Debdeep Jena

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

286	10,639	53	94
papers	citations	h-index	g-index

322	12,390	4.3	6.53
ext. papers	ext. citations	avg, IF	L-index

#	Paper	IF	Citations
286	Breakdown Mechanisms in □Ga2O3 Trench-MOS Schottky-Barrier Diodes. *IEEE Transactions on Electron Devices*, **2022**, 69, 75-81	2.9	2
285	Quantitative scanning microwave microscopy of 2D electron and hole gases in AlN/GaN heterostructures. *Applied Physics Letters*, **2022**, 120, 012103	3.4	0
284	A unified thermionic and thermionic-field emission (TE□TFE) model for ideal Schottky reverse-bias leakage current. *Journal of Applied Physics*, **2022**, 131, 015702	2.5	5
283	High thermal conductivity and ultrahigh thermal boundary conductance of homoepitaxial AlN thin films. *APL Materials*, **2022**, 10, 011115	5.7	1
282	Infrared dielectric functions and Brillouin zone center phonons of □Ga2O3 compared to □Al2O3. *Physical Review Materials*, **2022**, 6,	3.2	5
281	Distributed polarization-doped GaN p□ diodes with near-unity ideality factor and avalanche breakdown voltage of 1.25 kV. *Applied Physics Letters*, **2022**, 120, 122111	3.4	0
280	Infrared-active phonon modes and static dielectric constants in □(AlxGa1□)2O3 (0.18 □x □0.54) alloys. *Applied Physics Letters*, **2022**, 120, 112202	3.4	1
279	Optically pumped deep-UV multimode lasing in AlGaN double heterostructure grown by molecular beam homoepitaxy. *AIP Advances*, **2022**, 12, 035023	1.5	2
278	Epitaxial ScxAl1□N on GaN exhibits attractive high-K dielectric properties. *Applied Physics Letters*, **2022**, 120, 152901	3.4	5
277	Structural and electronic properties of NbN/GaN junctions grown by molecular beam epitaxy. *APL Materials*, **2022**, 10, 051103	5.7	0
276	Tight-binding band structure of □and □phase Ga2O3 and Al2O3. *Journal of Applied Physics*, **2022**, 131, 175702	2.5	
275	Polarization-induced 2D hole gases in pseudomorphic undoped GaN/AlN heterostructures on single-crystal AlN substrates. *Applied Physics Letters*, **2021**, 119, 162104	3.4	6
274	Adsorption-controlled growth of Ga2O3 by suboxide molecular-beam epitaxy. *APL Materials*, **2021**, 9, 031101	5.7	11
273	MBE growth and donor doping of coherent ultrawide bandgap AlGaN alloy layers on single-crystal AlN substrates. *Applied Physics Letters*, **2021**, 118, 092101	3.4	5
272	Enhanced efficiency in bottom tunnel junction InGaN blue LEDs **2021**,		3
271	Next generation electronics on the ultrawide-bandgap aluminum nitride platform. *Semiconductor Science and Technology*, **2021**, 36, 044001	1.8	17
270	Ultrafast dynamics of gallium vacancy charge states in □Ga2O3. *Physical Review Research*, **2021**, 3,	3.9	4

