Sriram Krishnamoorthy

List of Publications by Year
in descending order

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107	4,287	81889	114455
papers	citations	39 h-index	63 g-index

112	112	112	3760
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Modulation-doped Î²-(Al0.2Ga0.8)2O3/Ga2O3 field-effect transistor. Applied Physics Letters, 2017, 111, .	3.3	252
2	Large area single crystal (0001) oriented MoS2. Applied Physics Letters, 2013, 102, .	3.3	200
3	Î²-Gallium oxide power electronics. APL Materials, 2022, 10, .	5.1	184
4	High responsivity in molecular beam epitaxy grown Î²-Ga2O3 metal semiconductor metal solar blind deep-UV photodetector. Applied Physics Letters, 2017, 110, .	3.3	175
5	Electrical properties of atomic layer deposited aluminum oxide on gallium nitride. Applied Physics Letters, 2011, 99, .	3.3	155
6	Polarization-engineered GaN/InGaN/GaN tunnel diodes. Applied Physics Letters, 2010, 97, .	3.3	145
7	Suppression of electron overflow and efficiency droop in N-polar GaN green light emitting diodes. Applied Physics Letters, 2012, 100, .	3.3	139
8	Delta-doped Î²-gallium oxide field-effect transistor. Applied Physics Express, 2017, 10, 051102.	2.4	117
9	Low-pressure CVD-grown Î²-Ga₂O₃bevel-field-plated Schottky barrier diodes. Applied Physics Express, 2018, 11, 031101.	2.4	115
10	Optical signatures of deep level defects in Ga2O3. Applied Physics Letters, 2018, 112, .	3.3	113
11	Delta Doped eta -Ga2O3 Field Effect Transistors With Regrown Ohmic Contacts. IEEE Electron Device Letters, 2018, 39, 568-571.	3.9	106
12	Low resistance GaN/InGaN/GaN tunnel junctions. Applied Physics Letters, 2013, 102, .	3.3	102
13	High-k Oxide Field-Plated Vertical (001) Î²-Ga₂O₃Schottky Barrier Diode With Baligaâ€™s Figure of Merit Over 1 GW/cm². IEEE Electron Device Letters, 2021, 42, 1140-1143.	3.9	86
14	Interface Charge Engineering for Enhancement-Mode GaN MISHEMTs. IEEE Electron Device Letters, 2014, 35, 312-314.	3.9	81
15	Interband tunneling for hole injection in III-nitride ultraviolet emitters. Applied Physics Letters, 2015, 106, .	3.3	79
16	Interface charge engineering at atomic layer deposited dielectric/III-nitride interfaces. Applied Physics Letters, 2013, 102, .	3.3	75
17	Tunneling-based carrier regeneration in cascaded GaN light emitting diodes to overcome efficiency droop. Applied Physics Letters, 2013, 103, 081107.	3.3	72
18	Layer-transferred MoS2/GaN PN diodes. Applied Physics Letters, 2015, 107, .	3.3	69

