Qian Sun ??

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142 3,088 3.6 4.79 ext. papers ext. citations avg, IF L-index

#	Paper	IF	Citations
131	One-step hydrothermal process to prepare highly crystalline Fe3O4 nanoparticles with improved magnetic properties. <i>Materials Research Bulletin</i> , 2003 , 38, 1113-1118	5.1	161
130	Room-temperature continuous-wave electrically injected InGaN-based laser directly grown on Si. <i>Nature Photonics</i> , 2016 , 10, 595-599	33.9	151
129	Understanding nonpolar GaN growth through kinetic Wulff plots. <i>Journal of Applied Physics</i> , 2008 , 104, 093523	2.5	85
128	Room-temperature continuous-wave electrically pumped InGaN/GaN quantum well blue laser diode directly grown on Si. <i>Light: Science and Applications</i> , 2018 , 7, 13	16.7	73
127	Heteroepitaxy of AlGaN on bulk AlN substrates for deep ultraviolet light emitting diodes. <i>Applied Physics Letters</i> , 2007 , 91, 051116	3.4	70
126	Studies on High-Voltage GaN-on-Si MIS-HEMTs Using LPCVD Si3N4 as Gate Dielectric and Passivation Layer. <i>IEEE Transactions on Electron Devices</i> , 2016 , 63, 731-738	2.9	68
125	A conductivity-based selective etching for next generation GaN devices. <i>Physica Status Solidi (B):</i> Basic Research, 2010 , 247, 1713-1716	1.3	68
124	Morphological and microstructural evolution in the two-step growth of nonpolar a-plane GaN on r-plane sapphire. <i>Journal of Applied Physics</i> , 2009 , 106, 123519	2.5	67
123	Understanding and controlling heteroepitaxy with the kinetic Wulff plot: A case study with GaN. <i>Journal of Applied Physics</i> , 2011 , 110, 053517	2.5	66
122	Improving microstructural quality of semipolar (112 2) GaN on m-plane sapphire by a two-step growth process. <i>Applied Physics Letters</i> , 2009 , 95, 231904	3.4	62
121	Ultrathin-Barrier AlGaN/GaN Heterostructure: A Recess-Free Technology for Manufacturing High-Performance GaN-on-Si Power Devices. <i>IEEE Transactions on Electron Devices</i> , 2018 , 65, 207-214	2.9	61
120	Normally OFF GaN-on-Si MIS-HEMTs Fabricated With LPCVD-SiNx Passivation and High-Temperature Gate Recess. <i>IEEE Transactions on Electron Devices</i> , 2016 , 63, 614-619	2.9	60
119	Nitrogen-polar GaN growth evolution on c-plane sapphire. <i>Applied Physics Letters</i> , 2008 , 93, 131912	3.4	57
118	High Uniformity Normally-OFF GaN MIS-HEMTs Fabricated on Ultra-Thin-Barrier AlGaN/GaN Heterostructure. <i>IEEE Electron Device Letters</i> , 2016 , 37, 1617-1620	4.4	54
117	Using the kinetic Wulff plot to design and control nonpolar and semipolar GaN heteroepitaxy. <i>Semiconductor Science and Technology</i> , 2012 , 27, 024005	1.8	54
116	GaN-on-Si blue/white LEDs: epitaxy, chip, and package. <i>Journal of Semiconductors</i> , 2016 , 37, 044006	2.3	53
115	Improved hydrogen detection sensitivity in N-polar GaN Schottky diodes. <i>Applied Physics Letters</i> , 2009 , 94, 212108	3.4	48

114	The fabrication of large-area, free-standing GaN by a novel nanoetching process. <i>Nanotechnology</i> , 2011 , 22, 045603	3.4	48
113	Reduction of stacking fault density in m-plane GaN grown on SiC. <i>Applied Physics Letters</i> , 2008 , 93, 1119	0,44	48
112	Influence of dislocations on photoluminescence of InGaNGaN multiple quantum wells. <i>Applied Physics Letters</i> , 2005 , 87, 071908	3.4	46
111	N-face GaN growth on c-plane sapphire by metalorganic chemical vapor deposition. <i>Journal of Crystal Growth</i> , 2009 , 311, 2948-2952	1.6	44
