

# S Yu Karpov

## List of Publications by Citations

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158  
papers

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30  
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168  
ext. papers

3,341  
ext. citations

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5.56  
L-index

#	Paper	IF	Citations
158	Dislocation effect on light emission efficiency in gallium nitride. <i>Applied Physics Letters</i> , <b>2002</b> , 81, 4721-4723	3.4	145
157	Suppression of phase separation in InGaN due to elastic strain. <i>MRS Internet Journal of Nitride Semiconductor Research</i> , <b>1998</b> , 3, 1		141
156	ABC-model for interpretation of internal quantum efficiency and its droop in III-nitride LEDs: a review. <i>Optical and Quantum Electronics</i> , <b>2015</b> , 47, 1293-1303	2.4	122
155	GaN evaporation in molecular-beam epitaxy environment. <i>Applied Physics Letters</i> , <b>1999</b> , 74, 1854-1856	3.4	90
154	Temperature-Dependent Internal Quantum Efficiency of Blue High-Brightness Light-Emitting Diodes. <i>IEEE Journal of Quantum Electronics</i> , <b>2014</b> , 50, 911-920	2	76
153	Is Auger recombination responsible for the efficiency rollover in III-nitride light-emitting diodes?. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , <b>2008</b> , 5, 2066-2069		74
152	Temperature-dependent recombination coefficients in InGaN light-emitting diodes: Hole localization, Auger processes, and the green gap. <i>Applied Physics Letters</i> , <b>2016</b> , 109, 161103	3.4	67
151	On mechanisms of sublimation growth of AlN bulk crystals. <i>Journal of Crystal Growth</i> , <b>2000</b> , 211, 68-72	1.6	64
150	From Large-Size to Micro-LEDs: Scaling Trends Revealed by Modeling. <i>Physica Status Solidi (A) Applications and Materials Science</i> , <b>2018</b> , 215, 1700508	1.6	64
149	Novel approach to simulation of group-III nitrides growth by MOVPE. <i>MRS Internet Journal of Nitride Semiconductor Research</i> , <b>1999</b> , 4, 1		63
148	Impact of surface recombination on efficiency of III-nitride light-emitting diodes. <i>Physica Status Solidi - Rapid Research Letters</i> , <b>2016</b> , 10, 480-484	2.5	56
147	Global numerical simulation of heat and mass transfer for SiC bulk crystal growth by PVT. <i>Journal of Crystal Growth</i> , <b>2000</b> , 211, 333-338	1.6	56
146	Modeling of InGaN MOVPE in AIX 200 Reactor and AIX 2000 HT Planetary Reactor. <i>MRS Internet Journal of Nitride Semiconductor Research</i> , <b>1999</b> , 4, 1		56
145	Simulation of visible and ultra-violet group-III nitride light emitting diodes. <i>Journal of Computational Physics</i> , <b>2006</b> , 213, 214-238	4.1	52
144	Analysis of sublimation growth of bulk SiC crystals in tantalum container. <i>Journal of Crystal Growth</i> , <b>2000</b> , 211, 347-351	1.6	48
143	Simulation of Sublimation Growth of SiC Single Crystals. <i>Physica Status Solidi (B): Basic Research</i> , <b>1997</b> , 202, 201-220	1.3	47
142	Statistical model of ternary group-III nitrides. <i>Physical Review B</i> , <b>2004</b> , 70,	3.3	46

