Joel T Asubar

List of Publications by Year
in descending order

71	1,122	471509 17	414414 32
papers	citations	h-index	g-index

71	71	71	1058
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Generalized Frequency Dependent Small Signal Model for High Frequency Analysis of AlGaN/GaN MOS-HEMTs. IEEE Journal of the Electron Devices Society, 2021, 9, 570-581.	2.1	6
2	GaN-based MIS-HEMTs with Al₂O₃ dielectric deposited by low-cost and environmental-friendly mist-CVD technique. Applied Physics Express, 2021, 14, 031004.	2.4	9
3	Controlling surface/interface states in GaN-based transistors: Surface model, insulated gate, and surface passivation. Journal of Applied Physics, 2021, 129, .	2.5	58
4	Stoichiometric imbalances in Mg-implanted GaN. Japanese Journal of Applied Physics, 2021, 60, 066504.	1.5	1
5	Ornsteinâ€“Uhlenbeck process in a human body weight fluctuation. Physica A: Statistical Mechanics and Its Applications, 2021, 582, 126286.	2.6	1
6	Modified Small Signal Circuit of AlGaN/GaN MOS-HEMTs Using Rational Functions. IEEE Transactions on Electron Devices, 2021, 68, 6059-6064.	3.0	3
7	Mist chemical vapor deposited-Al₂O₃/AlGaN interfacial characterization for GaN MIS-HEMTs. , 2021, , .		0
8	Enhancementâ€Mode AlGaN/GaN Vertical Trench Metalâ€“Insulatorâ€“Semiconductor Highâ€Electronâ€Mobility Transistors with a High Drain Current Fabricated Using the AlGaN Regrowth Technique. Physica Status Solidi (A) Applications and Materials Science, 2020, 217, 1900622.	1.8	5
9	Design considerations for normally-off operation in Schottky gate p-GaN/AlGaN/GaN HEMTs. Japanese Journal of Applied Physics, 2020, 59, 084002.	1.5	11
10	Enhancement-Mode AlGaN/GaN MIS-HEMTs With High V_{TH} and High I_{Dmax} Using Recessed-Structure With Regrown AlGaN Barrier. IEEE Electron Device Letters, 2020, 41, 693-696.	3.9	39
11	Epitaxial growth and characterization of Cr-doped ZnSnAs2thin films on InP substrates. Japanese Journal of Applied Physics, 2020, 59, 030601.	1.5	2
12	Influence of reactive-ion-etching depth on interface properties in Al₂O₃/n-GaN MOS diodes. Japanese Journal of Applied Physics, 2019, 58, 106503.	1.5	7
13	On the presence of Ga2O sub-oxide in high-pressure water vapor annealed AlGaN surface by combined XPS and first-principles methods. Applied Surface Science, 2019, 481, 1120-1126.	6.1	11
14	Spatial distribution of substitutional Mn-As clusters in ferromagnetic (Zn,Sn,Mn)As2 thin films revealed by image reconstruction of atom probe tomography data. Journal of Applied Physics, 2019, 125, 073902.	2.5	2
15	Impact of SiN capping during Ohmic Annealing on Performance of GaN-based MISHEMTs. , 2019, , .		2
16	Analytical derivation of charge relaxation time distribution in transistor from current noise spectrum using inverse integral transformation method. Applied Physics Express, 2018, 11, 031201.	2.4	1
17	Impact of rounded electrode corners on breakdown characteristics of AlGaN/GaN high-electron mobility transistors. Applied Physics Express, 2018, 11, 054102.	2.4	1
18	Correlation of AlGaN/GaN high-electron-mobility transistors electroluminescence characteristics with current collapse. Applied Physics Express, 2018, 11, 024101.	2.4	4

