Sriram Krishnamoorthy

List of Publications by Citations

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	Modulation-doped β-(Al0.2Ga0.8)2O3/Ga2O3 field-effect transistor. *Applied Physics Letters*, **2017**, 111, 023502	3.4	188
93	Large area single crystal (0001) oriented MoS2. *Applied Physics Letters*, **2013**, 102, 252108	3.4	178
92	Electrical properties of atomic layer deposited aluminum oxide on gallium nitride. *Applied Physics Letters*, **2011**, 99, 133503	3.4	138
91	High responsivity in molecular beam epitaxy grown β-Ga2O3 metal semiconductor metal solar blind deep-UV photodetector. *Applied Physics Letters*, **2017**, 110, 221107	3.4	124
90	Polarization-engineered GaN/InGaN/GaN tunnel diodes. *Applied Physics Letters*, **2010**, 97, 203502	3.4	121
89	Suppression of electron overflow and efficiency droop in N-polar GaN green light emitting diodes. *Applied Physics Letters*, **2012**, 100, 111118	3.4	118
88	Delta-doped β-gallium oxide field-effect transistor. *Applied Physics Express*, **2017**, 10, 051102	2.4	94
87	Low resistance GaN/InGaN/GaN tunnel junctions. *Applied Physics Letters*, **2013**, 102, 113503	3.4	89
86	Optical signatures of deep level defects in Ga2O3. *Applied Physics Letters*, **2018**, 112, 242102	3.4	82
85	Low-pressure CVD-grown β-Ga2O3bevel-field-plated Schottky barrier diodes. *Applied Physics Express*, **2018**, 11, 031101	2.4	81
84	Delta Doped $beta$ -Ga2O3 Field Effect Transistors With Regrown Ohmic Contacts. *IEEE Electron Device Letters*, **2018**, 39, 568-571	4.4	75
83	Interband tunneling for hole injection in III-nitride ultraviolet emitters. *Applied Physics Letters*, **2015** , 106, 141103	3.4	67
82	Interface Charge Engineering for Enhancement-Mode GaN MISHEMTs. *IEEE Electron Device Letters*, **2014**, 35, 312-314	4.4	66
81	Interface charge engineering at atomic layer deposited dielectric/III-nitride interfaces. *Applied Physics Letters*, **2013**, 102, 072105	3.4	65
80	Tunneling-based carrier regeneration in cascaded GaN light emitting diodes to overcome efficiency droop. *Applied Physics Letters*, **2013**, 103, 081107	3.4	59
79	Demonstration of forward inter-band tunneling in GaN by polarization engineering. *Applied Physics Letters*, **2011**, 99, 233504	3.4	55
78	Layer-transferred MoS2/GaN PN diodes. *Applied Physics Letters*, **2015**, 107, 103505	3.4	53

