Wengliang Wang

List of Publications by Year
in descending order

48 papers	1,544 citations	257450 24 h-index	315739 38 g-index
48 all docs	48 docs citations	48 times ranked	1660 citing authors

#	Article	IF	Citations
1	GaN-based light-emitting diodes on various substrates: a critical review. Reports on Progress in Physics, 2016, 79, 056501.	20.1	236
2	Epitaxial growth of group III-nitride films by pulsed laser deposition and their use in the development of LED devices. Surface Science Reports, 2015, 70, 380-423.	7.2	125
3	2D AlN Layers Sandwiched Between Graphene and Si Substrates. Advanced Materials, 2019, 31, e1803448.	21.0	73
4	A Novel Approach for Achieving Highâ€Efficiency Photoelectrochemical Water Oxidation in InGaN Nanorods Grown on Si System: MXene Nanosheets as Multifunctional Interfacial Modifier. Advanced Functional Materials, 2020, 30, 1910479.	14.9	67
5	Growth and characterization of GaN-based LED wafers on La0.3Sr1.7AlTaO6 substrates. Journal of Materials Chemistry C, 2013, 1, 4070.	5.5	66
6	Lattice Structure and Bandgap Control of 2D GaN Grown on Graphene/Si Heterostructures. Small, 2019, 15, e1802995.	10.0	58
7	A Selfâ€Powered Highâ€Performance UV Photodetector Based on Coreâ€"Shell GaN/MoO_{3â€"}<i>_x</i> Nanorod Array Heterojunction. Advanced Optical Materials, 2020, 8, 2000197.	7.3	57
8	Modulating Surface/Interface Structure of Emerging InGaN Nanowires for Efficient Photoelectrochemical Water Splitting. Advanced Functional Materials, 2020, 30, 2005677.	14.9	51
9	Self-Integrated Hybrid Ultraviolet Photodetectors Based on the Vertically Aligned InGaN Nanorod Array Assembly on Graphene. ACS Applied Materials & Interfaces, 2019, 11, 13589-13597.	8.0	46
10	Largeâ€Size Ultrathin Î±â€Ga₂S₃ Nanosheets toward Highâ€Performance Photodetection. Advanced Functional Materials, 2021, 31, 2008307.	14.9	43
11	High-performance nonpolar <i>a</i>-plane GaN-based metalâ€"semiconductorâ€"metal UV photo-detectors fabricated on LaAlO₃ substrates. Journal of Materials Chemistry C, 2018, 6, 3417-3426.	5.5	40
12	A new approach to epitaxially grow high-quality GaN films on Si substrates: the combination of MBE and PLD. Scientific Reports, 2016, 6, 24448.	3.3	37
13	Defect effect on the performance of nonpolar GaN-based ultraviolet photodetectors. Applied Physics Letters, 2021, 118, .	3.3	37
14	Epitaxial growth of GaN films on unconventional oxide substrates. Journal of Materials Chemistry C, 2014, 2, 9342-9358.	5.5	36
15	A new system for achieving high-quality nonpolar m-plane GaN-based light-emitting diode wafers. Journal of Materials Chemistry C, 2014, 2, 4112-4116.	5.5	33
16	High responsivity and low dark current nonpolar GaN-based ultraviolet photo-detectors. Journal of Materials Chemistry C, 2018, 6, 6641-6646.	5.5	33
17	Formate-assisted analytical pyrolysis of kraft lignin to phenols. Bioresource Technology, 2019, 278, 464-467.	9.6	33
18	Growth of high-quality AlN epitaxial film by optimizing the Si substrate surface. Applied Surface Science, 2018, 435, 163-169.	6.1	32

