

# Songrui

## List of Publications by Year in Descending Order

**Source:** <https://exaly.com/author-pdf/2527276/songrui-publications-by-year.pdf>

**Version:** 2024-04-18

This document has been generated based on the publications and citations recorded by exaly.com. For the latest version of this publication list, visit the link given above.

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

74  
papers

3,027  
citations

29  
h-index

54  
g-index

86  
ext. papers

3,444  
ext. citations

5.6  
avg, IF

5.38  
L-index

#	Paper	IF	Citations
74	AlGa <sub>N</sub> nanowire deep ultraviolet light emitting diodes with graphene electrode. <i>Applied Physics Letters</i> , <b>2022</b> , 120, 171108	3.4	1
73	Vertical semiconductor deep ultraviolet light emitting diodes on a nanowire-assisted aluminum nitride buffer layer.. <i>Scientific Reports</i> , <b>2022</b> , 12, 7230	4.9	1
72	Intrinsic excitation-dependent room-temperature internal quantum efficiency of AlGa <sub>N</sub> nanowires with varying Al contents. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , <b>2021</b> , 39, 022803	1.3	3
71	Molecular Beam Epitaxial Growth of AlN Thin Films on Si through Exploiting Low Al Adatom Migration and the Nitrogen-Rich Environment on a Nanowire Template. <i>Crystal Growth and Design</i> , <b>2021</b> , 21, 3645-3649	3.5	4
70	Recent Progress on Aluminum Gallium Nitride Deep Ultraviolet Lasers by Molecular Beam Epitaxy. <i>Physica Status Solidi - Rapid Research Letters</i> , <b>2021</b> , 15, 2100090	2.5	3
69	Light extraction efficiency of AlGa <sub>N</sub> nanowire deep ultraviolet light-emitting diodes on Si with different photonic structures. <i>Journal of Nanophotonics</i> , <b>2021</b> , 15,	1.1	5
68	Molecular beam epitaxy growth and characterization of AlGa <sub>N</sub> epilayers in nitrogen-rich condition on Si substrate. <i>Materials Science in Semiconductor Processing</i> , <b>2021</b> , 135, 106099	4.3	3
67	Molecular beam epitaxial growth and optical characterization of AlGa <sub>N</sub> nanowires with reduced substrate temperature. <i>AIP Advances</i> , <b>2020</b> , 10, 025022	1.5	7
66	AlGa <sub>N</sub> Nanowires for Ultraviolet Light-Emitting: Recent Progress, Challenges, and Prospects. <i>Micromachines</i> , <b>2020</b> , 11,	3.3	23
65	Field emission from AlGa <sub>N</sub> nanowires with low turn-on field. <i>Nanotechnology</i> , <b>2020</b> , 31, 475702	3.4	5
64	Comparative study on the molecular beam epitaxial growth and characterization of AlGa <sub>N</sub> nanowire structures on AlN buffer layer and on Si. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , <b>2020</b> , 38, 062804	1.3	2
63	Decoupling Strategy for Enhanced Syngas Generation from Photoelectrochemical CO Reduction. <i>IScience</i> , <b>2020</b> , 23, 101390	6.1	11
62	Optical Quality and Stimulated Emission of Molecular Beam Epitaxy Grown AlGa <sub>N</sub> in the Deep Ultraviolet. <i>Physica Status Solidi (B): Basic Research</i> , <b>2020</b> , 257, 2000287	1.3	4
61	Structural and electrical characterization of monolithic core-double shell n-GaN/Al/p-AlGa <sub>N</sub> nanowire heterostructures grown by molecular beam epitaxy. <i>Nanoscale</i> , <b>2019</b> , 11, 3888-3895	7.7	8
60	Effect of low hole mobility on the efficiency droop of AlGa <sub>N</sub> nanowire deep ultraviolet light emitting diodes. <i>Applied Physics Letters</i> , <b>2019</b> , 114, 101104	3.4	25
59	Molecular Beam Epitaxy of III-Nitride Nanowires: Emerging Applications From Deep-Ultraviolet Light Emitters and Micro-LEDs to Artificial Photosynthesis. <i>IEEE Nanotechnology Magazine</i> , <b>2019</b> , 13, 6-16	1.7	7
58	An electrically injected AlGa <sub>N</sub> nanowire defect-free photonic crystal ultraviolet laser. <i>Optics Express</i> , <b>2019</b> , 27, 5843-5850	3.3	18

