

# Ankush Bag

## List of Publications by Year in descending order

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Version: 2024-02-01

57  
papers

527  
citations

686830

13  
h-index

752256

20  
g-index

58  
all docs

58  
docs citations

58  
times ranked

532  
citing authors

#	ARTICLE	IF	CITATIONS
1	Ga-In Nanoparticle Induced UV Plasmonic Impact on Heterojunction Based Deep UV Photodetector. IEEE Nanotechnology Magazine, 2022, 21, 196-203.	1.1	8
2	Interface Engineering of CZTS/TiO <sub>2</sub> Heterojunction Using Wide-Bandgap Ga <sub>2</sub> O <sub>3</sub> Passivation Interlayer for Efficient Charge Extraction. Physica Status Solidi (A) Applications and Materials Science, 2022, 219, .	0.8	7
3	Broad Range (254–302 nm) and High Performance Ga <sub>2</sub> O <sub>3</sub> :SnO <sub>2</sub> Based Deep UV Photodetector. IEEE Nanotechnology Magazine, 2022, 21, 320-327.	1.1	7
4	Suppression of interfacial oxygen vacancies for efficient charge extraction at CZTS/TiO <sub>2</sub> heterojunction. Applied Physics Letters, 2021, 118, .	1.5	12
5	Exceptional Responsivity (>6 kA/W) and Dark Current (<70 fA) Tradeoff of n-Ga <sub>2</sub> O <sub>3</sub> /p-CuO Quasi-Heterojunction-Based Deep UV Photodetector. IEEE Transactions on Electron Devices, 2021, 68, 144-151.	1.6	24
6	Substrate orientation dependent current transport mechanisms in $\text{In}^{2+}$ -Ga <sub>2</sub> O <sub>3</sub> /Si based Schottky barrier diodes. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2021, 39, .	0.9	11
7	Design and Analysis of P-GaN/N-Ga <sub>2</sub> O <sub>3</sub> Based Junction Barrier Schottky Diodes. IEEE Transactions on Electron Devices, 2021, 68, 6052-6058.	1.6	8
8	Probing Interface Trapping Characteristics of Au/ $\text{In}^{2+}$ -Ga <sub>2</sub> O <sub>3</sub> Schottky Barrier Diode on Si (100). IEEE Transactions on Device and Materials Reliability, 2021, , 1-1.	1.5	1
9	Integration of $\text{In}^{2+}$ -Ga <sub>2</sub> O <sub>3</sub> on Si (100) for Lateral Schottky Barrier Diodes. , 2021, , .		1
10	Impact of annealing temperature on band-alignment of PLD grown Ga <sub>2</sub> O <sub>3</sub> /Si (100) heterointerface. Journal of Alloys and Compounds, 2020, 819, 153052.	2.8	72
11	Transition from thin film to nanostructure in low pressure chemical vapor deposition growth of $\text{In}^{2+}$ -Ga <sub>2</sub> O <sub>3</sub> : Impact of metal gallium source. Thin Solid Films, 2020, 709, 138234.	0.8	16
12	Evaluation of diode characteristics for fully vertical $\text{In}^{2+}$ -Ga <sub>2</sub> O <sub>3</sub> on silicon (100) substrate. Journal of Materials Science: Materials in Electronics, 2020, 31, 13845-13856.	1.1	8
13	Extremely low dark current and detection range extension of Ga <sub>2</sub> O <sub>3</sub> UV photodetector using Sn alloyed nanostructures. Nanotechnology, 2020, 31, 294002.	1.3	32
14	Ultra-high responsivity (>12.34 kA W <sup>-1</sup> ) of Ga-In bimetallic oxide nanowires based deep-UV photodetector. Nanotechnology, 2020, 31, 304001.	1.3	12
15	Performance enhancement of $\text{In}^{2+}$ -Ga <sub>2</sub> O <sub>3</sub> on Si (100) based Schottky barrier diodes using Reduced Surface Field. Semiconductor Science and Technology, 2020, 35, 085009.	1.0	13
16	Bench-marking High Power Switching Performance of Ga <sub>2</sub> O <sub>3</sub> SBD with SiC Devices. , 2020, , .		0
17	Performance Evaluation of GaN-based Selective UV Photodetector by Varying Metal-Semiconductor-Metal Geometry. , 2019, , .		1
18	High Responsivity of Quasi-2D Electrospun $\text{Ga}_2\text{O}_3$ -Based Deep-UV Photodetectors. IEEE Photonics Technology Letters, 2019, 31, 619-622.	1.3	20

