Tao Wang

List of Publications by Year
in descending order

95 papers	2,096 citations	218677 26 h-index	276875 41 g-index
95 all docs	95 docs citations	95 times ranked	1780 citing authors

#	Article	IF	Citations
1	Lattice Polarity Manipulation of Quasiâ€vdW Epitaxial GaN Films on Graphene Through Interface Atomic Configuration. Advanced Materials, 2022, 34, e2106814.	21.0	19
2	Ga₂O₃/GaN Heterostructural Ultraviolet Photodetectors with Exciton-Dominated Ultranarrow Response. ACS Applied Electronic Materials, 2022, 4, 188-196.	4.3	19
3	Nearly Lattice-Matched GaN Distributed Bragg Reflectors with Enhanced Performance. Materials, 2022, 15, 3536.	2.9	3
4	A Simple Approach to Achieving Ultrasmall III-Nitride Microlight-Emitting Diodes with Red Emission. ACS Applied Electronic Materials, 2022, 4, 2787-2792.	4.3	8
5	Simple Approach to Mitigate the Emission Wavelength Instability of III-Nitride Î¼LED Arrays. ACS Photonics, 2022, 9, 2073-2078.	6.6	8
6	Study of the Luminescence Decay of a Semipolar Green Light-Emitting Diode for Visible Light Communications by Time-Resolved Electroluminescence. ACS Photonics, 2022, 9, 2378-2384.	6.6	15
7	Direct Epitaxial Approach to Achieve a Monolithic On-Chip Integration of a HEMT and a Single Micro-LED with a High-Modulation Bandwidth. ACS Applied Electronic Materials, 2021, 3, 445-450.	4.3	24
8	Monolithically Integrated Î¼ LEDs/HEMTs Microdisplay on a Single Chip by a Direct Epitaxial Approach. Advanced Materials Technologies, 2021, 6, 2100214.	5.8	8
9	Long-Wavelength Semipolar (11â€“22) InGaN/GaN LEDs with Multi-Gb/s Data Transmission Rates for VLC. ACS Applied Electronic Materials, 2021, 3, 4236-4242.	4.3	10
10	Influence of micro-patterning of the growth template on defect reduction and optical properties of non-polar (112Ë‰0) GaN. Journal Physics D: Applied Physics, 2021, 54, 025107.	2.8	3
11	Large negative thermal quenching of yellow luminescence in non-polar InGaN/GaN quantum wells. Journal of Applied Physics, 2021, 130, 205704.	2.5	5
12	Semiâ€Polar InGaNâ€Based Green Lightâ€Emitting Diodes Grown on Silicon. Physica Status Solidi (A) Applications and Materials Science, 2020, 217, 1900654.	1.8	7
13	High Modulation Bandwidth of Semipolar (11â€“22) InGaN/GaN LEDs with Long Wavelength Emission. ACS Applied Electronic Materials, 2020, 2, 2363-2368.	4.3	23
14	Optical polarization properties of (11â€“22) semi-polar InGaN LEDs with a wide spectral range. Scientific Reports, 2020, 10, 7191.	3.3	4
15	Influence of an InGaN superlattice pre-layer on the performance of semi-polar (11â€“22) green LEDs grown on silicon. Scientific Reports, 2020, 10, 12650.	3.3	4
16	Advances in electron channelling contrast imaging and electron backscatter diffraction for imaging and analysis of structural defects in the scanning electron microscope. IOP Conference Series: Materials Science and Engineering, 2020, 891, 012023.	0.6	0
17	Nonpolar (112Ì…0) GaN Metalâ€“Semiconductorâ€“Metal Photodetectors with Superior Performance on Silicon. ACS Applied Materials & Interfaces, 2020, 12, 25031-25036.	8.0	19
18	Ultrasmall, Ultracompact and Ultrahigh Efficient InGaN Micro Light Emitting Diodes (Î¼LEDs) with Narrow Spectral Line Width. ACS Nano, 2020, 14, 6906-6911.	14.6	39

