Nikolay A Kalyuzhnyy

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/1649926/publications.pdf

Version: 2024-02-01

149	887	643344	721071
papers	citations	15 h-index	23 g-index

150	150	150	506
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Dynamic characteristics and noise modelling of directly modulated quantum well-dots microdisk lasers on silicon. Laser Physics Letters, 2022, 19, 025801.	0.6	0
2	Improvement of thermal resistance in InGaAs/GaAs/AlGaAs microdisk lasers bonded onto silicon. Semiconductor Science and Technology, 2022, 37, 075010.	1.0	3
3	Using electroluminescence of subcells for obtaining fundamental resistive-less dark IV characteristic of multi-junction solar cells. Solar Energy Materials and Solar Cells, 2022, 245, 111863.	3.0	0
4	Saturated layer gain in waveguides with InGaAs quantum well-dot heterostructures. Journal of Lightwave Technology, 2021, , 1-1.	2.7	1
5	Piezo-electric fields and state-filling photo-luminescence in natural InP/GaInP2 Wigner molecule structures. Applied Physics Letters, 2021, 118, .	1.5	5
6	Effect of the Active Region and Waveguide Design on the Performance of Edge-Emitting Lasers Based on InGaAs/GaAs Quantum Well-Dots. Semiconductors, 2021, 55, 333-340.	0.2	4
7	Temperature dependencies of the refractive index for Al-Ga-In-As metamorphic layers. Optics Letters, 2021, 46, 4928.	1.7	0
8	Material gain of InGaAs/GaAs quantum well-dots. Semiconductor Science and Technology, 2021, 36, 015008.	1.0	14
9	Influence of QD array positioning in GaAs solar cell p-n junction on their photoelectric characteristics. Journal of Physics: Conference Series, 2021, 2103, 012192.	0.3	0
10	Electronic states in GaAs photoconverters with InGaAs quantum well-dots. Applied Physics Express, 2020, 13, 015009.	1.1	3
11	Study of GaP Nucleation Layers Grown on Si by Plasmaâ€Enhanced Atomic Layer Deposition. Physica Status Solidi (A) Applications and Materials Science, 2020, 217, 1900532.	0.8	1
12	Impact of Self-Heating and Elevated Temperature on Performance of Quantum Dot Microdisk Lasers. IEEE Journal of Quantum Electronics, 2020, 56, 1-8.	1.0	14
13	Optimization of photoelectric parameters of InGaAs metamorphic laser (Î»=1064Ânm) power converters with over 50% efficiency. Solar Energy Materials and Solar Cells, 2020, 217, 110710.	3.0	30
14	Temperature Tweaking of the Output Photovoltaic Parameters of Laser Power Converters. IEEE Electron Device Letters, 2020, 41, 1324-1327.	2.2	10
15	Comparative Analysis of the Optical and Physical Properties of InAs and In0.8Ga0.2As Quantum Dots and Solar Cells Based on them. Semiconductors, 2020, 54, 1267-1275.	0.2	2
16	A Micro Optocoupler Based on a Microdisk Laser and a Photodetector with an Active Region Based on Quantum Well-Dots. Technical Physics Letters, 2020, 46, 629-632.	0.2	2
17	Laser Power Converter Modules with a Wavelength of 809â€“850 nm. Technical Physics, 2020, 65, 1690-1694.	0.2	0
18	Effects of Doping of Bragg Reflector Layers on the Electrical Characteristics of InGaAs/GaAs Metamorphic Photovoltaic Converters. Semiconductors, 2020, 54, 476-483.	0.2	2