110	Strain relaxation and dislocation reduction in AlGaN step-graded buffer for crack-free GaN on Si (111). <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2014 , 11, 437-441		43
109	Mechanical properties of nanoporous GaN and its application for separation and transfer of GaN thin films. <i>ACS Applied Materials & amp; Interfaces</i> , 2013 , 5, 11074-9	9.5	36
108	Effect of Controlled Growth Dynamics on the Microstructure of Nonpolara-Plane GaN Revealed by X-ray Diffraction. <i>Japanese Journal of Applied Physics</i> , 2009 , 48, 071002	1.4	35
107	Room-Temperature Electrically Injected AlGaN-Based near-Ultraviolet Laser Grown on Si. <i>ACS Photonics</i> , 2018 , 5, 699-704	6.3	31
106	On-Chip Integration of GaN-Based Laser, Modulator, and Photodetector Grown on Si. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2018 , 24, 1-5	3.8	31
105	Role of nonradiative recombination centers and extended defects in nonpolar GaN on light emission efficiency. <i>Applied Physics Letters</i> , 2011 , 98, 072104	3.4	30
104	Low-temperature growth of InN by MOCVD and its characterization. <i>Journal of Crystal Growth</i> , 2005 , 276, 13-18	1.6	29
103	A wireless, implantable optoelectrochemical probe for optogenetic stimulation and dopamine detection. <i>Microsystems and Nanoengineering</i> , 2020 , 6, 64	7.7	29
102	p-GaN Gate Enhancement-Mode HEMT Through a High Tolerance Self-Terminated Etching Process. <i>IEEE Journal of the Electron Devices Society</i> , 2017 , 5, 340-346	2.3	28
101	Microstructural evolution in m-plane GaN growth on m-plane SiC. Applied Physics Letters, 2008, 92, 0511	32 4	28
100	On-wafer fabrication of cavity mirrors for InGaN-based laser diode grown on Si. <i>Scientific Reports</i> , 2018 , 8, 7922	4.9	28
99	Normally-off HEMTs With Regrown p-GaN Gate and Low-Pressure Chemical Vapor Deposition SiNx Passivation by Using an AlN Pre-Layer. <i>IEEE Electron Device Letters</i> , 2019 , 40, 1495-1498	4.4	27
98	Lateral phase separation in AlGaN grown on GaN with a high-temperature AlN interlayer. <i>Applied Physics Letters</i> , 2005 , 87, 121914	3.4	27
97	Room-temperature electrically pumped InGaN-based microdisk laser grown on Si. <i>Optics Express</i> , 2018 , 26, 5043-5051	3.3	25

96	Classification of stacking faults and dislocations observed in nonpolar a-plane GaN epilayers using transmission electron microscopy. <i>Applied Surface Science</i> , 2012 , 258, 2522-2528	6.7	24
95	Self-terminated etching of GaN with a high selectivity over AlGaN under inductively coupled Cl 2 /N 2 /O 2 plasma with a low-energy ion bombardment. <i>Applied Surface Science</i> , 2017 , 420, 817-824	6.7	23
94	UVA light-emitting diode grown on Si substrate with enhanced electron and hole injections. <i>Optics Letters</i> , 2017 , 42, 4533-4536	3	23
93	Electrical properties and deep traps spectra of a-plane GaN films grown on r-plane sapphire. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2010, 166, 220-224	3.1	22
92	Hydrogen sensing of N-polar and Ga-polar GaN Schottky diodes. <i>Sensors and Actuators B: Chemical</i> , 2009 , 142, 175-178	8.5	20
91	GaN-based ultraviolet microdisk laser diode grown on Si. <i>Photonics Research</i> , 2019 , 7, B32	6	20
90	Off-state electrical breakdown of AlGaN/GaN/Ga(Al)N HEMT heterostructure grown on Si(111). <i>AIP Advances</i> , 2016 , 6, 035308	1.5	19
89	High efficient GaN-based laser diodes with tunnel junction. <i>Applied Physics Letters</i> , 2013 , 103, 043508	3.4	18
88	Growth evolution and microstructural characterization of semipolar (112 2) GaN selectively grown on etched r-plane sapphire. <i>Journal of Crystal Growth</i> , 2012 , 341, 27-33	1.6	18
