

Roman Stoklas

List of Publications by Year in descending order

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times ranked

823
citing authors

#	ARTICLE	IF	CITATIONS
1	Investigation of trapping effects in AlGaIn/GaN/Si field-effect transistors by frequency dependent capacitance and conductance analysis. Applied Physics Letters, 2008, 93, 124103.	1.5	95
2	Improved transport properties of Al ₂ O ₃ /AlGaIn/GaN metal-oxide-semiconductor heterostructure field-effect transistor. Applied Physics Letters, 2007, 90, 123513.	1.5	75
3	Characterization of AlGaIn/GaN metal-oxide-semiconductor field-effect transistors by frequency dependent conductance analysis. Applied Physics Letters, 2009, 94, 223512.	1.5	70
4	AlGaIn/GaN metal-oxide-semiconductor heterostructure field-effect transistors with 4 nm thick Al ₂ O ₃ gate oxide. Semiconductor Science and Technology, 2007, 22, 947-951.	1.0	63
5	Transport properties of AlGaIn/GaN metal-oxide-semiconductor heterostructure field-effect transistors with Al ₂ O ₃ of different thickness. Solid-State Electronics, 2008, 52, 973-979.	0.8	52
6	Trap states in AlGaIn/GaN metal-oxide-semiconductor structures with Al ₂ O ₃ prepared by atomic layer deposition. Journal of Applied Physics, 2010, 107, .	1.1	51
7	On the origin of interface states at oxide/III-nitride heterojunction interfaces. Journal of Applied Physics, 2016, 120, .	1.1	41
8	Trapping effects in Al ₂ O ₃ /AlGaIn/GaN metal-oxide-semiconductor heterostructure field-effect transistor investigated by temperature dependent conductance measurements. Applied Physics Letters, 2010, 96, .	1.5	39
9	Electrical properties of InAlN/GaN high electron mobility transistor with Al ₂ O ₃ , ZrO ₂ , and GdScO ₃ gate dielectrics. Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2011, 29, .	0.6	30
10	Investigation of surface donors TM in Al ₂ O ₃ /AlGaIn/GaN metal-oxide-semiconductor heterostructures: Correlation of electrical, structural, and chemical properties. Applied Surface Science, 2017, 426, 656-661.	3.1	27
11	Characterization of capture cross sections of interface states in dielectric/III-nitride heterojunction structures. Journal of Applied Physics, 2016, 119, .	1.1	21
12	InAlN/GaN/Si heterostructures and field-effect transistors with lattice matched and tensely or compressively strained InAlN. Applied Physics Letters, 2010, 97, 173505.	1.5	19
13	Origin of positive fixed charge at insulator/AlGaIn interfaces and its control by AlGaIn composition. Applied Physics Letters, 2017, 110, 243505.	1.5	19
14	Aluminum oxide as passivation and gate insulator in GaAs-based field-effect transistors prepared in situ by metal-organic vapor deposition. Applied Physics Letters, 2012, 100, 142113.	1.5	18
15	Zinc-doped gallium phosphide nanowires for photovoltaic structures. Applied Surface Science, 2013, 269, 72-76.	3.1	18
16	Influence of oxygen-plasma treatment on AlGaIn/GaN metal-oxide-semiconductor heterostructure field-effect transistors with HfO ₂ by atomic layer deposition: leakage current and density of states reduction. Semiconductor Science and Technology, 2017, 32, 045018.	1.0	18
17	Optimization and performance of Al ₂ O ₃ /GaN metal-oxide-semiconductor structures. Microelectronics Reliability, 2007, 47, 790-793.	0.9	15
18	Preparation of thin Ga-doped ZnO layers for core-shell GaP/ZnO nanowires. Applied Surface Science, 2012, 258, 7607-7611.	3.1	15

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19	Trapped charge effects in AlGa _{0.2} N/GaN metal-oxide-semiconductor structures with Al ₂ O ₃ and ZrO ₂ gate insulator. Semiconductor Science and Technology, 2014, 29, 045003.	1.0	14
20	High carrier mobility epitaxially aligned PtSe ₂ films grown by one-zone selenization. Applied Surface Science, 2021, 538, 147936.	3.1	13
21	Characterization of AlGa _{0.2} N/GaN MOSFETs with Al ₂ O ₃ as gate oxide. Physica Status Solidi C: Current Topics in Solid State Physics, 2007, 4, 2720-2723.	0.8	11
22	Performance of AlGa _{0.2} N/GaN metal-insulator-semiconductor heterostructure field-effect transistors with AlN gate insulator prepared by reactive magnetron sputtering. Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2011, 29, 01A809.	0.6	11
23	Characterization of interface states in AlGa _{0.2} N/GaN metal-oxide-semiconductor heterostructure field-effect transistors with HfO ₂ gate dielectric grown by atomic layer deposition. Applied Surface Science, 2018, 461, 255-259.	3.1	11
24	Investigation of self-nucleated skyrmion states in the ferromagnetic/nonmagnetic multilayer dot. Applied Physics Letters, 2021, 118, .	1.5	11
25	Characterization of AlGa _{0.2} N/GaN MISHFETs on a Si substrate by static and high-frequency measurements. Semiconductor Science and Technology, 2009, 24, 075014.	1.0	10
26	InGaAs/GaAs metal-oxide-semiconductor heterostructure field-effect transistors with oxygen-plasma oxide and Al ₂ O ₃ double-layer insulator. Applied Physics Letters, 2014, 105, 183504.	1.5	10
27	Properties of InGaAs/GaAs metal-oxide-semiconductor heterostructure field-effect transistors modified by surface treatment. Applied Surface Science, 2017, 395, 140-144.	3.1	10
28	Extraction of interface trap density of Al ₂ O ₃ /AlGa _{0.2} N/GaN MIS heterostructure capacitance. Physica Status Solidi (B): Basic Research, 2015, 252, 996-1000.	0.7	9
29	Effect of temperature and carrier gas on the properties of Al ₂ O ₃ /AlGa _{0.2} N/GaN MIS heterostructure capacitance. Physica Status Solidi (B): Basic Research, 2015, 252, 996-1000.	3.1	9
30	Defect states characterization of non-annealed and annealed ZrO ₂ /InAlN/GaN structures by capacitance measurements. Applied Physics Letters, 2013, 102, .	1.5	8
31	Temperature-induced instability of the threshold voltage in GaN-based heterostructure field-effect transistors. Semiconductor Science and Technology, 2017, 32, 025017.	1.0	8
32	Ohmic contacts to p-GaP/n-ZnO core/shell nanowires based on Au metallization. Applied Surface Science, 2013, 269, 60-64.	3.1	7
33	Semi-insulating GaN for vertical structures: role of substrate selection and growth pressure. Materials Science in Semiconductor Processing, 2020, 118, 105203.	1.9	7
34	InN: Breaking the limits of solid-state electronics. AIP Advances, 2021, 11, .	0.6	7
35	Electrical properties of individual GaP nanowires doped by zinc. Physica Status Solidi (A) Applications and Materials Science, 2012, 209, 2505-2509.	0.8	6
36	Oxidized Al Film as an Insulation Layer in AlGa _{0.2} N/GaN Metal-oxide-semiconductor Heterostructure Field Effect Transistors. Japanese Journal of Applied Physics, 2010, 49, 046504.	0.8	5

