

Sriram Krishnamoorthy

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

94 papers	2,980 citations	33 h-index	52 g-index
112 ext. papers	3,546 ext. citations	3.4 avg, IF	5.41 L-index

#	Paper	IF	Citations
94	α -Gallium oxide power electronics. <i>APL Materials</i> , 2022 , 10, 029201	5.7	33
93	Effect of extended defects on photoluminescence of gallium oxide and aluminum gallium oxide epitaxial films.. <i>Scientific Reports</i> , 2022 , 12, 3243	4.9	2
92	Electronic and ionic conductivity in α -Ga ₂ O ₃ single crystals. <i>Journal of Applied Physics</i> , 2022 , 131, 085102.	2.5	0
91	Alloyed α -(Al _x Ga _{1-x}) ₂ O ₃ bulk Czochralski single α -(Al _{0.1} Ga _{0.9}) ₂ O ₃ and polycrystals α -(Al _{0.33} Ga _{0.66}) ₂ O ₃ , α -(Al _{0.5} Ga _{0.5}) ₂ O ₃), and property trends. <i>Journal of Applied Physics</i> , 2022 , 131, 155702	2.5	2
90	On the terahertz response of metal-gratings on anisotropic dielectric substrates and its prospective application for anisotropic refractive index characterization. <i>Journal of Applied Physics</i> , 2022 , 131, 193101	2.5	1
89	Optical Characterization of Gallium Oxide α and β Polymorph Thin-Films Grown on c-Plane Sapphire. <i>Journal of Electronic Materials</i> , 2021 , 50, 2990-2998	1.9	3
88	N-type doping of low-pressure chemical vapor deposition grown α -Ga ₂ O ₃ thin films using solid-source germanium. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2021 , 39, 030404	2.9	6
87	130 μ m α -Ga ₂ O ₃ metal semiconductor field effect transistor with low-temperature metalorganic vapor phase epitaxy-regrown ohmic contacts. <i>Applied Physics Express</i> , 2021 , 14, 076502	2.4	14
86	Ultrafast THz modulators with WSe ₂ thin films: erratum. <i>Optical Materials Express</i> , 2021 , 11, 2242	2.6	
85	Oxygen annealing induced changes in defects within α -Ga ₂ O ₃ epitaxial films measured using photoluminescence. <i>Journal Physics D: Applied Physics</i> , 2021 , 54, 174004	3	3
84	Impurity band conduction in Si-doped α -Ga ₂ O ₃ films. <i>Applied Physics Letters</i> , 2021 , 118, 072105	3.4	4
83	High-k Oxide Field-Plated Vertical (001) α -Ga ₂ O ₃ Schottky Barrier Diode With Baliga's Figure of Merit Over 1 GW/cm ² . <i>IEEE Electron Device Letters</i> , 2021 , 42, 1140-1143	4.4	27
82	GaO-on-SiC Composite Wafer for Thermal Management of Ultrawide Bandgap Electronics. <i>ACS Applied Materials & Interfaces</i> , 2021 , 13, 40817-40829	9.5	16
81	Thermal Conductivity of α -Phase GaO and (AlGa)O Heteroepitaxial Thin Films. <i>ACS Applied Materials & Interfaces</i> , 2021 , 13, 38477-38490	9.5	8
80	Spalling-Induced Lifting and Transfer of Electronic Films Using a van der Waals Release Layer. <i>Small</i> , 2021 , 17, e2102668	11	1
79	Multi-kV Class α -Ga ₂ O ₃ MESFETs With a Lateral Figure of Merit Up to 355 MW/cm ² . <i>IEEE Electron Device Letters</i> , 2021 , 42, 1272-1275	4.4	17
78	Growth and characterization of metalorganic vapor-phase epitaxy-grown α -(Al _x Ga _{1-x}) ₂ O ₃ / α -Ga ₂ O ₃ heterostructure channels. <i>Applied Physics Express</i> , 2021 , 14, 025501	2.4	23

