

# Jing Li

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

127  
papers

5,712  
citations

42  
h-index

72  
g-index

137  
ext. papers

6,246  
ext. citations

3  
avg, IF

5.49  
L-index

#	Paper	IF	Citations
127	Formation energy and optical excitation mechanisms of Er in GaN semi-bulk crystals. <i>Applied Physics Letters</i> , <b>2022</b> , 120, 052103	3.4	
126	Charge collection and trapping mechanisms in hexagonal boron nitride epilayers. <i>Applied Physics Letters</i> , <b>2021</b> , 119, 221111	3.4	
125	Charge collection in h-BN neutron detectors at elevated temperatures. <i>Applied Physics Letters</i> , <b>2021</b> , 118, 092102	3.4	3
124	Band structure and ultraviolet optical transitions in ErN. <i>Applied Physics Letters</i> , <b>2021</b> , 118, 131108	3.4	2
123	High efficiency hexagonal boron nitride neutron detectors with 1 cm <sup>2</sup> detection areas. <i>Applied Physics Letters</i> , <b>2020</b> , 116, 142102	3.4	11
122	Anisotropic index of refraction and structural properties of hexagonal boron nitride epilayers probed by spectroscopic ellipsometry. <i>Journal of Applied Physics</i> , <b>2020</b> , 127, 053103	2.5	5
121	Band structure and infrared optical transitions in ErN. <i>Applied Physics Letters</i> , <b>2020</b> , 116, 171104	3.4	4
120	Erbium energy levels in GaN grown by hydride vapor phase epitaxy. <i>AIP Advances</i> , <b>2020</b> , 10, 125006	1.5	1
119	Polarization-resolved Er emission in Er doped GaN bulk crystals. <i>Journal of Applied Physics</i> , <b>2020</b> , 127, 243107	2.5	2
118	Probing the surface oxidation process in hexagonal boron nitride epilayers. <i>AIP Advances</i> , <b>2020</b> , 10, 025213	1.5	3
117	Critical thickness of hexagonal GaBN/BN heterostructures. <i>Journal of Applied Physics</i> , <b>2019</b> , 125, 205703	2.5	4
116	Growth and fabrication of GaN/Er:GaN/GaN core-cladding planar waveguides. <i>Applied Physics Letters</i> , <b>2019</b> , 114, 222105	3.4	7
115	High sensitivity hexagonal boron nitride lateral neutron detectors. <i>Applied Physics Letters</i> , <b>2019</b> , 114, 222102	3.4	14
114	Effects of surface recombination on the charge collection in h-BN neutron detectors. <i>Journal of Applied Physics</i> , <b>2019</b> , 125, 104501	2.5	10
113	Lateral charge carrier transport properties of B-10 enriched hexagonal BN thick epilayers. <i>Applied Physics Letters</i> , <b>2019</b> , 115, 072108	3.4	9
112	Origin and roles of oxygen impurities in hexagonal boron nitride epilayers. <i>Applied Physics Letters</i> , <b>2018</b> , 112, 162103	3.4	27
111	Hexagonal boron nitride neutron detectors with high detection efficiencies. <i>Journal of Applied Physics</i> , <b>2018</b> , 123, 044501	2.5	31

