Wenshen Li

List of Publications by Year
in descending order

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Version: 2024-02-01

42 papers	1,652 citations	430442 18 h-index	552369 26 g-index
42 all docs	42 docs citations	42 times ranked	1112 citing authors

#	ARTICLE	IF	CITATIONS
1	Enhancement-Mode Ga₂O₃ Vertical Transistors With Breakdown Voltage >1 kV. IEEE Electron Device Letters, 2018, 39, 869-872.	2.2	241
2	Field-Plated Ga₂O₃ Trench Schottky Barrier Diodes With a BV²/$R_{ext{on,sp}}$ of up to 0.95 GW/cm². IEEE Electron Device Letters, 2020, 41, 107-110.	2.2	184
3	Î²-Gallium oxide power electronics. APL Materials, 2022, 10, .	2.2	184
4	Breakdown mechanism in 1 kA/cm2 and 960 V E-mode <i>Î²</i>-Ga2O3 vertical transistors. Applied Physics Letters, 2018, 113, .	1.5	128
5	1230â€‰V Î²-Ga2O3 trench Schottky barrier diodes with an ultra-low leakage current of <1 <i>Î¼</i>A/cm2. Applied Physics Letters, 2018, 113, .	1.5	94
6	Near-ideal reverse leakage current and practical maximum electric field in Î²-Ga2O3 Schottky barrier diodes. Applied Physics Letters, 2020, 116, .	1.5	86
7	Design and Realization of GaN Trench Junction-Barrier-Schottky-Diodes. IEEE Transactions on Electron Devices, 2017, 64, 1635-1641.	1.6	76
8	GaN HEMTs on Si With Regrown Contacts and Cutoff/Maximum Oscillation Frequencies of 250/204 GHz. IEEE Electron Device Letters, 2020, 41, 689-692.	2.2	69
9	1.1-kV Vertical GaN p-n Diodes With p-GaN Regrown by Molecular Beam Epitaxy. IEEE Electron Device Letters, 2017, 38, 1071-1074.	2.2	60
10	Fin-channel orientation dependence of forward conduction in kV-class Ga₂O₃ trench Schottky barrier diodes. Applied Physics Express, 2019, 12, 061007.	1.1	50
11	Single and multi-fin normally-off Ga₂O₃ vertical transistors with a breakdown voltage over 2.6 kV. , 2019, , .		50
12	Development of GaN Vertical Trench-MOSFET With MBE Regrown Channel. IEEE Transactions on Electron Devices, 2018, 65, 2558-2564.	1.6	46
13	2.44 kV Ga<inf>2</inf>O<inf>3</inf> vertical trench Schottky barrier diodes with very low reverse leakage current. , 2018, , .		39
14	Guiding Principles for Trench Schottky Barrier Diodes Based on Ultrawide Bandgap Semiconductors: A Case Study in Gaâ‚‚Oâ‚ƒ. IEEE Transactions on Electron Devices, 2020, 67, 3938-3947.	1.6	36
15	Activation of buried p-GaN in MOCVD-regrown vertical structures. Applied Physics Letters, 2018, 113, 062105.	1.5	35
16	1.6 kV Vertical Ga₂O₃ FinFETs With Source-Connected Field Plates and Normally-off Operation. , 2019, , .		31
17	Thermal stability of epitaxial <i>Î±</i>-Ga2O3 and (Al,Ga)2O3 layers on m-plane sapphire. Applied Physics Letters, 2021, 119, .	1.5	30
18	Thermionic emission or tunneling? The universal transition electric field for ideal Schottky reverse leakage current: A case study in <i>Î²</i> -Ga2O3. Applied Physics Letters, 2020, 117, .	1.5	24

