Debdeep Jena

List of Publications by Year
in descending order

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319 papers	14,259 citations	19636 61 h-index	24961 109 g-index
323 all docs	323 docs citations	323 times ranked	12561 citing authors

#	Article	IF	Citations
1	Two-dimensional semiconductors for transistors. Nature Reviews Materials, 2016, 1, .	23.3	1,020
2	Ultrawideâ€Bandgap Semiconductors: Research Opportunities and Challenges. Advanced Electronic Materials, 2018, 4, 1600501.	2.6	839
3	Polarization-Induced Hole Doping in Wideâ€“Band-Gap Uniaxial Semiconductor Heterostructures. Science, 2010, 327, 60-64.	6.0	662
4	Enhancement of Carrier Mobility in Semiconductor Nanostructures by Dielectric Engineering. Physical Review Letters, 2007, 98, 136805.	2.9	382
5	Esaki Diodes in van der Waals Heterojunctions with Broken-Gap Energy Band Alignment. Nano Letters, 2015, 15, 5791-5798.	4.5	319
6	Intrinsic electron mobility limits in Î²-Ga2O3. Applied Physics Letters, 2016, 109, .	1.5	299
7	InAlN/AlN/GaN HEMTs With Regrown Ohmic Contacts and f_{T} of 370 GHz. IEEE Electron Device Letters, 2012, 33, 988-990.	2.2	292
8	High-voltage field effect transistors with wide-bandgap Î²-Ga2O3 nanomembranes. Applied Physics Letters, 2014, 104, .	1.5	288
9	High-mobility window for two-dimensional electron gases at ultrathin AlNâ•GaN heterojunctions. Applied Physics Letters, 2007, 90, 182112.	1.5	242
10	Enhancement-Mode Ga₂O₃ Vertical Transistors With Breakdown Voltage >1 kV. IEEE Electron Device Letters, 2018, 39, 869-872.	2.2	241
11	Transistors with chemically synthesized layered semiconductor WS2 exhibiting 105 room temperature modulation and ambipolar behavior. Applied Physics Letters, 2012, 101, .	1.5	237
12	Dislocation scattering in a two-dimensional electron gas. Applied Physics Letters, 2000, 76, 1707-1709.	1.5	217
13	Graphene Nanoribbon Tunnel Transistors. IEEE Electron Device Letters, 2008, 29, 1344-1346.	2.2	193
14	Field-Plated Ga₂O₃ Trench Schottky Barrier Diodes With a BV²/$R_{ext{on,sp}}$ of up to 0.95 GW/cm². IEEE Electron Device Letters, 2020, 41, 107-110.	2.2	184
15	Unique prospects for graphene-based terahertz modulators. Applied Physics Letters, 2011, 99, .	1.5	183
16	Determination of graphene work function and graphene-insulator-semiconductor band alignment by internal photoemission spectroscopy. Applied Physics Letters, 2012, 101, .	1.5	166
17	Realization of wide electron slabs by polarization bulk doping in graded IIIâ€“V nitride semiconductor alloys. Applied Physics Letters, 2002, 81, 4395-4397.	1.5	163
18	1.9-kV AlGaN/GaN Lateral Schottky Barrier Diodes on Silicon. IEEE Electron Device Letters, 2015, 36, 375-377.	2.2	160

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19	1.7-kV and 0.55-$ext{m}Omega cdot ext {cm}^{2}$ GaN p-n Diodes on Bulk GaN Substrates With Avalanche Capability. IEEE Electron Device Letters, 2016, 37, 161-164.	2.2	153
20	Near unity ideality factor and Shockley-Read-Hall lifetime in GaN-on-GaN p-n diodes with avalanche breakdown. Applied Physics Letters, 2015, 107, .	1.5	146
21	Single-particle tunneling in doped graphene-insulator-graphene junctions. Journal of Applied Physics, 2012, 111, .	1.1	144
22	AlN/GaN Insulated-Gate HEMTs With 2.3 A/mm Output Current and 480 mS/mm Transconductance. IEEE Electron Device Letters, 2008, 29, 661-664.	2.2	141
23	Gate-Recessed Enhancement-Mode InAlN/AlN/GaN HEMTs With 1.9-A/mm Drain Current Density and 800-mS/mm Transconductance. IEEE Electron Device Letters, 2010, 31, 1383-1385.	2.2	134
24	Adsorption-controlled growth of La-doped BaSnO3 by molecular-beam epitaxy. APL Materials, 2017, 5, .	2.2	131