77	Synthesis and Characterization of Large-Area Nanometer-Thin AlGaO_3 Films from Oxide Printing of Liquid Metal Gallium. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2020 , 217, 1901007	1.6	8
76	Theoretical investigation of optical intersubband transitions and infrared photodetection in $\text{Al}_{1-x}\text{Ga}_x\text{O}_3/\text{Ga}_2\text{O}_3$ quantum well structures. <i>Journal of Applied Physics</i> , 2020 , 127, 173102	2.5	1
75	Highly tunable, polarization-engineered two-dimensional electron gas in $\text{AlGaO}_3/\text{Ga}_2\text{O}_3$ heterostructures. <i>Applied Physics Express</i> , 2020 , 13, 061009	2.4	17
74	Delta-doped AlGaO_3 thin films and $\text{Al}_{0.26}\text{Ga}_{0.74}\text{O}_3/\text{AlGaO}_3$ heterostructures grown by metalorganic vapor-phase epitaxy. <i>Applied Physics Express</i> , 2020 , 13, 045501	2.4	30
73	Schottky Barrier Height Engineering in AlGaO_3 Using SiO_2 Interlayer Dielectric. <i>IEEE Journal of the Electron Devices Society</i> , 2020 , 8, 286-294	2.3	15
72	Degenerate doping in AlGaO_3 single crystals through Hf-doping. <i>Semiconductor Science and Technology</i> , 2020 , 35, 04LT01	1.8	26
71	Field-Effect Transistors 3. <i>Springer Series in Materials Science</i> , 2020 , 609-621	0.9	
70	The anisotropic quasi-static permittivity of single-crystal AlGaO_3 measured by terahertz spectroscopy. <i>Applied Physics Letters</i> , 2020 , 117, 252103	3.4	14
69	Electro-thermal co-design of $\text{Al}_{1-x}\text{Ga}_x\text{O}_3/\text{Ga}_2\text{O}_3$ modulation doped field effect transistors. <i>Applied Physics Letters</i> , 2020 , 117, 153501	3.4	25
68	Low temperature homoepitaxy of (010) AlGaO_3 by metalorganic vapor phase epitaxy: Expanding the growth window. <i>Applied Physics Letters</i> , 2020 , 117, 142102	3.4	35
67	Compensation in (2 × 01) homoepitaxial AlGaO_3 thin films grown by metalorganic vapor-phase epitaxy. <i>Journal of Applied Physics</i> , 2020 , 128, 195703	2.5	7
66	Defect states and their electric field-enhanced electron thermal emission in heavily Zr-doped AlGaO_3 crystals. <i>Applied Physics Letters</i> , 2020 , 117, 212104	3.4	6
65	Design of a AlGaO_3 Schottky Barrier Diode With p-Type III-Nitride Guard Ring for Enhanced Breakdown. <i>IEEE Transactions on Electron Devices</i> , 2020 , 67, 4842-4848	2.9	10
64	Delta-doped AlGaO_3 films with narrow FWHM grown by metalorganic vapor-phase epitaxy. <i>Applied Physics Letters</i> , 2020 , 117, 172105	3.4	12
63	Electrical and optical properties of Zr doped AlGaO_3 single crystals. <i>Applied Physics Express</i> , 2019 , 12, 085502	2.4	25
62	Mechanism of Si doping in plasma assisted MBE growth of AlGaO_3 . <i>Applied Physics Letters</i> , 2019 , 115, 152106	3.4	26
61	Si-doped $\text{Al}_{0.26}\text{Ga}_{0.74}\text{O}_3$ thin films and heterostructures grown by metalorganic vapor-phase epitaxy. <i>Applied Physics Express</i> , 2019 , 12, 111004	2.4	34
60	Ultrafast THz modulators with WSe ₂ thin films [Invited]. <i>Optical Materials Express</i> , 2019 , 9, 826	2.6	15

