

# Dun-Jun Chen

## List of Publications by Year in descending order

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114  
papers

1,990  
citations

279798

23  
h-index

315739

38  
g-index

116  
all docs

116  
docs citations

116  
times ranked

2099  
citing authors

#	ARTICLE	IF	CITATIONS
1	Progress on AlGa <sub>N</sub> -based solar-blind ultraviolet photodetectors and focal plane arrays. <i>Light: Science and Applications</i> , 2021, 10, 94.	16.6	193
2	On the reverse gate leakage current of AlGa <sub>N</sub> /Ga <sub>N</sub> high electron mobility transistors. <i>Applied Physics Letters</i> , 2010, 97, .	3.3	115
3	Forward tunneling current in Ga <sub>N</sub> -based blue light-emitting diodes. <i>Applied Physics Letters</i> , 2010, 96, .	3.3	77
4	Ultra-Low Dark Current AlGa <sub>N</sub> -Based Solar-Blind Metal-Semiconductor-Metal Photodetectors for High-Temperature Applications. <i>IEEE Sensors Journal</i> , 2012, 12, 2086-2090.	4.7	75
5	High Color Rendering Index Hybrid InGaN/Nanocrystals White Light-Emitting Diodes. <i>Advanced Functional Materials</i> , 2016, 26, 36-43.	14.9	58
6	Enhanced bias stress stability of a-InGaZnO thin film transistors by inserting an ultra-thin interfacial InGaZnO:N layer. <i>Applied Physics Letters</i> , 2013, 102, .	3.3	57
7	High-Temperature Single Photon Detection Performance of 4H-SiC Avalanche Photodiodes. <i>IEEE Photonics Technology Letters</i> , 2014, 26, 1136-1138.	2.5	53
8	Stable response to visible light of InGa <sub>N</sub> photoelectrodes. <i>Applied Physics Letters</i> , 2008, 92, 262110.	3.3	50
9	High Quantum Efficiency Ga <sub>N</sub> -Based p-i-n Ultraviolet Photodetectors Prepared on Patterned Sapphire Substrates. <i>IEEE Photonics Technology Letters</i> , 2013, 25, 652-654.	2.5	45
10	Highly selective and sensitive phosphate anion sensors based on AlGa <sub>N</sub> /Ga <sub>N</sub> high electron mobility transistors functionalized by ion imprinted polymer. <i>Scientific Reports</i> , 2016, 6, 27728.	3.3	43
11	A Reusable and High Sensitivity Nitrogen Dioxide Sensor Based on Monolayer SnSe. <i>IEEE Electron Device Letters</i> , 2018, 39, 599-602.	3.9	43
12	Field-dependent carrier trapping induced kink effect in AlGa <sub>N</sub> /Ga <sub>N</sub> high electron mobility transistors. <i>Applied Physics Letters</i> , 2011, 98, .	3.3	40
13	Performance of Monolayer Blue Phosphorene Double-Gate MOSFETs from the First Principles. <i>ACS Applied Materials &amp; Interfaces</i> , 2019, 11, 20956-20964.	8.0	39
14	Do all screw dislocations cause leakage in Ga <sub>N</sub> -based devices?. <i>Applied Physics Letters</i> , 2020, 116, .	3.3	38
15	Magnesium ion-implantation-based gallium nitride p-i-n photodiode for visible-blind ultraviolet detection. <i>Photonics Research</i> , 2019, 7, B48.	7.0	36
16	Hybrid Light Emitters and UV Solar-Blind Avalanche Photodiodes based on InGaN Semiconductors. <i>Advanced Materials</i> , 2020, 32, e1904354.	21.0	34
17	Nanoplasmonically Enhanced High-Performance Metastable Phase InGa <sub>2</sub> O <sub>3</sub> Solar-Blind Photodetectors. <i>ACS Applied Materials &amp; Interfaces</i> , 2019, 11, 40283-40289.	8.0	31
18	Large-Swing a-IGZO Inverter With a Depletion Load Induced by Laser Annealing. <i>IEEE Electron Device Letters</i> , 2014, 35, 1034-1036.	3.9	30