57	Passivation of Surface States of AlGa <sub>N</sub> Nanowires Using H <sub>3</sub> PO <sub>4</sub> Treatment To Enhance the Performance of UV-LEDs and Photoanodes. <i>ACS Applied Nano Materials</i> , <b>2018</b> , 1, 1968-1975	5.6	8
56	2D strain mapping using scanning transmission electron microscopy Moiré Interferometry and geometrical phase analysis. <i>Ultramicroscopy</i> , <b>2018</b> , 187, 1-12	3.1	23
55	Magnetic Field Enhanced Superconductivity in Epitaxial Thin Film WTe. <i>Scientific Reports</i> , <b>2018</b> , 8, 6520	4.9	20
54	Effect of growth temperature on the structural and optical properties of few-layer hexagonal boron nitride by molecular beam epitaxy. <i>Optics Express</i> , <b>2018</b> , 26, 23031-23039	3.3	14
53	Wafer-scale synthesis of monolayer WSe <sub>2</sub> : A multi-functional photocatalyst for efficient overall pure water splitting. <i>Nano Energy</i> , <b>2018</b> , 51, 54-60	17.1	30
52	Molecular Beam Epitaxy of Al(Ga) <sub>N</sub> Nanowire Heterostructures and Their Application in Ultraviolet Optoelectronics <b>2018</b> , 115-133		2
51	AlGa <sub>N</sub> Nanowires: Path to Electrically Injected Semiconductor Deep Ultraviolet Lasers. <i>IEEE Journal of Quantum Electronics</i> , <b>2018</b> , 54, 1-9	2	12
50	An AlGa <sub>N</sub> Core-Shell Tunnel Junction Nanowire Light-Emitting Diode Operating in the Ultraviolet-C Band. <i>Nano Letters</i> , <b>2017</b> , 17, 1212-1218	11.5	94
49	On the mechanism of highly efficient p-type conduction of Mg-doped ultra-wide-bandgap AlN nanostructures. <i>Applied Physics Letters</i> , <b>2017</b> , 110, 032102	3.4	59
48	AlN/h-BN Heterostructures for Mg Dopant-Free Deep Ultraviolet Photonics. <i>Nano Letters</i> , <b>2017</b> , 17, 3738-3743	13.59	
47	Molecular beam epitaxial growth and characterization of AlN nanowall deep UV light emitting diodes. <i>Applied Physics Letters</i> , <b>2017</b> , 111, 101103	3.4	10
46	InN Nanowires: Epitaxial Growth, Characterization, and Device Applications. <i>Semiconductors and Semimetals</i> , <b>2017</b> , 96, 267-304	0.6	7
45	Selective area epitaxy of AlGa <sub>N</sub> nanowire arrays across nearly the entire compositional range for deep ultraviolet photonics. <i>Optics Express</i> , <b>2017</b> , 25, 30494-30502	3.3	35
44	Recent Advances on p-Type III-Nitride Nanowires by Molecular Beam Epitaxy. <i>Crystals</i> , <b>2017</b> , 7, 268	2.3	24
43	Molecular beam epitaxial growth and characterization of Al(Ga) <sub>N</sub> nanowire deep ultraviolet light emitting diodes and lasers. <i>Journal Physics D: Applied Physics</i> , <b>2016</b> , 49, 364006	3	38
42	Carrier Localization at Atomic-Scale Compositional Fluctuations in Single AlGa <sub>N</sub> Nanowires with Nano-Cathodoluminescence <b>2016</b> , 624-625		
41	Nanogenerators based on vertically aligned InN nanowires. <i>Nanoscale</i> , <b>2016</b> , 8, 2097-106	7.7	30
40	Atomic-Scale Compositional Fluctuations in Ternary III-Nitride Nanowires <b>2016</b> , 550-551		