269	□phase inclusions as common structural defects in alloyed □(AlxGa1□)2O3 and doped □Ga2O3 films. *APL Materials*, **2021**, 9, 051119	5.7	7
268	ON-Resistance of Ga2O3 Trench-MOS Schottky Barrier Diodes: Role of Sidewall Interface Trapping. *IEEE Transactions on Electron Devices*, **2021**, 68, 2420-2426	2.9	5
267	Temperature-dependent Lowering of Coercive Field in 300 nm Sputtered Ferroelectric Al0.70Sc0.30N **2021**,		4
266	High-conductivity polarization-induced 2D hole gases in undoped GaN/AlN heterojunctions enabled by impurity blocking layers. *Journal of Applied Physics*, **2021**, 130, 025703	2.5	7
265	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	2.3	16
264	Crystal orientation dictated epitaxy of ultrawide-bandgap 5.4- to 8.6-eV □(AlGa)O on m-plane sapphire. *Science Advances*, **2021**, 7,	14.3	35
263	Advanced concepts in Ga2O3 power and RF devices. *Semiconductors and Semimetals*, **2021**, 107, 23-47	0.6	2
262	Epitaxial Ferrimagnetic Mn4N Thin Films on GaN by Molecular Beam Epitaxy. *IEEE Transactions on Magnetics*, **2021**, 1-1	2	0
261	An all-epitaxial nitride heterostructure with concurrent quantum Hall effect and superconductivity. *Science Advances*, **2021**, 7,	14.3	4
260	Electric Fields and Surface Fermi Level in Undoped GaN/AlN Two-Dimensional Hole Gas Heterostructures. *Physica Status Solidi - Rapid Research Letters*, **2021**, 15, 2000573	2.5	2
259	Anisotropic dielectric functions, band-to-band transitions, and critical points in □Ga2O3. *Applied Physics Letters*, **2021**, 118, 062103	3.4	12
258	Unexplored MBE growth mode reveals new properties of superconducting NbN. *Physical Review Materials*, **2021**, 5,	3.2	5
257	Molecular beam epitaxy of polar III-nitride resonant tunneling diodes. *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*, **2021**, 39, 023409	2.9	1
256	Thermal stability of epitaxial □Ga2O3 and (Al,Ga)2O3 layers on m-plane sapphire. *Applied Physics Letters*, **2021**, 119, 062102	3.4	8
255	High-frequency and below bandgap anisotropic dielectric constants in □(AlxGa1□)2O3 (0□□1). *Applied Physics Letters*, **2021**, 119, 092103	3.4	9
254	Dislocation and indium droplet related emission inhomogeneities in InGaN LEDs. *Journal Physics D: Applied Physics*, **2021**, 54, 495106	3	1
253	Strong effect of scandium source purity on chemical and electronic properties of epitaxial ScxAl1□N/GaN heterostructures. *APL Materials*, **2021**, 9, 091106	5.7	3
252	Momentum-resolved electronic structure and band offsets in an epitaxial NbN/GaN superconductor/semiconductor heterojunction.. *Science Advances*, **2021**, 7, eabi5833	14.3	3

251	Molecular beam homoepitaxy on bulk AlN enabled by aluminum-assisted surface cleaning. *Applied Physics Letters*, **2020**, 116, 172106	3.4	17
250	Near-ideal reverse leakage current and practical maximum electric field in □Ga_2O_3 Schottky barrier diodes. *Applied Physics Letters*, **2020**, 116, 192101	3.4	42
249	Spin□orbit torque field-effect transistor (SOTFET): Proposal for a magnetoelectric memory. *Applied Physics Letters*, **2020**, 116, 242405	3.4	4
248	. *IEEE Transactions on Electron Devices*, **2020**, 67, 3978-3982	2.9	1
247	Fighting Broken Symmetry with Doping: Toward Polar Resonant Tunneling Diodes with Symmetric Characteristics. *Physical Review Applied*, **2020**, 13,	4.3	8
246	GaN HEMTs on Si With Regrown Contacts and Cutoff/Maximum Oscillation Frequencies of 250/204 GHz. *IEEE Electron Device Letters*, **2020**, 41, 689-692	4.4	29
245	All-Epitaxial Bulk Acoustic Wave Resonators. *Physica Status Solidi (A) Applications and Materials Science*, **2020**, 217, 1900786	1.6	8
244	Multiferroic $LuFeO_3$ on GaN by molecular-beam epitaxy. *Applied Physics Letters*, **2020**, 116, 102901	3.4	5
243	Surface control and MBE growth diagram for homoepitaxy on single-crystal AlN substrates. *Applied Physics Letters*, **2020**, 116, 262102	3.4	17
242	Magnetic properties of MBE grown Mn_4N on MgO, SiC, GaN and Al_2O_3 substrates. *AIP Advances*, **2020**, 10, 015238	1.5	3
241	Gallium nitride tunneling field-effect transistors exploiting polarization fields. *Applied Physics Letters*, **2020**, 116, 073502	3.4	2
240	Fully transparent field-effect transistor with high drain current and on-off ratio. *APL Materials*, **2020** , 8, 011110	5.7	16
239	GaN/AlN p-channel HFETs with Imax >420 mA/mm and ~20 GHz fT / fMAX **2020**,		6
238	Monolithically p-down nitride laser diodes and LEDs obtained by MBE using buried tunnel junction design **2020**,		2
237	Enhanced injection efficiency and light output in bottom tunnel-junction light-emitting diodes. *Optics Express*, **2020**, 28, 4489-4500	3.3	12
236	Distributed-feedback blue laser diode utilizing a tunnel junction grown by plasma-assisted molecular beam epitaxy. *Optics Express*, **2020**, 28, 35321-35329	3.3	3
235	GaN/AlGaN 2DEGs in the quantum regime: Magneto-transport and photoluminescence to 60 tesla. *Applied Physics Letters*, **2020**, 117, 262105	3.4	1
234	Resonant Tunneling Transport in Polar III-Nitride Heterostructures **2020**, 215-247		1