77	AlGaN channel field effect transistors with graded heterostructure ohmic contacts. *Applied Physics Letters*, **2016**, 109, 133508	3.4	52
76	InGaN/GaN tunnel junctions for hole injection in GaN light emitting diodes. *Applied Physics Letters*, **2014**, 105, 141104	3.4	49
75	GdN nanoisland-based GaN tunnel junctions. *Nano Letters*, **2013**, 13, 2570-5	11.5	49
74	Tunnel-injected sub-260 nm ultraviolet light emitting diodes. *Applied Physics Letters*, **2017**, 110, 201102	3.4	48
73	Demonstration of zero bias responsivity in MBE grown □-Ga2O3 lateral deep-UV photodetector. *Japanese Journal of Applied Physics*, **2018**, 57, 060313	1.4	47
72	Density-dependent electron transport and precise modeling of GaN high electron mobility transistors. *Applied Physics Letters*, **2015**, 107, 153504	3.4	44
71	High current density 2D/3D MoS2/GaN Esaki tunnel diodes. *Applied Physics Letters*, **2016**, 109, 183505	3.4	44
70	Design and demonstration of ultra-wide bandgap AlGaN tunnel junctions. *Applied Physics Letters*, **2016**, 109, 121102	3.4	43
69	Molecular beam epitaxy of 2D-layered gallium selenide on GaN substrates. *Journal of Applied Physics*, **2017**, 121, 094302	2.5	38
68	GaN-based three-junction cascaded light-emitting diode with low-resistance InGaN tunnel junctions. *Applied Physics Express*, **2015**, 8, 082103	2.4	37
67	Low-resistance GaN tunnel homojunctions with 150 kA/cm2 current and repeatable negative differential resistance. *Applied Physics Letters*, **2016**, 108, 131103	3.4	37
66	Graded AlGaN Channel Transistors for Improved Current and Power Gain Linearity. *IEEE Transactions on Electron Devices*, **2017**, 64, 3114-3119	2.9	35
65	Low temperature homoepitaxy of (010) □-Ga2O3 by metalorganic vapor phase epitaxy: Expanding the growth window. *Applied Physics Letters*, **2020**, 117, 142102	3.4	35
64	Si-doped □-(Al0.26Ga0.74)2O3 thin films and heterostructures grown by metalorganic vapor-phase epitaxy. *Applied Physics Express*, **2019**, 12, 111004	2.4	34
63	Incident wavelength and polarization dependence of spectral shifts in □-GaO UV photoluminescence. *Scientific Reports*, **2018**, 8, 18075	4.9	34
62	□-Gallium oxide power electronics. *APL Materials*, **2022**, 10, 029201	5.7	33
61	Delta-doped □-Ga2O3 thin films and □-(Al0.26Ga0.74)2O3/□-Ga2O3 heterostructures grown by metalorganic vapor-phase epitaxy. *Applied Physics Express*, **2020**, 13, 045501	2.4	30
60	Electron gas dimensionality engineering in AlGaN/GaN high electron mobility transistors using polarization. *Applied Physics Letters*, **2012**, 100, 063507	3.4	28

59	Design of p-type cladding layers for tunnel-injected UV-A light emitting diodes. *Applied Physics Letters*, **2016**, 109, 191105	3.4	28
58	High-k Oxide Field-Plated Vertical (001) β-Ga2O3 Schottky Barrier Diode With Baliga□ Figure of Merit Over 1 GW/cm2. *IEEE Electron Device Letters*, **2021**, 42, 1140-1143	4.4	27
57	Degenerate doping in β-Ga2O3 single crystals through Hf-doping. *Semiconductor Science and Technology*, **2020**, 35, 04LT01	1.8	26
56	Mechanism of Si doping in plasma assisted MBE growth of β-Ga2O3. *Applied Physics Letters*, **2019**, 115, 152106	3.4	26
55	Reflective metal/semiconductor tunnel junctions for hole injection in AlGaN UV LEDs. *Applied Physics Letters*, **2017**, 111, 051104	3.4	26
54	Electrical and optical properties of Zr doped β-Ga2O3 single crystals. *Applied Physics Express*, **2019**, 12, 085502	2.4	25
53	Electro-thermal co-design of β-(AlxGa1-x)2O3/Ga2O3 modulation doped field effect transistors. *Applied Physics Letters*, **2020**, 117, 153501	3.4	25
52	Enhanced light extraction in tunnel junction-enabled top emitting UV LEDs. *Applied Physics Express*, **2016**, 9, 052102	2.4	23
51	Advances in Ga2O3 solar-blind UV photodetectors **2019**, 369-399		23
50	Growth and characterization of metalorganic vapor-phase epitaxy-grown β-(Al x Ga1□)2O3/β-Ga2O3 heterostructure channels. *Applied Physics Express*, **2021**, 14, 025501	2.4	23
49	Transferred large area single crystal MoS2 field effect transistors. *Applied Physics Letters*, **2015**, 107, 193503	3.4	19
48	Recess-Free Nonalloyed Ohmic Contacts on Graded AlGaN Heterojunction FETs. *IEEE Electron Device Letters*, **2015**, 36, 226-228	4.4	17
47	Highly tunable, polarization-engineered two-dimensional electron gas in □AlGaO3/□Ga2O3 heterostructures. *Applied Physics Express*, **2020**, 13, 061009	2.4	17
46	Multi-kV Class β-Ga□□MESFETs With a Lateral Figure of Merit Up to 355 MW/cm□ *IEEE Electron Device Letters*, **2021**, 42, 1272-1275	4.4	17
45	GaO-on-SiC Composite Wafer for Thermal Management of Ultrawide Bandgap Electronics. *ACS Applied Materials & Interfaces*, **2021**, 13, 40817-40829	9.5	16
44	Schottky Barrier Height Engineering in β-Ga2O3 Using SiO2 Interlayer Dielectric. *IEEE Journal of the Electron Devices Society*, **2020**, 8, 286-294	2.3	15
43	Detailed characterization of deep level defects in InGaN Schottky diodes by optical and thermal deep level spectroscopies. *Applied Physics Letters*, **2011**, 99, 092109	3.4	15
42	Ultrafast THz modulators with WSe2 thin films [Invited]. *Optical Materials Express*, **2019**, 9, 826	2.6	15

