

Sudhiranjan Tripathy

List of Publications by Year in descending order

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116
papers

3,819
citations

134610

34
h-index

169272

56
g-index

117
all docs

117
docs citations

117
times ranked

5745
citing authors

#	ARTICLE	IF	CITATIONS
1	1T and 2H heterophase MoS ₂ for enhanced sensitivity of GaN transistor-based mercury ions sensor. Nanotechnology, 2022, 33, 265501.	1.3	4
2	MoS ₂ functionalized AlGaIn/GaN transistor based room temperature NO ₂ gas sensor. Sensors and Actuators A: Physical, 2022, 342, 113647.	2.0	13
3	Fabrication and Modeling-Based Performance Analysis of Circular GaN MOSHEMT-Based Electrochemical Sensors. IEEE Sensors Journal, 2021, 21, 4216-4224.	2.4	5
4	Development of semiconductor based heavy metal ion sensors for water analysis: A review. Sensors and Actuators A: Physical, 2021, 330, 112879.	2.0	29
5	Angstrom-Scale Transparent Overcoats: Interfacial Nitrogen-Driven Atomic Intermingling Promotes Lubricity and Surface Protection of Ultrathin Carbon. Nano Letters, 2021, 21, 8960-8969.	4.5	5
6	Slippery and Wear-Resistant Surfaces Enabled by Interface Engineered Graphene. Nano Letters, 2020, 20, 905-917.	4.5	18
7	Deep Submicron Normally Off AlGaIn/GaN MOSFET on Silicon with $V_{TH} \approx 5V$ and $On\text{-}Current > 0.5 A/mm^2$. Physica Status Solidi (A) Applications and Materials Science, 2020, 217, 1900709.	0.8	1
8	Meandering Gate Edges for Breakdown Voltage Enhancement in AlGaIn/GaN High Electron Mobility Transistors. Physica Status Solidi (A) Applications and Materials Science, 2020, 217, 1900766.	0.8	0
9	Room-Temperature Patterning of Nanoscale MoS ₂ under an Electron Beam. ACS Applied Materials & Interfaces, 2020, 12, 16772-16781.	4.0	10
10	Thermoelectric Properties of Substoichiometric Electron Beam Patterned Bismuth Sulfide. ACS Applied Materials & Interfaces, 2020, 12, 33647-33655.	4.0	17
11	Real time detection of Hg ²⁺ ions using MoS ₂ functionalized AlGaIn/GaN high electron mobility transistor for water quality monitoring. Sensors and Actuators B: Chemical, 2020, 309, 127832.	4.0	40
12	Photodegradation of 4-nitrophenol over B-doped TiO ₂ nanostructure: effect of dopant concentration, kinetics, and mechanism. Environmental Science and Pollution Research, 2020, 27, 10966-10980.	2.7	52
13	Nanoengineered Advanced Materials for Enabling Hydrogen Economy: Functionalized Graphene-Incorporated Cupric Oxide Catalyst for Efficient Solar Hydrogen Production. Global Challenges, 2020, 4, 1900087.	1.8	16
14	Sensitive and Selective Detection of Pb ²⁺ Ions Using 2,5-Dimercapto-1,3,4-Thiadiazole Functionalized AlGaIn/GaN High Electron Mobility Transistor. IEEE Electron Device Letters, 2019, 40, 1976-1979.	2.2	16
15	Local surface conductivity mapping of single-layer graphene subject to low energy argon bombardment: Energy loss mechanism and defect induction efficiency. Materials Letters, 2019, 256, 126638.	1.3	1
16	Ultrasmall Designed Plasmon Resonators by Fused Colloidal Nanopatterning. ACS Applied Materials & Interfaces, 2019, 11, 45207-45213.	4.0	2
17	Investigation of Ta ₂ O ₅ as an Alternative High- ϵ_r Dielectric for InAlN/GaN MOS-HEMT on Si. IEEE Transactions on Electron Devices, 2019, 66, 1230-1235.	1.6	15
18	Linear and Circular AlGaIn/AlN/GaN MOS-HEMT-based pH Sensor on Si Substrate: A Comparative Analysis. , 2019, 3, 1-4.		20