25	Breakdown mechanism in 1 kA/cm2 and 960 V E-mode Î²-Ga2O3 vertical transistors. Applied Physics Letters, 2018, 113, .	1.5	128
26	Polarization-Induced Zener Tunnel Junctions in Wide-Band-Gap Heterostructures. Physical Review Letters, 2009, 103, 026801.	2.9	123
27	MBE-Regrown Ohmics in InAlN HEMTs With a Regrowth Interface Resistance of 0.05 $Omegacdothbox{mm}$. IEEE Electron Device Letters, 2012, 33, 525-527.	2.2	118
28	GaN/NbN epitaxial semiconductor/superconductor heterostructures. Nature, 2018, 555, 183-189.	13.7	116
29	Intimate contacts. Nature Materials, 2014, 13, 1076-1078.	13.3	107
30	A polarization-induced 2D hole gas in undoped gallium nitride quantum wells. Science, 2019, 365, 1454-1457.	6.0	106
31	Two-Dimensional Heterojunction Interlayer Tunneling Field Effect Transistors (Thin-TFETs). IEEE Journal of the Electron Devices Society, 2015, 3, 200-207.	1.2	105
32	MBE-grown 232â€“270â€‰nm deep-UV LEDs using monolayer thin binary GaN/AlN quantum heterostructures. Applied Physics Letters, 2017, 110, .	1.5	105
33	Efficient terahertz electro-absorption modulation employing graphene plasmonic structures. Applied Physics Letters, 2012, 101, .	1.5	103
34	Effect of Optical Phonon Scattering on the Performance of GaN Transistors. IEEE Electron Device Letters, 2012, 33, 709-711.	2.2	99
35	1230â€‰V Î²-Ga2O3 trench Schottky barrier diodes with an ultra-low leakage current of <1 Î¼A/cm2. Applied Physics Letters, 2018, 113, .	1.5	94
36	SymFET: A Proposed Symmetric Graphene Tunneling Field-Effect Transistor. IEEE Transactions on Electron Devices, 2013, 60, 951-957.	1.6	93

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37	Intrinsic Mobility Limiting Mechanisms in Lanthanum-Doped Strontium Titanate. Physical Review Letters, 2014, 112, .	2.9	90
38	High-performance photocurrent generation from two-dimensional WS2 field-effect transistors. Applied Physics Letters, 2014, 104, .	1.5	88
39	AlGaN/GaN polarization-doped field-effect transistor for microwave power applications. Applied Physics Letters, 2004, 84, 1591-1593.	1.5	87
40	Near-ideal reverse leakage current and practical maximum electric field in Î²-Ga2O3 Schottky barrier diodes. Applied Physics Letters, 2020, 116, .	1.5	86
41	Controllable growth of layered selenide and telluride heterostructures and superlattices using molecular beam epitaxy. Journal of Materials Research, 2016, 31, 900-910.	1.2	85
42	Polarizationâ€engineering in group IIIâ€nitride heterostructures: New opportunities for device design. Physica Status Solidi (A) Applications and Materials Science, 2011, 208, 1511-1516.	0.8	83
43	High Breakdown Voltage in RF AlN/GaN/AlN Quantum Well HEMTs. IEEE Electron Device Letters, 2019, 40, 1293-1296.	2.2	79
44	Tunnel-injection quantum dot deep-ultraviolet light-emitting diodes with polarization-induced doping in III-nitride heterostructures. Applied Physics Letters, 2014, 104, 021105.	1.5	77
45	Layered transition metal dichalcogenides: promising near-lattice-matched substrates for GaN growth. Scientific Reports, 2016, 6, 23708.	1.6	76
46	Design and Realization of GaN Trench Junction-Barrier-Schottky-Diodes. IEEE Transactions on Electron Devices, 2017, 64, 1635-1641.	1.6	76
47	Hole mobility of strained GaN from first principles. Physical Review B, 2019, 100, .	1.1	75
48	Thermal conductivity of crystalline AlN and the influence of atomic-scale defects. Journal of Applied Physics, 2019, 126, .	1.1	75
49	Hot Electron Transistor with van der Waals Base-Collector Heterojunction and High-Performance GaN Emitter. Nano Letters, 2017, 17, 3089-3096.	4.5	74