59	Advances in Ga ₂ O ₃ solar-blind UV photodetectors 2019 , 369-399		23
58	Low-pressure CVD-grown α -Ga ₂ O ₃ bevel-field-plated Schottky barrier diodes. <i>Applied Physics Express</i> , 2018 , 11, 031101	2.4	81
57	Delta Doped β -Ga ₂ O ₃ Field Effect Transistors With Regrown Ohmic Contacts. <i>IEEE Electron Device Letters</i> , 2018 , 39, 568-571	4.4	75
56	Optical signatures of deep level defects in Ga ₂ O ₃ . <i>Applied Physics Letters</i> , 2018 , 112, 242102	3.4	82
55	Incident wavelength and polarization dependence of spectral shifts in α -GaO UV photoluminescence. <i>Scientific Reports</i> , 2018 , 8, 18075	4.9	34
54	Demonstration of zero bias responsivity in MBE grown α -Ga ₂ O ₃ lateral deep-UV photodetector. <i>Japanese Journal of Applied Physics</i> , 2018 , 57, 060313	1.4	47
53	A self-limiting layer-by-layer etching technique for 2H-MoS ₂ . <i>Applied Physics Express</i> , 2017 , 10, 035201	2.4	11
52	Tunnel-injected sub-260 nm ultraviolet light emitting diodes. <i>Applied Physics Letters</i> , 2017 , 110, 201102	3.4	48
51	Delta-doped α -gallium oxide field-effect transistor. <i>Applied Physics Express</i> , 2017 , 10, 051102	2.4	94
50	High responsivity in molecular beam epitaxy grown α -Ga ₂ O ₃ metal semiconductor metal solar blind deep-UV photodetector. <i>Applied Physics Letters</i> , 2017 , 110, 221107	3.4	124
49	Molecular beam epitaxy of 2D-layered gallium selenide on GaN substrates. <i>Journal of Applied Physics</i> , 2017 , 121, 094302	2.5	38
48	Small-signal characteristics of graded AlGa _N channel PolFETs 2017 ,		2
47	Atomic Scale Structure and Defects in 2D GaSe Films and Van der Waals Interface. <i>Microscopy and Microanalysis</i> , 2017 , 23, 1728-1729	0.5	
46	Modulation-doped α -(Al _{0.2} Ga _{0.8}) ₂ O ₃ /Ga ₂ O ₃ field-effect transistor. <i>Applied Physics Letters</i> , 2017 , 111, 023502	3.4	188
45	Point and Extended Defects in Ultra Wide Band Gap α -Ga ₂ O ₃ Interfaces. <i>Microscopy and Microanalysis</i> , 2017 , 23, 1454-1455	0.5	2
44	Reflective metal/semiconductor tunnel junctions for hole injection in AlGa _N UV LEDs. <i>Applied Physics Letters</i> , 2017 , 111, 051104	3.4	26
43	Large-area SnSe ₂ /Ga _N heterojunction diodes grown by molecular beam epitaxy. <i>Applied Physics Letters</i> , 2017 , 111, 202101	3.4	7
42	Ultralow-voltage-drop Ga _N /InGa _N /Ga _N tunnel junctions with 12% indium content. <i>Applied Physics Express</i> , 2017 , 10, 121003	2.4	13

41	Graded AlGa _N Channel Transistors for Improved Current and Power Gain Linearity. <i>IEEE Transactions on Electron Devices</i> , 2017 , 64, 3114-3119	2.9	35
40	Deep level defects in N-rich and In-rich In _x Ga _{1-x} N: in composition dependence. <i>Superlattices and Microstructures</i> , 2016 , 99, 67-71	2.8	
39	Low-resistance GaN tunnel homojunctions with 150 kA/cm ² current and repeatable negative differential resistance. <i>Applied Physics Letters</i> , 2016 , 108, 131103	3.4	37
38	Current gain above 10 in sub-10 nm base III-Nitride tunneling hot electron transistors with GaN/AlN emitter. <i>Applied Physics Letters</i> , 2016 , 108, 192101	3.4	6
37	Design of p-type cladding layers for tunnel-injected UV-A light emitting diodes. <i>Applied Physics Letters</i> , 2016 , 109, 191105	3.4	28
36	High current density 2D/3D MoS ₂ /GaN Esaki tunnel diodes. <i>Applied Physics Letters</i> , 2016 , 109, 183505	3.4	44
35	Design and demonstration of ultra-wide bandgap AlGa _N tunnel junctions. <i>Applied Physics Letters</i> , 2016 , 109, 121102	3.4	43
34	AlGa _N channel field effect transistors with graded heterostructure ohmic contacts. <i>Applied Physics Letters</i> , 2016 , 109, 133508	3.4	52
33	Enhanced light extraction in tunnel junction-enabled top emitting UV LEDs. <i>Applied Physics Express</i> , 2016 , 9, 052102	2.4	23
32	GaN-based three-junction cascaded light-emitting diode with low-resistance InGa _N tunnel junctions. <i>Applied Physics Express</i> , 2015 , 8, 082103	2.4	37
31	Recess-Free Nonalloyed Ohmic Contacts on Graded AlGa _N Heterojunction FETs. <i>IEEE Electron Device Letters</i> , 2015 , 36, 226-228	4.4	17
30	Sub 300 nm wavelength III-Nitride tunnel-injected ultraviolet LEDs 2015 ,		4
29	Density-dependent electron transport and precise modeling of GaN high electron mobility transistors. <i>Applied Physics Letters</i> , 2015 , 107, 153504	3.4	44
28	Layer-transferred MoS ₂ /GaN PN diodes. <i>Applied Physics Letters</i> , 2015 , 107, 103505	3.4	53
27	Transferred large area single crystal MoS ₂ field effect transistors. <i>Applied Physics Letters</i> , 2015 , 107, 193503	3.4	19
26	Interband tunneling for hole injection in III-nitride ultraviolet emitters. <i>Applied Physics Letters</i> , 2015 , 106, 141103	3.4	67
25	Power switching transistors based on GaN and AlGa _N channels 2015 ,		1
24	Lateral energy band engineering of Al ₂ O ₃ /III-nitride interfaces 2014 ,		1