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19	Optically Coupled Electrically Isolated, Monolithically Integrated Switch Using Al _x Ga _{1-x} N/GaN High Electron Mobility Transistor Structures on Si (111). ACS Applied Electronic Materials, 2019, 1, 340-345.	2.0	7
20	Effect of TaN intermediate layer on the back contact reaction of sputter-deposited Cu poor Cu ₂ ZnSnS ₄ and Mo. Applied Surface Science, 2019, 471, 277-288.	3.1	21
21	MPA-GSH Functionalized AlGaN/GaN High-Electron Mobility Transistor-Based Sensor for Cadmium Ion Detection. IEEE Sensors Journal, 2019, 19, 2863-2870.	2.4	32
22	Boosting contact sliding and wear protection via atomic intermixing and tailoring of nanoscale interfaces. Science Advances, 2019, 5, eaau7886.	4.7	22
23	Dielectric Engineering of HfO ₂ Gate-Stacks for Normally-ON GaN HEMTs on 200-mm Silicon Substrates. IEEE Transactions on Electron Devices, 2018, 65, 3711-3718.	1.6	10
24	Direct observation of thickness and foreign interlayer driven abrupt structural transformation in ultrathin carbon and hybrid silicon nitride/carbon films. Carbon, 2017, 115, 701-719.	5.4	18
25	Impact of molybdenum out diffusion and interface quality on the performance of sputter grown CZTS based solar cells. Scientific Reports, 2017, 7, 1350.	1.6	60
26	Effect of self-heating on electrical characteristics of AlGaN/ GaN HEMT on Si (111) substrate. AIP Advances, 2017, 7, .	0.6	59
27	Direct Patterning of Zinc Sulfide on a Sub-10 Nanometer Scale via Electron Beam Lithography. ACS Nano, 2017, 11, 9920-9929.	7.3	26
28	Superior wear resistance and low friction in hybrid ultrathin silicon nitride/carbon films: synergy of the interfacial chemistry and carbon microstructure. Nanoscale, 2017, 9, 14937-14951.	2.8	17
29	UV detector based on InAlN/GaN-on-Si HEMT stack with photo-to-dark current ratio > 107. Applied Physics Letters, 2017, 111, .	1.5	36
30	Origin and Quenching of Novel ultraviolet and blue emission in NdGaO ₃ : Concept of Super-Hydrogenic Dopants. Scientific Reports, 2016, 6, 36352.	1.6	2
31	Gold-free contacts on Al _x Ga _{1-x} N/GaN high electron mobility transistor structure grown on a 200-mm diameter Si(111) substrate. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2016, 34, 041217.	0.6	7
32	Thermally stable device isolation by inert gas heavy ion implantation in AlGaN/GaN HEMTs on Si. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2016, 34, 042203.	0.6	22
33	Interface Engineering and Controlling the Friction and Wear of Ultrathin Carbon Films: High σ^3 Versus High σ^2 Carbons. Advanced Functional Materials, 2016, 26, 1526-1542.	7.8	44
34	Atomic Scale Interface Manipulation, Structural Engineering, and Their Impact on Ultrathin Carbon Films in Controlling Wear, Friction, and Corrosion. ACS Applied Materials & Interfaces, 2016, 8, 17606-17621.	4.0	20
35	Annealing Pressure and Ambient Dependent RuO _x Schottky Contacts on InAlN/AlN/GaN-on-Si(111) Heterostructure. ECS Journal of Solid State Science and Technology, 2016, 5, Q17-Q23.	0.9	0
36	Comparison of the Al _x Ga _{1-x} N/GaN Heterostructures Grown on Silicon-on-Insulator and Bulk-Silicon Substrates. IEEE Transactions on Electron Devices, 2016, 63, 345-352.	1.6	15