87	High-Voltage and High-ION/IOFF Quasi-Vertical GaN-on-Si Schottky Barrier Diode With Argon-Implanted Termination. <i>IEEE Electron Device Letters</i> , 2021 , 42, 473-476	4.4	17
86	High \${F}_{{T}}\$ AlGa(In)N/GaN HEMTs Grown on Si With a Low Gate Leakage and a High ON/OFF Current Ratio. <i>IEEE Electron Device Letters</i> , 2018 , 39, 576-579	4.4	16
85	Surface and interface states of gallium-polar versus nitrogen-polar GaN: Impact of thin organic semiconductor overlayers. <i>Journal of Applied Physics</i> , 2010 , 107, 113707	2.5	16
84	Effect of NH3 flow rate on m-plane GaN growth on m-plane SiC by metalorganic chemical vapor deposition. <i>Journal of Crystal Growth</i> , 2009 , 311, 3824-3829	1.6	16
83	AlGaN-based Schottky barrier deep ultraviolet photodetector grown on Si substrate. <i>Optics Express</i> , 2020 , 28, 17188-17195	3.3	16
82	Effect of Thermal Cleaning Prior to p-GaN Gate Regrowth for Normally Off High-Electron-Mobility Transistors. <i>ACS Applied Materials & Acs Applied & Acs Ap</i>	9.5	15
81	High-power AlGaN-based near-ultraviolet light-emitting diodes grown on Si(111). <i>Applied Physics Express</i> , 2017 , 10, 072101	2.4	15
80	Recovery of p-GaN surface damage induced by dry etching for the formation of p-type Ohmic contact. <i>Applied Physics Express</i> , 2019 , 12, 055507	2.4	13
79	III-nitride semiconductor lasers grown on Si. <i>Progress in Quantum Electronics</i> , 2021 , 77, 100323	9.1	13

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78	transistors by photo-electrochemical gate recess etching in ionic liquid. <i>Applied Physics Express</i> , 2016 , 9, 084102	2.4	13
77	Monolithic integration of E/D-mode GaN MIS-HEMTs on ultrathin-barrier AlGaN/GaN heterostructure on Si substrates. <i>Applied Physics Express</i> , 2019 , 12, 024001	2.4	13
76	Effects of matrix layer composition on the structural and optical properties of self-organized InGaN quantum dots. <i>Journal of Applied Physics</i> , 2013 , 114, 093105	2.5	12
75	Properties of AlN film grown on Si (111). Journal of Crystal Growth, 2016, 435, 76-83	1.6	11
74	Effect of gate orientation on dc characteristics of Si-doped, nonpolar AlGaN/GaN metal-oxide semiconductor high electron mobility transistors. <i>Applied Physics Letters</i> , 2009 , 95, 082110	3.4	11
73	Spatial distribution of deep level defects in crack-free AlGaN grown on GaN with a high-temperature AlN interlayer. <i>Journal of Applied Physics</i> , 2006 , 100, 123101	2.5	11
72	Effects of grain size on the mosaic tilt and twist in InN films grown on GaN by metal-organic chemical vapor deposition. <i>Applied Physics Letters</i> , 2006 , 89, 092114	3.4	11
71	Investigation of InGaN/GaN laser degradation based on luminescence properties. <i>Journal of Applied Physics</i> , 2016 , 119, 213107	2.5	11
70	Light output improvement of GaN-based light-emitting diodes grown on Si (111) by a via-thin-film structure. <i>Journal of Semiconductors</i> , 2018 , 39, 044002	2.3	10
69	Stress evolution in AlN and GaN grown on Si(111): experiments and theoretical modeling. <i>Journal of Materials Science: Materials in Electronics</i> , 2016 , 27, 2004-2013	2.1	10
68	a-Axis GaN/AlN/AlGaN Core-Shell Heterojunction Microwires as Normally Off High Electron Mobility Transistors. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 41435-41442	9.5	10
67	Study on the thermal stability of InN by in-situ laser reflectance system. <i>Journal of Crystal Growth</i> , 2005 , 281, 310-317	1.6	10
