

# Akhilesh Pandey

## List of Publications by Year in descending order

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58  
papers

836  
citations

471509

17  
h-index

552781

26  
g-index

59  
all docs

59  
docs citations

59  
times ranked

817  
citing authors

#	ARTICLE	IF	CITATIONS
1	Thermal evolution of morphological, structural, optical and photocatalytic properties of CuO thin films. Nano Structures Nano Objects, 2019, 17, 92-102.	3.5	58
2	Binder free and high performance of sputtered tungsten nitride thin film electrode for supercapacitor device. International Journal of Hydrogen Energy, 2019, 44, 10823-10832.	7.1	48
3	Current Transport and Band Alignment Study of MoS <sub>2</sub> /GaN and MoS <sub>2</sub> /AlGaN Heterointerfaces for Broadband Photodetection Application. ACS Applied Electronic Materials, 2020, 2, 710-718.	4.3	43
4	Structural characterization of polycrystalline thin films by X-ray diffraction techniques. Journal of Materials Science: Materials in Electronics, 2021, 32, 1341-1368.	2.2	41
5	Improved electrical properties of PbZrTiO <sub>3</sub> /BiFeO <sub>3</sub> multilayers with ZnO buffer layer. Journal of Applied Physics, 2012, 112, .	2.5	37
6	Growth and electrical properties of spin coated ultrathin ZrO <sub>2</sub> films on silicon. Journal of Applied Physics, 2013, 114, 014105.	2.5	30
7	Improvement in surface morphology and 2DEG properties of AlGaN/GaN HEMT. Journal of Alloys and Compounds, 2020, 815, 152283.	5.5	29
8	Growth assessment and scrutinize dielectric reliability of c-axis oriented insulating AlN thin films in MIM structures for microelectronics applications. Materials Chemistry and Physics, 2018, 219, 74-81.	4.0	27
9	Optical and Sensing Properties of Cu Doped ZnO Nanocrystalline Thin Films. Journal of Nanotechnology, 2015, 2015, 1-10.	3.4	26
10	Dislocation density investigation on MOCVD-grown GaN epitaxial layers using wet and dry defect selective etching. Applied Physics A: Materials Science and Processing, 2016, 122, 1.	2.3	26
11	Growth and evolution of residual stress of AlN films on silicon (100) wafer. Materials Science in Semiconductor Processing, 2016, 52, 16-23.	4.0	25
12	Growth and Comparison of Residual Stress of AlN Films on Silicon (100), (110) and (111) Substrates. Journal of Electronic Materials, 2018, 47, 1405-1413.	2.2	25
13	Structural And Optical Properties Of Bulk MoS <sub>2</sub> For 2D Layer Growth. Advanced Materials Letters, 2016, 7, 777-782.	0.6	25
14	Zn interstitial defects and their contribution as efficient light blue emitters in Zn rich ZnO thin films. Journal of Alloys and Compounds, 2018, 735, 2318-2323.	5.5	24
15	Effect of two step GaN buffer on the structural and electrical characteristics in AlGaN/GaN heterostructure. Vacuum, 2020, 178, 109442.	3.5	23
16	Improved electrical transport properties in high quality nanocrystalline silicon carbide (nc-SiC) thin films for microelectronic applications. Materials Letters, 2016, 164, 28-31.	2.6	21
17	Electrical properties of ultrathin titanium dioxide films on silicon. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2015, 33, .	2.1	19
18	Overview of residual stress in MEMS structures: Its origin, measurement, and control. Journal of Materials Science: Materials in Electronics, 2021, 32, 6705-6741.	2.2	18

#	ARTICLE	IF	CITATIONS
19	Estimation of residual stress in Pb(Zr <sub>0.52</sub> Ti <sub>0.48</sub> )O <sub>3</sub> /BiFeO <sub>3</sub> multilayers deposited on silicon. Journal of Applied Physics, 2013, 114, 174103.	2.5	16
20	Electrical and structural characteristics of sputtered c-oriented AlN thin films on Si (100) and Si (110) substrates. Thin Solid Films, 2018, 666, 143-149.	1.8	16
21	Microstructure and improved electrical properties of Ti-substituted BiFeO <sub>3</sub> thin films. Materials Research Bulletin, 2017, 95, 223-228.	5.2	15
22	Influence of residual stress on performance of AlN thin film based piezoelectric MEMS accelerometer structure. Microsystem Technologies, 2019, 25, 3959-3967.	2.0	15
23	Effect of fully strained AlN nucleation layer on the AlN/SiC interface and subsequent GaN growth on 4H-SiC by MOVPE. Journal of Materials Science: Materials in Electronics, 2019, 30, 18910-18918.	2.2	14
24	Preparation and properties of AlN (aluminum nitride) powder/thin films by single source precursor. New Journal of Chemistry, 2019, 43, 1900-1909.	2.8	14
25	Anisotropic magnetoelectric functionality of ferromagnetic shape memory alloy heterostructures for MEMS magnetic sensors. Journal Physics D: Applied Physics, 2020, 53, 395302.	2.8	14
26	Estimation of bending of micromachined gold cantilever due to residual stress. Journal of Materials Science: Materials in Electronics, 2014, 25, 382-389.	2.2	12
27	Optical properties of Pb (Zr <sub>0.52</sub> Ti <sub>0.48</sub> ) O <sub>3</sub> /BiFeO <sub>3</sub> multilayers with ZnO buffer layer. Applied Physics A: Materials Science and Processing, 2015, 120, 53-58.	2.3	12
28	Growth and characterization of ultrathin TiO <sub>2</sub> -Cr <sub>2</sub> O <sub>3</sub> nanocomposite films. Journal of Alloys and Compounds, 2017, 696, 376-381.	5.5	12
29	Influence of temperature and Al/N ratio on structural, chemical & electronic properties of epitaxial AlN films grown via PAMBE. Applied Surface Science, 2018, 455, 919-923.	6.1	12
30	Structural and optical characteristics investigations in oxygen ion implanted GaN epitaxial layers. Materials Science in Semiconductor Processing, 2020, 107, 104833.	4.0	10
31	Interface engineered MBE grown InAs/GaSb based type-II superlattice heterostructures. Journal of Alloys and Compounds, 2021, 889, 161692.	5.5	10
32	Structural, transport, optical, and electronic properties of Sr <sub>2</sub> CoNbO <sub>6</sub> thin films. Journal of Applied Physics, 2020, 128, .	2.5	9
33	Growth, structural and electrical properties of AlN/Si (111) for futuristic MEMS applications. Materials Science in Semiconductor Processing, 2021, 123, 105567.	4.0	9
34	Investigating the growth of AlGaN/AlN heterostructure by modulating the substrate temperature of AlN buffer layer. SN Applied Sciences, 2021, 3, 1.	2.9	9
35	X-ray photoelectron spectroscopy study and humidity sensing properties of Zn doped SnO <sub>2</sub> thin films. Journal of Materials Science: Materials in Electronics, 2013, 24, 4951-4957.	2.2	8
36	Polytype switching identification in 4H-SiC single crystal grown by PVT. Journal of Materials Science: Materials in Electronics, 2020, 31, 16343-16351.	2.2	8

