

Alexander Gudovskikh

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papers

841
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16
h-index

23
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140
ext. papers

954
ext. citations

1.6
avg, IF

3.91
L-index

#	Paper	IF	Citations
128	Laser fabrication of crystalline silicon nanoresonators from an amorphous film for low-loss all-dielectric nanophotonics. <i>Nanoscale</i> , 2016 , 8, 5043-8	7.7	78
127	Determination of the conduction band offset between hydrogenated amorphous silicon and crystalline silicon from surface inversion layer conductance measurements. <i>Applied Physics Letters</i> , 2008 , 92, 162101	3.4	59
126	Determination of band offsets in a-Si:H/c-Si heterojunctions from capacitance-voltage measurements: Capabilities and limits. <i>Thin Solid Films</i> , 2007 , 515, 7481-7485	2.2	36
125	Interface properties of a-Si:H/c-Si heterojunction solar cells from admittance spectroscopy. <i>Thin Solid Films</i> , 2006 , 511-512, 385-389	2.2	36
124	Numerical modelling of GaInP solar cells with AlInP and AlGaAs windows. <i>Thin Solid Films</i> , 2008 , 516, 6739-6743	2.2	34
123	Fine-Tuning of the Magnetic Fano Resonance in Hybrid Oligomers via fs-Laser-Induced Reshaping. <i>ACS Photonics</i> , 2017 , 4, 536-543	6.3	25
122	Observation by conductive-probe atomic force microscopy of strongly inverted surface layers at the hydrogenated amorphous silicon/crystalline silicon heterojunctions. <i>Applied Physics Letters</i> , 2010 , 97, 252110	3.4	25
121	Optimisation of amorphous and polymorphous thin silicon layers for the formation of the front-side of heterojunction solar cells on p-type crystalline silicon substrates. <i>Thin Solid Films</i> , 2006 , 511-512, 543-547	2.2	23
120	High interfacial conductivity at amorphous silicon/crystalline silicon heterojunctions. <i>Journal of Non-Crystalline Solids</i> , 2008 , 354, 2641-2645	3.9	20
119	MBE growth of GaP on a Si substrate. <i>Semiconductors</i> , 2015 , 49, 559-562	0.7	18
118	Germanium subcells for multijunction GaInP/GaInAs/Ge solar cells. <i>Semiconductors</i> , 2010 , 44, 1520-1528	0.7	18
117	Polycrystalline AlN films deposited at low temperature for selective UV detectors. <i>Sensors and Actuators A: Physical</i> , 2004 , 113, 355-359	3.9	18
116	Capacitance spectroscopy of amorphous/crystalline silicon heterojunction solar cells at forward bias and under illumination. <i>Applied Physics Letters</i> , 2007 , 90, 034104	3.4	17
115	Investigation of a-Si:H/c-Si heterojunction solar cells interface properties. <i>Thin Solid Films</i> , 2004 , 451-452, 345-349	2.2	17
114	Study of GaP/Si Heterojunction Solar Cells. <i>Energy Procedia</i> , 2016 , 102, 56-63	2.3	17
113	Characterization of silicon heterojunctions for solar cells. <i>Nanoscale Research Letters</i> , 2011 , 6, 152	5	16
112	Low temperature plasma enhanced deposition of GaP films on Si substrate. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2018 , 36, 021302	2.9	14