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19	InGaN Nanohole Arrays Coated by Lead Halide Perovskite Nanocrystals for Solid-State Lighting. ACS Applied Nano Materials, 2020, 3, 2167-2175.	5.0	9
20	Exploring an Approach toward the Intrinsic Limits of GaN Electronics. ACS Applied Materials & Interfaces, 2020, 12, 12949-12954.	8.0	14
21	Structural and luminescence imaging and characterisation of semiconductors in the scanning electron microscope. Semiconductor Science and Technology, 2020, 35, 054001.	2.0	7
22	A Direct Epitaxial Approach To Achieving Ultrasmall and Ultrabright InGaN Micro Light-Emitting Diodes (Î¼LEDs). ACS Photonics, 2020, 7, 411-415.	6.6	40
23	Optical and polarization properties of nonpolar InGaN-based light-emitting diodes grown on micro-rod templates. Scientific Reports, 2019, 9, 9770.	3.3	8
24	Confocal photoluminescence investigation to identify basal stacking faultâ€™s role in the optical properties of semi-polar InGaN/GaN lighting emitting diodes. Scientific Reports, 2019, 9, 9735.	3.3	3
25	Determining GaN Nanowire Polarity and its Influence on Light Emission in the Scanning Electron Microscope. Nano Letters, 2019, 19, 3863-3870.	9.1	14
26	Overgrowth and characterization of (11-22) semi-polar GaN on (113) silicon with a two-step method. Semiconductor Science and Technology, 2019, 34, 045012.	2.0	5
27	Ultra-Energy-Efficient Photoelectrode Using Microstriped GaN on Si. ACS Photonics, 2019, 6, 1302-1306.	6.6	4
28	Monolithically integrated white light LEDs on (11â€“22) semi-polar GaN templates. Scientific Reports, 2019, 9, 1383.	3.3	14
29	Monolithic multiple colour emission from InGaN grown on patterned non-polar GaN. Scientific Reports, 2019, 9, 986.	3.3	6
30	Electrically Injected Hybrid Organic/Inorganic III-Nitride White Light-Emitting Diodes with Nonradiative FÃ¶rster Resonance Energy Transfer. ACS Photonics, 2018, 5, 642-647.	6.6	15
31	Heavily tin-doped indium oxide nano-pyramids as high-performance gas sensor. AIP Advances, 2018, 8, .	1.3	3
32	Non-polar (11-20) GaN grown on sapphire with double overgrowth on micro-rod/stripe templates. Semiconductor Science and Technology, 2018, 33, 125023.	2.0	5
33	Strain Analysis of GaN HEMTs on (111) Silicon with Two Transitional AlxGa1â^'xN Layers. Materials, 2018, 11, 1968.	2.9	10
34	Controllable Uniform Green Light Emitters Enabled by Circular HEMT-LED Devices. IEEE Photonics Journal, 2018, 10, 1-7.	2.0	7
35	Overgrowth and strain investigation of (11â€“20) non-polar GaN on patterned templates on sapphire. Scientific Reports, 2018, 8, 9898.	3.3	20
36	Polarized white light from hybrid organic/III-nitrides grating structures. Scientific Reports, 2017, 7, 39677.	3.3	10

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37	Monolithically multi-color lasing from an InGaN microdisk on a Si substrate. Scientific Reports, 2017, 7, 10086.	3.3	20
38	Stimulated emission from semi-polar (11-22) GaN overgrown on sapphire. AIP Advances, 2017, 7, .	1.3	2
39	Porosity-enhanced solar powered hydrogen generation in GaN photoelectrodes. Applied Physics Letters, 2017, 111, .	3.3	19
40	Optical properties and resonant cavity modes in axial InGaN/GaN nanotube microcavities. Optics Express, 2017, 25, 28246.	3.4	22
41	Microstructure investigation of semi-polar (11-22) GaN overgrown on differently designed micro-rod array templates. Applied Physics Letters, 2016, 109, .	3.3	18
42	Topical Review: Development of overgrown semi-polar GaN for high efficiency green/yellow emission. Semiconductor Science and Technology, 2016, 31, 093003.	2.0	87
43	Defect reduction in overgrown semi-polar (11-22) GaN on a regularly arrayed micro-rod array template. AIP Advances, 2016, 6, 025201.	1.3	15
44	Semiâ€polar (11â€22) GaN grown on patterned (113) Si substrate. Physica Status Solidi C: Current Topics in Solid State Physics, 2016, 13, 190-194.	0.8	10
45	Enhanced non-radiative energy transfer in hybrid III-nitride structures. Applied Physics Letters, 2015, 107, 121108.	3.3	5
46	(11-22) semipolar InGaN emitters from green to amber on overgrown GaN on micro-rod templates. Applied Physics Letters, 2015, 107, .	3.3	44
47	Study of highâ€quality (11â¯22) semiâ€polar GaN grown on nanorod templates. Physica Status Solidi (B): Basic Research, 2015, 252, 1079-1083.	1.5	3
48	(Invited) High Efficiency Green-Yellow Emission from InGaN/GaN Quantum Well Structures Grown on Overgrown Semi-Polar (11-22) GaN on Regularly Arrayed Micro-Rod Templates. ECS Transactions, 2015, 66, 151-155.	0.5	17
49	Growth and characterization of semi-polar (11-22) GaN on patterned (113) Si substrates. Semiconductor Science and Technology, 2015, 30, 065012.	2.0	7
50	Room temperature plasmonic lasing in a continuous wave operation mode from an InGaN/GaN single nanorod with a low threshold. Scientific Reports, 2015, 4, 5014.	3.3	42
51	Temporally and spatially resolved photoluminescence investigation of (112Â¯2) semi-polar InGaN/GaN multiple quantum wells grown on nanorod templates. Applied Physics Letters, 2014, 105, .	3.3	22
52	Coherent nanocavity structures for enhancement in internal quantum efficiency of III-nitride multiple quantum wells. Applied Physics Letters, 2014, 104, 161108.	3.3	9
53	Room temperature continuousâ€“wave green lasing from an InGaN microdisk on silicon. Scientific Reports, 2014, 4, 7250.	3.3	48
54	Probing light emission from quantum wells within a single nanorod. Nanotechnology, 2013, 24, 365704.	2.6	10