41	The anisotropic quasi-static permittivity of single-crystal β-Ga2O3 measured by terahertz spectroscopy. *Applied Physics Letters*, **2020**, 117, 252103	3.4	14
40	130 mA mm−1 β-Ga2O3 metal semiconductor field effect transistor with low-temperature metalorganic vapor phase epitaxy-regrown ohmic contacts. *Applied Physics Express*, **2021**, 14, 076502	2.4	14
39	Ultralow-voltage-drop GaN/InGaN/GaN tunnel junctions with 12% indium content. *Applied Physics Express*, **2017**, 10, 121003	2.4	13
38	A study of electrically active traps in AlGaN/GaN high electron mobility transistor. *Applied Physics Letters*, **2013**, 103, 173520	3.4	12
37	Delta-doped β-Ga2O3 films with narrow FWHM grown by metalorganic vapor-phase epitaxy. *Applied Physics Letters*, **2020**, 117, 172105	3.4	12
36	A self-limiting layer-by-layer etching technique for 2H-MoS2. *Applied Physics Express*, **2017**, 10, 035201	2.4	11
35	Metal-oxide barrier extraction by Fowler-Nordheim tunnelling onset in Al2O3-on-GaN MOS diodes. *Electronics Letters*, **2012**, 48, 347	1.1	11
34	Design of a β-Ga2O3 Schottky Barrier Diode With p-Type III-Nitride Guard Ring for Enhanced Breakdown. *IEEE Transactions on Electron Devices*, **2020**, 67, 4842-4848	2.9	10
33	Electron tunneling spectroscopy study of electrically active traps in AlGaN/GaN high electron mobility transistors. *Applied Physics Letters*, **2013**, 103, 223507	3.4	9
32	Synthesis and Characterization of Large-Area Nanometer-Thin β-Ga2O3 Films from Oxide Printing of Liquid Metal Gallium. *Physica Status Solidi (A) Applications and Materials Science*, **2020**, 217, 1901007	1.6	8
31	Gallium Nitride (GaN)		8
30	Thermal Conductivity of β-Phase GaO and (AlGa)O Heteroepitaxial Thin Films. *ACS Applied Materials & Interfaces*, **2021**, 13, 38477-38490	9.5	8
29	Large-area SnSe2/GaN heterojunction diodes grown by molecular beam epitaxy. *Applied Physics Letters*, **2017**, 111, 202101	3.4	7
28	Compensation in (2 01) homoepitaxial β-Ga2O3 thin films grown by metalorganic vapor-phase epitaxy. *Journal of Applied Physics*, **2020**, 128, 195703	2.5	7
27	Energy band engineering for photoelectrochemical etching of GaN/InGaN heterostructures. *Applied Physics Letters*, **2014**, 104, 243503	3.4	6
26	Defect states and their electric field-enhanced electron thermal emission in heavily Zr-doped β-Ga2O3 crystals. *Applied Physics Letters*, **2020**, 117, 212104	3.4	6
25	N-type doping of low-pressure chemical vapor deposition grown β-Ga2O3 thin films using solid-source germanium. *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*, **2021**, 39, 030404	2.9	6
24	Current gain above 10 in sub-10 nm base III-Nitride tunneling hot electron transistors with GaN/AlN emitter. *Applied Physics Letters*, **2016**, 108, 192101	3.4	6

