# Suresh Sundaram

List of Publications by Year
in descending order

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Version: 2024-02-01

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|---|---|---|---|
| 53 papers | 1,271 citations | 430874 18 h-index | 361022 35 g-index |
| 53 all docs | 53 docs citations | 53 times ranked | 2058 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Controlled crack propagation for atomic precision handling of wafer-scale two-dimensional materials. Science, 2018, 362, 665-670. | 12.6 | 208 |
| 2 | 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 |
| 3 | Bandgap energy bowing parameter of strained and relaxed InGaN layers. Optical Materials Express, 2014, 4, 1030. | 3.0 | 81 |
| 4 | Structural and compositional characterization of MOVPE GaN thin films transferred from sapphire to glass substrates using chemical lift-off and room temperature direct wafer bonding and GaN wafer scale MOVPE growth on ZnO-buffered sapphire. Journal of Crystal Growth, 2013, 370, 63-67. | 1.5 | 75 |
| 5 | 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 |
| 6 | Investigation of the Performance of HEMT-Based NO, NO2 and NH3 Exhaust Gas Sensors for Automotive Antipollution Systems. Sensors, 2016, 16, 273. | 3.8 | 60 |
| 7 | 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 |
| 8 | Flexible metal-semiconductor-metal device prototype on wafer-scale thick boron nitride layers grown by MOVPE. Scientific Reports, 2017, 7, 786. | 3.3 | 41 |
| 9 | Multilayered InGaN/GaN structure vs. single InGaN layer for solar cell applications: A comparative study. Acta Materialia, 2013, 61, 6587-6596. | 7.9 | 38 |
| 10 | 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/AlGaN/GaN HEMT. IEEE Sensors Journal, 2016, 16, 6828-6838. | 4.7 | 35 |
| 11 | MOVPE grown periodic AlN/BAlN heterostructure with high boron content. Journal of Crystal Growth, 2015, 414, 119-122. | 1.5 | 34 |
| 12 | BAlN thin layers for deep UV applications. Physica Status Solidi (A) Applications and Materials Science, 2015, 212, 745-750. | 1.8 | 31 |
| 13 | Highly sensitive detection of NO2 gas using BGaN/GaN superlattice-based double Schottky junction sensors. Applied Physics Letters, 2015, 106, . | 3.3 | 30 |
| 14 | AlGaN-based MQWs grown on a thick relaxed AlGaN buffer on AlN templates emitting at 285 nm. Optical Materials Express, 2015, 5, 380. | 3.0 | 30 |
| 15 | Modeling, design, fabrication and experimentation of a GaN-based,<sup>63</sup>Ni betavoltaic battery. Journal Physics D: Applied Physics, 2018, 51, 035101. | 2.8 | 24 |
| 16 | Improving InGaN heterojunction solar cells efficiency using a semibulk absorber. Solar Energy Materials and Solar Cells, 2017, 159, 405-411. | 6.2 | 23 |
| 17 | Heterogeneous Integration of Thin-Film InGaN-Based Solar Cells on Foreign Substrates with Enhanced Performance. ACS Photonics, 2018, 5, 3003-3008. | 6.6 | 20 |
| 18 | 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 |