141	Thermodynamic properties of group-III nitrides and related species. <i>MRS Internet Journal of Nitride Semiconductor Research</i> , <b>1998</b> , 3, 1		45
140	Efficiency droop suppression in InGaN-based blue LEDs: Experiment and numerical modelling. <i>Physica Status Solidi (A) Applications and Materials Science</i> , <b>2012</b> , 209, 456-460	1.6	41
139	Modelling study of MQW LED operation. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , <b>2005</b> , 2, 2928-2931		40
138	Hybrid CdZnO/GaN quantum-well light emitting diodes. <i>Journal of Applied Physics</i> , <b>2008</b> , 104, 093107	2.5	37
137	Current spreading and thermal effects in blue LED dice. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , <b>2007</b> , 4, 45-48		37
136	Mechanism of stress relaxation in (0001) InGaN/GaN via formation of V-shaped dislocation half-loops. <i>Applied Physics Letters</i> , <b>2013</b> , 103, 152106	3.4	36
135	Carrier localization in InGaN by composition fluctuations: implication to the green gap. <i>Photonics Research</i> , <b>2017</b> , 5, A7	6	35
134	Strain effects on indium incorporation and optical transitions in green-light InGaN heterostructures of different orientations. <i>Physica Status Solidi (A) Applications and Materials Science</i> , <b>2011</b> , 208, 2671-2675	1.6	35
133	Surface chemistry and transport effects in GaN hydride vapor phase epitaxy. <i>Journal of Crystal Growth</i> , <b>2004</b> , 270, 384-395	1.6	34
132	Coupled modeling of current spreading, thermal effects and light extraction in III-nitride light-emitting diodes. <i>Semiconductor Science and Technology</i> , <b>2008</b> , 23, 125023	1.8	33
131	Determination of recombination coefficients in InGaN quantum-well light-emitting diodes by small-signal time-resolved photoluminescence. <i>Japanese Journal of Applied Physics</i> , <b>2016</b> , 55, 05FJ01	1.4	32
130	Indium incorporation and optical transitions in InGaN bulk materials and quantum wells with arbitrary polarity. <i>Applied Physics Letters</i> , <b>2010</b> , 97, 051904	3.4	32
129	Optimal ways of colour mixing for high-quality white-light LED sources. <i>Physica Status Solidi (A) Applications and Materials Science</i> , <b>2015</b> , 212, 914-919	1.6	31
128	Role of nonradiative recombination centers and extended defects in nonpolar GaN on light emission efficiency. <i>Applied Physics Letters</i> , <b>2011</b> , 98, 072104	3.4	30
127	Effect of localized states on internal quantum efficiency of III-nitride LEDs. <i>Physica Status Solidi - Rapid Research Letters</i> , <b>2010</b> , 4, 320-322	2.5	30
126	On low temperature kinetic effects in metalorganic vapor phase epitaxy of III-V compounds. <i>Journal of Crystal Growth</i> , <b>2001</b> , 230, 232-238	1.6	30
125	Numerical study of SiC CVD in a vertical cold-wall reactor. <i>Computational Materials Science</i> , <b>2002</b> , 24, 520-534	3.2	30
124	Surface kinetics of GaN evaporation and growth by molecular-beam epitaxy. <i>Surface Science</i> , <b>2000</b> , 450, 191-203	1.8	30

123	Virtual reactor as a new tool for modeling and optimization of SiC bulk crystal growth. <i>Journal of Crystal Growth</i> , <b>2001</b> , 225, 307-311	1.6	27
122	The role of gaseous species in group-III nitride growth. <i>MRS Internet Journal of Nitride Semiconductor Research</i> , <b>1997</b> , 2, 1		26
121	Growth of silicon carbide by sublimation sandwich method in the atmosphere of inert gas. <i>Journal of Crystal Growth</i> , <b>2000</b> , 208, 431-441	1.6	26
120	Sublimation Growth of AlN in Vacuum and in a Gas Atmosphere. <i>Physica Status Solidi A</i> , <b>1999</b> , 176, 435-438		26
119	Simulation of light-emitting diodes for new physics understanding and device design <b>2012</b> ,		25
118	Experimental and theoretical study of electrical, thermal, and optical characteristics of InGaN/GaN high-power flip-chip LEDs. <i>Physica Status Solidi (A) Applications and Materials Science</i> , <b>2013</b> , 210, 466-469 <sup>1.6</sup>		24
117	Modeling of III-nitride light-emitting diodes: progress, problems, and perspectives <b>2011</b> ,		24
116	Current crowding effect on light extraction efficiency of thin-film LEDs. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , <b>2010</b> , 7, 2124-2126		24
115	Theoretical Model for Analysis and Optimization of Group III-Nitrides Growth by Molecular Beam Epitaxy. <i>MRS Internet Journal of Nitride Semiconductor Research</i> , <b>1996</b> , 1, 1		24
114	Bandgap engineering of electronic and optoelectronic devices on native AlN and GaN substrates: A modelling insight. <i>Journal of Crystal Growth</i> , <b>2005</b> , 281, 115-124	1.6	24
113	Advances in the modeling of MOVPE processes. <i>Journal of Crystal Growth</i> , <b>2003</b> , 248, 1-7	1.6	23
112	Current status of GaN crystal growth by sublimation sandwich technique. <i>MRS Internet Journal of Nitride Semiconductor Research</i> , <b>1998</b> , 3, 1		23
111	Effect of Die Shape and Size on Performance of III-Nitride Micro-LEDs: A Modeling Study. <i>Photonics</i> , <b>2018</b> , 5, 41	2.2	23
110	Effect of free-carrier absorption on performance of 808 nm AlGaAs-based high-power laser diodes. <i>Semiconductor Science and Technology</i> , <b>2007</b> , 22, 502-510	1.8	21
109	Advances in modeling of wide-bandgap bulk crystal growth. <i>Crystal Research and Technology</i> , <b>2003</b> , 38, 237-249	1.3	21
108	Evolution of thermoelastic strain and dislocation density during sublimation growth of silicon carbide. <i>Diamond and Related Materials</i> , <b>2000</b> , 9, 446-451	3.5	21
107	Model of the adsorption/desorption kinetics on a growing III-V compound surface. <i>Surface Science</i> , <b>1997</b> , 393, 108-125	1.8	20
106	Analysis of vaporization kinetics of group-III nitrides. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , <b>1997</b> , 43, 167-171	3.1	20