23	Sub 300 nm wavelength III-Nitride tunnel-injected ultraviolet LEDs **2015**,		4
22	Fabrication and characterization of a piezoelectric gallium nitride switch for optical MEMS applications. *Smart Materials and Structures*, **2012**, 21, 094003	3.4	4
21	Methods for attaining high interband tunneling current in III-Nitrides **2012**,		4
20	Impurity band conduction in Si-doped β-Ga2O3 films. *Applied Physics Letters*, **2021**, 118, 072105	3.4	4
19	In Situ Dielectric Al2O3/β-Ga2O3 Interfaces Grown Using Metal□Organic Chemical Vapor Deposition. *Advanced Electronic Materials*,2100333	6.4	4
18	Optical Characterization of Gallium Oxide □and □Polymorph Thin-Films Grown on c-Plane Sapphire. *Journal of Electronic Materials*, **2021**, 50, 2990-2998	1.9	3
17	Oxygen annealing induced changes in defects within β-Ga2O3 epitaxial films measured using photoluminescence. *Journal Physics D: Applied Physics*, **2021**, 54, 174004	3	3
16	Small-signal characteristics of graded AlGaN channel PolFETs **2017**,		2
15	Point and Extended Defects in Ultra Wide Band Gap β-Ga2O3 Interfaces. *Microscopy and Microanalysis*, **2017**, 23, 1454-1455	0.5	2
14	Determination of trap energy levels in AlGaN/GaN HEMT **2013**,		2
13	Effect of extended defects on photoluminescence of gallium oxide and aluminum gallium oxide epitaxial films.. *Scientific Reports*, **2022**, 12, 3243	4.9	2
12	Alloyed β-(AlxGa1□)2O3 bulk Czochralski single β-(Al0.1Ga0.9)2O3 and polycrystals β-(Al0.33Ga0.66)2O3, β-(Al0.5Ga0.5)2O3), and property trends. *Journal of Applied Physics*, **2022**, 131, 155702	2.5	2
11	Theoretical investigation of optical intersubband transitions and infrared photodetection in β-(AlxGa1 □x)2O3/Ga2O3 quantum well structures. *Journal of Applied Physics*, **2020**, 127, 173102	2.5	1
10	Lateral energy band engineering of Al2O3/III-nitride interfaces **2014**,		1
9	Power switching transistors based on GaN and AlGaN channels **2015**,		1
8	III-nitride tunnel junctions for efficient solid state lighting **2014**,		1
7	Spalling-Induced Liftoff and Transfer of Electronic Films Using a van der Waals Release Layer. *Small*, **2021**, 17, e2102668	11	1
6	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, 193101	2.5	1

5	Electronic and ionic conductivity in □-Ga2O3 single crystals. *Journal of Applied Physics*, **2022**, 131, 085102	2.5	0
4	Deep level defects in N-rich and In-rich InxGa1□xN: in composition dependence. *Superlattices and Microstructures*, **2016**, 99, 67-71	2.8	
3	Atomic Scale Structure and Defects in 2D GaSe Films and Van der Waals Interface. *Microscopy and Microanalysis*, **2017**, 23, 1728-1729	0.5	
2	Field-Effect Transistors 3. *Springer Series in Materials Science*, **2020**, 609-621	0.9	
1	Ultrafast THz modulators with WSe2 thin films: erratum. *Optical Materials Express*, **2021**, 11, 2242	2.6	