111	Photoelectric properties of solar cells based on GaPNAs/GaP heterostructures. <i>Technical Physics Letters</i> , 2013 , 39, 1117-1120	0.7	13
110	Characterization of the Manufacturing Processes to Grow Triple-Junction Solar Cells. <i>International Journal of Photoenergy</i> , 2014 , 2014, 1-10	2.1	13
109	About the efficiency limits of heterojunction solar cells. <i>Journal of Non-Crystalline Solids</i> , 2006 , 352, 1928-1932	3.9	13
108	Electronic and structural properties of the amorphous/crystalline silicon interface. <i>Thin Solid Films</i> , 2009 , 517, 6386-6391	2.2	12
107	Si doped GaP layers grown on Si wafers by low temperature PE-ALD. <i>Journal of Renewable and Sustainable Energy</i> , 2018 , 10, 021001	2.5	11
106	Design of multijunction GaPNAs/Si heterostructure solar cells by computer simulation. <i>Semiconductors</i> , 2014 , 48, 381-386	0.7	11
105	Interface properties of GaInP/Ge hetero-structure sub-cells of multi-junction solar cells. <i>Journal Physics D: Applied Physics</i> , 2012 , 45, 495305	3	11
104	Study of the interfacial properties of amorphous silicon/n-type crystalline silicon heterojunction through static planar conductance measurements. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2010 , 7, NA-NA		11
103	Band structure at heterojunction interfaces of GaInP solar cells. <i>Solar Energy Materials and Solar Cells</i> , 2010 , 94, 1953-1958	6.4	10
102	Properties of interfaces in GaInP solar cells. <i>Semiconductors</i> , 2009 , 43, 1363-1368	0.7	9
101	Characterization of an a-Si:H/c-Si interface by admittance spectroscopy. <i>Semiconductors</i> , 2005 , 39, 904-909	0.7	9
100	Nanoscale Cu ₂ O films: Radio-frequency magnetron sputtering and structural and optical studies. <i>Semiconductors</i> , 2017 , 51, 110-114	0.7	8
99	Numerical simulation of the properties of solar cells based on GaPNAs/Si heterostructures and GaN nanowires. <i>Semiconductors</i> , 2016 , 50, 1521-1525	0.7	8
98	Low temperature growth of ITO transparent conductive oxide layers in oxygen-free environment by RF magnetron sputtering. <i>Journal of Physics: Conference Series</i> , 2013 , 461, 012021	0.3	8
97	The Study of Latex Sphere Lithography for High Aspect Ratio Dry Silicon Etching. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2020 , 217, 1900535	1.6	8
96	Multijunction a-Si:H/c-Si solar cells with vertically-aligned architecture based on silicon nanowires. <i>Materials Today: Proceedings</i> , 2017 , 4, 6797-6803	1.4	7
95	Study of the light-induced degradation of tandem a-Si:H/a-Si:H photovoltaic converters. <i>Semiconductors</i> , 2013 , 47, 679-685	0.7	7
94	III-phosphides heterojunction solar cell interface properties from admittance spectroscopy. <i>Journal Physics D: Applied Physics</i> , 2009 , 42, 165307	3	7

93	Scaling analysis of field-enhanced bandtail hopping transport in amorphous carbon nitride. <i>Physica Status Solidi (B): Basic Research</i> , 2007 , 244, 2081-2099	1.3	7
92	New approach to capacitance spectroscopy for interface characterization of a-Si:H/c-Si heterojunctions. <i>Journal of Non-Crystalline Solids</i> , 2006 , 352, 1213-1216	3.9	7
91	DC and AC Hopping transport in metal/amorphous carbon nitride/metal devices. <i>Journal of Non-Crystalline Solids</i> , 2006 , 352, 1323-1326	3.9	7
90	Low temperature epitaxial growth of GaP on Si by atomic-layer deposition with plasma activation. <i>Journal Physics D: Applied Physics</i> , 2020 , 53, 345105	3	6
89	Low temperature plasma enhanced deposition approach for fabrication of microcrystalline GaP/Si superlattice. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2018 , 36, 02D408	2.9	6
88	Frequency scaling of ac hopping transport in amorphous carbon nitride. <i>Diamond and Related Materials</i> , 2007 , 16, 1799-1805	3.5	6
87	New method for interface characterization in heterojunction solar cells based on diffusion capacitance measurements. <i>Thin Solid Films</i> , 2008 , 516, 6786-6790	2.2	6
86	Interface Properties of GaP/Si Heterojunction Fabricated by PE-ALD. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2019 , 216, 1800617	1.6	6
85	Defect properties of InGaAsN layers grown as sub-monolayer digital alloys by molecular beam epitaxy. <i>Journal of Applied Physics</i> , 2018 , 123, 161418	2.5	5
84	Visualization of Isofrequency Contours of Strongly Localized Waveguide Modes in Planar Dielectric Structures. <i>JETP Letters</i> , 2018 , 107, 10-14	1.2	5
83	Electric field-controlled sign of the capacitance in metal-carbon nitride-metal devices. <i>Journal of Non-Crystalline Solids</i> , 2008 , 354, 2637-2640	3.9	5
82	Characterization of amorphous/crystalline silicon interfaces from electrical measurements. <i>Materials Research Society Symposia Proceedings</i> , 2008 , 1066, 1		5
81	Electroluminescence from amorphous-crystalline silicon heterostructures. <i>Journal of Non-Crystalline Solids</i> , 2004 , 338-340, 440-443	3.9	5
80	Electrical and optical properties of nanosized films of doped zinc and indium oxides deposited by RF magnetron sputtering at room temperature. <i>Technical Physics Letters</i> , 2015 , 41, 804-806	0.7	4
79	Formation of Cu ₂ O and ZnO Crystal Layers by Magnetron Assisted Sputtering and Their Optical Characterization. <i>Semiconductors</i> , 2018 , 52, 383-389	0.7	4
78	Deep-level study of Ga(In)P(NAs) alloys grown on Si substrates. <i>Journal of Physics: Conference Series</i> , 2016 , 741, 012077	0.3	4
77	Simulation of characteristics of double-junction solar cells based on ZnSiP ₂ heterostructures on silicon substrate. <i>Technical Physics Letters</i> , 2015 , 41, 1120-1123	0.7	4
76	High intensity low temperature (HILT) performance of space concentrator GaInP/GaInAs/Ge MJ SCs 2014 ,		4