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19	Significant Performance Improvement in AlGa <sub>N</sub> Solar-Blind Avalanche Photodiodes by Exploiting the Built-In Polarization Electric Field. IEEE Journal of Selected Topics in Quantum Electronics, 2014, 20, 187-192.	2.9	30
20	High-Voltage Quasi-Vertical GaN Junction Barrier Schottky Diode With Fast Switching Characteristics. IEEE Electron Device Letters, 2021, 42, 974-977.	3.9	29
21	Significant improvements in InGa <sub>N</sub> /Ga <sub>N</sub> nano-photoelectrodes for hydrogen generation by structure and polarization optimization. Scientific Reports, 2016, 6, 20218.	3.3	27
22	Highly responsive and selective ppb-level NO <sub>2</sub> gas sensor based on porous Pd-functionalized CuO/rGO at room temperature. Journal of Materials Chemistry C, 2022, 10, 3756-3769.	5.5	27
23	Improvement of Power Performance of GaN HEMT by Using Quaternary InAlGa <sub>N</sub> Barrier. IEEE Journal of the Electron Devices Society, 2018, 6, 360-364.	2.1	26
24	Efficiency droop behavior of direct current aged GaN-based blue light-emitting diodes. Applied Physics Letters, 2009, 95, .	3.3	23
25	Manipulable and Hybridized, Ultralow-Threshold Lasing in a Plasmonic Laser Using Elliptical InGa <sub>N</sub> /Ga <sub>N</sub> Nanorods. Advanced Functional Materials, 2017, 27, 1703198.	14.9	23
26	Achieving Record High External Quantum Efficiency >86.7% in Solar-Blind Photoelectrochemical Photodetection. Advanced Functional Materials, 2022, 32, .	14.9	23
27	Gate Reliability of p-GaN Gate AlGa <sub>N</sub> /Ga <sub>N</sub> High Electron Mobility Transistors. IEEE Electron Device Letters, 2019, 40, 379-382.	3.9	21
28	Characteristics of polarization-doped N-face III-nitride light-emitting diodes. Applied Physics Letters, 2012, 100, 073507.	3.3	20
29	1.4-kV Quasi-Vertical GaN Schottky Barrier Diode With Reverse <i>p-n</i> Junction Termination. IEEE Journal of the Electron Devices Society, 2020, 8, 316-320.	2.1	20
30	3.4-kV AlGa <sub>N</sub> /Ga <sub>N</sub> Schottky Barrier Diode on Silicon Substrate With Engineered Anode Structure. IEEE Electron Device Letters, 2021, 42, 208-211.	3.9	20
31	High- $k$ HfO <sub>2</sub> -Based AlGa <sub>N</sub> /Ga <sub>N</sub> MIS-HEMTs With Y <sub>2</sub> O <sub>3</sub> Interfacial Layer for High Gate Controllability and Interface Quality. IEEE Journal of the Electron Devices Society, 2020, 8, 15-19.	2.1	19
32	High-Responsivity Graphene/4H-SiC Ultraviolet Photodetector Based on a Planar Junction Formed by the Dual Modulation of Electric and Light Fields. Advanced Optical Materials, 2020, 8, 2000559.	7.3	19
33	Investigations of Sidewall Passivation Technology on the Optical Performance for Smaller Size GaN-Based Micro-LEDs. Crystals, 2021, 11, 403.	2.2	19
34	Demonstration of Avalanche and Surge Current Robustness in GaN Junction Barrier Schottky Diode With 600-V/10-A Switching Capability. IEEE Transactions on Power Electronics, 2021, 36, 12163-12167.	7.9	19
35	Photoluminescence Study of the Photoinduced Phase Separation in Mixed-Halide Hybrid Perovskite CH <sub>3</sub> NH <sub>3</sub> Pb(BrxI <sub>1-x</sub> ) <sub>3</sub> Crystals Synthesized via a Solvothermal Method. Scientific Reports, 2017, 7, 17695.	3.3	18
36	1.2 kV/25 A Normally off P-N Junction/AlGa <sub>N</sub> /Ga <sub>N</sub> HEMTs With Nanosecond Switching Characteristics and Robust Overvoltage Capability. IEEE Transactions on Power Electronics, 2022, 37, 26-30.	7.9	18

