Jian-Dong Ye

List of Publications by Year in descending order

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147801 161849 3,629 120 31 54 citations h-index g-index papers 123 123 123 2997 docs citations times ranked citing authors all docs

#	Article	IF	CITATIONS
1	Review of gallium-oxide-based solar-blind ultraviolet photodetectors. Photonics Research, 2019, 7, 381.	7.0	391
2	Electroluminescent and transport mechanisms of n-ZnOâ^•p-Si heterojunctions. Applied Physics Letters, 2006, 88, 182112.	3.3	233
3	Solar-Blind Photodetector with High Avalanche Gains and Bias-Tunable Detecting Functionality Based on Metastable Phase α-Ga ₂ O ₃ /ZnO Isotype Heterostructures. ACS Applied Materials & Detection of the American Substitution of th	8.0	158
4	A 1.86-kV double-layered NiO/ <i>β</i> -Ga2O3 vertical p–n heterojunction diode. Applied Physics Letters, 2020, 117, .	3.3	136
5	Carbonized Bamboos as Excellent 3D Solar Vaporâ€Generation Devices. Advanced Materials Technologies, 2019, 4, 1800593.	5.8	107
6	Demonstration of the p-NiO _x /n-Ga ₂ O ₃ Heterojunction Gate FETs and Diodes With BV ² /R _{on,sp} Figures of Merit of 0.39 GW/cm ² and 1.38 GW/cm ² . IEEE Electron Device Letters, 2021, 42, 485-488.	3.9	86
7	Split Bull's Eye Shaped Aluminum Antenna for Plasmon-Enhanced Nanometer Scale Germanium Photodetector. Nano Letters, 2011, 11, 1289-1293.	9.1	80
8	1.37 kV/12 A NiO/ \hat{l}^2 -Ga ₂ O ₃ Heterojunction Diode With Nanosecond Reverse Recovery and Rugged Surge-Current Capability. IEEE Transactions on Power Electronics, 2021, 36, 12213-12217.	7.9	77
9	Gallium oxide-based solar-blind ultraviolet photodetectors. Semiconductor Science and Technology, 2020, 35, 023001.	2.0	73
10	\hat{l}^2 -Ga2O3 hetero-junction barrier Schottky diode with reverse leakage current modulation and BV2/Ron,sp value of 0.93 GW/cm2. Applied Physics Letters, 2021, 118, .	3.3	72
11	2.41 kV Vertical P-Nio/n-Ga ₂ O ₃ Heterojunction Diodes With a Record Baliga's Figure-of-Merit of 5.18 GW/cm ² . IEEE Transactions on Power Electronics, 2022, 37, 3743-3746.	7.9	72
12	$\hat{l}^2\text{-}\text{Ga}2\text{O}3$ vertical heterojunction barrier Schottky diodes terminated with p-NiO field limiting rings. Applied Physics Letters, 2021, 118, .	3.3	65
13	Two-dimensional electron gas in Zn-polar ZnMgO/ZnO heterostructure grown by metal-organic vapor phase epitaxy. Applied Physics Letters, 2010, 97, .	3.3	64
14	Band Alignment and Interface Recombination in NiO/ $\langle i \rangle \hat{l}^2 \langle i \rangle$ -Ga $\langle sub \rangle 2 \langle sub \rangle 0 \langle sub \rangle 3 \langle sub \rangle$ Type-II p-n Heterojunctions. IEEE Transactions on Electron Devices, 2020, 67, 3341-3347.	3.0	63
15	1.95-kV Beveled-Mesa NiO/ \hat{l}^2 -Ga ₂ O ₃ Heterojunction Diode With 98.5% Conversion Efficiency and Over Million-Times Overvoltage Ruggedness. IEEE Transactions on Power Electronics, 2022, 37, 1223-1227.	7.9	60
16	Carrier Transport and Gain Mechanisms in \$eta\$ –Ga ₂ O ₃ -Based Metal–Semiconductor–Metal Solar-Blind Schottky Photodetectors. IEEE Transactions on Electron Devices, 2019, 66, 2276-2281.	3.0	59
17	Deep-level defects in gallium oxide. Journal Physics D: Applied Physics, 2021, 54, 043002.	2.8	57
18	Toward emerging gallium oxide semiconductors: A roadmap. Fundamental Research, 2021, 1, 697-716.	3.3	56

