Dmitry A Firsov

List of Publications by Year
in descending order

146	668	623699	752679
papers	citations	14 h-index	20 g-index

147	147	147	374
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Generation of millimeter radiation due to electric-field-induced electron-transit-time resonance in indium phosphide. JETP Letters, 2001, 73, 219-222.	1.4	35
2	Spontaneous far-IR emission accompanying transitions of charge carriers between levels of quantum dots. JETP Letters, 1998, 67, 275-279.	1.4	31
3	Impurity breakdown and terahertz luminescence in n-GaN epilayers under external electric field. Journal of Applied Physics, 2009, 106, 123523.	2.5	26
4	Blackbody-like emission of terahertz radiation from AlGaN/GaN heterostructure under electron heating in lateral electric field. Journal of Applied Physics, 2011, 109, 073108.	2.5	26
5	Selective terahertz emission due to electrically excited 2D plasmons in AlGaN/GaN heterostructure. Journal of Applied Physics, 2019, 126, .	2.5	26
6	Terahertz luminescence in strained GaAsN:Be layers under strong electric fields. Applied Physics Letters, 2007, 90, 161128.	3.3	24
7	Interaction of surface plasmon polaritons in heavily doped GaN microstructures with terahertz radiation. Journal of Applied Physics, 2016, 119, .	2.5	22
8	Room-temperature operation of quantum cascade lasers at a wavelength of 5.8 Î¼m. Semiconductors, 2016, 50, 1299-1303.	0.5	22
9	Terahertz radiation associated with the impurity electron transition in quantum wells upon optical and electrical pumping. Semiconductors, 2015, 49, 28-32.	0.5	19
10	Lasing of multiperiod quantum-cascade lasers in the spectral range of (5.6â€“5.8)-Î¼m under current pumping. Semiconductors, 2015, 49, 1527-1530.	0.5	17
11	Terahertz electroluminescence of surface plasmons from nanostructured InN layers. Applied Physics Letters, 2010, 96, .	3.3	16
12	Realization of the Kohnâ€™s Theorem in Ge/Si Quantum Dots with Hole Gas: Theory and Experiment. Nanomaterials, 2019, 9, 56.	4.1	16
13	Electron heating by a strong longitudinal electric field in quantum wells. Semiconductors, 2003, 37, 586-593.	0.5	14
14	Terahertz emission and photoconductivity in n-type GaAs/AlGaAs quantum wells: the role of resonant impurity states. Semiconductors, 2010, 44, 1394-1397.	0.5	14
15	Lasing in 9.6-Î¼m Quantum Cascade Lasers. Technical Physics, 2018, 63, 1511-1515.	0.7	14
16	Lateral photoconductivity in structures with Ge/Si quantum dots. Semiconductors, 2013, 47, 1574-1577.	0.5	13
17	<title>Toward far- and mid-IR intraband lasers based on hot carrier intervalley/real-space transfer in multiple quantum well systems</title>. , 2001, 4318, 192.		12
18	The outlook for the development of radiation sources in the middle-IR range based on the intraband transitions between the energy levels of charge carriers in injection laser heterostructures with quantum dots and wells. Physics-Uspekhi, 1999, 42, 391-396.	2.2	11

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19	Carrier heating in quantum wells under optical and current injection of electron-hole pairs. Semiconductors, 2010, 44, 1402-1405.	0.5	11
20	Modulation of intersubband light absorption and interband photoluminescence in double GaAs/AlGaAs quantum wells under strong lateral electric fields. Semiconductors, 2016, 50, 1425-1430.	0.5	11
21	A Two-Dimensional hot electron electro-optic effect in GaAs/(Al,Ga)As multiple quantum wells. Superlattices and Microstructures, 1995, 17, 129-133.	3.1	10
22	Dynamics of photoluminescence and recombination processes in Sb-containing laser nanostructures. Semiconductors, 2010, 44, 50-58.	0.5	10
23	Effect of transverse electric field and temperature on light absorption in GaAs/AlGaAs tunnel-coupled quantum wells. Semiconductors, 2015, 49, 1425-1429.	0.5	10
24	Far-IR radiation of hot holes in germanium for mutually perpendicular directions of uniaxial pressure and electric field. JETP Letters, 1999, 70, 265-269.	1.4	9
25	Carrier transfer in coupled asymmetric GaAs/AlGaAs double quantum wells after ultrafast intersubband excitation. Semiconductor Science and Technology, 2006, 21, 1267-1273.	2.0	9
26	Quantum-Cascade Lasers with a Distributed Bragg Reflector Formed by Ion-Beam Etching. Technical Physics Letters, 2020, 46, 312-315.	0.7	8
27	Birefringence and absorption of light during intersubband transitions of hot electrons in quantum wells. JETP Letters, 1997, 65, 549-554.	1.4	7
28	Hot-electron far-infrared intrasubband absorption and emission in quantum wells. Applied Physics Letters, 1999, 75, 2930-2932.	3.3	7
29	On resonance states in â€œsplitâ€•germanium. JETP Letters, 1999, 69, 676-681.	1.4	7
30	Surface plasmon-phonon polaritons in GaAs. Journal of Physics: Conference Series, 2017, 917, 062038.	0.4	7
31	Impurity-assisted terahertz photoluminescence in compensated quantum wells. Journal of Applied Physics, 2019, 126, 175702.	2.5	7
32	Interaction of surface plasmonâ€“phonon polaritons with terahertz radiation in heavily doped GaAs epilayers. Journal of Physics Condensed Matter, 2019, 31, 105002.	1.8	7
33	Intraband absorption and emission of light in quantum wells and quantum dots. Physics of the Solid State, 2004, 46, 118-121.	0.6	6
34	Intraband light absorption in InAs/GaAs quantum dots covered with InGaAs quantum wells. Semiconductor Science and Technology, 2006, 21, 1341-1347.	2.0	6
35	Plasmon phonon modes and optical resonances inn-GaN. Journal of Physics: Conference Series, 2016, 690, 012005.	0.4	6
36	Phase modulation of mid-infrared radiation in double-quantum-well structures under a lateral electric field. Semiconductors, 2017, 51, 363-366.	0.5	6

