Muhammad Ajmal Khan

List of Publications by Year
in descending order

54	925	430874 18	501196 28
papers	citations	h-index	g-index

57	57	57	496
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	13 mW operation of a 295â€“310 nm AlGaN UV-B LED with a p-AlGaN transparent contact layer for real world applications. Journal of Materials Chemistry C, 2019, 7, 143-152.	5.5	84
2	In-situ heavily p-type doping of over 1020â€‰cmâ^'3 in semiconducting BaSi2 thin films for solar cells applications. Applied Physics Letters, 2013, 102, .	3.3	72
3	Improved photoresponsivity of semiconducting BaSi₂ epitaxial films grown on a tunnel junction for thin-film solar cells. Applied Physics Letters, 2012, 100, 152114.	3.3	50
4	Electrical characterization and conduction mechanism of impurity-doped BaSi2 films grown on Si(111) by molecular beam epitaxy. Thin Solid Films, 2012, 522, 95-99.	1.8	45
5	External Quantum Efficiency of 6.5% at 300 nm Emission and 4.7% at 310 nm Emission on Bare Wafer of AlGaN-Based UVB LEDs. ACS Applied Electronic Materials, 2020, 2, 1892-1907.	4.3	45
6	Achieving 9.6% efficiency in 304ÂÂnm p-AlGaN UVB LED via increasing the holes injection and light reflectance. Scientific Reports, 2022, 12, 2591.	3.3	38
7	Precipitation control and activation enhancement in boron-doped p+-BaSi2 films grown by molecular beam epitaxy. Applied Physics Letters, 2014, 104, .	3.3	32
8	Fabrication and characterization of BaSi₂ epitaxial films over 1 ÂµÂm in thickness on Si(111). Japanese Journal of Applied Physics, 2014, 53, 04ER04.	1.5	31
9	Suppressing the efficiency droop in AlGaN-based UVB LEDs. Nanotechnology, 2021, 32, 215703.	2.6	29
10	High internal quantum efficiency and optically pumped stimulated emission in AlGaN-based UV-C multiple quantum wells. Applied Physics Letters, 2020, 117, .	3.3	28
11	Improved external quantum efficiency of 293 nm AlGaN UVB LED grown on an AlN template. Japanese Journal of Applied Physics, 2019, 58, SAAF01.	1.5	27
12	Al- and Cu-doped <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si1.gif" display="inline" overflow="scroll"><mml:msub><mml:mrow><mml:mstyle mathvariant="normal"><mml:mi>BaSi</mml:mi></mml:mstyle></mml:mrow><mml:mrow><mml:mn>2</mml:mn></mml:mrow></mml: films on Si(111) substrate by molecular beam epitaxy and evaluation of depth profiles of Al and Cu atoms. Physics Procedia, 2011, 11, 11-14.	1.2	26
13	Beyond 53% internal quantum efficiency in a AlGaN quantum well at 326â€‰â€‰nm UVA emission and single-peak operation of UVA LED. Optics Letters, 2020, 45, 495.	3.3	26
14	In Vitro Cytotoxicity and Morphological Assessments of GO-ZnO against the MCF-7 Cells: Determination of Singlet Oxygen by Chemical Trapping. Nanomaterials, 2018, 8, 539.	4.1	25
15	Influence of Undopedâ€AlGaN Final Barrier of MQWs on the Performance of Lateralâ€Type UVB LEDs. Physica Status Solidi (A) Applications and Materials Science, 2019, 216, 1900185.	1.8	25
16	High photodetectivity of low-voltage flexible photodetectors assembled with hybrid aligned nanowire arrays. Journal of Materials Chemistry C, 2018, 6, 6510-6519.	5.5	23
17	Correlation between excitons recombination dynamics and internal quantum efficiency of AlGaN-based UV-A multiple quantum wells. Journal of Applied Physics, 2020, 128, .	2.5	23
18	Impact of Mg level on lattice relaxation in a p-AlGaN hole source layer and attempting excimer laser annealing on p-AlGaN HSL of UVB emitters. Nanotechnology, 2021, 32, 055702.	2.6	23