110	Resonant excitation cross-sections of erbium in freestanding GaN bulk crystals. <i>Applied Physics Letters</i> , <b>2018</b> , 112, 202103	3-4	4
109	Probing carbon impurities in hexagonal boron nitride epilayers. <i>Applied Physics Letters</i> , <b>2017</b> , 110, 182107	3-4	24
108	Layer number dependent optical properties of multilayer hexagonal BN epilayers. <i>Applied Physics Letters</i> , <b>2017</b> , 110, 092102	3-4	14
107	Response of alpha particles in hexagonal boron nitride neutron detectors. <i>Applied Physics Letters</i> , <b>2017</b> , 110, 213502	3-4	0
106	Excitation and emission mechanisms of Er:GaN gain medium in 1.5 $\mu\text{m}$ region. <i>Applied Physics Letters</i> , <b>2017</b> , 111, 072109	3-4	6
105	Toward achieving flexible and high sensitivity hexagonal boron nitride neutron detectors. <i>Applied Physics Letters</i> , <b>2017</b> , 111, 033507	3-4	25
104	Temperature dependence of the energy bandgap of multi-layer hexagonal boron nitride. <i>Applied Physics Letters</i> , <b>2017</b> , 111, 132106	3-4	7
103	Enhancement of 1.5 $\mu\text{m}$ emission under 980 nm resonant excitation in Er and Yb co-doped GaN epilayers. <i>Applied Physics Letters</i> , <b>2016</b> , 109, 152103	3-4	7
102	Toward the realization of erbium-doped GaN bulk crystals as a gain medium for high energy lasers. <i>Applied Physics Letters</i> , <b>2016</b> , 109, 052101	3-4	13
101	Growth and device processing of hexagonal boron nitride epilayers for thermal neutron and deep ultraviolet detectors. <i>AIP Advances</i> , <b>2016</b> , 6, 075213	1-5	20
100	Realization of highly efficient hexagonal boron nitride neutron detectors. <i>Applied Physics Letters</i> , <b>2016</b> , 109, 072101	3-4	55
99	The origins of near band-edge transitions in hexagonal boron nitride epilayers. <i>Applied Physics Letters</i> , <b>2016</b> , 108, 052106	3-4	37
98	Bandgap and exciton binding energies of hexagonal boron nitride probed by photocurrent excitation spectroscopy. <i>Applied Physics Letters</i> , <b>2016</b> , 109, 122101	3-4	31
97	Nature of exciton transitions in hexagonal boron nitride. <i>Applied Physics Letters</i> , <b>2016</b> , 108, 122101	3-4	14
96	Hexagonal boron nitride thin film thermal neutron detectors with high energy resolution of the reaction products. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , <b>2015</b> , 783, 121-127	1-2	43
95	Erbium-doped a-plane GaN epilayers synthesized by metal-organic chemical vapor deposition. <i>Optical Materials Express</i> , <b>2015</b> , 5, 274	2-6	3
94	Erbium doped GaN synthesized by hydride vapor-phase epitaxy. <i>Optical Materials Express</i> , <b>2015</b> , 5, 596	2-6	7
93	The origin of deep-level impurity transitions in hexagonal boron nitride. <i>Applied Physics Letters</i> , <b>2015</b> , 106, 021110	3-4	61

