

Russell D Dupuis

List of Publications by Year in descending order

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83
papers

2,508
citations

159358

30
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214527

47
g-index

85
all docs

85
docs citations

85
times ranked

1856
citing authors

#	ARTICLE	IF	CITATIONS
1	Thermal characterization of gallium nitride p-i-n diodes. Applied Physics Letters, 2018, 112, .	1.5	42
2	Revealing microstructure and dislocation behavior in BAlN/AlGaN heterostructures. Applied Physics Express, 2018, 11, 011001.	1.1	8
3	100-Å-thick single-phase wurtzite BAlN films with boron contents over 10%. Physica Status Solidi (B): Basic Research, 2017, 254, 1600699.	0.7	35
4	Sub 250-nm deep-UV AlGaN/AlN distributed Bragg reflectors. Applied Physics Letters, 2017, 110, .	1.5	29
5	Influence of TMAI preflow on AlN epitaxy on sapphire. Applied Physics Letters, 2017, 110, 192106.	1.5	22
6	Band alignment of B _{0.14} Al _{0.86} N/Al _{0.7} Ga _{0.3} N heterojunction. Applied Physics Letters, 2017, 111, .	1.5	31
7	Crystal structure and composition of BAlN thin films: Effect of boron concentration in the gas flow. Journal of Crystal Growth, 2017, 475, 334-340.	0.7	17
8	Structural properties, crystal quality and growth modes of MOCVD-grown AlN with TMAI pretreatment of sapphire substrate. Journal Physics D: Applied Physics, 2017, 50, 395101.	1.3	13
9	Strain management of AlGaN-based distributed Bragg reflectors with GaN interlayer grown by metalorganic chemical vapor deposition. Applied Physics Letters, 2016, 109, .	1.5	14
10	Electrically conducting n-type AlGaN/GaN distributed Bragg reflectors grown by metalorganic chemical vapor deposition. Journal of Crystal Growth, 2016, 443, 81-84.	0.7	14
11	Onset of deep UV surface stimulated emission from AlGaN multiple quantum wells. , 2016, , .		0
12	Growth of single-phase wurtzite BAlN with 7.2%-B contents. , 2016, , .		0
13	Lattice vibration modes in type-II superlattice InAs/GaSb with no-common-atom interface and overlapping vibration spectra. Physical Review B, 2015, 91, .	1.1	8
14	Radiative recombination in GaN/InGaN heterojunction bipolar transistors. Applied Physics Letters, 2015, 107, 242104.	1.5	2
15	Effect of Group-III precursors on unintentional gallium incorporation during epitaxial growth of InAlN layers by metalorganic chemical vapor deposition. Journal of Applied Physics, 2015, 118, .	1.1	5
16	Onset of surface stimulated emission at 260-nm from AlGaN multiple quantum wells. Applied Physics Letters, 2015, 107, .	1.5	24
17	Growth of high-quality AlN layers on sapphire substrates at relatively low temperatures by metalorganic chemical vapor deposition. Physica Status Solidi (B): Basic Research, 2015, 252, 1089-1095.	0.7	46
18	Temperature dependence of the crystalline quality of AlN layer grown on sapphire substrates by metalorganic chemical vapor deposition. Journal of Crystal Growth, 2015, 414, 76-80.	0.7	38