50	Polarization-Engineered III-Nitride Heterojunction Tunnel Field-Effect Transistors. IEEE Journal on Exploratory Solid-State Computational Devices and Circuits, 2015, 1, 28-34.	1.1	73
51	Deep ultraviolet emission from ultra-thin GaN/AlN heterostructures. Applied Physics Letters, 2016, 109, .	1.5	73
52	Prospects for Wide Bandgap and Ultrawide Bandgap CMOS Devices. IEEE Transactions on Electron Devices, 2020, 67, 4010-4020.	1.6	73
53	Graphene nanoribbon field-effect transistors on wafer-scale epitaxial graphene on SiC substrates. APL Materials, 2015, 3, .	2.2	72
54	220-GHz Quaternary Barrier InAlGaN/AlN/GaN HEMTs. IEEE Electron Device Letters, 2011, 32, 1215-1217.	2.2	71

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55	Crystal orientation dictated epitaxy of ultrawide-bandgap 5.4- to 8.6-eV Î±-(AlGa) ₂ O ₃ on m-plane sapphire. Science Advances, 2021, 7, .	4.7	71
56	The new nitrides: layered, ferroelectric, magnetic, metallic and superconducting nitrides to boost the GaN photonics and electronics eco-system. Japanese Journal of Applied Physics, 2019, 58, SC0801.	0.8	69
57	GaN HEMTs on Si With Regrown Contacts and Cutoff/Maximum Oscillation Frequencies of 250/204 GHz. IEEE Electron Device Letters, 2020, 41, 689-692.	2.2	69
58	Hot phonon effect on electron velocity saturation in GaN: A second look. Applied Physics Letters, 2007, 91, .	1.5	67
59	Ultrascaled InAlN/GaN High Electron Mobility Transistors with Cutoff Frequency of 400 GHz. Japanese Journal of Applied Physics, 2013, 52, 08JN14.	0.8	66
60	Enhancement-Mode InAlN/AlN/GaN HEMTs With $ hbox{10}^{-12} hbox{A/mm}$ Leakage Current and $ hbox{10}^{12}$ on/off Current Ratio. IEEE Electron Device Letters, 2011, 32, 309-311.	2.2	65
61	N-polar III-nitride quantum well light-emitting diodes with polarization-induced doping. Applied Physics Letters, 2011, 99, .	1.5	63
62	Route to High Hole Mobility in GaN via Reversal of Crystal-Field Splitting. Physical Review Letters, 2019, 123, 096602.	2.9	63
63	Gate-Recessed E-mode p-Channel HFET With High On-Current Based on GaN/AlN 2D Hole Gas. IEEE Electron Device Letters, 2018, 39, 1848-1851.	2.2	62
64	1.1-kV Vertical GaN p-n Diodes With p-GaN Regrown by Molecular Beam Epitaxy. IEEE Electron Device Letters, 2017, 38, 1071-1074.	2.2	60
65	Quaternary Barrier InAlGaN HEMTs With f_{T}/f_{max} of 230/300 GHz. IEEE Electron Device Letters, 2013, 34, 378-380.	2.2	58
66	Polarization effects on gate leakage in InAlN/AlN/GaN high-electron-mobility transistors. Applied Physics Letters, 2012, 101, .	1.5	55
67	Transport properties of graphene nanoribbon transistors on chemical-vapor-deposition grown wafer-scale graphene. Applied Physics Letters, 2012, 100, .	1.5	55
68	Polarization-Induced GaN-on-Insulator E/D Mode p-Channel Heterostructure FETs. IEEE Electron Device Letters, 2013, 34, 852-854.	2.2	55
69	234â€‰nm and 246â€‰nm AlN-Delta-GaN quantum well deep ultraviolet light-emitting diodes. Applied Physics Letters, 2018, 112, .	1.5	55
70	Deep-UV emission at 219â€‰nm from ultrathin MBE GaN/AlN quantum heterostructures. Applied Physics Letters, 2017, 111, .	1.5	54
71	High breakdown single-crystal GaN p-n diodes by molecular beam epitaxy. Applied Physics Letters, 2015, 107, .	1.5	53
72	CdSe nanowires with illumination-enhanced conductivity: Induced dipoles, dielectrophoretic assembly, and field-sensitive emission. Journal of Applied Physics, 2007, 101, 073704.	1.1	52

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73	High-performance few-layer-MoS<inf>2</inf> field-effect-transistor with record low contact-resistance. , 2013, , .		52
74	Effect of scattering by strain fields surrounding edge dislocations on electron transport in two-dimensional electron gases. Applied Physics Letters, 2002, 80, 64-66.	1.5	51
