Gregory Belenky

List of Publications by Year
in descending order

73 papers	1,125 citations	361413 20 h-index	414414 32 g-index
73 all docs	73 docs citations	73 times ranked	626 citing authors

#	Article	IF	Citations
1	Carrier lifetime measurements in short-period InAs/GaSb strained-layer superlattice structures. Applied Physics Letters, 2009, 95, .	3.3	124
2	Minority carrier lifetime in type-2 InAsâ€“GaSb strained-layer superlattices and bulk HgCdTe materials. Applied Physics Letters, 2010, 97, .	3.3	109
3	Type-I Diode Lasers for Spectral Region Above 3 Î¼m. IEEE Journal of Selected Topics in Quantum Electronics, 2011, 17, 1426-1434.	2.9	84
4	Type-I GaSb-Based Laser Diodes Operating in 3.1- to 3.3-mum Wavelength Range. IEEE Photonics Technology Letters, 2010, 22, 718-720.	2.5	43
5	Cascade Pumping of 1.9â€“3.3 Î¼m Type-I Quantum Well GaSb-Based Diode Lasers. IEEE Journal of Selected Topics in Quantum Electronics, 2017, 23, 1-8.	2.9	40
6	Cascade type-I quantum well diode lasers emitting 960â€‰mW near 3â€‰Î¼m. Applied Physics Letters, 2014, 105, 161112.	3.3	38
7	Phonon enhanced inverse population in asymmetric double quantum wells. Applied Physics Letters, 1999, 75, 3258-3260.	3.3	32
8	High-Power 2.2-mum Diode Lasers With Heavily Strained Active Region. IEEE Photonics Technology Letters, 2011, 23, 603-605.	2.5	32
9	Metamorphic InAsSb-based barrier photodetectors for the long wave infrared region. Applied Physics Letters, 2013, 103, .	3.3	30
10	Influence of complex phonon spectra on intersubband optical gain. Journal of Applied Physics, 1997, 82, 2031-2038.	2.5	29
11	GaSb based light emitting diodes with strained InGaAsSb type I quantum well active regions. Applied Physics Letters, 2008, 93, .	3.3	29
12	High power cascade diode lasers emitting near 2â€‰Î¼m. Applied Physics Letters, 2016, 108, 131109.	3.3	29
13	Metamorphic InAsSb/AlInAsSb heterostructures for optoelectronic applications. Applied Physics Letters, 2013, 102, .	3.3	28
14	Development of Bulk InAsSb Alloys and Barrier Heterostructures for Long-Wave Infrared Detectors. Journal of Electronic Materials, 2015, 44, 3360-3366.	2.2	27
15	Effect of Quantum Well Compressive Strain Above 1% On Differential Gain and Threshold Current Density in Type-I GaSb-Based Diode Lasers. IEEE Journal of Quantum Electronics, 2008, 44, 1204-1210.	1.9	26
16	Type-I quantum well cascade diode lasers emitting near 3â€‰<i>Î¼</i>m. Applied Physics Letters, 2013, 103, .	3.3	26
17	Conduction- and Valence-Band Energies in Bulk InAs1âˆ’x Sb x and TypeÂII InAs1âˆ’x Sb x /InAs Strained-Layer Superlattices. Journal of Electronic Materials, 2013, 42, 918-926.	2.2	26
18	High-Power 2.2-mum Diode Lasers With Metamorphic Arsenic-Free Heterostructures. IEEE Photonics Technology Letters, 2011, 23, 317-319.	2.5	21