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55	Great emission enhancement and excitonic recombination dynamics of InGaN/GaN nanorod structures. Applied Physics Letters, 2013, 103, .	3.3	38
56	Efficient reduction of defects in (11<u>2</u>0) non-polar and (11<u>2</u>2) semi-polar GaN grown on nanorod templates. Applied Physics Letters, 2013, 102, .	3.3	15
57	Hybrid III-Nitride/Organic Semiconductor Nanostructure with High Efficiency Nonradiative Energy Transfer for White Light Emitters. Nano Letters, 2013, 13, 3042-3047.	9.1	65
58	Development of high quality and low defect density semipolar and non-polar GaN templates. , 2013, , .		0
59	Significantly enhanced performance of an InGaN/GaN nanostructure based photo-electrode for solar power hydrogen generation. Applied Physics Letters, 2013, 103, .	3.3	31
60	Fabrication of two-dimensional InGaN/GaN photonic crystal structure using a modified nanosphere lithography technique. Applied Physics Letters, 2013, 102, .	3.3	19
61	Enhancement in solar hydrogen generation efficiency using a GaN-based nanorod structure. Applied Physics Letters, 2013, 102, .	3.3	49
62	High-Resolution Cathodoluminescence Hyperspectral Imaging of Nitride Nanostructures. Microscopy and Microanalysis, 2012, 18, 1212-1219.	0.4	51
63	Greatly enhanced performance of InGaN/GaN nanorod light emitting diodes. Physica Status Solidi (A) Applications and Materials Science, 2012, 209, 477-480.	1.8	29
64	Greatly improved crystal quality of non-polar GaN grown on a-plane GaN nano-rod template obtained using self-organised nano-masks. Physica Status Solidi C: Current Topics in Solid State Physics, 2012, 9, 564-567.	0.8	3
65	Investigation of the optical properties of InGaN/GaN nanorods with different indium composition. Physica Status Solidi C: Current Topics in Solid State Physics, 2012, 9, 620-623.	0.8	3
66	Light Emitting and Laser Diodes in the Ultraviolet. IEEE Journal of Selected Topics in Quantum Electronics, 2011, 17, 1402-1411.	2.9	21
67	Enhanced internal quantum efficiency of an InGaN/GaN quantum well as a function of silver thickness due to surface plasmon coupling. Physica Status Solidi C: Current Topics in Solid State Physics, 2011, 8, 2176-2178.	0.8	2
68	Influence of high temperature AlN buffer on optical gain in AlGaN/AlGaN multiple quantum well structures. Applied Physics Letters, 2011, 99, 171912.	3.3	9
69	InGaN/GaN quantum well structures with greatly enhanced performance on a-plane GaN grown using self-organized nano-masks. Applied Physics Letters, 2011, 99, 181907.	3.3	24
70	High resolution cathodoluminescence hyperspectral imaging of surface features in InGaN/GaN multiple quantum well structures. Applied Physics Letters, 2011, 98, .	3.3	75
71	Optically pumped ultraviolet lasing from nitride nanopillars at room temperature. Applied Physics Letters, 2010, 96, .	3.3	51
72	Influence of crystal quality of underlying GaN buffer on the formation and optical properties of InGaN/GaN quantum dots. Applied Physics Letters, 2009, 95, 101909.	3.3	11