233	Degradation Mechanisms of GaN-Based Vertical Devices: A Review. *Physica Status Solidi (A) Applications and Materials Science*, **2020**, 217, 1900750	1.6	3
232	Oxygen Incorporation in the Molecular Beam Epitaxy Growth of ScxGa1�N and ScxAl1�N. *Physica Status Solidi (B): Basic Research*, **2020**, 257, 1900612	1.3	19
231	Molecular Beam Epitaxy Growth of Large-Area GaN/AlN 2D Hole Gas Heterostructures. *Physica Status Solidi (B): Basic Research*, **2020**, 257, 1900567	1.3	9
230	Nitride LEDs and Lasers with Buried Tunnel Junctions. *ECS Journal of Solid State Science and Technology*, **2020**, 9, 015018	2	5
229	Field-Plated Ga2O3 Trench Schottky Barrier Diodes With a BV2/ $R_{text{on,sp}}$ of up to 0.95 GW/cm2. *IEEE Electron Device Letters*, **2020**, 41, 107-110	4.4	97
228	Molecular Beam Epitaxy of Transition Metal Nitrides for Superconducting Device Applications. *Physica Status Solidi (A) Applications and Materials Science*, **2020**, 217, 1900675	1.6	11
227	Epitaxial niobium nitride superconducting nanowire single-photon detectors. *Applied Physics Letters*, **2020**, 117, 132601	3.4	12
226	N-polar GaN/AlN resonant tunneling diodes. *Applied Physics Letters*, **2020**, 117, 143501	3.4	5
225	Guiding Principles for Trench Schottky Barrier Diodes Based on Ultrawide Bandgap Semiconductors: A Case Study in Ga��*IEEE Transactions on Electron Devices*, **2020**, 67, 3938-3947	2.9	26
224	Thermionic emission or tunneling? The universal transition electric field for ideal Schottky reverse leakage current: A case study in �Ga2O3. *Applied Physics Letters*, **2020**, 117, 222104	3.4	14
223	Prospects for Wide Bandgap and Ultrawide Bandgap CMOS Devices. *IEEE Transactions on Electron Devices*, **2020**, 67, 4010-4020	2.9	38
222	Bottom tunnel junction blue light-emitting field-effect transistors. *Applied Physics Letters*, **2020**, 117, 031107	3.4	2
221	Very High Parallel-Plane Surface Electric Field of 4.3 MV/cm in Ga2O3 Schottky Barrier Diodes with PtOx Contacts **2020**,		4
220	Light-emitting diodes with AlN polarization-induced buried tunnel junctions: A second look. *Applied Physics Letters*, **2020**, 117, 061104	3.4	5
219	Structural and piezoelectric properties of ultra-thin ScxAl1�N films grown on GaN by molecular beam epitaxy. *Applied Physics Letters*, **2020**, 117, 112101	3.4	15
218	. *IEEE Transactions on Electron Devices*, **2020**, 67, 3954-3959	2.9	12
217	Intra- and inter-conduction band optical absorption processes in �Ga2O3. *Applied Physics Letters*, **2020**, 117, 072103	3.4	8
216	High-mobility two-dimensional electron gases at AlGaN/GaN heterostructures grown on GaN bulk wafers and GaN template substrates. *Applied Physics Express*, **2019**, 12, 121003	2.4	6

