

Haoran Li

List of Publications by Citations

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47
papers

783
citations

13
h-index

26
g-index

48
ext. papers

969
ext. citations

3.5
avg. IF

4.13
L-index

#	Paper	IF	Citations
47	Recent progress in metal-organic chemical vapor deposition of $\left(000\bar{1}\right)$ N-polar group-III nitrides. <i>Semiconductor Science and Technology</i> , 2014 , 29, 113001	1.8	129
46	Demonstration of Constant 8 W/mm Power Density at 10, 30, and 94 GHz in State-of-the-Art Millimeter-Wave N-Polar GaN MISHEMTs. <i>IEEE Transactions on Electron Devices</i> , 2018 , 65, 45-50	2.9	98
45	N-Polar GaN Cap MISHEMT With Record Power Density Exceeding 6.5 W/mm at 94 GHz. <i>IEEE Electron Device Letters</i> , 2017 , 38, 359-362	4.4	56
44	880 V/ 2.7×10^6 $\Omega\text{-cm}^2$ MIS Gate Trench CAVET on Bulk GaN Substrates. <i>IEEE Electron Device Letters</i> , 2018 , 39, 863-865	4.4	54
43	N-Polar GaN HEMTs Exhibiting Record Breakdown Voltage Over 2000 V and Low Dynamic On-Resistance. <i>IEEE Electron Device Letters</i> , 2018 , 39, 1014-1017	4.4	50
42	W-Band Power Performance of SiN-Passivated N-Polar GaN Deep Recess HEMTs. <i>IEEE Electron Device Letters</i> , 2020 , 41, 349-352	4.4	42
41	Relaxed c-plane InGaN layers for the growth of strain-reduced InGaN quantum wells. <i>Semiconductor Science and Technology</i> , 2015 , 30, 105015	1.8	34
40	N-Polar GaN MIS-HEMTs on Sapphire With High Combination of Power Gain Cutoff Frequency and Three-Terminal Breakdown Voltage. <i>IEEE Electron Device Letters</i> , 2016 , 37, 77-80	4.4	27
39	Measurement of the hot electron mean free path and the momentum relaxation rate in GaN. <i>Applied Physics Letters</i> , 2014 , 105, 263506	3.4	23
38	N-face GaN/AlN/GaN/InAlN and GaN/AlN/AlGaIn/GaN/InAlN high-electron-mobility transistor structures grown by plasma-assisted molecular beam epitaxy on vicinal substrates. <i>Semiconductor Science and Technology</i> , 2015 , 30, 055012	1.8	18
37	N-Polar Deep Recess MISHEMTs With Record 2.9 W/mm at 94 GHz. <i>IEEE Electron Device Letters</i> , 2016 , 1-1	4.4	18
36	Development of Polycrystalline Diamond Compatible with the Latest N-Polar GaN mm-Wave Technology. <i>Crystal Growth and Design</i> , 2021 , 21, 2624-2632	3.5	14
35	Role of GaN cap layer for reference electrode free AlGaIn/GaN-based pH sensors. <i>Sensors and Actuators B: Chemical</i> , 2019 , 287, 250-257	8.5	13
34	An improved methodology for extracting interface state density at Si ₃ N ₄ /GaN. <i>Applied Physics Letters</i> , 2020 , 116, 022104	3.4	13
33	Analysis of MOCVD SiN _x Passivated N-Polar GaN MIS-HEMTs on Sapphire With High $f_{\text{max}} \cdot V_{\text{DS,Q}}$. <i>IEEE Electron Device Letters</i> , 2018 , 39, 409-412	4.4	13
32	Compositionally graded InGaN layers grown on vicinal N-face GaN substrates by plasma-assisted molecular beam epitaxy. <i>Journal of Crystal Growth</i> , 2017 , 465, 55-59	1.6	12
31	A Demonstration of Nitrogen Polar Gallium Nitride Current Aperture Vertical Electron Transistor. <i>IEEE Electron Device Letters</i> , 2019 , 40, 885-888	4.4	12

