

Xuanqi Huang

List of Publications by Year in descending order

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Version: 2024-02-01

50
papers

1,248
citations

279487

23
h-index

377514

34
g-index

50
all docs

50
docs citations

50
times ranked

1258
citing authors

#	ARTICLE	IF	CITATIONS
1	GaN-based solar cells degradation kinetics investigated at high temperature under high-intensity 405nm optical stress. , 2022, , .		1
2	Quantum efficiency of InGaN/GaN multi-quantum well solar cells: Experimental characterization and modeling. Journal of Applied Physics, 2022, 131, .	1.1	4
3	Supercontinuum Generation in High Order Waveguide Mode with near-Visible Pumping Using Aluminum Nitride Waveguides. ACS Photonics, 2021, 8, 1344-1352.	3.2	14
4	Selective area regrowth and doping for vertical gallium nitride power devices: Materials challenges and recent progress. Materials Today, 2021, 49, 296-323.	8.3	21
5	Temperature and intensity dependence of the open-circuit voltage of InGaN/GaN multi-quantum well solar cells. Solar Energy Materials and Solar Cells, 2021, 230, 111253.	3.0	10
6	High Voltage Vertical GaN p-n Diodes With Hydrogen-Plasma Based Guard Rings. IEEE Electron Device Letters, 2020, 41, 127-130.	2.2	49
7	Deep level transient spectroscopy investigation of ultra-wide bandgap (2̂,01) and (001) <i>̂</i>-Ga2O3. Journal of Applied Physics, 2020, 128, .	1.1	14
8	Demonstration of GaN-based metal-insulator-semiconductor junction by hydrogen plasma treatment. Applied Physics Letters, 2020, 117, .	1.5	7
9	GaN Vertical-Channel Junction Field-Effect Transistors With Regrown p-GaN by MOCVD. IEEE Transactions on Electron Devices, 2020, 67, 3972-3977.	1.6	25
10	Vertical GaN-on-GaN Schottky Barrier Diodes With Multi-Floating Metal Rings. IEEE Journal of the Electron Devices Society, 2020, 8, 857-863.	1.2	13
11	InGaN/GaN multi-quantum-well solar cells under high solar concentration and elevated temperatures for hybrid solar thermal-photovoltaic power plants. Progress in Photovoltaics: Research and Applications, 2020, 28, 1167-1174.	4.4	20
12	Anomalous carrier dynamics and localization effects in nonpolar m-plane InGaN/GaN quantum wells at high temperatures. Nano Energy, 2020, 76, 105013.	8.2	3
13	Reverse Leakage Analysis for As-Grown and Regrown Vertical GaN-on-GaN Schottky Barrier Diodes. IEEE Journal of the Electron Devices Society, 2020, 8, 74-83.	1.2	42
14	High-Temperature Polarization-Free III-Nitride Solar Cells with Self-Cooling Effects. ACS Photonics, 2019, 6, 2096-2103.	3.2	28
15	Demonstration of 1.27 kV Etch-Then-Regrow GaN $\{p\}$ - $\{n\}$ Junctions With Low Leakage for GaN Power Electronics. IEEE Electron Device Letters, 2019, 40, 1728-1731.	2.2	44
16	Temperature-dependent electrical properties of $\hat{2}$ -Ga ₂ O ₃ Schottky barrier diodes on highly doped single-crystal substrates. Journal of Semiconductors, 2019, 40, 012801.	2.0	30
17	Demonstration of mechanically exfoliated $\hat{2}$ -Ga2O3/GaN p-n heterojunction. Applied Physics Letters, 2019, 114, .	1.5	46
18	Implantation-and etching-free high voltage vertical GaN p-n diodes terminated by plasma-hydrogenated p-GaN: revealing the role of thermal annealing. Applied Physics Express, 2019, 12, 051015.	1.1	28