105	Analytical model for the quantum-confined Stark effect including electric field screening by non-equilibrium carriers. <i>Physica Status Solidi (B): Basic Research</i> , <b>2006</b> , 243, 1625-1629	1.3	20
104	In situ visualization of SiC physical vapor transport crystal growth. <i>Journal of Crystal Growth</i> , <b>2005</b> , 275, e1807-e1812	1.6	20
103	Indium segregation kinetics in InGaAs ternary compounds. <i>Thin Solid Films</i> , <b>2000</b> , 380, 71-74	2.2	20
102	Effect of Carrier Localization on Recombination Processes and Efficiency of InGaN-Based LEDs Operating in the Green Gap. <i>Applied Sciences (Switzerland)</i> , <b>2018</b> , 8, 818	2.6	19
101	Polarization doping for III-nitride optoelectronics. <i>Physica Status Solidi (A) Applications and Materials Science</i> , <b>2013</b> , 210, 1369-1376	1.6	19
100	Analysis of silicon carbide growth by sublimation sandwich method. <i>Journal of Crystal Growth</i> , <b>1997</b> , 173, 408-416	1.6	19
99	Indium droplet formation during molecular beam epitaxy of InGaN. <i>Journal of Crystal Growth</i> , <b>1999</b> , 206, 147-149	1.6	19
98	Bendable III-N Visible Light-Emitting Diodes beyond Mechanical Flexibility: Theoretical Study on Quantum Efficiency Improvement and Color Tunability by External Strain. <i>ACS Photonics</i> , <b>2016</b> , 3, 486-493	6.3	18
97	Hybrid ZnO/III-nitride light-emitting diodes: modelling analysis of operation. <i>Physica Status Solidi (A) Applications and Materials Science</i> , <b>2007</b> , 204, 241-245	1.6	18
96	On the Possible Origins of Low Indium Incorporation during MOVPE of InGaN. <i>Physica Status Solidi A</i> , <b>1999</b> , 176, 253-256		18
95	Differential carrier lifetime in InGaN-based light-emitting diodes obtained by small-signal frequency-domain measurements. <i>Journal of Applied Physics</i> , <b>2017</b> , 121, 035701	2.5	17
94	Light-emitting diodes for solid-state lighting: searching room for improvements <b>2016</b> ,		16
93	Current crowding effects on blue LED operation. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , <b>2006</b> , 3, 1645-1648		16
92	Effect of gas-phase nucleation on chemical vapor deposition of silicon carbide. <i>Journal of Crystal Growth</i> , <b>2000</b> , 211, 343-346	1.6	16
91	Analysis of V-group molecules sticking to III-V compound surfaces. <i>Surface Science</i> , <b>1995</b> , 344, 11-22	1.8	16
90	Carrier injection and light emission in visible and UV nitride LEDs by modeling. <i>Physica Status Solidi (B): Basic Research</i> , <b>2004</b> , 241, 2668-2671	1.3	14
89	Indium-free violet LEDs grown by HVPE. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , <b>2003</b> , 2265-2269		14
88	Analytical model of silicon carbide growth under free-molecular transport conditions. <i>Journal of Crystal Growth</i> , <b>1996</b> , 169, 491-495	1.6	13