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19	Highly Narrow-Band Polarization-Sensitive Solar-Blind Photodetectors Based on \hat{l}^2 -Ga $<$ sub $>$ 2 $<$ /sub $>$ 0 $<$ sub $>$ 3 $<$ /sub $>$ Single Crystals. ACS Applied Materials & Amp; Interfaces, 2019, 11, 7131-7137.	8.0	55
20	Origins of green band emission in high-temperature annealed N-doped ZnO. Journal of Luminescence, 2011, 131, 1189-1192.	3.1	51
21	Recent progress of the native defects and p-type doping of zinc oxide. Chinese Physics B, 2017, 26, 047702.	1.4	51
22	Raman-active Fröhlich optical phonon mode in arsenic implanted ZnO. Applied Physics Letters, 2009, 94, 011913.	3.3	49
23	Sustainable Solar Evaporation while Salt Accumulation. ACS Applied Materials & Samp; Interfaces, 2021, 13, 4935-4942.	8.0	46
24	Heteroepitaxial growth of thick <i>\hat{l}± </i> -Ga < sub > 2 O < sub > 3 film on sapphire (0001) by MIST-CVD technique. Journal of Semiconductors, 2019, 40, 012804.	3.7	45
25	Identification and modulation of electronic band structures of single-phase \hat{l}^2 -(AlxGa1 \hat{a} -'x)2O3 alloys grown by laser molecular beam epitaxy. Applied Physics Letters, 2018, 113, .	3.3	43
26	Localized surface plasmon enhanced Ga ₂ O ₃ solar blind photodetectors. Optics Express, 2020, 28, 5731.	3.4	42
27	Low density of interface trap states and temperature dependence study of Ga2O3 Schottky barrier diode with p-NiOx termination. Applied Physics Letters, 2022, 120, .	3.3	38
28	On the origin of dislocation generation and annihilation in <i>$\hat{l}\pm>$</i> -Ga2O3 epilayers on sapphire. Applied Physics Letters, 2019, 115, .	3.3	37
29	Tellurium assisted realization of p-type N-doped ZnO. Applied Physics Letters, 2010, 96, .	3.3	36
30	Magnesium ion-implantation-based gallium nitride p-i-n photodiode for visible-blind ultraviolet detection. Photonics Research, 2019, 7, B48.	7.0	36
31	Hybrid Light Emitters and UV Solarâ€Blind Avalanche Photodiodes based on Illâ€Nitride Semiconductors. Advanced Materials, 2020, 32, e1904354.	21.0	34
32	Vertically Emitting Indium Phosphide Nanowire Lasers. Nano Letters, 2018, 18, 3414-3420.	9.1	33
33	Nanoplasmonically Enhanced High-Performance Metastable Phase α-Ga ₂ O ₃ Solar-Blind Photodetectors. ACS Applied Materials & Solar-Blind Photodetectors.	8.0	31
34	Carbonized Treeâ€Like Furry Magnolia Fruitâ€Based Evaporator Replicating the Feat of Plant Transpiration. Global Challenges, 2019, 3, 1900040.	3.6	30
35	Two-dimensional electron gas related emissions in ZnMgO/ZnO heterostructures. Applied Physics Letters, 2011, 99, .	3.3	27
36	Transition of photoconductive and photovoltaic operation modes in amorphous Ga ₂ O ₃ -based solar-blind detectors tuned by oxygen vacancies. Chinese Physics B, 2019, 28, 028501.	1.4	26

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37	Band alignment and band bending at $\langle i \rangle \hat{l} \pm \langle i \rangle$ -Ga2O3/ZnO n-n isotype hetero-interface. Applied Physics Letters, 2019, 115, .	3.3	25
38	Influence of thermally diffused aluminum atoms from sapphire substrate on the properties of ZnO epilayers grown by metal-organic chemical vapor deposition. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2011, 29, .	2.1	24
39	Realization of p-type gallium nitride by magnesium ion implantation for vertical power devices. Scientific Reports, 2019, 9, 8796.	3.3	24