66	Determination of carbon-related trap energy level in (Al)GaN buffers for high electron mobility transistors through a room-temperature approach. <i>Applied Physics Letters</i> , 2020 , 117, 263501	3.4	10
65	Wafer-scale crack-free 10 µm-thick GaN with a dislocation density of 5.8 ☐107 cm2 grown on Si. <i>Journal Physics D: Applied Physics</i> , 2019 , 52, 425102	3	9
64	Capture and emission mechanisms of defect states at interface between nitride semiconductor and gate oxides in GaN-based metal-oxide-semiconductor power transistors. <i>Journal of Applied Physics</i> , 2019 , 126, 164505	2.5	9
63	Surface striation, anisotropic in-plane strain, and degree of polarization in nonpolarm-plane GaN grown on SiC. <i>Journal Physics D: Applied Physics</i> , 2011 , 44, 375103	3	9
62	Optical emission characteristics of semipolar (1,1,bar{2},2) GaN light-emitting diodes grown on m-sapphire and stripe-etchedr-sapphire. <i>Semiconductor Science and Technology</i> , 2012 , 27, 024016	1.8	9
61	Electrical and luminescent properties and deep traps spectra of N-polar GaN films. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2010 , 166, 83-88	3.1	9

Continuous-wave electrically injected GaN-on-Si microdisk laser diodes. Optics Express, 2020, 28, 12201-12208 9 60 A 30 Mbps in-plane full-duplex light communication using a monolithic GaN photonic circuit. 1.8 59 Semiconductor Science and Technology, **2017**, 32, 075002 High-temperature AlN interlayer for crack-free AlGaN growth on GaN. Journal of Applied Physics, 58 8 2.5 2008, 104, 043516 UV LED arrays at 280 and 340 nm for spectroscopic biosensing. Physica Status Solidi (A) Applications 1.6 57 and Materials Science, 2007, 204, 2112-2116 Evolution of mosaic structure in InN grown by metalorganic chemical vapor deposition. Journal of 8 56 1.6 Crystal Growth, 2006, 293, 269-272 Performance improvement of InGaN-based laser grown on Si by suppressing point defects. Optics 8 55 3.3 Express, 2019, 27, 25943-25952 Reverse leakage and breakdown mechanisms of vertical GaN-on-Si Schottky barrier diodes with and 8 3.4 54 without implanted termination. Applied Physics Letters, 2021, 118, 243501 A Study of Efficiency Droop Phenomenon in GaN-Based Laser Diodes before Lasing. Materials, 2017 53 7 3.5 , 10, Nitride-organic hybrid heterostructures for possible novel optoelectronic devices: charge injection 52 7 and transport. Physica Status Solidi C: Current Topics in Solid State Physics, 2009, 6, 593-595 Crack-free high quality 2 fh-thick Al0.5Ga0.5N grown on a Si substrate with a superlattice 51 3.3 transition layer. CrystEngComm, 2020, 22, 1160-1165 Transfer-printed, tandem microscale light-emitting diodes for full-color displays. Proceedings of the 50 11.5 7 National Academy of Sciences of the United States of America, 2021, 118, AlGaN/GaN metal-insulator-semiconductor high electron mobility transistors with reduced leakage current and enhanced breakdown voltage using aluminum ion implantation. Applied Physics Letters, 49 3.4 7 2016, 108, 013507 48 GaN LEDs on Si Substrate. Solid State Lighting Technology and Application Series, 2019, 133-170 0.7 7 Influence of the carrier behaviors in p-GaN gate on the threshold voltage instability in the normally 47 3.4 off high electron mobility transistor. Applied Physics Letters, 2021, 119, 063501 Nitrogen-Implanted Guard Rings for 600-V Quasi-Vertical GaN-on-Si Schottky Barrier Diodes With a 46 2.9 7 BFOM of 0.26 GW/cm[] IEEE Transactions on Electron Devices, 2021, 1-5 Efficiency improvement of GaN-on-silicon thin-film light-emitting diodes with optimized via-like 1.8 6 45 n-electrodes. Semiconductor Science and Technology, 2017, 32, 075009 Highly linearly polarized white light emission from InGaN light-emitting diode with 6 44 2.4 nanograting-integrated fluorescent ceramics. Applied Physics Express, 2017, 10, 012101 Observation of oxide precipitates in InN nanostructures. Applied Physics Letters, 2007, 91, 234102 6 43 3.4