87	Instability of III-V compound surfaces due to liquid phase formation. <i>Journal of Crystal Growth</i> , <b>1993</b> , 129, 563-570	1.6	13
86	Efficiency of True-Green Light Emitting Diodes: Non-Uniformity and Temperature Effects. <i>Materials</i> , <b>2017</b> , 10,	3.5	12
85	Assessment of various LED structure designs for high-current operation. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , <b>2009</b> , 6, S804-S806		12
84	Metastable centers in AlGaIn/AlN/GaN heterostructures. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , <b>2012</b> , 30, 041209	1.3	12
83	Spontaneous polarization in III-nitride materials: crystallographic revision. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , <b>2010</b> , 7, 1841-1843		12
82	Effect of ITO spreading layer on performance of blue light-emitting diodes. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , <b>2010</b> , 7, 2127-2129		12
81	Nucleation and growth kinetics of GaAs during molecular beam epitaxy. <i>Surface Science</i> , <b>1994</b> , 314, 79-88	8.8	12
80	Gallium droplet formation during MOVPE and thermal annealing of GaN. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , <b>2001</b> , 82, 22-24	3.1	11
79	Modeling of gas phase nucleation during silicon carbide chemical vapor deposition. <i>Diamond and Related Materials</i> , <b>2000</b> , 9, 472-475	3.5	11
78	Multi-color monolithic III-nitride light-emitting diodes: Factors controlling emission spectra and efficiency. <i>Physica Status Solidi (A) Applications and Materials Science</i> , <b>2016</b> , 213, 19-29	1.6	10
77	Properties of undoped GaN/InGaIn multi-quantum-wells and GaN/InGaIn p-n junctions prepared by epitaxial lateral overgrowth. <i>Journal of Applied Physics</i> , <b>2009</b> , 105, 123708	2.5	10
76	Visible Light-Emitting Diodes	303-325	10
75	Role of oxygen in AlN sublimation growth. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , <b>2003</b> , 1989-1992		10
74	Modeling of facet formation in SiC bulk crystal growth. <i>Journal of Crystal Growth</i> , <b>2004</b> , 266, 313-319	1.6	9
73	Simulation of hybrid ZnO/AlGaIn single-heterostructure light-emitting diode. <i>Applied Physics Letters</i> , <b>2005</b> , 87, 243502	3.4	9
72	Indium Incorporation and Droplet Formation during InGaIn Molecular Beam Epitaxy. <i>Physica Status Solidi A</i> , <b>1999</b> , 176, 297-300		9
71	Modeling Study of Hydride Vapor Phase Epitaxy of GaN. <i>Physica Status Solidi A</i> , <b>1999</b> , 176, 439-442		9
70	Superior color rendering with a phosphor-converted blue-cyan monolithic light-emitting diode. <i>Laser and Photonics Reviews</i> , <b>2016</b> , 10, 1031-1038	8.3	8