75	Room temperature microwave oscillations in GaN/AlN resonant tunneling diodes with peak current densities up to 220 kA/cm2. Applied Physics Letters, 2018, 112, .	1.5	51
76	Fin-channel orientation dependence of forward conduction in kV-class Ga₂O₃ trench Schottky barrier diodes. Applied Physics Express, 2019, 12, 061007.	1.1	50
77	Single and multi-fin normally-off Ga₂O₃ vertical transistors with a breakdown voltage over 2.6 kV. , 2019, , .		50
78	Green luminescence of InGaN nanowires grown on silicon substrates by molecular beam epitaxy. Journal of Applied Physics, 2011, 109, .	1.1	48
79	Strained GaN quantum-well FETs on single crystal bulk AlN substrates. Applied Physics Letters, 2017, 110, .	1.5	48
80	Carrier transport and confinement in polarization-induced three-dimensional electron slabs: Importance of alloy scattering in AlGaN. Applied Physics Letters, 2006, 88, 042109.	1.5	47
81	Threshold Voltage Control in $hbox{Al}_{0.72} hbox{Ga}_{0.28}hbox{N/AlN/GaN}$ HEMTs by Work-Function Engineering. IEEE Electron Device Letters, 2010, 31, 954-956.	2.2	47
82	Conduction band offset at the InNâ•GaN heterojunction. Applied Physics Letters, 2007, 91, .	1.5	46
83	Inductively-coupled-plasma reactive ion etching of single-crystal Î²-Ga₂O₃. Japanese Journal of Applied Physics, 2017, 56, 030304.	0.8	46
84	Development of GaN Vertical Trench-MOSFET With MBE Regrown Channel. IEEE Transactions on Electron Devices, 2018, 65, 2558-2564.	1.6	46
85	Physics and polarization characteristics of 298â€‰nm AlN-delta-GaN quantum well ultraviolet light-emitting diodes. Applied Physics Letters, 2017, 110, .	1.5	44
86	InGaN channel high electron mobility transistor structures grown by metal organic chemical vapor deposition. Applied Physics Letters, 2012, 100, .	1.5	42
87	Ultra-low resistance ohmic contacts to GaN with high Si doping concentrations grown by molecular beam epitaxy. Applied Physics Letters, 2012, 101, .	1.5	42
88	Two-dimensional electron gases in strained quantum wells for AlN/GaN/AlN double heterostructure field-effect transistors on AlN. Applied Physics Letters, 2014, 104, .	1.5	42
89	New Tunneling Features in Polar III-Nitride Resonant Tunneling Diodes. Physical Review X, 2017, 7, .	2.8	42
90	Next generation electronics on the ultrawide-bandgap aluminum nitride platform. Semiconductor Science and Technology, 2021, 36, 044001.	1.0	42

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91	Very low sheet resistance and Shubnikovâ€“de-Haas oscillations in two-dimensional electron gases at ultrathin binary AlNâˆ•GaN heterojunctions. Applied Physics Letters, 2008, 92, .	1.5	40
92	Ultrathin Body GaN-on-Insulator Quantum Well FETs With Regrown Ohmic Contacts. IEEE Electron Device Letters, 2012, 33, 661-663.	2.2	40
93	Electron mobility in graded AlGaN alloys. Applied Physics Letters, 2006, 88, 042103.	1.5	39
94	Polarization-engineered removal of buffer leakage for GaN transistors. Applied Physics Letters, 2010, 96, 042102.	1.5	39
95	A computational study of metal-contacts to beyond-graphene 2D semiconductor materials. , 2012, , .		38
96	Adsorption-controlled growth of Ga2O3 by suboxide molecular-beam epitaxy. APL Materials, 2021, 9, .	2.2	38
97	Ultralow-Leakage AlGaN/GaN High Electron Mobility Transistors on Si With Non-Alloyed Regrown Ohmic Contacts. IEEE Electron Device Letters, 2016, 37, 16-19.	2.2	37
98	Electron Transport in III-V Nitride Two-Dimensional Electron Gases. Physica Status Solidi (B): Basic Research, 2001, 228, 617-619.	0.7	36
99	Guiding Principles for Trench Schottky Barrier Diodes Based on Ultrawide Bandgap Semiconductors: A Case Study in Gaâ„Oâ„ƒ. IEEE Transactions on Electron Devices, 2020, 67, 3938-3947.	1.6	36
