 14392-14401	28	2014
Demonstration of a quick process to achieve buried heterostructure QCL leading to high power and wall plug efficiency W Metaferia, B Simozrag, C Junesand, YT Sun, M Carras, F Capasso, ... Laser Technology for Defense and Security X 9081, 90810O		2014
New techniques in optical trapping and sensing L Liu, A Woolf, F Capasso CLEO: QELS_Fundamental Science, FTh1K. 3		2014
Enhancing the gain by quantum coherence in terahertz quantum cascade lasers E Strupiechonski, R Blanchard, P Genevet, Y Wang, A Belyanin, LH Li, ... 2014 Conference on Lasers and Electro-Optics (CLEO)-Laser Science to …		2014
Genetically optimized multi-wavelengths QCL GM De Naurois, S Kalchmair, TS Mansuripur, R Blanchard, L Diehl, ... CLEO: Science and Innovations, STh4G. 4		2014
Mid-infrared graphene detectors with antenna enhanced light absorption and photo-carrier collection Y Yao, R Shankar, P Rauter, Y Song, J Kong, M Loncar, F Capasso 2014 Conference on Lasers and Electro-Optics (CLEO)-Laser Science to …		2014
Plasmonic polarizer with a ring shaped waveguide F Capasso, N Yu, R Blanchard US Patent 8,723,145	7	2014
Nanostructured photodiode L Samuelson, F Capasso, J Ohlsson US Patent 8,692,301	50	2014
Study of photocurrent generation in InP nanowire-based p^+-i-n^+ photodetectors V Jain, A Nowzari, J Wallentin, MT Borgström, ME Messing, D Asoli, ... Nano Research 7 (4), 544-552	42	2014

TITLE	CITED BY	YEAR
Harvesting renewable energy from Earth's mid-infrared emissions SJ Byrnes, R Blanchard, F Capasso Proceedings of the National Academy of Sciences 111 (11), 3927-3932	125	2014
DNA-mediated self-assembly of tetrahedral plasmonic clusters for metafluids N Schade, L Sun, YJ Lee, J Fan, F Capasso, GR Yi, V Manoharan APS March Meeting Abstracts 2014, D50. 013		2014
Breakthroughs in Photonics 2013: Flat Optics: Wavefronts Control With Huygens' Interfaces P Genevet, F Capasso IEEE Photonics Journal 6 (2), 1-4	16	2014
Accounting for inhomogeneous broadening in nano-optics by electromagnetic modeling based on Monte Carlo methods H Gudjonson, MA Kats, K Liu, Z Nie, E Kumacheva, F Capasso Proceedings of the National Academy of Sciences 111 (6), E639-E644	17	2014
Mode switching in a multi-wavelength distributed feedback quantum cascade laser using an external micro-cavity M Sidler, P Rauter, R Blanchard, P Métivier, TS Mansuripur, C Wang, ... Applied Physics Letters 104 (5), 051102	5	2014
Flat optics with designer metasurfaces N Yu, F Capasso Nature materials 13 (2), 139-150	3740	2014
Spoof surface plasmon waveguide forces D Woolf, MA Kats, F Capasso Optics letters 39 (3), 517-520	34	2014
Plasmonic Polarizer F CAPASSO, N YU, R BLANCHARD		2014
Wide wavelength tuning of optical antennas on graphene with nanosecond response time Y Yao, MA Kats, R Shankar, Y Song, J Kong, M Loncar, F Capasso Nano letters 14 (1), 214-219	149	2014
High Contrast Metastructures IX CJ Chang-Hasnain, A Faraon, W Zhou Proc. of SPIE Vol 11290, 1129001-1		2014
Large area photodetectors based on InP NWs with InAs/InAsP QWs V Jain, M Heurlin, D Lindgren, A Nowzari, L Hussein, J Wallentin, ... SPIE Optics+ Photonics (2014), San Diego, California, USA, 17-21 August, 2014		2014
Large Area Photodetectors at 1.3/1.55 μm Based on InP/InAsP NWs V Jain, M Heurlin, A Nowzari, D Lindgren, MT Borgström, F Capasso, ... 32nd International Conference on the Physics of Semiconductors (ICPS 2014 …		2014

TITLE	CITED BY	YEAR
Thin-film interference in lossy, ultra-thin layers MA Kats, R Blanchard, S Ramanathan, F Capasso Optics and Photonics News 25 (1), 40-47	50	2014
Ultrasmooth, highly spherical monocrystalline gold particles for precision plasmonics YJ Lee, NB Schade, L Sun, JA Fan, DR Bae, MM Mariscal, G Lee, ... ACS nano 7 (12), 11064-11070	126	2013
Aberrations of flat lenses and aplanatic metasurfaces F Aieta, P Genevet, M Kats, F Capasso Optics express 21 (25), 31530-31539	146	2013
Buried nanoantenna arrays: versatile antireflection coating A Kabiri, E Girgis, F Capasso Nano letters 13 (12), 6040-6047	29	2013
Generation of picosecond pulses and frequency combs in actively mode locked external ring cavity quantum cascade lasers AK Wójcik, P Malara, R Blanchard, TS Mansuripur, F Capasso, A Belyanin Applied Physics Letters 103 (23), 231102	47	2013
Geometry-induced Casimir suspension of oblate bodies in fluids AW Rodriguez, MTH Reid, F Intravaia, A Woolf, DAR Dalvit, F Capasso, ... Physical review letters 111 (18), 180402	10	2013
Vanadium dioxide as a natural disordered metamaterial: perfect thermal emission and large broadband negative differential thermal emittance MA Kats, R Blanchard, S Zhang, P Genevet, C Ko, S Ramanathan, ... Physical Review X 3 (4), 041004	291	2013
Molding optical wavefronts: flat optics based on metasurfaces (Presentation Video) F Capasso Metamaterials: Fundamentals and Applications VI 8806, 88060K		2013
Investigation of tunable single-mode quantum cascade lasers via surface-acoustic-wave modulation B Meng, M Yamanishi, C Pflügl, K Fujita, F Capasso, QJ Wang IEEE Journal of Quantum Electronics 49 (12), 1053-1061	7	2013
Methods and apparatuses for engineering electromagnetic radiation N Yu, F Capasso US Patent App. 13/696,734	5	2013
Plasmonic polarizer F Capasso, N Yu, R Blanchard US Patent 8,552,410	13	2013
Asymmetric surface plasmon polariton emission by a dipole emitter near a metal surface JPB Mueller, F Capasso	82	2013

TITLE	CITED BY	YEAR
Physical Review B 88 (12), 121410		
Nanostructured holograms for broadband manipulation of vector beams J Lin, P Genevet, MA Kats, N Antoniou, F Capasso Nano letters 13 (9), 4269-4274	255	2013
Flat optics based on metasurfaces: Molding wavefronts with optical antenna arrays F Capasso 2013 IEEE Photonics Conference, 315-315		2013
High-brightness quantum cascade laser spectrometers based on master-oscillator-power-amplifier arrays F Capasso 2013 IEEE Photonics Conference, 99-99		2013
Enhancement of absorption and color contrast in ultra-thin highly absorbing optical coatings MA Kats, SJ Byrnes, R Blanchard, M Kolle, P Genevet, J Aizenberg, ... Applied Physics Letters 103 (10), 101104	77	2013
Broadband quantum cascade laser source F Capasso, C Pfluegl, L Diehl, R Blanchard US Patent App. 13/816,385	2	2013
On finite groups of symmetries of surfaces J Müller, S Sarkar arXiv preprint arXiv:1308.3180	2	2013
Continuous wave nanowire lasing R Röder, M Wille, S Geburt, J Rensberg, M Zhang, JG Lu, F Capasso, ... Nano letters 13 (8), 3602-3606	58	2013
Monte-Carlo-based electromagnetic modeling of nanoscale structures: accounting for inhomogeneous broadening in polydisperse ensembles H Gudjonson, MA Kats, K Liu, Z Nie, E Kumacheva, F Capasso arXiv preprint arXiv:1308.0095		2013
Quantum-coherence-enhanced surface plasmon amplification by stimulated emission of radiation KE Dorfman, PK Jha, DV Voronine, P Genevet, F Capasso, MO Scully Physical review letters 111 (4), 043601	104	2013
Optical bistability with a repulsive optical force in coupled silicon photonic crystal membranes PC Hui, D Woolf, E Iwase, YI Sohn, D Ramos, M Khan, AW Rodriguez, ... Applied Physics Letters 103 (2), 021102	15	2013
Metasurface-based half-wave plate A Kabiri, E Girgis, F Capasso 2013 IEEE Antennas and Propagation Society International Symposium (APSURSI …	1	2013

TITLE	CITED BY	YEAR
Controlling Light Propagation with Interfacial Phase Discontinuities N YU, MA KATS, P GENEVET, F AIETA, R BLANCHARD, G AOUST, ... Active Plasmonics and Tuneable Plasmonic Metamaterials, 171-217		2013
and Optoelectronic Ge/Si Superlattice Structures S Luryi, F Capasso Two-Dimensional Systems: Physics and New Devices: Proceedings of the …		2013
Quantum cascade laser source with ultrabroadband spectral coverage L Diehl, C Pfluegl, R Blanchard, F Capasso US Patent App. 13/639,533	3	2013
Electro-optic tuning of mid-infrared photonic crystal cavities using graphene R Shankar, Y Yao, J Frish, I Frank, Y Song, J Kong, F Capasso, M Lončar CLEO: Science and Innovations, CTu1F. 5	1	2013
Broad electrical tuning of graphene-loaded optical antennas Y Yao, MA Kats, P Genevet, N Yu, Y Song, J Kong, F Capasso CLEO: QELS_Fundamental Science, QTh1B. 3	3	2013
New beam engineered and spectrally engineered mid-ir quantum cascade lasers by transverse and longitudinal mode control F Capasso CLEO: Science and Innovations, JM4K. 6		2013
Negative differential thermal emitter MA Kats, R Blanchard, S Zhang, P Genevet, C Ko, S Ramanathan, ... CLEO: QELS_Fundamental Science, QM1A. 7	3	2013
Controlling Light Propagation with ZG AOUST, F CAPASSO Active Plasmonics and Tuneable Plasmonic Metamaterials 8, 171		2013
Active plasmonics and tuneable plasmonic metamaterials AV Zayats, S Maier John Wiley & Sons	113	2013
High-power low-divergence tapered quantum cascade lasers with plasmonic collimators R Blanchard, TS Mansuripur, B Gökden, N Yu, M Kats, P Genevet, K Fujita, ... Applied Physics Letters 102 (19), 191114	15	2013
Single-mode tapered quantum cascade lasers P Rauter, S Menzel, B Gokden, A K. Goyal, CA Wang, A Sanchez, ... Applied Physics Letters 102 (18), 181102	19	2013
High power (> 5 W) λ~ 9.6 μm tapered quantum cascade lasers grown by OMVPE CA Wang, AK Goyal, S Menzel, DR Calawa, M Spencer, MK Connors, ... Journal of crystal growth 370, 212-216	12	2013

TITLE	CITED BY	YEAR
Generation of two-dimensional plasmonic bottle beams P Genevet, J Dellinger, R Blanchard, A She, M Petit, B Cluzel, MA Kats, ... Optics express 21 (8), 10295-10300	31	2013
Polarization-controlled tunable directional coupling of surface plasmon polaritons J Lin, JPB Mueller, Q Wang, G Yuan, N Antoniou, XC Yuan, F Capasso Science 340 (6130), 331-334	953	2013
Strong Asymmetric Surface Plasmon Polariton Emission by a Dipole Emitter near a Metal Surface JP Mueller, F Capasso arXiv preprint arXiv:1304.2403	1	2013
External ring-cavity quantum cascade lasers P Malara, R Blanchard, TS Mansuripur, AK Wojcik, A Belyanin, K Fujita, ... Applied Physics Letters 102 (14), 141105	19	2013
Tetrahedral colloidal clusters from random parking of bidisperse spheres NB Schade, MC Holmes-Cerfon, ER Chen, D Aronzon, JW Collins, ... Physical review letters 110 (14), 148303	81	2013
Optomechanical and photothermal interactions in suspended photonic crystal membranes D Woolf, PC Hui, E Iwase, M Khan, AW Rodriguez, P Deotare, I Bulu, ... Optics express 21 (6), 7258-7275	29	2013
Broad electrical tuning of graphene-loaded plasmonic antennas Y Yao, MA Kats, P Genevet, N Yu, Y Song, J Kong, F Capasso Nano letters 13 (3), 1257-1264	512	2013
New Quantum Well Avalanche Photodiodes F Capasso High-Speed Electronics: Basic Physical Phenomena and Device Principles …		2013
Physics of quantum electron devices F Capasso Springer Science & Business Media	307	2013
The Casimir effect in microfluidics A Rodriguez-Wong, A Woolf, L Liu, D Woolf, S Johnson, F Capasso, ... APS March Meeting Abstracts 2013, C29. 012		2013
High-power arrays of quantum cascade laser master-oscillator power-amplifiers P Rauter, S Menzel, AK Goyal, CA Wang, A Sanchez, G Turner, ... Optics express 21 (4), 4518-4530	53	2013
High-brightness tapered quantum cascade lasers B Gökden, TS Mansuripur, R Blanchard, C Wang, A Goyal, ... Applied Physics Letters 102 (5), 053503	31	2013

TITLE	CITED BY	YEAR
Thermal tuning of mid-infrared plasmonic antenna arrays using a phase change material MA Kats, R Blanchard, P Genevet, Z Yang, MM Qazilbash, DN Basov, ... Optics letters 38 (3), 368-370	182	2013
Measurement of the ultrafast temporal response of a plasmonic antenna M Becker, WCW Huang, H Batelaan, EJ Smythe, F Capasso Annalen der Physik 525 (1-2), L6-L11	15	2013
Flat optics: controlling wavefronts with optical antenna metasurfaces N Yu, P Genevet, F Aieta, MA Kats, R Blanchard, G Aoust, JP Tetienne, ... IEEE Journal of Selected Topics in Quantum Electronics 19 (3), 4700423-4700423	345	2013
Methods and apparatus for single-mode selection in quantum cascade lasers F Capasso, BG Lee, C Pflugl, L Diehl, MA Belkin US Patent 8,351,481	1	2013
Anomalous near-field heat transfer between a cylinder and a perforated surface AW Rodriguez, MTH Reid, J Varela, JD Joannopoulos, F Capasso, ... Physical review letters 110 (1), 014301	30	2013
2013 Conference on Lasers and Electro-Optics, CLEO 2013 R Shankar, Y Yao, J Frish, I Frank, Y Song, J Kong, F Capasso, M Loncar IEEE Computer Society		2013
302.3: FLAT OPTICS: CONTROLLING WAVEFRONTS WITH OPTICAL ANTENNA METASURFACES N Yu, F Capasso INTERNATIONAL SYMPOSIUM DIGEST ANTENNAS AND PROPAGATION 1 (3), 2341-2342		2013
Nanometre optical coatings based on strong interference effects in highly absorbing media MA Kats, R Blanchard, P Genevet, F Capasso Nature materials 12 (1), 20-24	748	2013
NANOPHOTONICS F Capasso, D Couwenberg, S Saini, X Zhang, A Zayats, N Zheludev, ...		2013
Master-oscillator power-amplifier quantum cascade laser array P Rauter, S Menzel, AK Goyal, B Gökden, CA Wang, A Sanchez, ... Applied Physics Letters 101 (26), 261117	37	2012
Coherence-Enhanced Spaser KE Dorfman, PK Jha, DV Voronine, P Genevet, F Capasso, MO Scully unpublished). arXiv 1212	3	2012
A broadband, background-free quarter-wave plate based on plasmonic metasurfaces N Yu, F Aieta, P Genevet, MA Kats, Z Gaburro, F Capasso	973	2012

TITLE	CITED BY	YEAR
Nano letters 12 (12), 6328-6333		
Holographic detection of the orbital angular momentum of light with plasmonic photodiodes P Genevet, J Lin, MA Kats, F Capasso Nature communications 3 (1), 1-5	239	2012
Methods and apparatus for improving collimation of radiation beams F Capasso, N Yu, J Fan US Patent 8,328,396	12	2012
Picosecond Electronics and Optoelectronics II: Proceedings of the Second OSA-IEEE (LEOS) Incline Village, Nevada, January 14–16, 1987 FJ Leonberger, C Chiang, F Capasso, H Morkoc Springer Science & Business Media	1	2012
ELECTRONIC QUARTER-WAVE STACKS AND BRAGG REFLECTORS: PHYSICS OF LOCALIZED CONTINUUM STATES IN QUANTUM SEMICONDUCTOR C SIRTORI, F CAPASSO, J FAIST, D SIVCO, AY CHO Quantum Well Intersubband Transition Physics and Devices 270, 301		2012
QUANTUMPHENOMENA AND THEIRAPPLICATIONS IN F Capasso Advances in Quantum Phenomena 347, 145		2012
Murray Hill, New Jersey 07974 F Capasso Physics and Applications of Quantum Wells and Superlattices 170, 377		2012
Electronic materials: a new era in materials science JR Chelikowsky, A Franciosi Springer Science & Business Media	11	2012
Reflection and refraction of light from metasurfaces with phase discontinuities F Aieta, A Kabiri, P Genevet, N Yu, MA Kats, Z Gaburro, F Capasso Journal of Nanophotonics 6 (1), 063532	51	2012
Ultra-thin perfect absorber employing a tunable phase change material MA Kats, D Sharma, J Lin, P Genevet, R Blanchard, Z Yang, ... Applied Physics Letters 101 (22), 221101	502	2012
Color manipulation of ultra thin coatings F Capasso, RL Wallace Advanced Coatings & Surface Technology 25 (11), 2-4		2012
Nanolayered coatings that can change color F Capasso Advanced Coatings & Surface Technology 25 (11), 3-5		2012

TITLE	CITED BY	YEAR
Plasmonic mode engineering with templated self-assembled nanoclusters JA Fan, K Bao, L Sun, J Bao, VN Manoharan, P Nordlander, F Capasso Nano letters 12 (10), 5318-5324	110	2012
Widely tunable mid-infrared quantum cascade lasers using sampled grating reflectors TS Mansuripur, S Menzel, R Blanchard, L Diehl, C Pflügl, Y Huang, ... Optics express 20 (21), 23339-23348	59	2012
Phase control from the visible to the TeraHertz: Surface photonics for wavefront engineering F Capasso 2012 37th International Conference on Infrared, Millimeter, and Terahertz …		2012
Aberration-free ultrathin flat lenses and axicons at telecom wavelengths based on plasmonic metasurfaces F Aieta, P Genevet, MA Kats, N Yu, R Blanchard, Z Gaburro, F Capasso Nano letters 12 (9), 4932-4936	1484	2012
Novel Devices for Plasmonic and Nanophotonic Networks: Exploiting X-ray Wavelengths at Optical Frequencies HA Atwater, A Scherer, OJ Painter, E Yablonovitch, X Zhang, F Capasso CALIFORNIA INST OF TECH PASADENA		2012
Cosine-Gauss plasmon beam: a localized long-range nondiffracting surface wave J Lin, J Dellinger, P Genevet, B Cluzel, F de Fornel, F Capasso Physical Review Letters 109 (9), 093904	181	2012
Multi-stack quantum cascade lasers R Blanchard, C Pfluegl, L Diehl, RD Dupuis, F Capasso 2012 International Conference on Indium Phosphide and Related Materials, 147-150		2012
Low threshold room-temperature lasing of CdS nanowires S Geburt, A Thielmann, R Röder, C Borschel, A McDonnell, M Kozlik, ... Nanotechnology 23 (36), 365204	51	2012
Broadband wavefront engineering with optical resonator arrays F Capasso, P Genevet, N Yu, MA Kats, F Aieta, Z Gaburro 2012 International Conference on Optical MEMS and Nanophotonics, 127-127		2012
Sensitivity enhancement of off-axis ICOS using wavelength modulation P Malara, MF Witinski, F Capasso, JG Anderson, P De Natale Applied physics B 108 (2), 353-359	25	2012
Giant birefringence in optical antenna arrays with widely tailorable optical anisotropy MA Kats, P Genevet, G Aoust, N Yu, R Blanchard, F Aieta, Z Gaburro, ... Proceedings of the National Academy of Sciences 109 (31), 12364-12368	172	2012

TITLE	CITED BY	YEAR
Angle-independent antireflective layer based on buried IR nanoantennas A Kabiri, F Capasso Proceedings of the 2012 IEEE International Symposium on Antennas and …		2012
Zeroes of the spectral density of the periodic Schrödinger operator with Wigner–von Neumann potential S Naboko, S Simonov Mathematical Proceedings of the Cambridge Philosophical Society 153 (1), 33-58	21	2012
Molding light propagation with phase discontinuities Z Gaburro, N Yu, P Genevet, MA Kats, F Aieta, F Capasso Integrated Photonics Research, Silicon and Nanophotonics, IW1B. 1	2	2012
Near-normal incidence dark-field microscopy: applications to nanoplasmonic spectroscopy JA Fan, K Bao, JB Lassiter, J Bao, NJ Halas, P Nordlander, F Capasso Nano letters 12 (6), 2817-2821	70	2012
Control of buckling in large micromembranes using engineered support structures E Iwase, PC Hui, D Woolf, AW Rodriguez, SG Johnson, F Capasso, ... Journal of Micromechanics and Microengineering 22 (6), 065028	55	2012
Demonstration of a new type of two-dimensional nondiffracting surface plasmon polariton J Lin, J Dellinger, P Genevet, B Cluzel, F de Fornel, MO Scully, F Capasso Quantum Electronics and Laser Science Conference, QF1D. 3		2012
Dynamics of a tethered silicon photonic crystal membrane due to optical gradient, photothermal and Casimir forces PC Hui, D Woolf, E Iwase, I Bulu, A Rodriguez, M Khan, P Deotare, ... 2012 Conference on Lasers and Electro-Optics (CLEO), 1-2		2012
Phase elements for surface optics MA Kats, P Genevet, G Aoust, N Yu, R Blanchard, F Aieta, Z Gaburro, ... Quantum Electronics and Laser Science Conference, QM4H. 2		2012
Vertical monolithic integration of quantum cascade lasers for high-power broadband applications R Blanchard, C Grezes, S Menzel, C Pflügl, L Diehl, Y Huang, JH Ryou, ... CLEO: Science and Innovations, CTh3N. 8	1	2012
Out-of-plane reflection and refraction of light by plasmonic interfaces with phase discontinuities F Aieta, P Genevet, N Yu, MA Kats, Z Gaburro, F Capasso Quantum Electronics and Laser Science Conference, QM4F. 1	1	2012
External ring-cavity quantum cascade lasers for mode-locking and atmospheric sensing P Malara, R Blanchard, F Capasso, P De Natale CLEO: Science and Innovations, CTh3N. 2		2012

TITLE	CITED BY	YEAR
Towards optical manipulation of Casimir force using free-standing membranes with engineered optical and mechanical properties E Iwase, PC Hui, D Woolf, AW Rodriguez, M Khan, SG Johnson, ... Quantum Electronics and Laser Science Conference, QW3E. 1		2012
Plasmonic-based techniques to generate and detect optical vortex beams P Genevet, J Lin, N Yu, F Aieta, MA Kats, R Blanchard, Z Gaburro, ... Quantum Electronics and Laser Science Conference, QF1D. 2		2012
Broadband birefringent metainterfaces N Yu, P Genevet, F Aieta, MA Kats, Z Gaburro, F Capasso Quantum Electronics and Laser Science Conference, QM3F. 5		2012
Modeling nanoscale V-shaped antennas for the design of optical phased arrays R Blanchard, G Aoust, P Genevet, N Yu, MA Kats, Z Gaburro, F Capasso Physical Review B 85 (15), 155457	117	2012
Electrical and optical properties of InP nanowire ensemble p+–i–n+ photodetectors H Pettersson, I Zubritskaya, NT Nghia, J Wallentin, MT Borgström, K Storm, ... Nanotechnology 23 (13), 135201	35	2012
Out-of-plane reflection and refraction of light by anisotropic optical antenna metasurfaces with phase discontinuities F Aieta, P Genevet, N Yu, MA Kats, Z Gaburro, F Capasso Nano letters 12 (3), 1702-1706	477	2012
Doubly-corrugated spoof-insulator-spoof waveguides MA Kats, D Woolf, R Blanchard, N Yu, F Capasso Terahertz Technology and Applications V 8261, 82610G		2012
Tetrahedral colloidal clusters from random aggregation of bidisperse spheres NB Schade, JW Collins, JA Fan, ER Chen, D Aronzon, ...	1	2012
Double-waveguide quantum cascade laser R Blanchard, C Grezes, S Menzel, C Pflügl, L Diehl, Y Huang, JH Ryou, ... Applied Physics Letters 100 (3), 033502	10	2012
Beam engineering of quantum cascade lasers N Yu, Q Wang, F Capasso Laser & Photonics Reviews 6 (1), 24-46	64	2012
Ultra-thin plasmonic optical vortex plate based on phase discontinuities P Genevet, N Yu, F Aieta, J Lin, MA Kats, R Blanchard, MO Scully, ... Applied Physics Letters 100 (1), 013101	494	2012
Widely tunable mid-infrared quantum cascade lasers using sampled grating reflectors (1st submission) TS Mansuripur, S Menzel, R Blanchard, L Diehl, C Pflügl, Y Huang, ...		2012

TITLE	CITED BY	YEAR
A comparative study of nanowire-based infrared p+-i-n+ photodetectors J Wallentin, M Borgström, K Storm, L Landin, P Wickert, F Capasso, ... ICPS 2012: 31st International Conference on the Physics of Semiconductors		2012
Wavefront engineering of quantum cascade lasers using plasmonics N Yu, F Capasso Plasmonics And Plasmonic Metamaterials: Analysis and Applications, 123-166	1	2012
A comparative study of nanowire based infrared p+-i-n+ photodetectors V Jain, J Wallentin, M Borgström, K Storm, L Landin, P Wickert, F Capasso, ... International Conference on the Physics of Semiconductors, Zürich …		2012
Beam Shaped Single Mode Spiral Lasers F Capasso HARVARD UNIV CAMBRIDGE MA SCHOOL OF ENGINEERING AND APPLIED SCIENCES		2011
Limiting factors to the temperature performance of THz quantum cascade lasers based on the resonant-phonon depopulation scheme Y Chassagneux, QJ Wang, SP Khanna, E Strupiechonski, JR Coudevylle, ... IEEE Transactions on Terahertz Science and Technology 2 (1), 83-92	67	2011
Dispersion-compensated wavelength beam combining of quantum-cascade-laser arrays AK Goyal, M Spencer, O Shatrovoy, BG Lee, L Diehl, C Pfluegl, ... Optics Express 19 (27), 26725-26732	29	2011
Photoinduced oxygen release and persistent photoconductivity in ZnO nanowires J Bao, I Shalish, Z Su, R Gurwitz, F Capasso, X Wang, Z Ren Nanoscale research letters 6 (1), 1-7	188	2011
Gratings with an aperiodic basis: single-mode emission in multi-wavelength lasers R Blanchard, S Menzel, C Pflügl, L Diehl, C Wang, Y Huang, JH Ryou, ... New Journal of Physics 13 (11), 113023	32	2011
DNA-enabled self-assembly of plasmonic nanoclusters JA Fan, Y He, K Bao, C Wu, J Bao, NB Schade, VN Manoharan, G Shvets, ... Nano letters 11 (11), 4859-4864	150	2011
Enhancement of optical processes in coupled plasmonic nanocavities P Genevet, JP Tetienne, R Blanchard, MA Kats, JPB Müller, MO Scully, ... Applied optics 50 (31), G56-G62	9	2011
Effect of radiation damping on the spectral response of plasmonic components MA Kats, N Yu, P Genevet, Z Gaburro, F Capasso Optics express 19 (22), 21748-21753	128	2011
Multi-wavelength mid-infrared plasmonic antennas with single nanoscale focal point	38	2011

TITLE	CITED BY	YEAR
R Blanchard, SV Boriskina, P Genevet, MA Kats, JP Tetienne, N Yu, ... optics express 19 (22), 22113-22124		
Light propagation with phase discontinuities: generalized laws of reflection and refraction N Yu, P Genevet, MA Kats, F Aieta, JP Tetienne, F Capasso, Z Gaburro science 334 (6054), 333-337	5583	2011
Cylindrical vector beam-splitters J Lin, P Genevet, F Capasso Frontiers in Optics, FThC4		2011
Molding Optical Wavefronts Using Phase Discontinuities N Yu, P Genevet, MA Kats, F Aieta, JP Tetienne, Z Gaburro, F Capasso Frontiers in Optics, PDPC5		2011
Lattice-matched and strain-compensated materials for mid-wave and long-wave infrared quantum cascade lasers CA Wang, DR Calawa, A Goyal, S Menzel, F Capasso ECS Transactions 41 (6), 139	2	2011
Methods and apparatus for generating terahertz radiation MA Belkin, F Capasso, A Belyanin US Patent App. 13/112,889	2	2011
Highly unidirectional whispering gallery mode lasers QJ Wang, C Yan, N Yu, C Pflügl, L Diehl, F Capasso, J Unterhinninghofen, ... Conference on Lasers and Electro-Optics/Pacific Rim, J143		2011
Quantum cascade laser master-oscillator power-amplifier with 1.5 W output power at 300 K S Menzel, L Diehl, C Pflügl, A Goyal, C Wang, A Sanchez, G Turner, ... Optics express 19 (17), 16229-16235	52	2011
Spoof plasmon analogue of metal-insulator-metal waveguides MA Kats, D Woolf, R Blanchard, N Yu, F Capasso Optics express 19 (16), 14860-14870	107	2011
Quantum Cascade Lasers with Integrated Multi-Beam Plasmonic Collimators R Blanchard, JP Tetienne, N Yu, P Genevet, MA Kats, JA Fan, T Edamura, ... CIOMP-OSA Summer Session: Lasers and Their Applications, Tu7		2011
Methods and apparatus for generating terahertz radiation MA Belkin, F Capasso, A Belyanin US Patent 7,974,325	10	2011
Dipolar modeling and experimental demonstration of multi-beam plasmonic collimators JP Tetienne, R Blanchard, N Yu, P Genevet, MA Kats, JA Fan, T Edamura, ... New Journal of Physics 13 (5), 053057	38	2011

TITLE	CITED BY	YEAR
Nonlinear optical interactions of laser modes in quantum cascade lasers AK Wojcik, N Yu, F Capasso, A Belyanin Journal of Modern Optics 58 (9), 727-742	13	2011
Designing evanescent optical interactions to control the expression of Casimir forces in optomechanical structures AW Rodriguez, D Woolf, PC Hui, E Iwase, AP McCauley, F Capasso, ... Applied Physics Letters 98 (19), 194105	32	2011
Advances in infrared photodetectors C Jagadish, S Gunapala, D Rhiger Elsevier	55	2011
Coupled nanocavity-grating resonances: Large plasmonic enhancement of nonlinear optical phenomena F Capasso, P Genevet, JP Tetienne, E Gatzogiannis, R Blanchard, ... CLEO: 2011-Laser Science to Photonic Applications, 1-2	2	2011
Off-axis and multi-directional plasmonic lenses R Blanchard, JP Tetienne, N Yu, P Genevet, MA Kats, JA Fan, T Edamura, ... Quantum Electronics and Laser Science Conference, QThQ1	1	2011
Nonlinear dynamics, phase coherence, and mode locking in quantum cascade lasers A Wojcik, N Yu, L Diehl, F Capasso, A Belyanin CLEO: Science and Innovations, CMQ5		2011
Optical bonding and antibonding forces in asymmetric geometries for Casimir force detection D Woolf, PC Hui, E Iwase, A Rodriguez, A McCauley, I Lovchinsky, ... Quantum Electronics and Laser Science Conference, QWG1		2011
Temporal Response of a Plasmonic Antenna M Becker, CW Huang, R Bach, H Batelaan, E Smythe, F Capasso APS Division of Atomic, Molecular and Optical Physics Meeting Abstracts 2011 …		2011
3–4 THz InGaAs/InAlAs quantum-cascade lasers based on the indirect pump scheme M Yamanishi, K Fujita, N Yu, T Edamura, K Tanaka, F Capasso CLEO: 2011-Laser Science to Photonic Applications, 1-2	3	2011
Search journal F Wang Reading 2 (2)		2011
Self-synchronization of laser modes and multistability in quantum cascade lasers AK Wójcik, N Yu, L Diehl, F Capasso, A Belyanin Physical review letters 106 (13), 133902	14	2011