215	Hole mobility of strained GaN from first principles. *Physical Review B*, **2019**, 100,	3.3	38
214	Significantly reduced thermal conductivity in (Al0.1Ga0.9)2O3/Ga2O3 superlattices. *Applied Physics Letters*, **2019**, 115, 092105	3.4	17
213	Route to High Hole Mobility in GaN via Reversal of Crystal-Field Splitting. *Physical Review Letters*, **2019**, 123, 096602	7.4	31
212	Magnetotransport and superconductivity in InBi films grown on Si(111) by molecular beam epitaxy. *Journal of Applied Physics*, **2019**, 126, 103901	2.5	1
211	A polarization-induced 2D hole gas in undoped gallium nitride quantum wells. *Science*, **2019**, 365, 1454-1457	35.3	57
210	Wurtzite phonons and the mobility of a GaN/AlN 2D hole gas. *Applied Physics Letters*, **2019**, 114, 253501	3.4	14
209	Polarization control in nitride quantum well light emitters enabled by bottom tunnel-junctions. *Journal of Applied Physics*, **2019**, 125, 203104	2.5	14
208	Realization of GaN PolarMOS using selective-area regrowth by MBE and its breakdown mechanisms. *Japanese Journal of Applied Physics*, **2019**, 58, SCCD15	1.4	12
207	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	1.4	43
206	Blue (In,Ga)N light-emitting diodes with buried n +p + tunnel junctions by plasma-assisted molecular beam epitaxy. *Japanese Journal of Applied Physics*, **2019**, 58, 060914	1.4	3
205	Fin-channel orientation dependence of forward conduction in kV-class Ga2O3 trench Schottky barrier diodes. *Applied Physics Express*, **2019**, 12, 061007	2.4	29
204	Bandgap narrowing and Mott transition in Si-doped Al0.7Ga0.3N. *Applied Physics Letters*, **2019**, 114, 113501	3.4	6
203	Broken Symmetry Effects due to Polarization on Resonant Tunneling Transport in Double-Barrier Nitride Heterostructures. *Physical Review Applied*, **2019**, 11,	4.3	17
202	Self-assembly and properties of domain walls in BiFeO3 layers grown via molecular-beam epitaxy. *APL Materials*, **2019**, 7, 071101	5.7	7
201	1.6 kV Vertical Ga2O3 FinFETs With Source-Connected Field Plates and Normally-off Operation **2019**,		19
200	High Breakdown Voltage in RF AlN/GaN/AlN Quantum Well HEMTs. *IEEE Electron Device Letters*, **2019**, 40, 1293-1296	4.4	46
199	Molecular beam epitaxial growth of scandium nitride on hexagonal SiC, GaN, and AlN. *Applied Physics Letters*, **2019**, 115, 172101	3.4	14
198	. *IEEE Transactions on Electron Devices*, **2019**, 66, 4597-4603	2.9	8

197	Room-Temperature Graphene-Nanoribbon Tunneling Field-Effect Transistors. *Npj 2D Materials and Applications*, **2019**, 3,	8.8	18
196	Rotationally aligned hexagonal boron nitride on sapphire by high-temperature molecular beam epitaxy. *Physical Review Materials*, **2019**, 3,	3.2	15
195	New physics in GaN resonant tunneling diodes **2019**,		1
194	Materials Relevant to Realizing a Field-Effect Transistor Based on Spin�Orbit Torques. *IEEE Journal on Exploratory Solid-State Computational Devices and Circuits*, **2019**, 5, 158-165	2.4	1
193	**2019**,		23
192	GaN/AlN Schottky-gate p-channel HFETs with InGaN contacts and 100 mA/mm on-current **2019**,		17
191	Thermal conductivity of crystalline AlN and the influence of atomic-scale defects. *Journal of Applied Physics*, **2019**, 126, 185105	2.5	42
190	Modeling and Circuit Design of Associative Memories With Spin�Orbit Torque FETs. *IEEE Journal on Exploratory Solid-State Computational Devices and Circuits*, **2019**, 5, 197-205	2.4	4
189	GaN/NbN epitaxial semiconductor/superconductor heterostructures. *Nature*, **2018**, 555, 183-189	50.4	83
188	Steep Sub-Boltzmann Switching in AlGaN/GaN Phase-FETs With ALD VO2. *IEEE Transactions on Electron Devices*, **2018**, 65, 945-949	2.9	11
187	75 Years of the Device Research Conference�A History Worth Repeating. *IEEE Journal of the Electron Devices Society*, **2018**, 6, 116-120	2.3	1
186	234 nm and 246 nm AlN-Delta-GaN quantum well deep ultraviolet light-emitting diodes. *Applied Physics Letters*, **2018**, 112, 011101	3.4	42
185	Development of GaN Vertical Trench-MOSFET With MBE Regrown Channel. *IEEE Transactions on Electron Devices*, **2018**, 65, 2558-2564	2.9	32
184	Enhancement-Mode Ga2O3 Vertical Transistors With Breakdown Voltage >1 kV. *IEEE Electron Device Letters*, **2018**, 39, 869-872	4.4	166
183	Room temperature microwave oscillations in GaN/AlN resonant tunneling diodes with peak current densities up to 220 kA/cm2. *Applied Physics Letters*, **2018**, 112, 103101	3.4	38
182	Activation of buried p-GaN in MOCVD-regrown vertical structures. *Applied Physics Letters*, **2018**, 113, 062105	3.4	25
181	Ultrawide-Bandgap Semiconductors: Research Opportunities and Challenges. *Advanced Electronic Materials*, **2018**, 4, 1600501	6.4	520
180	**2018**,		7