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37	Shift and Recovery Mechanisms of p-GaN Gate HEMTs Under DC/AC Gate Stress Investigated by Fast Sweeping Characterization. IEEE Electron Device Letters, 2021, 42, 1508-1511.	3.9	17
38	Growth of In-rich and Ga-rich InGaN alloys by MOCVD and fabrication of InGaN-based photoelectrodes. Physica Status Solidi C: Current Topics in Solid State Physics, 2010, 7, 1817-1820.	0.8	16
39	High Fill-Factor 4H-SiC Avalanche Photodiodes With Partial Trench Isolation. IEEE Photonics Technology Letters, 2016, 28, 2526-2528.	2.5	16
40	High-Performance 4H-SiC p-i-n Ultraviolet Photodiode With p Layer Formed by Al Implantation. IEEE Photonics Technology Letters, 2016, 28, 1189-1192.	2.5	16
41	Analysis of Dark Count Mechanisms of 4H-SiC Ultraviolet Avalanche Photodiodes Working in Geiger Mode. IEEE Transactions on Electron Devices, 2017, 64, 4532-4539.	3.0	16
42	Highly Enhanced Inductive Current Sustaining Capability and Avalanche Ruggedness in GaN p-i-n Diodes With Shallow Bevel Termination. IEEE Electron Device Letters, 2020, 41, 469-472.	3.9	16
43	4H-SiC SACM Avalanche Photodiode With Low Breakdown Voltage and High UV Detection Efficiency. IEEE Photonics Journal, 2016, 8, 1-7.	2.0	15
44	$\hat{\mu}$ -Ga <sub>2</sub> O <sub>3</sub> : A Promising Candidate for High-Electron-Mobility Transistors. IEEE Electron Device Letters, 2020, , 1-1.	3.9	15
45	High-temperature and reliability performance of 4H-SiC Schottky-barrier photodiodes for UV detection. Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2015, 33, .	1.2	14
46	High-Responsivity and Fast-Response Ultraviolet Phototransistors Based on Enhanced p-GaN/AlGaIn/GaN HEMTs. ACS Photonics, 2022, 9, 2040-2045.	6.6	14
47	An Improved Design for Solar-Blind AlGaIn Avalanche Photodiodes. IEEE Photonics Journal, 2017, 9, 1-7.	2.0	13
48	4H-SiC Avalanche Photodiode Linear Array Operating in Geiger Mode. IEEE Photonics Journal, 2017, 9, 1-7.	2.0	13
49	High Sensitive pH Sensor Based on AlInN/GaN Heterostructure Transistor. Sensors, 2018, 18, 1314.	3.8	13
50	Janus Ga <sub>2</sub> SeTe: A Promising Candidate for Highly Efficient Solar Cells. Solar Rrl, 2019, 3, 1900321.	5.8	13
51	GaN MSM photodetectors fabricated on bulk GaN with low dark current and high UV/visible rejection ratio. Physica Status Solidi C: Current Topics in Solid State Physics, 2011, 8, 2473-2475.	0.8	12
52	An improved design for e-mode AlGaIn/GaN HEMT with gate stack $\hat{\mu}$ -Ga <sub>2</sub> O <sub>3</sub> /p-GaN structure. Journal of Applied Physics, 2021, 130, .	2.5	12
53	Spatially localised luminescence emission properties induced by formation of ring-shaped quasi-potential trap around V-pits in InGaN epi-layers. Physica Status Solidi (A) Applications and Materials Science, 2014, 211, 2823-2827.	1.8	11
54	Single Photon Counting Spatial Uniformity of 4H-SiC APD Characterized by SNOM-Based Mapping System. IEEE Photonics Technology Letters, 2017, 29, 1603-1606.	2.5	10