TITLE	CITED BY	YEAR
The Casimir effect in microstructured geometries AW Rodriguez, F Capasso, SG Johnson Nature photonics 5 (4), 211-221	431	2011
Spectrometers utilizing mid infrared ultra broadband high brightness light sources C Pflugl, BG Lee, L Diehl, MA Belkin, F Capasso, TJ Tague Jr US Patent App. 12/263,948	5	2011
Designer plasmonic structures and metamaterials for subwavelength photonics F Capasso APS March Meeting Abstracts 2011, A32. 004		2011
Patterning the tips of optical fibers with metallic nanostructures using nanoskiving DJ Lipomi, RV Martinez, MA Kats, SH Kang, P Kim, J Aizenberg, ... Nano letters 11 (2), 632-636	123	2011
Waveguide integrated plasmonic platform for sensing and spectroscopy F Degirmenci, I Bulu, P Deotare, M Khan, M Loncar, F Capasso Integrated Optics: Devices, Materials, and Technologies XV 7941, 794117	2	2011
Optimization of growth conditions for InGaAs/InAlAs/InP quantum cascade lasers by metalorganic chemical vapor deposition Y Huang, JH Ryou, RD Dupuis, C Pflügl, F Capasso, K Sun, AM Fischer, ... Journal of Crystal Growth 316 (1), 75-80	27	2011
Bonding, antibonding and tunable optical forces in asymmetric membranes AW Rodriguez, AP McCauley, PC Hui, D Woolf, E Iwase, F Capasso, ... Optics express 19 (3), 2225-2241	31	2011
Towards all-optical control and measurement of Casimir forces via evanescent optical forces AW Rodriguez, D Woolf, E Iwase, SG Johnson, F Capasso, AP McCauley, ... Applied Physics Letters Vol. 98 (arXiv: 1101.4237), 194105		2011
Self-assembled plasmonic nonoparticle clusters: New building blocks for metamaterials and their optical properties J Fan, C Wu, K Bao, R Bardhan, J Bao, V Manoharan, N Halas, ... IEEE Winter Topicals 2011, 53-54	2	2011
Bonding, antibonding and tunable optical forces in asymmetric membranes PC Hui, D Woolf, E Iwase, F Capasso, M Loncar, A Rodriguez-Wong, ... Optical Society of America		2011
Terahertz plasmonics N Yu, QJ Wang, MA Kats, JA Fan, F Capasso, SP Khanna, L Li, ... Electronics Letters 1, S52		2011

TITLE	CITED BY	YEAR
Epitaxial Growth of InGaAs/InAlAs/InP Quantum Cascade Lasers by Metalorganic Chemical Vapor Deposition Y Huang, JH Ryou, R Dupuis, C Pflugl, F Capasso, K Sun, A Fischer, ... Minerals, Metals and Materials Society/AIME, 420 Commonwealth Dr., P. O. Box …		2011
Attractive and repulsive Casimir–Lifshitz forces, QED torques, and applications to nanomachines F Capasso, JN Munday Casimir Physics, 249-286	13	2011
Whispering-gallery mode resonators for highly unidirectional laser action QJ Wang, C Yan, N Yu, J Unterhinninghofen, J Wiersig, C Pflügl, L Diehl, ... Proceedings of the National Academy of Sciences 107 (52), 22407-22412	191	2010
Terahertz plasmonics N Yu, QJ Wang, MA Kats, JA Fan, F Capasso, SP Khanna, L Li, ... Electronics Letters 46 (26), 52-57	38	2010
Large enhancement of nonlinear optical phenomena by plasmonic nanocavity gratings P Genevet, JP Tetienne, E Gatzogiannis, R Blanchard, MA Kats, ... Nano letters 10 (12), 4880-4883	233	2010
Q & A Professor Federico Capasso Harvard University F Capasso ELECTRONICS LETTERS, S51-S51		2010
Nonlinear dynamics of coupled transverse modes in quantum cascade lasers AK Wójcik, N Yu, L Diehl, F Capasso, A Belyanin Journal of Modern Optics 57 (19), 1892-1899	3	2010
Fano-like interference in self-assembled plasmonic quadrumer clusters JA Fan, K Bao, C Wu, J Bao, R Bardhan, NJ Halas, VN Manoharan, ... Nano letters 10 (11), 4680-4685	368	2010
Broadly tunable single-mode quantum cascade laser sources and sensors MA Belkin, BG Lee, RM Audet, JB MacArthur, L Diehl, C Pflügl, F Capasso US Patent 7,826,509	37	2010
High-performance continuous-wave room temperature 4.0-μm quantum cascade lasers with single-facet optical emission exceeding 2 W A Lyakh, R Maulini, A Tsekoun, R Go, S Von der Porten, C Pflügl, L Diehl, ... Proceedings of the National Academy of Sciences 107 (44), 18799-18802	59	2010
Nonlinear coupling of transverse modes in quantum cascade lasers AK Wojcik, N Yu, L Diehl, F Capasso, AA Belyanin Optical Engineering 49 (11), 111114	5	2010
Wavefront engineering for mid-infrared and terahertz quantum cascade lasers N Yu, F Capasso	26	2010

TITLE	CITED BY	YEAR
JOSA B 27 (11), B18-B35		
High-performance midinfrared quantum cascade lasers F Capasso Optical Engineering 49 (11), 111102	194	2010
The Physics and Technology of Quantum Cascade Lasers F Capasso Frontiers in Optics, SMB2		2010
Ultrafast Rabi flopping and coherent pulse propagation in a quantum cascade laser H Choi, VM Gkortsas, L Diehl, D Bour, S Corzine, J Zhu, G Höfler, ... Nature Photonics 4 (10), 706-710	48	2010
Plasmonics for beam engineering F Capasso, N Yu The 5th European Microwave Integrated Circuits Conference, 74-77		2010
$\mathrm{GaAs}/\mathrm{Al}_{0.15}\mathrm{Ga}_{0.85}\mathrm{As}$ terahertz quantum cascade lasers with double-phonon resonant depopulation operating up to 172 K RW Adams, K Vijayraghavan, QJ Wang, J Fan, F Capasso, SP Khanna, ... Applied Physics Letters 97 (13), 131111	36	2010
Scattering-assisted tunneling: Energy dependence, magnetic field dependence, and use as an external probe of two-dimensional transport KJ Russell, F Capasso, V Narayanamurti, H Lu, JMO Zide, AC Gossard Physical Review B 82 (11), 115322	5	2010
Designer spoof surface plasmon structures collimate terahertz laser beams N Yu, QJ Wang, MA Kats, JA Fan, SP Khanna, L Li, AG Davies, ... Nature materials 9 (9), 730-735	302	2010
Polarity-controlled visible/infrared electroluminescence in Si-nanocrystal/Si light-emitting devices Z Liu, J Huang, PC Joshi, AT Voutsas, J Hartzell, F Capasso, J Bao Applied Physics Letters 97 (7), 071112	19	2010
Fano resonances in plasmonic nanoclusters: geometrical and chemical tunability JB Lassiter, H Sobhani, JA Fan, J Kundu, F Capasso, P Nordlander, ... Nano letters 10 (8), 3184-3189	629	2010
Achieving a strongly temperature-dependent Casimir effect AW Rodriguez, D Woolf, AP McCauley, F Capasso, JD Joannopoulos, ... Physical review letters 105 (6), 060401	35	2010
Emission properties of electrically pumped triangular shaped microlasers M Hentschel, QJ Wang, C Yan, F Capasso, T Edamura, H Kan Optics express 18 (16), 16437-16442	15	2010

TITLE	CITED BY	YEAR
Nanowire-based solar cell structure L Samuelson, M Magnusson, F Capasso US Patent App. 12/452,175	36	2010
Fabrication and replication of arrays of single-or multicomponent nanostructures by replica molding and mechanical sectioning DJ Lipomi, MA Kats, P Kim, SH Kang, J Aizenberg, F Capasso, ... ACS nano 4 (7), 4017-4026	72	2010
Newly developed nanoshell structures display optical activity F Capasso Advanced Coatings & Surface Technology 23 (7), 9-11		2010
Growth, characterization and lasing of CdS nanostructures J Kuehnel, S Geburt, C Borschel, M Kozlik, A McDonnell, C Ronning, ... Verhandlungen der Deutschen Physikalischen Gesellschaft		2010
Dynamics of actively mode-locked quantum cascade lasers VM Gkortsas, C Wang, L Kuznetsova, L Diehl, A Gordon, C Jirauschek, ... Optics express 18 (13), 13616-13630	51	2010
FTIR Spectrometers Utilizing Mid-Infrared Quantum Cascade Lasers. C Pflugl, L Diehl, F Capasso, MF Witinski, S Shilov, P Wang, T Tague 65th International Symposium On Molecular Spectroscopy 65, FA03"		2010
Self-assembled plasmonic nanoparticle clusters JA Fan, C Wu, K Bao, J Bao, R Bardhan, NJ Halas, VN Manoharan, ... science 328 (5982), 1135-1138	1441	2010
Polarity-controlled visible/IR electroluminescence in Si-nanocrystal/Si light-emitting diodes Z Liu, J Huang, PC Joshi, AT Voutsas, J Hartzell, F Capasso, J Bao Conference on Lasers and Electro-Optics, CTuNN5		2010
High-power thermoelectrically-cooled and uncooled mid-wave infrared quantum cascade lasers R Maulini, A Lyakh, A Tsekoun, R Go, C Pflügl, L Diehl, F Capasso, ... CLEO/QELS: 2010 Laser Science to Photonic Applications, 1-2		2010
Terahertz quantum cascade lasers with integrated plasmonic collimators N Yu, QJ Wang, SP Khanna, L Li, AG Davies, EH Linfield, F Capasso Conference on Lasers and Electro-Optics, CTuMM5	3	2010
Time-domain observation of Rabi flopping in a laser H Choi, VM Gkortsas, L Diehl, D Bour, S Corzine, J Zhu, G Höfler, ... Quantum Electronics and Laser Science Conference, QThF6		2010
Waveguide integrated plasmonic devices I Bulu, Q Quan, F Degirmenci, M Khan, F Capasso, M Loncar CLEO/QELS: 2010 Laser Science to Photonic Applications, 1-2		2010

TITLE	CITED BY	YEAR
Wavelength-beam-combined quantum-cascade-laser array for remote spectroscopy AK Goyal, M Spencer, O Shatrovoy, A Sanchez, BG Lee, L Diehl, C Pflügl, ... Conference on Lasers and Electro-Optics, CThX5	1	2010
Gain competition in multicolor quantum cascade lasers C Pflügl, M Geiser, A Belyanin, QJ Wang, N Yu, T Edamura, M Yamanishi, ... Conference on Lasers and Electro-Optics, CThE4		2010
Large area multi-material plasmonic nanostructures fabricated by replica molding and mechanical sectioning MA Kats, DJ Lipomi, P Kim, SH Kang, J Aizenberg, GM Whitesides, ... Conference on Lasers and Electro-Optics, CPDA5		2010
Fourier transform spectrometers utilizing mid-infrared quantum cascade lasers L Diehl, C Pflügl, MF Witinski, P Wang, TJ Tague, F Capasso Conference on Lasers and Electro-Optics: Applications, JThB1	3	2010
Gain competition in dual wavelength quantum cascade lasers M Geiser, C Pflügl, A Belyanin, QJ Wang, N Yu, T Edamura, M Yamanishi, ... Optics express 18 (10), 9900-9908	33	2010
Raman Injection A Belyanin, M Troccoli, F Capasso Intersubband Transitions In Quantum Structures, 237		2010
Repulsive Casimir and van der Waals forces: From measurements to future technologies JN Munday, F Capasso International Journal of Modern Physics A 25 (11), 2252-2259	13	2010
Nontouching nanoparticle diclusters bound by repulsive and attractive Casimir forces AW Rodriguez, AP McCauley, D Woolf, F Capasso, JD Joannopoulos, ... Physical review letters 104 (16), 160402	64	2010
Corrections to “High Performance Quantum Cascade Lasers Grown by Metal-Organic Vapor Phase Epitaxy and Their Applications to Trace Gas Sensing” M Troccoli, L Diehl, DP Bour, SW Corzine, N Yu, CY Wang, MA Belkin, ... Journal of Lightwave Technology 28 (6), 984-984		2010
Quantum cascade lasers in chemical physics RF Curl, F Capasso, C Gmachl, AA Kosterev, B McManus, R Lewicki, ... Chemical Physics Letters 487 (1-3), 1-18	603	2010
Freedom from band-gap slavery: from diode lasers to quantum cascade lasers F Capasso Bulletin of the American Physical Society 55	1	2010

TITLE	CITED BY	YEAR
Wavelength Beam Combining of Quantum Cascade Laser Arrays for Remote Sensing F Capasso, C Pfluegl, L Diehl, B Lee, J Kansky, A Goyal, M Belkin, ... Proceedings of SPIE the International Society for Optical Engineering		2010
Surface-emitting THz sources based on difference-frequency generation in mid-infrared quantum cascade lasers M Geiser, C Pflügl, A Belyanin, QJ Wang, N Yu, MA Belkin, T Edamura, ... Novel In-Plane Semiconductor Lasers IX 7616, 76160R	6	2010
Influence of excitation and collection geometry on the dark field spectra of individual plasmonic nanostructures MW Knight, J Fan, F Capasso, NJ Halas Optics express 18 (3), 2579-2587	81	2010
Layered superconductors as negative-refractive-index metamaterials AL Rakhmanov, VA Yampol'Skii, JA Fan, F Capasso, F Nori Physical Review B 81 (7), 075101	80	2010
Optically pumped nanowire lasers: invited review MA Zimmler, F Capasso, S Müller, C Ronning Semiconductor Science and Technology 25 (2), 024001	211	2010
Activation energy study of electron transport in high performance short wavelengths quantum cascade lasers C Pflügl, L Diehl, A Lyakh, QJ Wang, R Maulini, A Tsekoun, CKN Patel, ... Optics express 18 (2), 746-753	23	2010
Wavefront engineering of semiconductor lasers using plasmonics N Yu, R Blanchard, JA Fan, QJ Wang, M Kats, F Capasso 2010 3rd International Nanoelectronics Conference (INEC), 70-71		2010
Surface physics, nanoscale physics, low-dimensional systems-Enhanced thermoelectric figure of merit in edge-disordered zigzag graphene nanoribbons (4 pages) 113401 H Sevinçli, G Cuniberti Physical Review B Condensed Matter And Materials Physics 81 (11)		2010
Novel In-Plane Semiconductor Lasers XV AA Belyanin, PM Smowton Proc. of SPIE Vol 9767, 976701-1	1	2010
Interview with Professor Federico Capasso F Capasso Electronics Letters 46 (26), S51		2010
Focus on advanced semiconductor heterostructures for optoelectronics MC Amann, F Capasso, A Larsson, M Pessa New Journal of Physics 11 (12), 125012	16	2009

TITLE	CITED BY	YEAR
Deformed microcavity quantum cascade lasers with directional emission QJ Wang, C Yan, L Diehl, M Hentschel, J Wiersig, N Yu, C Pflügl, ... New Journal of Physics 11 (12), 125018	27	2009
Optical nanorod antennas as dispersive one-dimensional Fabry–Pérot resonators for surface plasmons E Cubukcu, F Capasso Applied Physics Letters 95 (20), 201101	107	2009
The forces from coupled surface plasmon polaritons in planar waveguides D Woolf, M Loncar, F Capasso Optics express 17 (22), 19996-20011	105	2009
Multi-beam multi-wavelength semiconductor lasers N Yu, MA Kats, C Pflügl, M Geiser, QJ Wang, MA Belkin, F Capasso, ... Applied Physics Letters 95 (16), 161108	31	2009
High power thermoelectrically cooled and uncooled quantum cascade lasers with optimized reflectivity facet coatings R Maulini, A Lyakh, A Tsekoun, R Go, C Pflügl, L Diehl, F Capasso, ... Applied Physics Letters 95 (15), 151112	97	2009
Measurement of Attractive and Repulsive Casimir Forces and Applications to Nanomechanics J Munday, F Capasso Laser Science, LSTuH2		2009
3 W continuous-wave room temperature single-facet emission from quantum cascade lasers based on nonresonant extraction design approach A Lyakh, R Maulini, A Tsekoun, R Go, C Pflügl, L Diehl, QJ Wang, ... Applied Physics Letters 95 (14), 141113	233	2009
Nanowire-Induced Wurtzite InAs Thin Film on Zinc-Blende InAs Substrate J Bao, DC Bell, F Capasso, N Erdman, D Wei, L Fröberg, T Mårtensson, ... Advanced Materials 21 (36), 3654-3658	47	2009
The bright future of sub-wavelength photonics: From light manipulation to quantum levitation at the nanoscale F Capasso 2009 34th International Conference on Infrared, Millimeter, and Terahertz …		2009
Beam combining of quantum cascade laser arrays BG Lee, J Kansky, AK Goyal, C Pflügl, L Diehl, MA Belkin, A Sanchez, ... Optics Express 17 (18), 16216-16224	99	2009
Wavelength beam combining of quantum cascade laser arrays for remote sensing BG Lee, J Kansky, AK Goyal, C Pflügl, L Diehl, MA Belkin, A Sanchez, ... Lidar Remote Sensing for Environmental Monitoring X 7460, 746004	5	2009

TITLE	CITED BY	YEAR
Plasmonics for laser beam shaping N Yu, R Blanchard, J Fan, QJ Wang, C Pflügl, L Diehl, T Edamura, ... IEEE Transactions on Nanotechnology 9 (1), 11-29	54	2009
Mode-locked pulses from mid-infrared quantum cascade lasers CY Wang, L Kuznetsova, VM Gkortsas, L Diehl, FX Kaertner, MA Belkin, ... Optics Express 17 (15), 12929-12943	200	2009
Far-Field and Near-Field Engineering of Semiconductor Lasers Using Plasmonics-Invited Plenary Talk F Capasso, N Yu, E Cubukcu, R Blanchard, J Fan, QJ Wang, C Pflugl, ... ECS Meeting Abstracts, 2286		2009
Laser oscillation thresholds for ZnO nanowires MA Zimmler, J Bao, KA Sunter, F Capasso, S Mueller, C Ronning Verhandlungen der Deutschen Physikalischen Gesellschaft		2009
On the temperature dependence of point-defect-mediated luminescence in silicon D Recht, F Capasso, MJ Aziz Applied Physics Letters 94 (25), 251113	13	2009
Directional emission and universal far-field behavior from semiconductor lasers with limaçon-shaped microcavity C Yan, QJ Wang, L Diehl, M Hentschel, J Wiersig, N Yu, C Pflügl, ... Applied Physics Letters 94 (25), 251101	107	2009
Broadband Distributed-Feedback Quantum Cascade Laser Array Operating From 8.0 to 9.8μm BG Lee, HA Zhang, C Pflugl, L Diehl, MA Belkin, M Fischer, A Wittmann, ... IEEE Photonics Technology Letters 21 (13), 914-916	81	2009
Exciton-related electroluminescence from ZnO nanowire light-emitting diodes MA Zimmler, T Voss, C Ronning, F Capasso Applied Physics Letters 94 (24), 241120	108	2009
Angular emission characteristics of quantum cascade spiral microlasers M Hentschel, TY Kwon, MA Belkin, R Audet, F Capasso Optics express 17 (12), 10335-10343	25	2009
Directional micro-cavity lasers with Limaçon-shaped chaotic resonator QJ Wang, C Yan, L Diehl, N Yu, C Pflugl, MA Belkin, F Capasso, ... 2009 Conference on Lasers and Electro-Optics and 2009 Conference on Quantum …		2009
Spatial hole burning in actively mode-locked quantum cascade lasers VM Gkortsas, A Gordon, C Jirauschek, C Wang, L Kuznetsova, L Diehl, ... 2009 Conference on Lasers and Electro-Optics and 2009 Conference on Quantum …		2009
Infrared Spectroscopy using Quantum Cascade Lasers P Wang, TJ Tague, L Diehl, C Pflügl, F Capasso 64th International Symposium On Molecular Spectroscopy 64, TG03"	5	2009

TITLE	CITED BY	YEAR
Epitaxial catalyst-free growth of InN nanorods on c-plane sapphire I Shalish, G Seryogin, W Yi, JM Bao, MA Zimmler, E Likovich, DC Bell, ... Nanoscale research letters 4 (6), 532-537	21	2009
Functionalized fiber optic devices for surface enhanced Raman scattering detection and optical trapping EJ Smythe, MD Dickey, E Schonbrun, KB Crozier, GM Whitesides, ... Conference on Lasers and Electro-Optics, CMNN7		2009
Theory of transverse mode coherence in quantum cascade lasers AK Wójcik, N Yu, L Diehl, E Cubukcu, D Bour, S Corzine, J Zhu, G Höfler, ... Conference on Lasers and Electro-Optics, CThT3		2009
Mode-locking via active gain modulation in quantum cascade lasers L Kuznetsova, CY Wang, VM Gkortsas, L Diehl, F Kärtner, MA Belkin, ... Conference on Lasers and Electro-Optics, CMBB6		2009
Broadband distributed feedback quantum cascade laser array using a heterogeneous cascade L Diehl, BG Lee, HA Zhang, C Pflügl, M Belkin, M Fisher, A Wittman, ... Conference on Lasers and Electro-Optics, CThT1	2	2009
High-temperature operation of terahertz quantum cascade laser sources MA Belkin, QJ Wang, C Pflugl, A Belyanin, SP Khanna, AG Davies, ... IEEE Journal of Selected Topics in Quantum Electronics 15 (3), 952-967	145	2009
DFB quantum cascade laser arrays BG Lee, MA Belkin, C Pflugl, L Diehl, HA Zhang, RM Audet, J MacArthur, ... IEEE Journal of Quantum Electronics 45 (5), 554-565	129	2009
Using plasmonics to shape light beams F Capasso, N Yu, E Cubukcu, E Smythe Optics and Photonics News 20 (5), 22-27	15	2009
Semiconductor lasers with integrated plasmonic polarizers N Yu, QJ Wang, C Pflügl, L Diehl, F Capasso, T Edamura, S Furuta, ... Applied Physics Letters 94 (15), 151101	80	2009
Stable mode-locked pulses from mid-infrared semiconductor lasers CY Wang, L Kuznetsova, VM Gkortsas, L Diehl, FX Kärtner, MA Belkin, ... arXiv preprint arXiv:0903.4385	1	2009
Optical Antenna Arrays on a Fiber Facet for *in Situ* Surface-Enhanced Raman Scattering Detection EJ Smythe, MD Dickey, J Bao, GM Whitesides, F Capasso Nano letters 9 (3), 1132-1138	270	2009
Time-resolved investigations of electronic transport dynamics in quantum cascade lasers based on diagonal lasing transition H Choi, L Diehl, ZK Wu, M Giovannini, J Faist, F Capasso, TB Norris IEEE Journal of Quantum Electronics 45 (4), 307-321	20	2009

TITLE	CITED BY	YEAR
The quenching of scattering-enhanced tunneling in the Quantum Hall Regime K Russell, F Capasso, V Narayanamurti, H Lu, J Zide, A Gossard APS March Meeting Abstracts, Q23. 002		2009
Fabrication of surface plasmon resonators by nanoskiving single-crystalline gold microplates BJ Wiley, DJ Lipomi, J Bao, F Capasso, GM Whitesides Advanced Fabrication Technologies for Micro/Nano Optics and Photonics II …		2009
Aligned carbon nanotubes as polarization-sensitive, molecular near-field detectors E Cubukcu, F Degirmenci, C Kocabas, MA Zimmler, JA Rogers, ... Proceedings of the National Academy of Sciences 106 (8), 2495-2499	39	2009
Multimode Regimes in Quantum Cascade Lasers: From Coherent Instabilities to Spatial Hole Burning F Capasso, F Kaertner HARVARD UNIV CAMBRIDGE MA SCHOOL OF ENGINEERING AND APPLIED SCIENCES		2009
Ultrafast electronic transport in low dimensional semiconductor nanostructures H Choi, TB Norris, J Faist, F Capasso Ultrafast Phenomena in Semiconductors and Nanostructure Materials XIII 7214 …		2009
Repulsive Casimir effect captured J Penni, F Capasso Physics World		2009
Controlled modification of erbium lifetime by near-field coupling to metallic films N Yu, A Belyanin, J Bao, F Capasso New Journal of Physics 11 (1), 015003	11	2009
A technique to transfer metallic nanoscale patterns to small and non-planar surfaces EJ Smythe, MD Dickey, GM Whitesides, F Capasso ACS nano 3 (1), 59-65	156	2009
Widely tunable high-power external cavity quantum cascade laser operating in continuous-wave at room temperature R Maulini, I Dunayevskiy, A Lyakh, A Tsekoun, CKN Patel, L Diehl, ... Electronics letters 45 (2), 107-108	71	2009
Coherent coupling of multiple transverse modes in quantum cascade lasers N Yu, L Diehl, E Cubukcu, D Bour, S Corzine, G Höfler, AK Wojcik, ... Physical review letters 102 (1), 013901	62	2009
High performance quantum cascade lasers based on three-phonon-resonance design	102	2009

TITLE	CITED BY	YEAR
QJ Wang, C Pflügl, L Diehl, F Capasso, T Edamura, S Furuta, ... Applied Physics Letters 94 (1), 011103		
New Journal of Physics. Focus on advanced semiconcuctor heterostructures for optoelectronics M Amann, F Capasso, A Larsson, M Pessa		2009
Wavelength beam combining of quantum cascade laser arrays for remote sensing A Sanchez-Rubio, AK Goyal, JE Kansky, F Capasso, MA Belkin, L Diehl, ... The International Society for Optical Engineering		2009
Phytotherapeutic approach to alcohol dependence: a new old way? A review L Montebianco Abenavoli, F Capasso, G Addolorato		2009
Quantum Cascade Lasers-Time-Resolved Investigations of Electronic Transport Dynamics in Quantum Cascade Lasers Based on Diagonal Lasing Transition H Choi, L Diehl, ZK Wu, M Giovannini, J Faist, F Capasso, TB Norris IEEE Journal of Quantum Electronics 45 (3), 307		2009
Measured long-range repulsive Casimir–Lifshitz forces JN Munday, F Capasso, VA Parsegian Nature 457 (7226), 170-173	659	2009
Quantum cascade lasers with integrated plasmonic antenna-array collimators N Yu, R Blanchard, J Fan, QJ Wang, C Pflügl, L Diehl, T Edamura, ... Optics Express 16 (24), 19447-19461	76	2008
Low divergence semiconductor lasers by plasmonic collimation F Capasso, N Yu, J Fan, QJ Wang, C Pflugl, L Diehl, T Edamura, ... LEOS 2008-21st Annual Meeting of the IEEE Lasers and Electro-Optics Society, 6-7		2008
High performance room temperature quantum cascade lasers based on three-phonon-resonance depopulation QJ Wang, C Pflugl, T Edamura, H Kan, F Capasso LEOS 2008-21st Annual Meeting of the IEEE Lasers and Electro-Optics Society …		2008
Stable suspension and dispersion-induced transitions from repulsive Casimir forces between fluid-separated eccentric cylinders AW Rodriguez, JN Munday, JD Joannopoulos, F Capasso, DAR Dalvit, ... Physical review letters 101 (19), 190404	44	2008
Gigahertz surface acoustic wave generation on ZnO thin films deposited by radio frequency magnetron sputtering on III-V semiconductor substrates QJ Wang, C Pflügl, WF Andress, D Ham, F Capasso, M Yamanishi Journal of Vacuum Science & Technology B: Microelectronics and Nanometer …	39	2008

TITLE	CITED BY	YEAR
Small divergence edge-emitting semiconductor lasers with two-dimensional plasmonic collimators N Yu, R Blanchard, J Fan, F Capasso, T Edamura, M Yamanishi, H Kan Applied physics letters 93 (18), 181101	64	2008
High-performance quantum cascade lasers grown by metal-organic vapor phase epitaxy and their applications to trace gas sensing M Troccoli, L Diehl, DP Bour, SW Corzine, N Yu, CY Wang, MA Belkin, ... Journal of Lightwave Technology 26 (21), 3534-3555	62	2008
Surface-emitting terahertz quantum cascade laser source based on intracavity difference-frequency generation C Pflügl, MA Belkin, QJ Wang, M Geiser, A Belyanin, M Fischer, ... Applied Physics Letters 93 (16), 161110	41	2008
Orientation-dependent Casimir force arising from highly anisotropic crystals: Application to Bi 2 Sr 2 Ca Cu 2 O 8+ δ MB Romanowsky, F Capasso Physical Review A 78 (4), 042110	22	2008
New Widely Tunable Room-Temperature Terahertz Coherent Sources F Capasso, A Belyanin HARVARD UNIV CAMBRIDGE MA SCHOOL OF ENGINEERING AND APPLIED SCIENCES		2008
Instabilities and mode locking of quantum cascade lasers F Kärtner, V Gkortsas, A Gordon, C Jirauschek, F Capasso, C Wang, ... IQCLSW 2008 Conference, September, 14-19	2	2008
Terahertz frequency quantum cascade lasers operating up to 178 K with copper metal-metal waveguides MA Belkin, SP Khanna, JA Fan, S Hormoz, M Lachab, F Capasso, ... 2008 33rd International Conference on Infrared, Millimeter and Terahertz …	2	2008
Measurements of the Casimir-Lifshitz force in fluids: The effect of electrostatic forces and Debye screening JN Munday, F Capasso, VA Parsegian, SM Bezrukov Physical Review A 78 (3), 032109	62	2008
Fabrication of surface plasmon resonators by nanoskiving single-crystalline gold microplates BJ Wiley, DJ Lipomi, J Bao, F Capasso, GM Whitesides Nano letters 8 (9), 3023-3028	90	2008
Widely tunable mode-hop free external cavity quantum cascade lasers for high resolution spectroscopy and chemical sensing G Wysocki, R Lewicki, RF Curl, FK Tittel, L Diehl, F Capasso, M Troccoli, ... Applied Physics B 92 (3), 305-311	251	2008

TITLE	CITED BY	YEAR
Small-divergence semiconductor lasers by plasmonic collimation N Yu, J Fan, QJ Wang, C Pflügl, L Diehl, T Edamura, M Yamanishi, H Kan, ... Nature Photonics 2 (9), 564-570	261	2008
Laser action in nanowires: Observation of the transition from amplified spontaneous emission to laser oscillation MA Zimmler, J Bao, F Capasso, S Müller, C Ronning Applied Physics Letters 93 (5), 051101	262	2008
Highly collimated and ultra-high-intensity near-field lasers by wavefront engineering F Capasso 2008 International Nano-Optoelectronics Workshop, 102-102		2008
TEM Correlation between the Structural and Optical Properties Of Rotationally Twinned InP Nanowires DC Bell, J Bao, F Capasso, J Wagner, T Martensson, J Trägårdh, ... Microscopy and Microanalysis 14 (S2), 414-415		2008
Simpler technique for integrating nanowires on silicon substrate F Capasso, M Zimmler Advanced Manufacturing Technology 29 (6), 11-12		2008
Scalable fabrication of nanowire photonic and electronic circuits using spin-on glass MA Zimmler, D Stichtenoth, C Ronning, W Yi, V Narayanamurti, T Voss, ... Nano letters 8 (6), 1695-1699	93	2008
Room temperature terahertz quantum cascade laser source based on intracavity difference-frequency generation MA Belkin, F Capasso, F Xie, A Belyanin, M Fischer, A Wittmann, J Faist Applied Physics Letters 92 (20), 201101	274	2008
Multimode regimes in quantum cascade lasers: From coherent instabilities to spatial hole burning A Gordon, CY Wang, L Diehl, FX Kärtner, A Belyanin, D Bour, S Corzine, ... Physical Review A 77 (5), 053804	216	2008
Continuously tunable compact single-mode quantum cascade laser source for chemical sensing BG Lee, MA Belkin, J MacArthur, RM Audet, L Diehl, C Pflügl, F Capasso, ... Conference on Lasers and Electro-Optics, CMH1		2008
Microwatt-level terahertz sources based on intra-cavity difference-frequency generation in mid-infrared quantum cascade lasers MA Belkin, F Capasso, F Xie, A Belyanin, M Fischer, A Wittmann, J Faist Conference on Lasers and Electro-Optics, CMFF6	1	2008
Terahertz quantum cascade lasers operating up to 178 K with copper metal-metal waveguides SP Khanna, MA Belkin, JA Fan, S Hormoz, M Lachab, F Capasso, ...		2008

TITLE	CITED BY	YEAR
Conference on Lasers and Electro-Optics, CMV2		
Time-domain measurements of group-velocity dispersion in quantum cascade lasers H Choi, TB Norris, L Diehl, F Capasso, D Bour, S Corzine, J Zhu, G Hofler 2008 Conference on Lasers and Electro-Optics and 2008 Conference on Quantum …		2008
Wide ridge low-divergence metal-metal terahertz quantum cascade lasers JA Fan, MA Belkin, F Capasso, SJ Khanna, M Lachab, G Davies, ... Conference on Lasers and Electro-Optics, CMV3		2008
1.3 W quantum cascade lasers with optimized design for continuous-wave operation at room temperature A Lyakh, C Pflügl, L Diehl, Q Wang, F Capasso, XJ Wang, JY Fan, ... Conference on Lasers and Electro-Optics, CTuF3	2	2008
Stable Mode-Locked Pulses from Mid-Infrared Quantum Cascade Lasers CY Wang, L Kuznetsova, L Diehl, F Kaertner, MA Belkin, H Schneider, ... Conference on Lasers and Electro-Optics, CPDA11	2	2008
Femtosecond resonant pulse propagation in quantum cascade lasers: Evidence of coherent effects H Choi, VM Gkortsas, FX Kärtner, L Diehl, CY Wang, F Capasso, D Bour, ... Conference on Lasers and Electro-Optics, CTuP7	1	2008
Array of tiny quantum cascade lasers provides tunable mid-IR output BG Lee, MA Belkin, F Capasso Photonics Spectra 42 (5), 70	2	2008
Gain recovery dynamics and photon-driven transport in quantum cascade lasers H Choi, L Diehl, ZK Wu, M Giovannini, J Faist, F Capasso, TB Norris Physical Review Letters 100 (16), 167401	86	2008
Fabrication of arrays of metal and metal oxide nanotubes by shadow evaporation MD Dickey, EA Weiss, EJ Smythe, RC Chiechi, F Capasso, ... ACS nano 2 (4), 800-808	93	2008
High-power long-wavelength room-temperature MOVPE-grown quantum cascade lasers with air-semiconductor waveguide QJ Wang, C Pflugl, L Diehl, F Capasso, S Furuta, H Kan Electronics Letters 44 (8), 525-526	11	2008
Plasmonic laser antennas and related devices E Cubukcu, N Yu, EJ Smythe, L Diehl, KB Crozier, F Capasso IEEE Journal of Selected Topics in Quantum Electronics 14 (6), 1448-1461	171	2008
Reply to “Comment on ‘Precision measurement of the Casimir-Lifshitz force in a fluid’” JN Munday, F Capasso Physical Review A 77 (3), 036103	12	2008