42	Heteroepitaxy of Nonpolar and Semipolar GaN. Springer Series in Materials Science, 2012, 1-27	0.9	6
41	Accurate surface band bending determination on Ga-polar n-type GaN films by fitting x-ray valence band photoemission spectrum. <i>AIP Advances</i> , 2019 , 9, 115106	1.5	6
40	Unintentional incorporation of Ga in the nominal AlN spacer of AllnGaN/AlN/GaN Heterostructure. <i>Journal Physics D: Applied Physics</i> , 2018 , 51, 035102	3	6
39	Effects of thickness on optical characteristics and strain distribution of thin-film GaN light-emitting diodes transferred to Si substrates. <i>Applied Physics Express</i> , 2016 , 9, 042101	2.4	5
38	InGaN-Based Quantum Well Superluminescent Diode Monolithically Grown on Si. <i>ACS Photonics</i> , 2019 , 6, 2104-2109	6.3	5
37	Gate Reliability and its Degradation Mechanism in the Normally OFF High-Electron-Mobility Transistors With Regrown p-GaN Gate. <i>IEEE Journal of Emerging and Selected Topics in Power Electronics</i> , 2021 , 9, 3715-3724	5.6	5
36	Thermal degradation of InGaN/GaN quantum wells in blue laser diode structure during the epitaxial growth 2017 ,		4
35	Mechanism of leakage of ion-implantation isolated AlGaN/GaN MIS-high electron mobility transistors on Si substrate. <i>Solid-State Electronics</i> , 2017 , 134, 39-45	1.7	4
34	Fabrication of AlGaN nanostructures by nanolithography on ultraviolet LEDs grown on Si substrates. <i>Nanotechnology</i> , 2019 , 30, 185201	3.4	4
33	Thermal characterization of electrically injected GaN-based microdisk lasers on Si. <i>Applied Physics Express</i> , 2020 , 13, 074002	2.4	4
32	A p-GaN-Gated Hybrid Anode Lateral Diode with a Thicker AlGaN Barrier Layer. <i>Physica Status Solidi</i> (A) Applications and Materials Science, 2020 , 217, 1900781	1.6	4
31	The Role of Growth-Pressure on the Determination of Anisotropy Properties in Nonpolarm-Plane GaN. <i>ECS Journal of Solid State Science and Technology</i> , 2012 , 1, R50-R53	2	4
30	Suppression of unintentional carbon incorporation in AlGaN-based near-ultraviolet light-emitting diode grown on Si. <i>Journal of Nanophotonics</i> , 2018 , 12, 1	1.1	4
29	Effects of Thickness of a Low-Temperature Buffer and Impurity Incorporation on the Characteristics of Nitrogen-polar GaN. <i>Nanoscale Research Letters</i> , 2016 , 11, 509	5	4
28	Effect of surface stoichiometry on the non-alloyed ohmic contact to N-face n-GaN. <i>Solid-State Electronics</i> , 2020 , 171, 107863	1.7	3
27	Improving the Current Spreading by Locally Modulating the Doping Type in the n-AlGaN Layer for AlGaN-Based Deep Ultraviolet Light-Emitting Diodes. <i>Nanoscale Research Letters</i> , 2019 , 14, 268	5	3
26	Preparation of GaN-on-Si based thin-film flip-chip LEDs. <i>Journal of Semiconductors</i> , 2013 , 34, 053006	2.3	3
25	Depth dependence of structural quality in InN grown by metalorganic chemical vapor deposition. <i>Materials Letters</i> , 2007 , 61, 516-519	3.3	3

24	Enhanced carrier confinement and radiative recombination in GaN-based lasers by tailoring first-barrier doping. <i>Optics Express</i> , 2020 , 28, 32124-32131	3.3	3