39	An electrically pumped 239 nm AlGaIn nanowire laser operating at room temperature. <i>Applied Physics Letters</i> , <b>2016</b> , 109, 191106	3-4	57
38	Sub-milliwatt AlGaIn nanowire tunnel junction deep ultraviolet light emitting diodes on silicon operating at 242 nm. <i>Applied Physics Letters</i> , <b>2016</b> , 109, 201106	3-4	54
37	Molecular beam epitaxy growth of Al-rich AlGaIn nanowires for deep ultraviolet optoelectronics. <i>APL Materials</i> , <b>2016</b> , 4, 086115	5-7	53
36	Controlled Coalescence of AlGaIn Nanowire Arrays: An Architecture for Nearly Dislocation-Free Planar Ultraviolet Photonic Device Applications. <i>Advanced Materials</i> , <b>2016</b> , 28, 8446-8454	24	70
35	Polarization-resolved electroluminescence study of InGaIn/GaIn dot-in-a-wire light-emitting diodes grown by molecular beam epitaxy. <i>Physica Status Solidi (A) Applications and Materials Science</i> , <b>2015</b> , 212, 941-946	1-6	9
34	Ultralow-threshold electrically injected AlGaIn nanowire ultraviolet lasers on Si operating at low temperature. <i>Nature Nanotechnology</i> , <b>2015</b> , 10, 140-4	28-7	210
33	Defect-engineered GaIn:Mg nanowire arrays for overall water splitting under violet light. <i>Applied Physics Letters</i> , <b>2015</b> , 106, 113105	3-4	22
32	Visible light-driven efficient overall water splitting using p-type metal-nitride nanowire arrays. <i>Nature Communications</i> , <b>2015</b> , 6, 6797	17-4	257
31	Optical constants of In(x)Ga(1-x)N (0 ≤ x ≤ 0.73) in the visible and near-infrared wavelength regimes. <i>Optics Letters</i> , <b>2015</b> , 40, 3304-7	3	9
30	Surface Emitting, High Efficiency Near-Vacuum Ultraviolet Light Source with Aluminum Nitride Nanowires Monolithically Grown on Silicon. <i>Nano Letters</i> , <b>2015</b> , 15, 7006-9	11-5	73
29	An electrically injected AlGaIn nanowire laser operating in the ultraviolet-C band. <i>Applied Physics Letters</i> , <b>2015</b> , 107, 043101	3-4	70
28	Optical and electrical properties of Mg-doped AlN nanowires grown by molecular beam epitaxy. <i>Applied Physics Letters</i> , <b>2015</b> , 106, 213105	3-4	43
27	Extending group-III nitrides to the infrared: Recent advances in InN. <i>Physica Status Solidi (B): Basic Research</i> , <b>2015</b> , 252, 1050-1062	1-3	24
26	Three-Dimensional Quantum Confinement of Charge Carriers in Self-Organized AlGaIn Nanowires: A Viable Route to Electrically Injected Deep Ultraviolet Lasers. <i>Nano Letters</i> , <b>2015</b> , 15, 7801-7	11-5	67
25	III-Nitride nanowire optoelectronics. <i>Progress in Quantum Electronics</i> , <b>2015</b> , 44, 14-68	9-1	152
24	Aluminum nitride nanowire light emitting diodes: Breaking the fundamental bottleneck of deep ultraviolet light sources. <i>Scientific Reports</i> , <b>2015</b> , 5, 8332	4-9	148
23	Tuning the surface Fermi level on p-type gallium nitride nanowires for efficient overall water splitting. <i>Nature Communications</i> , <b>2014</b> , 5, 3825	17-4	191
22	Is the Fermi-level pinned on InN grown surfaces?. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , <b>2014</b> , 11, 412-416		6