TITLE	CITED BY	YEAR
Femtosecond dynamics of resonant tunneling and superlattice relaxation in quantum cascade lasers H Choi, TB Norris, T Gresch, M Giovannini, J Faist, L Diehl, F Capasso Applied Physics Letters 92 (12), 122114	33	2008
1.6 W high wall plug efficiency, continuous-wave room temperature quantum cascade laser emitting at 4.6 μm A Lyakh, C Pflügl, L Diehl, QJ Wang, F Capasso, XJ Wang, JY Fan, ... Applied Physics Letters 92 (11), 111110	243	2008
Optical properties of rotationally twinned InP nanowire heterostructures J Bao, DC Bell, F Capasso, JB Wagner, T Mårtensson, J Trägårdh, ... Nano letters 8 (3), 836-841	360	2008
Terahertz quantum cascade lasers with copper metal-metal waveguides operating up to 178 K MA Belkin, JA Fan, S Hormoz, F Capasso, SP Khanna, M Lachab, ... Optics express 16 (5), 3242-3248	263	2008
Measurements of the Casimir-Lifshitz force between a metal and a dielectric in fluid J Munday, F Capasso APS March Meeting Abstracts, B14. 006		2008
Orientation dependence of Casimir force between uniaxial crystals M Romanowsky, F Capasso APS March Meeting Abstracts, B14. 003		2008
Differential near-field scanning optical microscopy based on sensor arrays A Ozcan, E Cubukcu, F Capasso, A Bilenca, BE Bouma, GJ Tearney Nanoscale Imaging, Sensing, and Actuation for Biomedical Applications V 6865 …		2008
Wide-ridge metal-metal terahertz quantum cascade lasers with high-order lateral mode suppression JA Fan, MA Belkin, F Capasso, SP Khanna, M Lachab, AG Davies, ... Applied Physics Letters 92 (3), 031106	64	2008
Point defect engineered Si sub-bandgap light-emitting diodes J Bao, S Charnvanichborikarn, Y Yang, M Tabbal, B Shin, J Wong-Leung, ... Device and Process Technologies for Microelectronics, MEMS, Photonics, and …	2	2008
Том. 1055. Materials Research Society Symposium Proceedings-Excitons and Plasmon Resonances in Nanostructures.-Cep. Materials Research Society Symposium Proceedings-Excitons … N Yu, J Bao, F Capasso, A Belyanin, T Mates, M Troccoli, BS Passmore, ...		2008
Point defect engineered Si sub-bandgap light-emitting diodes (Invited Paper)[6800-30] J Bao, S Charnvanichborikarn, Y Yang, M Tabbal, B Shin, J Wong-Leung, ... PROCEEDINGS-SPIE THE INTERNATIONAL SOCIETY FOR OPTICAL ENGINEERING 6800, 6800		2008

TITLE	CITED BY	YEAR
Integrated Optics/Optoelectronics-High-Performance Quantum Cascade Lasers Grown by Metal-Organic Vapor Phase Epitaxy and Their Applications to Trace Gas Sensing M Troccoli, L Diehl, DP Bour, SW Corzine, N Yu, CY Wang, MA Belkin, ... Ieee Journal Of Lightwave Technology 26 (21), 3534		2008
Femtosecond pump-probe studies of carrier transport and gain dynamics in quantum cascade lasers H Choi, L Diehl, M Giovannini, J Faist, F Capasso, TB Norris physica status solidi c 5 (1), 225-228	3	2008
Differential near-field scanning optical microscopy based on sensor arrays (Invited Paper)[6865-07] A Ozcan, E Cubukcu, F Capasso, A Bilenca, BE Bouma, GJ Tearney PROCEEDINGS-SPIE THE INTERNATIONAL SOCIETY FOR OPTICAL ENGINEERING 6865, 6865		2008
Quantum cascade lasers: Quantum design, high performance technology for mid-and far-infrared photonics and commercialization F Capasso 2007 International Workshop on Physics of Semiconductor Devices, 3-3		2007
Widely tunable single-mode quantum cascade laser source for mid-infrared spectroscopy BG Lee, MA Belkin, R Audet, J MacArthur, L Diehl, C Pflügl, F Capasso, ... Applied Physics Letters 91 (23), 231101	242	2007
Time-domain upconversion measurements of group-velocity dispersion in quantum cascade lasers H Choi, L Diehl, F Capasso, D Bour, S Corzine, J Zhu, G Höfler, TB Norris Optics express 15 (24), 15898-15907	25	2007
Mode Locking of Quantum Cascade Lasers F Capasso, FX Kaertner HARVARD UNIV CAMBRIDGE MA SCHOOL OF ENGINEERING AND APPLIED SCIENCES		2007
Double-metal waveguide λ≃ 19 μm quantum cascade lasers grown by metal organic vapour phase epitaxy JA Fan, MA Belkin, M Troccoli, S Corzine, D Bour, G Höfler, F Capasso Electronics Letters 43 (23), 1284-1285	6	2007
Differential near-field scanning optical microscopy using sensor arrays A Ozcan, E Cubukcu, A Bilenca, BE Bouma, F Capasso, GJ Tearney IEEE journal of selected topics in quantum electronics 13 (6), 1721-1729	10	2007
Improved thermoelectric figure of merit in n-type $\mathrm{CoSb_3}$ based nanocomposites JL Mi, XB Zhao, TJ Zhu, JP Tu Applied physics letters 91 (17), 172116	100	2007

TITLE	CITED BY	YEAR
Plasmonic quantum cascade laser antenna N Yu, E Cubukcu, L Diehl, MA Belkin, KB Crozier, F Capasso, D Bour, ... Applied Physics Letters 91 (17), 173113	101	2007
Plasmonic nanoclusters: a path towards negative-index metafluids YA Urzhumov, G Shvets, J Fan, F Capasso, D Brandl, P Nordlander Optics express 15 (21), 14129-14145	166	2007
The Measurement and Simulation of Terahertz Difference Frequency Generation in Quantum Cascade Lasers F Xie, M Belkin, F Capasso, J Faist APS Texas Sections Fall Meeting Abstracts, J3. 004		2007
Near-field imaging of quantum cascade laser transverse modes N Yu, L Diehl, E Cubukcu, C Pflügl, D Bour, S Corzine, J Zhu, G Höfler, ... Optics express 15 (20), 13227-13235	50	2007
Bowtie plasmonic quantum cascade laser antenna N Yu, E Cubukcu, L Diehl, D Bour, S Corzine, J Zhu, G Höfler, KB Crozier, ... Optics Express 15 (20), 13272-13281	184	2007
Controlled modification of erbium lifetime in silicon dioxide with metallic overlayers J Bao, N Yu, F Capasso, T Mates, M Troccoli, A Belyanin Applied Physics Letters 91 (13), 131103	28	2007
Single-mode laser action in quantum cascade lasers with spiral-shaped chaotic resonators R Audet, MA Belkin, JA Fan, BG Lee, K Lin, F Capasso, EE Narimanov, ... Applied Physics Letters 91 (13), 131106	43	2007
Room-temperature continuous-wave operation of long wavelength (λ9. 5 μm) MOVPE-grown quantum cascade lasers C Pflugl, L Diehl, A Tsekoun, R Go, CKN Patel, X Wang, J Fan, ... Electronics Letters 43 (19), 1026-1028	17	2007
Fabrication of large-area patterned nanostructures for optical applications by nanoskiving Q Xu, J Bao, RM Rioux, R Perez-Castillejos, F Capasso, GM Whitesides Nano letters 7 (9), 2800-2805	98	2007
A two-colour heterojunction unipolar nanowire light-emitting diode by tunnel injection MA Zimmler, J Bao, I Shalish, W Yi, V Narayanamurti, F Capasso Nanotechnology 18 (39), 395201	23	2007
Intra-cavity absorption spectroscopy with narrow-ridge microfluidic quantum cascade lasers MA Belkin, M Lončar, BG Lee, C Pflügl, R Audet, L Diehl, F Capasso, ... Optics Express 15 (18), 11262-11271	27	2007

TITLE	CITED BY	YEAR
Observation of photon-driven electronic transport in quantum cascade lasers H Choi, L Diehl, M Giovannini, J Faist, F Capasso, TB Norris Conference on Lasers and Electro-Optics/Pacific Rim, ThA2_5		2007
Computation and visualization of Casimir forces in arbitrary geometries: Nonmonotonic lateral-wall forces and the failure of proximity-force approximations A Rodriguez, M Ibanescu, D Iannuzzi, F Capasso, JD Joannopoulos, ... Physical review letters 99 (8), 080401	119	2007
Precision measurement of the Casimir-Lifshitz force in a fluid JN Munday, F Capasso Physical Review A 75 (6), 060102	84	2007
Optical properties of surface plasmon resonances of coupled metallic nanorods EJ Smythe, E Cubukcu, F Capasso Optics Express 15 (12), 7439-7447	170	2007
Point defect engineered Si sub-bandgap light-emitting diode J Bao, M Tabbal, T Kim, S Charnvanichborikarn, JS Williams, MJ Aziz, ... Optics Express 15 (11), 6727-6733	87	2007
Electroluminescence from single nanowires by tunnel injection: an experimental study MA Zimmler, J Bao, I Shalish, W Yi, J Yoon, V Narayanamurti, F Capasso Nanotechnology 18 (23), 235205	30	2007
Widely Tunable, High Power, Mode-hop Free, CW External Cavity Quantum Cascade Laser at 8μm G Wysocki, RF Curl, FK Tittel, F Capasso, L Diehl, M Troccoli, G Höfler, ... Conference on Lasers and Electro-Optics, CFB3	2	2007
Dispersive, superfluid-like shock waves in nonlinear optics: Properties & Interactions W Wan, S Jia, JW Fleischer Quantum Electronics and Laser Science Conference, QME2	1	2007
Coupled metallic antenna nanorod arrays EJ Smythe, E Cubukcu, F Capasso 2007 Quantum Electronics and Laser Science Conference, 1-2	1	2007
Photon-driven transport in quantum cascade lasers H Choi, ZK Wu, TB Norris, L Diehl, F Capasso, M Giovannini, J Faist 2007 Conference on Lasers and Electro-Optics (CLEO), 1-2		2007
Current injection spiral-shaped chaotic microcavity quantum cascade lasers RM Audet, MA Belkin, JA Fan, F Capasso, E Narimanov, D Bour, ... 2007 Conference on Lasers and Electro-Optics (CLEO), 1-2	2	2007

TITLE	CITED BY	YEAR
Broadly Tunable Single-Mode Quantum Cascade Laser Source BG Lee, R Audet, J MacArthur, M Belkin, L Diehl, C Pflugl, F Capasso, ... 2007 Conference on Lasers and Electro-Optics (CLEO), 1-2		2007
Efficient point defect engineered si light-emitting diode at 1.218 μm J Bao, M Tabbal, T Kim, S Charnvanichborikarn, JS Williams, MJ Aziz, ... Conference on Lasers and Electro-Optics, JTuA95	2	2007
Nonlinear quantum cascade lasers: Toward broad tunability and short-wavelength operation F Xie, D Smith, VR Chaganti, A Belyanin, D Wasserman, C Gmachl, ... Conference on Lasers and Electro-Optics, CTuO6		2007
Local Fields of Optical Antenna Structures B Deutsch, L Novotny, E Cubukcu, EJ Smythe, F Capasso, R Hillenbrand Conference on Lasers and Electro-Optics, CTuZ6		2007
Nonlinear optics with quantum cascade lasers F Xie, VR Chaganti, D Smith, A Belyanin, F Capasso, C Gmachl Laser physics 17 (5), 672-679	4	2007
Terahertz quantum-cascade-laser source based on intracavity difference-frequency generation MA Belkin, F Capasso, A Belyanin, DL Sivco, AY Cho, DC Oakley, ... Nature Photonics 1 (5), 288-292	313	2007
Casimir forces and quantum electrodynamical torques: Physics and nanomechanics F Capasso, JN Munday, D Iannuzzi, HB Chan IEEE Journal of Selected Topics in Quantum Electronics 13 (2), 400-414	362	2007
Design and fabrication of photonic crystal quantum cascade lasers for optofluidics M Lončar, BG Lee, L Diehl, M Belkin, F Capasso, M Giovannini, J Faist, ... Optics Express 15 (8), 4499-4514	42	2007
Time-Resolved Studies of Gain Dynamics in Quantum Cascade Laser H Choi, ZK Wu, TB Norris, T Gresch, M Giovannini, J Faist, L Diehl, ... AIP Conference Proceedings 893 (1), 1437-1438		2007
Coherent instabilities in a semiconductor laser with fast gain recovery CY Wang, L Diehl, A Gordon, C Jirauschek, FX Kärtner, A Belyanin, ... Physical review A 75 (3), 031802	138	2007
Ultra-low friction configuration D Iannuzzi, J Munday, F Capasso US Patent App. 11/230,354	4	2007
Intra-Cavity Terahertz Difference-Frequency Generation in Quantum Cascade Lasers MA Belkin, F Capasso, A Belyanin, DL Sivco, DC Oakley, CJ Vineis, ... Optical Terahertz Science and Technology, ME1	2	2007

TITLE	CITED BY	YEAR
Active optical antenna F Capasso, K Crozier, E Cubukcu, E Kort, N Yu, E Smythe US Patent App. 11/464,758	36	2007
Casimir force measurements between metal and high-T_c superconductor surfaces MB Romanowsky, JN Munday, R Schalek, F Capasso, Q Li, G Gu APS March Meeting Abstracts, N32. 009		2007
Experimental analysis of tunneling from a two-dimensional electron gas into the bulk in the presence of strong scattering. K Russell, V Narayanamurti, F Capasso, J Zide, A Gossard APS March Meeting Abstracts, W40. 011	1	2007
Measurements of the Casimir force in fluids J Munday, F Capasso APS March Meeting Abstracts, N32. 008		2007
The Casimir force on transparent conductors L Spector, J Munday, F Capasso, N Geisse, K Kit Parker APS March Meeting Abstracts, N32. 010		2007
Self-collimation phenomena of surface waves in structured perfect electric conductors and metal surfaces SS Oh, SG Lee, JE Kim, HY Park Optics express 15 (3), 1205-1210	21	2007
General Physics: Statistical and Quantum Mechanics, Quantum Information, etc.-Noninvariance of Space-and Time-Scale Ranges under a Lorentz Transformation and the Implications … JL Vay Physical Review Letters 98 (13), 130405-130500		2007
Opt. Express Q Xu, S Manipatruni, B Schmidt, J Shakya, M Lipson	48	2007
Point Defect Engineered Si Sub-Bandgap Light-Emitting Diode F Capasso, M Aziz, J Williams, S Charnvanichborikarn, T Kim, M Tabbal, ... Optics Express		2007
Intra-cavity absorption spectroscopy with narrow-ridge microfluidic quantum cascade lasers L Diehl, F Capasso, D Bour, S Corzine, G Höfler		2007
Controlled Modification of Erbium Lifetime in Silicon Dioxide Film with Chromium or Titanium Coatings N Yu, J Bao, A Belyanin, T Mates, M Troccoli, F Capasso MRS Online Proceedings Library (OPL) 1055		2007
General Physics: Statistical and Quantum Mechanics, Quantum Information, etc.-Computation and Visualization of Casimir Forces in		2007

TITLE	CITED BY	YEAR
Arbitrary Geometries: Nonmonotonic Lateral-Wall … A Rodriguez, M Ibanescu, D Iannuzzi, F Capasso, JD Joannopoulos, ... Physical Review Letters 99 (8), 80401-80401		
PART A-RAPID COMMUNICATIONS-Quantum optics, physics of lasers, nonlinear optics, classical optics-Coherent instabilities in a semiconductor laser with fast gain recovery CY Wang, L Diehl, A Gordon, C Jirauschek, FX Kaxtner, A Belyanin, ... Physical Review-Section A-Atomic Molecular and Optical Physics 75 (3), 31802R		2007
Single p-type/intrinsic/n-type silicon nanowires as nanoscale avalanche photodetectors C Yang, CJ Barrelet, F Capasso, CM Lieber Nano letters 6 (12), 2929-2934	286	2006
Microfluidic tuning of distributed feedback quantum cascade lasers L Diehl, BG Lee, P Behroozi, M Lončar, MA Belkin, F Capasso, T Aellen, ... Optics Express 14 (24), 11660-11667	36	2006
Surface emitting terahertz quantum cascade laser with a double-metal waveguide JA Fan, MA Belkin, F Capasso, S Khanna, M Lachab, AG Davies, ... Optics Express 14 (24), 11672-11680	136	2006
Differential near-field scanning optical microscopy A Ozcan, E Cubukcu, A Bilenca, KB Crozier, BE Bouma, F Capasso, ... Nano letters 6 (11), 2609-2616	24	2006
Frequency modulation spectroscopy by means of quantum-cascade lasers S Borri, S Bartalini, P De Natale, M Inguscio, C Gmachl, F Capasso, ... Applied Physics B 85 (2), 223-229	60	2006
Quantum electrodynamical torques in the presence of Brownian motion JN Munday, D Iannuzzi, F Capasso New Journal of Physics 8 (10), 244	32	2006
Mid-infrared and Terahertz Quantum Cascade Lasers: from quantum design to commercialization F Capasso 2006 Joint 31st International Conference on Infrared Millimeter Waves and …		2006
Enhancement mechanisms for optical forces in integrated optics ML Povinelli, M Lončar, EJ Smythe, M Ibanescu, SG Johnson, F Capasso, ... Optical Trapping and Optical Micromanipulation III 6326, 632609	5	2006
INOR 594-Hybrid single-nanowire photonic crystal and microresonator structures CJ Barrelet, HG Park, B Jiming, M Loncar, F Capasso, CM Lieber ABSTRACTS OF PAPERS OF THE AMERICAN CHEMICAL SOCIETY 232		2006
Plasmonic laser antenna E Cubukcu, EA Kort, KB Crozier, F Capasso	499	2006

TITLE	CITED BY	YEAR
Applied Physics Letters 89 (9), 093120		
High-temperature continuous wave operation of strain-balanced quantum cascade lasers grown by metal organic vapor-phase epitaxy L Diehl, D Bour, S Corzine, J Zhu, G Höfler, M Lončar, M Troccoli, ... Applied physics letters 89 (8), 081101	95	2006
Unipolar, intraband optoelectronic transducers with micro-cavity resonators F Capasso, AY Cho, R Colombelli, CF Gmachl, OJ Painter, AM Sergent, ... US Patent 7,092,421	12	2006
Quantum electrodynamics of accelerated atoms in free space and in cavities A Belyanin, VV Kocharovsky, F Capasso, E Fry, MS Zubairy, MO Scully Physical Review A 74 (2), 023807	42	2006
Broadband ZnO single-nanowire light-emitting diode J Bao, MA Zimmler, F Capasso, X Wang, ZF Ren Nano letters 6 (8), 1719-1722	677	2006
Optofluidic tuning of quantum cascade lasers BG Lee, M Loncar, L Diehl, PS Berhoozi, T Aellen, D Hofstetter, M Beck, ... 2006 Digest of the LEOS Summer Topical Meetings, 64-65		2006
Laser A Belyanin, F Capasso, M Troccoli US Patent App. 11/027,398	2	2006
Surface plasmon resonances of free-standing gold nanowires fabricated by nanoskiving Q Xu, J Bao, F Capasso, GM Whitesides Angewandte Chemie International Edition 45 (22), 3631-3635	117	2006
High power quantum cascade lasers by MOVPE D Bour, L Diehl, M Troccoli, S Corzine, J Zhu, G Hofler, O Assayag, B Lee, ... 2006 Conference on Lasers and Electro-Optics and 2006 Quantum Electronics …		2006
Hybrid single nanowire photonic crystal structure HG Park, CJ Barrelet, J Bao, M Lončar, F Capasso, CM Lieber Conference on Lasers and Electro-Optics, CThB5		2006
Semiconductor nanowires embedded in optical microcavities M Lončar, CJ Barrelet, J Bao, HG Park, CM Lieber, F Capasso Quantum Electronics and Laser Science Conference, QWG4		2006
Active optical antenna E Cubukcu, EA Kort, KB Crozier, F Capasso Quantum Electronics and Laser Science Conference, QTuA5		2006
Coherent instabilities and self-pulsations in Quantum Cascade Lasers CY Wang, L Diehl, A Gordon, C Jirauschek, F Capasso, F Kartner, ... 2006 Conference on Lasers and Electro-Optics and 2006 Quantum Electronics …		2006

TITLE	CITED BY	YEAR
Ultrafast gain dynamics in a quantum cascade laser H Choi, ZK Wu, TB Norris, T Gresch, M Giovannini, J Faist, L Diehl, ... 2006 Conference on Lasers and Electro-Optics and 2006 Quantum Electronics …		2006
Novel photonic crystal quantum cascade laser platform M Lončar, BG Lee, M Troccoli, L Diehl, F Capasso, M Giovannini, J Faist Quantum Electronics and Laser Science Conference, QTuL5	1	2006
Quantum cascade photonic crystal lasers: design, fabrication, and applications R Perahia, K Srinivasan, O Painter, V Moreau, M Bahriz, R Colombelli, ... Conference on Lasers and Electro-Optics, CTuAA5	2	2006
Quasiphase matching of second-harmonic generation in quantum cascade lasers by Stark shift of electronic resonances MA Belkin, M Troccoli, L Diehl, F Capasso, AA Belyanin, DL Sivco, ... Applied physics letters 88 (20), 201108	14	2006
High-power quantum cascade lasers grown by low-pressure metal organic vapor-phase epitaxy operating in continuous wave above $400\ \mathrm{K}$ L Diehl, D Bour, S Corzine, J Zhu, G Höfler, M Lončar, M Troccoli, ... Applied physics letters 88 (20), 201115	175	2006
Quantum fluctuations in the presence of thin metallic films and anisotropic materials D Iannuzzi, M Lisanti, JN Munday, F Capasso Journal of Physics A: Mathematical and General 39 (21), 6445	17	2006
High-Speed Operation and Ultrafast Pulse Generation with Quantum Cascade Lasers R Paiella, R Martini, A Soibel, HC Liu, F Capasso Intersubband Transitions In Quantum Structures, 107		2006
Raman injection and inversionless intersubband lasers A Belyanin, M Troccoli, F Capasso Intersubband transitions in quantum structures, 181-236	8	2006
Quantum Cascade Photonic Crystal Microlasers for" Intra-Cavity" Mid-IR Spectroscopy of Biomolecules on a Chip R Perahia, K Srinivasan, O Painter, V Moreau, M Bahriz, R Colombelli, ... Nanophotonics, JWA4		2006
Broadband cascade light emitters F Capasso, AY Cho, CF Gmachl, ML Peabody, AM Sergent, DL Sivco, ... US Patent 7,010,010	4	2006
Performance benefits of nonlinear quantum cascade sources A Belyanin, F Xie, F Capasso, C Gmachl, O Malis Novel In-Plane Semiconductor Lasers V 6133, 61330Z		2006

TITLE	CITED BY	YEAR
Surface-plasmon quantum cascade microlasers with highly deformed resonators R Colombelli, C Gmachl, AM Sergent, DL Sivco, EE Narimanov, ... IEEE Journal of selected topics in quantum electronics 12 (1), 66-70	10	2006
Pulsed-and continuous-mode operation at high temperature of strained quantum-cascade lasers grown by metalorganic vapor phase epitaxy L Diehl, D Bour, S Corzine, J Zhu, G Höfler, BG Lee, CY Wang, M Troccoli, ... Applied physics letters 88 (4), 041102	36	2006
Hybrid single-nanowire photonic crystal and microresonator structures CJ Barrelet, J Bao, M Loncar, HG Park, F Capasso, CM Lieber Nano letters 6 (1), 11-15	143	2006
VU Research Portal JN Munday, D Iannuzzi, F Capasso New J. Phys 8, 244		2006
Coherent phenomena in high power quantum cascade lasers F Capasso, CY Wang, A Gordon, FX Kärtner, C Jirauschek, L Diehl, ... 19th Annual Meeting of the IEEE Lasers & Electro-Optics Society (LEOS 2006 …		2006
Light pulls waveguides together or pushes them apart F Capasso LASER FOCUS WORLD 41 (12), 11-11		2005
A frequency-modulated quantum-cascade laser for spectroscopy of CH4 and N2O isotopomers G Gagliardi, S Borri, F Tamassia, F Capasso, C Gmachl, DL Sivco, ... Isotopes in Environ Health Studies 41 (4), 313-321	32	2005
Evanescent-wave bonding between optical waveguides ML Povinelli, M Lončar, M Ibanescu, EJ Smythe, SG Johnson, F Capasso, ... Optics letters 30 (22), 3042-3044	432	2005
Coherent nonlinear optics with quantum cascade structures A Belyanin, F Xie, D Liu, F Capasso, M Troccoli Journal of Modern Optics 52 (16), 2293-2302	10	2005
Optical Forces in Microphotonic Waveguides ML Povinelli, M Lončar, M Ibanescu, EJ Smythe, SG Johnson, F Capasso, ... Frontiers in Optics, FTuQ6		2005
Room temperature continuous-wave operation of quantum-cascade lasers grown by metal organic vapour phase epitaxy M Troccoli, S Corzine, D Bour, J Zhu, O Assayag, L Diehl, BG Lee, ... Electronics Letters 41 (19), 1059-1060	51	2005
High-Q enhancement of attractive and repulsive optical forces between coupled whispering-gallery-mode resonators ML Povinelli, SG Johnson, M Lončar, M Ibanescu, EJ Smythe, F Capasso, ... Optics express 13 (20), 8286-8295	202	2005

TITLE	CITED BY	YEAR
The design of long range quantum electrodynamical forces and torques between macroscopic bodies D Iannuzzi, M Lisanti, JN Munday, F Capasso Solid state communications 135 (9-10), 618-626	36	2005
Observation of the skin-depth effect on the Casimir force between metallic surfaces M Lisanti, D Iannuzzi, F Capasso Proceedings of the National Academy of Sciences 102 (34), 11989-11992	109	2005
Quantum cascade lasers: widely tailorable light sources for the mid-to far-infrared and their applications F Capasso 63rd Device Research Conference Digest, 2005. DRC'05. 1, 5-5		2005
Quasi-Phase Matching of Second-Harmonic Generation by Modulation of Electron Population Density in Quantum Cascade Lasers MA Belkin, M Troccoli, L Diehl, F Capasso, AA Belyanin, DL Sivco Quantum Electronics and Laser Science Conference, QPDA1		2005
Publisher's Note: Torque on birefringent plates induced by quantum fluctuations [Phys. Rev. A 71, 042102 (2005)] JN Munday, D Iannuzzi, Y Barash, F Capasso Physical Review A 71 (4), 049904	2	2005
Correcting for miniature eye movements in high-resolution scanning laser ophthalmoscopy SB Stevenson, A Roorda Ophthalmic technologies XV 5688, 145-151	142	2005
Torque on birefringent plates induced by quantum fluctuations JN Munday, D Iannuzzi, Y Barash, F Capasso Physical Review A 71 (4), 042102	141	2005
Theory of intracavity nonlinear processes in quantum cascade lasers A Belyanin, D Liu, F Xie, F Capasso, C Gmachl Novel In-Plane Semiconductor Lasers IV 5738, 98-108	1	2005
Quantum cascade Raman laser M Troccoli, A Belyanin, F Capasso, E Cubukcu, DL Sivco, AY Cho Novel In-Plane Semiconductor Lasers IV 5738, 90-97		2005
Quantum Cascade Raman Injection Laser for Mid/Far-Infrared Generation A Belyanin, M Troccoli, F Capasso, E Cubukcu, DL Sivco, AY Cho Optical Terahertz Science and Technology, TuA5		2005
Raman injection laser M Troccoli, A Belyanin, F Capasso, E Cubukcu, DL Sivco, AY Cho Nature 433 (7028), 845-848	155	2005

TITLE	CITED BY	YEAR
Terahertz Quantum Cascade Lasers Operating in Magnetic Fields G Fasching, R Zobl, V Tamošiunas, J Ulrich, G Strasser, K Unterrainer, ... Proceedings of the GMe Forum, 71		2005
High-Q enhancement of attractive and repulsive optical forces between coupled whispering-gallery-mode resonators EJ Smythe, F Capasso, JD Joannopoulos		2005
Optical amplifier for quantum cascade laser F CAPASSO, AYI CHO, CF GMACHL, DLEE SIVCO, M TROCCOLI		2004
Optical amplifier for quantum cascade laser F Capasso, AY Cho, CF Gmachl, DL Sivco, M Troccoli US Patent 6,836,499	27	2004
Quantum electrodynamics of accelerated atoms in free space and in confined cavities A Belyanin, F Capasso, E Fry, S Fulling, V Kocharovsky, MS Zubairy, ... arXiv preprint quant-ph/0412134		2004
Low-threshold continuous-wave operation of quantum-cascade lasers grown by metalorganic vapor phase epitaxy M Troccoli, D Bour, S Corzine, G Höfler, A Tandon, D Mars, DJ Smith, ... Applied Physics Letters 85 (24), 5842-5844	56	2004
Metalorganic vapor-phase epitaxy of room-temperature, low-threshold InGaAs/AlInAs quantum cascade lasers D Bour, M Troccoli, F Capasso, S Corzine, A Tandon, D Mars, G Höfler Journal of crystal growth 272 (1-4), 526-530	20	2004
Magnetic modulation of THz quantum cascade lasers V Tamosiunas, R Zobl, G Fasching, G Strasser, K Unterrianer, ... Infrared and Millimeter Waves, Conference Digest of the 2004 Joint 29th …		2004
Theoretical and experimental study of optical gain and linewidth enhancement factor of type-I quantum-cascade lasers J Kim, M Lerttamrab, SL Chuang, C Gmachl, DL Sivco, F Capasso, ... IEEE journal of quantum electronics 40 (12), 1663-1674	78	2004
Nonlinear semiconductor light sources F Capasso, AY Cho, R Colombelli, CF Gmachl, N Owschimikow, DL Sivco US Patent 6,816,530	59	2004
Avalanche spin-valve transistor KJ Russell, I Appelbaum, W Yi, DJ Monsma, F Capasso, CM Marcus, ... Applied physics letters 85 (19), 4502-4504	16	2004
On the torque on birefringent plates induced by quantum fluctuations D Iannuzzi, JN Munday, Y Barash, F Capasso arXiv preprint quant-ph/0410136		2004

TITLE	CITED BY	YEAR
Technique for measuring intersubband electroluminescence in a quantum cascade laser F Capasso, AY Cho, R Colombelli, CF Gmachl, AL Hutchinson, ... US Patent 6,795,467	4	2004
Scully *et al.* Reply: MO Scully, VV Kocharovsky, A Belyanin, E Fry, F Capasso Physical Review Letters 93 (12), 129302	57	2004
Intersubband light emitters with injection/relaxation regions doped to different levels F Capasso, AY Cho, R Colombelli, CF Gmachl, TS Mosely, A Straub, ... US Patent 6,760,354	31	2004
Optical free-space communications at middle-infrared wavelengths R Martini, C Glazowski, EA Whittaker, WW Harper, YF Su, JF Schultz, ... Quantum Sensing and Nanophotonic Devices 5359, 196-202	11	2004
Active mode locking of broadband quantum cascade lasers A Soibel, F Capasso, C Gmachl, ML Peabody, AM Sergent, R Paiella, ... IEEE journal of quantum electronics 40 (7), 844-851	26	2004
Education system challenging a subject's physiologic and kinesthetic systems to synergistically enhance cognitive function BJ French, KR Ferguson US Patent 6,749,432	275	2004
Lasing mode pattern of a quantum cascade photonic crystal surface-emitting microcavity laser K Srinivasan, O Painter, R Colombelli, C Gmachl, DM Tennant, ... Applied Physics Letters 84 (21), 4164-4166	34	2004
Electrical beam steering of quantum cascade lasers M Troccoli, F Capasso, DL Sivco, ML Peabody, AY Cho, C Gmachl Conference on Lasers and Electro-Optics, CMZ5		2004
Stability of near-and mid-infrared free-space links under strong scattering environment R Martini, C Glazowski, EA Whittaker, WW Harper, YF Su, JF Shultz, ... Conference on Lasers and Electro-Optics, 2004.(CLEO). 1, 2 pp. vol. 1		2004
Quantum cascade Raman injection laser M Troccoli, A Belyanin, F Capasso, E Cubukeu, DL Alfred, Y Cho Conference on Lasers and Electro-Optics, 2004.(CLEO). 2, 1029-1030		2004
Stability of near-and mid-infrared free-space optical links under strong scattering environment R Martini, C Glazowski, EA Whittaker, WW Harper, YF Su, JF Shultz, ... Conference on Lasers and Electro-Optics, CTuEE7		2004