92	Dramatic enhancement of 1.54 $\mu\text{m}$ emission in Er doped GaN quantum well structures. <i>Applied Physics Letters</i> , <b>2015</b> , 106, 121106	3.4	10
91	Carbon-rich hexagonal (BN)C alloys. <i>Journal of Applied Physics</i> , <b>2015</b> , 117, 215703	2.5	15
90	Fabrication and characterization of solid-state thermal neutron detectors based on hexagonal boron nitride epilayers. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , <b>2014</b> , 748, 84-90	1.2	43
89	Realizing InGaN monolithic solar-photoelectrochemical cells for artificial photosynthesis. <i>Applied Physics Letters</i> , <b>2014</b> , 104, 143901	3.4	24
88	Refractive index of erbium doped GaN thin films. <i>Applied Physics Letters</i> , <b>2014</b> , 105, 081104	3.4	8
87	Charge carrier transport properties in layer structured hexagonal boron nitride. <i>AIP Advances</i> , <b>2014</b> , 4, 107126	1.5	21
86	Layer-structured hexagonal (BN)C semiconductor alloys with tunable optical and electrical properties. <i>Journal of Applied Physics</i> , <b>2014</b> , 115, 093509	2.5	30
85	Electrical transport properties of (BN)-rich hexagonal (BN)C semiconductor alloys. <i>AIP Advances</i> , <b>2014</b> , 4, 087141	1.5	16
84	Optoelectronic properties of hexagonal boron nitride epilayers <b>2013</b> ,		4
83	Hexagonal boron nitride and 6H-SiC heterostructures. <i>Applied Physics Letters</i> , <b>2013</b> , 102, 213505	3.4	37
82	SiO <sub>2</sub> /TiO <sub>2</sub> distributed Bragg reflector near 1.5 $\mu\text{m}$ fabricated by e-beam evaporation. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , <b>2013</b> , 31, 061514	2.9	12
81	Electrical transport properties of Si-doped hexagonal boron nitride epilayers. <i>AIP Advances</i> , <b>2013</b> , 3, 122116	3.6	30
80	Optical excitation cross section of erbium in GaN. <i>Applied Optics</i> , <b>2013</b> , 52, 1132-5	1.7	9
79	Correlation between the optical loss and crystalline quality in erbium-doped GaN optical waveguides. <i>Applied Optics</i> , <b>2013</b> , 52, 5426-9	1.7	16
78	Dry etching techniques for active devices based on hexagonal boron nitride epilayers. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , <b>2013</b> , 31, 061517	2.9	19
77	Dielectric strength, optical absorption, and deep ultraviolet detectors of hexagonal boron nitride epilayers. <i>Applied Physics Letters</i> , <b>2012</b> , 101, 171112	3.4	95
76	Metal-semiconductor-metal neutron detectors based on hexagonal boron nitride epitaxial layers <b>2012</b> ,		2
75	Surfactant effects of gallium on quality of AlN epilayers grown via metal-organic chemical-vapour deposition on SiC substrates. <i>Journal Physics D: Applied Physics</i> , <b>2012</b> , 45, 285103	3	10

74	Full-scale self-emissive blue and green microdisplays based on GaN micro-LED arrays <b>2012</b> ,		19
73	Effects of growth pressure on erbium doped GaN infrared emitters synthesized by metal organic chemical vapor deposition. <i>Optical Materials Express</i> , <b>2012</b> , 2, 1095	2.6	9
72	Band-edge transitions in hexagonal boron nitride epilayers. <i>Applied Physics Letters</i> , <b>2012</b> , 101, 051110	3.4	42
71	Epitaxial growth and demonstration of hexagonal BN/AlGaIn p-n junctions for deep ultraviolet photonics. <i>Applied Physics Letters</i> , <b>2012</b> , 100, 061121	3.4	76
70	Semiconducting hexagonal boron nitride for deep ultraviolet photonics <b>2012</b> ,		9
69	Photonic properties of erbium doped InGaIn alloys grown on Si (001) substrates. <i>Applied Physics Letters</i> , <b>2011</b> , 98, 081102	3.4	13
68	Hexagonal boron nitride epitaxial layers as neutron detector materials. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , <b>2011</b> , 654, 417-420	1.2	93
67	III-Nitride full-scale high-resolution microdisplays. <i>Applied Physics Letters</i> , <b>2011</b> , 99, 031116	3.4	198
66	Enhanced magnetization in erbium doped GaN thin films due to strain induced electric fields. <i>Applied Physics Letters</i> , <b>2011</b> , 99, 122506	3.4	11
65	Epitaxially grown semiconducting hexagonal boron nitride as a deep ultraviolet photonic material. <i>Applied Physics Letters</i> , <b>2011</b> , 98, 211110	3.4	156
64	Thermoelectric Properties of Er-doped InGaIn Alloys for High Temperature Applications. <i>Materials Research Society Symposia Proceedings</i> , <b>2011</b> , 1325, 41		1
63	Erbium-Doped AlInGaIn Alloys as High-Temperature Thermoelectric Materials. <i>Applied Physics Express</i> , <b>2011</b> , 4, 051001	2.4	29
62	Evolution of phase separation in In-rich InGaIn alloys. <i>Applied Physics Letters</i> , <b>2010</b> , 96, 232105	3.4	36
61	Probing the relationship between structural and optical properties of Si-doped AlN. <i>Applied Physics Letters</i> , <b>2010</b> , 96, 131906	3.4	18
60	Nature of deep center emissions in GaN. <i>Applied Physics Letters</i> , <b>2010</b> , 96, 151902	3.4	84
59	InGaIn/GaN multiple quantum well concentrator solar cells. <i>Applied Physics Letters</i> , <b>2010</b> , 97, 073115	3.4	147
58	Hydrogen generation by solar water splitting using p-InGaIn photoelectrochemical cells. <i>Applied Physics Letters</i> , <b>2010</b> , 96, 052110	3.4	116
57	Enhancing erbium emission by strain engineering in GaN heteroepitaxial layers. <i>Applied Physics Letters</i> , <b>2010</b> , 96, 031908	3.4	23

