Alexander Gudovskikh

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.

128
papers841
citations16
h-index23
g-index140
ext. papers954
ext. citations1.6
avg, IF3.91
L-index

#	Paper	IF	Citations
128	Study of Cryogenic Unmasked Etching of "Black Silicon" with Ar Gas Additives ACS Omega, 2022 , 7, 60)53 .6 05	57 ₀
127	Full Silicon Tandem Solar Cells Based on Vertically Aligned Nanostructures. <i>International Journal of Photoenergy</i> , 2022 , 2022, 1-11	2.1	О
126	Space charge capacitance study of GaP/Si multilayer structures grown by plasma deposition. <i>Journal Physics D: Applied Physics</i> , 2022 , 55, 135103	3	
125	Large-scale flexible membrane with resonant silicon nanowires for infrared visualization via efficient third harmonic generation. <i>Applied Physics Letters</i> , 2022 , 120, 151102	3.4	
124	Influence of the Design Features of a Magnetron Sputtering Deposition System on the Electrical and Optical Properties of Indium I in Oxide Films. <i>Semiconductors</i> , 2021 , 55, 410	0.7	
123	Plasma-enhanced atomic layer deposition of Zn-doped GaP. <i>Journal of Physics: Conference Series</i> , 2021 , 1851, 012009	0.3	0
122	Plasma-enhanced atomic layer deposition of GaP/GaN digital alloys. <i>Journal of Physics: Conference Series</i> , 2021 , 1851, 012008	0.3	
121	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
120	Formation of Heterostructures of GaP/Si Photoconverters by the Combined Method of MOVPE and PEALD. <i>Technical Physics Letters</i> , 2021 , 47, 730-733	0.7	
119	Admittance Spectroscopy of Solar Cells Based on Selective Contact MoOx/Si Junction. <i>Technical Physics Letters</i> , 2021 , 47, 785-788	0.7	1
118	Silicon nanowires based adsorption sensors for CO and NH3 detection. <i>Journal of Physics:</i> Conference Series, 2021 , 2103, 012229	0.3	
117	Investigation of defects in structures based on BP/Si heterojunction. <i>Journal of Physics: Conference Series</i> , 2021 , 2103, 012088	0.3	
116	Conformality of a-Si:H deposited by low temperature PECVD for solar cells application. <i>Journal of Physics: Conference Series</i> , 2021 , 2086, 012041	0.3	
115	Simulation of double-junction III-phosphides/silicon solar cells. <i>Journal of Physics: Conference Series</i> , 2021 , 2086, 012094	0.3	
114	Study of GaP/Si electron-selective contact deposited by plasma. <i>Journal of Physics: Conference Series</i> , 2021 , 2086, 012091	0.3	
113	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
112	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

(2018-2020)

111	Formation of SiO2 hard mask using dry etching and nanosphere lithography. <i>Journal of Physics:</i> Conference Series, 2020 , 1697, 012188	0.3	2
110	Study of SiNx based antireflection coating for GaP/Si heterojunction solar cells. <i>Journal of Physics:</i> Conference Series, 2020 , 1695, 012080	0.3	
109	Influence of wet etching in KOH on defects in silicon nanowires formed by cryogenic dry etching. Journal of Physics: Conference Series, 2020, 1697, 012060	0.3	О
108	Using MoOx/p-Si Selective Contact for Evaluation of the Degradation of a Near-Surface Region of Silicon. <i>Technical Physics Letters</i> , 2020 , 46, 1245-1248	0.7	
107	Study of Latex sphere mask dry etching in oxygen. <i>Journal of Physics: Conference Series</i> , 2020 , 1697, 0121	193	1
106	Defect properties of multilayer GaP/Si nanoheterostructures grown by plasma deposition. <i>Journal of Physics: Conference Series</i> , 2020 , 1695, 012203	0.3	
105	Capacitance characterization of silicon nanowires formed by cryogenic dry etching. <i>Journal of Physics: Conference Series</i> , 2020 , 1695, 012089	0.3	0
104	Effect of Cryogenic Dry Etching on Minority Charge Carrier Lifetime in Silicon. <i>Physica Status Solidi</i> (A) Applications and Materials Science, 2020 , 217, 1900534	1.6	3
103	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
102	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
101	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
100	GaPAsN-based light-emitting diode on silicon. <i>Optics and Laser Technology</i> , 2020 , 129, 106308	4.2	1
99	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
98	Capacitance characterization of GaP/Si superlattice grown by time-modulated PECVD. <i>Journal of Physics: Conference Series</i> , 2019 , 1410, 012116	0.3	1
97	Electronic transport properties of microcrystalline GaP. <i>Journal of Physics: Conference Series</i> , 2019 , 1410, 012207	0.3	
96	Multijunction solar cells concept based on GaP/Si nanostructures. <i>Materials Today: Proceedings</i> , 2019 , 19, 47-52	1.4	1
95	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
94	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