TITLE	CITED BY	YEAR
Method of improving adherence and centering of intra-corneal implants on corneal bed ML Paul, R Glick US Patent 6,733,526	28	2004
Quantum cascade photonic-crystal microlasers R Colombelli, K Srinivasan, M Troccoli, OJ Painter, CF Gmachl, ... Novel In-Plane Semiconductor Lasers III 5365, 228-239	2	2004
Engineering the gain/loss profile of intersubband optical devices having heterogeneous cascades F Capasso, AY Cho, R Colombelli, CF Gmachl, HM Ng, DL Sivco US Patent 6,728,282	5	2004
Temperature dependence and single-mode tuning behavior of second-harmonic generation in quantum cascade lasers C Gmachl, N Owschimikow, A Belyanin, AM Sergent, DL Sivco, ... Applied physics letters 84 (15), 2751-2753	20	2004
Effect of hydrogen-switchable mirrors on the Casimir force D Iannuzzi, M Lisanti, F Capasso Proceedings of the National Academy of Sciences 101 (12), 4019-4023	160	2004
Fabrication technologies for quantum cascade photonic-crystal microlasers R Colombelli, K Srinivasan, M Troccoli, O Painter, C Gmachl, DM Tennant, ... Nanotechnology 15 (5), 675	18	2004
Magnetic field effects in terahertz quantum-cascade lasers V Tamosiunas, R Zobl, G Fasching, J Ulrich, G Strasser, K Unterrainer, ... Semiconductor science and technology 19 (4), S348	7	2004
Stability of pulse emission and enhancement of intracavity second-harmonic generation in self-mode-locked quantum cascade lasers A Soibel, F Capasso, C Gmachl, ML Peabody, AM Sergent, R Paiella, ... IEEE journal of quantum electronics 40 (3), 197-204	21	2004
Quantum Cascade Photonic Crystal lasers F Capasso APS March Meeting Abstracts 2004, A10. 001		2004
Casimir Force Between Thin Metallic Films M Lisanti, D Iannuzzi, F Capasso APS March Meeting Abstracts 2004, J14. 008		2004
Quantum cascade laser with relaxation-stabilized injection F Capasso, AY Cho, AL Hutchinson, G Scamarcio, DL Sivco, M Troccoli US Patent 6,690,699	56	2004
Mode Locking of Quantum Cascade Lasers (Theory) FX Kaertner, C Jirauschek, F Capasso, A Soibel, A Belyanin, J Faist Workshop in Infrared Physics, Seville, Spain	2	2004

TITLE	CITED BY	YEAR
Terahertz quantum-cascade lasers in a magnetic field V Tamošiūnas, R Zobl, G Fasching, J Ulrich, G Strasser, K Unterrainer, ... na		2004
Reply Phys MO Scully, VV Kocharovsky, A Belyanin, E Fry, F Capasso Rev. Lett 93, 129302	2	2004
Semiconductor Lasers-Stability of Pulse Emission and Enhancement of Intracavity Second-Harmonic Generation in Self-Mode-Locked Quantum Cascade Lasers A Soibel, F Capasso, C Gmachl, ML Peabody, AM Sergent, R Paiella, ... IEEE Journal of Quantum Electronics 40 (3), 197-204		2004
Mid-IR quantum cascade lasers and amplifiers: recent developments and applications M Troccoli, F Capasso, R Colombelli, C Gmachl, D Tennant, DL Sivco, ... CLEO/Pacific Rim 2003. The 5th Pacific Rim Conference on Lasers and Electro …		2003
Enhancing acceleration radiation from ground-state atoms via cavity quantum electrodynamics MO Scully, VV Kocharovsky, A Belyanin, E Fry, F Capasso Physical review letters 91 (24), 243004	99	2003
New challenges and directions in Casimir force experiments D Iannuzzi, I Gelfand, M Lisanti, F Capasso arXiv preprint quant-ph/0312043	5	2003
Midinfrared electroluminescence in quantum cascade structures with InP/InGaAs active regions M Troccoli, F Capasso, J Chen, ML Peabody, C Gmachl, DL Sivco, ... Journal of applied physics 94 (11), 7101-7104	3	2003
Quantum cascade surface-emitting photonic crystal laser R Colombelli, K Srinivasan, M Troccoli, O Painter, CF Gmachl, ... Science 302 (5649), 1374-1377	364	2003
Terahertz quantum cascade lasers in a magnetic field V Tamosiunas, R Zobl, J Ulrich, K Unterrainer, R Colombelli, C Gmachl, ... Applied Physics Letters 83 (19), 3873-3875	37	2003
Fabrication methods for a quantum cascade photonic crystal surface emitting laser DM Tennant, R Colombelli, K Srinivasan, M Troccoli, O Painter, C Gmachl, ... Journal of Vacuum Science & Technology B: Microelectronics and Nanometer …	5	2003
Optimized second-harmonic generation in quantum cascade lasers C Gmachl, A Belyanin, DL Sivco, ML Peabody, N Owschimikow, ... IEEE journal of Quantum electronics 39 (11), 1345-1355	135	2003

TITLE	CITED BY	YEAR
構造の設計しだいで波長を自由に変えられる, 画期的な光源 量子カスケードレーザー F Capasso, C Gmachl, DL Sivco パリティ 18 (11), 4-12		2003
Nonlinear light generation in quantum cascade and semiconductor diode lasers A Belyanin, C Gmachl, DL Sivco, F Capasso The 16th Annual Meeting of the IEEE Lasers and Electro-Optics Society, 2003 …		2003
Linewidth enhancement factor of a type-I quantum-cascade laser M Lerttamrab, SL Chuang, C Gmachl, DL Sivco, F Capasso, AY Cho Journal of applied physics 94 (8), 5426-5428	54	2003
GaAsSb Quantum Wells for Optoelectronics and Integrated Optics AR Kost, N Eradat, X Sun, E Selvig, BO Fimland, DH Chow Frontiers in Optics, ThM4		2003
Tunable quantum cascade laser based sensor for ethylene monitoring D Weidmann, A Kosterev, C Roller, RF Curl, MP Fraser, FK Tittel Frontiers in Optics, MNN2	1	2003
Large Blue Shifts in Band Gaps of antimonide-based Multiple quantum-wells based on ion-implantation X Sun, N Eradat, CH Chen, AR Kost, N Peyghambarian Frontiers in Optics, ThM3		2003
New quantum cascade microlasers F Capasso Frontiers in Optics, MP1		2003
Recent Developments in Quantum Cascade Lasers C Gmachl, A Belyanin, DL Sivco, V Kocharovsky, ML Peabody, ... Frontiers in Optics, ThMM3		2003
Enhancement of second harmonic generation through phase-matching in quantum cascade lasers O Malis, C Gmachl, A Belyanin, DL Sivco, ML Peabody, MA Sergent, ... Frontiers in Optics, ThX4		2003
Internally excited acoustic resonator for photoacoustic trace detection S Danworaphong, IG Calasso, A Beveridge, GJ Diebold, C Gmachl, ... Applied optics 42 (27), 5561-5565	6	2003
Thermal characteristics of quantum-cascade lasers by micro-probe optical spectroscopy V Spagnolo, G Scamarcio, D Marano, M Troccoli, F Capasso, C Gmachl, ... IEE Proceedings-Optoelectronics 150 (4), 298-305	28	2003
Comment on “Repulsive Casimir Forces” D Iannuzzi, F Capasso Physical review letters 91 (2), 029101	59	2003

TITLE	CITED BY	YEAR
Optimization of broadband quantum cascade lasers for continuous wave operation A Soibel, C Gmachl, DL Sivco, ML Peabody, AM Sergent, AY Cho, ... Applied physics letters 83 (1), 24-26	12	2003
Free-space midinfrared optical links using quantum cascade lasers R Martini, CG Bethea, F Capasso, CF Gmachl, R Paiella, EA Whittaker, ... Free-Space Laser Communication Technologies XV 4975, 20-24		2003
Analog and digital high-speed modulation of quantum cascade laser R Martini, CF Gmachl, R Paiella, F Capasso, C Glazowski, RK Murawski, ... Novel In-Plane Semiconductor Lasers II 4995, 169-175	5	2003
Quantum cascade photonic crystal surface emitting injection laser R Colombelli, K Srinivasan, M Troccoli, O Painter, C Gmachl, F Capasso, ... Conference on Lasers and Electro-Optics, 2003. CLEO'03., 2 pp.		2003
Nonlinear Micromechanical Casimir Oscillator VA Aksyuk, DJ Bishop, F Capasso, HB Chan, RN Kleiman Physical Review Letters 87 (21)		2003
Generation of light through second-order nonlinear processes in Quantum Cascade lasers C Gmachl, A Belyanin, N Owschimikow, V Kocharovsky, F Capasso, ... Conference on Lasers and Electro-Optics, CMC5		2003
Self-mode-locking quantum cascade laser JN Baillargeon, F Capasso, AY Cho, CF Gmachl, AL Hutchinson, ... US Patent 6,563,852	17	2003
Flat minibands with spatially symmetric wavefunctions in intersubband superlattice light emitters F Capasso, AY Cho, SNG Chu, CF Gmachl, AL Hutchinson, AM Sergent, ... US Patent 6,556,604	4	2003
Resonant second-order nonlinear optical processes in quantum cascade lasers N Owschimikow, C Gmachl, A Belyanin, V Kocharovsky, DL Sivco, ... Physical review letters 90 (4), 043902	154	2003
CONFERENCE PROCEEDINGS-LASERS AND ELECTRO-OPTICS SOCIETY ANNUAL MEETING-LEOS A D'Alessandro, R Asquini, C Gizzi, R Caputo, A Veltri, C Umeton, ...		2003
OSA TRENDS IN OPTICS AND PHOTONICS SERIES C Gmachl, N Owschimikow, F Capasso, DL Sivco, ML Peadbody, ... Polarization 1643, 1644		2003
Quantum cascade lasers: Fundamentals and multi-wavelength operation C Gmachl, R Colombelli, F Capasso, DL Sivco, AY Cho Electron and Photon Confinement in Semiconductor Nanostructures, 327-343	1	2003

TITLE	CITED BY	YEAR
Papers from the 47th International Conference on Electron, Ion, and Photon Beam Technology and Nanofabrication-Nanophotonics-Fabrication methods for a quantum cascade photonic … DM Tennant, R Colombelli, K Srinivasan, M Troccoli, O Painter, C Gmachi, ... Journal of Vacuum Science and Technology-Section B 21 (6), 2907-2911		2003
Self-Excitation and Radiation of Neutral Molecules Moving above a Grating AA Belyanin, F Capasso, VV Kocharovsky, VV Kocharovsky Proceedings TH2002 Supplement 1, 9		2003
GaN-based intersubband structures and mid-infrared quantum cascade lasers with heterogeneous cascades C Gmachl, HM Ng, DL Sivco, JD Heber, R Colombelli, A Soibel, ... Physics of Semiconductors 2002: Proceedings of the 26th International …		2003
Comment on: Repulsive Casimir forces. Authors' reply D LANNUZZI, F CAPASSO, O KENNETH, I KLICH, A MANN, M REVZEN Physical review letters 91 (2), 029101.1-029102.1		2003
Distributed feedback surface plasmon laser F Capasso, AY Cho, CF Gmachl, AL Hutchinson, DL Sivco, A Tredicucci US Patent 6,501,783	34	2002
Frequency stabilization of quantum-cascade lasers by use of optical cavities MS Taubman, TL Myers, BD Cannon, RM Williams, F Capasso, C Gmachl, ... Optics letters 27 (24), 2164-2166	77	2002
Two-wavelength quantum cascade lasers with heterogeneous cascades A Straub, C Gmachl, TS Mosely, R Colombelli, M Troccoli, DL Sivco, ... 2002 Conference on Optoelectronic and Microelectronic Materials and Devices …	5	2002
Minimal group refractive index dispersion and gain evolution in ultra-broad-band quantum cascade lasers C Gmachl, A Soibel, R Colombelli, DL Sivco, F Capasso, AY Cho IEEE Photonics Technology Letters 14 (12), 1671-1673	16	2002
Laser Optics: Ultrabroadband Quantum Cascade Lasers C Gmachl, DL Sivco, A Soibel, R Colombelli, F Capasso, AY Cho Optics and Photonics News 13 (12), 23-23	1	2002
Mesa geometry semiconductor light emitter having chalcogenide dielectric coating JN Baillargeon, F Capasso, AY Cho, C Gmachl, AL Hutchinson, ... US Patent 6,463,088	21	2002
Single-mode, tunable distributed-feedback and multiple-wavelength quantum cascade lasers C Gmachl, A Straub, R Colombelli, F Capasso, DL Sivco, AM Sergent, ... IEEE Journal of Quantum Electronics 38 (6), 569-581	135	2002

TITLE	CITED BY	YEAR
Simultaneously at two wavelengths (5.0 and 7.5/spl mu/m) singlemode and tunable quantum cascade distributed feedback lasers A Straub, C Gmachl, DL Sivco, AM Sergent, F Capasso, AY Cho Electronics Letters 38 (12), 565-567	35	2002
Free-space optical transmission of multimedia satellite data streams using mid-infrared quantum cascade lasers R Martini, C Bethea, F Capasso, C Gmachl, R Paiella, EA Whittaker, ... Electronics Letters 38 (4), 181-183	114	2002
Quantum cascade lasers: ultrahigh-speed operation, optical wireless communication, narrow linewidth, and far-infrared emission F Capasso, R Paiella, R Martini, R Colombelli, C Gmachl, TL Myers, ... IEEE Journal of quantum electronics 38 (6), 511-532	365	2002
Teaching electrons and photons new tricks with state-of-the-art technology: Quantum Cascade Lasers, optical microbilliards, and QED-based nanomechanics F Capasso Trends in Physics 26, 30		2002
Multiwavelength and Supercontinuum Quantum Cascade Lasers F Capasso, C Gmachl, D Sivco, A Cho Nonlinear Optics: Materials, Fundamentals and Applications, WD3		2002
Data transmission via direct modulation of a mid-IR laser C Bethea, F Capasso, A Cho, C Gmachi, A Hutchinson, R Martini, ... US Patent App. 09/896,783	8	2002
Nonequilibrium optical phonon generation by steady-state electron transport in quantum-cascade lasers V Spagnolo, G Scamarcio, M Troccoli, F Capasso, C Gmachl, AM Sergent, ... Applied physics letters 80 (23), 4303-4305	30	2002
Laser action on" Scar"-modes and KAM-transition to chaos in semiconductor diode lasers with deformed resonators EE Narimanov, CF Gmachl, F Capasso, JN Baillargeon, AY Cho Laser Resonators and Beam Control V 4629, 164-171	1	2002
Apparatus comprising a quantum cascade laser having improved distributed feedback for single-mode operation F Capasso, AY Cho, SNG Chu, CF Gmachi, R Koehler, DL Sivco, ... US Patent 6,400,744	56	2002
Mid-infrared (λ≈ 7.4 μm) quantum cascade laser amplifier for high power single-mode emission and improved beam quality M Troccoli, C Gmachl, F Capasso, DL Sivco, AY Cho Applied physics letters 80 (22), 4103-4105	49	2002
Using a wavelength-modulated quantum cascade laser to measure NO concentrations in the parts-per-billion range for vehicle emissions	49	2002

TITLE	CITED BY	YEAR
certification WH Weber, JT Remillard, RE Chase, JF Richert, F Capasso, C Gmachl, ... Applied spectroscopy 56 (6), 706-714		
Sensitive detection of methane and nitrous oxide isotopomers using a continuous wave quantum cascade laser G Gagliardi, F Tamassia, P De Natale, C Gmachl, F Capasso, DL Sivco, ... The European Physical Journal D-Atomic, Molecular, Optical and Plasma …	53	2002
Quantum cascade semiconductor amplifiers for high power single mode emission at/spl lambda/= 7.5/spl mu/m M Troccoli, F Capasso, C Gmachl, A Straub, DL Sivco, AY Cho Summaries of Papers Presented at the Lasers and Electro-Optics. CLEO'02 …		2002
Relative frequency stabilization of two 8.5-micron quantum cascade lasers to 5.6 Hz MS Taubman, TL Myers, RM Williams, BD Cannon, F Capasso, C Gmachl, ... Summaries of Papers Presented at the Lasers and Electro-Optics. CLEO'02 …		2002
Sub-Doppler NICE-OHMS spectroscopy at 8.5 microns using a quantum cascade laser MS Taubman, RM Williams, TL Myers, F Capasso, C Gmachl, D Sivco, ... Summaries of Papers Presented at the Lasers and Electro-Optics. CLEO'02 …	4	2002
Free-space mid-infrared link for transmission of multimedia data using quantum cascade lasers R Martini, C Bethea, F Capasso, C Gmachl, R Paiella, EA Whittaker, ... Summaries of Papers Presented at the Lasers and Electro-Optics. CLEO'02 …		2002
Quantum cascade lasers with a heterogeneous cascade: two-and multiple-wavelength operation CF Gmachl, DL Sivco, A Straub, R Colombelli, TS Mosely, JN Baillargeon, ... Novel In-Plane Semiconductor Lasers 4651, 286-293	2	2002
Quantum cascade lasers and metal waveguides at lambda> 20 m R Colombelli, F Capasso, K Unterrainer, CF Gmachl, AM Sergent, ... Novel In-Plane Semiconductor Lasers 4651, 146-156	1	2002
Quantum Cascade Semiconductor Amplifiers for High Power Single Mode Emission at λ= 7.5 μm M Troccoli, F Capasso, C Gmachl, A Straub, DL Sivco, AY Cho Conference on Lasers and Electro-Optics, CTuE5	1	2002
The transition from integrability to chaos in near-infrared semiconductor microdisk lasers E Narimanov, C Gmach, F Capasso, JN Baillargeon, AY Cho 2002 Summaries of Papers Presented at the Quantum Electronics and Laser …		2002
Supercontinuum quantum cascade laser C Gmachl, DL Sivco, R Colombelli, F Capasso, AY Cho Conference on Lasers and Electro-Optics, CTuJ4		2002

TITLE	CITED BY	YEAR
Kolmogorov–Arnold–Moser transition and laser action on scar modes in semiconductor diode lasers with deformed resonators C Gmachl, EE Narimanov, F Capasso, JN Baillargeon, AY Cho Optics letters 27 (10), 824-826	88	2002
Quantum cascade lasers with double metal-semiconductor waveguide resonators K Unterrainer, R Colombelli, C Gmachl, F Capasso, HY Hwang, ... Applied physics letters 80 (17), 3060-3062	141	2002
Threshold reduction in quantum cascade lasers with partially undoped, dual-wavelength interdigitated cascades A Straub, TS Mosely, C Gmachl, R Colombelli, M Troccoli, F Capasso, ... Applied physics letters 80 (16), 2845-2847	38	2002
Generation of tunable far-infrared radiation with a quantum cascade laser G Gagliardi, S Viciani, M Inguscio, P De Natale, C Gmachl, F Capasso, ... Optics letters 27 (7), 521-523	13	2002
Terahertz electroluminescence from superlattice quantum cascade structures R Colombelli, A Straub, F Capasso, C Gmachl, MI Blakey, AM Sergent, ... Journal of applied physics 91 (6), 3526-3529	22	2002
Quantum cascade semiconductor optical amplifier M Troccoli, F Capasso, C Gmachl, DL Sivco, AY Cho APS March Meeting Abstracts, G8. 004		2002
Quantum cascade lasers with dual-wavelength interdigitated cascades TS Mosely, A Straub, C Gmachl, R Colombelli, M Troccoli, F Capasso, ... APS March Meeting Abstracts, G8. 003		2002
FIR quantum cascade lasers at λ> 20μm and THz emitters at λ= 80μm R Colombelli, F Capasso, A Straub, C Gmachl, MI Blakey, AM Sergent, ... Physica E: Low-dimensional Systems and Nanostructures 13 (2-4), 848-853	1	2002
Recent results in quantum cascade lasers and intersubband transitions in GaN/AlGaN multiple quantum wells C Gmachl, HM Ng, R Paiella, R Martini, HY Hwang, DL Sivco, F Capasso, ... Physica E: Low-dimensional Systems and Nanostructures 13 (2-4), 823-828	7	2002
Chill out: Mild hypothermia aids heart attack recovery N Seppa Science News 161 (8), 115-115		2002
Infrared cavity ringdown and integrated cavity output spectroscopy for trace species monitoring JB Paul, JJ Scherer, A O'Keefe, L Lapson, JR Anderson, CF Gmachl, ... Vibrational Spectroscopy-based Sensor Systems 4577, 1-11	36	2002

TITLE	CITED BY	YEAR
Thermoelectrically cooled quantum-cascade-laser-based sensor for the continuous monitoring of ambient atmospheric carbon monoxide AA Kosterev, FK Tittel, R Köhler, C Gmachl, F Capasso, DL Sivco, AY Cho, ... Applied optics 41 (6), 1169-1173	105	2002
In-situ flame measurements of NO and CO using Mid-IR QC lasers SD Wehe, DM Sonnenfroh, MG Allen, C Gmachl, F Capasso Laser Applications to Chemical and Environmental Analysis, FC3	1	2002
Spectroscopic trace gas detection with pulsed quantum cascade lasers AA Kosterev, FK Tittel, S Wehe, DM Sonnenfroh, MG Allen, R Köhler, ... Laser Applications to Chemical and Environmental Analysis, SaB5	5	2002
Free-running frequency stability of mid-infrared quantum cascade lasers TL Myers, RM Williams, MS Taubman, C Gmachl, F Capasso, DL Sivco, ... Optics letters 27 (3), 170-172	70	2002
Ultra-broadband semiconductor laser C Gmachl, DL Sivco, R Colombelli, F Capasso, AY Cho Nature 415 (6874), 883-887	341	2002
Coherent radiation from neutral molecules moving above a grating A Belyanin, V Kocharovsky, V Kocharovsky, F Capasso Physical review letters 88 (5), 053602	12	2002
Transportable automated ammonia sensor based on a pulsed thermoelectrically cooled quantum-cascade distributed feedback laser AA Kosterev, RF Curl, FK Tittel, R Köhler, C Gmachl, F Capasso, DL Sivco, ... Applied optics 41 (3), 573-578	75	2002
Submitted Papers-Using a Wavelength-Modulated Quantum Cascade Laser to Measure NO Concentrations in the Parts-per-Billion Range for Vehicle Emissions Certification WH Weber, JT Remillard, RE Chase, JF Richert, F Capasso, C Gmachl, ... Applied Spectroscopy 56 (6), 706-714		2002
FIR quantum cascade lasers at l> 20 (micro) m and THz emitters at l= 80 (micro) m R Colombelli, F Capasso, A Straub, C Gmachl, MI Blakey, AM Sergent, ... Physica-Section E 13 (2), 848-853		2002
FEATURE SECTION ON MID-INFRARED QUANTUM CASCADE LASERS-Invited Paper-Quantum Cascade Lasers: Ultrahigh-Speed Operation, Optical Wireless Communication, Narrow Linewidth, and … F Capasso, R Paiella, R Martini, R Colombelli, C Gmachl, TL Myers, ... IEEE Journal of Quantum Electronics-Institute Electrical and Electronic …	23	2002
Resonance parametric generation of IR radiation on intersubband transition in quantum-well heterostructures AA Belyanin, VV Kocharovskij, F Kapasso, VV Kocharovskij, DS Pestov, ... Izvestiya Akademii Nauk. Rossijskaya Akademiya Nauk. Seriya Fizicheskaya 66 …	3	2002

TITLE	CITED BY	YEAR
Measurements of trace pollutants in combustion flows using room-temperature, mid-IR quantum cascade lasers S Wehe, D Sonnenfroh, M Allen, C Gmachl, F Capasso 40th AIAA Aerospace Sciences Meeting & Exhibit, 824	8	2002
Quantum cascade lasers and metal waveguides at lambda greater than 20 microns R Colombelli, F Capasso, K Unterrainer, CF Gmachl, AM Sergent, ... Proceedings of SPIE, the International Society for Optical …		2002
FEATURE SECTION ON MID-INFRARED QUANTUM CASCADE LASERS-Invited Paper-Single-Mode, Tunable Distributed-Feedback and Multiple-Wavelength Quantum Cascade Lasers C Gmachl, A Straub, R Colombelli, F Capasso, DL Sivco, AM Sergent, ... IEEE Journal of Quantum Electronics-Institute Electrical and Electronic …		2002
Resonant Parametric Generation of IR Radiation at Intersubband Transitions in Quantum-Well Heterostructures AA Belyanin, F Capasso, VV Kocharovsky, VV Kocharovsky, DS Pestov, ... Bulletin of the Russian Academy of Sciences-Physics 66 (2), 262-264	1	2002
Detection of biogenic CO production above vascular cell cultures using a near-room-temperature QC-DFB laser AA Kosterev, FK Tittel, W Durante, M Allen, R Köhler, C Gmachl, ... Applied Physics B 74 (1), 95-99	43	2002
Quantum cascade lasers F Capasso, C Gmachl, DL Sivco, AY Cho Physics Today 55 (5), 34-40	305	2002
Semiconductor laser for operation in librational modes F Capasso, AY Cho, CF Gmachl, DL Sivco, EE Narimanov, AD Stone US Patent 6,333,944	3	2001
Mounting technology for intersubband light emitters JN Baillargeon, F Capasso, AY Cho, GSN Chu, C Gmachl, AL Hutchinson, ... US Patent 6,326,646	52	2001
Quantum-cascade lasers with heterogeneous cascades: Multiple-wavelength operation C Gmachl, DL Sivco, R Colombelli, F Capasso, TS Mosely, A Straub, ... Optics and Photonics News 12 (12), 24-24	1	2001
Quantum-cascade laser-based sensor for CO and NO measurements in combustor exhaust flows S Wehe, D Sonnenfroh, M Allen, C Gmachl, F Capasso 37th Joint Propulsion Conference and Exhibit, 3317	7	2001
Resonant parametric generation of infrared radiation on intersubband transitions in low-dimensional semiconductor heterostructures AA Belyanin, F Capasso, VV Kocharovsky, VV Kocharovsky, DS Pestov, ...	14	2001

TITLE	CITED BY	YEAR
Nanotechnology 12 (4), 450		
Intersubband light source with separate electron injector and reflector/extractor F Capasso, AY Cho, SNG Chu, CF Gmachl, AL Hutchinson, DL Sivco, ... US Patent 6,324,199	19	2001
Two-color heterolasers as parametric generators of infrared radiation AA Belyanin, F Capasso, VV Kocharovsky, VV Kocharovsky, DS Pestov, ... PECS 2001: Photon Echo and Coherent Spectroscopy 4605, 363-367		2001
Improved quantum cascade laser JN BAILLARGEON, F CAPASSO, AYI CHO, CF GMACHL, ...		2001
Casimir force holds empty promise G Brumfiel Physics 8, 25	1	2001
Nonlinear micromechanical Casimir oscillator HB Chan, VA Aksyuk, RN Kleiman, DJ Bishop, F Capasso Physical Review Letters 87 (21), 211801	516	2001
Recent progress in quantum cascade lasers and applications C Gmachl, F Capasso, DL Sivco, AY Cho Reports on progress in physics 64 (11), 1533	894	2001
Cavity ringdown spectroscopic detection of nitric oxide with a continuous-wave quantum-cascade laser AA Kosterev, AL Malinovsky, FK Tittel, C Gmachl, F Capasso, DL Sivco, ... Applied Optics 40 (30), 5522-5529	210	2001
High-frequency modulation without the relaxation oscillation resonance in quantum cascade lasers R Paiella, R Martini, F Capasso, C Gmachl, HY Hwang, DL Sivco, ... Applied Physics Letters 79 (16), 2526-2528	141	2001
High-speed digital data transmission using mid-infrared quantum cascade lasers R Martini, R Paiella, C Gmachl, F Capasso, EA Whittaker, HC Liu, ... Electronics Letters 37 (21), 1290-1292	66	2001
Long wavelength semiconductor lasers incorporating waveguides based on surface plasmons F Capasso, AY Cho, CF Gmachl, AL Hutchinson, DL Sivco, J Faist, ... US Patent 6,301,282	18	2001
Investigation of the spectral width of quantum cascade laser emission near 5.2 μm by a heterodyne experiment H Ganser, B Frech, A Jentsch, M Mürtz, C Gmachl, F Capasso, DL Sivco, ... Optics communications 197 (1-3), 127-130	40	2001

TITLE	CITED BY	YEAR
Quantum mechanical actuation of microelectromechanical systems by the Casimir force?(vol 291, pg 1941, 2001) HB Chan Science 293 (5536), 1766-1766	8	2001
Quantum cascade lasers shape up for trace-gas sensing C Gmachl, F Capasso, R Colombelli, R Paiella, DL Sivco, AY Cho Laser focus world 37 (9), 65-72	6	2001
Bi-directional unipolar semiconductor light source F Capasso, AY Cho, CF Gmachl, AL Hutchinson, DL Sivco, A Tredicucci US Patent 6,278,134	11	2001
Continuous wave operation of/spl lambda//spl sim/19/spl mu/m surface-plasmon quantum cascade lasers R Colombelli, A Tredicucci, C Gmachl, F Capasso, DL Sivco, AM Sergent, ... Electronics Letters 37 (16), 1023-1024	15	2001
Quantum cascade lasers with a heterogeneous cascade: Two-wavelength operation C Gmachl, DL Sivco, JN Baillargeon, AL Hutchinson, F Capasso, AY Cho Applied Physics Letters 79 (5), 572-574	99	2001
Quantum devices, MBE technology for the 21st century AY Cho, DL Sivco, HM Ng, C Gmachl, A Tredicucci, AL Hutchinson, ... Journal of crystal growth 227, 1-7	22	2001
Injectorless quantum-cascade lasers MC Wanke, F Capasso, C Gmachl, A Tredicucci, DL Sivco, AL Hutchinson, ... Applied Physics Letters 78 (25), 3950-3952	64	2001
High duty cycle operation of quantum cascade lasers based on graded superlattice active regions R Martini, C Gmachi, A Tredicucci, F Capasso, AL Hutchinson, DL Sivco, ... Journal of Applied Physics 89 (12), 7735-7738	25	2001
Inversionless lasing with self-generated driving field A Belyanin, C Bentley, F Capasso, O Kocharovskaya, MO Scully Physical Review A 64 (1), 013814	41	2001
Novel quantum cascade devices for long wavelength IR emission A Tredicucci, C Gmachl, F Capasso, MC Wanke, AL Hutchinson, DL Sivco, ... optical materials 17 (1-2), 211-217	6	2001
Far-IR quantum cascade lasers at 21.5/spl mu/m wavelength R Colombelli, F Capasso, C Gmachl, M Wanke, A Tredicucci, ... Technical Digest. Summaries of papers presented at the Conference on Lasers …		2001
Frequency stabilization, line narrowing and modulation studies in quantum cascade lasers MS Taubman, RM Williams, TL Myers, SW Sharpe, JF Kelly, F Capasso, ... Technical Digest. Summaries of papers presented at the Conference on Lasers …		2001

TITLE	CITED BY	YEAR
Near infrared semiconductor microlasers with partially chaotic resonators E Narimanov, C Gmach, F Capasso, JN Baillargeon, AY Cho Technical Digest. Summaries of papers presented at the Conference on Lasers …		2001
Quantum cascade lasers for the mid-ir to far-ir and applications F Capasso Technical Digest. Summaries of papers presented at the Conference on Lasers …	2	2001
Cavity ringdown spectroscopy of NO with a cw single frequency quantum cascade laser AA Kosterev, AL Malinovsky, FK Tittel, C Gmachl, F Capasso, DL Sivco, ... Technical Digest. Summaries of papers presented at the Conference on Lasers …	8	2001
Far-IR quantum cascade lasers at 21.5 μm wavelength R Colombelli, F Capasso, C Gmachl, M Wanke, A Tredicucci, ... Conference on Lasers and Electro-Optics, CWD2		2001
Characterization of intensity and frequency fluctuations of mid-infrared quantum cascade lasers TL Myers, RM Williams, MS Taubman, JF Kelly, F Capasso, C Gmachi, ... Conference on Lasers and Electro-Optics, CThL67		2001
Absence of relaxation oscillation in quantum cascade lasers verified by high-frequency modulation R Martini, R Paiella, F Capasso, C Gmachl, HY Hwang, DL Sivco, AY Cho, ... Conference on Lasers and Electro-Optics, CPD17	7	2001
Far-infrared and ultra-high-speed quantum-cascade lasers F Capasso, R Colombelli, R Paiella, C Gmachl, A Tredicucci, DL Sivco, ... Optics and Photonics News 12 (5), 40-46	15	2001
Spectroscopic detection of biological NO with a quantum cascade laser L Menzel, AA Kosterev, RF Curl, FK Tittel, C Gmachl, F Capasso, ... Applied Physics B 72 (7), 859-863	173	2001
Far-infrared surface-plasmon quantum-cascade lasers at 21.5 μm and 24 μm wavelengths R Colombelli, F Capasso, C Gmachl, AL Hutchinson, DL Sivco, ... Applied physics letters 78 (18), 2620-2622	296	2001
Infrared generation in low-dimensional semiconductor heterostructures via quantum coherence AA Belyanin, F Capasso, VV Kocharovsky, VV Kocharovsky, MO Scully Physical Review A 63 (5), 053803	104	2001
Temperature profile of GaInAs/AlInAs/InP quantum cascade-laser facets measured by microprobe photoluminescence V Spagnolo, M Troccoli, G Scamarcio, C Gmachl, F Capasso, A Tredicucci, ... Applied Physics Letters 78 (15), 2095-2097	72	2001