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|---|---|---|---|
| 19 | Nanoscale selective area growth of thick, dense, uniform, In-rich, InGaN nanostructure arrays on GaN/sapphire template. Journal of Applied Physics, 2014, 116, . | 2.5 | 18 |
| 20 | 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 |
| 21 | 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 |
| 22 | Nanoselective area growth and characterization of dislocation-free InGaN nanopyramids on AlN buffered Si(111) templates. Applied Physics Letters, 2015, 107, . | 3.3 | 15 |
| 23 | 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 |
| 24 | 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 |
| 25 | Control of the Mechanical Adhesion of IIIâ€“V Materials Grown on Layered h-BN. ACS Applied Materials & Interfaces, 2020, 12, 55460-55466. | 8.0 | 14 |
| 26 | Highly Ordered Boron Nitride/Epigraphene Epitaxial Films on Silicon Carbide by Lateral Epitaxial Deposition. ACS Nano, 2020, 14, 12962-12971. | 14.6 | 14 |
| 27 | 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 |
| 28 | Largeâ€Area van der Waals Epitaxial Growth of Vertical IIIâ€Nitride Nanodevice Structures on Layered Boron Nitride. Advanced Materials Interfaces, 2019, 6, 1900207. | 3.7 | 12 |
| 29 | 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 |
| 30 | Single crystalline boron rich B(Al)N alloys grown by MOVPE. Applied Physics Letters, 2020, 116, . | 3.3 | 12 |
| 31 | 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 |
| 32 | 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 |
| 33 | Novel Scalable Transfer Approach for Discrete IIIâ€Nitride Devices Using Waferâ€Scale Patterned hâ€BN/Sapphire Substrate for Pickâ€andâ€Place Applications. Advanced Materials Technologies, 2019, 4, 1900164. | 5.8 | 10 |
| 34 | MOVPE of GaN-based mixed dimensional heterostructures on wafer-scale layered 2D hexagonal boron nitrideâ€”A key enabler of III-nitride flexible optoelectronics. APL Materials, 2021, 9, . | 5.1 | 9 |
| 35 | Role of V-pits in the performance improvement of InGaN solar cells. Applied Physics Letters, 2016, 109, . | 3.3 | 8 |
| 36 | MOVPE van der Waals epitaxial growth of AlGaN/AlGaN 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 |

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|---|---|---|---|
| 37 | 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 |
| 38 | High quality thick InGaN 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 |
| 39 | Emission wavelength red-shift by using â€œsemi-bulkâ€•InGaN buffer layer in InGaN/InGaN multiple-quantum-well. Superlattices and Microstructures, 2017, 112, 279-286. | 3.1 | 7 |
| 40 | Structural and optical investigations of AlGaN MQWs grown on a relaxed AlGaN buffer on AlN templates for emission at 280nm. Journal of Crystal Growth, 2015, 432, 37-44. | 1.5 | 6 |
| 41 | Natural Boron and <sup>10</sup>B-Enriched Hexagonal Boron Nitride for High-Sensitivity Self-Biased Metalâ€“Semiconductorâ€“Metal Neutron Detectors. ACS Omega, 2022, 7, 804-809. | 3.5 | 6 |
| 42 | Single-crystal nanopyramidal BGaN by nanoselective area growth on AlN/Si(111) and GaN templates. Nanotechnology, 2016, 27, 115602. | 2.6 | 4 |
| 43 | 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 |
| 44 | Dc and ac electrical response of MOCVD grown GaN in p-i-n structure, assessed through Iâ€“V and admittance measurement. Journal Physics D: Applied Physics, 2017, 50, 505109. | 2.8 | 4 |
| 45 | 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 |
| 46 | Novel method for reclaim/reuse of bulk GaN substrates using sacrificial ZnO release layers. , 2014, , . | | 1 |
| 47 | Nanoselective area growth of defect-free thick indium-rich InGaN nanostructures on sacrificial ZnO templates. Nanotechnology, 2017, 28, 195304. | 2.6 | 1 |
| 48 | Lightâ€Emitting Diodes: Largeâ€Area van der Waals Epitaxial Growth of Vertical IIIâ€Nitride Nanodevice Structures on Layered Boron Nitride (Adv. Mater. Interfaces 16/2019). Advanced Materials Interfaces, 2019, 6, 1970102. | 3.7 | 1 |
| 49 | Sensors based on AlGaN/GaN HEMT for fast H2 and O2 detection and measurement at high temperature. , 2019, , . | | 1 |
| 50 | Investigation of new approaches for InGaN growth with high indium content for CPV application. AIP Conference Proceedings, 2015, , . | 0.4 | 0 |
| 51 | Scale-up of the chemical lift-off of (In)GaN-based p-i-n junctions from sapphire substrates using sacrificial ZnO template layers. Proceedings of SPIE, 2015, , . | 0.8 | 0 |
| 52 | 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 |
| 53 | Synthesis and characterization of InN nanocrystals on glass substrate by plasma assisted reactive evaporation. AIP Conference Proceedings, 2017, , . | 0.4 | 0 |