21	p-Type dopant incorporation and surface charge properties of catalyst-free GaN nanowires revealed by micro-Raman scattering and X-ray photoelectron spectroscopy. <i>Nanoscale</i> , <b>2014</b> , 6, 9970-6	7.7	21
20	Photoelectrochemical Water Splitting and Hydrogen Generation Using InGaN/GaN Nanowire Arrays <b>2014</b> ,		1
19	Electrically injected near-infrared light emission from single InN nanowire p-i-n diode. <i>Applied Physics Letters</i> , <b>2014</b> , 105, 231124	3.4	28
18	Study on the coalescence of dislocation-free GaN nanowires on Si and SiO <sub>x</sub> . <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , <b>2014</b> , 32, 02C114	1.3	21
17	Optical properties of strain-free AlN nanowires grown by molecular beam epitaxy on Si substrates. <i>Applied Physics Letters</i> , <b>2014</b> , 104, 223107	3.4	35
16	One-step overall water splitting under visible light using multiband InGaN/GaN nanowire heterostructures. <i>ACS Nano</i> , <b>2013</b> , 7, 7886-93	16.7	162
15	Highly stable photoelectrochemical water splitting and hydrogen generation using a double-band InGaN/GaN core/shell nanowire photoanode. <i>Nano Letters</i> , <b>2013</b> , 13, 4356-61	11.5	157
14	p-Type InN nanowires. <i>Nano Letters</i> , <b>2013</b> , 13, 5509-13	11.5	80
13	High efficiency photoelectrochemical water splitting and hydrogen generation using GaN nanowire photoelectrode. <i>Nanotechnology</i> , <b>2013</b> , 24, 175401	3.4	70
12	Growth of large-scale vertically aligned GaN nanowires and their heterostructures with high uniformity on SiO(x) by catalyst-free molecular beam epitaxy. <i>Nanoscale</i> , <b>2013</b> , 5, 5283-7	7.7	75
11	Highly efficient, spectrally pure 340 nm ultraviolet emission from Al <sub>x</sub> Ga <sub>1-x</sub> N nanowire based light emitting diodes. <i>Nanotechnology</i> , <b>2013</b> , 24, 345201	3.4	48
10	Optical and structural characterization of nitrogen-rich InN: Transition from nearly intrinsic to strongly n-type degenerate with temperature. <i>Applied Physics Letters</i> , <b>2013</b> , 103, 262101	3.4	4
9	Photoluminescence properties of Mg-doped InN nanowires. <i>Applied Physics Letters</i> , <b>2013</b> , 103, 203113	3.4	13
8	Probing the electrical transport properties of intrinsic InN nanowires. <i>Applied Physics Letters</i> , <b>2013</b> , 102, 073102	3.4	44
7	Large-scale cubic InN nanocrystals by a combined solution- and vapor-phase method under silica confinement. <i>Journal of the American Chemical Society</i> , <b>2012</b> , 134, 780-3	16.4	26
6	Observation of phonon sideband emission in intrinsic InN nanowires: a photoluminescence and micro-Raman scattering study. <i>Nanotechnology</i> , <b>2012</b> , 23, 415706	3.4	11
5	Tuning the surface charge properties of epitaxial InN nanowires. <i>Nano Letters</i> , <b>2012</b> , 12, 2877-82	11.5	87
4	(Invited) Passivation of III-V Nanowires for Optoelectronics. <i>ECS Transactions</i> , <b>2012</b> , 45, 51-60	1	3

3	Electrical transport and optical model of GaAs-AlInP core-shell nanowires. <i>Journal of Applied Physics</i> , <b>2012</b> , 111, 094319	2.5	26
2	High Internal Quantum Efficiency AlGaIn Epilayer Grown by Molecular Beam Epitaxy on Si Substrate. <i>ECS Journal of Solid State Science and Technology</i> ,	2	2
1	Correlation of Defects and Lasing Threshold for AlGaIn Deep Ultraviolet Lasers Grown by Molecular Beam Epitaxy. <i>Physica Status Solidi (B): Basic Research</i> , 2100201	1.3	0