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19	Demonstration of transverse-magnetic deep-ultraviolet stimulated emission from AlGaIn multiple-quantum-well lasers grown on a sapphire substrate. Applied Physics Letters, 2015, 106, .	1.5	53
20	Inverse-Tapered p-Waveguide for Vertical Hole Transport in High-[Al] AlGaIn Emitters. IEEE Photonics Technology Letters, 2015, 27, 1768-1771.	1.3	9
21	Temperature-Dependent Characteristics of GaIn Homojunction Rectifiers. IEEE Transactions on Electron Devices, 2015, 62, 2679-2683.	1.6	19
22	Low-threshold stimulated emission at 249nm and 256nm from AlGaIn-based multiple-quantum-well lasers grown on sapphire substrates. Applied Physics Letters, 2014, 105, .	1.5	78
23	Optically pumped AlGaIn quantum-well lasers at sub-250 nm grown by MOCVD on AlN substrates. Physica Status Solidi C: Current Topics in Solid State Physics, 2014, 11, 258-260.	0.8	13
24	Origins of unintentional incorporation of gallium in InAlN layers during epitaxial growth, part II: Effects of underlying layers and growth chamber conditions. Journal of Crystal Growth, 2014, 388, 143-149.	0.7	44
25	AlGaIn-Based Vertical Injection Laser Diodes Using Inverse Tapered p-Waveguide for Efficient Hole Transport. IEEE Journal of Quantum Electronics, 2014, 50, 166-173.	1.0	14
26	Origins of unintentional incorporation of gallium in AlInN layers during epitaxial growth, part I: Growth of AlInN on AlN and effects of prior coating. Journal of Crystal Growth, 2014, 388, 137-142.	0.7	45
27	Deep-ultraviolet lasing at 243nm from photo-pumped AlGaIn/AlN heterostructure on AlN substrate. Applied Physics Letters, 2013, 102, .	1.5	77
28	Sub-250nm low-threshold deep-ultraviolet AlGaIn-based heterostructure laser employing HfO ₂ /SiO ₂ dielectric mirrors. Applied Physics Letters, 2013, 103, .	1.5	36
29	The effect of InGaIn underlayers on the electronic and optical properties of InGaIn/GaIn quantum wells. Applied Physics Letters, 2013, 102, .	1.5	19
30	III-N High-Power Bipolar Transistors. ECS Transactions, 2013, 58, 261-267.	0.3	7
31	Working toward high-power GaIn/InGaIn heterojunction bipolar transistors. Semiconductor Science and Technology, 2013, 28, 074025.	1.0	17
32	Hydrogen-related, deeply bound excitons in Mg-doped GaIn films. Applied Physics Letters, 2013, 103, 082103.	1.5	12
33	Distributed Bragg reflectors based on diluted boron-based BAlN alloys for deep ultraviolet optoelectronic applications. Applied Physics Letters, 2012, 100, 051101.	1.5	44
34	Design and Analysis of 250-nm AlInN Laser Diodes on AlN Substrates Using Tapered Electron Blocking Layers. IEEE Journal of Quantum Electronics, 2012, 48, 703-711.	1.0	34
35	GaIn/InGaIn Heterojunction Bipolar Transistors With f_{T} > 5 GHz. IEEE Electron Device Letters, 2011, 32, 1065-1067.	2.2	8
36	Optical Properties of Strain-balanced InAs ^{1-x} Sb _x Type-II Superlattices. , 2011, , .		3