69	Analysis of gallium nitride growth by gas-source molecular beam epitaxy. <i>Journal of Crystal Growth</i> , <b>1998</b> , 187, 397-401	1.6	8
68	Influence of electromechanical coupling on optical properties of InGaN quantum-dot based light-emitting diodes. <i>Nanotechnology</i> , <b>2017</b> , 28, 015701	3.4	7
67	Solar-blind Al <sub>x</sub> Ga <sub>1-x</sub> N (x > 0.45) p-i-n photodiodes with a polarization-p-doped emitter. <i>Technical Physics Letters</i> , <b>2016</b> , 42, 635-638	0.7	7
66	Temperature effects on optical properties and efficiency of red AlGaInP-based light emitting diodes under high current pulse pumping. <i>Journal of Applied Physics</i> , <b>2018</b> , 124, 013103	2.5	7
65	Spectral dependence of light extraction efficiency of high-power III-nitride light-emitting diodes. <i>Physica Status Solidi - Rapid Research Letters</i> , <b>2015</b> , 9, 312-316	2.5	7
64	Polarization phenomena in light emission from C-plane Al(In)GaN heterostructures. <i>Physica Status Solidi (B): Basic Research</i> , <b>2013</b> , 250, 180-186	1.3	7
63	A surface trap model and its application to analysis of III-nitride HEMT performance. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , <b>2006</b> , 3, 2356-2359		7
62	Quasi-thermodynamic model of SiGe epitaxial growth. <i>Journal of Crystal Growth</i> , <b>2001</b> , 225, 268-273	1.6	7
61	Monolithically-integrated hybrid heterostructure diode laser with dielectric-film waveguide DBR. <i>IEEE Journal of Quantum Electronics</i> , <b>1987</b> , 23, 869-881	2	7
60	Radiative and Auger Recombination Constants and Internal Quantum Efficiency of (0001) AlGaIn Deep-UV Light-Emitting Diode Structures. <i>Physica Status Solidi (A) Applications and Materials Science</i> , <b>2020</b> , 217, 1900878	1.6	7
59	GaN buffer growth temperature and efficiency of InGaIn/GaN quantum wells: The critical role of nitrogen vacancies at the GaN surface. <i>Applied Physics Letters</i> , <b>2021</b> , 118, 111102	3.4	7
58	Impact of metalorganic vapor phase epitaxy growth conditions on compressive strain relaxation in polar III-nitride heterostructures. <i>Japanese Journal of Applied Physics</i> , <b>2019</b> , 58, SC1017	1.4	6
57	Indium Segregation in MOVPE Grown InGaIn-Based Heterostructures. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , <b>2003</b> , 311-314		6
56	Surface Segregation and Composition Fluctuations in ammonia MBE and MOVPE of InGaIn. <i>Materials Research Society Symposia Proceedings</i> , <b>2000</b> , 639, 3181		6
55	Carrier transport and emission efficiency in InGaIn quantum-dot based light-emitting diodes. <i>Nanotechnology</i> , <b>2017</b> , 28, 275201	3.4	5
54	AlGaInP red-emitting light emitting diode under extremely high pulsed pumping <b>2016</b> ,		5
53	ABC-model for interpretation of internal quantum efficiency and its droop in III-nitride LEDs <b>2014</b> ,		5
52	Effects of electron and optical confinement on performance of UV laser diodes. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , <b>2009</b> , 6, 603-606		5