56	Electrical and optical properties of p-type InGaN. <i>Applied Physics Letters</i> , <b>2009</b> , 95, 261904	3-4	56
55	Probing exciton-phonon interaction in AlN epilayers by photoluminescence. <i>Applied Physics Letters</i> , <b>2009</b> , 95, 061106	3-4	20
54	Thermoelectric Properties of In <sub>0.3</sub> Ga <sub>0.7</sub> N Alloys. <i>Journal of Electronic Materials</i> , <b>2009</b> , 38, 1132-1135	1-9	24
53	InGaN/GaN multiple quantum well solar cells with long operating wavelengths. <i>Applied Physics Letters</i> , <b>2009</b> , 94, 063505	3-4	274
52	Single phase In <sub>x</sub> Ga <sub>1-x</sub> N (0.25 ≤ x ≤ 0.63) alloys synthesized by metal organic chemical vapor deposition. <i>Applied Physics Letters</i> , <b>2008</b> , 93, 182107	3-4	47
51	Direct hydrogen gas generation by using InGaN epilayers as working electrodes. <i>Applied Physics Letters</i> , <b>2008</b> , 93, 162107	3-4	78
50	Beryllium acceptor binding energy in AlN. <i>Applied Physics Letters</i> , <b>2008</b> , 93, 141104	3-4	12
49	Surface chemical and electronic properties of plasma-treated n-type Al <sub>0.5</sub> Ga <sub>0.5</sub> N. <i>Physica Status Solidi (A) Applications and Materials Science</i> , <b>2007</b> , 204, 3410-3416	1-6	17
48	Correlation between biaxial stress and free exciton transition in AlN epilayers. <i>Applied Physics Letters</i> , <b>2007</b> , 91, 121117	3-4	34
47	Correlation between optoelectronic and structural properties and epilayer thickness of AlN. <i>Applied Physics Letters</i> , <b>2007</b> , 90, 241101	3-4	100
46	200nm deep ultraviolet photodetectors based on AlN. <i>Applied Physics Letters</i> , <b>2006</b> , 89, 213510	3-4	146
45	AlGaIn/GaN/AlN quantum-well field-effect transistors with highly resistive AlN epilayers. <i>Applied Physics Letters</i> , <b>2006</b> , 88, 073513	3-4	28
44	Effects of plasma treatment on the Ohmic characteristics of Ti/Al/Ti/Au contacts to n-AlGaIn. <i>Applied Physics Letters</i> , <b>2006</b> , 89, 082109	3-4	36
43	Growth of III-nitride photonic structures on large area silicon substrates. <i>Applied Physics Letters</i> , <b>2006</b> , 88, 171909	3-4	67
42	Effects of compressive strain on optical properties of In <sub>x</sub> Ga <sub>1-x</sub> N/GaN quantum wells. <i>Applied Physics Letters</i> , <b>2006</b> , 89, 151916	3-4	38
41	Higher lying conduction band in GaN and AlN probed by photoluminescence spectroscopy. <i>Applied Physics Letters</i> , <b>2006</b> , 88, 261919	3-4	8
40	Exciton localization in AlGaIn alloys. <i>Applied Physics Letters</i> , <b>2006</b> , 88, 062103	3-4	57
39	III-nitride-based planar lightwave circuits for long wavelength optical communications. <i>IEEE Journal of Quantum Electronics</i> , <b>2005</b> , 41, 100-110	2	27