TITLE	CITED BY	YEAR
Quantum cascade lasers with double-quantum-well superlattices MC Wanke, F Capasso, C Gmachl, A Tredicucci, DL Sivco, AL Hutchinson, ... IEEE Photonics Technology Letters 13 (4), 278-280	5	2001
Quantum mechanical actuation of microelectromechanical systems by the Casimir force HB Chan, VA Aksyuk, RN Kleiman, DJ Bishop, F Capasso Science 291 (5510), 1941-1944	1005	2001
High peak power (2.2 W) superlattice quantum cascade laser G Scamarcio, M Troccoli, F Capasso, AL Hutchinson, DL Sivco, AY Cho Electronics Letters 37 (5), 295-296	27	2001
Sensitive detection of NO in exhaust gas with a frequency-modulated, distributed-feedback, quantum-cascade laser WH Weber, JT Remillard, D Uy, C Gmachl, F Capasso, AL Hutchinson, ... APS March Meeting Abstracts, X9. 004		2001
Injectorless Quantum Cascade Lasers with Double Quantum Well Superlattices MC Wanke, F Capasso, C Gmachl, A Tredicucci, DL Sivco, ... APS March Meeting Abstracts, X9. 005		2001
Far-IR Quantum Cascade Lasers at 21.5 μm and 24 μm Wavelength R Colombelli, F Capasso, C Gmachl, M Wanke, A Tredicucci, ... APS March Meeting Abstracts, X9. 006		2001
Quantum cascade lasers with low-loss chalcogenide lateral waveguides C Gmachl, HY Hwang, R Paiella, DL Sivco, JN Baillargeon, F Capasso, ... IEEE Photonics Technology Letters 13 (3), 182-184	29	2001
Application of balanced detection to absorption measurements of trace gases with room-temperature, quasi-cw quantum-cascade lasers DM Sonnenfroh, WT Rawlins, MG Allen, C Gmachl, F Capasso, ... Applied Optics 40 (6), 812-820	124	2001
Pollutant emission monitoring using QC laser-based mid-IR sensors DM Sonnenfroh, MG Allen, WT Rawlins, CF Gmachl, F Capasso, ... Water, Ground, and Air Pollution Monitoring and Remediation 4199, 86-97	7	2001
Mid-infrared integrated cavity absorption spectroscopy for chemical sensing T Myers, RM Williams, MS Taubman, SW Sharpe, JF Kelly, F Capasso, ... Optical Remote Sensing, OThA4		2001
Development of mid-infrared NICE-OHMS: ultra-trace chemical detection using quantum-cascade lasers R Williams, MS Taubman, TL Myers, JF Kelly, F Capasso, C Gmachl, ... Optical Remote Sensing, OThA3	2	2001
High-speed modulation and free-space optical audio/video transmission using quantum cascade lasers R Martini, C Gmachl, J Falciglia, FG Curti, CG Bethea, F Capasso, ...	98	2001

TITLE	CITED BY	YEAR
Electronics Letters 37 (3), 191-193		
Quantum-cascade laser measurements of stratospheric methane and nitrous oxide CR Webster, GJ Flesch, DC Scott, JE Swanson, RD May, WS Woodward, ... Applied Optics 40 (3), 321-326	126	2001
Widely Tunable and High Power Mid-infrared Quantum Cascade Lasers F Capasso, A Tredicucci, R Paiella, R Koehler, C Gmachl AT AND T BELL LABS MURRAY HILL NJ		2001
High Frequency Modulation and Optical Free Space Video Transmission using Quantum Cascade Lasers R Martini, C Gmachl, CG Bethea, F Capasso, J Falciglia, FH Curti, ... Ultrafast Electronics and Optoelectronics, UWD1		2001
Hydrothermal synthesis and properties of hierarchical ZnO and Eu-doped ZnO 3D structures C Verissimo, A Abbaspourrad, K Sunter, F Capasso, S Moshkalev, ... NSTI-Nanotech	1	2001
Infrared characterization of particulate and pollutant emissions from gas turbine combustors M Allen, B Upschulte, D Sonnenfroh, W Rawlins, C Gmachl, F Capasso, ... 39th Aerospace Sciences Meeting and Exhibit, 789	19	2001
Quantum optics, physics of lasers, nonlinear optics-Infrared generation in low-dimensional semiconductor heterostructures via quantum coherence AA Belyanin, F Capasso, VV Kocharovsky, VV Kocharovsky, MO Scully Physical Review-Section A-Atomic Molecular and Optical Physics 63 (5), 53803 …		2001
High performance quantum cascade lasers for the mid-to far-infrared: from Band structure engineering to commercialization F Capasso SPRINGER PROCEEDINGS IN PHYSICS 87 (1), 9-13	1	2001
LASER APPLICATIONS TO CHEMICAL AND ENVIRONMENTAL ANALYSIS-Development and Application of Mid-IR Semiconductor Lasers-Application of balanced detection to absorption … DM Sonnenfroh, WT Rawlins, MG Allen, C Gmachl, F Capasso, ... Applied Optics 40 (6), 812-820		2001
Superlattice QC lasers towards the far-infrared A Tredicucci, C Gmachl, MC Wanke, F Capasso, AL Hutchinson, DL Sivco, ... Terahertz Sources and Systems, 101-114	1	2001
Absorption spectroscopy with quantum cascade lasers AA Kosterev, RF Curl, FK Tittel, C Gmachl, F Capasso, DL Sivco, ... LASER PHYSICS-LAWRENCE- 11 (1), 39-49	6	2001
Trace-gas detection in ambient air with a thermoelectrically cooled, pulsed quantum-cascade distributed feedback laser	131	2000

TITLE	CITED BY	YEAR
AA Kosterev, FK Tittel, C Gmachl, F Capasso, DL Sivco, JN Baillargeon, ... Applied optics 39 (36), 6866-6872		
Intersubband electroluminescence from long-side-cleaved quantum-cascade lasers above threshold: Investigation of phonon bottleneck effects R Colombelli, F Capasso, C Gmachl, A Tredicucci, AM Sergent, ... Applied Physics Letters 77 (24), 3893-3895	19	2000
Gain switching and active mode locking of mid-infrared quantum cascade lasers R Paiella, F Capasso, C Gmachl, CG Bethea, HY Hwang, DL Sivco, ... Optics and Photonics News 11 (12), 22-23	1	2000
Mid-IR gas sensors based on quasi-CW, room-temperature quantum cascade lasers D Sonnenfroh, E Wetjen, M Miller, M Allen, C Gmachl, F Capasso, ... 38th Aerospace Sciences Meeting and Exhibit, 641	7	2000
Self-mode-locking of quantum cascade lasers with giant ultrafast optical nonlinearities R Paiella, F Capasso, C Gmachl, DL Sivco, JN Baillargeon, ... Science 290 (5497), 1739-1742	194	2000
Multiple wavelength quantum cascade light source F Capasso, AY Cho, CF Gmachl, AL Hutchinson, DL Sivco, A Tredicucci US Patent 6,148,012	20	2000
Gain-switching and mode-locking of quantum cascade lasers R Paiella, F Capasso, C Gmachl, CG Bethea, HY Hwang, DL Sivco, ... LEOS 2000. 2000 IEEE Annual Meeting Conference Proceedings. 13th Annual …		2000
Quantum cascade lasers using double quantum well superlattices MC Wanke, F Capasso, C Gmachi, A Tredicucci, DL Sivco, AL Hutchinson, ... LEOS 2000. 2000 IEEE Annual Meeting Conference Proceedings. 13th Annual …		2000
Article comprising a dual-wavelength quantum cascade photon source F Capasso, AY Cho, J Faist, AL Hutchinson, C Sirtori, DL Sivco, ... US Patent 6,144,681	9	2000
New frontiers in quantum cascade lasers and applications F Capasso, C Gmachl, R Paiella, A Tredicucci, AL Hutchinson, DL Sivco, ... IEEE Journal of selected topics in quantum electronics 6 (6), 931-947	218	2000
Electric-Field-Tunable Quantum Cascade Lasers by Oscillator Strength Tuning J FAISTI, F CAPASSO, C SIRTORI Long Wavelength Infrared Emitters Based on Quantum Wells and Superlattices 6, 65		2000
Quantum cascade laser JN Baillargeon, F Capasso, AY Cho, CF Gmachl, AL Hutchinson, ... US Patent 6,137,817	23	2000

TITLE	CITED BY	YEAR
Solid state laser for operation in librational modes F Capasso, AY Cho, J Faist, CF Gmachl, DL Sivco, EE Narimanov, ... US Patent 6,134,257	49	2000
Sub-Doppler resolution limited Lamb-dip spectroscopy of NO with a quantum cascade distributed feedback laser JT Remillard, D Uy, WH Weber, F Capasso, C Gmachl, AL Hutchinson, ... Optics Express 7 (7), 243-248	52	2000
Potential use of near, mid and far infrared laser diodes in automotive LIDAR applications A Samman, L Rimai, JR McBride, RO Carter, WH Weber, C Gmachl, ... Vehicular Technology Conference Fall 2000. IEEE VTS Fall VTC2000. 52nd …	35	2000
Hot phonons in quantum cascade lasers V Spagnolo, M Troccoli, G Scamarcio, C Gmachl, A Tredicucci, F Capasso, ... Conference Digest. 2000 Conference on Lasers and Electro-Optics Europe (Cat …		2000
Electronic distribution in superlattice quantum cascade lasers M Troccoli, G Scamarcio, V Spagnolo, A Tredicucci, C Gmachl, F Capasso, ... Applied Physics Letters 77 (8), 1088-1090	34	2000
Effective utilization of quantum-cascade distributed-feedback lasers in absorption spectroscopy AA Kosterev, RF Curl, FK Tittel, C Gmachl, F Capasso, DL Sivco, ... Applied optics 39 (24), 4425-4430	103	2000
Quantitative gas sensing by backscatter-absorption measurements of a pseudorandom code modulated λ~ 8-μm quantum cascade laser CM Gittins, ET Wetjen, C Gmachl, F Capasso, AL Hutchinson, DL Sivco, ... Optics letters 25 (16), 1162-1164	24	2000
Article comprising an improved superlattice quantum cascade laser F Capasso, AY Cho, J Faist, CF Gmachl, AL Hutchinson, DL Sivco, ... US Patent 6,091,753	7	2000
Monolithic active mode locking of quantum cascade lasers R Paiella, F Capasso, C Gmachl, HY Hwang, DL Sivco, AL Hutchinson, ... Applied Physics Letters 77 (2), 169-171	70	2000
Generation and detection of high-speed pulses of mid-infrared radiation with intersubband semiconductor lasers and detectors R Paiella, F Capasso, C Gmachl, CG Bethea, DL Sivco, JN Baillargeon, ... IEEE Photonics Technology Letters 12 (7), 780-782	54	2000
Recent results in quantum cascade lasers and applications C Gmachi, F Capasso, A Tredicucci, R Koehler, AL Hutchinson LUCENT TECHNOLOGIES INC MURRAY HILL NJ		2000
Unipolarer Halbleiterlaser F CAPASSO, AYI CHO, J FAIST, ALEE HUTCHINSON, S LURYI, ...		2000

TITLE	CITED BY	YEAR
High power and tunable single-mode quantum cascade lasers C Gmachl, F Capasso, A Tredicucci, DL Sivco, JN Baillargeon, ... Materials Science and Engineering: B 75 (2-3), 93-99	12	2000
High performance quantum cascade lasers for the/spl lambda/= 4 to 17/spl mu/m region and their chemical sensing applications F Capasso, C Gmachi, R Kohler, R Paiella, A Tredicucci, AL Hutchinson, ... Conference Proceedings. 2000 International Conference on Indium Phosphide …	3	2000
Continuous wave operation of long wavelength (/spl lambda//spl sime/11/spl mu/m) inter-miniband lasers A Tredicucci, F Capasso, C Gmachl, DL Sivco, AL Hutchinson, SNG Chu, ... Electronics Letters 36 (10), 876-878	20	2000
High Power, Low Threshold Quantum Cascade Laser Diodes Emitting at 9 μm Grown by Gas-Source Molecular Beam Epitaxy M Razeghi, S Slivken, A Matlis, K Luo, A Tahraoui, Z Wu, J Diaz Conference on Lasers and Electro-Optics, PD28		2000
Single-mode, tunable quantum cascade distributed feedback (QC-DFB) lasers between 4.6 and 10/spl mu/m wavelength C Gmachl, R Kohler, F Capasso, A Tredicucci, AL Hutchinson, DL Sivco, ... Conference on Lasers and Electro-Optics (CLEO 2000). Technical Digest …	3	2000
Miniband electronic distribution in superlattice quantum cascade structures M Troccoli, MT Pellegrini, V Spagnolo, G Scamarcio, M Striccoli, ... Conference on Lasers and Electro-Optics (CLEO 2000). Technical Digest …		2000
Self-mode-locking in quantum cascade lasers R Paiella, F Capasso, C Gmacbl, DL Sivco, JN Baillargeon, ... Conference on Lasers and Electro-Optics, PD29	1	2000
Trace gas detection in ambient air with cw and pulsed QC lasers AA Kosterev, RF Curl, FK Tittel, C Gmachl, F Capasso, DL Sivco, ... Conference on Lasers and Electro-Optics (CLEO 2000). Technical Digest …	1	2000
Single-Mode Tunable Quantum Cascade Lasers in the Spectral Range of the CO2 Laser at λ= 9.5-10.5 μm R Köhler, C Gmachl, F Capasso, A Tredicucci, DL Sivco, AY Cho IEEE Photonics Technology Letters 12 (5), 474-476	14	2000
Mid-infrared tunable quantum cascade lasers for gas-sensing applications C Gmachl, F Capasso, R Kohler, A Tredicucci, AL Hutchinson, DL Sivco, ... IEEE Circuits and Devices Magazine 16 (3), 10-18	11	2000
Single-mode tunable quantum cascade lasers in the spectral range of the CO 2 laser at/spl lambda/= 9.5-10.5 μm R Kohler, C Gmachl, F Capasso, A Tredicucci, DL Sivco, AY Cho IEEE Photonics Technology Letters 12 (5), 474-476	7	2000

TITLE	CITED BY	YEAR
Sense-ability of semiconductor lasers C Gmachl, F Capasso, R Köhler, A Tredicucci, AL Hutchinson, DL Sivco, ... IEEE Circuits and Devices Magazine 16 (3), 10-18	51	2000
Cavity ringdown spectroscopy using mid-infrared quantum-cascade lasers BA Paldus, CC Harb, TG Spence, RN Zare, C Gmachl, F Capasso, ... Optics letters 25 (9), 666-668	173	2000
Quantum cascade laser JN BAILLARGEON, F CAPASSO, AYI CHO, CF GMACHL, DLEE SIVCO, ...		2000
Quantum cascade light emitter with pre-biased internal electronic potential F Capasso, AY Cho, CF Gmachl, AL Hutchinson, DL Sivco, A Tredicucci US Patent 6,055,254	13	2000
Quantum cascade laser JN Baillargeon, F Capasso, AY Cho, CF Gmachl, DL Sivco, M Beck, ... US Patent 6,055,257	16	2000
Single-mode surface-plasmon laser A Tredicucci, C Gmachl, F Capasso, AL Hutchinson, DL Sivco, AY Cho Applied physics letters 76 (16), 2164-2166	193	2000
High temperature (T/spl ges/425 K) pulsed operation of quantum cascade lasers C Gmachl, A Tredicucci, F Capasso, AL Hutchinson, DL Sivco, ... Electronics Letters 36 (8), 723-725	21	2000
Semiconductor laser F CAPASSO, AYI CHO, J FAIST, ALEE HUTCHINSON, C SIRTORI, ...		2000
Chaos-assisted Tunneling in Deformed Microdisk Resonators E Narimanov, C Gmachl, F Capasso APS March Meeting Abstracts, I25. 001		2000
Intersubband transitions in GaN/AlGaN single and coupled quantum wells C Gmachl, H Ng, F Capasso, SN Chu, AY Cho APS March Meeting Abstracts, Z17. 004		2000
High-performance quantum cascade lasers with electric-field-free undoped superlattice A Tredicucci, F Capasso, C Gmachl, DL Sivco, AL Hutchinson, AY Cho IEEE Photonics Technology Letters 12 (3), 260-262	22	2000
Single-mode tunable, pulsed, and continuous wave quantum-cascade distributed feedback lasers at $\lambda \cong 4.6–4.7\,\mu\mathrm{m}$ R Köhler, C Gmachl, A Tredicucci, F Capasso, DL Sivco, SNG Chu, ... Applied Physics Letters 76 (9), 1092-1094	58	2000
Single-mode tunable, pulsed, and continuous wave quantum-cascade distributed feedback lasers at lambda congruent to 4.6-4.7 mu m R Kohler, C Gmachl, A Tredicucci, F Capasso, DL Sivco, SNG Chu, ...	41	2000

TITLE	CITED BY	YEAR
Applied Physics Letters 76 (9), 1092-1094		
Very long wavelength (/spl lambda//spl sime/16/spl mu/m) whispering gallery mode microdisk lasers A Tredicucci, C Gmachl, F Capasso, DL Sivco, SNG Chu, AL Hutchinson, ... Electronics Letters 36 (4), 328-330	18	2000
High-power, continuous-wave, current-tunable, single-mode quantum-cascade distributed-feedback lasers at λ≅ 5.2 and λ≅ 7.95 μm C Gmachl, F Capasso, A Tredicucci, DL Sivco, JN Baillargeon, ... Optics letters 25 (4), 230-232	38	2000
Single frequency quantum cascade-DFB laser based spectrometer for trace gas detection FK Tittel, AA Kosterev, RF Curl, C Gmachl, F Capasso, DL Sivco, ... Advanced Solid State Lasers, WC15	1	2000
Trace gas detection in ambient air using a 7.9 micron QC-DFB laser AA Kosterev, RF Curl, FK Tittel, C Gmachl, F Capasso, DL Sivco, ... Laser Applications to Chemical and Environmental Analysis, SaA2	1	2000
Mid-infrared, single-mode, continuously tunable Quantum Cascade distributed feedback lasers C Gmachl, F Capasso, R Kohler, A Tredicucci, DL Sivco, JN Baillargeon, ... Laser Applications to Chemical and Environmental Analysis, SaA1		2000
A portable, LN2-free, multi-chemical sensor based upon mid-infrared laser absorption spectroscopy JS Hartman, TL Stewart, JF Kelly, SW Sbarpe, RM Williams, C Gmachl, ... Laser Applications to Chemical and Environmental Analysis, SaB2		2000
Sensitive absorption spectroscopy using the quantum cascade laser EA Whittaker, JF Kelly, RM Williams, SW Sharpe, JS Hartman, C Gmachl, ... Laser Applications to Chemical and Environmental Analysis, SaA3		2000
Pound-Drever-Hall frequency stabilization of a quantum-cascade laser to an infrared ro-vibrational molecular resonance RM Williams, JF Kelly, JS Hartman, SW Sharpe, MS Taubman, JL Hall, ... Laser Applications to Chemical and Environmental Analysis, SaA5	2	2000
Pseudo-random code-based differential absorption LIDAR in the LWIR spectral region ET Wetjen, MG Allen, WJ Marinelli, CM Gittins, C GmachI, F Capasso, ... Laser Applications to Chemical and Environmental Analysis, SaB3		2000
Application of balanced detection to absorption measurements with quasi-cw QC lasers D Sonnenfroh, E Wetjen, M Miller, M Allen, C Gmachl, F Capasso, ... Laser Applications to Chemical and Environmental Analysis, SaA4	3	2000
Article comprising a strain-compensated QC laser F Capasso, AY Cho, SNG Chu, J Faist, AL Hutchinson, DL Sivco	7	2000

TITLE	CITED BY	YEAR
US Patent 6,023,482		
LASERS, OPTICS, AND OPTOELECTRONICS-Single-mode tunable, pulsed, and continuous wave quantum-cascade distributed feedback lasers at l (part of the article not published in the … R Kohler, C Gmachl, A Tredicucci, F Capasso, DL Sivco, SNG Chu, ... Applied Physics Letters 76 (9), 1092-1094	2	2000
Intersubband Transitions in Quantum Wells: Physics and Device Applications II F Capasso, HC Liu Academic Press	6	2000
Intersubband transitions in quantum wells: Physics and device applications HC Liu, F Capasso Academic press	454	2000
Intersubband transitions in quantum wells: physics and device applications II J Faist, F Capasso, C Sirtori, D Sivco, A Cho Semiconductors and Semimetals 66, 1-83	92	2000
Instrumentation, Measurement, and Metrology-Quantitative gas sensing by backscatter-absorption measurements of a pseudorandom code modulated l. 8-mm quantum cascade laser CM Gittins, ET Wetjen, C Gmachl, F Capasso, AL Hutchinson, DL Sivco, ... Optics Letters 25 (16), 1162-1164		2000
Semiconductor Lasers and Amplifiers-Generation and Detection of High-Speed Pulses of Mid-Infrared Radiation with Intersubband Semiconductor Lasers and Detectors R Paiella, F Capasso, C Gmachl, CG Bethea, DL Sivco, JN Baillargeon, ... IEEE Photonics Technology Letters 12 (7), 780-782		2000
Lasers and Laser Optics-High-power, continuous-wave, current-tunable, single-mode quantum-cascade distributed-feedback lasers at l (part of the article not published in the … C Gmachl, F Capasso, A Tredicucci, DL Sivco, JN Baillargeon, ... Optics Letters 25 (4), 230-232		2000
Kilohertz linewidth from frequency-stabilized mid-infrared quantum cascade lasers RM Williams, JF Kelly, JS Hartman, SW Sharpe, MS Taubman, JL Hall, ... Optics letters 24 (24), 1844-1846	156	1999
Methane concentration and isotopic composition measurements with a mid-infrared quantum-cascade laser AA Kosterev, RF Curl, FK Tittel, C Gmachl, F Capasso, DL Sivco, ... Optics letters 24 (23), 1762-1764	173	1999

TITLE	CITED BY	YEAR
Article comprising an electric field-tunable semiconductor laser F Capasso, AY Cho, J Faist, AL Hutchinson, C Sirtori, DL Sivco US Patent 5,978,397	20	1999
Improved CW operation of quantum cascade lasers with epitaxial-side heat-sinking C Gmachl, AM Sergent, A Tredicucci, F Capasso, AL Hutchinson, ... IEEE Photonics Technology Letters 11 (11), 1369-1371	118	1999
Intersubband transitions in quantum wells: physics and device applications ER Weber, RK Willardson, HC Liu, F Capasso Academic press	54	1999
Rapid-scan Doppler-limited absorption spectroscopy using mid-infrared quantum cascade lasers SW Sharpe, JF Kelly, RM Williams, JS Hartman, CF Gmachl, F Capasso, ... Application of Tunable Diode and Other Infrared Sources for Atmospheric …	10	1999
Spectral and modulation performance of quantum cascade lasers with application to remote sensing RM Williams, JF Kelly, SW Sharpe, JS Hartman, CF Gmachl, F Capasso, ... Application of Tunable Diode and Other Infrared Sources for Atmospheric …	6	1999
High-speed operation of gain-switched midinfrared quantum cascade lasers R Paiella, F Capasso, C Gmachl, CG Bethea, DL Sivco, JN Baillargeon, ... Applied physics letters 75 (17), 2536-2538	47	1999
Bidirectional semiconductor laser C Gmachl, A Tredicucci, DL Sivco, AL Hutchinson, F Capasso, AY Cho Science 286 (5440), 749-752	80	1999
High performance quantum cascade lasers F Capasso, C Gmachl, A Tredicucci, AL Hutchinson, DL Sivco, AY Cho Optics and Photonics News 10 (10), 31-37	73	1999
Long wavelength quantum cascade lasers A Tredicucci, F Capasso, C Gmachl, DL Sivco, AL Hutchinson, AY Cho 1999 Digest of the LEOS Summer Topical Meetings: Nanostructures and Quantum …	1	1999
High Performance Quantum Cascade Lasers for Trace Gas Analysis F Capasso, C Gmachl Advanced Semiconductor Lasers and Their Applications, 156		1999
Quantum cascade lasers F Capasso, C Gmachl, DL Sivco, AY Cho Physics World 12 (6), 27	118	1999
Wideband frequency modulation spectroscopy using the quantum cascade laser EA Whittaker, JF Kelly, SW Sharpe, JS Hartman, C Gmachl, F Capasso, ... Technical Digest. Summaries of papers presented at the Conference on Lasers …	1	1999

TITLE	CITED BY	YEAR
Spectral noise measurements of a 8.5 micron quantum cascade laser with implications for stabilization to 1 kHz RM Williams, JF Kelly, SW Sharpe, JS Hartman, C Gmachl, F Capasso, ... Technical Digest. Summaries of papers presented at the Conference on Lasers …		1999
Superlattice quantum cascade lasers operating at very long wavelengths (λ≈ 17 μm) A Tredicucci, F Capasso, C Gmachl, DL Sivco, AL Hutchinson, AY Cho Quantum Electronics and Laser Science Conference, JMA4		1999
Bi-directionally functional semiconductor laser C Gmachl, F Capasso, A Tredicucci, DL Sivco, AL Hutchinson, AY Cho Conference on Lasers and Electro-Optics, CPD19	1	1999
Article comprising an improved QC laser JN Baillargeon, F Capasso, AY Cho, J Faist, CF Gmachl, C Sirtori, ... US Patent 5,901,168	37	1999
Dependence of the device performance on the number of stages in quantum-cascade lasers C Gmachi, F Capasso, A Tredicucci, DL Sivxo, R Kohler, AL Hutchinson, ... IEEE Journal of selected topics in quantum electronics 5 (3), 808-816	145	1999
High-performance superlattice quantum cascade lasers F Capasso, A Tredicucci, C Gmachl, DL Sivco, AL Hutchinson, AY Cho, ... IEEE Journal of selected Topics In quantum electronics 5 (3), 792-807	122	1999
High performance quantum cascade lasers with superlattice active regions F Capasso, A Tredicucci, C Gmachl, AL Hutchinson, DL Sivco, AY Cho Quantum Optoelectronics, QTuA1	1	1999
Superlattice quantum cascade lasers A Tredicucci, F Capasso, CF Gmachl, DL Sivco, AL Hutchinson, G Chu, ... In-Plane Semiconductor Lasers III 3628, 95-103	1	1999
Long wavelength superlattice quantum cascade lasers at $\lambda \simeq 17$ μm A Tredicucci, C Gmachl, F Capasso, DL Sivco, AL Hutchinson, AY Cho Applied physics letters 74 (5), 638-640	132	1999
Opt F Capasso, C Gmachl, A Tredicucci Photonics News 10, 10-32	4	1999
Quantum Cascade Laser Measurements of Stratospheric Methane (CHsub4) and Nitrous Oxide (NSub20) C Webster, G Flesch, D Scott, J Swanson, R May, S Gmachl, F Capasso, ...		1999
Quantum well infrared photodetector physics and novel devices HC Liu Semiconductors and semimetals 62, 129-196	88	1999

TITLE	CITED BY	YEAR
Nonlinear optics in coupled-quantum-well quasi-molecules C Sirtori, F Capasso, DL Sivco, AY Cho Semiconductors and Semimetals 66, 85-125	12	1999
Quantum interference effects in intersubband transitions J Faist, C Sirtori, F Capasso, LN Pfeiffer, KW West, DL Sivco, AY Cho Semiconductors and Semimetals 62, 101-128	4	1999
Noncascaded intersubband injection lasers at $\lambda \approx 7.7\,\mu\mathrm{m}$ C Gmachl, F Capasso, A Tredicucci, DL Sivco, AL Hutchinson, SNG Chu, ... Applied physics letters 73 (26), 3830-3832	44	1998
Microlasers with chaotic resonators and bow-tie lasers C Gmachl, F Capasso, DL Sivco, AY Cho, EE Narimanov, AD Stone, ... Optics and Photonics News 9 (12), 26-27		1998
High power quantum cascade lasers F Capasso, A Tredicucci, C Gmachl, DL Sivco, AL Hutchinson, AY Cho Conference Proceedings. LEOS'98. 11th Annual Meeting. IEEE Lasers and …	1	1998
Article comprising an improved QC laser JN BAILLARGEON, F CAPASSO, AYI CHO, J FAIST, CF GMACHI, ...		1998
Long-wavelength interminiband Fabry-Pérot and distributed feedback quantum cascade lasers G Scamarcio, C Gmachl, F Capasso, A Tredicucci, AL Hutchinson, ... Semiconductor science and technology 13 (11), 1333	24	1998
A multiwavelength semiconductor laser A Tredicucci, C Gmachl, F Capasso, DL Sivco, AL Hutchinson, AY Cho Nature 396 (6709), 350-353	128	1998
High performance interminiband quantum cascade lasers with graded superlattices A Tredicucci, F Capasso, C Gmachl, DL Sivco, AL Hutchinson, AY Cho Applied physics letters 73 (15), 2101-2103	233	1998
Poisson's ratio measurement in tungsten thin films combining an x-ray diffractometer with *in situ* tensile tester PO Renault, KF Badawi, L Bimbault, P Goudeau, E Elkaım, JP Lauriat Applied physics letters 73 (14), 1952-1954	159	1998
Quantum cascade lasers: From band structure engineering to applications F Capasso Conference Digest. ISLC 1998 NARA. 1998 IEEE 16th International …	1	1998
Quantum Cascade Lasers C Sirtori, P Collot, J Nagle, J Faist, F Capasso CLEO/Europe Conference on Lasers and Electro-Optics, 226-226		1998
Multiple wavelength mid-IR lasers operating on inter-miniband transitions A Tredicucci, F Capasso, C Gmachl, DL Sivco, AL Hutchinson, AY Cho		1998

TITLE	CITED BY	YEAR
Optics & Photonics News 9 (9), 64		
High-resolution (Doppler-limited) spectroscopy using quantum-cascade distributed-feedback lasers SW Sharpe, JF Kelly, JS Hartman, C Gmachl, F Capasso, DL Sivco, ... Optics letters 23 (17), 1396-1398	139	1998
Long-wavelength (?? 8–11.5?? μm) semiconductor lasers with waveguides based on surface plasmons C Sirtori, C Gmachl, F Capasso, J Faist, DL Sivco, AL Hutchinson, AY Cho Optics letters 23 (17), 1366-1368	241	1998
Resonant tunneling in quantum cascade lasers C Sirtori, F Capasso, J Faist, AL Hutchinson, DL Sivco, AY Cho IEEE journal of quantum electronics 34 (9), 1722-1729	350	1998
High-power long-wavelength (/spl lambda//spl sim/11.5 μm) quantum cascade lasers operating above room temperature J Faist, C Sirtori, F Capasso, DL Sivco, JN Baillargeon, AL Hutchinson, ... IEEE Photonics Technology Letters 10 (8), 1100-1102	66	1998
High-power $\lambda \approx 8\ \mu\mathrm{m}$ quantum cascade lasers with near optimum performance C Gmachl, A Tredicucci, F Capasso, AL Hutchinson, DL Sivco, ... Applied Physics Letters 72 (24), 3130-3132	164	1998
High-power directional emission from microlasers with chaotic resonators C Gmachl, F Capasso, EE Narimanov, JU Nöckel, AD Stone, J Faist, ... Science 280 (5369), 1556-1564	858	1998
Long wavelength (/spl lambda//spl sime/13/spl mu/m) quantum cascade lasers C Gmachl, F Capasso, A Tredicucci, DL Sivco, AL Hutchinson, AY Cho Electronics Letters 34 (11), 1103-1104	32	1998
High-power inter-miniband lasing in intrinsic superlattices A Tredicucci, F Capasso, C Gmachl, DL Sivco, AL Hutchinson, AY Cho, ... Applied physics letters 72 (19), 2388-2390	88	1998
Tunable distributed-feedback quantum-cascade lasers for gas-sensing applications CF Gmachl, F Capasso, J Faist, DL Sivco, JN Baillargeon, AL Hutchinson, ... Fabrication, Testing, Reliability, and Applications of Semiconductor Lasers …	4	1998
Multiple wavelength mid-infrared lasers operating on inter-miniband transitions A Tredicucci, F Capasso, C Gmachl, DL Sivco, AL Hutchinson, AY Cho Conference on Lasers and Electro-Optics, CPD17		1998
Chaotic whispering gallery lasers with high power and directional emission C Gmachl, F Capasso, DL Sivco, AY Cho, EE Narimanov, AD Stone, ... Technical Digest. Summaries of Papers Presented at the Conference on Lasers …		1998