179	1230 V Ga2O3 trench Schottky barrier diodes with an ultra-low leakage current of . *Applied Physics Letters*, **2018**, 113, 202101	3.4	61
178	Measurement of ultrafast dynamics of photoexcited carriers in Ga2O3 by two-color optical pump-probe spectroscopy. *Applied Physics Letters*, **2018**, 113, 252102	3.4	14
177	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	4.4	46
176	Breakdown mechanism in 1 kA/cm2 and 960 V E-mode Ga2O3 vertical transistors. *Applied Physics Letters*, **2018**, 113, 122103	3.4	91
175	1.5 kV Vertical Ga2O3 Trench-MIS Schottky Barrier Diodes **2018**,		9
174	. *IEEE Transactions on Electron Devices*, **2017**, 64, 1635-1641	2.9	58
173	Inductively-coupled-plasma reactive ion etching of single-crystal Ga2O3. *Japanese Journal of Applied Physics*, **2017**, 56, 030304	1.4	34
172	Physics and polarization characteristics of 298 nm AlN-delta-GaN quantum well ultraviolet light-emitting diodes. *Applied Physics Letters*, **2017**, 110, 071103	3.4	37
171	Strained GaN quantum-well FETs on single crystal bulk AlN substrates. *Applied Physics Letters*, **2017**, 110, 063501	3.4	34
170	MBE-grown 23270 nm deep-UV LEDs using monolayer thin binary GaN/AlN quantum heterostructures. *Applied Physics Letters*, **2017**, 110, 041108	3.4	85
169	Hot Electron Transistor with van der Waals Base-Collector Heterojunction and High-Performance GaN Emitter. *Nano Letters*, **2017**, 17, 3089-3096	11.5	55
168	Single-crystal N-polar GaN p-n diodes by plasma-assisted molecular beam epitaxy. *Applied Physics Letters*, **2017**, 110, 253506	3.4	12
167	Electron mobility in polarization-doped Al0-0.2GaN with a low concentration near 1017 cm. *Applied Physics Letters*, **2017**, 110, 182102	3.4	8
166	New Tunneling Features in Polar III-Nitride Resonant Tunneling Diodes. *Physical Review X*, **2017**, 7,	9.1	34
165	Terahertz spectroscopy of an electron-hole bilayer system in AlN/GaN/AlN quantum wells. *Applied Physics Letters*, **2017**, 111, 073102	3.4	8
164	Deep-UV emission at 219 nm from ultrathin MBE GaN/AlN quantum heterostructures. *Applied Physics Letters*, **2017**, 111, 091104	3.4	42
163	1.1-kV Vertical GaN p-n Diodes With p-GaN Regrown by Molecular Beam Epitaxy. *IEEE Electron Device Letters*, **2017**, 38, 1071-1074	4.4	50
162	Wide-bandgap Gallium Nitride p-channel MISFETs with enhanced performance at high temperature **2017**,		2