75	Characterization of GaInP/Ge heterostructure solar cells by capacitance measurements at forward bias under illumination. <i>Energy Procedia</i> , 2011 , 3, 76-83	2.3	4
74	TEM Study of the Formation and Modification of Nanocrystalline Si Inclusions in a-Si:H Films. <i>Semiconductors</i> , 2004 , 38, 221	0.7	4
73	Simulation of photovoltaic efficiency of a tandem solar cell on Si with GaN nanowires as an emitter layer. <i>Journal of Physics: Conference Series</i> , 2016 , 690, 012041	0.3	3
72	Study of the properties of solar cells based on a-Si:H p-i-n structures by admittance spectroscopy. <i>Semiconductors</i> , 2013 , 47, 1090-1096	0.7	3
71	Indium Tin Oxide Films Grown at Room Temperature by RF-Magnetron Sputtering in Oxygen-Free Environment. <i>Solid State Phenomena</i> , 2013 , 200, 10-13	0.4	3
70	Professional training and retraining of specialists in the field of thin film solar power engineering 2015 ,		3
69	Comparison of photoluminescence and capacitance spectroscopies as efficient tools for interface characterisation of heterojunction solar cells. <i>Journal of Non-Crystalline Solids</i> , 2008 , 354, 2416-2420	3.9	3
68	Effect of thermal treatment on structure and properties of a-Si:H films obtained by cyclic deposition. <i>Semiconductors</i> , 2002 , 36, 230-234	0.7	3
67	Investigation of nc-Si inclusions in multilayer a-Si:H films obtained using the layer by layer technique. <i>Journal of Non-Crystalline Solids</i> , 2004 , 338-340, 135-138	3.9	3
66	Electrical and photoelectric properties of a-Si:H layered films: The influence of thermal annealing. <i>Semiconductors</i> , 2001 , 35, 353-356	0.7	3
65	Structure and properties of a-Si:H films grown by cyclic deposition. <i>Semiconductors</i> , 2000 , 34, 477-480	0.7	3
64	Effect of Cryogenic Dry Etching on Minority Charge Carrier Lifetime in Silicon. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2020 , 217, 1900534	1.6	3
63	Defect properties of solar cells with layers of GaP based dilute nitrides grown by molecular beam epitaxy. <i>Journal of Applied Physics</i> , 2020 , 128, 023105	2.5	3
62	GaAs/InGaAsN heterostructures for multi-junction solar cells. <i>Semiconductors</i> , 2016 , 50, 652-655	0.7	3
61	Investigation of silicon wafers thermal degradation by photoluminescence decay measurements 2018 ,		3
60	Optical emission spectroscopy of gallium phosphide plasma-enhanced atomic layer deposition. <i>Journal of Physics: Conference Series</i> , 2018 , 1038, 012108	0.3	3
59	A Selective BP/Si Contact Formed by Low-Temperature Plasma-Enhanced Atomic Layer Deposition. <i>Technical Physics Letters</i> , 2021 , 47, 96-98	0.7	3
58	Influence of PE-ALD of GaP on the Silicon Wafers Quality. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2017 , 214, 1700685	1.6	2