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37	Traveling dipole domains in AlGa _N /Ga _N heterostructures and the direct generation of millimeter-wave oscillations. Physica Status Solidi C: Current Topics in Solid State Physics, 2011, 8, 2285-2287.	0.8	4
38	Structural and optical characterization of type-II InAs/InAs _{1-x} Sb _x superlattices grown by metalorganic chemical vapor deposition. Applied Physics Letters, 2011, 99, .	1.5	25
39	Doping-dependent device functionality of InP/InAlGaAs long-wavelength light-emitting transistors. Applied Physics Letters, 2011, 99, 103502.	1.5	2
40	PERFORMANCE ENHANCEMENT OF InGa _N -BASED LASER DIODES USING A STEP-GRADED Al _x Ga _{1-x} N _{1-x} ELECTRON BLOCKING LAYER. International Journal of High Speed Electronics and Systems, 2011, 20, 515-520.	0.3	3
41	High-Current-Gain Direct-Growth GaN/InGa _N Double Heterojunction Bipolar Transistors. IEEE Transactions on Electron Devices, 2010, 57, 2964-2969.	1.6	22
42	Threshold voltage control of InAlN/GaN heterostructure field-effect transistors for depletion- and enhancement-mode operation. Applied Physics Letters, 2010, 96, .	1.5	24
43	Improvement of peak quantum efficiency and efficiency droop in III-nitride visible light-emitting diodes with an InAlN electron-blocking layer. Applied Physics Letters, 2010, 96, .	1.5	183
44	Improvement of quantum efficiency by employing active-layer-friendly lattice-matched InAlN electron blocking layer in green light-emitting diodes. Applied Physics Letters, 2010, 96, .	1.5	89
45	Erratic dislocations within funnel defects in AlN templates for AlGa _N epitaxial layer growth. Applied Physics Letters, 2009, 94, 171912.	1.5	6
46	Geiger mode simulation of Ga _N homojunction avalanche photodetectors. Physica Status Solidi C: Current Topics in Solid State Physics, 2009, 6, S662.	0.8	4
47	Device performance of light emitting transistors with C-doped and Zn-doped base layers. , 2009, , .		1
48	Surface treatment on the growth surface of semi-insulating Ga _N bulk substrate for III-nitride heterostructure field-effect transistors. Physica Status Solidi C: Current Topics in Solid State Physics, 2008, 5, 1849-1851.	0.8	7
49	Barrier effect on hole transport and carrier distribution in InGa _N -Ga _N multiple quantum well visible light-emitting diodes. Applied Physics Letters, 2008, 93, .	1.5	129
50	Control of quantum-confined Stark effect in InGa _N -Ga _N multiple quantum well active region by p-type layer for III-nitride-based visible light emitting diodes. Applied Physics Letters, 2008, 92, .	1.5	60
51	Bandgap bowing in BGaN thin films. Applied Physics Letters, 2008, 93, .	1.5	51
52	Transistor laser with emission wavelength at 1544nm. Applied Physics Letters, 2008, 93, 021111.	1.5	29
53	Growth of Vertically Aligned ZnO Nanobelt Arrays on Ga _N Substrate. Journal of Physical Chemistry C, 2008, 112, 18935-18937.	1.5	35
54	III-nitride heterostructure field-effect transistors grown on semi-insulating Ga _N substrate without regrowth interface charge. Applied Physics Letters, 2008, 92, .	1.5	20

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55	Mapping the electrostatic potential across AlGaIn ^x AlN ^y GaN heterostructures using electron holography. Applied Physics Letters, 2007, 90, 032101.	1.5	26
56	Effect of internal electrostatic fields in InGaIn quantum wells on the properties of green light emitting diodes. Applied Physics Letters, 2007, 91, .	1.5	25
57	Experimental demonstration of the polarization-dependent photon-mediated carrier redistribution in tunneling injection InP quantum-dot lasers with external-grating feedback. Applied Physics Letters, 2007, 90, 211102.	1.5	4
58	Modulation of high current gain ($\beta > 49$) light-emitting InGaIn-GaN heterojunction bipolar transistors. Applied Physics Letters, 2007, 91, 232114.	1.5	15
59	Comparison of GaN and In _{0.04} Ga _{0.96} N p-Layers on the Electrical and Electroluminescence Properties of Green Light Emitting Diodes. Journal of Electronic Materials, 2007, 36, 426-430.	1.0	16
60	Effect of thin strain-compensated Al _{0.6} Ga _{0.4} P layers on the growth of multiple-stacked InP/In _{0.5} Al _{0.3} Ga _{0.2} P quantum dots. Journal of Electronic Materials, 2006, 35, 701-704.	1.0	2
61	Metalorganic chemical vapor deposition growth and characterization of InGaP/GaAs superlattices. Journal of Electronic Materials, 2006, 35, 705-710.	1.0	13
62	Visible spectrum light-emitting transistors. Applied Physics Letters, 2006, 88, 012108.	1.5	7
63	Graded-base InGaIn-GaN heterojunction bipolar light-emitting transistors. Applied Physics Letters, 2006, 89, 082108.	1.5	21
64	MOCVD growth of InGaIn:Mg for GaN/InGaIn HBTs. Physica Status Solidi C: Current Topics in Solid State Physics, 2005, 2, 2157-2160.	0.8	1
65	III-N Epitaxial Growth for Nitride Devices. Materials Research Society Symposia Proceedings, 2005, 892, 97.	0.1	0
66	Epitaxial tilting of GaN grown on vicinal surfaces of sapphire. Applied Physics Letters, 2005, 86, 211916.	1.5	39
67	Structural defects and luminescence features in heteroepitaxial GaN grown on on-axis and misoriented substrates. Journal of Applied Physics, 2005, 97, 116101.	1.1	16
68	Relationship of basal plane and prismatic stacking faults in GaN to low temperature photoluminescence peaks at ≈ 3.4 eV and ≈ 3.2 eV. Materials Research Society Symposia Proceedings, 2004, 831, 200.	0.1	1
69	Vanadium-based ohmic contacts to n-type Al _{0.6} Ga _{0.4} N. Journal of Electronic Materials, 2004, 33, 418-421.	1.0	27
70	Ohmic contacts to p-type Al _{0.45} Ga _{0.55} N. Journal of Applied Physics, 2004, 96, 7325-7331.	1.1	13
71	Temperature dependence of threshold current for quantum well Al _x Ga _{1-x} As/GaAs heterostructure laser diodes. Applied Physics Letters, 1980, 36, 19-21.	1.5	117
72	Phonon-assisted recombination and stimulated emission in quantum well Al _x Ga _{1-x} As/GaAs heterostructures. Journal of Applied Physics, 1980, 51, 1328-1337.	1.1	73