40	<i>In situ</i> heteroepitaxial construction and transport properties of lattice-matched <i>α</i> -lr2O3/ <i>α</i> -Ga2O3 p-n heterojunction. Applied Physics Letters, 2021, 118, .	3.3	24
41	Over 1.8 GW/cm2 beveled-mesa NiO/ <i>$^{\hat{1}^2}$</i> $^{\hat{1}^2}$ -Ga2O3 heterojunction diode with 800 V/10 A nanosecond switching capability. Applied Physics Letters, 2021, 119, .	3.3	24
42	Ellipsometric determination of anisotropic optical constants of single phase Ga2O3 thin films in its orthorhombic and monoclinic phases. Optical Materials, 2020, 102, 109807.	3.6	23
43	Majority and Minority Carrier Traps in NiO/ \hat{l}^2 -Ga ₂ O ₃ p ⁺ -n Heterojunction Diode. IEEE Transactions on Electron Devices, 2022, 69, 981-987.	3.0	23
44	Fast Speed Ga2O3 Solar-blind Schottky Photodiodes with Large Sensitive Area. IEEE Electron Device Letters, 2020, , 1-1.	3.9	22
45	Surfactant effect of arsenic doping on modification of ZnO (0001) growth kinetics. Applied Physics Letters, 2009, 95, 101905.	3.3	21
46	Electrically tunable terahertz metamaterials with embedded large-area transparent thin-film transistor arrays. Scientific Reports, 2016, 6, 23486.	3.3	21
47	Effects of Post Annealing on Electrical Performance of Polycrystalline Ga2O3 Photodetector on Sapphire. Nanoscale Research Letters, 2020, 15, 100.	5.7	21
48	Temperature-dependent photoluminescence of ZnO films codoped with tellurium and nitrogen. Journal of Applied Physics, 2012, 112, 103534.	2.5	20
49	Defect formation and thermal stability of H in high dose H implanted ZnO. Journal of Applied Physics, 2013, 114, 083111.	2.5	19
50	Identification of defect-related emissions in ZnO hybrid materials. Applied Physics Letters, 2015, 107, .	3.3	19
51	Zinc vacancy related emission in homoepitaxial N-doped ZnO microrods. Journal of Luminescence, 2015, 161, 293-299.	3.1	19
52	Highly efficient solar steam generation by hybrid plasmonic structured TiN/mesoporous anodized alumina membrane. Journal of Materials Research, 2018, 33, 3857-3869.	2.6	19
53	High-\${k}\$ HfO ₂ -Based AlGaN/GaN MIS-HEMTs With Y ₂ O ₃ Interfacial Layer for High Gate Controllability and Interface Quality. IEEE Journal of the Electron Devices Society, 2020, 8, 15-19.	2.1	19
54	70-νm-Body Ga ₂ O ₃ Schottky Barrier Diode With 1.48 K/W Thermal Resistance, 59 A Surge Current and 98.9% Conversion Efficiency. IEEE Electron Device Letters, 2022, 43, 773-776.	3.9	19

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55	Anion Engineering Enhanced Response Speed and Tunable Spectral Responsivity in Gallium-Oxynitrides-Based Ultraviolet Photodetectors. ACS Applied Electronic Materials, 2020, 2, 808-816.	4.3	18
56	Structural transition, subgap states, and carrier transport in anion-engineered zinc oxynitride nanocrystalline films. Applied Physics Letters, 2016, 109, .	3.3	17
57	Plasmon-enhanced photoelectrochemical water splitting by InGaN/GaN nano-photoanodes. Semiconductor Science and Technology, 2020, 35, 025017.	2.0	17
58	Spin-polarized Wide Electron Slabs in Functionally Graded Polar Oxide Heterostructures. Scientific Reports, 2012, 2, 533.	3.3	16
59	The suppression of zinc interstitial related shallow donors in Te-doped ZnO microrods. Journal of Alloys and Compounds, 2018, 735, 1232-1238.	5.5	16
60	Highly Enhanced Inductive Current Sustaining Capability and Avalanche Ruggedness in GaN p-i-n Diodes With Shallow Bevel Termination. IEEE Electron Device Letters, 2020, 41, 469-472.	3.9	16