#	ARTICLE	IF	CITATIONS
19	Steep-slope field-effect transistors with AlGaIn/GaN HEMT and oxide-based threshold switching device. <i>Nanotechnology</i> , 2019, 30, 215201.	1.3	12
20	Demonstration of low loss Al^{2+} -Ga ₂ O ₃ optical waveguides in the UV–NIR spectra. <i>Applied Physics Letters</i> , 2019, 115, .	1.5	10
21	Threshold Switching and Memory Behaviors of Epitaxially Regrown GaN-on-GaN Vertical p-n Diodes With High Temperature Stability. <i>IEEE Electron Device Letters</i> , 2019, 40, 375-378.	2.2	20
22	Effect of Proton Radiation on Ultrawide Bandgap AlN Schottky Barrier Diodes. <i>IEEE Transactions on Nuclear Science</i> , 2019, 66, 91-96.	1.2	2
23	Study of crystalline defect induced optical scattering loss inside photonic waveguides in UV–visible spectral wavelengths using volume current method. <i>Optics Express</i> , 2019, 27, 17262.	1.7	3
24	Supercontinuum Generation from Dispersion Engineered AlN Nanophotonic Waveguide Arrays. , 2019, , .		0
25	Study of Crystalline Defect Induced Optical Scattering Loss inside AlN Waveguides in UV-Visible Spectral Wavelengths. , 2019, , .		0
26	Investigation of GaN-on-GaN vertical p-n diode with regrown p-GaN by metalorganic chemical vapor deposition. <i>Applied Physics Letters</i> , 2018, 113, .	1.5	52
27	Experimental demonstration of non-line-of-sight visible light communication with different reflecting materials using a GaN-based micro-LED and modified IEEE 802.11ac. <i>AIP Advances</i> , 2018, 8, .	0.6	13
28	Nonpolar vertical GaN-on-GaN p-n diodes grown on free-standing $(10\bar{1}0)$ m -plane GaN substrates. <i>Applied Physics Express</i> , 2018, 11, 111003.	1.1	13
29	High Performance Vertical GaN-on-GaN p-n Power Diodes With Hydrogen-Plasma-Based Edge Termination. <i>IEEE Electron Device Letters</i> , 2018, 39, 1018-1021.	2.2	49
30	Characterizations of the nonlinear optical properties for (010) and $(2\bar{1}01)$ beta-phase gallium oxide. <i>Optics Express</i> , 2018, 26, 3938.	1.7	33
31	Energy band engineering of InGaIn/GaN multi-quantum-well solar cells via AlGaIn electron- and hole-blocking layers. <i>Applied Physics Letters</i> , 2018, 113, . A Comparative Study on the Electrical Properties of Vertical $(\text{in-line-formula}; \text{tex-math}) T_j \text{ETQ}000 \text{rgBT} / \text{Overlock } 10 \text{Tf } 50 \text{2}$	1.5	29
32	$\text{in-line-formula}; \text{tex-math notation="LaTeX"} \eta \text{in-line-formula}; \text{tex-math} \text{-Ga}_{2\text{O}_3\text{-Schottky Barrier Diodes on EFG Single-Crystal Substrates. IEEE Transactions on Electron Devices, 2018, 65, 3507-3513.}$	1.6	74
33	Theoretical analysis of modulation doping effects on intersubband transition properties of semipolar AlGaIn/GaN quantum well. <i>Journal of Applied Physics</i> , 2017, 121, .	1.1	17
34	Nonpolar and semipolar InGaIn/GaN multiple-quantum-well solar cells with improved carrier collection efficiency. <i>Applied Physics Letters</i> , 2017, 110, .	1.5	36
35	Characterizations of nonlinear optical properties on GaN crystals in polar, nonpolar, and semipolar orientations. <i>Applied Physics Letters</i> , 2017, 110, .	1.5	24
36	Optical Cavity Effects in InGaIn Micro-Light-Emitting Diodes With Metallic Coating. <i>IEEE Photonics Journal</i> , 2017, 9, 1-8.	1.0	3

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37	Effect of Buffer Layer Design on Vertical GaN-on-GaN p-n and Schottky Power Diodes. IEEE Electron Device Letters, 2017, 38, 763-766.	2.2	46
38	Ultra-low turn-on voltage and on-resistance vertical GaN-on-GaN Schottky power diodes with high mobility double drift layers. Applied Physics Letters, 2017, 111, .	1.5	78
39	Demonstration of AlN Schottky Barrier Diodes With Blocking Voltage Over 1 kV. IEEE Electron Device Letters, 2017, 38, 1286-1289.	2.2	62
40	Fabrication and Characterization of Ultra-wide Bandgap AlN-Based Schottky Diodes on Sapphire by MOCVD. IEEE Journal of the Electron Devices Society, 2017, 5, 518-524.	1.2	19
41	InGaN-based solar cells for space applications. , 2017, , .		7
42	Reliability analysis of InGaN/GaN multi-quantum-well solar cells under thermal stress. Applied Physics Letters, 2017, 111, .	1.5	22
43	Active tracking system for visible light communication using a GaN-based micro-LED and NRZ-OOK. Optics Express, 2017, 25, 17971.	1.7	42
44	Low loss GaN waveguides at the visible spectral wavelengths for integrated photonics applications. Optics Express, 2017, 25, 31758.	1.7	37
45	Analysis of low efficiency droop of semipolar InGaN quantum well light-emitting diodes by modified rate equation with weak phase-space filling effect. AIP Advances, 2016, 6, .	0.6	30
46	Analysis of loss mechanisms in InGaN solar cells using a semi-analytical model. , 2016, , .		1
47	Crystal orientation dependent intersubband transition in semipolar AlGaIn/GaN single quantum well for optoelectronic applications. Journal of Applied Physics, 2016, 119, .	1.1	29
48	Analysis of loss mechanisms in InGaN solar cells using a semi-analytical model. Journal of Applied Physics, 2016, 119, 213101.	1.1	19
49	Optical properties of highly polarized InGaN light-emitting diodes modified by plasmonic metallic grating. Optics Express, 2016, 24, A856.	1.7	25
50	Discrete Li-occupation versus pseudo-continuous Na-occupation and their relationship with structural change behaviors in Fe ₂ (MoO ₄) ₃ . Scientific Reports, 2015, 5, 8810.	1.6	42