Seth R Bank

List of Publications by Year
in descending order

87 papers	2,275 citations	186265 28 h-index	223800 46 g-index
87 all docs	87 docs citations	87 times ranked	2407 citing authors

#	Article	IF	Citations
1	Ultrafast optical switching of terahertz metamaterials fabricated on ErAs/GaAs nanoisland superlattices. Optics Letters, 2007, 32, 1620.	3.3	250
2	Dilute nitride GaInNAs and GaInNAsSb solar cells by molecular beam epitaxy. Journal of Applied Physics, 2007, 101, 114916.	2.5	192
3	Ultrafast Dynamics of Surface Plasmons in InAs by Time-Resolved Infrared Nanospectroscopy. Nano Letters, 2014, 14, 4529-4534.	9.1	92
4	Low-noise AlInAsSb avalanche photodiode. Applied Physics Letters, 2016, 108, .	3.3	88
5	Large-Area Dry Transfer of Single-Crystalline Epitaxial Bismuth Thin Films. Nano Letters, 2016, 16, 6931-6938.	9.1	87
6	Recent Progress on 1.55-$mu{hbox {m}}$ Dilute-Nitride Lasers. IEEE Journal of Quantum Electronics, 2007, 43, 773-785.	1.9	83
7	Broadly Tunable AlInAsSb Digital Alloys Grown on GaSb. Crystal Growth and Design, 2016, 16, 3582-3586.	3.0	78
8	Dynamic thermal emission control with InAs-based plasmonic metasurfaces. Science Advances, 2018, 4, eaat3163.	10.3	74
9	Low-noise high-temperature AlInAsSb/GaSb avalanche photodiodes for 2-Î¼m applications. Nature Photonics, 2020, 14, 559-563.	31.4	73
10	Nonlinear terahertz devices utilizing semiconducting plasmonic metamaterials. Light: Science and Applications, 2016, 5, e16078-e16078.	16.6	65
11	Ultralow resistance in situ Ohmic contacts to InGaAs/InP. Applied Physics Letters, 2008, 93, 183502.	3.3	55
12	Nitrogen plasma optimization for high-quality dilute nitrides. Journal of Crystal Growth, 2005, 278, 229-233.	1.5	49
13	AlInAsSb separate absorption, charge, and multiplication avalanche photodiodes. Applied Physics Letters, 2016, 108, .	3.3	49
14	Low resistance, nonalloyed Ohmic contacts to InGaAs. Applied Physics Letters, 2007, 91, .	3.3	47
15	High-Gain InAs Avalanche Photodiodes. IEEE Journal of Quantum Electronics, 2013, 49, 154-161.	1.9	43
16	Comparison of GaNAsSb and GaNAs as quantum-well barriers for GaInNAsSb optoelectronic devices operating at 1.3â€“1.55Î¼m. Journal of Applied Physics, 2004, 96, 6375-6381.	2.5	41
17	The role of antimony on properties of widely varying GaInNAsSb compositions. Journal of Applied Physics, 2006, 99, 093504.	2.5	41
18	Impact of substrate characteristics on performance of large area plasmonic photoconductive emitters. Optics Express, 2015, 23, 32035.	3.4	40

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19	Recombination, gain, band structure, efficiency, and reliability of 1.5-Î¼m GaInNAsSb/GaAs lasers. Journal of Applied Physics, 2005, 97, 083101.	2.5	35
20	Characteristics of Al$_{x}$In 1â^'$_{x}$As $_{y}$Sb1â^' $_{y}$ (x:0.3â^'0.7) Avalanche Photodiodes. Journal of Lightwave Technology, 2017, 35, 2380-2384.	4.6	35
21	Digital Alloy InAlAs Avalanche Photodiodes. Journal of Lightwave Technology, 2018, 36, 3580-3585.	4.6	35
22	Improved optical quality of GaNAsSb in the dilute Sb limit. Journal of Applied Physics, 2005, 97, 113510.	2.5	33
23	Nearest-neighbor distributions inGa1â^'xInxNyAs1â^'yandGa1â^'xInxNyAs1â^'yâ^'zSbzthin films upon annealing. Physical Review B, 2005, 71, .	3.2	33
24	Enhanced conductivity of tunnel junctions employing semimetallic nanoparticles through variation in growth temperature and deposition. Applied Physics Letters, 2010, 96, .	3.3	33
25	Advanced Modulation and Multiple-Input Multiple-Output for Multimode Fiber Links. IEEE Photonics Technology Letters, 2011, 23, 1424-1426.	2.5	33
26	Highly Strained Mid-Infrared Type-I Diode Lasers on GaSb. IEEE Journal of Selected Topics in Quantum Electronics, 2015, 21, 1-10.	2.9	30
27	Multistep staircase avalanche photodiodes with extremely low noise and deterministic amplification. Nature Photonics, 2021, 15, 468-474.	31.4	30
28	Avalanche Photodiodes Based on the AlInAsSb Materials System. IEEE Journal of Selected Topics in Quantum Electronics, 2018, 24, 1-7.	2.9	29
29	Temperature dependence of the ionization coefficients of InAlAs and AlGaAs digital alloys. Photonics Research, 2018, 6, 794.	7.0	27
30	Vis-NIR photodetector with microsecond response enabled by 2D bismuth/Si(111) heterojunction. 2D Materials, 2021, 8, 035002.	4.4	27
31	Al_xIn_1-xAs_ySb_1-y photodiodes with low avalanche breakdown temperature dependence. Optics Express, 2017, 25, 24340.	3.4	26
32	AlInAsSb Impact Ionization Coefficients. IEEE Photonics Technology Letters, 2019, 31, 315-318.	2.5	25
33	Photo-induced terahertz near-field dynamics of graphene/InAs heterostructures. Optics Express, 2019, 27, 13611.	3.4	25
34	Quantum-confined Stark effect of GaInNAs(Sb) quantum wells at 1300â€"1600nm. Applied Physics Letters, 2004, 85, 902-904.	3.3	24
35	Effects of growth temperature on the structural and optical properties of 1.55Î¼m GaInNAsSb quantum wells grown on GaAs. Applied Physics Letters, 2005, 87, 021908.	3.3	21
36	Non-destructive measurement of photoexcited carrier transport in graphene with ultrafast grating imaging technique. Carbon, 2016, 107, 233-239.	10.3	18