#	Article	IF	Citations
19	Engineering Dirac Materials: Metamorphic InAs_{1â€“<i>x</i>}Sb_{<i>x</i>}/InAs_{1â€“<i>y</i>}Sb_{<i>y</i>} Superlattices with Ultralow Bandgap. Nano Letters, 2018, 18, 412-417.	9.1	21
20	Effects of interface phonon scattering in three-interface heterostructures. Journal of Applied Physics, 1998, 83, 4816-4822.	2.5	20
21	200 mW type I GaSb-based laser diodes operating at 3â€,Î¼m: Role of waveguide width. Applied Physics Letters, 2009, 94, 261104.	3.3	18
22	Dual wavelength GaSb based type I quantum well mid-infrared light emitting diodes. Applied Physics Letters, 2010, 96, .	3.3	18
23	Rapidly Tunable Quantum Cascade Lasers. IEEE Journal of Selected Topics in Quantum Electronics, 2015, 21, 1-9.	2.9	18
24	Widely tunable type-II interband cascade laser. Applied Physics Letters, 2006, 88, 031103.	3.3	17
25	Three stage cascade diode lasers generating 500 mW near 3.2â€‰<i>Î¼</i>m. Applied Physics Letters, 2015, 107, .	3.3	15
26	Materials design parameters for infrared device applications based on III-V semiconductors. Applied Optics, 2017, 56, B58.	2.1	15
27	Electronâ€“plasmon relaxation in quantum wells with inverted subband occupation. Applied Physics Letters, 1998, 73, 2075-2077.	3.3	14
28	GaSb-Based Type-I Quantum Well 3â€“3.5-<inline-formula> <tex-math notation="LaTeX">mu </tex-math> </inline-formula>m Cascade Light Emitting Diodes. IEEE Photonics Technology Letters, 2018, 30, 869-872.	2.5	13
29	Interband tunneling depopulation in type-II InAs/GaSb cascade laser heterostructure. Physica E: Low-Dimensional Systems and Nanostructures, 2001, 10, 576-586.	2.7	12
30	Carrier Lifetime Measurements in Long-Wave Infrared InAs/GaSb Superlattices Under Low Excitation Conditions. Journal of Electronic Materials, 2012, 41, 3027-3030.	2.2	12
31	Cascade Type-I Quantum Well GaSb-Based Diode Lasers. Photonics, 2016, 3, 27.	2.0	12
32	Narrow Ridge $lambda approx 3$ - $mu ext{m}$ Cascade Diode Lasers With Output Power Above 100 mW at Room Temperature. IEEE Photonics Technology Letters, 2015, 27, 2425-2428.	2.5	10
33	Unrelaxed bulk InAsSb with novel absorption, carrier transport, and recombination properties for MWIR and LWIR photodetectors. Proceedings of SPIE, 2012, , .	0.8	9
34	GaSb-Based Diode Lasers With Asymmetric Separate Confinement Heterostructure. IEEE Photonics Technology Letters, 2013, 25, 925-928.	2.5	8
35	Transport properties of holes in bulk InAsSb and performance of barrier long-wavelength infrared detectors. Semiconductor Science and Technology, 2014, 29, 112002.	2.0	7
36	Wavelength-Tunable, GaSb-Based, Cascaded Type-I Quantum-Well Laser Emitting Over a Range of 300 nm. IEEE Photonics Technology Letters, 2018, 30, 1941-1943.	2.5	7

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37	External cavity cascade diode lasers tunable from 3.05 to 3.25â€‰â€‰Î¼m. Optical Engineering, 2017, 57, 1.	1.0	7
38	Proposal for Electrically Tunable Quantum-Cascade Laser. IEEE Photonics Technology Letters, 2007, 19, 426-428.	2.5	6
39	The 3.0â€“3.2 Âµm wavelength range narrow ridge waveguide Sb-based semiconductor diode lasers operating up to 333 K. Semiconductor Science and Technology, 2011, 26, 095024.	2.0	6
40	Metamorphic narrow-gap InSb/InAsSb superlattices with ultra-thin layers. Applied Physics Letters, 2018, 113, .	3.3	6
41	External cavity type-I quantum well cascade diode lasers with a tuning range of 440â€‰â€‰nm near 3â€‰â€‰Î¼m. Optics Letters, 2018, 43, 4473.	3.3	6
42	High-power narrow spectrum GaSb-based DBR lasers emitting near 2.1â€‰â€‰Âµm. Optics Letters, 2021, 46, 1967.	3.3	6
43	GaSb-Based Type I Quantum-Well Light-Emitting Diode Addressable Array Operated at Wavelengths Up to 3.66 mum. IEEE Photonics Technology Letters, 2009, 21, 1087-1089.	2.5	5
44	Laterally coupled distributed feedback type-I quantum well cascade diode lasers emitting near 322â€‰â€‰Î¼m. Applied Optics, 2017, 56, H74.	1.8	5
45	Dirac energy spectrum and inverted bandgap in metamorphic InAsSb/InSb superlattices. Applied Physics Letters, 2020, 116, 032101.	3.3	5
46	Tailoring of optical phonon modes in nanoscale semiconductor structures: role of interface-optical phonons in quantum-well lasers. Physica B: Condensed Matter, 1999, 263-264, 462-465.	2.7	4
47	High-Speed Stark Wavelength Tuning of MidIR Interband Cascade Lasers. IEEE Photonics Technology Letters, 2007, 19, 360-362.	2.5	4
48	PROGRESS IN DEVELOPMENT OF ROOM TEMPERATURE CW GASB BASED DIODE LASERS FOR 2-3.5 Î¼M SPECTRAL REGION. International Journal of High Speed Electronics and Systems, 2011, 20, 43-49.	0.7	4
49	3.3â€“3.4-$mu{m m}$ Diode Lasers Based on Triple-Layer GaInAsSb Quantum Wells. IEEE Photonics Technology Letters, 2014, 26, 664-666.	2.5	4
50	Two-Step Narrow Ridge Cascade Diode Lasers Emitting Near $2~mu$ m. IEEE Photonics Technology Letters, 2017, 29, 485-488.	2.5	4
51	The effect of Auger recombination on the nonequilibrium carrier recombination rate in the InGaAsSb/AlGaAsSb quantum wells. Superlattices and Microstructures, 2017, 109, 743-749.	3.1	4
52	GaSb-based diode lasers with asymmetric coupled quantum wells. Applied Physics Letters, 2018, 113, 071106.	3.3	4
53	GaSb-Based Mid-Infrared Single Lateral Mode Lasers Fabricated by Selective Wet Etching Technique with an Etch Stop Layer. Journal of Electronic Materials, 2012, 41, 899-904.	2.2	3
54	Diffraction limited 3.15Î¼m cascade diode lasers. Semiconductor Science and Technology, 2014, 29, 115016.	2.0	3