100	Dipole scattering in polarization induced IIIâ€“V nitride two-dimensional electron gases. Journal of Applied Physics, 2000, 88, 4734.	1.1	35
101	InGaN Channel High-Electron-Mobility Transistors with InAlGaN Barrier andf_T/f_{max}of 260/220 GHz. Applied Physics Express, 2013, 6, 016503.	1.1	35
102	Comparative study of chemically synthesized and exfoliated multilayer MoS2 field-effect transistors. Applied Physics Letters, 2013, 102, 043116.	1.5	35
103	Activation of buried p-GaN in MOCVD-regrown vertical structures. Applied Physics Letters, 2018, 113, 062105.	1.5	35
104	Structural and piezoelectric properties of ultra-thin ScxAl1âˆ’xN films grown on GaN by molecular beam epitaxy. Applied Physics Letters, 2020, 117, .	1.5	34
105	Effect of dislocation scattering on the transport properties of InN grown on GaN substrates by molecular beam epitaxy. Applied Physics Letters, 2006, 89, 162110.	1.5	33
106	Power Amplification at THz via Plasma Wave Excitation in RTD-Gated HEMTs. IEEE Transactions on Terahertz Science and Technology, 2013, 3, 200-206.	2.0	33
107	First RF Power Operation of AlN/GaN/AlN HEMTs With >3 A/mm and 3 W/mm at 10 GHz. IEEE Journal of the Electron Devices Society, 2021, 9, 121-124.	1.2	33
108	Polarization-induced Zener tunnel diodes in GaN/InGaN/GaN heterojunctions. Applied Physics Letters, 2015, 107, .	1.5	32

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109	1.6 kV Vertical Ga₂O₃ FinFETs With Source-Connected Field Plates and Normally-off Operation. , 2019, , .		31
110	Thermal stability of epitaxial Î±-Ga2O3 and (Al,Ga)2O3 layers on m-plane sapphire. Applied Physics Letters, 2021, 119, .	1.5	30
111	Ultrathin CdSe nanowire field-effect transistors. Journal of Electronic Materials, 2006, 35, 170-172.	1.0	29
112	Oxygen Incorporation in the Molecular Beam Epitaxy Growth of Sc_xGa_{1â^'x}N and Sc_xAl_{1â^'x}N. Physica Status Solidi (B): Basic Research, 2020, 257, 1900612.	0.7	29
113	Polarization-mediated remote surface roughness scattering in ultrathin barrier GaN high-electron mobility transistors. Applied Physics Letters, 2010, 97, .	1.5	28
114	Room temperature weak ferromagnetism in Sn1â^'xMnxSe2 2D films grown by molecular beam epitaxy. APL Materials, 2016, 4, .	2.2	28
115	On the possibility of sub 60 mV/decade subthreshold switching in piezoelectric gate barrier transistors. Physica Status Solidi C: Current Topics in Solid State Physics, 2013, 10, 1469-1472.	0.8	27
116	Quantum and classical scattering times due to charged dislocations in an impure electron gas. Physical Review B, 2002, 66, .	1.1	26
117	Room-Temperature Graphene-Nanoribbon Tunneling Field-Effect Transistors. Npj 2D Materials and Applications, 2019, 3, .	3.9	26
118	Molecular beam homoepitaxy on bulk AlN enabled by aluminum-assisted surface cleaning. Applied Physics Letters, 2020, 116, .	1.5	26
119	Surface control and MBE growth diagram for homoepitaxy on single-crystal AlN substrates. Applied Physics Letters, 2020, 116, .	1.5	26
120	Metalâ€face InAlN/AlN/GaN high electron mobility transistors with regrown ohmic contacts by molecular beam epitaxy. Physica Status Solidi (A) Applications and Materials Science, 2011, 208, 1617-1619.	0.8	25
121	Sub-230 nm deep-UV emission from GaN quantum disks in AlN grown by a modified Stranskiâ€“Krastanov mode. Japanese Journal of Applied Physics, 2016, 55, 05FF06.	0.8	25
122	Broken Symmetry Effects due to Polarization on Resonant Tunneling Transport in Double-Barrier Nitride Heterostructures. Physical Review Applied, 2019, 11, .	1.5	25