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19	Highly Efficient InGaN Nanorods Photoelectrode by Constructing Zâ€scheme Charge Transfer System for Unbiased Water Splitting. Small, 2021, 17, e2006666.	10.0	32
20	Performance improvement of GaN-based light-emitting diodes grown on Si(111) substrates by controlling the reactor pressure for the GaN nucleation layer growth. Journal of Materials Chemistry C, 2015, 3, 1484-1490.	5.5	31
21	High-performance vertical GaN-based near-ultraviolet light-emitting diodes on Si substrates. Journal of Materials Chemistry C, 2018, 6, 11255-11260.	5.5	31
22	Nucleation layer design for growth of a high-quality AlN epitaxial film on a Si(111) substrate. CrystEngComm, 2018, 20, 1483-1490.	2.6	30
23	Stress and dislocation control of GaN epitaxial films grown on Si substrates and their application in high-performance light-emitting diodes. Journal of Alloys and Compounds, 2019, 771, 1000-1008.	5.5	30
24	High-efficiency near-UV light-emitting diodes on Si substrates with InGaN/GaN/AlGaN/GaN multiple quantum wells. Journal of Materials Chemistry C, 2020, 8, 883-888.	5.5	27
25	Electronic engineering of transition metal Zn-doped InGaN nanorods arrays for photoelectrochemical water splitting. Journal of Power Sources, 2020, 450, 227578.	7.8	25
26	High-efficiency vertical-structure GaN-based light-emitting diodes on Si substrates. Journal of Materials Chemistry C, 2018, 6, 1642-1650.	5.5	22
27	Epitaxial growth of high quality AlN films on Si substrates. Materials Letters, 2016, 182, 277-280.	2.6	19
28	Two-dimensional group-III nitrides and devices: a critical review. Reports on Progress in Physics, 2021, 84, 086501.	20.1	19
29	Waferâ€Scale InN/In₂S₃ Coreâ€"Shell Nanorod Array for Ultrafast Selfâ€Powered Photodetection. Advanced Functional Materials, 2022, 32, .	14.9	18
30	Air-stable MXene/GaAs heterojunction solar cells with a high initial efficiency of 9.69%. Journal of Materials Chemistry A, 2021, 9, 16160-16168.	10.3	17
31	Effect of residual stress on the microstructure of GaN epitaxial films grown by pulsed laser deposition. Applied Surface Science, 2016, 369, 414-421.	6.1	16
32	395 nm GaN-based near-ultraviolet light-emitting diodes on Si substrates with a high wall-plug efficiency of 520%@350 mA. Optics Express, 2019, 27, 7447.	3.4	16
33	Low-temperature growth of high-quality a-plane GaN epitaxial films on lattice-matched LaAlO3 substrates. Vacuum, 2020, 182, 109687.	3.5	10
34	GaN Nanowire/Nb-Doped MoS₂ Nanoflake Heterostructures for Fast UVâ€"Visible Photodetectors. ACS Applied Nano Materials, 2022, 5, 4515-4523.	5.0	10
35	Epitaxial growth of nonpolar GaN films on r-plane sapphire substrates by pulsed laser deposition. Materials Science in Semiconductor Processing, 2016, 43, 82-89.	4.0	9
36	Performance-improved vertical GaN-based light-emitting diodes on Si substrates through designing the epitaxial structure. CrystEngComm, 2018, 20, 4685-4693.	2.6	9

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37	Growth mechanisms of GaN epitaxial films grown on ex situ low-temperature AlN templates on Si substrates by the combination methods of PLD and MOCVD. Journal of Alloys and Compounds, 2017, 718, 28-35.	5.5	8
38	Recent progress in III-nitride nanosheets: properties, materials and applications. Semiconductor Science and Technology, 2021, 36, 123002.	2.0	8
39	Effect of growth temperature on the properties of GaN epitaxial films grown on magnesium aluminate scandium oxide substrates by pulsed laser deposition. Materials Letters, 2016, 183, 382-385.	2.6	7
40	Defect-related anisotropic surface micro-structures of nonpolar <i>a</i>-plane GaN epitaxial films. CrystEngComm, 2018, 20, 1198-1204.	2.6	7
41	Dislocation density control of GaN epitaxial film and its photodetector. Vacuum, 2022, 197, 110800.	3.5	7
42	High-Performance GaN-Based LEDs on Si Substrates: The Utility of <italic>Ex Situ</italic> Low-Temperature AlN Template With Optimal Thickness. IEEE Transactions on Electron Devices, 2017, 64, 4540-4546.	3.0	6
43	Large-scale <i>m</i>-GeS2 grown on GaN for self-powered ultrafast UV photodetection. Applied Physics Letters, 2022, 120, .	3.3	6
44	Polarity control of GaN epitaxial films grown on LiGaO₂(001) substrates and its mechanism. Physical Chemistry Chemical Physics, 2017, 19, 21467-21473.	2.8	5
45	High-speed graphene/InGaN heterojunction photodetectors for potential application in visible light communication. Optics Express, 2022, 30, 3903.	3.4	5
46	High-quality nonpolara-plane GaN epitaxial films grown onr-plane sapphire substrates by the combination of pulsed laser deposition and metalâ€“organic chemical vapor deposition. Japanese Journal of Applied Physics, 2018, 57, 051001.	1.5	4
47	High responsivity and high speed InGaN-based blue-light photodetectors on Si substrates. RSC Advances, 2021, 11, 25079-25083.	3.6	4
48	Design of Wide-Bottomed Patterned Sapphire Substrates for Performance Improvement of GaN-Based Light-Emitting Diodes. ECS Journal of Solid State Science and Technology, 2014, 3, R200-R206.	1.8	3