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37	Characterization deep boron diffused p++ silicon layer. Journal of Materials Science: Materials in Electronics, 2012, 23, 1569-1574.	2.2	7
38	Estimation of boron diffusion induced residual stress in silicon by wafer curvature technique. Materials Letters, 2016, 164, 316-319.	2.6	7
39	Optical and sensing properties of Fe doped ZnO nanocrystalline thin films. Materials Science-Poland, 2016, 34, 354-361.	1.0	6
40	CuO and CuO/ZnO hybrid nanostructures as photocatalysts and catalysts for efficient removal of pollutants. Applied Physics A: Materials Science and Processing, 2020, 126, 1.	2.3	6
41	Effect of growth and residual stress in AlN (0002) thin films on MEMS accelerometer design. Journal of Materials Science: Materials in Electronics, 2020, 31, 17281-17290.	2.2	6
42	X-ray pole figure analysis of catalyst free InAs nanowires on Si substrate. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2017, 225, 108-114.	3.5	5
43	Influence of nickel doping on structural, morphological and mechanical properties of BiFeO <sub>3</sub> thin films. Materials Chemistry and Physics, 2018, 216, 47-50.	4.0	5
44	RF Sputtered MoO <sub>3</sub> Thin Film on Si (100) for Gas Sensing Applications. Defence Science Journal, 2020, 70, 505-510.	0.8	5
45	Suitability of thin-GaN for AlGaN/GaN HEMT material and device. Journal of Materials Science, 2022, 57, 5913-5923.	3.7	5
46	Study of organic pollutant removal capacity and work function of magnetite/graphene oxide nanocomposites. Materials Research Express, 2019, 6, 125039.	1.6	4
47	High-quality AlN nucleation layer on SiC substrate grown by MOVPE: Growth, structural and optical characteristics. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2022, 278, 115635.	3.5	4
48	Nanoharvesting of GaN nanowires on Si (211) substrates by plasma-assisted molecular beam epitaxy. Journal of Crystal Growth, 2014, 402, 37-41.	1.5	3
49	Growth and morphological evolution of c-axis oriented AlN films on Si (100) substrates by DC sputtering technique. AIP Conference Proceedings, 2018, , .	0.4	3
50	Deep boron diffusion induced surface damage in silicon. Materials Letters, 2016, 170, 76-79.	2.6	2
51	Evaluation of residual stress of c oriented AlN/Si (111) and its impact on mushroom-shaped piezoelectric resonator. Journal of Materials Science: Materials in Electronics, 2021, 32, 13499-13510.	2.2	2
52	Investigation of carrier gas on morphological and structural characteristics of AlGaN/GaN HEMT. Materials Research Bulletin, 2022, 153, 111875.	5.2	2
53	Effect of Colloidal Silver on Optical Transmittance Characteristics of Bulk Cadmium Zinc Telluride Crystals. Journal of Electronic Materials, 2009, 38, 2046-2051.	2.2	1
54	Optimization of AlN spacer layer in MOVPE grown AlGaN/AlN/InGaN/GaN high electron mobility heterostructure. AIP Conference Proceedings, 2020, , .	0.4	1

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55	Effect of surface phonon polariton in unimplanted and oxygen implanted GaN layers. Optik, 2021, 225, 165834.	2.9	1
56	Growth of ZnO nano films on Sapphire/GaAs/ Si substrates. , 2007, , .		0
57	Oxygen Ion Implantation Induced Effects in GaN Epilayer. Springer Proceedings in Physics, 2019, , 301-305.	0.2	0
58	Thermal evolution of morphological, optical, and photocatalytic properties of Au@Cu <sub>2</sub> O@CuO nanocomposite thin film. Journal of Materials Science: Materials in Electronics, 2021, 32, 24058-24068.	2.2	0