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37	Overannealing effects in GaInNAs(Sb) alloys and their importance to laser applications. Applied Physics Letters, 2006, 88, 221115.	3.3	17
38	Characterization of band offsets in AlxIn1-xAsySb1-y alloys with varying Al composition. Applied Physics Letters, 2019, 115, .	3.3	17
39	Picosecond transient thermoreflectance for thermal conductivity characterization. Nanoscale and Microscale Thermophysical Engineering, 2019, 23, 211-221.	2.6	17
40	Investigation of nitrogen flow variation into a radio frequency plasma cell on plasma properties and GaInNAs grown by molecular beam epitaxy. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2005, 23, 1328.	1.6	15
41	Effects of different plasma species (atomic N, metastable N2*, and ions) on the optical properties of dilute nitride materials grown by plasma-assisted molecular-beam epitaxy. Applied Physics Letters, 2007, 91, .	3.3	14
42	Molecular-beam epitaxy growth of low-threshold cw GaInNAsSb lasers at 1.5â€‚Î¼m. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2005, 23, 1337.	1.6	13
43	Effects of strain on the optimal annealing temperature of GaInNAsSb quantum wells. Applied Physics Letters, 2006, 88, 221913.	3.3	13
44	Enhanced luminescence in GaInNAsSb quantum wells through variation of the arsenic and antimony fluxes. Applied Physics Letters, 2006, 88, 241923.	3.3	13
45	Suppression of planar defects in the molecular beam epitaxy of GaAs/ErAs/GaAs heterostructures. Applied Physics Letters, 2011, 99, 072120.	3.3	13
46	Structural and optical studies of nitrogen incorporation into GaSb-based GaInSb quantum wells. Applied Physics Letters, 2012, 100, 021103.	3.3	13
47	Al_{0.8}In_{0.2}As_{0.23}Sb_{0.77} Avalanche Photodiodes. IEEE Photonics Technology Letters, 2018, 30, 1048-1051.	2.5	13
48	High Gain, Low Dark Current Al_{0.8}In_{0.2}As_{0.23}Sb_{0.77} Avalanche Photodiodes. IEEE Photonics Technology Letters, 2019, 31, 1948-1951.	2.5	12
49	Surface segregation effects of erbium in GaAs growth and their implications for optical devices containing ErAs nanostructures. Applied Physics Letters, 2011, 98, 121108.	3.3	11
50	Temperature dependencies of annealing behaviors of GaInNAsSbâˆ•GaNAs quantum wells for long wavelength dilute-nitride lasers. Applied Physics Letters, 2007, 90, 231119.	3.3	10
51	ErAs epitaxial Ohmic contacts to InGaAs/InP. Applied Physics Letters, 2009, 94, .	3.3	10
52	Offset Coupling, Feedback, and Spatial Multiplexing in 4$,imes,$4 Incoherent-MIMO Multimode Fiber Links. Journal of Lightwave Technology, 2013, 31, 2926-2939.	4.6	10
53	Ion damage effects from negative deflector plate voltages during the plasma-assisted molecular-beam epitaxy growth of dilute nitrides. Applied Physics Letters, 2005, 86, 221902.	3.3	9
54	Impact of fiber core diameter on dispersion and multiplexing in multimode-fiber links. Optics Express, 2014, 22, 17158.	3.4	8