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73	Stimulated emission at 340 nm from AlGaN multiple quantum well grown using high temperature AlN buffer technologies on sapphire. Applied Physics Letters, 2009, 95, .	3.3	15
74	Nonâ€polar AlN and GaN/AlN on râ€plane sapphire. Physica Status Solidi C: Current Topics in Solid State Physics, 2009, 6, S780.	0.8	10
75	Growth and optical investigation of self-assembled InGaN quantum dots on a GaN surface using a high temperature AlN buffer. Journal of Applied Physics, 2008, 103, 123522.	2.5	41
76	Dependence of carrier localization in InGaNâˆ•GaN multiple-quantum wells on well thickness. Applied Physics Letters, 2006, 89, 253120.	3.3	35
77	OPTICAL INVESTIGATION OF InGaN/GaN QUANTUM WELL STRUCTURES GROWN BY MOCVD. , 2006, , 305-343.		1
78	A study of dislocations in AlN and GaN films grown on sapphire substrates. Journal of Crystal Growth, 2005, 282, 290-296.	1.5	75
79	Air-bridged lateral growth of an Al0.98Ga0.02N layer by introduction of porosity in an AlN buffer. Applied Physics Letters, 2005, 87, 151906.	3.3	49
80	Effect of strain relaxation and exciton localization on performance of 350-nm AlInGaN quaternary light-emitting diodes. Journal of Applied Physics, 2005, 97, 083104.	2.5	13
81	High-reflectivity AlxGa1â^'xNâˆ•AlyGa1â^'yN distributed Bragg reflectors with peak wavelength around 350nm. Applied Physics Letters, 2004, 85, 43-45.	3.3	32
82	Highly improved performance of a 350nm ultraviolet light-emitting diode containing AlxGa1â^'xN/AlyGa1â^'yN distributed Bragg reflectors. Journal of Crystal Growth, 2004, 267, 583-587.	1.5	8
83	Study of stimulated emission from InGaN/GaN multiple quantum well structures. Journal of Crystal Growth, 2004, 273, 48-53.	1.5	8
84	Highly improved performance of a 350nm ultraviolet light-emitting diode containing AlxGa1$minus;xN/AlyGa1$minus;yN distributed Bragg reflectors. Journal of Crystal Growth, 2004, 267, 583-583.	1.5	0
85	Carrier capture times in InGaN/GaN multiple quantum wells. Physica Status Solidi (B): Basic Research, 2003, 240, 364-367.	1.5	10
86	MOCVD growth and optical investigation of the AlInGaN quaternary system. Physica Status Solidi C: Current Topics in Solid State Physics, 2003, 0, 2019-2022.	0.8	7
87	Fabrication of High-Output-Power AlGaN/GaN-Based UV-Light-Emitting Diode Using a Ga Droplet Layer. Japanese Journal of Applied Physics, 2002, 41, L1037-L1039.	1.5	8
88	High-Performance 348 nm AlGaN/GaN-Based Ultraviolet-Light-Emitting Diode with a SiN Buffer Layer. Japanese Journal of Applied Physics, 2002, 41, 4450-4453.	1.5	43
89	1 mW AlInGaN-based ultraviolet light-emitting diode with an emission wavelength of 348 nm grown on sapphire substrate. Applied Physics Letters, 2002, 81, 2508-2510.	3.3	98
90	Study of the strain relaxation in InGaN/GaN multiple quantum well structures. Journal of Applied Physics, 2001, 90, 1740-1744.	2.5	39

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91	Effect of silicon doping on the optical and transport properties of InGaN/GaN multiple-quantum-well structures. Applied Physics Letters, 2000, 76, 1737-1739.	3.3	67
92	Influence of buffer layer and growth temperature on the properties of an undoped GaN layer grown on sapphire substrate by metalorganic chemical vapor deposition. Applied Physics Letters, 2000, 76, 2220-2222.	3.3	58
93	Optical investigation of InGaN/GaN multiple quantum wells. Applied Physics Letters, 1999, 74, 3128-3130.	3.3	59
94	Role of Dislocation in InGaN Phase Separation. Japanese Journal of Applied Physics, 1998, 37, L1195-L1198.	1.5	110
95	Investigation of Electrical Properties of InGaNâ€Based Microâ€Lightâ€Emitting Diode Arrays Achieved by Direct Epitaxy. Physica Status Solidi (A) Applications and Materials Science, 0, , 2100474.	1.8	2