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73	Electrical properties of polycrystalline GaAs films. Journal of Applied Physics, 1980, 51, 3794-3800.	1.1	47
74	700-h continuous room-temperature operation of Al _x Ga _{1-x} As/GaAs heterostructure lasers grown by metalorganic chemical vapor deposition. Applied Physics Letters, 1979, 35, 311-314.	1.5	27
75	Low-temperature operation of multiple quantum-well Al _x Ga _{1-x} As/GaAs heterostructure lasers grown by metalorganic chemical vapor deposition. Journal of Applied Physics, 1979, 50, 5830-5834.	1.1	19
76	Phonon-sideband MO-CVD quantum-well Al _x Ga _{1-x} As/GaAs heterostructure laser. Applied Physics Letters, 1979, 34, 502-505.	1.5	73
77	Tunnel injection and phonon-assisted recombination in multiple quantum-well Al _x Ga _{1-x} As/GaAs heterostructure lasers grown by metalorganic chemical vapor deposition. Journal of Applied Physics, 1979, 50, 5835-5840.	1.1	30
78	Al _{0.5} Ga _{0.5} As/GaAs heterojunction phototransistors grown by metalorganic chemical vapor deposition. Applied Physics Letters, 1979, 34, 562-564.	1.5	56
79	Bandfilling in metalorganic chemical vapor deposited Al _x Ga _{1-x} As/GaAs-Al _x Ga _{1-x} As quantum-well heterostructure lasers. Journal of Applied Physics, 1978, 49, 5392-5397.	1.1	39
80	Room-temperature operation of distributed-Bragg-confinement Ga _{1-x} Al _x As/GaAs lasers grown by metalorganic chemical vapor deposition. Applied Physics Letters, 1978, 33, 68-69.	1.5	29
81	Room-temperature continuous operation of photopumped MO-CVD Al _x Ga _{1-x} As/GaAs-Al _x Ga _{1-x} As quantum-well lasers. Applied Physics Letters, 1978, 33, 73-75.	1.5	64
82	Low-threshold continuous laser operation (300-337%K) of multilayer MO-CVD Al _x Ga _{1-x} As/GaAs quantum-well heterostructures. Applied Physics Letters, 1978, 33, 737-739.	1.5	57
83	High-efficiency GaAlAs/GaAs heterostructure solar cells grown by metalorganic chemical vapor deposition. Applied Physics Letters, 1977, 31, 201-203.	1.5	77