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37	Defect Analysis And Performance Evaluation Of P-Type Epitaxial GaAs Layer On Ge Substrate For GaAs/Ge Based Advanced Device. <i>Advanced Materials Letters</i> , 2016, 7, 517-524.	0.3	3
38	Ultrathin Carbon with Interspersed Graphene/Fullerene-like Nanostructures: A Durable Protective Overcoat for High Density Magnetic Storage. <i>Scientific Reports</i> , 2015, 5, 11607.	1.6	33
39	Influence of PECVD deposited SiN _x passivation layer thickness on In _{0.18} Al _{0.82} N/GaN/Si HEMT. <i>Journal Physics D: Applied Physics</i> , 2015, 48, 365104.	1.3	8
40	Channel temperature measurements of In _x Al _{1-x} N/GaN high electron mobility transistors on Si(111) using optical spectroscopy. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2015, 33, 051203.	0.6	0
41	Crystallization of Sputter-Deposited Amorphous (FeSi ₂) _{1-x} Al _x Thin Films. <i>Crystal Growth and Design</i> , 2015, 15, 1692-1696.	1.4	9
42	Record-low contact resistance for InAlN/AlN/GaN high electron mobility transistors on Si with non-gold metal. <i>Japanese Journal of Applied Physics</i> , 2015, 54, 04DF12.	0.8	19
43	Sputter grown sub-micrometer thick Cu ₂ ZnSnS ₄ thin film for photovoltaic device application. <i>Materials Letters</i> , 2015, 160, 45-50.	1.3	42
44	Structural and optical properties of Al _x Ga _{1-x} N/GaN high electron mobility transistor structures grown on 200 mm diameter Si(111) substrates. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2014, 32, 021206.	0.6	13
45	Thermally robust RuO _x Schottky diodes and HEMTs on III-nitrides. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2014, 11, 883-886.	0.8	5
46	High-Frequency Microwave Noise Characteristics of InAlN/GaN High-Electron Mobility Transistors on Si (111) Substrate. <i>IEEE Electron Device Letters</i> , 2014, 35, 992-994.	2.2	28
47	In _x Al _{1-x} N/AlN/GaN High Electron Mobility Transistor Structures on 200 mm Diameter Si(111) Substrates with Au-Free Device Processing. <i>ECS Journal of Solid State Science and Technology</i> , 2014, 3, Q84-Q88.	0.9	14
48	Design and Synthesis of Polymer-Functionalized NIR Fluorescent Dyes-Magnetic Nanoparticles for Bioimaging. <i>ACS Nano</i> , 2013, 7, 6796-6805.	7.3	98
49	Impact of Al Passivation and Cosputter on the Structural Property of FeSi_2 for Al-Doped FeSi_2 -Si(100) Based Solar Cells Application. <i>ACS Applied Materials & Interfaces</i> , 2013, 5, 5455-5460.	4.0	14
50	Plasphonics : local hybridization of plasmons and phonons. <i>Optics Express</i> , 2013, 21, 4551.	1.7	15
51	Direct Current and Microwave Characteristics of Sub-micron AlGa _x N/GaN High-Electron-Mobility Transistors on 8-Inch Si(111) Substrate. <i>Japanese Journal of Applied Physics</i> , 2012, 51, 111001.	0.8	31
52	Study of electromagnetic enhancement for surface enhanced Raman spectroscopy of SiC graphene. <i>Applied Physics Letters</i> , 2012, 100, 191601.	1.5	19
53	Direct Current and Microwave Characteristics of Sub-micron AlGa _x N/GaN High-Electron-Mobility Transistors on 8-Inch Si(111) Substrate. <i>Japanese Journal of Applied Physics</i> , 2012, 51, 111001.	0.8	37
54	Al _x Ga _{1-x} N/GaN heterostructures on a thin silicon-on-insulator substrate for metal-semiconductor-metal photodetectors. <i>Journal Physics D: Applied Physics</i> , 2011, 44, 365102.	1.3	6

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55	Damping of the Acoustic Vibrations of Individual Gold Nanoparticles. Nano Letters, 2011, 11, 3301-3306.	4.5	75
56	Laterally-current-injected light-emitting diodes based on nanocrystalline-Si/SiO ₂ superlattice. Optics Express, 2011, 19, 2729.	1.7	17
57	Plasmonic properties of gold ring-disk nano-resonators: fine shape details matter. Optics Express, 2011, 19, 5587.	1.7	40
58	Acousto-Plasmonic and Surface-Enhanced Raman Scattering Properties of Coupled Gold Nanospheres/Nanodisk Trimers. Nano Letters, 2011, 11, 431-437.	4.5	47
59	Field Effects in Plasmonic Photocatalyst by Precise SiO ₂ Thickness Control Using Atomic Layer Deposition. ACS Catalysis, 2011, 1, 300-308.	5.5	151
60	Reduced Contact Resistance and Improved Surface Morphology of Ohmic Contacts on GaN Employing KrF Laser Irradiation. Japanese Journal of Applied Physics, 2011, 50, 04DF06.	0.8	1
61	Thin-film InGa ^x GaN Vertical Light Emitting Diodes Using GaN on Silicon-On-Insulator Substrates. Electrochemical and Solid-State Letters, 2011, 14, H460.	2.2	15
62	Low Temperature Metal Induced Lateral Crystallization of Ge Using Germanide Forming Metals. Journal of the Electrochemical Society, 2010, 157, H208.	1.3	6
63	Low Temperature Metal-Induced Lateral Crystallization of Si _{1-x} Ge _x Using Silicide/Germanide-Forming-Metals. Japanese Journal of Applied Physics, 2010, 49, 04DH10.	0.8	1
64	Interference lithographically defined and catalytically etched, large-area silicon nanocones from nanowires. Nanotechnology, 2010, 21, 205305.	1.3	41
65	Temperature rise in InGa ^x GaN vertical light emitting diode on copper transferred from silicon probed by Raman scattering. Journal of Applied Physics, 2010, 108, .	1.1	16
66	Dual wavelength sensing based on interacting gold nanodisk trimers. Nanotechnology, 2010, 21, 305501.	1.3	30
67	Gold nanoring trimers: a versatile structure for infrared sensing. Optics Express, 2010, 18, 22271.	1.7	44
68	Graphitically encapsulated cobalt nanocrystal assemblies. Chemical Communications, 2010, 46, 4749.	2.2	33
69	Optical Properties of ZnO Nanorods and Hybrid Structures Grown on <i>p</i> -type GaN/Sapphire and Silicon-on-Insulator Substrates. Science of Advanced Materials, 2010, 2, 64-68.	0.1	23
70	Formation of nanodots on oblique ion sputtered InP surfaces. Applied Surface Science, 2009, 256, 562-566.	3.1	25
71	Palladium-Induced Lateral Crystallization of Amorphous-Germanium Thin Film on Insulating Substrate. Electrochemical and Solid-State Letters, 2009, 12, H266.	2.2	8
72	Omega-Gate p-MOSFET With Nanowirelike SiGe/Si Core/Shell Channel. IEEE Electron Device Letters, 2009, 30, 392-394.	2.2	14