30	Interfacial N Vacancies in GaN/(Al,Ga)N/GaN Heterostructures. <i>Physical Review Applied</i> , 2020 , 13,	4.3	12
29	Observation of Hot Electron and Impact Ionization in N-Polar GaN MIS-HEMTs. <i>IEEE Electron Device Letters</i> , 2018 , 39, 1007-1010	4.4	12
28	Net negative fixed interface charge for Si ₃ N ₄ and SiO ₂ grown in situ on 000-1 N-polar GaN. <i>Applied Physics Letters</i> , 2019 , 115, 032103	3.4	11
27	Plasma-assisted molecular beam epitaxy growth diagram of InGa _N on (0001)Ga _N for the optimized synthesis of InGa _N compositional grades. <i>Physica Status Solidi (B): Basic Research</i> , 2016 , 253, 626-629	1.3	11
26	Optimization of a chlorine-based deep vertical etch of GaN demonstrating low damage and low roughness. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2016 , 34, 031303	2.9	11
25	High frequency N-polar GaN planar MIS-HEMTs on sapphire with high breakdown and low dispersion 2016 ,		10
24	Electron transport in N-polar GaN-based heterostructures. <i>Applied Physics Letters</i> , 2019 , 114, 162102	3.4	8
23	mm-Wave N-polar GaN MISHEMT with a self-aligned recessed gate exhibiting record 4.2 W/mm at 94 GHz on Sapphire 2016 ,		8
22	Growth of N-polar GaN by ammonia molecular beam epitaxy. <i>Journal of Crystal Growth</i> , 2018 , 481, 65-70	1.6	8
21	Improved properties of high-Al-composition AlGa _N /Ga _N high electron mobility transistor structures with thin Ga _N cap layers. <i>Japanese Journal of Applied Physics</i> , 2014 , 53, 095504	1.4	7
20	Bias-Dependent Electron Velocity Extracted From N-Polar GaN Deep Recess HEMTs. <i>IEEE Transactions on Electron Devices</i> , 2020 , 67, 1542-1546	2.9	6
19	Ultrathin InAs-channel MOSFETs on Si substrates 2015 ,		5
18	Observation of ID-VD Kink in N-Polar GaN MIS-HEMTs at Cryogenic Temperatures. <i>IEEE Electron Device Letters</i> , 2020 , 41, 345-348	4.4	5
17	Enhanced mobility in vertically scaled N-polar high-electron-mobility transistors using Ga _N /InGa _N composite channels. <i>Applied Physics Letters</i> , 2018 , 112, 073501	3.4	5
16	Characterization of N-polar AlN in Ga _N /AlN/(Al,Ga)N heterostructures grown by metal-organic chemical vapor deposition. <i>Semiconductor Science and Technology</i> , 2017 , 32, 115004	1.8	5
15	Design Space of III-N Hot Electron Transistors Using AlGa _N and InGa _N Polarization-Dipole Barriers. <i>IEEE Electron Device Letters</i> , 2015 , 36, 23-25	4.4	4
14	Flatband voltage stability and time to failure of MOCVD-grown SiO ₂ and Si ₃ N ₄ dielectrics on N-polar GaN. <i>Applied Physics Express</i> , 2019 , 12, 121001	2.4	4
13	Barrier height fluctuations in InGa _N polarization dipole diodes. <i>Applied Physics Letters</i> , 2015 , 107, 173503	3.4	4

12	pH-dependent surface properties of the gallium nitride - Solution interface mapped by surfactant adsorption. <i>Journal of Colloid and Interface Science</i> , 2019 , 556, 680-688	9.3	3
11	Discrete-Pulsed Current Time Method to Estimate Channel Thermal Resistance of GaN-Based Power Devices. <i>IEEE Transactions on Electron Devices</i> , 2018 , 65, 5301-5306	2.9	3
10	Evaluation of linearity at 30 GHz for N-polar GaN deep recess transistors with 10.3 W/mm of output power and 47.4% PAE. <i>Applied Physics Letters</i> , 2021 , 119, 072105	3.4	3
9	Vertical transport in isotype InAlN/GaN dipole induced diodes grown by molecular beam epitaxy. <i>Journal of Applied Physics</i> , 2017 , 121, 205702	2.5	2
8	Barrier reduction via implementation of InGa _N interlayer in wafer-bonded current aperture vertical electron transistors consisting of InGaAs channel and N-polar GaN drain. <i>Applied Physics Letters</i> , 2015 , 106, 023506	3.4	2
7	Measuring the signature of bias and temperature-dependent barrier heights in III-N materials using a hot electron transistor. <i>Semiconductor Science and Technology</i> , 2015 , 30, 105003	1.8	2
6	High-electron-mobility transistors with metal-organic chemical vapor deposition-regrown contacts for high voltage applications. <i>Semiconductor Science and Technology</i> , 2020 , 35, 124004	1.8	2
5	Common emitter operation of III-N HETs using AlGa _N and InGa _N polarization-dipole induced barriers 2014 ,		1
4	Virtual-Source Modeling of N-polar GaN MISHEMTS 2019 ,		1
3	pH-Dependent surface charge at the interfaces between aluminum gallium nitride (AlGa _N) and aqueous solution revealed by surfactant adsorption. <i>Journal of Colloid and Interface Science</i> , 2021 , 583, 331-339	9.3	1
2	Effects of surface oxidation on the pH-dependent surface charge of oxidized aluminum gallium nitride. <i>Journal of Colloid and Interface Science</i> , 2021 , 603, 604-614	9.3	1
1	Plasma-assisted molecular beam epitaxy growth diagram of InGa _N on (0001)Ga _N for the optimized synthesis of InGa _N compositional grades (Phys. Status Solidi B 4/2016). <i>Physica Status Solidi (B): Basic Research</i> , 2016 , 253, 792-792	1.3	