23	Interface Charge Effects on 2-D Electron Gas in Vertical-Scaled Ultrathin-Barrier AlGaN/GaN Heterostructure. <i>IEEE Transactions on Electron Devices</i> , 2021 , 68, 36-41	2.9	3
22	The abnormal aging phenomena in GaN-based near-ultraviolet laser diodes. <i>Journal Physics D: Applied Physics</i> , 2019 , 52, 275104	3	2
21	Nonpolar and semipolar GaN heteroepitaxy on sapphire for LED application 2010,		2
20	Narrow-Linewidth GaN-on-Si Laser Diode with Slot Gratings. <i>Nanomaterials</i> , 2021 , 11,	5.4	2
19	InGaN-Based Lasers with an Inverted Ridge Waveguide Heterogeneously Integrated on Si(100). <i>ACS Photonics</i> , 2020 , 7, 2636-2642	6.3	2
18	Degradation study of InGaN-based laser diodes grown on Si. <i>Journal Physics D: Applied Physics</i> , 2020 , 53, 395103	3	2
17	Effect of Si Doping on the Performance of GaN Schottky Barrier Ultraviolet Photodetector Grown on Si Substrate. <i>Photonics</i> , 2021 , 8, 28	2.2	2
16	A fixed cytometer chip for identification of cell populations and real-time monitoring of single-cell apoptosis under gradient UV radiation. <i>Microfluidics and Nanofluidics</i> , 2019 , 23, 1	2.8	1
15	Catalytic growth of highly crystalline polyaniline by copper under ambient conditions. <i>CrystEngComm</i> , 2018 , 20, 5119-5122	3.3	1
14	a-plane GaN hydride vapor phase epitaxy on a-plane GaN templates with and without use of TiN intermediate layers. <i>Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics</i> , 2010 , 28, 1039-1043	1.3	1
13	Growth of cubic InN on GaP(1 0 0) with GaN buffer by metalorganic chemical vapour deposition. <i>Journal Physics D: Applied Physics</i> , 2011 , 44, 285403	3	1
12	Influence of cracks generation on the structural and optical properties of GaN/Al0.55Ga0.45N multiple quantum wells. <i>Applied Surface Science</i> , 2006 , 252, 3043-3050	6.7	1
11	Identification of Semi-ON-state Current Collapse in AlGaN/GaN HEMTs by Drain Current Deep Level Transient Spectroscopy. <i>IEEE Electron Device Letters</i> , 2021 , 1-1	4.4	1
10	Self-terminated Gate Recessing with a Low Density of Interface States and High Uniformity for Enhancement-mode GaN HEMTs 2020 ,		1
9	An ultrathin-barrier AlGaN/GaN heterostructure: a recess-free technology for the fabrication and integration of GaN-based power devices and power-driven circuits. <i>Semiconductor Science and Technology</i> , 2021 , 36, 044002	1.8	1
8	Evidence of a strong perpendicular magnetic anisotropy in Au/Co/MgO/GaN heterostructures. <i>Nanoscale Advances</i> , 2019 , 1, 4466-4475	5.1	1
7	Electrically injected GaN-on-Si blue microdisk laser diodes <i>Optics Express</i> , 2022 , 30, 13039-13046	3.3	1

LIST OF PUBLICATIONS

6	GaN-Based Resonant-Cavity Light-Emitting Diodes Grown on Si Nanomaterials, 2021, 12,	5.4	1
5	Influence of traps on the gate reverse characteristics of normally-off high-electron-mobility transistors with regrown p-GaN gate. <i>Applied Physics Express</i> , 2021 , 14, 104005	2.4	O
4	Performance Enhancement of GaN-Based Laser Diodes With Prestrained Growth. <i>IEEE Photonics Technology Letters</i> , 2013 , 25, 2401-2404	2.2	
3	High sensitivity of hydrogen sensing through N-polar GaN Schottky diodes. <i>Materials Research Society Symposia Proceedings</i> , 2009 , 1202, 178		
2	GaN-based distributed feedback laser diodes grown on Si. <i>Journal Physics D: Applied Physics</i> , 2022 , 55, 195103	3	
1	Structure and luminescence of a-plane GaN on r-plane sapphire substrate modified by Si implantation*. <i>Chinese Physics B</i> , 2021 , 30, 056104	1.2	