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55	Full band Monte Carlo simulation of <scp>AlInAsSb</scp> digital alloys. InformaÄnÃ-MateriÃ¡ly, 2020, 2, 1236-1240.	17.3	8
56	Demonstration of infrared nBn photodetectors based on the AlInAsSb digital alloy materials system. Applied Physics Letters, 2021, 119, .	3.3	7
57	High-performance GaInNAsSb/GaAs lasers at 1.5 um. , 2005, , .		6
58	The carbon state in dilute germanium carbides. Journal of Applied Physics, 2021, 129, 055701.	2.5	6
59	Review of lateral epitaxial overgrowth of buried dielectric structures for electronics and photonics. Progress in Quantum Electronics, 2021, 77, 100316.	7.0	6
60	Composition-dependent structural transition in epitaxial <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>Bi</mml:mi><mml:mrow><mml:mn>1</mml thin films on Si(111). Physical Review Materials, 2019, 3, .	2.4	6
61	Al_{0.3}InAsSb/Al_{0.7}InAsSb Digital Alloy <i>nBn</i> Photodetectors. Journal of Lightwave Technology, 2022, 40, 113-120.	4.6	5
62	Quantum confinement of coherent acoustic phonons in transferred single-crystalline bismuth nanofilms. Applied Physics Letters, 2020, 116, .	3.3	4
63	Room-temperature bandwidth of 2-Î¼m AlInAsSb avalanche photodiodes. Optics Express, 2021, 29, 38939.	3.4	4
64	Analysis of Laser and Detector Placement in Incoherent MIMO Multimode Fiber Systems. Journal of Optical Communications and Networking, 2014, 6, 371.	4.8	3
65	In-plane Thermal Conductivity Measurement with Nanosecond Grating Imaging Technique. Nanoscale and Microscale Thermophysical Engineering, 2018, 22, 83-96.	2.6	3
66	Comparison between Grating Imaging and Transient Grating Techniques on Measuring Carrier Diffusion in Semiconductor. Nanoscale and Microscale Thermophysical Engineering, 2018, 22, 348-359.	2.6	3
67	A Study of Secondâ€Order Susceptibility in Digital Alloyâ€Grown InAs/AlSb Multiple Quantum Wells. Advanced Optical Materials, 0, , 2102845.	7.3	3
68	Role of ion damage on unintentional Ca incorporation during the plasma-assisted molecular-beam epitaxy growth of dilute nitrides using N[sub 2]âˆ•Ar source gas mixtures. Journal of Vacuum Science & Technology B, 2008, 26, 1058.	1.3	2
69	Operation stability study of AlInAsSb avalanche photodiodes. , 2017, , .		2
70	Digital Alloy-Based Avalanche Photodiodes. , 2018, , .		2
71	Starkâ€Localizationâ€Limited Franzâ€“Keldysh Effect in InAlAs Digital Alloys. Physica Status Solidi - Rapid Research Letters, 2019, 13, 1900272.	2.4	2
72	Comparison and analysis of Al0.7InAsSb avalanche photodiodes with different background doping polarities. Applied Physics Letters, 2021, 119, .	3.3	2

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73	Narrow bandgap Al_{0.15}In_{0.85}As_{0.77}Sb_{0.23} for mid-infrared photodetectors. Optics Express, 2022, 30, 27285.	3.4	2
74	AUnAsSb separate absorption, charge, and multiplication avalanche photodiodes. , 2016, , .		1
75	True hero of the trade: On the critical contributions of Art Gossard to modern device technology. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2021, 39, 020804.	2.1	1
76	Enhancing data rates in graded-index multimode fibers with offset coupling and multiplexing. , 2013, , .		1
77	Low-Noise Digital Alloy Avalanche Photodiodes. , 2018, , .		1
78	Infrared Al_{0.15}InAsSb Digital Alloy <i>Nbn</i> Photodetectors. Journal of Lightwave Technology, 2022, 40, 3855-3863.	4.6	1
79	Active metamaterials: A novel approach to manipulate terahertz waves. , 2007, , .		0
80	AlxIn1-xAsySb1-y Separate Absorption, Charge, and Multiplication Avalanche Photodiodes for 2-Î¼m Detection. , 2019, , .		0
81	2-Î¼m-Compatible AlInAsSb Avalanche Photodiodes. , 2020, , .		0
82	Low-noise, digital-alloy avalanche photodiodes. , 2018, , .		0
83	Temperature dependence of the ionization coefficients of InAlAs and AlGaAs digital alloy: erratum. Photonics Research, 2019, 7, 273.	7.0	0
84	Cryogenic Noise of Staircase Avalanche Photodiodes. , 2021, , .		0
85	AlxIn1-xAsySb1-y digital alloy nBn photodetectors. , 2021, , .		0
86	Digital Alloy Staircase Avalanche Photodetectors With Tunneling-Enhanced Gain. IEEE Journal of Selected Topics in Quantum Electronics, 2022, 28, 1-13.	2.9	0
87	Ultrafast broadband tuning of InAs THz plasmonic arrays. , 2021, , .		0