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19	Magnetic phase change in Mn-doped ZnSnAs2 thin films depending on Mn concentration. Journal of Applied Physics, 2018, 123, .	2.5	5
20	Characterization of Resistivity and Breakdown Field in Fe-Doped Semi-Insulating Gan Substrates. , 2018, , .		0
21	Study on Threshold Voltage Hysteresis in GaN-Based Vertical Trench MOSFETs. , 2018, , .		2
22	Improved Current Collapse in AlGaN/GaN MOS-HEMTs with Dual Field-Plates. , 2018, , .		2
23	Effect of Post-Gate Deposition Annealing on the Electrical Characteristics of AlGaN/GaN HEMTs with p-GaN Gate. , 2018, , .		0
24	Electron concentration in highly resistive GaN substrates co-doped with Si, C, and Fe. Japanese Journal of Applied Physics, 2018, 57, 071001.	1.5	8
25	Improved linearity, stability, and thermal performance of multi-mesa-channel AlGaN/GaN HEMTs. , 2018, 1, .		0
26	Reduced current collapse in multi-fingered AlGaN/GaN MOS-HEMTs with dual field plate. , 2017, , .		3
27	Analytical derivation of interface state density from sub-threshold swing in AlGaN/GaN metalâ€“insulatorâ€“semiconductor high-electron-mobility transistors. Japanese Journal of Applied Physics, 2017, 56, 104101.	1.5	3
28	Effect of reverse bias annealing on the properties of AlGaN/GaN MIS-HEMTs with recessed-gate structure. , 2017, , .		0
29	AlGaN/GaN high-electron-mobility transistor technology for high-voltage and low-on-resistance operation. Japanese Journal of Applied Physics, 2016, 55, 070101.	1.5	103
30	Large As sublattice distortion in sphalerite ZnSnAs2 thin films revealed by x-ray fluorescence holography. Journal of Applied Physics, 2016, 119, .	2.5	40
31	Highly-stable and low-state-density Al2O3/GaN interfaces using epitaxial n-GaN layers grown on free-standing GaN substrates. Applied Physics Letters, 2016, 109, 162104.	3.3	83
32	Insulated gate and surface passivation structures for GaN-based power transistors. Journal Physics D: Applied Physics, 2016, 49, 393001.	2.8	172
33	Effect of metal electrode edge irregularities on breakdown voltages of AlGaN/GaN HEMTs. , 2016, , .		1
34	Impact of drain electrode shape irregularities on breakdown voltage of AlGaN/GaN HEMTs. , 2016, , .		0
35	Breakdown degradation of AlGaN/GaN HEMTs with multi-finger gate patterns. , 2016, , .		1
36	AlGaN/GaN metalâ€“insulatorâ€“semiconductor high-electron mobility transistors with high on/off current ratio of over 5 Ã— 10¹⁰ achieved by ozone pretreatment and using ozone oxidant for Al₂O₃ gate insulator. Japanese Journal of Applied Physics, 2016, 55, 120305.	1.5	21

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37	Highly reduced current collapse in AlGaN/GaN high-electron-mobility transistors by combined application of oxygen plasma treatment and field plate structures. Japanese Journal of Applied Physics, 2016, 55, 04EG07.	1.5	17
38	High drain current and low on-resistance in AlGaN/GaN HEMTs with Au-plated ohmic electrodes. , 2015, , .		3
39	High breakdown voltage AlGaN/GaN HEMTs on free-standing GaN substrate. , 2015, , .		2
40	Current collapse in AlGaN/GaN HEMTs with a GaN cap layer. , 2015, , .		5
41	Impact of oxygen plasma treatment on the dynamic on-resistance of AlGaN/GaN high-electron-mobility transistors. Applied Physics Express, 2015, 8, 111001.	2.4	22
42	Calculating relaxation time distribution function from power spectrum based on inverse integral transformation method. Physics Letters, Section A: General, Atomic and Solid State Physics, 2015, 379, 738-742.	2.1	3
43	Interface trap states in Al₂O₃/AlGaN/GaN structure induced by inductively coupled plasma etching of AlGaN surfaces. Physica Status Solidi (A) Applications and Materials Science, 2015, 212, 1075-1080.	1.8	20
44	Current Collapse Reduction in AlGaN/GaN HEMTs by High-Pressure Water Vapor Annealing. IEEE Transactions on Electron Devices, 2015, 62, 2423-2428.	3.0	31
45	Improved current collapse in AlGaN/GaN HEMTs with 3-dimensional field plate structure. , 2015, , .		5
46	Cu/Al/Mo/Au and Ni/Al/Mo/Au ohmic contacts for AlGaN/GaN heterostructures. , 2015, , .		0
47	Characterization of electronic states at insulator/(Al)GaN interfaces for improved insulated gate and surface passivation structures of GaN-based transistors. Japanese Journal of Applied Physics, 2014, 53, 100213.	1.5	76
48	Reduced thermal resistance in AlGaN/GaN multi-mesa-channel high electron mobility transistors. Applied Physics Letters, 2014, 105, 053510.	3.3	33
49	Improved current stability in multi-mesa-channel AlGaN/GaN transistors. Physica Status Solidi C: Current Topics in Solid State Physics, 2014, 11, 857-861.	0.8	5
50	Evaluation of off-bias-stress induced surface charging at AlGaN/GaN surface using a dual-gate transistor structure. Japanese Journal of Applied Physics, 2014, 53, 070301.	1.5	9
51	Current Stability in Multi-Mesa-Channel AlGaN/GaN HEMTs. IEEE Transactions on Electron Devices, 2013, 60, 2997-3004.	3.0	79
52	Zinc-blende MnAs thin films directly grown on InP (001) substrates as possible source of spin-polarized current. Journal of Crystal Growth, 2012, 338, 129-133.	1.5	21
53	Three Dimensional Local Structure Analysis of ZnSnAs2:Mn by X-ray Fluorescence Holography. Japanese Journal of Applied Physics, 2011, 50, 01BF05.	1.5	2
54	Annealing Effects on Impurity Band Conduction of ZnSnAs₂Epitaxial Films. IOP Conference Series: Materials Science and Engineering, 2011, 21, 012031.	0.6	4