161	S-shaped negative differential resistance in III-Nitride blue quantum-well laser diodes grown by plasma-assisted MBE **2017**,		1
160	Adsorption-controlled growth of La-doped BaSnO3 by molecular-beam epitaxy. *APL Materials*, **2017** , 5, 116107	5.7	98
159	Demonstration of GaN HyperFETs with ALD VO2 **2016**,		2
158	Controllable growth of layered selenide and telluride heterostructures and superlattices using molecular beam epitaxy. *Journal of Materials Research*, **2016**, 31, 900-910	2.5	65
157	Two-dimensional semiconductors for transistors. *Nature Reviews Materials*, **2016**, 1,	73.3	670
156	Layered transition metal dichalcogenides: promising near-lattice-matched substrates for GaN growth. *Scientific Reports*, **2016**, 6, 23708	4.9	58
155	First demonstration of strained AlN/GaN/AlN quantum well FETs on SiC **2016**,		4
154	Structural Properties of (Sn,Mn)Se 2 - a New 2D Magnetic Semiconductor with Potential for Spintronic Applications. *Microscopy and Microanalysis*, **2016**, 22, 1512-1513	0.5	1
153	Ultralow-Leakage AlGaN/GaN High Electron Mobility Transistors on Si With Non-Alloyed Regrown Ohmic Contacts. *IEEE Electron Device Letters*, **2016**, 37, 16-19	4.4	26
152	1.7-kV and 0.55- $text{m}Omega cdot text {cm}^{2}$ GaN p-n Diodes on Bulk GaN Substrates With Avalanche Capability. *IEEE Electron Device Letters*, **2016**, 37, 161-164	4.4	125
151	Deep ultraviolet emission from ultra-thin GaN/AlN heterostructures. *Applied Physics Letters*, **2016**, 109, 241102	3.4	53
150	Room temperature weak ferromagnetism in Sn1�MnxSe2 2D films grown by molecular beam epitaxy. *APL Materials*, **2016**, 4, 032601	5.7	25
149	Novel III-N heterostructure devices for low-power logic and more **2016**,		3
148	Sub-230 nm deep-UV emission from GaN quantum disks in AlN grown by a modified Stranski�Krastanov mode. *Japanese Journal of Applied Physics*, **2016**, 55, 05FF06	1.4	23
147	Intrinsic electron mobility limits in �Ga2O3. *Applied Physics Letters*, **2016**, 109, 212101	3.4	223
146	Two-dimensional heterojunction interlayer tunnel FET (Thin-TFET): From theory to applications **2016**,		13
145	Comparing buffer leakage in PolarMOSH on SiC and free-standing GaN substrates **2016**,		1
144	Low temperature AlN growth by MBE and its application in HEMTs. *Journal of Crystal Growth*, **2015**, 425, 133-137	1.6	18