93	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
92	Formation of Cu2O and ZnO Crystal Layers by Magnetron Assisted Sputtering and Their Optical Characterization. <i>Semiconductors</i> , 2018 , 52, 383-389	0.7	4
91	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
90	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
89	Visualization of Isofrequency Contours of Strongly Localized Waveguide Modes in Planar Dielectric Structures. <i>JETP Letters</i> , 2018 , 107, 10-14	1.2	5
88	Investigation of silicon wafers thermal degradation by photoluminescence decay measurements 2018 ,		3
87	Investigation of deposition conditions on the structural properties of $\bar{\mu}$ c-Si:H. <i>Journal of Physics: Conference Series</i> , 2018 , 1124, 022009	0.3	
86	Effect of temperature on dry etching of III-V structures. <i>Journal of Physics: Conference Series</i> , 2018 , 1124, 041031	0.3	
85	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
84	A novel approach to characterization of bottom sub-cell in multijunction solar cell using photoluminescence <i>Journal of Physics: Conference Series</i> , 2018 , 1124, 041039	0.3	
83	Investigating the effect of silicon surface chemical treatment on Al/Si contact properties in GaP/Si solar cells. <i>Journal of Physics: Conference Series</i> , 2018 , 993, 012030	0.3	
82	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
81	Current localization in heterostructures of multijunction solar cells: Causes for arising and diagnostics potential 2018 ,		1
80	Optical emission spectroscopy of gallium phosphide plasma-enhanced atomic layer deposition. <i>Journal of Physics: Conference Series</i> , 2018 , 1038, 012108	0.3	3
79	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
78	Nanoscale Cu2O films: Radio-frequency magnetron sputtering and structural and optical studies. <i>Semiconductors</i> , 2017 , 51, 110-114	0.7	8
77	Influence of double- and triple-layer antireflection coatings on the formation of photocurrents in multijunction IIIIV solar cells. <i>Semiconductors</i> , 2017 , 51, 88-92	0.7	1
76	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

(2015-2017)

75	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	
74	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	
73	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	
72	Admittance spectroscopy of InGaAsN based solar cells. <i>Journal of Physics: Conference Series</i> , 2017 , 917, 052033	0.3		
71	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	
70	Copper (I) oxide rf-magnetron sputtering at elevated substrate temperatures. <i>Journal of Physics:</i> Conference Series, 2017 , 917, 032020	0.3		
69	Capacitance characterization of GaP/n-Si structures grown by PE-ALD. <i>Journal of Physics: Conference Series</i> , 2017 , 917, 052027	0.3		
68	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	
67	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	
66	GaP/Si anisotype heterojunction solar cells. <i>Journal of Physics: Conference Series</i> , 2016 , 741, 012096	0.3	2	
65	Thin film GaP for solar cell application. <i>Journal of Physics: Conference Series</i> , 2016 , 741, 012088	0.3	2	
64	The temperature dependence of the electrical conductivity in Cu2O thin films grown by magnetron sputtering. <i>Journal of Physics: Conference Series</i> , 2016 , 741, 012013	0.3	2	
63	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	
62	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	
61	Study of GaP/Si Heterojunction Solar Cells. <i>Energy Procedia</i> , 2016 , 102, 56-63	2.3	17	
60	GaAs/InGaAsN heterostructures for multi-junction solar cells. <i>Semiconductors</i> , 2016 , 50, 652-655	0.7	3	
59	Admittance spectroscopy of solar cells based on GaPNAs layers. Semiconductors, 2015, 49, 524-528	0.7	2	
58	MBE growth of GaP on a Si substrate. <i>Semiconductors</i> , 2015 , 49, 559-562	0.7	18	