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19	Lattice and grain-boundary diffusions of boron atoms in BaSi2 epitaxial films on Si(111). Journal of Applied Physics, 2013, 113, .	2.5	21
20	Milliwatt power UV-A LEDs developed by using n-AlGaN superlattice buffer layers grown on AlN templates. Journal Physics D: Applied Physics, 2019, 52, 115102.	2.8	21
21	Performance enhancement of AlGaN deep-ultraviolet laser diode using compositional Al-grading of Si-doped layers. Optics and Laser Technology, 2022, 152, 108156.	4.6	21
22	Overcoming the current injection issue in the 310Ânm band AlGaN UVB light-emitting diode. Japanese Journal of Applied Physics, 2020, 59, SAAD01.	1.5	19
23	Photoresponse properties of BaSi2 epitaxial films grown on the tunnel junction for high-efficiency thin-film solar cells. Thin Solid Films, 2011, 519, 8501-8504.	1.8	18
24	Molecular Beam Epitaxy of BaSi$_{2}$ Films with Grain Size over 4 mum on Si(111). Japanese Journal of Applied Physics, 2012, 51, 098003.	1.5	18
25	Molecular beam epitaxy of boron doped p-type BaSi2 epitaxial films on Si(111) substrates for thin-film solar cells. Journal of Crystal Growth, 2013, 378, 201-204.	1.5	18
26	Fabrication and characterizations of phosphorusâ€doped nâ€type BaSi₂ epitaxial films grown by molecular beam epitaxy. Physica Status Solidi C: Current Topics in Solid State Physics, 2013, 10, 1753-1755.	0.8	15
27	Improving AlGaN-based ultraviolet-C (UVâ€“C) light-emitting diodes by introducing quaternary-graded AlInGaN final quantum barrier. Optical Materials, 2021, 112, 110745.	3.6	13
28	Polarization-dependent hole generation in 222 nm-band AlGaN-based Far-UVC LED: a way forward to the epi-growers of MBE and MOCVD. Journal of Materials Chemistry C, 2021, 9, 16545-16557.	5.5	11
29	Control of verticality and (111) orientation of In-catalyzed silicon nanowires grown in the vapourâ€“liquidâ€“solid mode for nanoscale device applications. Journal of Materials Chemistry C, 2015, 3, 11577-11580.	5.5	10
30	Donor and acceptor levels in impurity-doped semiconducting BaSi₂ thin films for solar-cell application. Physica Status Solidi (A) Applications and Materials Science, 2017, 214, 1700019.	1.8	10
31	Physicochemical properties of the AC-excited helium discharges using a water electrode. Plasma Science and Technology, 2018, 20, 075403.	1.5	10
32	Lattice and grain-boundary diffusions of impurity atoms in BaSi2 epitaxial layers grown by molecular beam epitaxy. Journal of Crystal Growth, 2013, 378, 189-192.	1.5	9
33	Development of wide band gap p-a-SiOxCy:H using additional trimethylboron as carbon source gas. Electronic Materials Letters, 2016, 12, 462-467.	2.2	7
34	Investigation of crystallinity and planar defects in the Si nanowires grown by vaporâ€“liquidâ€“solid mode using indium catalyst for solar cell applications. Japanese Journal of Applied Physics, 2016, 55, 01AE03.	1.5	7
35	Beyond 53% internal quantum efficiency in a AlGaN quantum well at 326â€‰â€‰nm UVA emission and single-peak operation of UVA LED: publisherâ€™s note. Optics Letters, 2020, 45, 2563.	3.3	7
36	Theoretical investigation about the optical characterization of coneâ€shaped pinâ€Si nanowire for top cell application. Energy Science and Engineering, 2016, 4, 383-393.	4.0	6