57	Admittance spectroscopy of solar cells based on GaPNAs layers. <i>Semiconductors</i> , 2015 , 49, 524-528	0.7	2
56	Study of multiple InAs/GaAs quantum-well structures by electroreflectance spectroscopy. <i>Semiconductors</i> , 2015 , 49, 1400-1404	0.7	2
55	GaP/Si anisotype heterojunction solar cells. <i>Journal of Physics: Conference Series</i> , 2016 , 741, 012096	0.3	2
54	Thin film GaP for solar cell application. <i>Journal of Physics: Conference Series</i> , 2016 , 741, 012088	0.3	2
53	The temperature dependence of the electrical conductivity in Cu ₂ O thin films grown by magnetron sputtering. <i>Journal of Physics: Conference Series</i> , 2016 , 741, 012013	0.3	2
52	Effect of Thermal Annealing on the Photovoltaic Properties of GaP/Si Heterostructures Fabricated by Plasma-Enhanced Atomic Layer Deposition. <i>Semiconductors</i> , 2019 , 53, 1075-1081	0.7	2
51	Temperature and bias dependence of hydrogenated amorphous silicon/crystalline silicon heterojunction capacitance: the link to band bending and band offsets. <i>Canadian Journal of Physics</i> , 2014 , 92, 690-695	1.1	2
50	Fabrication of a-Si:H/nc-Si multilayer films using layer by layer technique and their properties. <i>Journal of Non-Crystalline Solids</i> , 2002 , 299-302, 1070-1074	3.9	2
49	Formation of SiO ₂ hard mask using dry etching and nanosphere lithography. <i>Journal of Physics: Conference Series</i> , 2020 , 1697, 012188	0.3	2
48	Quantum efficiency measurement of subcells in multi-junction solar cells based on III-V/Si. <i>Journal of Physics: Conference Series</i> , 2018 , 1124, 041034	0.3	2
47	Impact of Interface Recombination on Quantum Efficiency of a-Si:H/c-Si Solar Cells Based on Si Wires. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2100339	1.6	2
46	Influence of double- and triple-layer antireflection coatings on the formation of photocurrents in multijunction III-V solar cells. <i>Semiconductors</i> , 2017 , 51, 88-92	0.7	1
45	Atomic layer deposition precursor step repetition and surface plasma pretreatment influence on semiconductor/insulator/semiconductor heterojunction solar cell. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2015 , 33, 041101	2.9	1
44	Influence of plasma on electrophysical properties of the GaP/n-Si isotype heterojunction grown by PE-ALD. <i>Journal of Physics: Conference Series</i> , 2020 , 1482, 012017	0.3	1
43	Study of GaInP solar-cell interfaces by variable-flux spectral measurements. <i>Semiconductors</i> , 2014 , 48, 459-464	0.7	1
42	Influence of dry etching condition to geometry of vertically aligned silicon nanostructures. <i>Journal of Physics: Conference Series</i> , 2017 , 917, 052030	0.3	1
41	Lateral conductivity of n-GaP/p-Si heterojunction with an inversion layer. <i>Journal of Physics: Conference Series</i> , 2017 , 917, 052004	0.3	1
40	Investigation of the effect of surface passivation on microdisk lasers based on InGaAsN/GaAs quantum well active region. <i>Journal of Physics: Conference Series</i> , 2017 , 917, 052002	0.3	1

39	Photoluminescence observation from zinc oxide formed by magnetron sputtering at room temperature. <i>Journal of Physics: Conference Series</i> , 2015 , 643, 012013	0.3	1
38	Space charge capacitance spectroscopy in amorphous silicon Schottky diodes: Theory, modeling, and experiments. <i>Journal of Non-Crystalline Solids</i> , 2012 , 358, 2007-2010	3.9	1
37	Study of Latex sphere mask dry etching in oxygen. <i>Journal of Physics: Conference Series</i> , 2020 , 1697, 012192	0.3	1
36	Study of GaP Nucleation Layers Grown on Si by Plasma-Enhanced Atomic Layer Deposition. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2020 , 217, 1900532	1.6	1
35	GaPAsN-based light-emitting diode on silicon. <i>Optics and Laser Technology</i> , 2020 , 129, 106308	4.2	1
34	Capacitance characterization of GaP/Si superlattice grown by time-modulated PECVD. <i>Journal of Physics: Conference Series</i> , 2019 , 1410, 012116	0.3	1
33	Multijunction solar cells concept based on GaP/Si nanostructures. <i>Materials Today: Proceedings</i> , 2019 , 19, 47-52	1.4	1
32	Precision Chemical Etching of GaP(NAs) Epitaxial Layers for the Formation of Monolithic Optoelectronic Devices. <i>Semiconductors</i> , 2018 , 52, 1775-1781	0.7	1
31	Current localization in heterostructures of multijunction solar cells: Causes for arising and diagnostics potential 2018 ,		1
30	Hybrid Resonant Metal-dielectric Nanostructures for Local Color Generation. <i>JETP Letters</i> , 2018 , 107, 1-4	1.2	1
29	Admittance Spectroscopy of Solar Cells Based on Selective Contact MoOx/Si Junction. <i>Technical Physics Letters</i> , 2021 , 47, 785-788	0.7	1
28	Study of Cryogenic Unmasked Etching of "Black Silicon" with Ar Gas Additives.. <i>ACS Omega</i> , 2022 , 7, 6053-6057	0.3	0
27	Influence of wet etching in KOH on defects in silicon nanowires formed by cryogenic dry etching. <i>Journal of Physics: Conference Series</i> , 2020 , 1697, 012060	0.3	0
26	Capacitance characterization of silicon nanowires formed by cryogenic dry etching. <i>Journal of Physics: Conference Series</i> , 2020 , 1695, 012089	0.3	0
25	Plasma-enhanced atomic layer deposition of Zn-doped GaP. <i>Journal of Physics: Conference Series</i> , 2021 , 1851, 012009	0.3	0
24	Full Silicon Tandem Solar Cells Based on Vertically Aligned Nanostructures. <i>International Journal of Photoenergy</i> , 2022 , 2022, 1-11	2.1	0
23	Analysis of light-induced degradation mechanisms in $\text{Si:H}/\text{Si:H}$ solar photovoltaics. <i>Semiconductors</i> , 2013 , 47, 1252-1257	0.7	
22	Admittance spectroscopy of InGaAsN based solar cells. <i>Journal of Physics: Conference Series</i> , 2017 , 917, 052033	0.3	