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55	Ferromagnetic ZnSnAs2:Mn Chalcopyrite Semiconductors for InP-based Spintronics. E-Journal of Surface Science and Nanotechnology, 2011, 9, 95-102.	0.4	4
56	Anomalous Hall Effect and Magnetoresistance in Mn-Doped ZnSnAs2Epitaxial Film on InP Substrates. Japanese Journal of Applied Physics, 2011, 50, 01BE12.	1.5	3
57	Room-Temperature Ferromagnetism in (Zn,Mn,Sn)As2Thin Films Applicable to InP-Based Spintronic Devices. Japanese Journal of Applied Physics, 2011, 50, 05FB02.	1.5	5
58	Anomalous Hall Effect and Magnetoresistance in Mn-Doped ZnSnAs₂Epitaxial Film on InP Substrates. Japanese Journal of Applied Physics, 2011, 50, 01BE12.	1.5	9
59	Three Dimensional Local Structure Analysis of ZnSnAs₂:Mn by X-ray Fluorescence Holography. Japanese Journal of Applied Physics, 2011, 50, 01BF05.	1.5	8
60	Room-Temperature Ferromagnetism in (Zn,Mn,Sn)As2Thin Films Applicable to InP-Based Spintronic Devices. Japanese Journal of Applied Physics, 2011, 50, 05FB02.	1.5	2
61	High-Resolution X-ray Diffraction Studies of ZnSnAs2 Epitaxial Films Nearly Lattice-matched to InP Substrates. Physics Procedia, 2010, 3, 1351-1356.	1.2	13
62	Effect of thermal annealing on the properties of narrow-bandgap ZnSnAs2 epitaxial films on InP(001) substrates. Physics Procedia, 2010, 3, 1341-1344.	1.2	12
63	Fabrication and structural characterization of nearly lattice-matched p-ZnSnAs2/n-InP heterojunctions. , 2009, , .		0
64	Impurity band conduction and negative magnetoresistance in pâ€ZnSnAs₂ thin films. Physica Status Solidi C: Current Topics in Solid State Physics, 2009, 6, 1158-1161.	0.8	15
65	MBE growth of Mn-doped ZnSnAs2 thin films. Journal of Crystal Growth, 2009, 311, 929-932.	1.5	42
66	Low-temperature annealing effects on (Ga,Mn)As/Zn-GaAs superlattice structures grown on GaAs(001) substrates. Journal of Crystal Growth, 2009, 311, 933-936.	1.5	2
67	MBE growth and properties of GeMn thin films on (001) GaAs. Journal of Crystal Growth, 2009, 311, 937-940.	1.5	6
68	Comparison of annealing effects on Zn-doped GaMnAs and undoped GaMnAs epilayers. Applied Surface Science, 2008, 254, 6648-6652.	6.1	2
69	Electrotransport Properties of p-ZnSnAs₂ Thin Films Grown by Molecular Beam Epitaxy on Semi-insulating (001) InP Substrates. Japanese Journal of Applied Physics, 2008, 47, 657.	1.5	18
70	MBE growth of Mn-doped Znâ€“Snâ€“As compounds on (001) InP substrates. Journal of Crystal Growth, 2007, 301-302, 656-661.	1.5	24
71	MBE growth and properties of GaMnAs with high level of Zn acceptor incorporation. Physica Status Solidi (A) Applications and Materials Science, 2006, 203, 2778-2782.	1.8	13