Haoran Li

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.

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	pH-Dependent surface charge at the interfaces between aluminum gallium nitride (AlGaN) and aqueous solution revealed by surfactant adsorption. *Journal of Colloid and Interface Science*, **2021**, 583, 331-339	9.3	1
46	Development of Polycrystalline Diamond Compatible with the Latest N-Polar GaN mm-Wave Technology. *Crystal Growth and Design*, **2021**, 21, 2624-2632	3.5	14
45	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. *Applied Physics Letters*, **2021**, 119, 072105	3.4	3
44	Effects of surface oxidation on the pH-dependent surface charge of oxidized aluminum gallium nitride. *Journal of Colloid and Interface Science*, **2021**, 603, 604-614	9.3	1
43	Bias-Dependent Electron Velocity Extracted From N-Polar GaN Deep Recess HEMTs. *IEEE Transactions on Electron Devices*, **2020**, 67, 1542-1546	2.9	6
42	Observation of ID-VD Kink in N-Polar GaN MIS-HEMTs at Cryogenic Temperatures. *IEEE Electron Device Letters*, **2020**, 41, 345-348	4.4	5
41	W-Band Power Performance of SiN-Passivated N-Polar GaN Deep Recess HEMTs. *IEEE Electron Device Letters*, **2020**, 41, 349-352	4.4	42
40	An improved methodology for extracting interface state density at Si3N4/GaN. *Applied Physics Letters*, **2020**, 116, 022104	3.4	13
39	Interfacial N Vacancies in GaN/(Al,Ga)N/GaN Heterostructures. *Physical Review Applied*, **2020**, 13,	4.3	12
38	High-electron-mobility transistors with metal-organic chemical vapor deposition-regrown contacts for high voltage applications. *Semiconductor Science and Technology*, **2020**, 35, 124004	1.8	2
37	A Demonstration of Nitrogen Polar Gallium Nitride Current Aperture Vertical Electron Transistor. *IEEE Electron Device Letters*, **2019**, 40, 885-888	4.4	12
36	Electron transport in N-polar GaN-based heterostructures. *Applied Physics Letters*, **2019**, 114, 162102	3.4	8
35	Role of GaN cap layer for reference electrode free AlGaN/GaN-based pH sensors. *Sensors and Actuators B: Chemical*, **2019**, 287, 250-257	8.5	13
34	Net negative fixed interface charge for Si3N4 and SiO2 grown in situ on 000-1 N-polar GaN. *Applied Physics Letters*, **2019**, 115, 032103	3.4	11
33	pH-dependent surface properties of the gallium nitride - Solution interface mapped by surfactant adsorption. *Journal of Colloid and Interface Science*, **2019**, 556, 680-688	9.3	3
32	Flatband voltage stability and time to failure of MOCVD-grown SiO2 and Si3N4 dielectrics on N-polar GaN. *Applied Physics Express*, **2019**, 12, 121001	2.4	4
31	Virtual-Source Modeling of N-polar GaN MISHEMTS **2019**,		1

(2016-2018)