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73	Structural and optical properties of ZnO nanorods grown by metal organic chemical vapor deposition. Journal of Crystal Growth, 2008, 310, 3208-3213.	0.7	35
74	Comparative luminescence properties of ZnO nanorods grown on various substrates by low-temperature metalorganic chemical vapour deposition. Journal of Crystal Growth, 2008, 310, 5312-5316.	0.7	14
75	Hydrothermal epitaxy of ZnO:Co diluted magnetic semiconducting single crystalline films. Applied Physics Letters, 2008, 93, 102510.	1.5	21
76	Low temperature poly-germanium growth process on insulating substrate using palladium-induced lateral crystallization. , 2008, , .		0
77	The influence of nitrogen plasma treatment on the lattice vibrational properties of hydrothermally grown ZnO nanorods. Applied Physics Letters, 2008, 92, 141910.	1.5	24
78	In Ga N $\hat{\alpha}$ • Ga N light emitting diodes on nanoscale silicon on insulator. Applied Physics Letters, 2007, 91, .	1.5	34
79	Strained SiGeSn formed by Sn implant into SiGe and pulsed laser annealing. Applied Physics Letters, 2007, 91, 202105.	1.5	15
80	Morphological and micro-Raman investigations on Ar ⁺ -ion irradiated nanostructured GaAs surface. Applied Surface Science, 2007, 253, 4531-4536.	3.1	26
81	Photoluminescence of hydrothermally epitaxied ZnO films. Electrochimica Acta, 2007, 52, 2933-2937.	2.6	34
82	Nanoheteroepitaxial lateral overgrowth of GaN on nanoporous Si(111). Applied Physics Letters, 2006, 88, 141925.	1.5	35
83	Photoluminescence and multiphonon resonant Raman scattering in low-temperature grown ZnO nanostructures. Applied Physics Letters, 2006, 89, 071922.	1.5	97
84	Lasing in GaN microdisks pivoted on Si. Applied Physics Letters, 2006, 89, 211101.	1.5	84
85	High-Density Arrays of InGaN Nanorings, Nanodots, and Nanoarrows Fabricated by a Template-Assisted Approach. Journal of Physical Chemistry B, 2006, 110, 11081-11087.	1.2	39
86	Comparative study of LiMn ₂ O ₄ thin film cathode grown at high, medium and low temperatures by pulsed laser deposition. Journal of Solid State Chemistry, 2006, 179, 3831-3838.	1.4	30
87	Lateral Epitaxial Overgrowth of ZnO in Water at 90°C. Advanced Functional Materials, 2006, 16, 799-804.	7.8	143
88	Absorption and Raman Study for POSS-Oligophenylene Nanohybrid Molecules. Journal of Nanoscience and Nanotechnology, 2006, 6, 3882-3887.	0.9	7
89	Raman scattering probe of anharmonic effects due to temperature and compositional disorder in Ga _x As _{1-x} . Journal of Applied Physics, 2006, 99, 103503.	1.1	30
90	Improvement of microstructural and optical properties of GaN layer on sapphire by nanoscale lateral epitaxial overgrowth. Applied Physics Letters, 2006, 88, 211908.	1.5	21