61	Second-order surface-plasmon assisted responsivity enhancement in germanium nano-photodetectors with bull's eye antennas. Optics Express, 2014, 22, 15949.	3.4	15
62	A Terahertz Controlledâ€NOT Gate Based on Asymmetric Rotation of Polarization in Chiral Metamaterials. Advanced Optical Materials, 2017, 5, 1700108.	7.3	15
63	Sulfur regulation of boron doping and growth behavior for high-quality diamond in microwave plasma chemical vapor deposition. Applied Physics Letters, 2020, 117, .	3.3	15
64	Band Alignment and Enhanced Interfacial Conductivity Manipulated by Polarization in a Surfactant-Mediated Grown κ-Ga ₂ O ₃ /ln ₂ O ₃ Heterostructure. ACS Applied Electronic Materials, 2021, 3, 795-803.	4.3	15
65	Applications of AlGaN/GaN high electron mobility transistor-based sensors in water quality monitoring. Semiconductor Science and Technology, 2020, 35, 123001.	2.0	15
66	Demonstration of \hat{l}^2 -Gaâ,,Oâ, f Superjunction-Equivalent MOSFETs. IEEE Transactions on Electron Devices, 2022, 69, 2203-2209.	3.0	15
67	Spin-polarized two-dimensional electron gas in undoped MgxZn1â^xO/ZnO heterostructures. Applied Physics Letters, 2012, 100, 192105.	3.3	14
68	Nitrogen modulation of boron doping behavior for accessible n-type diamond. APL Materials, 2021, 9, .	5.1	14
69	A self-powered solar-blind photodetector based on polyaniline/⟨i⟩α⟨/i⟩-Ga2O3 p–n heterojunction. Applied Physics Letters, 2021, 119, .	3.3	14
70	High-Responsivity and Fast-Response Ultraviolet Phototransistors Based on Enhanced p-GaN/AlGaN/GaN HEMTs. ACS Photonics, 2022, 9, 2040-2045.	6.6	14
71	Anisotropy and in-plane polarization of low-symmetrical β-Ga2O3 single crystal in the deep ultraviolet band. Applied Surface Science, 2020, 527, 146648.	6.1	13
72	Enhanced Contactless Salt-Collecting Solar Desalination. ACS Applied Materials & Enhanced Samp; Interfaces, 2022, 14, 34151-34158.	8.0	13

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73	Identification and control of native defects in N-doped ZnO microrods. Optical Materials Express, 2016, 6, 2847.	3.0	12
74	Extreme absorption enhancement in ZnTe:O/ZnO intermediate band core-shell nanowires by interplay of dielectric resonance and plasmonic bowtie nanoantennas. Scientific Reports, 2017, 7, 7503.	3.3	12
75	The effect of oxygen annealing on characteristics of \hat{I}^2 -Ga2O3 solar-blind photodetectors on SiC substrate by ion-cutting process. Journal of Alloys and Compounds, 2021, 889, 161743.	5 . 5	12
76	Label-free fiber nanograting sensor for real-time in situ early monitoring of cellular apoptosis. Advanced Photonics, 2022, 4, .	11.8	12
77	Anomalous circular photogalvanic effect of the spin-polarized two-dimensional electron gas in Mg0.2Zn0.8O/ZnO heterostructures at room temperature. Applied Physics Letters, 2013, 102, .	3.3	11
78	Annealing in tellurium-nitrogen co-doped ZnO films: The roles of intrinsic zinc defects. Journal of Applied Physics, 2015, 117, 135304.	2.5	11
79	The roles of buffer layer thickness on the properties of the ZnO epitaxial films. Applied Surface Science, 2016, 388, 557-564.	6.1	11
80	Formation of V Zn -N O acceptors with the assistance of tellurium in nitrogen-doped ZnO films. Journal of Alloys and Compounds, 2017, 699, 484-488.	5 . 5	11
81	M-Plane α-Gaâ,,Oâ,f Solar-Blind Detector With Record-High Responsivity-Bandwidth Product and High-Temperature Operation Capability. IEEE Electron Device Letters, 2022, 43, 541-544.	3.9	11