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55	Precise Extraction of Dynamic $R_{\text{dson}}$ Under High Frequency and High Voltage by a Double-Diode-Isolation Method. IEEE Journal of the Electron Devices Society, 2019, 7, 690-695.	2.1	10
56	Effect of Very High-Fluence Proton Radiation on 6H-SiC Photoconductive Proton Detectors. IEEE Electron Device Letters, 2019, 40, 1929-1932.	3.9	10
57	Performance Modulation for Back-Illuminated AlGaN Ultraviolet Avalanche Photodiodes Based on Multiplication Scaling. IEEE Photonics Journal, 2019, 11, 1-7.	2.0	10
58	Electron-Beam-Driven III-Nitride Plasmonic Nanolasers in the Deep-UV and Visible Region. Small, 2020, 16, 1906205.	10.0	10
59	High-Performance 4H-SiC Schottky Photodiode With Semitransparent Grid-Electrode for EUV Detection. IEEE Photonics Technology Letters, 2020, 32, 791-794.	2.5	10
60	Demonstration of an AlGaN-based solar-blind high-voltage photoconductive switch. Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2015, 33, 040601.	1.2	9
61	Vertical 4H-SiC n-i-p-n APDs With Partial Trench Isolation. IEEE Photonics Technology Letters, 2018, 30, 805-808.	2.5	9
62	NiO/AlGaN interface reconstruction and transport manipulation of p-NiO gated AlGaN/GaN HEMTs. Applied Physics Reviews, 2021, 8, .	11.3	9
63	Over 1200 V Normally-OFF p-NiO Gated AlGaN/GaN HEMTs on Si With a Small Threshold Voltage Shift. IEEE Electron Device Letters, 2022, 43, 268-271.	3.9	9
64	High-Quality Crystal Growth and Characteristics of AlGaN-Based Solar-Blind Distributed Bragg Reflectors with a Tri-layer Period Structure. Scientific Reports, 2016, 6, 29571.	3.3	8
65	Fine Control of the Electric Field Distribution in the Heterostructure Multiplication Region of AlGaN Avalanche Photodiodes. IEEE Photonics Journal, 2017, 9, 1-7.	2.0	8
66	4H-SiC Ultraviolet Avalanche Photodiodes With Small Gain Slope and Enhanced Fill Factor. IEEE Photonics Journal, 2017, 9, 1-8.	2.0	8
67	Highly solar-blind ultraviolet selective metal-semiconductor-metal photodetector based on back-illuminated AlGaN heterostructure with integrated photonic crystal filter. Applied Physics Letters, 2021, 118, .	3.3	8
68	Bias-Selective Dual-Operation-Mode Ultraviolet Schottky-Barrier Photodetectors Fabricated on High-Resistivity Homoepitaxial GaN. IEEE Photonics Technology Letters, 2012, 24, 2203-2205.	2.5	7
69	High-voltage photoconductive semiconductor switches fabricated on semi-insulating HVPE GaN:Fe template. Physica Status Solidi C: Current Topics in Solid State Physics, 2016, 13, 374-377.	0.8	7
70	Avalanche Ruggedness of GaN p-i-n Diodes Grown on Sapphire Substrate. Physica Status Solidi (A) Applications and Materials Science, 2018, 215, 1800069.	1.8	7
71	High-performance normally off p-GaN gate high-electron-mobility transistor with In <sub>0.17</sub> Al <sub>0.83</sub> N barrier layer design. Optical and Quantum Electronics, 2021, 53, 1.	3.3	7
72	Multi-aperture anode based AlGaN/GaN Schottky barrier diodes with low turn-on voltage and high uniformity. Applied Physics Express, 2020, 13, 096502.	2.4	7

