

# Suresh Sundaram

## List of Publications by Year in descending order

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53  
papers

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citations

430874

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docs citations

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#	ARTICLE	IF	CITATIONS
1	Influence of Sapphire Substrate Orientation on the van der Waals Epitaxy of III-Nitrides on 2D Hexagonal Boron Nitride: Implication for Optoelectronic Devices. ACS Applied Nano Materials, 2022, 5, 791-800.	5.0	12
2	Natural Boron and $^{10}\text{B}$ -Enriched Hexagonal Boron Nitride for High-Sensitivity Self-Biased Metal-Semiconductor-Metal Neutron Detectors. ACS Omega, 2022, 7, 804-809.	3.5	6
3	Monolithic Free-Standing Large-Area Vertical III-N Light-Emitting Diode Arrays by One-Step h-BN-Based Thermomechanical Self-Lift-Off and Transfer. ACS Applied Electronic Materials, 2021, 3, 2614-2621.	4.3	8
4	MOVPE of GaN-based mixed dimensional heterostructures on wafer-scale layered 2D hexagonal boron nitride—A key enabler of III-nitride flexible optoelectronics. APL Materials, 2021, 9, .	5.1	9
5	Towards P-Type Conduction in Hexagonal Boron Nitride: Doping Study and Electrical Measurements Analysis of hBN/AlGaN Heterojunctions. Nanomaterials, 2021, 11, 211.	4.1	14
6	Control of the Mechanical Adhesion of III-V Materials Grown on Layered h-BN. ACS Applied Materials & Interfaces, 2020, 12, 55460-55466.	8.0	14
7	Highly Ordered Boron Nitride/Epigraphene Epitaxial Films on Silicon Carbide by Lateral Epitaxial Deposition. ACS Nano, 2020, 14, 12962-12971.	14.6	14
8	Effectiveness of selective area growth using van der Waals h-BN layer for crack-free transfer of large-size III-N devices onto arbitrary substrates. Scientific Reports, 2020, 10, 21709.	3.3	12
9	Single crystalline boron rich B(Al)N alloys grown by MOVPE. Applied Physics Letters, 2020, 116, .	3.3	12
10	Light-Emitting Diodes: Large-Area van der Waals Epitaxial Growth of Vertical III-Nitride Nanodevice Structures on Layered Boron Nitride (Adv. Mater. Interfaces 16/2019). Advanced Materials Interfaces, 2019, 6, 1970102.	3.7	1
11	Large-Area van der Waals Epitaxial Growth of Vertical III-Nitride Nanodevice Structures on Layered Boron Nitride. Advanced Materials Interfaces, 2019, 6, 1900207.	3.7	12
12	Novel Scalable Transfer Approach for Discrete III-Nitride Devices Using Wafer-Scale Patterned h-BN/Sapphire Substrate for Pick-and-Place Applications. Advanced Materials Technologies, 2019, 4, 1900164.	5.8	10
13	Sensors based on AlGaIn/GaN HEMT for fast H <sub>2</sub> and O <sub>2</sub> detection and measurement at high temperature. , 2019, , .		1
14	Wafer-scale MOVPE growth and characterization of highly ordered h-BN on patterned sapphire substrates. Journal of Crystal Growth, 2019, 509, 40-43.	1.5	11
15	MOVPE van der Waals epitaxial growth of AlGaIn/AlGaIn multiple quantum well structures with deep UV emission on large scale 2D h-BN buffered sapphire substrates. Journal of Crystal Growth, 2019, 507, 352-356.	1.5	8
16	Exfoliation of AlN film using two-dimensional multilayer hexagonal BN for deep-ultraviolet light-emitting diodes. Applied Physics Express, 2019, 12, 015505.	2.4	20
17	Modeling, design, fabrication and experimentation of a GaN-based, $^{63}\text{Ni}$ betavoltaic battery. Journal Physics D: Applied Physics, 2018, 51, 035101.	2.8	24
18	Controlled crack propagation for atomic precision handling of wafer-scale two-dimensional materials. Science, 2018, 362, 665-670.	12.6	208