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19	Effect of Si <sub>3</sub> N <sub>4</sub> Passivation on the Acetone Sensing Performance of Pd/AlGa <sub>N</sub> /Ga <sub>N</sub> Heterostructure. Springer Proceedings in Physics, 2019, , 875-879.	0.1	1
20	Elimination of V-shaped pits in InGa <sub>N</sub> /Ga <sub>N</sub> /Al <sub>N</sub> /Ga <sub>N</sub> heterostructure by metal modulation growth technique. Semiconductor Science and Technology, 2018, 33, 035009.	1.0	3
21	Observation and analysis of kink effect during drain current inception of Ga <sub>N</sub> HEMT. Superlattices and Microstructures, 2018, 120, 101-107.	1.4	2
22	OFF-State Leakage and Current Collapse in AlGa <sub>N</sub> /Ga <sub>N</sub> HEMTs: A Virtual Gate Induced by Dislocations. IEEE Transactions on Electron Devices, 2018, 65, 1333-1339.	1.6	21
23	Effect of trapped charge in AlGa <sub>N</sub> /Ga <sub>N</sub> and AlGa <sub>N</sub> /InGa <sub>N</sub> /Ga <sub>N</sub> heterostructure by temperature dependent threshold voltage analysis. Superlattices and Microstructures, 2018, 113, 147-152.	1.4	4
24	Acetone Adsorption Characteristics of Pd/AlGa <sub>N</sub> /Ga <sub>N</sub> Heterostructure Grown by PAMBE: A Kinetic Interpretation at Low Temperature. , 2018, , .		0
25	Selective UV Detection by AlGa <sub>N</sub> /Ga <sub>N</sub> -Based MSM Photo Detector for Integration with Silicon. , 2018, , .		2
26	Evolution of lateral V-defects on InGa <sub>N</sub> /Ga <sub>N</sub> on Si(111) during PAMBE: the role of strain on defect kinetics. CrystEngComm, 2018, 20, 4151-4163.	1.3	5
27	Fast Response (7.6s) Acetone Sensing by InGa <sub>N</sub> /Ga <sub>N</sub> on Si (111) at 373 K. IEEE Electron Device Letters, 2017, 38, 383-386.	2.2	17
28	Comparative analysis of parameter extraction techniques for AlGa <sub>N</sub> /Ga <sub>N</sub> HEMT on silicon/sapphire substrate. Microelectronics Reliability, 2017, 78, 389-395.	0.9	6
29	Probing InGa <sub>N</sub> immiscibility at AlGa <sub>N</sub> /InGa <sub>N</sub> heterointerface on silicon (111) through two-step capacitance-voltage and conductance-voltage profiles. Materials and Design, 2017, 133, 176-185.	3.3	7
30	Highly Sensitive Acetone Sensor Based on Pd/AlGa <sub>N</sub> /Ga <sub>N</sub> Resistive Device Grown by Plasma-Assisted Molecular Beam Epitaxy. IEEE Transactions on Electron Devices, 2017, 64, 4650-4656.	1.6	16
31	Investigation of cross-hatch surface and study of anisotropic relaxation and dislocation on InGaAs on GaAs (001). Electronic Materials Letters, 2016, 12, 356-364.	1.0	9
32	Observation of in-situ reciprocal lattice evolution of AlGa <sub>N</sub> /InGa <sub>N</sub> on Si (111) through Ga <sub>N</sub> and Al <sub>N</sub> interlayers by RHEED and reflectance. Physica Status Solidi C: Current Topics in Solid State Physics, 2016, 13, 186-189.	0.8	3
33	Reverse bias leakage current mechanism of AlGa <sub>N</sub> /InGa <sub>N</sub> /Ga <sub>N</sub> heterostructure. Electronic Materials Letters, 2016, 12, 232-236.	1.0	8
34	Fowler-Nordheim Tunnelling Contribution in AlGa <sub>N</sub> /Ga <sub>N</sub> on Si (111) Schottky Current. IETE Technical Review (Institution of Electronics and Telecommunication Engineers, India), 2016, 33, 7-10.	2.1	1
35	Simplified gas sensor model based on AlGa <sub>N</sub> /Ga <sub>N</sub> heterostructure Schottky diode. AIP Conference Proceedings, 2015, , .	0.3	4
36	Comparison of different grading schemes in InGaAs metamorphic buffers on GaAs substrate: Tilt dependence on cross-hatch irregularities. Applied Surface Science, 2015, 357, 922-930.	3.1	27

