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	Dislocation density control of GaN epitaxial film and its photodetector. Vacuum, 2022, 197, 110800.	3.5	7
2	High-speed graphene/InGaN heterojunction photodetectors for potential application in visible light communication. Optics Express, 2022, 30, 3903.	3.4	5
3	Large-scale <i>m</i>-GeS2 grown on GaN for self-powered ultrafast UV photodetection. Applied Physics Letters, 2022, 120, .	3.3	6
4	GaN Nanowire/Nb-Doped MoS₂ Nanoflake Heterostructures for Fast UVâ€“Visible Photodetectors. ACS Applied Nano Materials, 2022, 5, 4515-4523.	5.0	10
5	Waferâ€Scale InN/In₂S₃ Coreâ€“Shell Nanorod Array for Ultrafast Selfâ€Powered Photodetection. Advanced Functional Materials, 2022, 32, .	14.9	18
6	Largeâ€Size Ultrathin Î±â€Ga₂S₃ Nanosheets toward Highâ€Performance Photodetection. Advanced Functional Materials, 2021, 31, 2008307.	14.9	43
7	Highly Efficient InGaN Nanorods Photoelectrode by Constructing Zâ€scheme Charge Transfer System for Unbiased Water Splitting. Small, 2021, 17, e2006666.	10.0	32
8	High responsivity and high speed InGaN-based blue-light photodetectors on Si substrates. RSC Advances, 2021, 11, 25079-25083.	3.6	4
9	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
10	Defect effect on the performance of nonpolar GaN-based ultraviolet photodetectors. Applied Physics Letters, 2021, 118, .	3.3	37
11	Two-dimensional group-III nitrides and devices: a critical review. Reports on Progress in Physics, 2021, 84, 086501.	20.1	19
12	Recent progress in III-nitride nanosheets: properties, materials and applications. Semiconductor Science and Technology, 2021, 36, 123002.	2.0	8
13	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
14	Electronic engineering of transition metal Zn-doped InGaN nanorods arrays for photoelectrochemical water splitting. Journal of Power Sources, 2020, 450, 227578.	7.8	25
15	Low-temperature growth of high-quality a-plane GaN epitaxial films on lattice-matched LaAlO3 substrates. Vacuum, 2020, 182, 109687.	3.5	10
16	Modulating Surface/Interface Structure of Emerging InGaN Nanowires for Efficient Photoelectrochemical Water Splitting. Advanced Functional Materials, 2020, 30, 2005677.	14.9	51
17	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
18	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

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19	Formate-assisted analytical pyrolysis of kraft lignin to phenols. Bioresource Technology, 2019, 278, 464-467.	9.6	33
20	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
21	Lattice Structure and Bandgap Control of 2D GaN Grown on Graphene/Si Heterostructures. Small, 2019, 15, e1802995.	10.0	58
22	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
23	2D AlN Layers Sandwiched Between Graphene and Si Substrates. Advanced Materials, 2019, 31, e1803448.	21.0	73
24	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
25	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
26	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
27	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
28	High-efficiency vertical-structure GaN-based light-emitting diodes on Si substrates. Journal of Materials Chemistry C, 2018, 6, 1642-1650.	5.5	22
29	Defect-related anisotropic surface micro-structures of nonpolar <i>a</i>-plane GaN epitaxial films. CrystEngComm, 2018, 20, 1198-1204.	2.6	7
30	Growth of high-quality AlN epitaxial film by optimizing the Si substrate surface. Applied Surface Science, 2018, 435, 163-169.	6.1	32
31	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
32	Performance-improved vertical GaN-based light-emitting diodes on Si substrates through designing the epitaxial structure. CrystEngComm, 2018, 20, 4685-4693.	2.6	9
33	High responsivity and low dark current nonpolar GaN-based ultraviolet photo-detectors. Journal of Materials Chemistry C, 2018, 6, 6641-6646.	5.5	33
34	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
35	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
36	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

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37	Epitaxial growth of high quality AlN films on Si substrates. Materials Letters, 2016, 182, 277-280.	2.6	19
38	GaN-based light-emitting diodes on various substrates: a critical review. Reports on Progress in Physics, 2016, 79, 056501.	20.1	236
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	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
41	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
42	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
43	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
44	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
45	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
46	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
47	Epitaxial growth of GaN films on unconventional oxide substrates. Journal of Materials Chemistry C, 2014, 2, 9342-9358.	5.5	36
48	Growth and characterization of GaN-based LED wafers on La0.3Sr1.7AlTaO6 substrates. Journal of Materials Chemistry C, 2013, 1, 4070.	5.5	66