51	The use of magnesium to dope gallium nitride obtained by molecular-beam epitaxy from activated nitrogen. <i>Semiconductors</i> , <b>2003</b> , 37, 838-842	0.7	5
50	A Quantitative Model of Surface Segregation in III-V Ternary Compounds. <i>Materials Research Society Symposia Proceedings</i> , <b>2000</b> , 618, 185		5
49	Conditions of excess liquid phase formation during molecular beam epitaxy of III-V ternary compounds. <i>Journal of Crystal Growth</i> , <b>1996</b> , 162, 15-24	1.6	5
48	Thermal etching of binary and ternary III-V compounds under vacuum conditions. <i>Journal of Crystal Growth</i> , <b>1996</b> , 166, 167-171	1.6	5
47	Time of carrier escape and recombination coefficients in InGaN quantum-well active regions of blue, cyan, and green light-emitting diodes. <i>Semiconductor Science and Technology</i> , <b>2019</b> , 34, 015007	1.8	5
46	Barrier height modification and mechanism of carrier transport in Ni/in situ grown Si <sub>3</sub> N <sub>4</sub> /n-GaN Schottky contacts. <i>Semiconductor Science and Technology</i> , <b>2018</b> , 33, 025009	1.8	4
45	Correlations between Epitaxy Recipe, Characteristics, and Performance of Nitride Light Emitting Diode Structures. <i>Japanese Journal of Applied Physics</i> , <b>2013</b> , 52, 08JB15	1.4	4
44	Mechanism of carrier injection in (Ni/Au)/p-Al <sub>x</sub> Ga <sub>1-x</sub> N:Mg(0). <i>Applied Physics Letters</i> , <b>2009</b> , 95, 163502	3.4	4
43	Sublimation Sandwich Growth of Free Standing GaN Crystals. <i>Materials Research Society Symposia Proceedings</i> , <b>1997</b> , 482, 127		4
42	Current spreading, heat transfer, and light extraction in multi-pixel LED array. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , <b>2008</b> , 5, 2070-2072		4
41	A degradation rate study of MBE-grown high-power AlGaAs laser diodes. <i>Semiconductor Science and Technology</i> , <b>1994</b> , 9, 345-348	1.8	4
40	BANDGAP ENGINEERING OF III-NITRIDE DEVICES ON LOW-DEFECT SUBSTRATES <b>2008</b> , 367-397		4
39	Gallium Nitride Doping with Carbon: A Thermodynamic Analysis. <i>Physica Status Solidi (B): Basic Research</i> , <b>2021</b> , 258, 2100066	1.3	4
38	Dependence of leakage current in Ni/Si <sub>3</sub> N <sub>4</sub> /n-GaN Schottky diodes on deposition conditions of silicon nitride. <i>Semiconductor Science and Technology</i> , <b>2018</b> , 33, 115008	1.8	4
37	Study of Al Incorporation in Chemical Vapor Deposition of p-Doped SiC. <i>Materials Science Forum</i> , <b>2015</b> , 821-823, 145-148	0.4	3
36	effect of the parameters of AlN/GaN/AlGaIn and AlN/GaN/InAlN heterostructures with a two-dimensional electron gas on their electrical properties and the characteristics of transistors on their basis. <i>Semiconductors</i> , <b>2016</b> , 50, 1383-1389	0.7	3
35	Kinetic model of GaAs(100) growth from molecular beams. <i>Technical Physics Letters</i> , <b>1997</b> , 23, 38-40	0.7	3
34	Optical confinement in laser diodes based on nitrides of Group III elements. Part 1: Theory and optical properties of materials. <i>Semiconductors</i> , <b>2008</b> , 42, 845-851	0.7	3



33	Optical confinement in laser diodes based on nitrides of Group III elements. Part 2: Analysis of heterostructures on various substrates. <i>Semiconductors</i> , <b>2008</b> , 42, 852-857	0.7	3
32	ZnO-Based Light Emitters <b>2006</b> , 525-554		3
31	Modeling Analysis of Free-Spreading Sublimation Growth of SiC Crystals. <i>Materials Research Society Symposia Proceedings</i> , <b>2002</b> , 742, 131		3
30	Transport and Chemical Mechanisms in GaN Hydride Vapor Phase Epitaxy. <i>Materials Research Society Symposia Proceedings</i> , <b>2002</b> , 743, L3.40.1		3
29	Modeling of PVT Growth of Bulk SiC Crystals: General Trends and 2D to 4D Reactor Scaling. <i>Materials Research Society Symposia Proceedings</i> , <b>2000</b> , 616, 227		3
28	Growth Kinetics of GaN in Ammonia Atmosphere. <i>Physica Status Solidi A</i> , <b>1999</b> , 176, 333-336		3
27	Time-resolved reflection high energy electron diffraction study of dynamical surface processes during molecular beam epitaxy of GaAs and AlAs. <i>Journal of Crystal Growth</i> , <b>1995</b> , 146, 344-348	1.6	3
26	Mechanisms of optical confinement in phase-locked laser arrays. <i>Semiconductor Science and Technology</i> , <b>1996</b> , 11, 372-379	1.8	3
25	Critical aspects of AlGaInP-based LED design and operation revealed by full electrical-thermal-optical simulations. <i>Optics Express</i> , <b>2021</b> , 29, 35792-35805	3.3	3
24	Assessment of factors limiting conversion efficiency of single-junction III-nitride solar cells. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , <b>2014</b> , 11, 640-643		2
23	Theoretical and experimental study of thermal management in high-power AlInGaN LEDs <b>2014</b> ,		2
22	Effect of the design of the active region of monolithic multi-color LED heterostructures on their spectra and emission efficiency. <i>Semiconductors</i> , <b>2015</b> , 49, 1516-1521	0.7	2
21	Short period p-type AlN/AlGaIn superlattices for deep UV light emitters.. <i>Materials Research Society Symposia Proceedings</i> , <b>2009</b> , 1202, 251		2
20	Assessment of the pendeo-epitaxy effect on 2DEG mobility in III-nitride HEMT heterostructures. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , <b>2008</b> , 5, 1980-1982		2
19	Energy of mixing of $Al_xIn_yGa_{1-x-y}N$ compounds. <i>Technical Physics Letters</i> , <b>2008</b> , 34, 370-372	0.7	2
18	Advanced model for the simulation of BST-film growth with MOCVD. <i>Synthetic Metals</i> , <b>2003</b> , 138, 145-1516		2
17	Heterojunctions between group-III nitride short-period superlattices. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , <b>2005</b> , 2, 2394-2398		2
16	Comparison of silicon epitaxial growth on the 200- and 300-mm wafers from trichlorosilane in Centura reactors. <i>Microelectronic Engineering</i> , <b>2001</b> , 56, 93-98	2.5	2