82	Mutually beneficial doping of tellurium and nitrogen in ZnO films grown by metal-organic chemical vapor deposition. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2012, 30, .	2.1	10
83	Influence of oxygen precursors and annealing on Fe3O4 films grown on GaN templates by metal organic chemical vapor deposition. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2014, 32, 052801.	1.2	10
84	Distinct enhancement of sub-bandgap photoresponse through intermediate band in high dose implanted ZnTe:O alloys. Scientific Reports, 2017, 7, 44399.	3.3	10
85	Photo-assisted hysteresis of electronic transport for ZnO nanowire transistors. Nanotechnology, 2018, 29, 115204.	2.6	10
86	Field-Plated NiO/Ga ₂ O ₃ p-n Heterojunction Power Diodes With High-Temperature Thermal Stability and Near Unity Ideality Factors. IEEE Journal of the Electron Devices Society, 2021, 9, 1166-1171.	2.1	10
87	Raman probing of competitive laser heating and local recrystallization effect in ZnO nanocrystals. Optics Express, 2012, 20, 23281.	3.4	9
88	Temperature-dependent exciton-related transition energies mediated by carrier concentrations in unintentionally Al-doped ZnO films. Applied Physics Letters, 2013, 102, 221905.	3.3	9
89	The Luminescent Inhomogeneity and the Distribution of Zinc Vacancy-Related Acceptor-Like Defects in N-Doped ZnO Microrods. Nanoscale Research Letters, 2016, 11, 511.	5.7	9
90	Gate-first process compatible, high-quality <i>in situ</i> SiN _{<i>x</i>} for surface passivation and gate dielectrics in AlGaN/GaN MISHEMTs. Journal Physics D: Applied Physics, 2019, 52, 305105.	2.8	9

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91	Large bandgap tunability of GaN/ZnO pseudobinary alloys through combined engineering of anions and cations. Applied Physics Letters, 2019, 115, .	3.3	9
92	Polarizationâ€Independent Indium Phosphide Nanowire Photodetectors. Advanced Optical Materials, 2020, 8, 2000514.	7.3	9
93	NiO/AlGaN interface reconstruction and transport manipulation of p-NiO gated AlGaN/GaN HEMTs. Applied Physics Reviews, 2021, 8, .	11.3	9
94	Over 1200 V Normally-OFF p-NiO Gated AlGaN/GaN HEMTs on Si With a Small Threshold Voltage Shift. IEEE Electron Device Letters, 2022, 43, 268-271.	3.9	9
95	Optical fingerprints of donors and acceptors in high-quality NH_3-doped ZnO films. Optical Materials Express, 2017, 7, 1169.	3.0	8
96	Tailored Emission Properties of ZnTe/ZnTe:O/ZnO Core–Shell Nanowires Coupled with an Al Plasmonic Bowtie Antenna Array. ACS Nano, 2018, 12, 7327-7334.	14.6	8
97	1.26 W/mm Output Power Density at 10 GHz for Si ₃ N ₄ Passivated H-Terminated Diamond MOSFETs. IEEE Transactions on Electron Devices, 2021, 68, 5068-5072.	3.0	8
98	Unlocking the Single-Domain Heteroepitaxy of Orthorhombic κ-Ga ₂ O ₃ via Phase Engineering. ACS Applied Electronic Materials, 2022, 4, 461-468.	4.3	8
99	Band alignment and polarization engineering in \hat{l}^2 -Ga2O3/GaN ferroelectric heterojunction. Science China: Physics, Mechanics and Astronomy, 2022, 65, .	5.1	8
100	Gate-first AlGaN/GaN HEMT technology for enhanced threshold voltage stability based on MOCVD-grown <i>in situ</i> SiN _x . Journal Physics D: Applied Physics, 2021, 54, 015105.	2.8	7
101	Solution for Mass Production of High-Throughput Digital Microfluidic Chip Based on a-Si TFT with In-Pixel Boost Circuit. Micromachines, 2021, 12, 1199.	2.9	7