TITLE	CITED BY	YEAR
High-performance, widely tunable, single-mode, mid-infrared distributed feedback quantum cascade lasers F Capasso, C Gmachl, AL Hutchinson, A Tredicucci, J Faist, DL Sivco, ... Technical Digest. Summaries of Papers Presented at the Conference on Lasers …	2	1998
Quantum cascade lasers based on guided modes at a metal-semiconductor interface C Sirtori, C Gmachl, F Capasso, J Faist, DL Sivco, AY Cho Technical Digest. Summaries of Papers Presented at the Conference on Lasers …		1998
Strain-compensated In/sub 0.7/Ga/sub 0.3/As-Al/sub 0.6/In/sub 0.4/As quantum cascade lasers for 3-5/spl mu/m operation J Faist, M Beck, F Capasso, DL Sivco, AL Hutchinson, AY Cho Technical Digest. Summaries of Papers Presented at the Conference on Lasers …		1998
Resonant tunneling electron injection in quantum cascade laser structures C Sirtori, F Capasso, J Faist, AL Hutchinson, DL Sivco, AY Cho Technical Digest. Summaries of Papers Presented at the Conference on Lasers …		1998
Article comprising a unipolar superlattice laser F Capasso, AY Cho, J Faist, AL Hutchinson, G Scamarcio, C Sirtori, ... US Patent 5,745,516	17	1998
Mid-IR intersubband quantum cascade lasers C Sirtori, F Capasso, J Faist, AY Cho, P Collot, V Berger, J Nagle In-Plane Semiconductor Lasers: from Ultraviolet to Mid-Infrared II 3284, 212-223	2	1998
Buried heterostructure quantum cascade lasers M Beck, J Faist, CF Gmachl, F Capasso, DL Sivco, JN Baillargeon, ... In-Plane Semiconductor Lasers: from Ultraviolet to Mid-Infrared II 3284, 231-236	15	1998
Continuous-wave and high-power pulsed operation of index-coupled distributed feedback quantum cascade laser at $\lambda \approx 8.5\ \mu\mathrm{m}$ C Gmachl, F Capasso, J Faist, AL Hutchinson, A Tredicucci, DL Sivco, ... Applied physics letters 72 (12), 1430-1432	165	1998
Midinfrared emission from coupled wannier-stark ladders in semiconductor superlattices G Scamarcio, F Capasso, AL Hutchinson, DL Sivco, AY Cho Physical Review B 57 (12), R6811	16	1998
Dual-wavelength emission from optically cascaded intersubband transitions C Sirtori, A Tredicucci, F Capasso, J Faist, DL Sivco, AL Hutchinson, ... Optics letters 23 (6), 463-465	51	1998
Article comprising an improved quantum cascade laser F Capasso, AY Cho, J Faist, AL Hutchinson, C Sirtori, DL Sivco US Patent 5,727,010	18	1998
High-power quantum-cascade lasers at λ= 8 μm C Gmachl, A Tredicucci, F Capasso, AL Hutchinson, DL Sivco, AY Cho APS March Meeting Abstracts, Q27. 07		1998

TITLE	CITED BY	YEAR
Mid-infrared (λ= 7.1 μm) interminiband laser action in undoped superlattices A Tredicucci, F Capasso, C Gmachl, DL Sivco, AL Hutchinson, AY Cho, ... APS March Meeting Abstracts, Q27. 01		1998
Dual wavelength infrared emitters and Stark-tunable lasers with cascaded intersubband transitions A Tredicucci, F Capasso, DL Sivco, AL Hutchinson, AY Cho, C Sirtori, ... APS March Meeting Abstracts, Q27. 08		1998
Semiconductor whispering gallery lasers with chaotic resonators F Capasso, C Gmachl, DL Sivco, AY Cho, AD Stone, J Noeckel, ... APS March Meeting Abstracts, E29. 04		1998
The quantum cascade laser. A device based on two-dimensional electronic subbands C Sirtori, J Faist, F Capasso, AY Cho Pure and Applied Optics: Journal of the European Optical Society Part A 7 (2 …	19	1998
High-power continuous-wave quantum cascade lasers J Faist, A Tredicucci, F Capasso, C Sirtori, DL Sivco, JN Baillargeon, ... IEEE journal of quantum electronics 34 (2), 336-343	203	1998
Sensitive absorption spectroscopy with a room-temperature distributed-feedback quantum-cascade laser K Namjou, S Cai, EA Whittaker, J Faist, C Gmachl, F Capasso, DL Sivco, ... Optics letters 23 (3), 219-221	418	1998
Short wavelength (lambda˜ 3.4 mum) quantum cascade laser based on strained compensated InGaAs/AlInAs J Faist, F Capasso, DL Sivco, AL Hutchinson, SNG Chu, AY Cho Applied Physics Letters 72 (6), 680-683	419	1998
Buried heterostructure quantum cascade lasers [3284-31] M Beck, J Faist, CG Gmachl, F Capasso, DL Sivco, JN Baillargeon, ... PROCEEDINGS-SPIE THE INTERNATIONAL SOCIETY FOR OPTICAL ENGINEERING, 231-237		1998
Short (λ~ 3.4 μM) and Long (λ~ 11.5 μM) Wavelength Room Temperature Quantum Cascade Lasers J Faist, F Capasso, DL Sivco, AL Hutchinson, SNG Chu, AY Cho, C Sirtori Intersubband Transitions in Quantum Wells: Physics and Devices, 1-8		1998
CHARACTERIZATION OF DISTRIBUTED-FEEDBACK QUANTUM-CASCADE (QC) LASERS SW Sharpe, JF Kelly, J Hartman, F Capasso, CF Gmachl, DL Sivco, ... Ohio State University		1998
Intersubband emission in double-well structures with quantum interference in absorption J Faist, F Capasso, C Sirtori, AL Hutchinson, KW West, LN Pfeiffer Applied physics letters 71 (24), 3477-3479	37	1997

TITLE	CITED BY	YEAR
Quantum cascade distributed feedback laser C Gmachl, J Faist, F Capasso, DL Sivco, JN Baillargeon, AY Cho Optics and Photonics News 8 (12), 23-24		1997
Controlling the sign of quantum interference by tunnelling from quantum wells J Faist, F Capasso, C Sirtori, KW West, LN Pfeiffer Nature 390 (6660), 589-591	429	1997
High power continuous wave operation of mid-infrared quantum cascade lasers A Tredicucci, J Faist, F Capasso, DL Sivco, JN Baillargeon, ... Conference Proceedings. LEOS'97. 10th Annual Meeting IEEE Lasers and Electro …		1997
Recent advances in quantum cascade lasers F Capasso, J Faist, C Gmachl, G Scamarcio, DL Sivco, JN Baillargeon, ... Conference Proceedings. LEOS'97. 10th Annual Meeting IEEE Lasers and Electro …	2	1997
Article comprising an improved quantum cascade laser C SIRTORI, DLEE SIVCO, F CAPASSO, J FAIST, AYI CHO, ...		1997
Long-wavelength (9.5-11.5/spl mu/m) microdisk quantum-cascade lasers C Gmachl, J Faist, F Capasso, C Sirtori, DL Sivco, AY Cho IEEE journal of quantum electronics 33 (9), 1567-1573	79	1997
Erratum: “Distributed feedback quantum cascade lasers” [Appl. Phys. Lett. **70**, 2670 (1997)] J Faist, C Gmachl, F Capasso, C Sirtori, DL Sivco, JN Baillargeon, AY Cho Applied Physics Letters 71 (7), 986-986	5	1997
Tunable sources and quantum cascade lasers in the mid-IR C Gmachl, J Faist, C Sirtori, F Capasso, DL Sivco, JN Baillargeon, ... 1997 Digest of the IEEE/LEOS Summer Topical Meeting: Vertical-Cavity Lasers …		1997
Complex-coupled quantum cascade distributed-feedback laser C Gmachl, J Faist, JN Bailargeon, F Capasso, C Sirtori, DL Sivco, ... IEEE Photonics Technology Letters 9 (8), 1090-1092	134	1997
Laser action by tuning the oscillator strength J Faist, F Capasso, C Sirtori, DL Sivco, AL Hutchinson, AY Cho Nature 387 (6635), 777-782	162	1997
Distributed feedback quantum cascade lasers J Faist, C Gmachl, F Capasso, C Sirtori, DL Sivco, JN Baillargeon, AY Cho Applied Physics Letters 70 (20), 2670-2672	495	1997
Sensitive absorption spectroscopy with the quantum cascade laser K Namjou-Khaless, S Cai, EA Whittaker, J Faist, F Capasso, C Sirtori, ... Quantum Electronics and Laser Science Conference, QWD40	1	1997
Dual wavelength intersubband emitters C Sirtori, F Capasso, J Faist, AL Hutchinson, DL Sivco, AY Cho	1	1997

TITLE	CITED BY	YEAR
Conference on Lasers and Electro-Optics, CThS5		
High power interminiband superlattice infrared lasers G Scamarcio, F Capasso, C Sirtori, J Faist, AL Hutchinson, DL Sivco, ... Conference on Lasers and Electro-Optics, CThS1	1	1997
Quantum Interference and non-reciprocity in lifetime-broadened quantum well states J Faist, C Sirtori, F Capasso, AL Hutchinson, KW West, LN Pfeiffer Quantum Electronics and Laser Science Conference, QPD1		1997
Electric-field-tunable laser emission by photon-assisted tunneling J Faist, F Capasso, C Sirtori, DL Sivco, AL Hutchinson, AY Cho Conference on Lasers and Electro-Optics, CThS3		1997
Quantum cascade microdisk lasers C Gmachl, J Faist, F Capasso, C Sirtori, DL Sivco, AY Cho Conference on Lasers and Electro-Optics, CThS7		1997
Distributed feedback quantum cascade lasers C Gmachl, J Faist, F Capasso, C Sirtori, DL Sivco, JN Baillargeon, AY Cho Conference on Lasers and Electro-Optics, CPD13	1	1997
Unipolar mid-infrared semiconductor lasers F Capasso, J Faist, C Sirtori, AY Cho Conference Proceedings. 1997 International Conference on Indium Phosphide …	2	1997
Mid-IR room temperature quantum cascade lasers J Faist, C Sirtori, F Capasso, DL Sivco, JN Baillargeon, AL Hutchinson, ... In-Plane Semiconductor Lasers: from Ultraviolet to Midinfrared 3001, 264-270	2	1997
High-power infrared (8-micrometer wavelength) superlattice lasers G Scamarcio, F Capasso, C Sirtori, J Faist, AL Hutchinson, DL Sivco, ... Science 276 (5313), 773-776	281	1997
High power mid-infrared quantum cascade lasers with a molecular beam epitaxy grown InP cladding operating above room temperature J Faist, F Capasso, C Sirtori, DL Sivco, JN Baillargeon, AL Hutchinson, ... Journal of crystal growth 175, 22-28	15	1997
Tunable interminiband infrared emission in superlattice electron transport G Scamarcio, F Capasso, J Faist, C Sirtori, DL Sivco, AL Hutchinson, ... Applied physics letters 70 (14), 1796-1798	44	1997
Infrared (4–11 μm) quantum cascade lasers F Capasso, J Faist, C Sirtori, AY Cho Solid State Communications 102 (2-3), 231-236	120	1997
Mid-infrared (8.5 μm) semiconductor lasers operating at room temperature C Sirtori, J Faist, F Capasso, DL Sivco, AL Hutchinson, AY Cho IEEE Photonics Technology Letters 9 (3), 294-296	135	1997

TITLE	CITED BY	YEAR
Quantum Cascade Laser Mc Graw-Hill J Faist, F Capasso Yearbook of Science and Technology, 265-267	3	1997
Pulsed and continuous-wave operation of long wavelength infrared (/spl lambda/= 9.3/spl mu/m) quantum cascade lasers C Sirtori, J Faist, F Capasso, DL Sivco, AL Hutchinson, AY Cho IEEE journal of quantum electronics 33 (1), 89-93	48	1997
Long wavelength infrared (λ≈ 11 μm) quantum cascade lasers C Sirtori, J Faist, F Capasso, DL Sivco, AL Hutchinson, AY Cho Applied physics letters 69 (19), 2810-2812	130	1996
Semiconductor laser F Capasso, AY Cho, J Faist, AL Hutchinson, C Sirtori, DL Sivco US Patent 5,570,386	30	1996
Quantum cascade disk lasers J Faist, C Gmachl, M Striccoli, C Sirtori, F Capasso, DL Sivco, AY Cho Applied physics letters 69 (17), 2456-2458	107	1996
Quantum cascade lasers: new resonant tunnelling light sources for the mid-infrared F Capasso, J Faist, C Sirtori, DL Sivco, JN Baillargeon, AL Hutchinson, ... Philosophical Transactions of the Royal Society of London. Series A …	3	1996
Mesoscopic phenomena in semiconductor nanostructures by quantum design F Capasso, J Faist, C Sirtori Journal of Mathematical Physics 37 (10), 4775-4792	42	1996
Quantum Cascade Lasers: New Light Sources for the Mid-to-Far-Infrared F Capasso, J Faist, C Sirtori ESSDERC'96: Proceedings of the 26th European Solid State Device Research …		1996
Murray Hill, New Jersey 07974 G Scamarcio, F Capasso, AL Hutchinson, T Tanbun-Ek, D Sivco, AY Cho Hot Carriers in Semiconductors, 353		1996
Quantum cascade lasers F Capasso, J Faist, C Sirtori, AL Hutchison, DL Sivco, AY Cho International Quantum Electronics Conference, WI1		1996
Tunable Fano interference in intersubband absorption J Faist, C Sirtori, F Capasso, SNG Chu, LN Pfeiffer, KW West Optics letters 21 (13), 985-987	85	1996
Long-wavelength (9-11/spl mu/m) quantum cascade lasers C Sirtori, F Capasso, J Faist, DL Sivco, AL Hutchinson, AY Cho 1996 54th Annual Device Research Conference Digest, 98		1996

TITLE	CITED BY	YEAR
High Temperature, High Power Mid-Infrared Quantum Cascade Lasers at λ= 5.2 and 8μm J Faist, C Sirtori, F Capasso, DL Sivco, JN Baillargeon, AL Hutchinson, ... Conference on Lasers and Electro-Optics, CPD9		1996
Fano Interference in Intersubband Absorption C Sirtori, J Faist, F Capasso, AL Hutchinson, L Pfeiffer, KW West Quantum Electronics and Laser Science Conference, QPD2		1996
Long wavelength vertical transition quantum cascade lasers operating CW at 110 K C Sirtori, J Faist, F Capasso, DL Sivco, AL Hutchinson, AY Cho Superlattices and microstructures 19 (4), 357-363	4	1996
Continuous wave operation of quantum cascade lasers based on vertical transitions at λ= 4.6 μm J Faist, F Capasso, C Sirtori, DL Sivco, AL Hutchinson, SNG Chu, AY Cho Superlattices and Microstructures 19 (4), 337-345	36	1996
Unipolar semiconductor laser F Capasso, AY Cho, J Faist, AL Hutchinson, C Sirtori, DL Sivco US Patent 5,509,025	51	1996
Continuous-wave quantum cascade lasers in the 4-to 10-um wavelength region J Faist, F Capasso, C Sirtori, DL Sivco, AL Hutchinson, SNG Chu, AY Cho Laser Diodes and Applications II 2682, 198-205	9	1996
Erratum: “Continuous wave operation of a vertical transition quantum cascade laser above *T*=80 K” [Appl. Phys. Lett. **67**, 3057 (1995)] J Faist, F Capasso, C Sirtori, DL Sivco, AL Hutchinson, AY Cho Applied Physics Letters 68 (14), 2024-2024	2	1996
Article comprising a semiconductor waveguide structure F Capasso, AY Cho, J Faist, AL Hutchinson, C Sirtori, DL Sivco US Patent 5,502,787	23	1996
Continuous wave operation of midinfrared (7.4–8.6 μm) quantum cascade lasers up to 110 K temperature C Sirtori, J Faist, F Capasso, DL Sivco, AL Hutchinson, SNG Chu, AY Cho Applied physics letters 68 (13), 1745-1747	125	1996
Room temperature mid-infrared quantum cascade lasers J Faist, F Capasso, C Sirtori, DL Sivco, AL Hutchinson, AY Cho Electronics Letters 32 (6), 560-561	107	1996
Narrow-band electroluminescence at 3.5 μm from impact excitation and ionization of Fe^{2+} ions in InP G Scamarcio, F Capasso, AL Hutchinson, T Tanbun-Ek, D Sivco, AY Cho Applied physics letters 68 (10), 1374-1376	19	1996

TITLE	CITED BY	YEAR
Quantum cascade lasers without intersubband population inversion J Faist, F Capasso, C Sirtori, DL Sivco, AL Hutchinson, MS Hybertsen, ... Physical review letters 76 (3), 411	162	1996
Quantum design of QC-laser J Faist, F Capasso, C Sirtori, J Baillargeon, AL Hutchinson, S Chu, A Cho Appl. Phys. Lett. 68, 3680-3682	8	1996
Generation of Mid-Infrared Radiation by Impact Ionization of Deep-Centers in Semiconductor Structures G Scamarcio, F Capasso, AL Hutchinson, T Tanbun-Ek, DL Sivco, AY Cho Journal of Nonlinear Optical Physics & Materials 5 (01), 25-32	2	1996
Intra-Center Mid-Infrared Electroluminescence from Impact Ionization of Fe-Deep Levels in InP Based Structures G Scamarcio, F Capasso, AL Hutchinson, T Tanbun-Ek, D Sivco, AY Cho Hot Carriers in Semiconductors, 353-356		1996
Comments on quantum cascade lasers F Capasso, J Faist, C Sirtori Physica Scripta 1996 (T68), 113	1	1996
Quantum cascade lasers for the mid-infrared region F Capasso, J Faist, C Sirtori Physica Scripta 1996 (T66), 57	6	1996
Chaos in many body quantum systems C PRESILLA, G JONA-LASINIO, F CAPASSO Chaos in mesoscopic systems. Proceedings of the miniworkshop and Adriatico …		1995
Quantum cascade laser with a vertical transition and an electron Bragg reflector J Faist, F Capasso, C Sirtori, DL Sivco, AL Hutchinson, AY Cho Optics & Photonics News 6 (12), 10	1	1995
Quantum cascade lasers in the 8-9/spl mu/m wavelength region C Sirtori, J Faist, F Capasso, AL Hutchinson, DL Sivco, AY Cho LEOS'95. IEEE Lasers and Electro-Optics Society 1995 Annual Meeting. 8th …		1995
Unipolar semiconductor laser F CAPASSO, AY CHO, J FAIST, AL HUTCHINSON, S LURYI, C SIRTORI, ...		1995
Unipolar semiconductor laser F Capasso, AY Cho, J Faist, AL Hutchinson, S Luryi, C Sirtori, DL Sivco US Patent 5,457,709	105	1995
Quantum cascade laser with plasmon-enhanced waveguide operating at 8.4 μm wavelength C Sirtori, J Faist, F Capasso, DL Sivco, AL Hutchinson, AY Cho Applied physics letters 66 (24), 3242-3244	215	1995

TITLE	CITED BY	YEAR
Unipolar quantum cascade intersubband infrared lasers and LEDs F Capasso, J Faist, C Sirtori, AL Hutchinson, DL Sivco, AY Cho Quantum Electronics and Laser Science Conference, JWD1		1995
Status of short pulse optical power supplies WH Knox, RL McCrory, E Betzig, AJ Heeger, S Svanberg, DL Farkas, ... Quantum Electronics and Laser Science Conference, JMA1		1995
Continuous Wave Operation of Quantum Cascade Lasers at 8.15 μm C Sirtori, J Faist, F Capasso, AL Hutchinson, DL Sivco, AY Cho Conference on Lasers and Electro-Optics, CPD25		1995
Quantum cascade lasers: unipolar intersubband infrared lasers F Capasso, J Faist, C Sirtori, AL Hutchinson, DL Sivco, AY Cho Seventh International Conference on Indium Phosphide and Related Materials …		1995
Band structure engineering of quantum microstructures F Capasso Il Nuovo Cimento B (1971-1996) 110 (5-6), 501-507	2	1995
Measurement of the electron ionization coefficient at low electric fields in InGaAs-based heterojunction bipolar transistors C Canali, C Forzan, A Neviani, L Vendrame, E Zanoni, RA Hamm, ... Applied physics letters 66 (9), 1095-1097	41	1995
Quantum cascade unipolar intersubband light emitting diodes in the 8–13 μm wavelength region C Sirtori, F Capasso, J Faist, DL Sivco, AL Hutchinson, AY Cho Applied physics letters 66 (1), 4-6	53	1995
Heterostructure engineering of nonlinear optical properties and continuum states F Capasso, C Sirtori Nonlinear Optical Materials: Principles and Applications, 335-357		1995
D. I. Sivco, AL Hutchinson, and A. Cho J Faist, F Capasso, C Sitori Appl. Phys. Lett 67, 3057	1093	1995
Proceedings: 1995 International Semiconductor Device Research Symposium, December 5-8, 1995, Omni Charlottesville Hotel E Towe, F Capasso, S Jones Academic Outreach, School of Engineering & Applied Science, University of …		1995
Quantum Phenomena and Their Applications in Semiconductor Microstructures F Capasso Advances in Quantum Phenomena, 145-158		1995
MEASUREMENT OF THE ELECTRON IONIZATION COEFFICIENT AT LOW ELECTRIC-FIELDS IN HETEROJUNCTION BIPOLAR-TRANSISTORS		1995

TITLE	CITED BY	YEAR
C Canali, S Chandrasekhar, F Capasso, RA Hamm, R MALIK, C FORZAN, ... COMPOUND SEMICONDUCTORS 1994, 639-644		
Quantum cascade laser: a new optical source in the mid-infrared J Faist, F Capasso, DL Sivco, AL Hutchinson, C Sirtori, AY Cho Infrared Physics & Technology 36 (1), 99-103	28	1995
Quantum cascade laser: a unipolar intersubband semiconductor laser F Capasso, J Faist, DL Sivco, C Sirtori, AL Hutchinson, SNG Chu, AY Cho Proceedings of IEEE 14th International Semiconductor Laser Conference, 71-72	9	1994
Nonparabolicity and a sum rule associated with bound-to-bound and bound-to-continuum intersubband transitions in quantum wells C Sirtori, F Capasso, J Faist, S Scandolo Physical Review B 50 (12), 8663	383	1994
Measurement of the electron ionization coefficient at low electric fields in GaAs-based heterojunction bipolar transistors C Canali, F Capasso, R Malik, A Neviani, P Pavan, C Tedesco, E Zanoni IEEE electron device letters 15 (9), 354-356	25	1994
Far-infrared generation by doubly resonant difference frequency mixing in a coupled quantum well two-dimensional electron gas system C Sirtori, F Capasso, J Faist, LN Pfeiffer, KW West Applied physics letters 65 (4), 445-447	121	1994
Quantum electron devices: Physics and applications F Capasso, F Beltram, S Sen, A Palevski, AY Cho High-Speed Heterostructure Devices, 1-77	3	1994
Narrowing of the intersubband electroluminescent spectrum in coupled-quantum-well heterostructures J Faist, F Capasso, C Sirtori, DL Sivco, AL Hutchinson, SNG Chu, AY Cho Applied physics letters 65 (1), 94-96	99	1994
Quantum cascade laser: a unipolar intersubband semiconductor laser operating at 125 K F Capasso, J Faist, DL Sivco, C Sirtori, AL Hutchinson, SNG Chu, AY Cho 52nd Annual Device Research Conference, 123-124		1994
Formation of new energy bands and minigap suppression by hybridization of barrier and well resonances in semiconductor superlattices C Sirtori, F Capasso, DL Sivco, AY Cho Applied physics letters 64 (22), 2982-2984	8	1994
Quantum cascade laser: An intersub-band semiconductor laser operating above liquid nitrogen temperature J Faist, F Capasso, DL Sivco, C Sirtori, AL Hutchinson, AY Cho Electronics Letters 30 (11), 865-866	80	1994
Quantum well device for producing localized electron states for detectors and modulators	23	1994

TITLE	CITED BY	YEAR
F Capasso, AY Cho, J Faist, C Sirtori, DL Sivco US Patent 5,311,009		
Quantum cascade laser: A four level intersubband semiconductor laser for the mid ir to submillimeter wave region J Faist, F Capasso, DL Sivco, C Sirtori, AL Hutchinson, SNG Chu, AY Cho Conference on Lasers and Electro-Optics, CPD1	4	1994
Mid-infrared (λ= 4.8–5.5 μm) electric-field tunable intersubband electroluminescent diode J Faist, F Capasso, C Sirtori, DL Sivco, AL Hutchinson, SNG Chu, AY Cho Conference on Lasers and Electro-Optics, CThF5		1994
Far-infrared radiation (λ≈ 60 μm) by difference frequency generation in coupled quantum wells C Sirtori, F Capasso, J Faist, LN Pfeiffer, KW West International Quantum Electronics Conference, QMB6		1994
Coupled quantum well semiconductors with giant electric field tunable nonlinear optical properties in the infrared F Capasso, C Sirtori, AY Cho IEEE Journal of Quantum Electronics 30 (5), 1313-1326	218	1994
Quantum cascade laser J Faist, F Capasso, DL Sivco, C Sirtori, AL Hutchinson, AY Cho Science 264 (5158), 553-556	6054	1994
New optical absorption and photocurrent reversal phenomena induced by localized continuum resonances in quantum well heterostructures C Sirtori, J Faist, F Capasso, DL Sivco, AY Cho Solid-state electronics 37 (4-6), 1191-1194	2	1994
Intersubband lifetime in quantum wells with transition energies above and below the optical phonon energy J Faist, F Capasso, C Sirtori, DL Sivco, AY Cho, L Pfeiffer, K West Solid-state electronics 37 (4-6), 1273-1276	18	1994
Mid-infrared field-tunable intersubband electroluminescence at room temperature by photon-assisted tunneling in coupled-quantum wells J Faist, F Capasso, C Sirtori, D Sivco, AL Hutchinson, SNG Chu, AY Cho Applied physics letters 64 (9), 1144-1146	103	1994
Phonon limited intersubband lifetimes and linewidths in a two-dimensional electron gas J Faist, C Sirtori, F Capasso, L Pfeiffer, KW West Applied physics letters 64 (7), 872-874	138	1994
Atomically abrupt semiconductor heterointerfaces: their role in advanced electronic and photonic devices and quantum phenomena F Capasso Applied surface science 75 (1-4), 1-11	4	1994

TITLE	CITED BY	YEAR
Modulation of the Optical Absorption by Electric-Field-Induced Quantum Interference in Coupled Quantum Wells J Faist, F Capasso, AL Hutchinson, L Pfeiffer, KW West, DL Sivco, AY Cho Quantum Well Intersubband Transition Physics and Devices, 313-319		1994
Electronic quarter-wave stacks and Bragg reflectors: Physics of localized continuum states in quantum semiconductor structures C Sirtori, F Capasso, J Faist, D Sivco, AY Cho Quantum Well Intersubband Transition Physics and Devices, 301-311	4	1994
Mid-infrared quantum cascade lasers J Faist, F Capasso, DL Sivco, AL Hutchinson, C Sirtori, AY Cho Proceedings of LEOS'94 2, 385-386	1	1994
Bandgap engineering of semiconductor heterostructures by molecular beam epitaxy: physics and applications F Capasso, AY Cho Surface science 299, 878-891	71	1994
Quantum-well intersub-band electroluminescent diode at lambda= 5 mu m J Faist, F Capasso, C Sirtori, DL Sivco, AL Hutchinson, SNG Chu, AY Cho Electronics Letters 29 (25), 2230-2231	25	1993
Suppression of optical absorption by electric-field-induced quantum interference in coupled potential wells J Faist, F Capasso, AL Hutchinson, L Pfeiffer, KW West Physical review letters 71 (21), 3573	67	1993
Very large| x (2)(2w)| in the near infrared in AlSb/GaSb-InAsSb/AlSb asymmetric quantum wells S Scandolo, A Baldereschi, F Capasso Physical Concepts and Materials for Novel Optoelectronic Device Applications …	2	1993
New class of coupled-quantum-well semiconductors with large electric field-tunable nonlinear susceptibilities in the infrared C Sirtori, F Capasso, AY Cho Physical Concepts and Materials for Novel Optoelectronic Device Applications …	1	1993
Photocurrent reversal induced by localized continuum resonances in asymmetric quantum semiconductor structures C Sirtori, J Faist, F Capasso, DL Sivco, AY Cho Applied physics letters 63 (19), 2670-2672	17	1993
Measurement of the intersubband scattering rate in semiconductor quantum wells by excited state differential absorption spectroscopy J Faist, F Capasso, C Sirtori, DL Sivco, AL Hutchinson, SNG Chu, AY Cho Applied physics letters 63 (10), 1354-1356	150	1993
Γ-*X* phonon-assisted thermionic currents in the GaAs/$Al_xGa_{1-x}As$ interface system D Tammaro, K Hess, F Capasso	5	1993

TITLE	CITED BY	YEAR
Journal of applied physics 73 (12), 8536-8543		
Interband near-infrared second-harmonic generation with very large $\|\chi^{(2)}(2\omega)\|$ in AlSb/GaSb-InAsSb/AlSb asymmetric quantum wells S Scandolo, A Baldereschi, F Capasso Applied physics letters 62 (24), 3138-3140	16	1993
Narrowing of the intersubband absorption spectrum by localization of continuum resonances in a strong electric field C Sirtori, J Faist, F Capasso, DL Sivco, AY Cho Applied physics letters 62 (16), 1931-1933	34	1993
Light-emitting transistor based on real-space transfer: electrical and optical properties M Mastrapasqua, S Luryi, F Capasso, AL Hutchinson, DL Sivco, AY Cho IEEE transactions on electron devices 40 (2), 250-258	31	1993
Band Structure Engineering and its Device Applications F CAPASSO Semiconductor Superlattices and Interfaces, 379-397		1993
Artificial semiconductor structures: Electronic properties and device applications F Beltram, F Capasso Physics of Low-Dimensional Semiconductor Structures, 539-575	2	1993
Quantum Well" Quasimolecules" with Giant Nonlinear Optical Properties and New Heterostructures with Bound States in the Continuum F Capasso, C Sirtori, AC Cho OPTOELECTRONICS-TOKYO- 8, 479-479	1	1993
New class of coupled-quantum-well semiconductors with large electric-field-tunable nonlinear susceptibilities in the infrared (Invited Paper)[1985-19] C Sirtori, F Capasso, AY Cho PROCEEDINGS-SPIE THE INTERNATIONAL SOCIETY FOR OPTICAL ENGINEERING, 158-158		1993
Very large| x^(^ 2^)(2w)| in the near infrared in AlSb/GaSb-InAsSb/AlSb asymmetric quantum wells [1985-22] S Scandolo, A Baldereschi, F Capasso PROCEEDINGS-SPIE THE INTERNATIONAL SOCIETY FOR OPTICAL ENGINEERING, 186-186		1993
Thermionic Current in Direct-Indirect Energy-Gap *GaAs/Al $_x$* Ga $_{1-x}$ *As* Interfaces D Tammaro, K Hess, F Capasso Simulation of Semiconductor Devices and Processes, 489-492		1993
Quantum electron and optoelectronic devices F Capasso Microelectronic Engineering 19 (1-4), 909-916	2	1992

TITLE	CITED BY	YEAR
Bandgap and interface engineering for advanced electronic and photonic devices F Capasso Thin Solid Films 216 (1), 59-67	23	1992
Quantum wells with localized states at energies above the barrier height: A Fabry–Perot electron filter C Sirtori, F Capasso, J Faist, DL Sivco, SNG Chu, AY Cho Applied physics letters 61 (8), 898-900	94	1992
potential well F Capasso, C Sirtori, J Faist, DL Sivco, SNG Chu, AY Cho Nature 358, 13		1992
Observation of an electronic bound state above a potential well F Capasso, C Sirtori, J Faist, DL Sivco, SNG Chu, AY Cho Nature 358 (6387), 565-567	338	1992
Resonant multiphoton electron emission from a quantum well C Sirtori, F Capasso, DL Sivco, AY Cho Applied physics letters 60 (21), 2678-2680	24	1992
Quantum cascade lasers F Capasso Technical Digest. Summaries of Papers Presented at the Quantum Electronics …		1992
Noncascaded intersubband injection lasers and scaling with the number of stages in quantum cascade lasers C Gmachl, F Capasso, A Tredicucci, DL Sivco, AL Hutchinson, AY Cho Technical Digest. Summaries of Papers Presented at the Quantum Electronics …		1992
Superlattice quantum cascade lasers operating at very long wavelengths (/spl lambda//spl ap/17/spl mu/m) A Tredicucci, F Capasso, C Gmachl, DL Sivco, AL Hutchinson, AY Cho Technical Digest. Summaries of Papers Presented at the Quantum Electronics …		1992
Investigation of Carrier Transport in Photorefractive Superlattices by Time-Correlated Photon Counting A Lacaita, SE Ralph, F Capasso, RJ Malik AT AND T BELL LABS MURRAY HILL NJ		1992
Light emitting charge injection transistor with *p*-type collector M Mastrapasqua, F Capasso, S Luryi, AL Hutchinson, DL Sivco, AY Cho Applied physics letters 60 (19), 2415-2417	16	1992
Band-gap engineering of coupled-quantum-well" molecules" with large-field-tunable nonlinear optical properties F Capasso, C Sirtori Quantum Electronics and Laser Science Conference, QTuN5	4	1992