#	Article	IF	Citations
19	Improving the voltage of GaAs solar cells with In0.4Ga0.6As nanostructures. Applied Physics Express, 2020, 13, 075002.	1.1	1
20	Estimation of the potential for increasing the efficiency of GaInP/GaAs/Ge multi-junction solar cells by using quantum-size objects. Applied Physics Express, 2020, 13, 065004.	1.1	0
21	Light Emitting Devices Based on Quantum Well-Dots. Applied Sciences (Switzerland), 2020, 10, 1038.	1.3	37
22	Ultimate Lasing Temperature of Microdisk Lasers. Semiconductors, 2020, 54, 677-681.	0.2	2
23	InGaAs metamorphic laser power converters with distributed Bragg reflector for wavelength range Î»=1 â€“ 1.1â€…Âµm. AIP Conference Proceedings, 2020, , .	0.3	4
24	Comparative analysis of the optical and physical properties of InAs and In_{0.8}Ga_{0.2}As quantum dots. Journal of Physics: Conference Series, 2020, 1697, 012107.	0.3	1
25	Small-signal modulation and 10 Gb/s data transmission by microdisk lasers based on InGaAs/GaAs quantum well-dots. , 2020, , .		0
26	Photovoltaic converters with quantum objects under laser flux of subband photons. Journal of Physics: Conference Series, 2020, 1697, 012189.	0.3	0
27	The study of voltage loss reasons in GaAs solar cells with embedded InGaAs quantum dots. Journal of Physics: Conference Series, 2020, 1695, 012078.	0.3	0
28	The GaAs laser photoconverter (Î» 809 nm) current flow mechanisms at the temperature range of 100-420 K. Journal of Physics: Conference Series, 2020, 1697, 012170.	0.3	1
29	Analysis of the lasing characteristics of InGaAs/GaAs WGM microlasers. Journal of Physics: Conference Series, 2020, 1695, 012096.	0.3	0
30	Gain spectra of lasers based on transitional dimension active region. Journal of Physics: Conference Series, 2020, 1697, 012177.	0.3	1
31	Tuning of laser power converters efficiency by means of temperature. Journal of Physics: Conference Series, 2020, 1697, 012191.	0.3	1
32	Isotype barriers in the connecting part of multi-junction solar cells. Journal of Physics: Conference Series, 2020, 1695, 012091.	0.3	0
33	The dependence of recombination in GaAs solar cells on the number of included GaInAs quantum objects. Journal of Physics: Conference Series, 2020, 1695, 012092.	0.3	0
34	Selective epitaxy of InP/GaInP quantum dots using SiO2 mask. AIP Conference Proceedings, 2020, , .	0.3	0
35	Correlation between the open circuit voltage and the electroluminescence spectrum of solar cells with quantum objects. AIP Conference Proceedings, 2020, , .	0.3	0
36	Optoelectronic devices with active region based on InGaAs/GaAs quantum well dots. , 2020, , .		1

#	Article	IF	Citations
37	Optical gain and high-power operation of edge-emitting lasers based on quantum well-dots. , 2020, , .		0
38	Module of Laser-Radiation (Î» = 1064 nm) Photovoltaic Converters. Semiconductors, 2019, 53, 1110-1113.	0.2	5
39	Lasers Based on Quantum Well-Dots Emitting in the 980- and 1080-nm Optical Ranges. Technical Physics Letters, 2019, 45, 163-166.	0.2	2
40	Evaluation of the Impact of Surface Recombination in Microdisk Lasers by Means of High-Frequency Modulation. Semiconductors, 2019, 53, 1099-1103.	0.2	2
41	Minority charge carrier lifetime estimation for multijunction structures of PV converters. AIP Conference Proceedings, 2019, , .	0.3	0
42	Thermal and resistive losses in InGaAs metamorphic laser (Î» = 1064â€…nm) power converters with over 50% efficiency. , 2019, , .		8
43	Time-Resolved Photoluminescence of InGaAs Nanostructures Different in Quantum Dimensionality. Semiconductors, 2019, 53, 1489-1495.	0.2	4
44	Characteristics of Injection Microdisk Lasers with InGaAs/GaAs Quantum Well-Dots. , 2019, , .		0
45	GaAs subcell of triple-junction solar cells with hybrid quantum objects: Temperature photovoltaic characteristics. AIP Conference Proceedings, 2019, , .	0.3	0
46	Evaluation of energy-to-data ratio of quantum-dot microdisk lasers under direct modulation. Journal of Applied Physics, 2019, 126, 063107.	1.1	11
47	Collapsing-field-domain-based 200 GHz solid-state source. Applied Physics Letters, 2019, 115, .	1.5	12
48	Characterization of ultra high power laser beam PV converters. AIP Conference Proceedings, 2019, , .	0.3	6
49	Light budget in MJ SC at temperature tuning. AIP Conference Proceedings, 2019, , .	0.3	0
50	Dethermalization of carriers in GaAs solar cells with quantum objects. Applied Physics Express, 2019, 12, 035005.	1.1	7
51	Transverse mode competition in narrow-ridge diode lasers. Laser Physics, 2019, 29, 025003.	0.6	4
52	Anomalies in Photovoltaic Characteristics of Multijunction Solar Cells at Ultrahigh Solar Light Concentrations. Technical Physics Letters, 2019, 45, 1100-1102.	0.2	3
53	The effect of post-growth interruption on the formation of InGaAs/GaAs quantum dots obtained by MOVPE. Journal of Physics: Conference Series, 2019, 1400, 055015.	0.3	1
54	High-power 0.98 Âµm range diode lasers based on InGaAs/GaAs quantum well-dot active region. Journal of Physics: Conference Series, 2019, 1400, 066045.	0.3	2