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19	AlGaN channel field effect transistors with graded heterostructure ohmic contacts. Applied Physics Letters, 2016, 109, .	3.3	68
20	High current density 2D/3D MoS2/GaN Esaki tunnel diodes. Applied Physics Letters, 2016, 109, .	3.3	65
21	Demonstration of zero bias responsivity in MBE grown Î²-Ga₂O₃ lateral deep-UV photodetector. Japanese Journal of Applied Physics, 2018, 57, 060313.	1.5	64
22	Demonstration of forward inter-band tunneling in GaN by polarization engineering. Applied Physics Letters, 2011, 99, .	3.3	62
23	InGaN/GaN tunnel junctions for hole injection in GaN light emitting diodes. Applied Physics Letters, 2014, 105, .	3.3	62
24	Incident wavelength and polarization dependence of spectral shifts in Î²-Ga2O3 UV photoluminescence. Scientific Reports, 2018, 8, 18075.	3.3	62
25	Graded AlGaN Channel Transistors for Improved Current and Power Gain Linearity. IEEE Transactions on Electron Devices, 2017, 64, 3114-3119.	3.0	61
26	Density-dependent electron transport and precise modeling of GaN high electron mobility transistors. Applied Physics Letters, 2015, 107, .	3.3	59
27	Design and demonstration of ultra-wide bandgap AlGaN tunnel junctions. Applied Physics Letters, 2016, 109, .	3.3	59
28	Low temperature homoepitaxy of (010) Î² -Ga2O3 by metalorganic vapor phase epitaxy: Expanding the growth window. Applied Physics Letters, 2020, 117, .	3.3	56
29	Tunnel-injected sub-260â€‰nm ultraviolet light emitting diodes. Applied Physics Letters, 2017, 110, .	3.3	55
30	GdN Nanoisland-Based GaN Tunnel Junctions. Nano Letters, 2013, 13, 2570-2575.	9.1	54
31	Molecular beam epitaxy of 2D-layered gallium selenide on GaN substrates. Journal of Applied Physics, 2017, 121, .	2.5	52
32	Multi-kV Class Î²-Gaâ„Oâ„ MESFETs With a Lateral Figure of Merit Up to 355 MW/cmÂ². IEEE Electron Device Letters, 2021, 42, 1272-1275.	3.9	50
33	Ga₂O₃-on-SiC Composite Wafer for Thermal Management of Ultrawide Bandgap Electronics. ACS Applied Materials & Interfaces, 2021, 13, 40817-40829.	8.0	49
34	Si-doped Î²-(Al_{0.26}Ga_{0.74})₂O₃ thin films and heterostructures grown by metalorganic vapor-phase epitaxy. Applied Physics Express, 2019, 12, 111004.	2.4	47
35	Low-resistance GaN tunnel homojunctions with 150â€‰kA/cm2 current and repeatable negative differential resistance. Applied Physics Letters, 2016, 108, .	3.3	45
36	GaN-based three-junction cascaded light-emitting diode with low-resistance InGaN tunnel junctions. Applied Physics Express, 2015, 8, 082103.	2.4	43

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37	Degenerate doping in Î²-Ga₂O₃ single crystals through Hf-doping. Semiconductor Science and Technology, 2020, 35, 04LT01.	2.0	43
38	Mechanism of Si doping in plasma assisted MBE growth of Î²-Ga2O3. Applied Physics Letters, 2019, 115, .	3.3	41
39	Growth and characterization of metalorganic vapor-phase epitaxy-grown Î²-(Al _x) Tj ETQq1 1 0.784314 rgBT /Overlock 1 channels. Applied Physics Express, 2021, 14, 025501.	2.4	40
40	4.4 kV Î²-Ga₂O₃ MESFETs with power figure of merit exceeding 100 MW cm^{â^'2}. Applied Physics Express, 2022, 15, 061001.	2.4	40
41	130ÂmAÂmm^{â^'1} Î²-Ga₂O₃ metal semiconductor field effect transistor with low-temperature metalorganic vapor phase epitaxy-regrown ohmic contacts. Applied Physics Express, 2021, 14, 076502.	2.4	39
42	Electrical and optical properties of Zr doped Î²-Ga₂O₃ single crystals. Applied Physics Express, 2019, 12, 085502.	2.4	38
43	Highly tunable, polarization-engineered two-dimensional electron gas in Îµ-AlGaO₃/Îµ-Ga₂O₃ heterostructures. Applied Physics Express, 2020, 13, 061009.	2.4	38
44	Delta-doped Î²-Ga₂O₃ thin films and Î²-(Al_{0.26}Ga_{0.74})₂O₃/Î²-Ga₂O₃ heterostructures grown by metalorganic vapor-phase epitaxy. Applied Physics Express, 2020, 13, 045501.	2.4	38
45	Advances in Ga2O3 solar-blind UV photodetectors. , 2019, , 369-399.		36
46	Electro-thermal co-design of Î² -(AlxGa1-x)2O3/Ga2O3 modulation doped field effect transistors. Applied Physics Letters, 2020, 117, .	3.3	35
47	Design of p-type cladding layers for tunnel-injected UV-A light emitting diodes. Applied Physics Letters, 2016, 109, .	3.3	32
48	Reflective metal/semiconductor tunnel junctions for hole injection in AlGaN UV LEDs. Applied Physics Letters, 2017, 111, .	3.3	32
49	Schottky Barrier Height Engineering inÎ²-Ga₂O₃Using SiO₂Interlayer Dielectric. IEEE Journal of the Electron Devices Society, 2020, 8, 286-294.	2.1	32
50	Electron gas dimensionality engineering in AlGaN/GaN high electron mobility transistors using polarization. Applied Physics Letters, 2012, 100, .	3.3	30
51	Enhanced light extraction in tunnel junction-enabled top emitting UV LEDs. Applied Physics Express, 2016, 9, 052102.	2.4	27
52	The anisotropic quasi-static permittivity of single-crystal Î² -Ga2O3 measured by terahertz spectroscopy. Applied Physics Letters, 2020, 117, .	3.3	27
53	Thermal Conductivity of Î²-Phase Ga₂O₃ and (Al_xGa_{1â€“}_x)₂O₃ Heteroepitaxial Thin Films. ACS Applied Materials & Interfaces, 2021, 13, 38477-38490.	8.0	24
54	Transferred large area single crystal MoS2 field effect transistors. Applied Physics Letters, 2015, 107, .	3.3	21