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73	Reverse leakage current in AlGaIn-based ultraviolet light-emitting diodes. <i>Science Bulletin</i> , 2014, 59, 1276-1279.	1.7	6
74	Spatial Non-Uniform Hot Carrier Luminescence From 4H-SiC p-i-n Avalanche Photodiodes. <i>IEEE Photonics Technology Letters</i> , 2019, 31, 447-450.	2.5	6
75	High Performance Wide Angle DBR Design for Optoelectronic Devices. <i>IEEE Photonics Journal</i> , 2021, 13, 1-6.	2.0	6
76	High Performance Quasi-Vertical GaN Junction Barrier Schottky Diode with Zero Reverse Recovery and Rugged Avalanche Capability. , 2021, , .		6
77	Step-flow growth of Al droplet free AlN epilayers grown by plasma assisted molecular beam epitaxy. <i>Journal Physics D: Applied Physics</i> , 2022, 55, 364002.	2.8	6
78	Evaluation on Temperature-Dependent Transient VT Instability in p-GaN Gate HEMTs under Negative Gate Stress by Fast Sweeping Characterization. <i>Micromachines</i> , 2022, 13, 1096.	2.9	6
79	Effects of the Trap Level in the Unintentionally Doped GaN Buffer Layer on Optimized p-GaN Gate AlGaIn/GaN HEMTs. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2018, 215, 1700368.	1.8	5
80	Investigation on the Activation Energy of Device Degradation and Switching Time in AlGaIn/GaN HEMTs for High-Frequency Application. <i>IEEE Journal of the Electron Devices Society</i> , 2019, 7, 417-424.	2.1	5
81	After-Pulse Characterizations of Geiger-Mode 4H-SiC Avalanche Photodiodes. <i>IEEE Photonics Technology Letters</i> , 2020, 32, 706-709.	2.5	5
82	Enhanced Stability and Sensitivity of AlGaIn/GaN-HEMTs pH Sensor by Reference Device. <i>IEEE Sensors Journal</i> , 2021, 21, 9771-9776.	4.7	5
83	A High Quantum Efficiency Narrow-Band UV-B AlGaIn p-i-n Photodiode With Polarization Assistance. <i>IEEE Photonics Journal</i> , 2021, 13, 1-8.	2.0	5
84	Normally-off GaN HEMTs with InGaIn p-gate cap layer formed by polarization doping. <i>Applied Physics Express</i> , 2022, 15, 016502.	2.4	5
85	Observation and Modeling of Leakage Current in AlGaIn Ultraviolet Light Emitting Diodes. <i>IEEE Photonics Technology Letters</i> , 2019, 31, 1697-1700.	2.5	4
86	Effects of dissipative substrate on the performances of enhancement mode AlInN/GaN HEMTs. <i>International Journal of Numerical Modelling: Electronic Networks, Devices and Fields</i> , 2019, 32, e2482.	1.9	4
87	Synthesis and Properties of InGaIn/GaN Multiple Quantum Well Nanowires on Si (111) by Molecular Beam Epitaxy. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2020, 217, 1900729.	1.8	4
88	1000-W Resistive Energy Dissipating Capability Against Inductive Transients Demonstrated in Non-Avalanche AlGaIn/GaN Schottky Diode. <i>IEEE Electron Device Letters</i> , 2021, 42, 1743-1746.	3.9	4
89	Gate-Controlled NiO/Graphene/4H-SiC Double Schottky Barrier Heterojunction Based on a Metal-Oxide-Semiconductor Structure for Dual-Mode and Wide Range Ultraviolet Detection. <i>ACS Applied Electronic Materials</i> , 0, , .	4.3	4
90	Self-Assembly Nanopillar/Superlattice Hierarchical Structure: Boosting AlGaIn Crystalline Quality and Achieving High-Performance Ultraviolet Avalanche Photodetector. <i>ACS Applied Materials &amp; Interfaces</i> , 2022, 14, 33525-33537.	8.0	4