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37	ZrO ₂ /InAlN/GaN Metal-oxide Semiconductor Heterostructure Field-Effect Transistors with InAlN Barrier of Different Compositions. Japanese Journal of Applied Physics, 2013, 52, 08JN07.	0.8	5
38	Low- and high-frequency capacitance of aluminum gallium nitride/gallium nitride heterostructures with interface traps. Materials Science in Semiconductor Processing, 2015, 31, 525-529.	1.9	5
39	Generation of hole gas in non-inverted InAl(GaN)/GaN heterostructures. Applied Physics Express, 2019, 12, 014001.	1.1	5
40	Analysis and Modeling of Vertical Current Conduction and Breakdown Mechanisms in Semi-Insulating GaN Grown on GaN: Role of Deep Levels. IEEE Transactions on Electron Devices, 2021, 68, 2365-2371.	1.6	5
41	Enhancement of effective carrier velocity in AlGaIn/GaN MOSHFETs with Al ₂ O ₃ gate oxide. Physica Status Solidi C: Current Topics in Solid State Physics, 2008, 5, 1935-1937.	0.8	4
42	Thermally Oxidized InAlN of Different Compositions for InAlN/GaN Heterostructure Field-Effect Transistors. Journal of Electronic Materials, 2012, 41, 3013-3016.	1.0	4
43	Growth and Properties of Polar InN/InAlN Heterostructures. Physica Status Solidi (A) Applications and Materials Science, 2020, 217, 2000197.	0.8	4
44	GaAs-based metal-oxide-semiconductor field-effect transistor with aluminum oxide gate insulator prepared <i>in situ</i> by MOCVD. Semiconductor Science and Technology, 2012, 27, 115002.	1.0	3
45	InGaIn/(GaN)/AlGaIn/GaN normally-off metal-oxide-semiconductor high-electron mobility transistors with etched access region. Japanese Journal of Applied Physics, 2019, 58, SCCD21.	0.8	3
46	Investigation of interfaces and threshold voltage instabilities in normally-off MOS-gated InGaIn/AlGaIn/GaN HEMTs. Applied Surface Science, 2020, 528, 146824.	3.1	3
47	Skyrmion Formation in Nanodisks Using Magnetic Force Microscopy Tip. Nanomaterials, 2021, 11, 2627.	1.9	3
48	Technology and application of in-situ AlO _x layers on III-V semiconductors. Applied Surface Science, 2018, 461, 33-38.	3.1	1
49	Preparation and properties of AlGaIn/GaN MOSHFETs with MOCVD Al ₂ O ₃ as gate oxide. , 2006, , .		0
50	Influence of annealing on electrical properties of AlGaIn/GaN HFETs and MOSHFETs using Al ₂ O ₃ as gate oxide. , 2008, , .		0
51	Preparation and properties of AlGaIn/GaN MOS-HFETs with atomic layer deposited Al ₂ O ₃ as gate oxide. , 2010, , .		0
52	Current instabilities and other reliability aspects in AlGaIn/GaN MOS-HFETs with atomic layer deposited Al ₂ O ₃ as gate oxide. , 2012, , .		0
53	Devices with Te-doped InGaP layers. , 2012, , .		0
54	The influence of an AlO _x film in-situ deposited on the GaAs-based HFETs properties. , 2012, , .		0

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55	Gate leakage reduction of AlGaIn/GaN MOS-HFETs with HfO ₂ prepared by ALD. , 2014, , .		0
56	Temperature-dependent of sub-threshold slope of AlGaIn/GaN MOSHFETs with HfO ₂ gate oxide prepared by ALD. , 2016, , .		0
57	GaAs Nanomembranes in the High Electron Mobility Transistor Technology. Materials, 2021, 14, 3461.	1.3	0
58	InN crystal habit, structural, electrical, and optical properties affected by sapphire substrate nitridation in N-polar InN/InAlN heterostructures. Semiconductor Science and Technology, 2021, 36, 075025.	1.0	0
59	Invited: Polarization engineering in GaN-based normally-off transistors. , 2021, , .		0