123	Epitaxial niobium nitride superconducting nanowire single-photon detectors. Applied Physics Letters, 2020, 117, .	1.5	25
124	Rotationally aligned hexagonal boron nitride on sapphire by high-temperature molecular beam epitaxy. Physical Review Materials, 2019, 3, .	0.9	25
125	Phototransistors: Highâ€Đetectivity Multilayer MoS₂ Phototransistors with Spectral Response from Ultraviolet to Infrared (Adv. Mater. 43/2012). Advanced Materials, 2012, 24, 5902-5902.	11.1	24
126	Graphene as transparent electrode for direct observation of hole photoemission from silicon to oxide. Applied Physics Letters, 2013, 102, .	1.5	24

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127	Molecular beam epitaxial growth of scandium nitride on hexagonal SiC, GaN, and AlN. Applied Physics Letters, 2019, 115, .	1.5	24
128	Polarization control in nitride quantum well light emitters enabled by bottom tunnel-junctions. Journal of Applied Physics, 2019, 125, 203104.	1.1	24
129	Thermionic emission or tunneling? The universal transition electric field for ideal Schottky reverse leakage current: A case study in Î² -Ga2O3. Applied Physics Letters, 2020, 117, .	1.5	24
130	Trapping and Detrapping Mechanisms in Î²-Gaâ„Oâ„ Vertical FinFETs Investigated by Electro-Optical Measurements. IEEE Transactions on Electron Devices, 2020, 67, 3954-3959.	1.6	24
131	Effect of p-doped overlayer thickness on RF-dispersion in GaN junction FETs. IEEE Electron Device Letters, 2002, 23, 306-308.	2.2	23
132	Dipole scattering in highly polar semiconductor alloys. Journal of Applied Physics, 2004, 96, 2095-2101.	1.1	23
133	Low temperature AlN growth by MBE and its application in HEMTs. Journal of Crystal Growth, 2015, 425, 133-137.	0.7	23
134	Fully transparent field-effect transistor with high drain current and on-off ratio. APL Materials, 2020, 8, .	2.2	23
135	Î³-phase inclusions as common structural defects in alloyed Î²-(AlxGa1â^'x)2O3 and doped Î²-Ga2O3 films. APL Materials, 2021, 9, .	2.2	23
136	Charged basal stacking fault scattering in nitride semiconductors. Applied Physics Letters, 2011, 98, 022109.	1.5	22
137	Inâ€situ Xâ€ray photoelectron spectroscopy of trimethyl aluminum and water halfâ€cycle treatments on HFâ€treated and O₃â€oxidized GaN substrates. Physica Status Solidi - Rapid Research Letters, 2012, 6, 22-24.	1.2	22
138	Significantly reduced thermal conductivity in Î² -(Al0.1Ga0.9)2O3/Ga2O3 superlattices. Applied Physics Letters, 2019, 115, .	1.5	22
139	GaN/AlN Schottky-gate p-channel HFETs with InGaN contacts and 100 mA/mm on-current. , 2019, , .		22
140	Explanation of anomalously high current gain observed in GaN based bipolar transistors. IEEE Electron Device Letters, 2003, 24, 4-6.	2.2	21
141	First-principles study of high-field-related electronic behavior of group-III nitrides. Physical Review B, 2014, 90, .	1.1	20
142	Atomic Structure of Thin MoSe2 Films Grown by Molecular Beam Epitaxy. Microscopy and Microanalysis, 2014, 20, 164-165.	0.2	19
143	Measurement of ultrafast dynamics of photoexcited carriers in Î²-Ga2O3 by two-color optical pump-probe spectroscopy. Applied Physics Letters, 2018, 113, .	1.5	19
144	Wurtzite phonons and the mobility of a GaN/AlN 2D hole gas. Applied Physics Letters, 2019, 114, .	1.5	19

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145	Anisotropic dielectric functions, band-to-band transitions, and critical points in Î± -Ga2O3. Applied Physics Letters, 2021, 118, .	1.5	19
146	ON-Resistance of Ga₂O₃ Trench-MOS Schottky Barrier Diodes: Role of Sidewall Interface Trapping. IEEE Transactions on Electron Devices, 2021, 68, 2420-2426.	1.6	19