#	Article	IF	Citations
55	Performance of InGaAs metamorphic laser power converters at different conditions. Journal of Physics: Conference Series, 2019, 1410, 012094.	0.3	1
56	Spectral analysis of the electroluminescence and photoresponse of heterostructures with InGaAs quantum objects. Journal of Physics: Conference Series, 2019, 1410, 012099.	0.3	1
57	Experimental study of power-limiting factors of 1.1 Î¼m range edge-emitting lasers based on InGaAs/GaAs quantum well-dot nanostructures. Journal of Physics: Conference Series, 2019, 1410, 012100.	0.3	0
58	Transverse mode switching in quantum well-dot lasers triggered by gain saturation. Journal of Physics: Conference Series, 2019, 1410, 012118.	0.3	0
59	Counteracting the Photovoltaic Effect in the Top Intergenerator Part of GaInP/GaAs/Ge Solar Cells. Semiconductors, 2019, 53, 1535-1539.	0.2	2
60	On modelling optical parameters of InAs quantum dots for cascade GaInP / GaAs / Ge solar cells. Journal of Physics: Conference Series, 2019, 1400, 066058.	0.3	0
61	Capacitive Characteristics of High-Speed Photovoltaic Converters at Combined Lighting. Semiconductors, 2019, 53, 1959-1963.	0.2	1
62	Filling of In(Ga)P/GaInP quantum dot electron states detected by microphotoluminescence. Journal of Physics: Conference Series, 2019, 1400, 077013.	0.3	1
63	Investigation of optical properties of In(Ga)As/GaAs mesa structures with active region based on quantum wells, quantum dots, and quantum well-dots. Journal of Physics: Conference Series, 2019, 1410, 012157.	0.3	2
64	Direct modulation characteristics of microdisk lasers with InGaAs/GaAs quantum well-dots. Photonics Research, 2019, 7, 664.	3.4	20
65	Bimodality in Arrays of In0.4Ga0.6As Hybrid Quantum-Confined Heterostructures Grown on GaAs Substrates. Semiconductors, 2018, 52, 53-58.	0.2	6
66	Heterointerfaces in the bottom tunnel part of GaInP/GaAs/Ge solar cells. Journal of Physics: Conference Series, 2018, 1124, 041028.	0.3	0
67	Optical and electrical properties of superlattice and photonic metamorphic structures for high-performance solar cells. AIP Conference Proceedings, 2018, , .	0.3	2
68	Series spreading resistance in single- and multi-junction concentrator solar cells. Journal of Physics: Conference Series, 2018, 1038, 012105.	0.3	1
69	Heating of photovoltaic converter by laser beam: overheating temperature. Journal of Physics: Conference Series, 2018, 1135, 012070.	0.3	4
70	Investigation of multimodality effect in quantum dots InGaAs/GaAs grown by MOVPE. Journal of Physics: Conference Series, 2018, 1038, 012082.	0.3	2
71	Effect of carrier localization on performance of coupled large optical cavity diode lasers. Journal of Physics: Conference Series, 2018, 1124, 041005.	0.3	3
72	Edge-emitting lasers based on transitionally dimensional InGaAs/GaAs active region. Journal of Physics: Conference Series, 2018, 1135, 012071.	0.3	6