- 21 Copper (I) oxide rf-magnetron sputtering at elevated substrate temperatures. *Journal of Physics: Conference Series*, **2017**, 917, 032020 0.3
- 20 Capacitance characterization of GaP/n-Si structures grown by PE-ALD. *Journal of Physics: Conference Series*, **2017**, 917, 052027 0.3
- 19 Modeling of capacitance spectroscopy of (p) a-Si:H/(n) c-Si interfaces. *Physica Status Solidi C: Current Topics in Solid State Physics*, **2012**, 9, 1481-1483
- 18 Influence of the Design Features of a Magnetron Sputtering Deposition System on the Electrical and Optical Properties of Indium Tin Oxide Films. *Semiconductors*, **2021**, 55, 410 0.7
- 17 Study of SiN_x based antireflection coating for GaP/Si heterojunction solar cells. *Journal of Physics: Conference Series*, **2020**, 1695, 012080 0.3
- 16 Using MoO_x/p-Si Selective Contact for Evaluation of the Degradation of a Near-Surface Region of Silicon. *Technical Physics Letters*, **2020**, 46, 1245-1248 0.7
- 15 Defect properties of multilayer GaP/Si nanoheterostructures grown by plasma deposition. *Journal of Physics: Conference Series*, **2020**, 1695, 012203 0.3
- 14 Plasma-enhanced atomic layer deposition of GaP/GaN digital alloys. *Journal of Physics: Conference Series*, **2021**, 1851, 012008 0.3
- 13 Electronic transport properties of microcrystalline GaP. *Journal of Physics: Conference Series*, **2019**, 1410, 012207 0.3
- 12 Investigation of deposition conditions on the structural properties of μ c-Si:H. *Journal of Physics: Conference Series*, **2018**, 1124, 022009 0.3
- 11 Effect of temperature on dry etching of III-V structures. *Journal of Physics: Conference Series*, **2018**, 1124, 041031 0.3
- 10 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
- 9 Investigating the effect of silicon surface chemical treatment on Al/Si contact properties in GaP/Si solar cells. *Journal of Physics: Conference Series*, **2018**, 993, 012030 0.3
- 8 Formation of Heterostructures of GaP/Si Photoconverters by the Combined Method of MOVPE and PEALD. *Technical Physics Letters*, **2021**, 47, 730-733 0.7
- 7 Silicon nanowires based adsorption sensors for CO and NH₃ detection. *Journal of Physics: Conference Series*, **2021**, 2103, 012229 0.3
- 6 Investigation of defects in structures based on BP/Si heterojunction. *Journal of Physics: Conference Series*, **2021**, 2103, 012088 0.3
- 5 Space charge capacitance study of GaP/Si multilayer structures grown by plasma deposition. *Journal Physics D: Applied Physics*, **2022**, 55, 135103 3
- 4 Conformality of a-Si:H deposited by low temperature PECVD for solar cells application. *Journal of Physics: Conference Series*, **2021**, 2086, 012041 0.3

- 3 Simulation of double-junction III-phosphides/silicon solar cells. *Journal of Physics: Conference Series*, **2021**, 2086, 012094 0.3
- 2 Study of GaP/Si electron-selective contact deposited by plasma. *Journal of Physics: Conference Series*, **2021**, 2086, 012091 0.3
- 1 Large-scale flexible membrane with resonant silicon nanowires for infrared visualization via efficient third harmonic generation. *Applied Physics Letters*, **2022**, 120, 151102 3.4