30	Enhanced mobility in vertically scaled N-polar high-electron-mobility transistors using GaN/InGaN composite channels. *Applied Physics Letters*, **2018**, 112, 073501	3.4	5
29	Analysis of MOCVD SiNx Passivated N-Polar GaN MIS-HEMTs on Sapphire With High $f_{max}cdot V_{DS,Q}$. *IEEE Electron Device Letters*, **2018**, 39, 409-412	4.4	13
28	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. *IEEE Transactions on Electron Devices*, **2018**, 65, 45-50	2.9	98
27	880 V/ $2.7~text{m}Omegacdottext{cm}^{text{2}}$ MIS Gate Trench CAVET on Bulk GaN Substrates. *IEEE Electron Device Letters*, **2018**, 39, 863-865	4.4	54
26	Observation of Hot Electron and Impact Ionization in N-Polar GaN MIS-HEMTs. *IEEE Electron Device Letters*, **2018**, 39, 1007-1010	4.4	12
25	Growth of N-polar GaN by ammonia molecular beam epitaxy. *Journal of Crystal Growth*, **2018**, 481, 65-70	1.6	8
24	Discrete-Pulsed Current Time Method to Estimate Channel Thermal Resistance of GaN-Based Power Devices. *IEEE Transactions on Electron Devices*, **2018**, 65, 5301-5306	2.9	3
23	N-Polar GaN HEMTs Exhibiting Record Breakdown Voltage Over 2000 V and Low Dynamic On-Resistance. *IEEE Electron Device Letters*, **2018**, 39, 1014-1017	4.4	50
22	N-Polar GaN Cap MISHEMT With Record Power Density Exceeding 6.5 W/mm at 94 GHz. *IEEE Electron Device Letters*, **2017**, 38, 359-362	4.4	56
21	Compositionally graded InGaN layers grown on vicinal N-face GaN substrates by plasma-assisted molecular beam epitaxy. *Journal of Crystal Growth*, **2017**, 465, 55-59	1.6	12
20	Vertical transport in isotype InAlN/GaN dipole induced diodes grown by molecular beam epitaxy. *Journal of Applied Physics*, **2017**, 121, 205702	2.5	2
19	Characterization of N-polar AlN in GaN/AlN/(Al,Ga)N heterostructures grown by metal-organic chemical vapor deposition. *Semiconductor Science and Technology*, **2017**, 32, 115004	1.8	5
18	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
17	High frequency N-polar GaN planar MIS-HEMTs on sapphire with high breakdown and low dispersion **2016**,		10
16	N-Polar GaN MIS-HEMTs on Sapphire With High Combination of Power Gain Cutoff Frequency and Three-Terminal Breakdown Voltage. *IEEE Electron Device Letters*, **2016**, 37, 77-80	4.4	27
15	Plasma-assisted molecular beam epitaxy growth diagram of InGaN on (0001)GaN for the optimized synthesis of InGaN compositional grades. *Physica Status Solidi (B): Basic Research*, **2016**, 253, 626-629	1.3	11
14	Plasma-assisted molecular beam epitaxy growth diagram of InGaN on (0001)GaN for the optimized synthesis of InGaN compositional grades (Phys. Status Solidi B 4/2016). *Physica Status Solidi (B): Basic Research*, **2016**, 253, 792-792	1.3	
13	Optimization of a chlorine-based deep vertical etch of GaN demonstrating low damage and low roughness. *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*, **2016**, 34, 031303	2.9	11

12	N-Polar Deep Recess MISHEMTs With Record 2.9 W/mm at 94 GHz. *IEEE Electron Device Letters*, **2016**, 1-1	4.4	18
11	Design Space of III-N Hot Electron Transistors Using AlGaN and InGaN Polarization-Dipole Barriers. *IEEE Electron Device Letters*, **2015**, 36, 23-25	4.4	4
10	N-face GaN/AlN/GaN/InAlN and GaN/AlN/AlGaN/GaN/InAlN high-electron-mobility transistor structures grown by plasma-assisted molecular beam epitaxy on vicinal substrates. *Semiconductor Science and Technology*, **2015**, 30, 055012	1.8	18
9	Barrier reduction via implementation of InGaN interlayer in wafer-bonded current aperture vertical electron transistors consisting of InGaAs channel and N-polar GaN drain. *Applied Physics Letters*, **2015**, 106, 023506	3.4	2
8	Relaxedc-plane InGaN layers for the growth of strain-reduced InGaN quantum wells. *Semiconductor Science and Technology*, **2015**, 30, 105015	1.8	34
7	Ultrathin InAs-channel MOSFETs on Si substrates **2015**,		5
6	Measuring the signature of bias and temperature-dependent barrier heights in III-N materials using a hot electron transistor. *Semiconductor Science and Technology*, **2015**, 30, 105003	1.8	2
5	Barrier height fluctuations in InGaN polarization dipole diodes. *Applied Physics Letters*, **2015**, 107, 173503	3.4	4
4	Common emitter operation of III-N HETs using AlGaN and InGaN polarization-dipole induced barriers **2014**,		1
3	Improved properties of high-Al-composition AlGaN/GaN high electron mobility transistor structures with thin GaN cap layers. *Japanese Journal of Applied Physics*, **2014**, 53, 095504	1.4	7
2	Measurement of the hot electron mean free path and the momentum relaxation rate in GaN. *Applied Physics Letters*, **2014**, 105, 263506	3.4	23
1	Recent progress in metal-organic chemical vapor deposition of $left(000bar{1} right)$ N-polar group-III nitrides. *Semiconductor Science and Technology*, **2014**, 29, 113001	1.8	129