#	Article	IF	Citations
73	Investigation of InAs/InGaP nano-heterostructures grown by MOVPE for intermediate band solar cells. Journal of Physics: Conference Series, 2018, 1124, 022030.	0.3	0
74	Optical properties of In0.8Ga0.2As quantum dots in GaAs photovoltaic convertors. Journal of Physics: Conference Series, 2018, 1124, 041003.	0.3	0
75	A novel approach to characterization of bottom sub-cell in multijunction solar cell using photoluminescence.. Journal of Physics: Conference Series, 2018, 1124, 041039.	0.3	0
76	Reducing of thermal resistance of edge-emitting lasers based on coupled waveguides. Journal of Physics: Conference Series, 2018, 1124, 041016.	0.3	1
77	Electro-optical properties of InAs and In_{0.8}Ga_{0.2}As quantum dots in GaAs solar cells. Journal of Physics: Conference Series, 2018, 1135, 012078.	0.3	1
78	InAs quantum dots for cascade GaInP / GaAs / Ge solar cells. Journal of Physics: Conference Series, 2018, 1135, 012077.	0.3	0
79	Diode Lasers with Near-Surface Active Region. Semiconductors, 2018, 52, 1901-1904.	0.2	1
80	Optical Properties of InGaAs/InAlAs Metamorphic Nanoheterostructures for Photovoltaic Converters of Laser and Solar Radiation. Technical Physics Letters, 2018, 44, 877-880.	0.2	2
81	The investigation of InGaAs quantum dot growth peculiarities for GaAs intermediate band solar cells. Journal of Physics: Conference Series, 2018, 1038, 012110.	0.3	3
82	Photoconverter heating by incident radiation: Overheat temperature and IV-curve correction. AIP Conference Proceedings, 2018, , .	0.3	4
83	InGaAs/GaAs receiver for infrared (Î»=1064â€…nm) laser power conversion. AIP Conference Proceedings, 2018, , .	0.3	2
84	Current localization in heterostructures of multijunction solar cells: Causes for arising and diagnostics potential. AIP Conference Proceedings, 2018, , .	0.3	1
85	InGaAs metamorphic laser (Î»=1064â€…nm) power converters with over 44% efficiency. , 2018, , .		14
86	Reduction of Internal Loss and Thermal Resistance in Diode Lasers with Coupled Waveguides. Semiconductors, 2018, 52, 1462-1467.	0.2	5
87	Highly efficient injection microdisk lasers based on quantum well-dots. Optics Letters, 2018, 43, 4554.	1.7	46
88	Edge-emitting and microdisk lasers based on hybrid quantum-well-dot structures. , 2018, , .		1
89	Recombination in GaAs pâ€“iâ€“n Structures with InGaAs Quantum-Confined Objects: Modeling and Regularities. Semiconductors, 2018, 52, 1244-1248.	0.2	6
90	Multilayer Quantum Wellâ€“Dot InGaAs Heterostructures in GaAs-based Photovoltaic Converters. Semiconductors, 2018, 52, 1249-1254.	0.2	2

