

Biplab Sarkar

List of Publications by Year in descending order

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papers

988
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471061

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times ranked

1017
citing authors

#	ARTICLE	IF	CITATIONS
1	On electrical analysis of Al-rich p-AlGa _N films for III-nitride UV light emitters. <i>Semiconductor Science and Technology</i> , 2022, 37, 015003.	1.0	4
2	Evidence of thermionic emission in forward biased Al^{2+} -Ga ₂ O ₃ Schottky diodes at Boltzmann doping limit. <i>Journal of Applied Physics</i> , 2022, 131, .	1.1	11
3	Doping and compensation in heavily Mg doped Al-rich AlGa _N films. <i>Applied Physics Letters</i> , 2022, 120, .	1.5	12
4	Generalized Frequency Dependent Small Signal Model for High Frequency Analysis of AlGa _N /Ga _N MOS-HEMTs. <i>IEEE Journal of the Electron Devices Society</i> , 2021, 9, 570-581.	1.2	6
5	High n -type conductivity and carrier concentration in Si-implanted homoepitaxial AlN. <i>Applied Physics Letters</i> , 2021, 118, .	1.5	25
6	Role of Interface Induced Gap States in Polar Al _x Ga _{1-x} N ($0 \leq x \leq 1$) Schottky Diodes. <i>Journal of Electronic Materials</i> , 2021, 50, 3731-3738.	1.0	4
7	Temperature dependence of barrier height inhomogeneity in Al^{2+} -Ga ₂ O ₃ Schottky barrier diodes. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2021, 39, .	0.6	20
8	Self-powered ultraviolet photodiode based on lateral polarity structure Ga _N films. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2021, 39, .	0.6	8
9	Modified Small Signal Circuit of AlGa _N /Ga _N MOS-HEMTs Using Rational Functions. <i>IEEE Transactions on Electron Devices</i> , 2021, 68, 6059-6064.	1.6	3
10	Status of the growth and fabrication of AlGa _N -based UV laser diodes for near and mid-UV wavelength. <i>Journal of Materials Research</i> , 2021, 36, 4638-4664.	1.2	25
11	Numerical Simulation of Enhanced-Reliability Filleted-Gate AlGa _N /Ga _N HEMT. <i>Journal of Electronic Materials</i> , 2020, 49, 2018-2031.	1.0	8
12	The 2020 UV emitter roadmap. <i>Journal Physics D: Applied Physics</i> , 2020, 53, 503001.	1.3	289
13	Polarity Control and Nanoscale Optical Characterization of AlGa _N -Based Multiple-Quantum-Wells for Ultraviolet C Emitters. <i>ACS Applied Nano Materials</i> , 2020, 3, 5335-5342.	2.4	10
14	The nature of the DX state in Ge-doped AlGa _N . <i>Applied Physics Letters</i> , 2020, 116, .	1.5	14
15	The role of chemical potential in compensation control in Si:AlGa _N . <i>Journal of Applied Physics</i> , 2020, 127, .	1.1	34
16	Role of polarity in Si _N on Al/Ga _N and the pathway to stable contacts. <i>Semiconductor Science and Technology</i> , 2020, 35, 055007.	1.0	7
17	Shallow Si donor in ion-implanted homoepitaxial AlN. <i>Applied Physics Letters</i> , 2020, 116, .	1.5	20
18	Al Rich AlGa _N Based APDs on Single Crystal AlN with Solar Blindness and Room Temperature Operation. , 2019, , .		3

#	ARTICLE	IF	CITATIONS
19	(Invited) Advances in Ion Implantation of GaN and AlN. ECS Meeting Abstracts, 2019, , .	0.0	0
20	Doping and compensation in Al-rich AlGaIn grown on single crystal AlN and sapphire by MOCVD. Applied Physics Letters, 2018, 112, .	1.5	107
21	On Ni/Au Alloyed Contacts to Mg-Doped GaN. Journal of Electronic Materials, 2018, 47, 305-311.	1.0	17
22	On Using the Volatile Mem-Capacitive Effect of TiO ₂ Resistive Random Access Memory to Mimic the Synaptic Forgetting Process. Journal of Electronic Materials, 2018, 47, 994-997.	1.0	7
23	Plasma enhanced chemical vapor deposition of SiO ₂ and SiN _x on AlGaIn: Band offsets and interface studies as a function of Al composition. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2018, 36, 061101.	0.9	6
24	Improving the Conductivity Limits in Si Doped Al Rich AlGaIn. , 2018, , .		1
25	N- and P- type Doping in Al-rich AlGaIn and AlN. ECS Transactions, 2018, 86, 25-30.	0.3	20
26	Thermal conductivity of GaN single crystals: Influence of impurities incorporated in different growth processes. Journal of Applied Physics, 2018, 124, .	1.1	25
27	The influence of point defects on the thermal conductivity of AlN crystals. Journal of Applied Physics, 2018, 123, 185107.	1.1	26
28	On contacts to III-nitride deep-UV emitters. , 2018, , .		0
29	6 kW/cm ² UVC laser threshold in optically pumped lasers achieved by controlling point defect formation. Applied Physics Express, 2018, 11, 082101.	1.1	46
30	Thermal conductivity of single-crystalline AlN. Applied Physics Express, 2018, 11, 071001.	1.1	42
31	N- and P- type Doping in Al-rich AlGaIn and AlN. ECS Meeting Abstracts, 2018, MA2018-02, 1283-1283.	0.0	1
32	Defect-free Ni/GaN Schottky barrier behavior with high temperature stability. Applied Physics Letters, 2017, 110, .	1.5	38
33	Performance improvement of ohmic contacts on Al-rich n-AlGaIn grown on single crystal AlN substrate using reactive ion etching surface treatment. Applied Physics Express, 2017, 10, 071001.	1.1	11
34	(Invited) Material Considerations for the Development of III-Nitride Power Devices. ECS Transactions, 2017, 80, 29-36.	0.3	4
35	High free carrier concentration in p-GaN grown on AlN substrates. Applied Physics Letters, 2017, 111, .	1.5	22
36	Nonlinear analysis of vanadium- and titanium-based contacts to Al-rich n-AlGaIn. Japanese Journal of Applied Physics, 2017, 56, 100302.	0.8	19

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37	(Invited) Material Considerations for the Development of III-Nitride Power Devices. ECS Meeting Abstracts, 2017, , .	0.0	0
38	High temperature and low pressure chemical vapor deposition of silicon nitride on AlGaIn: Band offsets and passivation studies. Journal of Applied Physics, 2016, 119, .	1.1	22
39	Understanding the gradual reset in Pt/Al ₂ O ₃ /Ni RRAM for synaptic applications. Semiconductor Science and Technology, 2015, 30, 105014.	1.0	66
40	Understanding the influence of E _a and band-offset toward the conductance modulation in Al ₂ O ₃ and HfO ₂ synaptic RRAM. , 2015, , .		0
41	Dual Floating Gate Unified Memory MOSFET With Simultaneous Dynamic and Non-Volatile Operation. IEEE Electron Device Letters, 2014, 35, 48-50.	2.2	4
42	Sidelobe Suppression in Wigner Distribution Using Non-Linear Apodization. , 2009, , .		1