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37	Evolution and analysis of nitride surface and interfaces by statistical techniques: A correlation with RHEED through kinetic roughening. <i>Electronic Materials Letters</i> , 2015, 11, 707-716.	1.0	7
38	Temperature dependent etching of Gallium Nitride layers grown by PA-MBE. , 2015, , .		0
39	Influence of growth morphology on electrical and thermal modeling of AlGa <sub>N</sub> /Ga <sub>N</sub> HEMT on sapphire and silicon. <i>Solid-State Electronics</i> , 2015, 104, 101-108.	0.8	7
40	Implementation of verilog <sub>a</sub> Ga <sub>N</sub> HEMT model to design RF switch. <i>Microwave and Optical Technology Letters</i> , 2015, 57, 1765-1768.	0.9	3
41	2DEG modulation in double quantum well enhancement mode nitride HEMT. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2015, 74, 59-64.	1.3	17
42	Potentiality of trap charge effects and SiON induced interface defects in a-Si <sub>3</sub> N <sub>4</sub> /SiON based MIS structure for resistive NVM device. <i>Microelectronics Reliability</i> , 2015, 55, 789-794.	0.9	1
43	A novel growth strategy and characterization of fully relaxed un-tilted FCC GaAs on Si(100). <i>Journal of Crystal Growth</i> , 2015, 418, 138-144.	0.7	7
44	Quantitative investigation into the source of current slump in AlGa <sub>N</sub> /Ga <sub>N</sub> HEMT on both Si (111) and sapphire: Self-heating and trapping. <i>AIP Conference Proceedings</i> , 2015, , .	0.3	0
45	Comparison of different pathways in metamorphic graded buffers on GaAs substrate: Indium incorporation with surface roughness. <i>Applied Surface Science</i> , 2015, 324, 304-309.	3.1	12
46	Effects of threading dislocations on drain current dispersion and slow transients in unpassivated AlGa <sub>N</sub> /Ga <sub>N</sub> /Si heterostructure field-effect transistors. <i>Applied Physics Letters</i> , 2014, 105, .	1.5	11
47	Effect of Vertical and Longitudinal Electric Field on 2DEG of AlGa <sub>N</sub> /Ga <sub>N</sub> HEMT on Silicon: A Qualitative Reliability Study. <i>Environmental Science and Engineering</i> , 2014, , 81-83.	0.1	0
48	An unified analytical model for design consideration of doped cubic and undoped hexagonal AlGa <sub>N</sub> /Ga <sub>N</sub> MIS gate HEMTs. <i>Solid-State Electronics</i> , 2014, 96, 1-8.	0.8	5
49	Comparative DC Characteristic Analysis of AlGa <sub>N</sub> /Ga <sub>N</sub> HEMTs Grown on Si(111) and Sapphire Substrates by MBE. <i>Journal of Electronic Materials</i> , 2014, 43, 1263-1270.	1.0	15
50	Effect of longitudinal electric field and self heating of channel on linearity and gain of AlGa <sub>N</sub> /Ga <sub>N</sub> HEMT on Sapphire (0001). , 2014, , .		1
51	Growth and characterization of Al<sub>0.15</sub>/Ga<sub>0.85</sub>/As/GaAs pseudomorphic heterostructure by MBE. , 2014, , .		0
52	High-resolution X-ray diffraction analysis of Al <sub>x</sub> Ga <sub>1-x</sub> N/In <sub>x</sub> Ga <sub>1-x</sub> N/GaN on sapphire multilayer structures: Theoretical, simulations, and experimental observations. <i>Journal of Applied Physics</i> , 2014, 115, 174507.	1.1	31
53	Growth and Characterization of Self-Assembled InAs Quantum Dots on Si (100) for Monolithic Integration by MBE. <i>IEEE Nanotechnology Magazine</i> , 2014, 13, 917-925.	1.1	5
54	Comprehensive strain and band gap analysis of PA-MBE grown AlGa <sub>N</sub> /Ga <sub>N</sub> heterostructures on sapphire with ultra thin buffer. <i>AIP Advances</i> , 2014, 4, .	0.6	16

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55	Comprehensive study of AlGaAs/GaAs heterostructures grown by MBE: Structural and compositional analysis. , 2014, , .		0
56	Comprehensive Analytical Modeling of N-polar GaN/AlGaN Insulated Gate HEMTs with and without Polarization Neutralization Layer. Environmental Science and Engineering, 2014, , 269-272.	0.1	0
57	Analytical Expression of Barrier Layer for Enhancement Mode AlGaN/GaN HEMT. Environmental Science and Engineering, 2014, , 175-177.	0.1	0