#	Article	IF	Citations
91	Control of Wigner localization and electron cavity effects in near-field emission spectra of In(Ga)P/GaInP quantum-dot structures. Physical Review B, 2018, 97, .	1.1	17
92	Interferometrically enhanced sub-terahertz picosecond imaging utilizing a miniature collapsing-field-domain source. Applied Physics Letters, 2018, 112, .	1.5	9
93	Gradual Evolution From Quantumâ€Wellâ€Like to Quantumâ€Dotâ€Like Characteristics in InGaAs/GaAs Nanostructures. Physica Status Solidi (B): Basic Research, 2018, 255, 1800123.	0.7	8
94	Density Control of InP/GaInP Quantum Dots Grown by Metal-Organic Vapor-Phase Epitaxy. Semiconductors, 2018, 52, 497-501.	0.2	2
95	Bragg reflectors for measuring optical parameters of layers of metamorphic InAlGaAs/GaAs heterostructures. Optics Express, 2018, 26, A832.	1.7	2
96	In0.8Ga0.2As Quantum Dots for GaAs Solar Cells: Metal-Organic Vapor-Phase Epitaxy Growth Peculiarities and Properties. Semiconductors, 2018, 52, 870-876.	0.2	2
97	InGaAs metamorphic laser (1064Ânm) power converters with over 40% efficiency. Electronics Letters, 2017, 53, 173-175.	0.5	18
98	Optimization of structural and growth parameters of metamorphic InGaAs photovoltaic converters grown by MOCVD. Semiconductors, 2017, 51, 93-99.	0.2	15
99	Light-emitting and photovoltaic devices based on quantum well-dots hybrid nanostructures. , 2017, , .		2
100	InGaAs quantum well-dots based GaAs subcell with enhanced photocurrent for multijunction GaInP/GaAs/Ge solar cells. Semiconductor Science and Technology, 2017, 32, 015006.	1.0	12
101	InAs quantum dots grown by MOCVD in GaAs and metamorphic InGaAs matrixes. Journal of Physics: Conference Series, 2017, 816, 012024.	0.3	2
102	InAs QDs in a metamorphic In0.25Ga0.75As matrix, grown by MOCVD. Semiconductors, 2017, 51, 672-678.	0.2	0
103	Optical properties of hybrid quantum-wellâ€“dots nanostructures grown by MOCVD. Semiconductors, 2017, 51, 357-362.	0.2	2
104	InGaAs/GaAs hybrid quantum well-dot nanostructures: Impact of substrate orientation and recombination mechanisms. Journal of Physics: Conference Series, 2017, 917, 032001.	0.3	3
105	Manifestation of counteracting photovoltaic effect on IV characteristics in multi-junction solar cells. Journal of Physics: Conference Series, 2017, 917, 052034.	0.3	0
106	Investigation of lasers based on coupled waveguides by near-field scanning optical microscopy. Journal of Physics: Conference Series, 2017, 929, 012070.	0.3	0
107	Increasing the quantum efficiency of InAs/GaAs QD arrays for solar cells grown by MOVPE without using strainâ€balance technology. Progress in Photovoltaics: Research and Applications, 2016, 24, 1261-1271.	4.4	36
108	Increasing the quantum efficiency of GaAs solar cells by embedding InAs quantum dots. Journal of Physics: Conference Series, 2016, 769, 012036.	0.3	0

#	Article	IF	Citations
109	Gaâ€“In intermixing, intrinsic doping, and Wigner localization in the emission spectra of self-organized InP/GaInP quantum dots. Journal Physics D: Applied Physics, 2016, 49, 475301.	1.3	17
110	Counter-photo-electromotive force at heterointerfaces in MJ SC: Study by spectral method. AIP Conference Proceedings, 2016, , .	0.3	6
111	Metamorphic InGaAs photo-converters on GaAs substrates. Journal of Physics: Conference Series, 2016, 690, 012032.	0.3	2
112	On current spreading in solar cells: a two-parameter tube model. Semiconductors, 2016, 50, 970-975.	0.2	4
113	Comparison of wet chemical treatment and Ar-ion sputtering for GaInP2(100) surface preparation. Materials Science in Semiconductor Processing, 2016, 51, 81-88.	1.9	8
114	Optical properties of hybrid quantum-confined structures with high absorbance. Semiconductors, 2016, 50, 1180-1185.	0.2	2
115	Novel approach for transverse mode engineering in edge-emitting semiconductor lasers. , 2016, , .		0
116	Photovoltaic laser-power converter based on AlGaAs/GaAs heterostructures. Semiconductors, 2016, 50, 1220-1224.	0.2	40
117	Temperature characteristics of tilted wave lasers. Optical Engineering, 2016, 55, 116102.	0.5	0
118	Current flow mechanism in GaAs solar cells with GaInAs quantum dots. AIP Conference Proceedings, 2016, , .	0.3	12
119	Optimization of structural and growth parameters of metamorphic InGaAs/GaAs photoconverters grown by MOCVD. Journal of Physics: Conference Series, 2016, 741, 012086.	0.3	6
120	Heterostructures of metamorphic GaInAs photovoltaic converters fabricated by MOCVD on GaAs substrates. Semiconductors, 2016, 50, 517-522.	0.2	10
121	The Segmental Approximation in Multijunction Solar Cells. IEEE Journal of Photovoltaics, 2015, 5, 1229-1236.	1.5	22
122	Effect of the interaction conditions of the probe of an atomic-force microscope with the n-GaAs surface on the triboelectrization phenomenon. Semiconductors, 2015, 49, 1057-1061.	0.2	2
123	Hybrid InGaAs quantum wellâ€“dots nanostructures for light-emitting and photo-voltaic applications. Nanotechnology, 2015, 26, 385202.	1.3	39
124	Mode engineering in lasers based on coupled large optical cavities. , 2015, , .		0
125	Effect of the bimodality of a QD array on the optical properties and threshold characteristics of QD lasers. Semiconductors, 2015, 49, 1090-1094.	0.2	11
126	Single-Mode Emission From 4â€“9-Î¼m Microdisk Lasers With Dense Array of InGaAs Quantum Dots. Journal of Lightwave Technology, 2015, 33, 171-175.	2.7	8