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91	Improvements in Microstructure and Leakage Current of High-In-Content InGaN p-i-n Structure by Annealing. IEEE Photonics Technology Letters, 2012, 24, 1478-1480.	2.5	3
92	Temperature Dependence of the Energy Band Diagram of AlGaIn/GaN Heterostructure. Advances in Condensed Matter Physics, 2018, 2018, 1-4.	1.1	3
93	A High-Performance SiO <sub>2</sub> /SiN <sub>x</sub> 1-D Photonic Crystal UV Filter Used for Solar-Blind Photodetectors. IEEE Photonics Journal, 2019, 11, 1-7.	2.0	3
94	Electronic properties of arsenene nanoribbons for FET application. Optical and Quantum Electronics, 2020, 52, 1.	3.3	3
95	Different $I-V$ Behaviors and Leakage Current Mechanisms in AlGaIn Solar-Blind Ultraviolet Avalanche Photodiodes. ACS Applied Electronic Materials, 2020, 2, 2716-2720.	4.3	3
96	Direct observation of reach-through behavior in back-illuminated algan avalanche photodiode with separate absorption and multiplication structure. Journal Physics D: Applied Physics, 2020, 53, 425101.	2.8	3
97	Realization of regular resonance mode in GaN-based polygonal microdisks on Si. Journal of Applied Physics, 2020, 127, 113102.	2.5	3
98	Low-Voltage p-i-n GaN-Based Alpha-Particle Detector With High Energy Resolution. IEEE Electron Device Letters, 2021, 42, 1755-1758.	3.9	3
99	A method of applying compressive pre-stress to AlGaIn barrier in AlGaIn/GaN heterostructures by depositing an additional thermally mismatched dielectric. Physica Status Solidi (A) Applications and Materials Science, 2016, 213, 2474-2478.	1.8	2
100	Tunable tunneling magnetoresistance in in-plane double barrier magnetic tunnel junctions based on B vacancy h-NB nanoribbons. Physical Chemistry Chemical Physics, 2022, 24, 3451-3459.	2.8	2
101	4H-SiC n-i-p Extreme Ultraviolet Detector With Gradient Doping-Induced Surface Junction. IEEE Electron Device Letters, 2022, 43, 906-909.	3.9	2
102	InGaIn/GaN multi-quantum-well-based light-emitting and photodetective dual-functional devices. Frontiers of Optoelectronics in China, 2009, 2, 442-445.	0.2	1
103	Enhanced InGaIn/GaN photoelectrodes for visible-light-driven hydrogen generation by surface roughening. Physica Status Solidi (A) Applications and Materials Science, 2016, 213, 2704-2708.	1.8	1
104	Effective suppression of the high temperature DC performance degradation of AlInN/GaN HEMTs by back barrier. International Journal of Numerical Modelling: Electronic Networks, Devices and Fields, 2018, 31, e2299.	1.9	1
105	High sensitivity x-ray detectors based on 4H-SiC p-i-n structure with 80 $\mu\text{m}$ thick intrinsic layer. Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2021, 39, .	1.2	1
106	The Sensing Mechanism of InAlN/GaN HEMT. Crystals, 2022, 12, 401.	2.2	1
107	3-D Simulation Study of a Normally-OFF GaN Lateral Multi-Channel JFET With Optimized Electrical Field Transfer Terminal Structure. IEEE Transactions on Electron Devices, 2022, 69, 1918-1923.	3.0	1
108	Utilization of FIB Technique in TEM Specimen Preparation of GaN-based Devices for Dislocation Investigation. Microscopy and Microanalysis, 2015, 21, 1991-1992.	0.4	0

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109	Determination of Temperature-Dependent Stress State in Thin AlGa <sub>N</sub> Layer of AlGa <sub>N</sub> /Ga <sub>N</sub> HEMT Heterostructures by Near-Resonant Raman Scattering. <i>Advances in Condensed Matter Physics</i> , 2015, 2015, 1-6.	1.1	0
110	Improved Schottky contacts to InGa <sub>N</sub> alloys by a photoelectrochemical treatment. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2016, 213, 1034-1038.	1.8	0
111	Light-Emitting Diodes: High Color Rendering Index Hybrid III-Nitride/Nanocrystals White Light-Emitting Diodes ( <i>Adv. Funct. Mater.</i> 1/2016). <i>Advanced Functional Materials</i> , 2016, 26, 156-156.	14.9	0
112	Lasers: Manipulable and Hybridized, Ultralow-Threshold Lasing in a Plasmonic Laser Using Elliptical InGa <sub>N</sub> /Ga <sub>N</sub> Nanorods ( <i>Adv. Funct. Mater.</i> 37/2017). <i>Advanced Functional Materials</i> , 2017, 27, .	14.9	0
113	Synthesis and Properties of InGa <sub>N</sub> /Ga <sub>N</sub> Multiple Quantum Well Nanowires on Si (111) by Molecular Beam Epitaxy. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2020, 217, 2070028.	1.8	0
114	46.4: Fabrication of InGa <sub>N</sub> /Ga <sub>N</sub> -based nano-LEDs for display applications. <i>Digest of Technical Papers SID International Symposium</i> , 2021, 52, 568-568.	0.3	0