#	Article	IF	Citations
19	Trapping and Detrapping Mechanisms in <i>Î²</i>-Gaâ‚‚Oâ‚ƒ Vertical FinFETs Investigated by Electro-Optical Measurements. IEEE Transactions on Electron Devices, 2020, 67, 3954-3959.	1.6	24
20	ON-Resistance of Ga₂O₃ Trench-MOS Schottky Barrier Diodes: Role of Sidewall Interface Trapping. IEEE Transactions on Electron Devices, 2021, 68, 2420-2426.	1.6	19
21	Realization of GaN PolarMOS using selective-area regrowth by MBE and its breakdown mechanisms. Japanese Journal of Applied Physics, 2019, 58, SCCD15.	0.8	18
22	Thermal design of multi-fin Ga2O3 vertical transistors. Applied Physics Letters, 2021, 119, .	1.5	17
23	1.5 kV Vertical Ga₂O₃ Trench-MIS Schottky Barrier Diodes. , 2018, , .		16
24	600 V GaN vertical V-trench MOSFET with MBE regrown channel. , 2017, , .		14
25	A unified thermionic and thermionic-field emission (TEâ€“TFE) model for ideal Schottky reverse-bias leakage current. Journal of Applied Physics, 2022, 131, .	1.1	11
26	Demonstration of avalanche capability in polarization-doped vertical GaN pn diodes: study of walkout due to residual carbon concentration. , 2018, , .		10
27	Breakdown Walkout in Polarization-Doped Vertical GaN Diodes. IEEE Transactions on Electron Devices, 2019, 66, 4597-4603.	1.6	9
28	Breakdown Mechanisms in <i>Î²</i>-Ga₂O₃ Trench-MOS Schottky-Barrier Diodes. IEEE Transactions on Electron Devices, 2022, 69, 75-81.	1.6	9
29	GaN vertical nanowire and fin power MISFETs. , 2017, , .		8
30	Degradation Mechanisms of GaNâ€Based Vertical Devices: A Review. Physica Status Solidi (A) Applications and Materials Science, 2020, 217, 1900750.	0.8	8
31	Very High Parallel-Plane Surface Electric Field of 4.3 MV/cm in Ga₂O₃ Schottky Barrier Diodes with PtO_x Contacts. , 2020, , .		8
32	Field-plated Ga₂O₃ Trench Schottky Barrier Diodes with a Record High Figure-of-merit of 0.78 GW/cm². , 2019, , .		5
33	Impact of Residual Carbon on Avalanche Voltage and Stability of Polarization-Induced Vertical GaN p-n Junction. IEEE Transactions on Electron Devices, 2020, 67, 3978-3982.	1.6	4
34	Advanced concepts in Ga2O3 power and RF devices. Semiconductors and Semimetals, 2021, 107, 23-47.	0.4	3
35	Distributed polarization-doped GaN pâ€“n diodes with near-unity ideality factor and avalanche breakdown voltage of 1.25 kV. Applied Physics Letters, 2022, 120, .	1.5	3
36	Enhancement of punch-through voltage in GaN with buried p-type layer utilizing polarization-induced doping. , 2018, , .		2

#	Article	IF	Citations
37	Barrier Height Stability and Reverse Leakage Mechanisms in Ni/Ga₂O₃ (001) Schottky Barrier Diodes. , 2019, , .		1
38	Recent Progress of GaN-Based Vertical Devices. ECS Meeting Abstracts, 2019, , .	0.0	0
39	(Invited) High-Voltage Î²-Ga2O3 vertical Power Diodes and Transistors with Fin Channels. ECS Meeting Abstracts, 2019, , .	0.0	0
40	Field-Effect Transistors 5. Springer Series in Materials Science, 2020, , 639-660.	0.4	0
41	(Invited) GaN Power Electronics and Associated Fundamental Limits. ECS Meeting Abstracts, 2020, MA2020-02, 1739-1739.	0.0	0
42	Photoelectric Generation Coefficient of Bâ€Gallium Oxide during Exposure to Highâ€Energy Ionizing Radiation. Physica Status Solidi (A) Applications and Materials Science, 0, , 2100700.	0.8	0