38	Polarization of III-nitride blue and ultraviolet light-emitting diodes. <i>Applied Physics Letters</i> , <b>2005</b> , 86, 0911-0917	3.4	87
37	Temperature and compositional dependence of the energy band gap of AlGa <sub>N</sub> alloys. <i>Applied Physics Letters</i> , <b>2005</b> , 87, 2421-04	3.4	122
36	Optical properties of AlN and GaN in elevated temperatures. <i>Applied Physics Letters</i> , <b>2004</b> , 85, 3489-3491	3.4	53
35	Unique optical properties of AlGa <sub>N</sub> alloys and related ultraviolet emitters. <i>Applied Physics Letters</i> , <b>2004</b> , 84, 5264-5266	3.4	269
34	Epitaxial growth and time-resolved photoluminescence studies of AlN epilayers <b>2003</b> , 4992, 202		5
33	III-nitride ultraviolet light-emitting diodes with delta doping. <i>Applied Physics Letters</i> , <b>2003</b> , 83, 566-568	3.4	54
32	Band structure and fundamental optical transitions in wurtzite AlN. <i>Applied Physics Letters</i> , <b>2003</b> , 83, 5163-5165	3.4	282
31	Deep ultraviolet picosecond time-resolved photoluminescence studies of AlN epilayers. <i>Applied Physics Letters</i> , <b>2003</b> , 82, 1694-1696	3.4	86
30	Enhanced p-type conduction in GaN and AlGa <sub>N</sub> by Mg-doping. <i>Applied Physics Letters</i> , <b>2003</b> , 82, 3041-3043	3.4	99
29	Photoluminescence studies of Si-doped AlN epilayers. <i>Applied Physics Letters</i> , <b>2003</b> , 83, 2787-2789	3.4	42
28	III-Nitride Photonic Crystals for Blue and UV Emitters. <i>Materials Research Society Symposia Proceedings</i> , <b>2003</b> , 798, 424		1
27	Mg acceptor level in AlN probed by deep ultraviolet photoluminescence. <i>Applied Physics Letters</i> , <b>2003</b> , 83, 878-880	3.4	204
26	Birefringence of GaN/AlGa <sub>N</sub> optical waveguides. <i>Applied Physics Letters</i> , <b>2003</b> , 83, 1698-1700	3.4	6
25	GaN-based waveguide devices for long-wavelength optical communications. <i>Applied Physics Letters</i> , <b>2003</b> , 82, 1326-1328	3.4	51
24	Delta-doped AlGa <sub>N</sub> /GaN metal-oxide-semiconductor heterostructure field-effect transistors with high breakdown voltages. <i>Applied Physics Letters</i> , <b>2002</b> , 81, 4649-4651	3.4	12
23	Achieving highly conductive AlGa <sub>N</sub> alloys with high Al contents. <i>Applied Physics Letters</i> , <b>2002</b> , 81, 1038-1040	3.4	63
22	Growth and optical studies of two-dimensional electron gas of Al-rich AlGa <sub>N</sub> /GaN heterostructures. <i>Applied Physics Letters</i> , <b>2002</b> , 81, 1809-1811	3.4	16
21	AlGa <sub>N</sub> /GaN Metal-Oxide-Semiconductor Heterostructure Field-Effect Transistors (MOSHFETs) with the Delta-Doped Barrier Layer. <i>Materials Research Society Symposia Proceedings</i> , <b>2002</b> , 743, L9.11.1		

