Ayush Pandey

List of Publications by Year
in descending order

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33 papers	616 citations	516561 16 h-index	610775 24 g-index
33 all docs	33 docs citations	33 times ranked	650 citing authors

#	Article	IF	Citations
1	High-efficiency AlGaN/GaN/AlGaN tunnel junction ultraviolet light-emitting diodes. Photonics Research, 2020, 8, 331.	3.4	56
2	InGaN/Si Double-Junction Photocathode for Unassisted Solar Water Splitting. ACS Energy Letters, 2020, 5, 3741-3751.	8.8	49
3	Direct Deposition of Crystalline Ta₃N₅ Thin Films on FTO for PEC Water Splitting. ACS Applied Materials & Interfaces, 2019, 11, 15457-15466.	4.0	47
4	Molecular beam epitaxy and characterization of wurtzite ScxAl1â^'xN. Applied Physics Letters, 2020, 116, .	1.5	39
5	Deep Ultraviolet Luminescence Due to Extreme Confinement in Monolayer GaN/Al(Ga)N Nanowire and Planar Heterostructures. Nano Letters, 2019, 19, 7852-7858.	4.5	35
6	N-polar InGaN nanowires: breaking the efficiency bottleneck of nano and micro LEDs. Photonics Research, 2022, 10, 587.	3.4	31
7	N-polar InGaN/GaN nanowires: overcoming the efficiency cliff of red-emitting micro-LEDs. Photonics Research, 2022, 10, 1107.	3.4	31
8	Effect of electron blocking layer on the efficiency of AlGaN mid-ultraviolet light emitting diodes. Optics Express, 2019, 27, A738.	1.7	27
9	Graphene-assisted molecular beam epitaxy of AlN for AlGaN deep-ultraviolet light-emitting diodes. Applied Physics Letters, 2020, 116, .	1.5	26
10	III-nitride nanostructures: Emerging applications for Micro-LEDs, ultraviolet photonics, quantum optoelectronics, and artificial photosynthesis. Progress in Quantum Electronics, 2022, 85, 100401.	3.5	26
11	Ultrahigh Q microring resonators using a single-crystal aluminum-nitride-on-sapphire platform. Optics Letters, 2019, 44, 5679.	1.7	23
12	Oxygen defect dominated photoluminescence emission of ScxAl1â^'xN grown by molecular beam epitaxy. Applied Physics Letters, 2021, 118, .	1.5	22
13	Scalable Synthesis of Monolayer Hexagonal Boron Nitride on Graphene with Giant Bandgap Renormalization. Advanced Materials, 2022, 34, e2201387.	11.1	22
14	Enhanced doping efficiency of ultrawide band gap semiconductors by metal-semiconductor junction assisted epitaxy. Physical Review Materials, 2019, 3, .	0.9	21
15	Controlling Defect Formation of Nanoscale AlN: Toward Efficient Current Conduction of Ultrawideâ€Bandgap Semiconductors. Advanced Electronic Materials, 2020, 6, 2000337.	2.6	19
16	An AlGaN tunnel junction light emitting diode operating at 255â€‰nm. Applied Physics Letters, 2020, 117, .	1.5	19
17	Electron overflow of AlGaN deep ultraviolet light emitting diodes. Applied Physics Letters, 2021, 118, .	1.5	17
18	Photonic crystal tunnel junction deep ultraviolet light emitting diodes with enhanced light extraction efficiency. Optics Express, 2019, 27, 38413.	1.7	17

#	Article	IF	Citations
19	High efficiency InGaN nanowire tunnel junction green micro-LEDs. Applied Physics Letters, 2021, 119, .	1.5	16
20	Charge carrier transport properties of Mg-doped Al_{0.6}Ga_{0.4}N grown by molecular beam epitaxy. Semiconductor Science and Technology, 2018, 33, 085005.	1.0	15
21	III-Nitride Nanostructures for High Efficiency Micro-LEDs and Ultraviolet Optoelectronics. IEEE Journal of Quantum Electronics, 2022, 58, 1-13.	1.0	13
22	A High Efficiency Si Photoanode Protected by Fewâ€Layer MoSe₂. Solar Rrl, 2018, 2, 1800113.	3.1	10
23	Molecular beam epitaxy and characterization of Al0.6Ga0.4N epilayers. Journal of Crystal Growth, 2019, 507, 87-92.	0.7	8
24	Strain-free ultrathin AlN epilayers grown directly on sapphire by high-temperature molecular beam epitaxy. Applied Physics Letters, 2020, 116, .	1.5	7
25	Optical and interface characteristics of Al0.56Ga0.44N/Al0.62Ga0.38N multiquantum wells with â¼280â€¯nm emission grown by plasma-assisted molecular beam epitaxy. Journal of Crystal Growth, 2019, 508, 66-71.	0.7	6
26	Wavelength tuning in the purple wavelengths using strain-controlled AlxGa1â€“xN/GaN disk-in-wire structures. Applied Physics Letters, 2020, 116, 041102.	1.5	6
27	Nanoscale and quantum engineering of III-nitride heterostructures for high efficiency UV-C and far UV-C optoelectronics. Japanese Journal of Applied Physics, 2021, 60, 110501.	0.8	3
28	GaNâ€Based Deepâ€Nano Structures: Break the Efficiency Bottleneck of Conventional Nanoscale Optoelectronics. Advanced Optical Materials, 2022, 10, .	3.6	3
29	A dominant electron trap in molecular beam epitaxial InAlN lattice-matched to GaN. Journal Physics D: Applied Physics, 2018, 51, 14LT01.	1.3	2
30	High-Efficiency AlGaN Tunnel Junction Deep Ultraviolet LEDs Operating at 265 nm. , 2019, , .		0
31	On the Origin of Efficiency Droop of AlGaN Deep Ultraviolet Light Emitting Diodes. , 2020, , .		0
32	Demonstration of High Quality Factor Aluminum Nitride on Sapphire Microring Resonators at Near Infrared and Green Wavelengths. , 2020, , .		0
33	High Quality Factor Aluminum Nitride on Sapphire Resonators at Infrared and Near Infrared Wavelengths. , 2020, , .		0