102	Vertical Field-Plated NiO/Ga2O3 Heterojunction Power Diodes., 2021,,.		6
103	Photoconductive and photovoltaic metal-semiconductor-metal ΰ-Ga ₂ O ₃ solar-blind detectors with high rejection ratios. Journal Physics D: Applied Physics, 2022, 55, 394003.	2.8	6
104	The study of electronic structure and absorption coefficient of ZnTe:O alloys: A GGA+U method. Computational Materials Science, 2015, 109, 225-230.	3.0	5
105	Tailoring of nitrogen-vacancy colour centers in diamond epilayers by <i>in situ</i> sulfur and nitrogen anion engineering. Journal Physics D: Applied Physics, 2020, 53, 075107.	2.8	5
106	Property manipulation through pulsed laser annealing in high dose Mg-implanted GaN. Journal of Applied Physics, 2020, 128, .	2.5	5
107	Dislocation dynamics in $\langle i \rangle \hat{l} \pm \langle i \rangle$ -Ga2O3 micropillars from selective-area epitaxy to epitaxial lateral overgrowth. Applied Physics Letters, 2022, 120, .	3.3	5
108	Comparative study of the effect of H2 addition on ZnO films grown by different zinc and oxygen precursors. Journal of Materials Research, 2015, 30, 935-945.	2.6	4

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109	Identification and tuning of zinc-site nitrogen-related complexes in ZnO material. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2018, 36, .	2.1	4
110	Toward facile broadband photodetectors based on self-assembled ZnO nanobridge/rubrene heterointerface. Nanotechnology, 2019, 30, 065202.	2.6	4
111	Misfit epitaxial strain manipulated transport properties in cubic In2O3 hetero-epilayers. Applied Physics Letters, 2020, 117, 102104.	3.3	4
112	Gate-Controlled NiO/Graphene/4H-SiC Double Schottky Barrier Heterojunction Based on a Metal-Oxide-Semiconductor Structure for Dual-Mode and Wide Range Ultraviolet Detection. ACS Applied Electronic Materials, 0, , .	4.3	4
113	Effect of the V/III ratio during buffer layer growth on the yellow and blue luminescence in undoped GaN epilayer. Science China: Physics, Mechanics and Astronomy, 2013, 56, 1694-1698.	5.1	3
114	Origin and transport properties of twoâ€dimensional electron gas at ZnMgO/ZnO interface grown by MOVPE. Physica Status Solidi C: Current Topics in Solid State Physics, 2013, 10, 1268-1271.	0.8	3
115	Low-threshold ultraviolet stimulated emissions from large-sized single crystalline ZnO transferable membranes. Optics Express, 2018, 26, 31965.	3.4	3
116	First Demonstration of RESURF and Superjunction $\tilde{A}\ddot{Y}$ - Ga ₂ O ₃ MOSFETs with p-NiO/n- Ga ₂ O ₃ Junctions., 2021,,.		3
117	Strain-driven phase manipulation of $\langle i \rangle \hat{l} \pm \langle i \rangle$ - and $\langle i \rangle \hat{l}^{\circ} \langle i \rangle$ -Ga2O3 by nanoepitaxial lateral overgrowth on embedded $\langle i \rangle \hat{l} \pm \langle i \rangle$ -In2O3 submicron dots. Applied Physics Letters, 2021, 119, .	3.3	2
118	Numerical and experimental comparative study of metal-organic chemical vapor deposition of ZnO. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2007, 25, 187-190.	2.1	1
119	Electrically tunable terahertz metamaterials with embedded large-area transparent thin-film transistor arrays. , 0, .		1
120	Chiral Metamaterials: A Terahertz Controlledâ€NOT Gate Based on Asymmetric Rotation of Polarization in Chiral Metamaterials (Advanced Optical Materials 18/2017). Advanced Optical Materials, 2017, 5, .	7.3	0