#	Article	IF	Citations
127	Estimation of the potential efficiency of a multijunction solar cell at a limit balance of photogenerated currents. Semiconductors, 2015, 49, 668-673.	0.2	13
128	Transverse single-mode edge-emitting lasers based on coupled waveguides. Optics Letters, 2015, 40, 2150.	1.7	40
129	Determination of the technological growth parameters in the InAs-GaAs system for the MOCVD synthesis of â€œMultimodalâ€•InAs QDs. Semiconductors, 2015, 49, 1111-1118.	0.2	10
130	Site-Controlled Growth of Single InP QDs. Semiconductors, 2015, 49, 1095-1098.	0.2	0
131	Characterization of the Manufacturing Processes to Grow Triple-Junction Solar Cells. International Journal of Photoenergy, 2014, 2014, 1-10.	1.4	13
132	AlGaAs/GaAs photovoltaic converters for high power narrowband radiation. AIP Conference Proceedings, 2014, , .	0.3	20
133	High intensity low temperature (HILT) performance of space concentrator GaInP/GaInAs/Ge MJ SCs. , 2014, , .		5
134	Subtractive method for obtaining the dark current-voltage characteristic and its types for the residual (nongenerating) part of a multi-junction solar cell. Semiconductors, 2014, 48, 653-658.	0.2	2
135	Picosecond internal Q-switching mode correlates with laser diode breakdown voltage. Semiconductors, 2013, 47, 406-408.	0.2	0
136	Local triboelectrification of an n-GaAs surface using the tip of an atomic-force microscope. Semiconductors, 2013, 47, 1170-1173.	0.2	6
137	Multijunction solar cell with intermediate IR reflector. AIP Conference Proceedings, 2012, , .	0.3	4
138	Interface properties of GaInP/Ge hetero-structure sub-cells of multi-junction solar cells. Journal Physics D: Applied Physics, 2012, 45, 495305.	1.3	15
139	Influence of ex-situ AFM treatment on epitaxial growth of self-organized InAs quantum dots. Proceedings of SPIE, 2010, , .	0.8	0
140	Study of minority carrier diffusion lengths in photoactive layers of multijunction solar cells. Semiconductors, 2010, 44, 1084-1089.	0.2	19
141	Germanium subcells for multijunction GaInP/GaInAs/Ge solar cells. Semiconductors, 2010, 44, 1520-1528.	0.2	21
142	Edge-emitting InGaAs/GaAs laser with high temperature stability of wavelength and threshold current. Semiconductor Science and Technology, 2010, 25, 045003.	1.0	5
143	Doping profile effect on picosecond lasing of an internally Q-switched, high-power laser diode. Proceedings of SPIE, 2009, , .	0.8	3
144	Properties of interfaces in GaInP solar cells. Semiconductors, 2009, 43, 1363-1368.	0.2	11

#	Article	IF	Citations
145	III-phosphides heterojunction solar cell interface properties from admittance spectroscopy. Journal Physics D: Applied Physics, 2009, 42, 165307.	1.3	10
146	Improvement of Radiation Resistance of Multijunction GaInP/Ga(In)As/Ge Solar Cells with Application of Bragg Reflectors. Advances in Science and Technology, 0, , .	0.2	4
147	AlGaAs/GaAs Photovoltaic Cells with InGaAs Quantum Dots. Advances in Science and Technology, 0, , .	0.2	15
148	Frequency response and carrier escape time of InGaAs quantum well-dots photodiode. Optics Express, 0, , .	1.7	3
149	Increasing the Optical Power of InGaAs/GaAs Microdisk Lasers Transferred to a Silicon Substrate by Thermal Compression. Technical Physics Letters, 0, , .	0.2	0