TITLE	CITED BY	YEAR
Chaotic quantum phenomena without classical counterpart G Jona-Lasinio, C Presilla, F Capasso Physical review letters 68 (15), 2269	92	1992
Resonant Tunnelling Bipolar Transistor (RTBT): New Functional Device for Electronics of the Future S Sen, F Capasso, F Beltram, AS Vengurlekar IETE Journal of Research 38 (2-3), 120-132	1	1992
Giant, triply resonant, third-order nonlinear susceptibility χ 3 ω (3) in coupled quantum wells C Sirtori, F Capasso, DL Sivco, AY Cho Physical review letters 68 (7), 1010	216	1992
Resonant Stark tuning of second-order susceptibility in coupled quantum wells C Sirtori, F Capasso, DL Sivco, AL Hutchinson, AY Cho Applied physics letters 60 (2), 151-153	85	1992
COUPLED QUANTUM WELLS: SECOND HARMONIC GENERATION AND F Capasso, C Sirtori, D Sivco, AY Cho Intersubband Transitions in Quantum Wells 288 (200), 141		1992
2ND HARMONIC-GENERATION IN ALINAS/GAINAS ASYMMETRIC COUPLED QUANTUM-WELLS C SIRTORI, F CAPASSO, DL SIVCO, AY CHO INSTITUTE OF PHYSICS CONFERENCE SERIES, 625-630		1992
Nonlinear Optics of Intersubband Transitions in AlInas/GaInAs Coupled Quantum Wells: Second Harmonic Generation and Resonant Stark Tuning of χ 2ω (2) F Capasso, C Sirtori, D Sivco, AY Cho Intersubband Transitions in Quantum Wells, 141-149	3	1992
Heterojunction band discontinuities and tunable band offsets: building blocks for bandgap engineering F Capasso Applied surface science 56, 723-732	3	1992
Lineshape of the resistance resonance in coupled quantum wells A Palevski, S Luryi, PL Gammel, F Capasso, LN Pfeiffer, KW West Superlattices and microstructures 11 (3), 269-271	5	1992
Observation of large second order susceptibility via intersubband transitions at λ~ 10 μm in asymmetric coupled AlInAs/GaInAs quantum wells C Sirtori, F Capasso, DL Sivco, SNG Chu, AY Cho Applied physics letters 59 (18), 2302-2304	126	1991
Quantum Chaos Without Classical Counterpart G Jona-Lasinio, C Presilla, F Capasso Unknow		1991

TITLE	CITED BY	YEAR
Bandgap and interface engineering for advanced electronic and photonic devices F Capasso MRS Bulletin 16 (6), 23-29	39	1991
Picosecond carrier dynamics of photoexcited asymmetric δ-doped superlattices SE Ralph, A Lacaita, F Capasso, RJ Malik Quantum Electronics and Laser Science Conference, QFA1		1991
Quantum transistors and circuits break through the barriers F Capasso, S Sen, LM Lunardi, AY Cho IEEE Circuits and Devices Magazine 7 (3), 18-25	9	1991
Picosecond carrier dynamics and tunneling-assisted recombination in photorefractive δ-doped superlattices SE Ralph, A Lacaita, F Capasso, RJ Malik Applied physics letters 58 (13), 1375-1377	2	1991
Nonlinerar optical device structure with compound semiconductor having graded chemical composition F Capasso, SE Ralph US Patent 4,999,485	2	1991
Sequential-quenching resonant-tunneling transistor F Capasso, AY Cho, S Sen US Patent 4,999,697	11	1991
Nonlinear feedback oscillations in resonant tunneling through double barriers C Presilla, G Jona-Lasinio, F Capasso Physical Review B 43 (6), 5200	73	1991
Dynamical analysis of resonant tunneling in presence of a self consistent potential due to the space charge C Presillaa, G Jona-Lasinio, F Capasso Resonant Tunneling in Semiconductors, 275-284	2	1991
Transport in Superlattices: Observation of Negative Differential Conductance by Field Induced Localization and Its Equivalence with the Esaki-Tsu Mechanism; Scattering … F Capasso, F Beltram, DL Sivco, AL Hutchinson, SNG Chu, AY Cho Resonant Tunneling in Semiconductors, 377-386		1991
Oscillations Due to Many-Body Effects in Resonant Tunneling F Capasso, G Jona-Lasinio, C Presilla Microscopic Aspects of Nonlinearity in Condensed Matter, 193-196		1991
Photonic and Electronic Devices Based on Artificially Structured Semiconductors F Beltram, F Capasso, S Sen	1	1991

TITLE	CITED BY	YEAR
Electronic Materials, 233-285		
Observation of charge storage and intersubband relaxation in resonant tunneling via a high sensitivity capacitive technique EF Schubert, F Capasso, AL Hutchinson, S Sen, AC Gossard Applied physics letters 57 (26), 2820-2822	16	1990
Investigation of carrier transport in graded gap superlattices by time correlated single photon counting A Lacaita, SE Ralph, F Capasso, RJ Malik Applied physics letters 57 (23), 2449-2451	2	1990
Negative Differential Conductance by Field-Induced Localization and Scattering-Controlled Resonances in Superlattices F Beltram, F Capasso, DL Sivco, AY Cho Modern Physics Letters B 4 (20), 1255-1263	1	1990
Impact ionization in the base of a hot-electron AlSb/InAs bipolar transistor AS Vengurlekar, F Capasso, TH Chiu Applied physics letters 57 (17), 1772-1774	10	1990
Resistance resonance in coupled potential wells A Palevski, F Beltram, F Capasso, L Pfeiffer, KW West Physical review letters 65 (15), 1929	141	1990
Band-gap engineering of III-V semiconductors by MBE using electron beam evaporation of Group III metals RJ Malik, LM Lunardi, BF Levine, CG Bethea, F Beltram, SE Ralph, ... Growth of Semiconductor Structures and High-Tc Thin Films on Semiconductors …	1	1990
Transient nonlinear optical properties of δ-doped asymmetric superlattices measured by picosecond electro-optic sampling SE Ralph, F Capasso, RJ Malik Applied physics letters 57 (6), 626-628	12	1990
Floating gate memory circuit and apparatus F Beltram, F Capasso, RJ Malik, NJ Shah US Patent 4,945,393	77	1990
Transient Optical Nonlinearities In Asymmetric Superlattices SE Ralph, F Capasso, RJ Malik Digest on Nonlinear Optics: Materials, Phenomena and Devices, 119-120		1990
Scattering-controlled transmission resonances and negative differential conductance by field-induced localization in superlattices F Beltram, F Capasso, DL Sivco, AL Hutchinson, SNG Chu, AY Cho Physical review letters 64 (26), 3167	185	1990
Optical nonlinearities in graded gap superlattices SE RALPH, F CAPASSO, RJ MALIK International Quantum Electronics Conference, QTUE3		1990

TITLE	CITED BY	YEAR
Realization of a staircase photodiode: Towards a solid-state photomultiplier G Ripamonti, F Capasso, AL Hutchinson, DJ Muehlner, JF Walker, ... Nuclear Instruments and Methods in Physics Research Section A: Accelerators …	37	1990
Floating gate memories F Beltram, F Capasso, RJ Malik, NJ Shah US Patent 4,905,063	69	1990
Apparatus including resonant-tunneling device having multiple-peak current-voltage characteristics F Capasso, AY Cho, S Sen, M Shoji, D Sivco US Patent 4,902,912	21	1990
Nanoscale and ultrafast devices F Capasso Physics Today 43 (2), 22-23	23	1990
Miniband conduction of minority electrons and negative transconductance by quantum reflection in a superlattice transistor AS Vengurlekar, F Capasso, AL Hutchinson, WT Tsang Applied physics letters 56 (3), 262-264	24	1990
5 Resonant Tunneling Diodes and S SEN, F CAPASSO Introduction to Semiconductor Technology: GaAs and Related Compounds, 231		1990
QUANTUM SEMICONDUCTOR DEVICES F Capasso Ecoc'90 2		1990
Fabrication Techniques and New Quantum Functional Devices F Beltram, S Sen Towards the Biochip: 9th Course of the International School of Pure and …		1990
Observation of quantum well polarization effects in the photocurrent of multilayer diodes G Ripamonti, F Capasso, WT Tsang Journal of Applied Physics 67 (1), 583-585		1990
The effect of incident momentum distribution function on the current-voltage characteristic of resonant tunneling double barriers AS Vengurlekar, F Capasso Superlattices and Microstructures 7 (2), 89-96	1	1990
Is resonant tunneling transistor a reality? WR Frensley, MA Reed, A Seabaugh, F Capasso Physics Today 43 (9), 132	4	1990
Quantum-effect devicess F Capasso High-Speed Semiconductor Devices, 465-520	46	1990

TITLE	CITED BY	YEAR
Quantum electron devices. F Capasso, S Datta Physics today 43 (2), 74-82	39	1990
Quasi-ballistic resonant tunneling of minority electrons into the excited states of a quantum well AS Vengurlekar, F Capasso, S Sen, AL Hutchinson, SNG Chu, D Sivco, ... Applied physics letters 55 (24), 2529-2531	13	1989
New photorefractive effect in graded-gap superlattices SE Ralph, F Capasso, RJ Malik Physical review letters 63 (20), 2272	35	1989
Injection in a continuum miniband: Observation of negative transconductance in a superlattice-base transistor F Beltram, F Capasso, AL Hutchinson, RJ Malik Applied physics letters 55 (15), 1534-1536	26	1989
Quantum functional devices: resonant-tunneling transistors, circuits with reduced complexity, and multiple valued logic F Capasso, S Sen, F Beltram, LM Lunardi, AS Vengurlekar, PR Smith, ... IEEE Transactions on Electron Devices 36 (10), 2065-2082	287	1989
Continuum-miniband superlattice-base transistor with graded-gap electron injector F Beltram, F Capasso, AL Hutchinson, RJ Malik Electronics Letters 25 (18), 1219-1220	10	1989
Negative transconductance superlattice base bipolar transistor F Capasso, AS Vengurlekar, A Hutchinson, WT Tsang Electronics Letters 25 (17), 1117-1119	16	1989
Resonant-tunneling device, and mode of device operation F Capasso, AY Cho, S Sen US Patent 4,853,753	12	1989
Resonant tunneling transistor F Capasso, HT French, AC Gossard, AL Hutchinson, RA Kiehl, S Sen US Patent 4,849,799	29	1989
Microwave multiple-state resonant tunneling bipolar transistors LM Lunardi, S Sen, F Capasso, PR Smith, DL Sivco, AY Cho IEEE electron device letters 10 (5), 219-221	20	1989
Introduction to the Revised Edition J Weinberger ___.(Comp.) New Atlantis and The Great Instauration. Wheeling: Harlan Davidson	5	1989
STACKED DOUBLE BARRIERS AND THEIR APPLICATION IN NOVEL MULTISTATE RESONANT TUNNELING BIPOLAR-TRANSISTORS S Sen, F Capasso, AY Cho, DL Sivco INSTITUTE OF PHYSICS CONFERENCE SERIES, 605-610	8	1989

TITLE	CITED BY	YEAR
MEMORY PHENOMENA IN NOVEL FLOATING-GATE GAAS/ALGAAS DEVICES F CAPASSO, F BELTRAM, JF WALKER, RJ MALIK INSTITUTE OF PHYSICS CONFERENCE SERIES, 493-498		1989
Photoinduced field modulation in multiquantum well heterostructures: A new photocurrent gain mechanism G Ripamonti, F Capasso, WT Tsang, AL Hutchinson Superlattices and microstructures 5 (4), 491-494		1989
Memory phenomena in novel floating-gate GaAs/AlGaAs structures with graded gap injector F Beltram, F Capasso, JF Walker, RJ Malik Superlattices and Microstructures 5 (2), 293-296		1989
New photoconductive gain mechanism by electric field modulation in multiquantum-well heterostructures F Capasso, G Ripamonti, WT Tsang, AL Hutchinson, SNG Chu Journal of applied physics 65 (1), 388-390	5	1989
Heterojunction bipolar transistor F Capasso, AC Gossard, JR Hayes, RJ Malik, PM Petroff US Patent 4,794,440	29	1988
New resonant tunneling bipolar transistor (RTBT) with multiple negative differential resistance characteristics operating at room temperature with large current gain S Sen, F Capasso, AY Cho, DL Sivco Technical Digest., International Electron Devices Meeting, 834-837	3	1988
AlGaAs/GaAs staircase avalanche photodiodes with high and extremely uniform avalanche gain F Capasso, G Ripamonti, AL Hutchinson, DJ Meuhlner, JF Walker, ... Technical Digest., International Electron Devices Meeting, 491-493	2	1988
GaAlAs/GaAs floating-gate memory devices with graded-gap injector grown by molecular-beam epitaxy F Beltram, F Capasso, JF Walker, RJ Malik IEEE Transactions on Electron Devices 35 (12), 2451	17	1988
Parity generator circuit using a multistate resonant tunnelling bipolar transistor S Sen, F Capasso, AY Cho, DL Sivco Electronics Letters 24 (24), 1506-1507	22	1988
Multiple-state resonant-tunneling bipolar transistor operating at room temperature and its application as a frequency multiplier S Sen, F Capasso, AY Cho, DL Sivco IEEE electron device letters 9 (10), 533-535	65	1988

TITLE	CITED BY	YEAR
Multiple negative transconductance and differential conductance in a bipolar transistor by sequential quenching of resonant tunneling F Capasso, S Sen, AY Cho, DL Sivco Applied physics letters 53 (12), 1056-1058	63	1988
1988 INTERNATIONAL ELECTRONIC DEVICES AND MATERIALS SYMPOSIUM PM Asbeck, F Capasso, CK Chang, JC Chern, YL Chiou, KY Chiù, ...		1988
Deep Level Induced Formation Of Wide Minibands In A Tight-Binding Superlattice: Transition From Localized To Extended States F Beltram, F Capasso Quantum Well and Superlattice Physics II 943, 43-48		1988
Interaction phenomena between deep levels and minibands in semiconductor superlattices F Beltram, F Capasso Physical Review B 38 (5), 3580	49	1988
Picosecond Electronics and Optoelectronics II F Capasso, H Morkoc MRS BULLETIN, 51	16	1988
Memory phenomena in heterojunction structures: Evidence for suppressed thermionic emission F Beltram, F Capasso, JF Walker, RJ Malik Applied physics letters 53 (5), 376-378	34	1988
New resonant-tunneling devices with multiple negative resistance regions and high room-temperature peak-to-valley ratio S Sen, F Capasso, D Sivco, AY Cho IEEE electron device letters 9 (8), 402-404	54	1988
New floating-gate AlGaAs/GaAs memory devices with graded-gap electron injector and long retention times F Capasso, F Beltram, RJ Malik, JF Walker IEEE electron device letters 9 (8), 377-379	49	1988
Negative transconductance via gating of the quantum well subbands in a resonant tunneling transistor F Beltram, F Capasso, S Luryi, SNG Chu, AY Cho, DL Sivco Applied physics letters 53 (3), 219-221	63	1988
Avalanche photodetector J Allam, F Capasso, AY Cho US Patent 4,755,860	5	1988
Linear resonator in photorefractive BSO with two pump beams DR Erbschloe, L Solymar Electronics Letters 24 (11), 683-684	10	1988

TITLE	CITED BY	YEAR
AT&T Bell Laboratories, 600 Mountain Avenue, Murray Hill, New Jersey 07974 F CAPASSO, F BELTRAM Defects in Electronic Materials: Volume 104 1, 47		1988
Monte Carlo study of electron heating and enhanced thermionic emission by hot phonons in heterolayers K Kim, K Hess, F Capasso Applied physics letters 52 (14), 1167-1169	17	1988
Band-Gap Engineering: From Physics and Materials to New Semiconductor Devices F CAPASSO JOURNAL OF THE ELECTROCHEMICAL SOCIETY 135 (4), C194-C194	1	1988
Negative transconductance resonant tunneling field effect transistors and monolithically integrated resonant tunneling diodes S Sen, F Capasso, AY Cho Journal of Vacuum Science & Technology B: Microelectronics Processing and …		1988
Simulations of nonlinear transport in AlGaAs/GaAs single well heterostructures K Kim, K Hess, F Capasso Solid-State Electronics 31 (3-4), 349-350		1988
Resonant tunneling through quantum wells: physics and device applications F Capasso, S Sen, AY Cho, AC Gossard, RJ Spah Solid-State Electronics 31 (3-4), 723-729	6	1988
Repeated velocity overshoot semiconductor device F Capasso, JA Cooper Jr, KK Thornber US Patent 4,719,496	2	1988
Quantum Well and Superlattice Physics: Proceedings of a Conference, 2nd, 17-18 March 1988, NewPort Beach, California F Capasso, GH Döhler, JN Schulman SPIE		1988
New graded band gap and superlattice structures and their applications to photodetectors, bipolar transistors and high-speed devices F Capasso The Physics of Submicron Semiconductor Devices, 659-682	2	1988
Quantum well and superlattice physics II F Capasso, G Dohler, JN Schulman	1	1988
Compositionally graded semiconductors and their device applications F Capasso Electronic Structure of Semiconductor Heterojunctions, 70-98	70	1988

TITLE	CITED BY	YEAR
Session 4 Quantum electronics and compound semiconductor devices—New heterojunction electron devices F Capasso, J Cooper 1987 International Electron Devices Meeting, 59-59		1987
Observation of resonant tunneling through a compositionally graded parabolic quantum well F Capasso, S Sen, AC Gossard, RA Spah, AL Hutchinson, SNG Chu 1987 International Electron Devices Meeting, 66-69	4	1987
Room-temperature operation of Ga0. 47In0. 53As/Al0. 48In0. 52As resonant tunnelling diodes S Sen, F Capasso, AL Hutchinson Electronics Letters 23 (23), 1229-1231	34	1987
Negative transconductance device F Capasso, S Luryi US Patent 4,704,622	19	1987
Observation of resonant tunneling through a compositionally graded parabolic quantum well S Sen, F Capasso, AC Gossard, RA Spah, AL Hutchinson, SNG Chu Applied physics letters 51 (18), 1428-1430	125	1987
RESONANT ZENER TUNNELING OF ELECTRONS ACROSS THE BAND-GAP BETWEEN BOUND-STATES IN THE VALENCE-BAND AND CONDUCTION-BAND QUANTUM WELLS IN A MULTIPLE QUANTUM-WELL STRUCTURE J ALLAM, F BELTRAM, F CAPASSO, AY CHO JOURNAL DE PHYSIQUE 48 (C-5), 439-442		1987
RESONANT ZENER TUNNELING OF ELECTRONS ACROSS THE BAND-GAP BETWEEN BOUND STATES IN THE VALENCE-AND CONDUCTION-BAND QUANTUM WELLS IN A MULTIPLE QUANTUM-WELL STRUCTURE J Allam, F Beltram, F Capasso, AY CHO Le Journal de Physique Colloques 48 (C5), C5-439-C5-442		1987
Integration of GaAs/AlAs resonant tunneling diodes for digital and analog applications with reduced circuit complexity S Sen, F Capasso, A Cho 1987 GaAs IC Symposium Technical Digest, 61-64	3	1987
Photon-number-squeezed recombination radiation in semiconductors MC Teich, F Capasso, BEA Saleh JOSA B 4 (10), 1663-1666	30	1987
Resonant tunneling device with multiple negative differential resistance: digital and signal processing applications with reduced circuit complexity S Sen, F Capasso, AY Cho, D Sivco IEEE transactions on electron devices 34 (10), 2185-2191	198	1987

TITLE	CITED BY	YEAR
Sawtooth photodetector F Capasso, WT Tsang US Patent 4,694,318	18	1987
Resonant Zener tunneling of electrons between valence-band and conduction-band quantum wells J Allam, F Beltram, F Capasso, AY Cho Applied physics letters 51 (8), 575-577	19	1987
New effects of structure in momentum and real space on nonlinear transport across heterojunction band discontinuities K Kim, K Hess, F Capasso Applied physics letters 51 (7), 508-510	8	1987
Negative transconductance resonant tunneling field-effect transistor F Capasso, S Sen, AY Cho Applied physics letters 51 (7), 526-528	44	1987
Resonant Tunneling: Physics, New Transistors And Superlattice Devices F Capasso, S Sen, AY Cho Quantum Well and Superlattice Physics 792, 10-17	6	1987
Heterojunction semiconductor devices having a doping interface dipole F Capasso, AY Cho US Patent 4,686,550	50	1987
The resonant-tunneling field-effect transistor: A new negative transconductance device S Sen, F Capasso, F Beltram, AY Cho IEEE transactions on electron devices 34 (8), 1768-1773	27	1987
Superlattice photoconductor F Capasso, AY Cho, AL Hutchinson, K Mohammed US Patent 4,679,061	17	1987
Measurement of heterojunction band offsets in InP/$Ga_{0.47}In_{0.53}As$ by admittance spectroscopy DV Lang, MB Panish, F Capasso, J Allam, RA Hamm, AM Sergent, ... Journal of Vacuum Science & Technology B: Microelectronics Processing and …	30	1987
Resonant tunneling devices with multiple negative differential resistance and demonstration of a three-state memory cell for multiple-valued logic applications F Capasso, S Sen, AY Cho, D Sivco IEEE electron device letters 8 (7), 297-299	89	1987
Physics of the enhancement of impact ionization in multiquantum well structures K Brennan, K Hess, F Capasso Applied physics letters 50 (26), 1897-1899	28	1987

TITLE	CITED BY	YEAR
Direct subpicosecond measurement of carrier mobility of photoexcited electrons in gallium arsenide MC Nuss, DH Auston, F Capasso Physical review letters 58 (22), 2355	278	1987
Molecular-beam epitaxial growth of graded band-gap quaternary $Ga_xAl_yIn_{1-x-y}As$ multilayer heterostructures on InP: Application to a novel avalanche … K Alavi, AY Cho, F Capasso, J Allam Journal of Vacuum Science & Technology B: Microelectronics Processing and …	22	1987
GaAs avalanche photodiodes and the effect of rapid thermal annealing on crystalline quality of GaAs grown on Si by molecular-beam epitaxy N Chand, J Allam, JM Gibson, F Capasso, F Beltram, AT Macrander, ... Journal of Vacuum Science & Technology B: Microelectronics Processing and …	51	1987
$Ga_{0.47}In_{0.53}As$/InP superlattice avalanche photodiode grown by metalorganic chemical vapor deposition F Beltram, J Allam, F Capasso, U Koren, B Miller Applied physics letters 50 (17), 1170-1172	12	1987
Resonant tunneling spectroscopy of hot minority electrons injected in gallium arsenide quantum wells F Capasso, S Sen, AY Cho, AL Hutchinson Applied physics letters 50 (14), 930-932	37	1987
Measurement of heterojunction band offsets by admittance spectroscopy: InP/$Ga_{0.47}In_{0.53}As$ DV Lang, MB Panish, F Capasso, J Allam, RA Hamm, AM Sergent, ... Applied physics letters 50 (12), 736-738	165	1987
Resonant tunnelling gate field-effect transistor F Capasso, S Sen, F Beltram, AY Cho Electronics Letters 23 (5), 225-226	31	1987
New directions in photodetectors: from new solid-state photomultipliers to effective mass inters F CAPASSO Optical Fiber Communication Conference, MJ5	1	1987
Band-Gap Engineering: From Physics and Materials to New Semiconductor Devices F Capasso Science 235, 172-176	512	1987
Resonant tunnelling electron spectroscopy F Capasso, S Sen, AY Cho, AL Hutchinson Electronics Letters 23 (1), 28-29	5	1987
Resonant tunneling electron spectroscopy F Capasso, S Sen, AY Cho, AL Hutchinson		1987

TITLE	CITED BY	YEAR
Picosecond Electronics and Optoelectronics II, 113-115		
Picosecond Electronics and Optoelectronics II DL Rogers, FJ Leonberger, CH Lee, F Capasso, H Morkoç Springer-Verlag	9	1987
ELECTRONIC DEVICES F Capasso Physics and Applications of Quantum Wells and Superlattices 170, 377	1	1987
Physics and Device Applications HB Discontinuities New York North-Holland	12	1987
Heterojunction Band Discontinuities: Physics and Device Applications G Margaritondo, F Capasso North-Holland	39	1987
Band-gap engineering and interface engineering: from graded-gap structures to tunable band discontinuities F Capasso Heterojunction Band Discontinuities, 400-450	5	1987
Heterojunction Band Discontinuities: Physics and Device Applications G Duggan, F Capasso, G Margaritondo North-Holland	12	1987
Picosecond electronics and optoelectronics II JA Valdmanis, SS Pei, F Capasso, H Morkoc Springer-Verlag, Berlin	9	1987
Picosecond Electronics and Optoelectronics II FJ Leonberger, CH Lee, F Capasso, H Morkoc JR Andrews,—Comparison of Sampling Oscilloscopes with 35, 64-66	10	1987
A non-contact electro-optic prober for high speed integrated circuits JA Valdmanis, SS Pei Picosecond electronics and optoelectronics II, 4-10	25	1987
Resonant tunneling transistors and resonant tunneling hot electron spectroscopy F Capasso, S Sen, AY Cho, AC Gossard Superlattices, Microstructures and Microdevices, 34		1987
Optical detectors technical group (A) F Capasso Journal of the Optical Society of America A 4, P116		1987
Resonant tunneling transistors and resonant tunneling hot electron spectroscopy(Abstract Only) F CAPASSO, S SEN, AY CHO, AC GOSSARD Illinois Univ, Third International Conference on Superlattices …		1987

TITLE	CITED BY	YEAR
New Defect Related Phenomena in Semiconductor Heterolayers and Superlattices F Capasso, F Beltram MRS Online Proceedings Library (OPL) 104		1987
Band-gap engineering for new photonic and electronic devices F Capasso Physics and Applications of Quantum Wells and Superlattices, 377-391	4	1987
Physics and new device applications of resonant tunneling in quantum well heterostructures F Capasso, S Sen, AY Cho Physica Scripta 1987 (T19A), 199	5	1987
Near-single carrier-type multiplication in a multiple graded-well structure for a solid-state photomultiplier J Allam, F Capasso, K Alavi, AY Cho IEEE electron device letters 8 (1), 4-6	11	1987
Physics and Device Applications, edited by F. Capasso and G. Margaritondo HB Discontinuities Amsterdam, North-Holland	71	1987
Graded-gap and superlattice devices by bandgap engineering F Capasso Semiconductors and semimetals 24, 319-395	43	1987
Heterojunction band discontinuities: physics and device applications F Capasso, G Margaritondo North-Holland	292	1987
Session 4 Quantum electronics and compound-semiconductor devices—Novel heterostructure devices F Capasso, N Yokoyama 1986 International Electron Devices Meeting, 75-75		1986
Quantum well resonant tunneling bipolar transistor operating at room temperature F Capasso, S Sen, AC Gossard, AL Hutchinson, JH English 1986 International Electron Devices Meeting, 282-285	112	1986
Tunneling and photoconductivity F CAPASSO Optics News 12 (12), 10-11		1986
Electronic transport and depletion of quantum wells by tunneling through deep levels in semiconductor superlattices F Capasso, K Mohammed, AY Cho Physical review letters 57 (18), 2303	47	1986

TITLE	CITED BY	YEAR
High-speed InP/$Ga_{0.47}In_{0.53}As$ superlattice avalanche photodiodes with very low background doping grown by continuous trichloride vapor-phase epitaxy VD Mattera Jr, F Capasso, J Allam, AL Hutchinson, J Dick, JM Brown, ... Journal of applied physics 60 (7), 2609-2612	12	1986
Observation of novel steplike structure in the photocurrent and dark current of a superlattice: Charge collection by successive depletion of quantum wells J Allam, F Capasso, MB Panish, AL Hutchinson Applied physics letters 49 (12), 707-709	17	1986
Conversion of Poisson photons into sub-Poisson photons by the action of electron feedback F Capasso, MC Teich Physical review letters 57 (12), 1417	25	1986
Current prospects for the permeable base transistor CO Bozler Surface Science 174 (1-3), 487-500	15	1986
Effective mass filtering: New quantum photoconductivity in superlattices F Capasso, K Mohammed, AY Cho Surface Science 174 (1-3), 501-504	5	1986
Photodetector with graded bandgap region CG Bethea, F Capasso, AL Hutchinson, BF Levine, WT Tsang US Patent 4,599,632	13	1986
Method of making integrated circuits employing ion-bombarded InP layers F Capasso, MW Focht, AT Macrander, B Schwartz US Patent 4,597,165	5	1986
Erratum: Resonant tunneling of two-dimensional electrons through a quantum wire: A negative transconductance device [Appl. Phys. Lett. **47**, 1347 (1985)] S Luryi, F Capasso Applied Physics Letters 48 (24), 1693-1693		1986
Variable gap devices F Capasso, AC Gossard, MJ Stavola US Patent 4,590,507	26	1986
New avalanche multiplication phenomenon in quantum well superlattices: Evidence of impact ionization across the band-edge discontinuity F Capasso, J Allam, AY Cho, K Mohammed, RJ Malik, AL Hutchinson, ... Applied physics letters 48 (19), 1294-1296	81	1986
Band-gap engineering and interface engineering: novel superlattice structures and tunable band discontinuities F Capasso		1986

TITLE	CITED BY	YEAR
AIP Conference Proceedings 138 (1), 170-183		
New quantum transport phenomena and superlattice devices in molecular beam epitaxially grown AlInAs/GaInAs heterostructures F Capasso, K Mohammed, AY Cho Journal of Vacuum Science & Technology B: Microelectronics Processing and …	4	1986
Tunnel superlattice optoelectronic devices and high-speed 1.3-1.6-μm quantum well avalanche photodiodes F CAPASSO Optical Fiber Communication Conference, WCC1	1	1986
Sequential resonant tunneling through a multiquantum well superlattice F Capasso, K Mohammed, AY Cho Applied physics letters 48 (7), 478-480	348	1986
High-detectivity InAs0. 85Sb0. 15/InAs infra-red (1.8-4.8 μm) detectors K Mohammed, F Capasso, RA Logan, JP Van Der Ziel, AL Hutchinson Electronics Letters 22 (4), 215-216	44	1986
Semiconductors and Semimetals, ed. WT Tsang F Capasso Academic, New York 22, 1-172	4	1986
Resonant Tunneling Devices and Optoelectronic Ge/Si Superlattice Structures S Luryi, F Capasso Two-Dimensional Systems: Physics and New Devices, 140-153		1986
Resonant tunneling through double barriers, perpendicular quantum transport phenomena in superlattices, and their device applications F Capasso, K Mohammed, AY Cho IEEE Journal of Quantum Electronics 22, 1853-1869	667	1986
Impact ionization across the band-edge discontinuity in superlattices and its applications to solid-state photomultipliers (A) F Capasso, J Allam, AY Cho, K Mohammed, RJ Malik, AL Hutchinson, ... Journal of the Optical Society of America A 3, P39	1	1986
New high gain staircase photoconductors and observation of sawtooth-to-staircase transition in compositionally graded heterostructures (A) F Capasso, CW Tu, K Mohammed Journal of the Optical Society of America A 3, P39		1986
Optical detectors (A) F Capasso Journal of the Optical Society of America A 3, P37		1986
Resonant tunneling transistors, tunneling superlattice devices and new quantum well avalanche photodiodes F Capasso High-Speed Electronics, 50-61	1	1986

TITLE	CITED BY	YEAR
Resonant tunneling transistors and superlattice devices by band-gap engineering F Capasso Proc. Int. Symp. GaAs and Related Compounds, Inst. Phys. Conf. Ser., 17-25	3	1986
Impact ionization across the band edge discontinuity with very large ionization rate ratio in a superlattice with graded wells J Allam, F Capasso, K Alavi, Y Cho Proc. 13th Int. Symp. GaAs and Related Compounds, 405-410	2	1986
Resonant tunneling of two-dimensional electrons through a quantum wire: A negative transconductance device S Luryi, F Capasso Applied physics letters 47 (12), 1347-1349	155	1985
Observation of negative conductance by sequential resonant tunneling through a one micron thick superlattice F Capasso, K Mohammed, AY Cho 1985 International Electron Devices Meeting, 764-765		1985
IVA-1 giant amplification of the photocurrent in a superlattice by effective mass filtering F Capasso, K Mohammed, AY Cho, R Hull, AL Hutchinson IEEE Transactions on Electron Devices 32 (11), 2539-2539		1985
Quantum photoconductive gain by effective mass filtering and negative conductance in superlattice pn junctions F Capasso, K Mohammed, AY Cho Physica B+ C 134 (1-3), 487-493	19	1985
New high-speed long-wavelength $Al_{0.48}In_{0.52}As/Ga_{0.47}In_{0.53}As$ multiquantum well avalanche photodiodes K Mohammed, F Capasso, J Allam, AY Cho, AL Hutchinson Applied physics letters 47 (6), 597-599	67	1985
New Quantum Photoconductivity and Large Photocurrent Gain by Effective-Mass Filtering in a Forward-Biased Superlattice $p-n$ Junction F Capasso, K Mohammed, AY Cho, R Hull, AL Hutchinson Physical review letters 55 (10), 1152	121	1985
Effective mass filtering: Giant quantum amplification of the photocurrent in a semiconductor superlattice F Capasso, K Mohammed, AY Cho, R Hull, AL Hutchinson Applied physics letters 47 (4), 420-422	183	1985
Resonant tunneling transistor with quantum well base and high-energy injection: A new negative differential resistance device F Capasso, RA Kiehl Journal of Applied Physics 58 (3), 1366-1368	422	1985