23	Interface Charge Engineering for Enhancement-Mode GaN MISHEMTs. <i>IEEE Electron Device Letters</i> , 2014 , 35, 312-314	4.4	66
22	Energy band engineering for photoelectrochemical etching of GaN/InGaN heterostructures. <i>Applied Physics Letters</i> , 2014 , 104, 243503	3.4	6
21	III-nitride tunnel junctions for efficient solid state lighting 2014 ,		1
20	InGaN/GaN tunnel junctions for hole injection in GaN light emitting diodes. <i>Applied Physics Letters</i> , 2014 , 105, 141104	3.4	49
19	Electron tunneling spectroscopy study of electrically active traps in AlGaIn/GaN high electron mobility transistors. <i>Applied Physics Letters</i> , 2013 , 103, 223507	3.4	9
18	GdN nanoisland-based GaN tunnel junctions. <i>Nano Letters</i> , 2013 , 13, 2570-5	11.5	49
17	Large area single crystal (0001) oriented MoS ₂ . <i>Applied Physics Letters</i> , 2013 , 102, 252108	3.4	178
16	Tunneling-based carrier regeneration in cascaded GaN light emitting diodes to overcome efficiency droop. <i>Applied Physics Letters</i> , 2013 , 103, 081107	3.4	59
15	Determination of trap energy levels in AlGaIn/GaN HEMT 2013 ,		2
14	Low resistance GaN/InGaIn/GaN tunnel junctions. <i>Applied Physics Letters</i> , 2013 , 102, 113503	3.4	89
13	A study of electrically active traps in AlGaIn/GaN high electron mobility transistor. <i>Applied Physics Letters</i> , 2013 , 103, 173520	3.4	12
12	Interface charge engineering at atomic layer deposited dielectric/III-nitride interfaces. <i>Applied Physics Letters</i> , 2013 , 102, 072105	3.4	65
11	Electron gas dimensionality engineering in AlGaIn/GaN high electron mobility transistors using polarization. <i>Applied Physics Letters</i> , 2012 , 100, 063507	3.4	28
10	Fabrication and characterization of a piezoelectric gallium nitride switch for optical MEMS applications. <i>Smart Materials and Structures</i> , 2012 , 21, 094003	3.4	4
9	Suppression of electron overflow and efficiency droop in N-polar GaN green light emitting diodes. <i>Applied Physics Letters</i> , 2012 , 100, 111118	3.4	118
8	Methods for attaining high interband tunneling current in III-Nitrides 2012 ,		4
7	Metal-oxide barrier extraction by Fowler-Nordheim tunnelling onset in Al ₂ O ₃ -on-GaN MOS diodes. <i>Electronics Letters</i> , 2012 , 48, 347	1.1	11
6	Demonstration of forward inter-band tunneling in GaN by polarization engineering. <i>Applied Physics Letters</i> , 2011 , 99, 233504	3.4	55

5	Electrical properties of atomic layer deposited aluminum oxide on gallium nitride. <i>Applied Physics Letters</i> , 2011 , 99, 133503	3.4	138
4	Detailed characterization of deep level defects in InGaN Schottky diodes by optical and thermal deep level spectroscopies. <i>Applied Physics Letters</i> , 2011 , 99, 092109	3.4	15
3	Polarization-engineered GaN/InGaN/GaN tunnel diodes. <i>Applied Physics Letters</i> , 2010 , 97, 203502	3.4	121
2	Gallium Nitride (GaN)		8
1	In Situ Dielectric Al2O3/□Ga2O3 Interfaces Grown Using MetalOrganic Chemical Vapor Deposition. <i>Advanced Electronic Materials</i> ,2100333	6.4	4