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55	Design of a Î²-Ga₂O₃ Schottky Barrier Diode With p-Type III-Nitride Guard Ring for Enhanced Breakdown. IEEE Transactions on Electron Devices, 2020, 67, 4842-4848.	3.0	21
56	Recess-Free Nonalloyed Ohmic Contacts on Graded AlGaN Heterojunction FETs. IEEE Electron Device Letters, 2015, 36, 226-228.	3.9	18
57	Ultralow-voltage-drop GaN/InGaN/GaN tunnel junctions with 12% indium content. Applied Physics Express, 2017, 10, 121003.	2.4	18
58	Detailed characterization of deep level defects in InGaN Schottky diodes by optical and thermal deep level spectroscopies. Applied Physics Letters, 2011, 99, .	3.3	17
59	Delta-doped Î² -Ga2O3 films with narrow FWHM grown by metalorganic vapor-phase epitaxy. Applied Physics Letters, 2020, 117, .	3.3	17
60	In Situ Dielectric Al₂O₃/Î²â€Ga₂O₃ Interfaces Grown Using Metalâ€“Organic Chemical Vapor Deposition. Advanced Electronic Materials, 2021, 7, 2100333.	5.1	17
61	Synthesis and Characterization of Largeâ€Area Nanometerâ€Thin Î²â€Ga₂O₃ Films from Oxide Printing of Liquid Metal Gallium. Physica Status Solidi (A) Applications and Materials Science, 2020, 217, 1901007.	1.8	16
62	Ultrafast THz modulators with WSe₂ thin films [Invited]. Optical Materials Express, 2019, 9, 826.	3.0	16
63	Effect of extended defects on photoluminescence of gallium oxide and aluminum gallium oxide epitaxial films. Scientific Reports, 2022, 12, 3243.	3.3	16
64	Alloyed Î²-(AlxGa1â^'x)2O3 bulk Czochralski single Î²-(Al0.1Ga0.9)2O3 and polycrystals	2.5	16
65	A self-limiting layer-by-layer etching technique for 2H-MoS₂. Applied Physics Express, 2017, 10, 035201.	2.4	15
66	N-type doping of low-pressure chemical vapor deposition grown Î²-Ga2O3 thin films using solid-source germanium. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2021, 39, .	2.1	14
67	Electron tunneling spectroscopy study of electrically active traps in AlGaN/GaN high electron mobility transistors. Applied Physics Letters, 2013, 103, 223507.	3.3	13
68	A study of electrically active traps in AlGaN/GaN high electron mobility transistor. Applied Physics Letters, 2013, 103, 173520.	3.3	13
69	Compensation in (2Â¯01) homoepitaxial Î²-Ga2O3 thin films grown by metalorganic vapor-phase epitaxy. Journal of Applied Physics, 2020, 128, .	2.5	13
70	Defect states and their electric field-enhanced electron thermal emission in heavily Zr-doped Î² -Ga2O3 crystals. Applied Physics Letters, 2020, 117, .	3.3	13
71	Metal-oxide barrier extraction by Fowler-Nordheim tunnelling onset in Al2O3-on-GaN MOS diodes. Electronics Letters, 2012, 48, 347.	1.0	12
72	Large-area SnSe2/GaN heterojunction diodes grown by molecular beam epitaxy. Applied Physics Letters, 2017, 111, .	3.3	11