57	Atomic layer deposition precursor step repetition and surface plasma pretreatment influence on semiconductorihsulatoriemiconductor heterojunction solar cell. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2015 , 33, 041101	2.9	1
56	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
55	Study of multiple InAs/GaAs quantum-well structures by electroreflectance spectroscopy. <i>Semiconductors</i> , 2015 , 49, 1400-1404	0.7	2
54	Simulation of characteristics of double-junction solar cells based on ZnSiP2 heterostructures on silicon substrate. <i>Technical Physics Letters</i> , 2015 , 41, 1120-1123	0.7	4
53	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
52	Professional training and retraining of specialists in the field of thin film solar power engineering 2015 ,		3
51	Temperature and bias dependence of hydrogenated amorphous silicon Erystalline 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	Design of multijunction GaPNAs/Si heterostructure solar cells by computer simulation. <i>Semiconductors</i> , 2014 , 48, 381-386	0.7	11
49	Study of GaInP solar-cell interfaces by variable-flux spectral measurements. <i>Semiconductors</i> , 2014 , 48, 459-464	0.7	1
48	Characterization of the Manufacturing Processes to Grow Triple-Junction Solar Cells. <i>International Journal of Photoenergy</i> , 2014 , 2014, 1-10	2.1	13
47	High intensity low temperature (HILT) performance of space concentrator GaInP/GaInAs/Ge MJ SCs 2014 ,		4
46	Analysis of light-induced degradation mechanisms in i:H/वि-Si:H solar photovoltaics. <i>Semiconductors</i> , 2013 , 47, 1252-1257	0.7	
45	Photoelectric properties of solar cells based on GaPNAs/GaP heterostructures. <i>Technical Physics Letters</i> , 2013 , 39, 1117-1120	0.7	13
44	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
43	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
42	Study of the light-induced degradation of tandem 🗟:H/ਰ-Si:H photovoltaic converters. Semiconductors, 2013 , 47, 679-685	0.7	7
41	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
40	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

39	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
38	Modeling of capacitance spectroscopy of (p) a-Si:H/(n) c-Si interfaces. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2012 , 9, 1481-1483		
37	Characterization of silicon heterojunctions for solar cells. <i>Nanoscale Research Letters</i> , 2011 , 6, 152	5	16
36	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
35	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
34	Germanium subcells for multijunction GaInP/GaInAs/Ge solar cells. Semiconductors, 2010, 44, 1520-1528	3 0.7	18
33	Band structure at heterojunction interfaces of GaInP solar cells. <i>Solar Energy Materials and Solar Cells</i> , 2010 , 94, 1953-1958	6.4	10
32	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
31	Electronic and structural properties of the amorphous/crystalline silicon interface. <i>Thin Solid Films</i> , 2009 , 517, 6386-6391	2.2	12
30	Properties of interfaces in GaInP solar cells. <i>Semiconductors</i> , 2009 , 43, 1363-1368	0.7	9
29	III-phosphides heterojunction solar cell interface properties from admittance spectroscopy. <i>Journal Physics D: Applied Physics</i> , 2009 , 42, 165307	3	7
28	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
27	High interfacial conductivity at amorphous silicon/crystalline silicon heterojunctions. <i>Journal of Non-Crystalline Solids</i> , 2008 , 354, 2641-2645	3.9	20
26	Electric field-controlled sign of the capacitance in metalBarbon nitrideBhetal devices. <i>Journal of Non-Crystalline Solids</i> , 2008 , 354, 2637-2640	3.9	5
25	Characterization of amorphous/crystalline silicon interfaces from electrical measurements. <i>Materials Research Society Symposia Proceedings</i> , 2008 , 1066, 1		5
24	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
23	Numerical modelling of GaInP solar cells with AlInP and AlGaAs windows. <i>Thin Solid Films</i> , 2008 , 516, 6739-6743	2.2	34
22	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

21	Frequency scaling of ac hopping transport in amorphous carbon nitride. <i>Diamond and Related Materials</i> , 2007 , 16, 1799-1805	3.5	6
20	Determination of band offsets in a-Si:H/c-Si heterojunctions from capacitanceNoltage measurements: Capabilities and limits. <i>Thin Solid Films</i> , 2007 , 515, 7481-7485	2.2	36
19	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
18	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
17	About the efficiency limits of heterojunction solar cells. <i>Journal of Non-Crystalline Solids</i> , 2006 , 352, 192	28 j. 1993	213
16	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
15	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
14	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
13	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
12	Characterization of an a-Si:H/c-Si interface by admittance spectroscopy. <i>Semiconductors</i> , 2005 , 39, 904-	9097	9
11	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
10	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
9	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
8	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
7	Electroluminescence from amorphous Brystalline silicon heterostructures. <i>Journal of Non-Crystalline Solids</i> , 2004 , 338-340, 440-443	3.9	5
6	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
5	Fabrication of a-Si:H/nc-Si multilayer films using layer by layer technique and their properties. Journal of Non-Crystalline Solids, 2002 , 299-302, 1070-1074	3.9	2
4	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

LIST OF PUBLICATIONS

3 Structure and properties of a-Si:H films grown by cyclic deposition. *Semiconductors*, **2000**, 34, 477-480 o.7 3

2	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	
1	Hybrid Resonant Metal-dielectic Nanostructures for Local Color Generation. JETP Letters,1	1.2	1	