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55	Dual-Wavelength Y-Branch DBR Lasers With 100 mW of CW Power Near 2 Î¼m. IEEE Photonics Technology Letters, 2020, 32, 1017-1020.	2.5	3
56	Electrical modulation of the LWIR absorption and refractive index in InAsSb-based strained layer superlattice heterostructures. Journal of Applied Physics, 2020, 128, 083101.	2.5	3
57	Perspective on advances in InAsSb type II superlattices grown on virtual substrates. Applied Physics Letters, 2020, 117, .	3.3	3
58	Comparison of Thermal and Atomic-Hydrogen-Assisted Oxide Desorption Methods for Regrowth of GaSb-Based Cascade Diode Lasers. Journal of Electronic Materials, 2021, 50, 5522-5528.	2.2	3
59	Electrically pumped epitaxially regrown GaSbâ€based typeâ€I quantum well surface emitting lasers with buried highâ€indexâ€contrast photonic crystal layer.. Physica Status Solidi - Rapid Research Letters, 0, , 2100425.	2.4	2
60	Short-period InAsSb-based strained layer superlattices for high quantum efficiency long-wave infrared detectors. Applied Physics Letters, 2022, 120, 141101.	3.3	2
61	Electronâ€“plasmon resonance in quantum wells with inverted subband population. Physica E: Low-Dimensional Systems and Nanostructures, 1999, 5, 196-199.	2.7	1
62	Novel Cascade Diode Lasers Based on Type-I Quantum Wells. International Journal of High Speed Electronics and Systems, 2014, 23, 1450022.	0.7	1
63	Effect of Auger recombination on non-equilibrium charge carrier concentration in InGaAsSb/AlGaAsSb quantum wells. St Petersburg Polytechnical University Journal Physics and Mathematics, 2016, 2, 287-293.	0.3	1
64	First demonstration of single-mode distributed feedback type-I GaSb cascade diode laser emitting near 2.9 Î¼m. Proceedings of SPIE, 2016, , .	0.8	1
65	3 Âµm GaSb-based Type-I Quantum-well Diode Lasers with Cascade Pumping Scheme. , 2013, , .		0
66	Dynamics of charge carrier recombination and capture in laser nanostructures with InGaAsSb/AlGaAsSb quantum wells. , 2013, , .		0
67	PROGRESS IN DEVELOPMENT OF ROOM TEMPERATURE CW GASB BASED DIODE LASERS FOR 2-3.5 Î¼M SPECTRAL REGION. , 2013, , .		0
68	Structural and Optical Characteristics of Metamorphic Bulk InAsSb. International Journal of High Speed Electronics and Systems, 2014, 23, 1450021.	0.7	0
69	Activated Auger Processes and their Wavelength Dependence in Type-I Mid-Infrared Laser Diodes. , 2019, , .		0
70	Narrow Ridge Cascade Diode Lasers with Î» >3 Âµm. , 2016, , .		0
71	Cascade diode lasers generating 2 W CW near 2 Î¼m. , 2016, , .		0
72	P-doping with beryllium of long-wavelength InAsSb. Semiconductor Science and Technology, 2020, 35, 125001.	2.0	0

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73	Electrically pumped epitaxially regrown [lambda] > 2 Âµm GaSb-based photonic crystal surface-emitting lasers. , 2022, , .		0