147	Enhanced injection efficiency and light output in bottom tunnel-junction light-emitting diodes. Optics Express, 2020, 28, 4489.	1.7	19
148	Influence of Metalâ€“Graphene Contact on the Operation and Scalability of Graphene Field-Effect Transistors. IEEE Transactions on Electron Devices, 2011, 58, 3170-3178.	1.6	18
149	Steep subthreshold swing tunnel FETs: GaN/InN/GaN and transition metal dichalcogenide channels. , 2015, , .		18
150	Realization of GaN PolarMOS using selective-area regrowth by MBE and its breakdown mechanisms. Japanese Journal of Applied Physics, 2019, 58, SCCD15.	0.8	18
151	Formation of ohmic contacts to ultra-thin channel AlN/GaN HEMTs. Physica Status Solidi C: Current Topics in Solid State Physics, 2008, 5, 2030-2032.	0.8	17
152	Stokes and anti-Stokes resonant Raman scatterings from biased GaN/AlN heterostructure. Applied Physics Letters, 2008, 93, 051912.	1.5	17
153	Perspectives of TFETs for low power analog ICs. , 2012, , .		17
154	Epitaxial ScxAl1â^'xN on GaN exhibits attractive high-K dielectric properties. Applied Physics Letters, 2022, 120, .	1.5	17
155	2.3 nm barrier AlN/GaN HEMTs with insulated gates. Physica Status Solidi C: Current Topics in Solid State Physics, 2008, 5, 2047-2049.	0.8	16
156	Subcritical barrier AlN/GaN E/Dâ€mode HFETs and inverters. Physica Status Solidi (A) Applications and Materials Science, 2011, 208, 1620-1622.	0.8	16
157	1.5 kV Vertical Ga₂O₃ Trench-MIS Schottky Barrier Diodes. , 2018, , .		16
158	Molecular Beam Epitaxy of Transition Metal Nitrides for Superconducting Device Applications. Physica Status Solidi (A) Applications and Materials Science, 2020, 217, 1900675.	0.8	16
159	MBE growth and donor doping of coherent ultrawide bandgap AlGaN alloy layers on single-crystal AlN substrates. Applied Physics Letters, 2021, 118, .	1.5	16
160	Shortâ€period AlN/GaN pâ€type superlattices: hole transport use in pâ€n junctions. Physica Status Solidi C: Current Topics in Solid State Physics, 2010, 7, 2386-2389.	0.8	15
161	Determination of the Mott-Hubbard gap inGdTiO3. Physical Review B, 2015, 92, .	1.1	15
162	Polarization-induced 2D hole gases in pseudomorphic undoped GaN/AlN heterostructures on single-crystal AlN substrates. Applied Physics Letters, 2021, 119, .	1.5	15

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163	High mobility two-dimensional electron gases in nitride heterostructures with high Al composition AlGaN alloy barriers. Applied Physics Letters, 2010, 97, .	1.5	14
164	Stark-effect scattering in rough quantum wells. Applied Physics Letters, 2011, 99, .	1.5	14
165	Two-dimensional heterojunction interlayer tunnel FET (Thin-TFET): From theory to applications. , 2016, , .		14
166	Single-crystal N-polar GaN p-n diodes by plasma-assisted molecular beam epitaxy. Applied Physics Letters, 2017, 110, .	1.5	14
167	High-frequency and below bandgap anisotropic dielectric constants in Î±-(AlxGa1â^'x)2O3 (â‰¤xâ‰¤1). Applied Physics Letters, 2021, 119, .	1.5	14
168	Strong effect of scandium source purity on chemical and electronic properties of epitaxial ScxAl1â^'xN/GaN heterostructures. APL Materials, 2021, 9, .	2.2	14
169	Top-down AlN/GaN enhancement- & depletion-mode nanoribbon HEMTs. , 2009, , .		13
170	Dual optical marker Raman characterization of strained GaN-channels on AlN using AlN/GaN/AlN quantum wells and 15N isotopes. Applied Physics Letters, 2015, 106, .	1.5	13
171	Steep Sub-Boltzmann Switching in AlGaN/GaN Phase-FETs With ALD VO₂. IEEE Transactions on Electron Devices, 2018, 65, 945-949.	1.6	13
172	Bandgap narrowing and Mott transition in Si-doped Al0.7Ga0.3N. Applied Physics Letters, 2019, 114, .	1.5	13
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