TITLE	CITED BY	YEAR
Tunable barrier heights and band discontinuities via doping interface dipoles: An interface engineering technique and its device applications F Capasso, K Mohammed, AY Cho Journal of Vacuum Science & Technology B: Microelectronics Processing and …	54	1985
Electric field dependent cathodoluminescence of III-V compound heterostructures: A new interface characterization technique N Magnea, PM Petroff, F Capasso, RA Logan, K Alavi, AY Cho Applied physics letters 46 (11), 1074-1076	2	1985
Doping interface dipoles: Tunable heterojunction barrier heights and band-edge discontinuities by molecular beam epitaxy F Capasso, AY Cho, K Mohammed, PW Foy Applied physics letters 46 (7), 664-666	155	1985
High-gain, high-frequency AlGaAs/GaAs graded band-gap base bipolar transistors with a Be diffusion setback layer in the base RJ Malik, F Capasso, RA Stall, RA Kiehl, RW Ryan, R Wunder, ... Applied physics letters 46 (6), 600-602	58	1985
New heterojunction devices by band-gap engineering F Capasso Physica B+ C 129 (1-3), 92-106	34	1985
New transport phenomena in variable gap semiconductors and their device applications F Capasso, BF Levine Journal of Luminescence 30 (1-4), 144-153	3	1985
Semiconductors and semimetals F Capasso Ed. RW Willardson and AC Beer 22	38	1985
Lightwave Communication Technology: Photodetectors F Capasso, T Pearsall, M Pollack, T Caneda, S Forrest, G Campbell AP, New York	2	1985
Lightwave communications technology F Capasso, TP Pearsall, MA Pollack Semiconductors and semimetals 22 (Part D)	11	1985
Band-Gap Engineering via Superlattice and Graded-Gap Materials: New Phenomena and their Device Applications— F Capasso Proceedings of the 17th International Conference on the Physics of …	1	1985
Band-gap engineering: from physics to optoelectronic functional devices (A) F Capasso Journal of the Optical Society of America A 2, P47		1985

TITLE	CITED BY	YEAR
Microplasma characteristics in InP-$In_{0.53}Ga_{0.47}As$ long wavelength avalanche photodiodes N Magnea, PM Petroff, F Capasso, RA Logan, PW Foy Applied physics letters 46 (1), 66-68	3	1985
New High-Speed Quantum Well and Variable Grap Superlattice Devices F Capasso Picosecond Electronics and Optoelectronics, 112-130	17	1985
Physics of avalanche photodiodes F Capasso Semiconductors and semimetals 22, 1-172	247	1985
New pseudo-quaternary GaInAsP semiconductors: A high speed "High-low" avalanche photodiode with $Ga_{0.47}In_{0.53}As$/InP graded gap superlattice F Capasso, HM Cox, AL Hutchinson, NA Olsson, SG Hummel 1984 International Electron Devices Meeting, 723-726		1984
Avalanche photodetector including means for separating electrons and holes F Capasso US Patent 4,486,765	22	1984
IVA-1 new low dark current high-speed Al (0. 48</inf> In (0. 52</inf> As/Ga (0. 47</inf> In (0. 53</inf> As avalanche photodiode by molecular-beam epitaxy for long wavelength … F Capasso, K Alavi, AY Cho, JM Parsey, B Kasper IEEE Transactions on Electron Devices 31 (12), 1972-1973		1984
Pseudo-quaternary GaInAsP semiconductors: A new $Ga_{0.47}In_{0.53}As$/InP graded gap superlattice and its applications to avalanche photodiodes F Capasso, HM Cox, AL Hutchinson, NA Olsson, SG Hummel Applied physics letters 45 (11), 1193-1195	90	1984
IVA-1 new low dark current high-speed Al 0.48 In 0.52 As/Ga 0.47 In 0.53 As avalanche photodiode by molecular-beam epitaxy for long wavelength fiber optic communication systems F Capasso, K Alavi, AY Cho, JM Parsey, B Kasper IEEE Transactions on Electron Devices 31 (12), 1972-1973		1984
Impact ionization rates for electrons and holes in $Al_{0.48}In_{0.52}As$ F Capasso, K Mohammed, K Alavi, AY Cho, PW Foy Applied physics letters 45 (9), 968-970	26	1984
Graded bandgap multilayer avalanche photodetector with energy step backs F Capasso, WT Tsang, GF Williams US Patent 4,476,477	30	1984

TITLE	CITED BY	YEAR
Low-dark-current low-voltage 1.3-1.6 μm avalanche photodiode with high-low electric field profile and separate absorption and multiplication regions by molecular beam epitaxy F Capasso, AY Cho, PW Foy Electronics Letters 20 (15), 635-637	35	1984
New multilayer and graded gap optoelectronic and high speed devices by band gap engineering F Capasso Surface Science 142 (1-3), 513-528	67	1984
New low dark current, high speed $Al_{0.48}In_{0.52}As$/ $Ga_{0.47}In_{0.53}As$ avalanche photodiode by molecular beam epitaxy for long wavelength fiber optic … F Capasso, B Kasper, K Alavi, AY Cho, JM Parsey Applied physics letters 44 (11), 1027-1029	14	1984
Self-aligned InP pn junction diodes fabricated with $^3He+$ bombardment F Capasso, B Schwartz, RA Logan IEEE electron device letters 5 (4), 121-122		1984
New 1.3-1.6-μm low-voltage low-dark-current p+ in+ in− avalanche detector with separated absorption and multiplication regions grown by molecular beam epitaxy F Capasso, AY Cho Optical Fiber Communication Conference, WA4		1984
Effects of hydrogen on the IR absorption characteristics in optical fibers K Mochizuki, Y Namihira, M Kuwazuru, Y Iwamoto Optical Fiber Communication Conference, WB2	4	1984
NEW, QUIETER PHOTODIODES PROMISE TO CATCH SPEEDING LIGHTWAVES F CAPASSO, WT TSANG RECORD-AT&T BELL LABORATORIES 62 (3), 12-19		1984
Electroabsorption $Al_{0.48}In_{0.52}As$ p-i-n avalanche photodiodes grown by molecular beam epitaxy F Capasso, K Alavi, AY Cho, AL Hutchinson IEEE electron device letters 5 (1), 16-17		1984
Enhancement of the Ionization Rates Ratio by Spatial Separation of Electrons and Holes in Multilayer Heterojunction Structures: Towards a Solid State Photomultiplier F Capasso The Physics of Submicron Structures, 41-51		1984
Multilayer avalanche photodiodes and solid-state photomultipliers F Capasso Laser focus (1983) 20 (7), 84-101	25	1984

TITLE	CITED BY	YEAR
New transient electrical polarization phenomenon in sawtooth superlattices F Capasso, S Luryi, WT Tsang, CG Bethea, BF Levine Physical review letters 51 (25), 2318	90	1983
Long wavelength, wide spectral response (0.8-1.8 μm) $Al_{0.48}In_{0.52}As/Ga_{0.47}In_{0.53}As$ avalanche photodiodes and $Al_{0.48}In_{0.52}As$ electroabsorption PIN … F Capasso, K Alavi, AY Cho, PW Foy, CG Bethea 1983 International Electron Devices Meeting, 468-471		1983
Elimination of the emitter/collector offset voltage in heterojunction bipolar transistors JR Hayes, F Capasso, RJ Malik, AC Gossard, W Wiegmann 1983 International Electron Devices Meeting, 686-688	15	1983
New long wavelength $Al_{0.48}In_{0.52}As/Ga_{0.47}In_{0.53}As$ avalanche photodiode grown by molecular beam epitaxy F Capasso, K Alavi, AY Cho, PW Foy, CG Bethea Applied physics letters 43 (11), 1040-1042	15	1983
Optimum emitter grading for heterojunction bipolar transistors JR Hayes, F Capasso, RJ Malik, AC Gossard, W Wiegmann Applied physics letters 43 (10), 949-951	125	1983
IIA-3 (Al, In) As/(Ga, In) As heterojunction bipolar transistors grown by molecular beam epitaxy RJ Malik, JR Hayes, F Capasso, K Alavi, AY Cho IEEE Transactions on Electron Devices 30 (11), 1567-1567		1983
Papers by Bell Laboratories authors JC Campbell, GJ Qua, AG Dental, NA Optical Comparator—A The Bell System Technical Journal		1983
IIIA-7 measurement of high electron drift velocity in a submicron heavily doped graded GAP Al x Ga 1-x As layer BF Levine, CG Bethea, WT Tsang, F Capasso, KK Thornber, RC Fulton IEEE Transactions on Electron Devices 30 (11), 1578-1579		1983
High-gain $Al_{0.48}In_{0.52}As/Ga_{0.53}As$ vertical n-p-n heterojunction bipolar transistors grown by molecular-beam epitaxy RJ Malik, JR Hayes, F Capasso, K Alavi, AY Cho IEEE electron device letters 4 (10), 383-385	50	1983
New device applications of bandedge discontinuities in multilayer heterojunction structures F Capasso Surface Science 132 (1-3), 527-539	54	1983
Photodiode having an InGaAs layer with an adjacent InGaAsP pn junction F Capasso, AL Hutchinson, RA Logan US Patent 4,390,889	17	1983

TITLE	CITED BY	YEAR
Bipolar transistor with graded band-gap base JR Hayes, F Capasso, AC Gossard, RJ Malik, W Wiegmann Electronics Letters 19 (11), 410-411	91	1983
Graded bandgap photodetector F Capasso		1983
Graded bandgap photodetector F Capasso US Patent 4,383,269	32	1983
Measurement of high electron drift velocity in a submicron, heavily doped graded gap $Al_xGa_{1-x}As$ layer BF Levine, CG Bethea, WT Tsang, F Capasso, KK Thornber, RC Fulton, ... Applied Physics Letters 42 (9), 769-771	50	1983
Band-gap engineering via graded gap, superlattice, and periodic doping structures: Applications to novel photodetectors and other devices F Capasso Journal of Vacuum Science & Technology B: Microelectronics Processing and …	117	1983
Staircase solid-state photomultipliers and avalanche photodiodes with enhanced ionization rates ratio F Capasso, WT Tsang, GF Williams IEEE Transactions on Electron Devices 30 (4), 381-390	259	1983
Avalanche photodiodes with enhanced ionization rates ratio: Towards a solid state photomultiplier F Capasso IEEE Transactions on Nuclear Science 30 (1), 424-428	21	1983
High-electron drift velocity in a submicrometer graded gap $Al_xGa_{1-x}As$ layer (A) BF Levine, CG Bethea, WT Tsang, F Capasso Journal of the Optical Society of America (1917-1983) 73, 1887		1983
NOVEL GRADED BAND-GAP PHOTODETECTORS WITH ULTRAHIGH SPEED OF RESPONSE (TR= 20PS, FWHM= 40PS) AND PHOTOTRANSISTORS WITH GRADED GAP BASE F Capasso, WT Tsang, AL Hutchinson, CG Bethea, BF LEVINE INSTITUTE OF PHYSICS CONFERENCE SERIES, 225-231	1	1983
High-electron drift velocity in a submicrometer graded gap AlxGa1-xAs layer (A) BF Levine, CG Bethea, WT Tsang, F Capasso J. Opt. Soc. Am., vol. 73, page 1887 73		1983
New graded band-gap picosecond phototransistor F Capasso, WT Tsang, CG Bethea, AL Hutchinson, BF Levine Applied Physics Letters 42 (1), 93-95	79	1983

TITLE	CITED BY	YEAR
Measurement of electron drift velocity in compositionally graded $Al_xGa_{1-x}As$ by time resolved optical picosecond reflectivity BF Levine, WT Tsang, CG Bethea, F Capasso 1982 International Electron Devices Meeting, 778-780		1982
Superlattice, graded band gap, channeling and staircase avalanche photodiodes towards a solid-state photomultiplier F Capasso, WT Tsang 1982 International Electron Devices Meeting, 334-337	8	1982
New Very Low Noise Multilayer And Graded-Gap Avalanche Photodiodes For The 0.8 To 1. 8 Am Wavelength Region F Capasso, WT Tsang, GF Williams Future Trends in Fiber Optic Communications 340, 50-55	1	1982
Semiconductor structures for repeated velocity overshoot JA Cooper, F Capasso, KK Thornber IEEE Electron Device Letters 3 (12), 407-408	20	1982
Channeling photodiode: A new versatile interdigitated *p-n* junction photodetector F Capasso, RA Logan, WT Tsang, JR Hayes Applied Physics Letters 41 (10), 944-946	23	1982
IIB-3 New interdigitated pn junction device with novel capacitance-voltage characteristic and ultrahigh optical sensitivity F Capasso, RA Logan, WT Tsang, JR Hayes IEEE Transactions on Electron Devices 29 (10), 1667-1668	1	1982
Interdigitated pn junction device with novel capacitance/voltage characteristic, ultralow capacitance and low punch-through voltage F Capasso, RA Logan, WT Tsang Electronics Letters 18 (18), 760-761	18	1982
Electron drift velocity measurement in compositionally graded $Al_xGa_{1-x}As$ by time-resolved optical picosecond reflectivity BF Levine, WT Tsang, CG Bethea, F Capasso Applied Physics Letters 41 (5), 470-472	54	1982
The channeling avalanche photodiode: A novel ultra-low-noise interdigitated pn junction detector F Capasso IEEE Transactions on Electron Devices 29 (9), 1388-1395	74	1982
High quality InP grown by molecular beam epitaxy WT Tsang, RC Miller, F Capasso, WA Bonner Applied Physics Letters 41 (5), 467-469	62	1982
Comment on''Simulation of high-field transport in GaAs using a Monte Carlo method and pseudopotential band structures''and on''Band-structure dependent transport and impact …	19	1982

TITLE	CITED BY	YEAR
F Capasso, TP Pearsall, KK Thornber, RE Nahory, MA Pollack, ... Journal of Applied Physics 53 (4), 3324-3326		
A proposed hydrogenation/nitridization passivation mechanism for GaAs and other III–V semiconductor devices, including InGaAs long wavelength photodetectors F Capasso, GF Williams Journal of The Electrochemical Society 129 (4), 821	135	1982
Erratum: New ultra-low-noise avalanche photodiode with separated electron and hole avalanche regions F Capasso Electronics Letters 18 (5), 240		1982
The graded bandgap multilayer avalanche photodiode: A new low-noise detector GF Williams, F Capasso, WT Tsang IEEE Electron Device Letters 3 (3), 71-73	66	1982
New ultra-low-noise avalanche photodiode with separated electron and hole avalanche regions F Capasso Electronics Letters 18 (1), 12-13	50	1982
The graded bandgap avalanche diode: A new molecular beam epitaxial structure with a large ionization rate ratio F Capasso, WT Tsang, AL Hutchinson, PW Foy Proc. 1981 Symp. GaAs Related Compounds, Inst. Phys. Conf. Ser. 63, 473	34	1982
Enhancement of electron impact ionization in a superlattice: A new avalanche photodiode with a large ionization rate ratio F Capasso, WT Tsang, AL Hutchinson, GF Williams Applied Physics Letters 40 (1), 38-40	421	1982
The superlattice photodetector: A new avalanche photodiode with a large ionization rates ratio F Capasso, WT Tsang, AL Hutchinson, GF Williams 1981 International Electron Devices Meeting, 284-287	6	1981
Very low reach-through voltage, high performance Al_xGa_{1-x} Sb p-i-n photodiodes for 1.3-μm fiber optical systems F Capasso, AL Hutchinson, PW Foy, C Bethea, WA Bonner Applied Physics Letters 39 (9), 736-738	14	1981
The effect of collisional broadening on Monte Carlo simulations of high-field transport in semiconductor devices F Capasso, TP Pearsall, KK Thornber IEEE Electron Device Letters 2 (11), 295-297	15	1981

TITLE	CITED BY	YEAR
A study of deep level in bulk *n*-InP by transient spectroscopy SR McAfee, F Capasso, DV Lang, A Hutchinson, WA Bonner Journal of Applied Physics 52 (10), 6158-6164	38	1981
The liquid-phase epitaxial growth of low net donor concentration(5 × 10 ¹⁴-5 × 10 ¹⁵/cm³) GaSb for detector applications in the 1. 3- 1 … F Capasso, M Panish, S Sumski IEEE Journal of Quantum Electronics 17 (2), 273-274		1981
The liquid-phase epitaxial growth of low net donor concentration (5× 10 14-5× 10 15/cm 3) GaSb for detector applications in the 1.3-1.6 μm region F Capasso, M Panish, S Sumski IEEE Journal of Quantum Electronics 17 (2), 273-274	42	1981
IEEE Electron Devices Lett K Horii, T Kuroda, T Kunii EDL-2	7	1981
COMPARISON OF ELECTROREFLECTANCE AND 2ND-DERIVATIVE REFLECTANCE CORE-LEVEL SPECTRA IN GA-V SEMICONDUCTORS DE ASPNES, SM KELSO, F CAPASSO, CG OLSON, DW LYNCH BULLETIN OF THE AMERICAN PHYSICAL SOCIETY 26 (3), 421-422		1981
Ballistic electron-impact ionization in III-V semiconductor avalanche devices F Capasso BULLETIN OF THE AMERICAN PHYSICAL SOCIETY 26 (3), 466-466	3	1981
Ballistic electron impact ionization in GaAs and in InP avalanche devices F Capasso, GB Bachelet 1980 International Electron Devices Meeting, 633-636	3	1980
InGaAsP/InGaAs heterojunction pin detectors with low dark current and small capacitance for 1.3-1.6 μm fibre optic systems F Capasso, RA Logan, A Hutchinson, DD Manchon Electronics Letters 16 (23), 893-895	19	1980
Low leakage current and saturated reverse characteristic in broad-area InGaAsP diodes F Capasso, RA Logan, PW Foy, S Sumski, DD Manchon Electronics Letters 16 (7), 241-242	8	1980
Investigation of microplasmas in InP avalanche photodiodes F Capasso, PM Petroff, WB Bonner, S Sumski IEEE Electron Device Letters 1 (3), 27-29	18	1980
Very high quantum efficiency GaSb mesa photodetectors between 1.3 and 1.6 μm F Capasso, MB Panish, S Sumski, PW Foy Applied Physics Letters 36 (2), 165-167	53	1980

TITLE	CITED BY	YEAR
Hot electron dynamics in GaAs avalanche devices: Competition between ballistic behavior and intervalley scattering F Capasso, RE Nahory, MA Pollack Solid-State Electronics 22 (11), 977-979	21	1979
Erratum: Temperature dependence of impact ionisation rates in GaAs between 20° and 200° C F Capasso, RE Nahory, MA Pollack Electronics Letters 15 (16), 507		1979
Effect of carrier drift velocities on measured ionization coefficients in avalanching semiconductors G Beni, F Capasso Physical Review B 19 (4), 2197	12	1979
Temperature dependence of impact ionisation rates in GaAs between 20° and 200° C F Capasso, RE Nahory, MA Pollack Electronics Letters 15 (4), 117-118	20	1979
TA-B1 tunable-bandgap InGaAsP avalanche photodiode detectors MA Washington, RE Nahory, MA Pollack, ED Beebe, F Capasso IEEE Transactions on Electron Devices 25 (11), 1346-1346		1978
TA-B4 the temperature dependence of impact ionization rates in GaAs between 20° and 250° C F Capasso, RE Nahory, MA Pollack IEEE Transactions on Electron Devices 25 (11), 1347-1347		1978
Solid-State Electron. TP Pearsall, F Capasso, RE Nahory, MA Pollack, JR Chelikowsky	9	1978
Low density photoexcitation phenomena in semiconductors: Aspects of theory and experiment RG Ulbrich Solid-State Electronics 21 (1), 51-59	120	1978
THE BAND STRUCTURE DEPENDENCE OF IMPACT IONIZATION BY HOT CARRIERS IN F CAPASSO, RE NAHORY, MA POLLACK, JR CELKowskyj Solid-State Electronics 2, 297-302		1978
EFFECT OF CARRIER DRIFT VELOCITIES ON MEASURED IONIZATION COEFFICIENTS IN AVALANCHING SEMICONDUCTORS G BENI, F CAPASSO BULLETIN OF THE AMERICAN PHYSICAL SOCIETY 23 (3), 330-330		1978
TEMPERATURE-DEPENDENCE OF IMPACT IONIZATION COEFFICIENTS IN GAAS BETWEEN 20-DEGREES-C AND 200-DEGREES-C F CAPASSO, RE NAHORY, MA POLLACK		1978

TITLE	CITED BY	YEAR
BULLETIN OF THE AMERICAN PHYSICAL SOCIETY 23 (3), 330-330		
Coupled-mode theory of a fiber laser-amplifier F Capasso, PD Porto Fiber & Integrated Optics 1 (3), 313-325	3	1978
The band structure dependence of impact ionization by hot carriers in semiconductors: GaAs TP Pearsall, F Capasso, RE Nahory, MA Pollack, JR Chelikowsky Solid-State Electronics 21 (1), 297-302	186	1978
Observation of electronic band-structure effects on impact ionization by temperature tuning F Capasso, RE Nahory, MA Pollack, TP Pearsall Physical Review Letters 39 (11), 723	39	1977
ELECTRIC-FIELD ORIENTATION AND MAGNITUDE DEPENDENCE OF ELECTRONIC-TRANSITIONS INDUCED BY HOT CARRIER IMPACT IONIZATION IN SEMICONDUCTORS-GAAS TP PEARSALL, F CAPASSO, RE NAHORY BULLETIN OF THE AMERICAN PHYSICAL SOCIETY 22 (6), 710-710		1977
Coupled-mode theory of Raman amplification in lossless optical fibers F Capasso, P Di Porto Journal of Applied Physics 47 (4), 1472-1476	22	1976
Response time in heterojunction infrared detectors P Perfetti, M Antichi, F Capasso, G Margaritondo Infrared Physics 14 (4), 255-257	6	1974
Electric-field induced nonlinear coherent infrared spectroscopy investigation of the Q01 (1) vibro-rotational mode of the H2 molecule F Capasso, F De Martini Optics Communications 9 (2), 172-175	22	1973
High-resolution nonlinear spectroscopy of the $Q_{01}(1)$ vibrational resonance in H_2in the zone of Dicke narrowing F De Martini, E Santamato, F Capasso IEEE Journal of Quantum Electronics 8 (6), 542-543	5	1972
Fiber-to-chip meta-grating couplers K Leosson, JPB Mueller, F Capasso		
Multimode dynamics and mode locking phenomena in QCLs A Gordon, CY Wang, L Diehl, A Belyanin, F Capasso, FX Kärtner, J Faist		
Supplementary material for “Broad electrical tuning of graphene-loaded plasmonic antennas” Y Yao, MA Kats, P Genevet, N Yu, Y Song, J Kong, F Capasso		

TITLE	CITED BY	YEAR
Picosecond pulses from mid-infrared quantum cascade lasers J Hillbrand, AM Andrews, H Detz, G Strasser, B Schwarz, H Schneider, ...		
Mid-Infrared Optical Nanoantennas Using Hyperbolic Hexagonal Boron Nitride Phonon Polaritons M Tamagnone, A Ambrosio, K Chaudhary, LA Jauregui, P Kim, WL Wilson, ...		
Near Field Imaging of Spoof Plasmons in low-loss Highly Metallic Titanium Nitride thin films MN Gadalla, K Chaudhary, CM Zgrabik, F Capasso, EL Hu		
Macro to nanoscale imaging using planar lenses at visible wavelengths M Khorasaninejad, WT Chen, RC Devlin, AY Zhu, J Oh, D Rousso, ... SPIE Newsroom, doi 10 (2.1201608), 006633	1	
L. Vi* na (Spain) P. Voisin (France) JH Wolter (Netherlands) JC Woo (Korea) T Amand, J Cibert, T Dietl, G Doehler, N Grandjean, H Kamada, ...		
Broad electrical tuning of graphene-loaded optical antennas Y Yao, MA Kats, P Genevet, N Yu, Y Song, J Kong, F Capasso CLEO: 2013		
Time-dependent population inversion gratings in laser frequency combs: supplementary material M PICCARDO, D KAZAKOV, NA RUBIN, P CHEVALIER, Y WANG, F XIE, ...		
Supplementary material for “Electrically tunable metasurface perfect absorbers for ultra-thin mid-infrared optical modulators” Y Yao, R Shankar, MA Kats, Y Song, J Kong, M Loncar, F Capasso		
Sicence 291 (2001) 1941 HB Chan, VA Aksyuk, RN Kleiman, DJ Bishop, F Capasso Crossref	5	
Dispersion Engineered Metasurfaces for Broadband Achromatic Optics WT Chen, F Capasso 2019 IEEE Photonics Conference (IPC), 1-2		
Resonant parametric generation of infrared radiation on intersubband transitions in low-dimensional... F Capasso, VV Kocharovsky, VV Kocharovsky, D Pestov		
Anisotropic nanostructures for broadband achromatic polarization-insensitive meta-lenses Z Bharwani, WT Chen, AY Zhu, J Sisler, F Capasso Photonica2019: 7th International School and conference on Photonics …		
High Performance Flat Optics F Capasso		

TITLE	CITED BY	YEAR
Computation and visualization of Casimir forces in arbitrary geometries: non-monotonic lateral forces and failure of proximity-force approximations A Rodriguez, M Ibanescu, D Iannuzzi, F Capasso, JD Joannopoulos, ...		
Epitaxial Catalyst-Free Growth of InN Nanorods on c-Plane Sapphire E Likovich, DC Bell, F Capasso		
Buried heterostructure quantum cascade lasers JF Mattias Beck, C Gmachl, F Capasso, DL Sivco, JN Baillargeon, AY Cho		
ELEVENTH INTERNATIONAL CONFERENCE ON MOLECULAR BEAM EPITAXY JS HARRIS Jr, M ILEGEMS		
Control of buckling in large nanomembranes using engineered support structures E Iwase, PC Hui, D Woolf, AW Rodriguez, SG Johnson, F Capasso, ...		
Patterning the Tips of Optical Fibers with Metallic Nanostructures Using Nanoskiving PK Kang, J Aizenberg, F Capasso		
Mode-Locked Laser Diodes and Their Monolithic Integration (Invited Paper)..... JH Marsh and L. Hou 1100611 TS Mansuripur, DR Calawa, D McNulty, M Nickerson, JP Donnelly, ...		
Negative transconductance via gating of the quantum well subbands F Beltram, F Capasso, S Luryi, SNG Chu, AY Cho		
In-situ measurement of bound states in the continuum in photonic crystal slabs S Kalchmair, R Gansch, P Genevet, T Zederbauer, D MacFarland, H Detz, ...		
Monday, September 24, 2012 F Capasso, K Fukunaga, A Shkurinov, V Andreeva, A Borodin, ...		
Modeling and design of $Al_{0.25}Ga_{0.75}As$/GaAs terahertz quantum cascade lasers with a realistic band structure E Strupiechonski, H Galinski, M Gonzalez, R Blanchard, DC Bell, ... 2017 42nd International Conference on Infrared, Millimeter, and Terahertz …	1	
Metasurfaces: From quantum cascade lasers to flat optics F Capasso 2017 42nd International Conference on Infrared, Millimeter, and Terahertz …	1	
Spectroscopic trace gas detection with pulsed quantum R Köhler, C Gmachl, F Capasso, DL Sivco, AY Cho		
Experimental and theoretical study of the gain saturation in MIR QCL V Trinite, S Ferre, L Jumpertz, G Maisons, M Carras, GMDNT Mansipur, ...		

TITLE	CITED BY	YEAR

Performance of terahertz quantum cascade lasers with single-and double-resonant-phonon depopulation
MA Belkin, RW Adams, QJ Wang, J Fan, F Capasso, SP Khanna, ...
2010 IEEE Photonics Society Winter Topicals Meeting Series (WTM)

AU THOR IN DEX
MA Alam, F Alexandre, Z Alferov, ZI Alferov, N Antoniades, S Arai, ...

PAGE AUTHOR PAGE
Y Abe, F Alexandre, R Alfano, M Al-Mudares, A Al-Omar, E Alves, ...

Supplementary Information for “Tetrahedral colloidal clusters from random parking of bidisperse spheres”
NB Schade, MC Holmes-Cerfon, ER Chen, D Aronzon, JW Collins, ...

Hess, Ortwin
F Abdullaev, J Aizpurua, G Assanto, A Belyanin, A Berger, I Brener, W Cai, ...

Supplementary material for “High responsivity mid-infrared graphene detectors with antenna-enhanced photo-carrier generation and collection”
Y Yao, R Shankar, P Rauter, Y Song, J Kong, M Loncar, F Capasso

New transport phenomena in superlattices and resonant tunneling bipolar transistors
F Capasso, K Mohammed, AY Cho, AL Hutchinson

Supporting information to Continuous wave nanowire lasing
R Röder, M Wille, S Geburt, J Rensberg, M Zhang, JG Lu, F Capasso, ...

ORTWIN HESS
P Lalanne, G Assanto, K Oh, M Segev, E Rohwer, A Belyanin, AG Ramm, ...

School of Engineering and Applied Sciences, Harvard University, USA
F CAPASSO

devices' competition between ballistic behavior and intervalley scattering, Sohd-St Electron. 22, 977 (1979) Equation (2) should read
F Capasso, RE Nahory, MA Pollack

Organizing and Program Committee
Y Arakawa, K Matsumoto, N Yokoyama, T Mizutani, K Hirakawa, ...

Conference information vii
AY Cho, DL Sivco, HM Ng, C Gmachl, A Tredicucci, AL Hutchinson, ...

102/QFAI-I Quantum Cascade Whispering Gallery Lasers
C Gmachl, J Faist, F Capasso, C Sirtori, DL Sivco, AY Cho
OSA., 101

Quantum cascade lasers: coupled quantum well optoelectronics in the 4-100/spl mu/m wavelength region

TITLE	CITED BY	YEAR
F Capasso, J Faist Conference on Lasers and Electro-Optics Europe, 161-161		
Field Error EUV Compact, OPN Centennial eBooklets		
D. Bertone, R. Fang, G. Magnetti, M. Meliga, G. Meneghini, G. Morello, G. Rossi, L. Tallone, and M. Scofet 245 Selenium Doping Effects and Low-Threshold High-Power GaInP … IK Han, SH Cho, PJS Heim, DH Woo, SH Kim, JH Song, FG Johnson, ...		
Optical Free Space Video Transmission in the midinfrared spectrum using QC-lasers R Martini, R Paiella, C Gmachl, CG Bethea, F Capasso, J Falciglia, ...		
Technical Program Chair S Charbonneau, KL EcoVu		
WA4. F Capasso, J Capmany, A Carasco-Sanz, JD Castanon, S Chang, ...		
Holographic plasmonic couplers for light with complex wavefronts P Genevet, J Lin, J Dellinger, B Cluzel, F De Fornel, MA Kats, F Capasso		
Monolithic Quantum Cascade Laser Arrays for Spectroscopy and High Power Applications C Pflügl, L Diehl, MF Witinski, F Capasso		
THE BRIGHT FUTURE OF PLASMONICS: FROM QUANTUM CASCADE LASERS TO WAVE-FRONT ENGINEERING AND QUANTUM ELECTRODYNAMICAL LEVITATION F Capasso		
JANUARY/FEBRUARY 2006 VOLUME 12 NUMBER 1 IJSQEN (ISSN 1077-260X) VS Ilchenko, AB Matsko, EE Narimanov, VA Podolskiy, SV Boriskina, ...		
High-power continuous-wave quantum-cascade lasers at room temperature F Capasso, A Lyakh, R Maulini, A Tsekoun, CKN Patel		
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Fabrication technologies for Quantum Cascade surface-emitting photonic-crystal lasers R Colombelli, K Srinivasan, M Troccoli, O Painter, C Gmachl, DM Tennant, ...		
" The bright future of nanophotonics: recent advances and challenges F Capasso		

TITLE	CITED BY	YEAR

Highly collimated multi-beam QCLs using off-axis multi-directional plasmonic lenses
R Blanchard, JP Tetienne, N Yu, C Pflügl, L Diehl, M Kats, T Edamura, ...

Invited Speakers' Biographies and Abstracts Page numbers
M Amann, Y Arakawa, D Bimberg, C Chang-Hasnain, Z Chen, SL Chuang, ...
University of California, Berkeley 15, 98

Dynamics of Photon-driven Electron Transport in InGaAs/InAlAs Quantum Cascade Lasers
H Choi, L Diehl, M Giovannini, J Faist, F Capasso, TB Norris

Evanescent-Wave Bonding Between Optical Waveguides
SG Johnson, F Capasso, JD Joannopoulos

Semiconductor Ring Lasers Emission Directionality of Semiconductor Ring Lasers: A Traveling-Wave Description..... J. Javaloyes and S. Balle 431 Quantum Cascade Lasers DFB …
C Pflügl, L Diehl, HA Zhang, RM Audet, J MacArthur, DP Bour, ...