143	Determination of the Mott-Hubbard gap in GdTiO3. *Physical Review B*, **2015**, 92,	3.3	11
142	Two-Dimensional Heterojunction Interlayer Tunneling Field Effect Transistors (Thin-TFETs). *IEEE Journal of the Electron Devices Society*, **2015**, 3, 200-207	2.3	86
141	Polarization-Engineered III-Nitride Heterojunction Tunnel Field-Effect Transistors. *IEEE Journal on Exploratory Solid-State Computational Devices and Circuits*, **2015**, 1, 28-34	2.4	54
140	High-voltage polarization-induced vertical heterostructure p-n junction diodes on bulk GaN substrates **2015**,		3
139	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, 041906	3.4	10
138	Unique opportunity to harness polarization in GaN to override the conventional power electronics figure-of-merits **2015**,		5
137	Transistor Switches Using Active Piezoelectric Gate Barriers. *IEEE Journal on Exploratory Solid-State Computational Devices and Circuits*, **2015**, 1, 35-42	2.4	4
136	Esaki Diodes in van der Waals Heterojunctions with Broken-Gap Energy Band Alignment. *Nano Letters*, **2015**, 15, 5791-8	11.5	237
135	Deep-UV LEDs using polarization-induced doping: Electroluminescence at cryogenic temperatures **2015**,		1
134	Near unity ideality factor and Shockley-Read-Hall lifetime in GaN-on-GaN p-n diodes with avalanche breakdown. *Applied Physics Letters*, **2015**, 107, 243501	3.4	117
133	High breakdown single-crystal GaN p-n diodes by molecular beam epitaxy. *Applied Physics Letters*, **2015**, 107, 232101	3.4	44
132	Polarization-induced Zener tunnel diodes in GaN/InGaN/GaN heterojunctions. *Applied Physics Letters*, **2015**, 107, 163504	3.4	27
131	. *IEEE Electron Device Letters*, **2015**, 36, 375-377	4.4	126
130	Steep subthreshold swing tunnel FETs: GaN/InN/GaN and transition metal dichalcogenide channels **2015**,		14
129	Graphene nanoribbon field-effect transistors on wafer-scale epitaxial graphene on SiC substrates a. *APL Materials*, **2015**, 3, 011101	5.7	63
128	Photoluminescence-Based Electron and Lattice Temperature Measurements in GaN-Based HEMTs. *Journal of Electronic Materials*, **2014**, 43, 341-347	1.9	5
127	AlGaN/GaN HEMTs on Si by MBE with regrown contacts and fT = 153 GHz. *Physica Status Solidi C: Current Topics in Solid State Physics*, **2014**, 11, 887-889		8
126	Faceted sidewall etching of n-GaN on sapphire by photoelectrochemical wet processing. *Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics*, **2014**, 32, 061201	1.3	6

125	2D crystal semiconductors: Intimate contacts. *Nature Materials*, **2014**, 13, 1076-8	27	90
124	Two-dimensional electron gases in strained quantum wells for AlN/GaN/AlN double heterostructure field-effect transistors on AlN. *Applied Physics Letters*, **2014**, 104, 193506	3.4	35
123	GaN lateral PolarSJs: Polarization-doped super junctions **2014**,		2
122	Tunnel-injection quantum dot deep-ultraviolet light-emitting diodes with polarization-induced doping in III-nitride heterostructures. *Applied Physics Letters*, **2014**, 104, 021105	3.4	68
121	First-principles study of high-field-related electronic behavior of group-III nitrides. *Physical Review B*, **2014**, 90,	3.3	15
120	High-voltage field effect transistors with wide-bandgap □Ga2O3 nanomembranes. *Applied Physics Letters*, **2014**, 104, 203111	3.4	242
119	GaN Heterostructure Barrier Diodes Exploiting Polarization-Induced $delta$ -Doping. *IEEE Electron Device Letters*, **2014**, 35, 615-617	4.4	6
118	Energy-Efficient Clocking Based on Resonant Switching for Low-Power Computation. *IEEE Transactions on Circuits and Systems I: Regular Papers*, **2014**, 61, 1400-1408	3.9	8
117	Atomic Structure of Thin MoSe2 Films Grown by Molecular Beam Epitaxy. *Microscopy and Microanalysis*, **2014**, 20, 164-165	0.5	17
116	High-performance photocurrent generation from two-dimensional WS2 field-effect transistors. *Applied Physics Letters*, **2014**, 104, 193113	3.4	72
115	Electron transport in 2D crystal semiconductors and their device applications **2014**,		2
114	Two dimensional electron transport in modulation-doped In0.53Ga0.47As/AlAs0.56Sb0.44 ultrathin quantum wells. *Journal of Applied Physics*, **2014**, 115, 123711	2.5	5
113	Intrinsic Mobility Limiting Mechanisms in Lanthanum-Doped Strontium Titanate. *Physical Review Letters*, **2014**, 112,	7.4	78
112	Sub-60 mV/decade steep transistors with compliant piezoelectric gate barriers **2014**,		6
111	Graphene nanoribbon FETs for digital electronics: experiment and modeling. *International Journal of Circuit Theory and Applications*, **2013**, 41, 603-607	2	5
110	Electrical Noise and Transport Properties of Graphene. *Journal of Low Temperature Physics*, **2013**, 172, 202-211	1.3	9
109	Polarization-Induced GaN-on-Insulator E/D Mode p-Channel Heterostructure FETs. *IEEE Electron Device Letters*, **2013**, 34, 852-854	4.4	49
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