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91	Luminescence properties of ZnO layers grown on Si-on-insulator substrates. Applied Physics Letters, 2006, 89, 141901.	1.5	46
92	Fabrication Aspects of Germanium on Insulator from Sputtered Ge on Si-Substrates. Electrochemical and Solid-State Letters, 2006, 9, G158.	2.2	35
93	Investigation of optical properties of nanoporous GaN films. Physica E: Low-Dimensional Systems and Nanostructures, 2005, 28, 141-149.	1.3	84
94	Photoluminescence and micro-Raman scattering in ZnO nanoparticles: The influence of acetate adsorption. Chemical Physics Letters, 2005, 411, 150-154.	1.2	98
95	High Optical Quality Nanoporous GaN Prepared by Photoelectrochemical Etching. Electrochemical and Solid-State Letters, 2005, 8, C85.	2.2	57
96	The influence of V defects on luminescence properties of AlInGaN quaternary alloys. Journal of Physics Condensed Matter, 2005, 17, 729-736.	0.7	12
97	Influence of composition pulling effect on the two-dimensional electron gas formed at $\text{Al}_y\text{In}_x\text{Ga}_{1-x-y}\text{N}/\text{GaN}$ interface. Journal of Applied Physics, 2005, 98, 103704.	1.1	25
98	Nanoair-bridged lateral overgrowth of GaN on ordered nanoporous GaN template. Applied Physics Letters, 2005, 87, 251915.	1.5	53
99	Assignment of deep levels causing yellow luminescence in GaN. Journal of Applied Physics, 2004, 96, 1341-1347.	1.1	101
100	Identification of deep levels in GaN associated with dislocations. Journal of Physics Condensed Matter, 2004, 16, 6305-6315.	0.7	78
101	Micro-Raman spectroscopic investigation of NiSi films formed on BF_2^- , B^+ and non-implanted (100)Si substrates. Applied Physics A: Materials Science and Processing, 2004, 79, 637-642.	1.1	38
102	Micro-Raman spectroscopy of Si-, C-, Mg- and Be-implanted GaN layers. Journal of Raman Spectroscopy, 2004, 35, 73-77.	1.2	15
103	Raman scattering probe of anharmonic effects in NiSi. Journal of Raman Spectroscopy, 2004, 35, 536-540.	1.2	17
104	Influence of Au catalyst on the growth of ZnS nanowires. Chemical Physics Letters, 2004, 400, 175-178.	1.2	59
105	Effects of periodic delta-doping on the properties of GaN:Si films grown on Si (111) substrates. Applied Physics Letters, 2004, 85, 5881-5883.	1.5	53
106	Fabrication and properties of nanoporous GaN films. Applied Physics Letters, 2004, 85, 816-818.	1.5	67
107	Near-field scanning photoluminescence microscopy of InGaN/GaN quantum structures. , 2004, , .		1
108	Mechanism of enhanced light output efficiency in InGaN-based microlight emitting diodes. Journal of Applied Physics, 2003, 93, 5978-5982.	1.1	118

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109	Effects of indium surfactant on the crystalline and optical properties of GaN during initial growth stage. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2003, 21, 1814-1819.	0.9	14
110	Strain relaxation in graded InGa _N /Ga _N epilayers grown on sapphire. <i>Applied Physics Letters</i> , 2003, 83, 1545-1547.	1.5	37
111	Electronic and vibronic properties of Mg-doped GaN: The influence of etching and annealing. <i>Journal of Applied Physics</i> , 2002, 91, 3398-3407.	1.1	31
112	Micro-Raman scattering in laterally epitaxial overgrown GaN. <i>Journal of Applied Physics</i> , 2002, 91, 5840-5852.	1.1	25
113	Micro-Raman investigation of strain in GaN and Al _x Ga _{1-x} N/GaN heterostructures grown on Si(111). <i>Journal of Applied Physics</i> , 2002, 92, 3503-3510.	1.1	254
114	Optical properties of nano-silicon. <i>Bulletin of Materials Science</i> , 2001, 24, 285-289.	0.8	10
115	Optical properties of GaN layers grown on C-, A-, R-, and M-plane sapphire substrates by gas source molecular beam epitaxy. <i>Journal of Applied Physics</i> , 1999, 85, 8386-8399.	1.1	70
116	Raman spectroscopy of PbS nanocrystalline semiconductors. <i>Physical Review B</i> , 1998, 58, 15405-15407.	1.1	68