15	Use of molecular beam epitaxy for high-power AlGaAs laser production. <i>Journal of Crystal Growth</i> , <b>1995</b> , 150, 1350-1353	1.6	2
14	Dyakonov Surface Electromagnetic Waves in III-Nitride Heterostructures. <i>Physica Status Solidi (B): Basic Research</i> , <b>2019</b> , 256, 1800609	1.3	2
13	Novel evaluation procedure for internal and extraction efficiency of high-power blue LEDs <b>2014</b> ,		1
12	Laterally overgrown GaN/InGaN multi-quantum well heterostructures: Electrical and optical properties. <i>Physica Status Solidi (A) Applications and Materials Science</i> , <b>2010</b> , 207, 1383-1385	1.6	1
11	Coupled Modeling of Current Spreading, Thermal Effects, and Light Extraction in III-Nitride Light-Emitting Diodes <b>2007</b> ,		1
10	Field-effect transistors based on AlGaIn/GaN/AlGaIn double-heterostructures grown by MBE. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , <b>2005</b> , 2, 2688-2691		1
9	Experimental and Theoretical Analysis of Heat and Mass Transport in the System for AlN Bulk Crystal Growth. <i>Materials Research Society Symposia Proceedings</i> , <b>2002</b> , 743, L3.33.1		1
8	Advanced model of metal-organic chemical vapor Deposition of Ba <sub>x</sub> Sr <sub>1-x</sub> TiO <sub>3</sub> oxides. <i>Integrated Ferroelectrics</i> , <b>2000</b> , 30, 271-280	0.8	1
7	Mechanism of Carrier Transport in Hybrid GaN/AlN/Si Solar Cells. <i>Journal of Electronic Materials</i> , <b>2017</b> , 46, 6078-6083	1.9	
6	Influence of multilevel crystallization on the intensity oscillations of diffracted highenergy electrons during growth of aluminum arsenide by molecular beam epitaxy. <i>Technical Physics Letters</i> , <b>1997</b> , 23, 307-308	0.7	
5	Segregation effects and bandgap engineering in InGaN quantum-well heterostructures. <i>Materials Research Society Symposia Proceedings</i> , <b>2002</b> , 743, L6.5.1		
4	Comprehensive Reactor-Scale Modeling of III-V Ternary Compound Growth by MOVPE. <i>Materials Research Society Symposia Proceedings</i> , <b>2000</b> , 616, 153		
3	Computational Experiment on CVD of SiC: Growth Rate, C/Si Ratio, Parasitic Phase Formation. <i>Materials Research Society Symposia Proceedings</i> , <b>2000</b> , 616, 165		
2	Inverse-Computation Design of a SiC Bulk Crystal Growth System. <i>Materials Research Society Symposia Proceedings</i> , <b>2000</b> , 640, 1		
1	A Universal Model for DX-Center Binding Energy in Cubic III-V Compounds. <i>Physica Status Solidi (B): Basic Research</i> , <b>2021</b> , 258, 2000596	1.3	