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37	Evaluation of internal quantum efficiency and stimulated emission characteristics in AlGaN-based multiple quantum wells. Japanese Journal of Applied Physics, 2021, 60, 120503.	1.5	6
38	Growth and characterization of low composition Ge, x in epi-Si_{1â^'x}Gex (xâ€‰â€‰â©½â€‰â€‰10%) active layer for fabrication of hydrogenated bottom solar cell. Journal Physics D: Applied Physics, 2018, 51, 185107.	2.8	5
39	Kinematic analysis of periodic continuous gaits for a bio-mimetic walking robot. , 2011, , .		4
40	Molecular Beam Epitaxy of Cu-Doped BaSi₂ Films on Si(111) Substrate and Evaluation & Qualification of Depth Profiles of Cu Atoms for the Formation of Efficient Solar Cells. Advanced Materials Research, 0, 326, 139-143.	0.3	3
41	Donor and acceptor energy levels in impurity Sb-, In-, Ag- and Cu-doped semiconducting BaSi2 thin films for device applications. Energy Procedia, 2017, 124, 612-620.	1.8	3
42	Recent Progress Toward Realizing AlGaN-Based Deep-UV Laser Diodes. The Review of Laser Engineering, 2019, 47, 196.	0.0	3
43	Fabrication of BaSi2 films on transparent CaF2 (111) substrates by molecular beam epitaxy for optical characterization. Physics Procedia, 2011, 11, 189-192.	1.2	2
44	Molecular Beam Epitaxy of BaSi2Films with Grain Size over 4 Âµm on Si(111). Japanese Journal of Applied Physics, 2012, 51, 098003.	1.5	2
45	Highly Transparent pâ€AlGaNâ€Based (326â€“341 nm)â€Band Ultravioletâ€A Lightâ€Emitting Diodes on AlN Templates: Recent Advances and Perspectives. Physica Status Solidi (A) Applications and Materials Science, 2022, 219, .	1.8	2
46	Effect of Solid-Phase-Epitaxy Si Layers on Suppression of Sb Diffusion from Sb-Doped n⁺-BaSi₂/p⁺-Si Tunnel Junction to Undoped BaSi₂ Overlayers. Japanese Journal of Applied Physics, 2012, 51, 04DP01.	1.5	1
47	Effect of Solid-Phase-Epitaxy Si Layers on Suppression of Sb Diffusion from Sb-Doped n⁺-BaSi₂/p⁺-Si Tunnel Junction to Undoped BaSi₂Overlayers. Japanese Journal of Applied Physics, 2012, 51, 04DP01.	1.5	1
48	Modelling and Simulation of Flexibility Induced Disturbances for a Flying Rocket. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2004, 37, 1015-1018.	0.4	0
49	Improved internal quantum efficiency in high-quality BaSi<inf>2</inf> films grown by molecular beam epitaxy. , 2012, , .		0
50	Enhanced p-type conductivity and band gap narrowing in heavily B-doped p-BaSi<inf>2</inf> films grown by molecular beam epitaxy. , 2013, , .		0
51	Fabrication of n⁺â€BaSi₂/p⁺â€Si tunnel junction on Si(001) surface for characterization of photoresponse properties of BaSi₂epitaxial films. Physica Status Solidi C: Current Topics in Solid State Physics, 2013, 10, 1773-1776.	0.8	0
52	Engineering of p-n junction for high efficiency semiconducting BaSi2 based thin film solar cells. , 2014, , .		0
53	Indium (In)-Catalyzed Silicon Nanowires (Si NWs) Grown by the Vaporâ€“Liquidâ€“Solid (VLS) Mode for Nanoscale Device Applications. , 0, , .		0
54	Progress on pure AlGaN based UVB LEDs and Our Approach Toward Deep-Ultraviolet (DUV) LDs. , 2021, , .		0