20	Excitonic luminescence linewidths in AlGa <sub>x</sub> N alloys with high aluminum concentrations. <i>Applied Physics Letters</i> , <b>2002</b> , 80, 2907-2909	3-4	40
19	Band-edge photoluminescence of AlN epilayers. <i>Applied Physics Letters</i> , <b>2002</b> , 81, 3365-3367	3-4	87
18	Optical and electrical properties of Mg-doped p-type Al <sub>x</sub> Ga <sub>1-x</sub> N. <i>Applied Physics Letters</i> , <b>2002</b> , 80, 1210-1212	3-4	138
17	Optical properties of Pr implanted GaN epilayers and Al <sub>x</sub> Ga <sub>1-x</sub> N alloys. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , <b>2001</b> , 81, 167-170	3-1	5
16	III-nitride blue microdisplays. <i>Applied Physics Letters</i> , <b>2001</b> , 78, 1303-1305	3-4	209
15	Growth and deep ultraviolet picosecond time-resolved photoluminescence studies of AlN/GaN multiple quantum wells. <i>Applied Physics Letters</i> , <b>2001</b> , 78, 3690-3692	3-4	25
14	Linewidths of excitonic luminescence transitions in AlGa <sub>x</sub> N alloys. <i>Applied Physics Letters</i> , <b>2001</b> , 78, 1829-1831	3-4	44
13	Growth and optical properties of In <sub>x</sub> Al <sub>y</sub> Ga <sub>1-x-y</sub> N quaternary alloys. <i>Applied Physics Letters</i> , <b>2001</b> , 78, 61-63	3-4	68
12	Optical and electrical properties of Al-rich AlGa <sub>x</sub> N alloys. <i>Applied Physics Letters</i> , <b>2001</b> , 79, 3245-3247	3-4	88
11	InGa <sub>x</sub> N/GaN quantum well interconnected microdisk light emitting diodes. <i>Applied Physics Letters</i> , <b>2000</b> , 77, 3236-3238	3-4	100
10	Photoresponsivity of ultraviolet detectors based on In <sub>x</sub> Al <sub>y</sub> Ga <sub>1-x-y</sub> N quaternary alloys. <i>Applied Physics Letters</i> , <b>2000</b> , 77, 791-793	3-4	38
9	Observation of electronic Raman scattering from Mg-doped wurtzite GaN. <i>Applied Physics Letters</i> , <b>2000</b> , 76, 2889-2891	3-4	7
8	Formation and dissolution of microcrystalline graphite in carbon-implanted GaN. <i>Journal of Applied Physics</i> , <b>2000</b> , 88, 5662-5665	2-5	13
7	Barrier-width dependence of quantum efficiencies of GaN/Al <sub>x</sub> Ga <sub>1-x</sub> N multiple quantum wells. <i>Applied Physics Letters</i> , <b>2000</b> , 77, 1170-1172	3-4	13
6	Well-width dependence of the quantum efficiencies of GaN/Al <sub>x</sub> Ga <sub>1-x</sub> N multiple quantum wells. <i>Applied Physics Letters</i> , <b>2000</b> , 76, 3040-3042	3-4	38
5	Optimizing growth conditions for GaN/Al <sub>x</sub> Ga <sub>1-x</sub> N multiple quantum well structures. <i>Applied Physics Letters</i> , <b>2000</b> , 76, 864-866	3-4	10
4	GaN microdisk light emitting diodes. <i>Applied Physics Letters</i> , <b>2000</b> , 76, 631-633	3-4	140
3	Time-resolved photoluminescence studies of Al <sub>x</sub> Ga <sub>1-x</sub> N alloys. <i>Applied Physics Letters</i> , <b>2000</b> , 76, 1252-1254	3-4	110



- 2 Time-resolved photoluminescence studies of an ionized donor-bound exciton in GaN. *Applied Physics Letters*, **1999**, 74, 513-515 3.4 30
- 1 Correlation between Sheet Carrier Density-Mobility Product and Persistent Photoconductivity in ALGAN/GAN Modulation Doped Heterostructures. *Materials Research Society Symposia Proceedings*, **1999**, 595, 1