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73	Oxygen annealing induced changes in defects within Î²-Ga₂O₃ epitaxial films measured using photoluminescence. Journal Physics D: Applied Physics, 2021, 54, 174004.	2.8	11
74	Impurity band conduction in Si-doped Î² -Ga2O3 films. Applied Physics Letters, 2021, 118, .	3.3	11
75	Energy band engineering for photoelectrochemical etching of GaN/InGaN heterostructures. Applied Physics Letters, 2014, 104, 243503.	3.3	9
76	Current gain above 10 in sub-10â€‰nm base III-Nitride tunneling hot electron transistors with GaN/AlN emitter. Applied Physics Letters, 2016, 108, .	3.3	9
77	Optical Characterization of Gallium Oxide Î± and Î² Polymorph Thin-Films Grown on c-Plane Sapphire. Journal of Electronic Materials, 2021, 50, 2990-2998.	2.2	9
78	Fabrication and characterization of a piezoelectric gallium nitride switch for optical MEMS applications. Smart Materials and Structures, 2012, 21, 094003.	3.5	8
79	Plasmonâ€“Phonon Coupling in Electrostatically Gated Î²-Ga₂O₃ Films with Mobility Exceeding 200 cm² V^{â€“1} s^{â€“1}. ACS Nano, 2022, 16, 8812-8819.	14.6	8
80	Theoretical investigation of optical intersubband transitions and infrared photodetection in Î²-(AlxGa1â€‰â^’â€‰x)2O3/Ga2O3 quantum well structures. Journal of Applied Physics, 2020, 127, .	2.5	6
81	Methods for attaining high interband tunneling current in III-Nitrides. , 2012, , .		5
82	Determination of trap energy levels in AlGaN/GaN HEMT. , 2013, , .		5
83	Electronic and ionic conductivity in Î²-Ga2O3 single crystals. Journal of Applied Physics, 2022, 131, .	2.5	5
84	Sub 300 nm wavelength III-Nitride tunnel-injected ultraviolet LEDs. , 2015, , .		4
85	Spallingâ€Induced Liftoff and Transfer of Electronic Films Using a van der Waals Release Layer. Small, 2021, 17, e2102668.	10.0	4
86	Point and Extended Defects in Ultra Wide Band Gap Î²-Ga₂O₃ Interfaces. Microscopy and Microanalysis, 2017, 23, 1454-1455.	0.4	3
87	On the terahertz response of metal-gratings on anisotropic dielectric substrates and its prospective application for anisotropic refractive index characterization. Journal of Applied Physics, 2022, 131, .	2.5	3
88	Ultra-wide bandgap AlGaN channel MISFET with polarization engineered ohmics. , 2016, , .		2
89	Small-signal characteristics of graded AlGaN channel PolFETs. , 2017, , .		2
90	III-nitride tunnel junctions for efficient solid state lighting. Proceedings of SPIE, 2014, , .	0.8	1

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91	Lateral energy band engineering of Al<inf>2</inf>O<inf>3</inf>/III-nitride interfaces. , 2014, , .		1
92	Power switching transistors based on GaN and AlGaN channels. , 2015, , .		1
93	(Invited, Digital Presentation) Exploring the Potential and Limits of Gallium Oxide Electronics: In-Situ Dielectrics, Heterointegration and High-k Field Plates. ECS Transactions, 2022, 108, 27-37.	0.5	1
94	Distributed intelligence using gallium nitride based active devices. , 2010, , .		0
95	Plenary session [breaker pages]. , 2011, , .		0
96	Fabrication and Characterization of Gallium Nitride Unimorphs for Optical MEMS Applications. , 2011, , .		0
97	Record low tunnel junction specific resistivity (<) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 507 Td (3&#x00D inter-band tunnel junctions. , 2012, , .		0
98	Interface charge engineering in GaN-based MIS-HEMTs. , 2013, , .		0
99	Density-dependent electron transport for accurate modeling of AlGaN/GaN HEMTs. , 2015, , .		0
100	Modeling and experimental demonstration of sub-10 nm base III-nitride tunneling hot electron transistors. , 2015, , .		0
101	Current gain above 10 in sub-10 nm base III-nitride tunneling hot electron transistors with GaN/AlN emitter. , 2016, , .		0
102	Deep level defects in N-rich and In-rich InxGa1âˆ’XN: in composition dependence. Superlattices and Microstructures, 2016, 99, 67-71.	3.1	0
103	Atomic Scale Structure and Defects in 2D GaSe Films and Van der Waals Interface. Microscopy and Microanalysis, 2017, 23, 1728-1729.	0.4	0
104	Ultrafast terahertz modulator based on metamaterial-integrated WSe2 thin-films. , 2018, , .		0
105	Field-Effect Transistors 3. Springer Series in Materials Science, 2020, , 609-621.	0.6	0
106	Anisotropic Terahertz Permittivity of Î²-Ga2O3. , 2020, , .		0
107	Lateral Gallium Oxide Field Effect Transistors with High Figure of Merit. , 2022, , .		0