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19	Heterogeneous Integration of Thin-Film InGaN-Based Solar Cells on Foreign Substrates with Enhanced Performance. ACS Photonics, 2018, 5, 3003-3008.	6.6	20
20	Investigation of p-contact performance for indium rich InGaN based light emitting diodes and solar cells. Physica Status Solidi (A) Applications and Materials Science, 2017, 214, 1600496.	1.8	0
21	InGaN/InGaN multiple-quantum-well grown on InGaN/GaN semi-bulk buffer for blue to cyan emission with improved optical emission and efficiency droop. Superlattices and Microstructures, 2017, 104, 291-297.	3.1	18
22	Nanoselective area growth of defect-free thick indium-rich InGaN nanostructures on sacrificial ZnO templates. Nanotechnology, 2017, 28, 195304.	2.6	1
23	Flexible metal-semiconductor-metal device prototype on wafer-scale thick boron nitride layers grown by MOVPE. Scientific Reports, 2017, 7, 786.	3.3	41
24	Influence of barrier layer indium on efficiency and wavelength of InGaN multiple quantum well (MQW) with and without semi-bulk InGaN buffer for blue to green regime emission. Physica Status Solidi (A) Applications and Materials Science, 2017, 214, 1600868.	1.8	4
25	Emission wavelength red-shift by using "semi-bulk" InGaN buffer layer in InGaN/InGaN multiple-quantum-well. Superlattices and Microstructures, 2017, 112, 279-286.	3.1	7
26	Dc and ac electrical response of MOCVD grown GaN in p-i-n structure, assessed through $I-V$ and admittance measurement. Journal Physics D: Applied Physics, 2017, 50, 505109.	2.8	4
27	Gas sensors boosted by two-dimensional h-BN enabled transfer on thin substrate foils: towards wearable and portable applications. Scientific Reports, 2017, 7, 15212.	3.3	54
28	Synthesis and characterization of InN nanocrystals on glass substrate by plasma assisted reactive evaporation. AIP Conference Proceedings, 2017, , .	0.4	0
29	Improving InGaN heterojunction solar cells efficiency using a semibulk absorber. Solar Energy Materials and Solar Cells, 2017, 159, 405-411.	6.2	23
30	Mask effect in nano-selective- area-growth by MOCVD on thickness enhancement, indium incorporation, and emission of InGaN nanostructures on AlN-buffered Si(111) substrates. Optical Materials Express, 2017, 7, 376.	3.0	4
31	Investigation of the Performance of HEMT-Based NO, NO <sub>2</sub> and NH <sub>3</sub> Exhaust Gas Sensors for Automotive Antipollution Systems. Sensors, 2016, 16, 273.	3.8	60
32	Nanoselective area growth of GaN by metalorganic vapor phase epitaxy on 4H-SiC using epitaxial graphene as a mask. Applied Physics Letters, 2016, 108, .	3.3	15
33	Wafer-scale controlled exfoliation of metal organic vapor phase epitaxy grown InGaN/GaN multi quantum well structures using low-tack two-dimensional layered h-BN. Applied Physics Letters, 2016, 108, .	3.3	74
34	Role of V-pits in the performance improvement of InGaN solar cells. Applied Physics Letters, 2016, 109, .	3.3	8
35	Single-crystal nanopyramidal BGaN by nanoselective area growth on AlN/Si(111) and GaN templates. Nanotechnology, 2016, 27, 115602.	2.6	4
36	Large-Area Two-Dimensional Layered Hexagonal Boron Nitride Grown on Sapphire by Metalorganic Vapor Phase Epitaxy. Crystal Growth and Design, 2016, 16, 3409-3415.	3.0	106

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37	Experimental Study and Device Design of NO, NO <sub>2</sub> , and NH <sub>3</sub> Gas Detection for a Wide Dynamic and Large Temperature Range Using Pt/AlGaIn/GaN HEMT. IEEE Sensors Journal, 2016, 16, 6828-6838.	4.7	35
38	Wafer-scale epitaxial lift-off of optoelectronic grade GaN from a GaN substrate using a sacrificial ZnO interlayer. Journal Physics D: Applied Physics, 2016, 49, 315105.	2.8	16
39	Highly sensitive detection of NO <sub>2</sub> gas using BGaIn/GaN superlattice-based double Schottky junction sensors. Applied Physics Letters, 2015, 106, .	3.3	30
40	Nanoselective area growth and characterization of dislocation-free InGaIn nanopyramids on AlN buffered Si(111) templates. Applied Physics Letters, 2015, 107, .	3.3	15
41	Investigation of new approaches for InGaIn growth with high indium content for CPV application. AIP Conference Proceedings, 2015, . .	0.4	0
42	High quality thick InGaIn nanostructures grown by nanoselective area growth for new generation photovoltaic devices. Physica Status Solidi (A) Applications and Materials Science, 2015, 212, 740-744.	1.8	7
43	BAlN thin layers for deep UV applications. Physica Status Solidi (A) Applications and Materials Science, 2015, 212, 745-750.	1.8	31
44	Microstructural and electrical investigation of Pd/Au ohmic contact on p-GaN. Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2015, 33, 010603.	1.2	15
45	MOVPE grown periodic AlN/BAlN heterostructure with high boron content. Journal of Crystal Growth, 2015, 414, 119-122.	1.5	34
46	AlGaIn-based MQWs grown on a thick relaxed AlGaIn buffer on AlN templates emitting at 285 nm. Optical Materials Express, 2015, 5, 380.	3.0	30
47	Structural and optical investigations of AlGaIn MQWs grown on a relaxed AlGaIn buffer on AlN templates for emission at 280nm. Journal of Crystal Growth, 2015, 432, 37-44.	1.5	6
48	Scale-up of the chemical lift-off of (In)GaIn-based p-i-n junctions from sapphire substrates using sacrificial ZnO template layers. Proceedings of SPIE, 2015, . .	0.8	0
49	Bandgap energy bowing parameter of strained and relaxed InGaIn layers. Optical Materials Express, 2014, 4, 1030.	3.0	81
50	Nanoscale selective area growth of thick, dense, uniform, In-rich, InGaIn nanostructure arrays on GaIn/sapphire template. Journal of Applied Physics, 2014, 116, .	2.5	18
51	Novel method for reclaim/reuse of bulk GaIn substrates using sacrificial ZnO release layers. , 2014, . .		1
52	Structural and compositional characterization of MOVPE GaIn thin films transferred from sapphire to glass substrates using chemical lift-off and room temperature direct wafer bonding and GaIn wafer scale MOVPE growth on ZnO-buffered sapphire. Journal of Crystal Growth, 2013, 370, 63-67.	1.5	75
53	Multilayered InGaIn/GaN structure vs. single InGaIn layer for solar cell applications: A comparative study. Acta Materialia, 2013, 61, 6587-6596.	7.9	38