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37	Experimental study of surface plasmon-phonon polaritons in GaAs-based microstructures. Journal of Physics: Conference Series, 2018, 993, 012012.	0.4	6
38	On the Fabrication and Study of Lattice-Matched Heterostructures for Quantum Cascade Lasers. Semiconductors, 2018, 52, 950-953.	0.5	6
39	Spectral Characteristics of Half-Ring Quantum-Cascade Lasers. Optics and Spectroscopy (English) Tj ETQq1 1 0.784314 rgBT /Overloc	0.6	6
40	Effects of an External Magnetic Field on the Interband and Intraband Optical Properties of an Asymmetric Biconvex Lens-Shaped Quantum Dot. Nanomaterials, 2022, 12, 60.	4.1	6
41	Narrowband tunable sub-millimetre hot hole injectionless semiconductor laser and its use for cyclotron resonance investigation. Optical and Quantum Electronics, 1993, 25, 705-721.	3.3	5
42	The time-resolved spectroscopy of InGaAs/AlGaAs heterostructures with asymmetric funnel-shape quantum wells for near- and mid-IR lasing. Semiconductor Science and Technology, 2004, 19, S273-S275.	2.0	5
43	Absorption of Far-Infrared Radiation in Ge/Si Quantum Dots. Semiconductors, 2018, 52, 59-63.	0.5	5
44	An injectionless FIR laser based on interband transitions of hot holes in germanium. Semiconductor Science and Technology, 1994, 9, 641-644.	2.0	4
45	Impurity breakdown and electroluminescence in the terahertz range in p-GaAs and p-GaAsN microstructures. Technical Physics Letters, 2006, 32, 384-387.	0.7	4
46	Interband light absorption and Pauli blocking in InAs/GaAs quantum dots covered by InGaAs quantum wells. Semiconductor Science and Technology, 2007, 22, 814-818.	2.0	4
47	Modulation of intersubband absorption in tunnel-coupled quantum wells in electric fields. Semiconductors, 2007, 41, 596-605.	0.5	4
48	Dependence of the carrier concentration on the current in mid-infrared injection lasers with quantum wells. Semiconductors, 2013, 47, 1513-1516.	0.5	4
49	Intersubband light absorption in tunnel-coupled GaAs/AlGaAs quantum wells for electrooptic studies. Journal of Physics: Conference Series, 2014, 541, 012081.	0.4	4
50	The effect of Auger recombination on the nonequilibrium carrier recombination rate in the InGaAsSb/AlGaAsSb quantum wells. Superlattices and Microstructures, 2017, 109, 743-749.	3.1	4
51	Growth and optical characterization of 7.5 Î¼m quantum-cascade laser heterostructures grown by MBE. Journal of Physics: Conference Series, 2018, 1124, 041029.	0.4	4
52	Photon hole-current drag in germanium. JETP Letters, 2000, 71, 331-333.	1.4	3
53	Quasi-local impurity states in uniaxially compressed p-type Ge. Semiconductors, 2001, 35, 132-134.	0.5	3
54	Optical phenomena connected with intraband carrier transitions in quantum dots and quantum wells. Nanotechnology, 2001, 12, 462-465.	2.6	3

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55	Luminescence of stepped quantum wells in GaAs/GaAlAs and InGaAs/GaAs/GaAlAs structures. Semiconductors, 2004, 38, 565-571.	0.5	3
56	Intersubband absorption of light in selectively doped asymmetric double tunnel-coupled quantum wells. Semiconductors, 2004, 38, 1409-1415.	0.5	3
57	Emission of terahertz radiation from GaN under impact ionization of donors in an electric field. Bulletin of the Russian Academy of Sciences: Physics, 2010, 74, 86-88.	0.6	3
58	Photoinduced and equilibrium optical absorption in Ge/Si quantum dots. Semiconductors, 2012, 46, 1529-1533.	0.5	3
59	Photoluminescence dynamics in InGaAsSb/AlGaAsSb quantum well nanostructures. Semiconductors, 2013, 47, 146-151.	0.5	3
60	Mid-infrared photoluminescence from structures with InAs/GaSb type II quantum wells. Journal of Physics: Conference Series, 2015, 643, 012078.	0.4	3
61	Temperature depopulation of the GeSi/Si quantum dots with non-equilibrium charge carriers. Superlattices and Microstructures, 2017, 107, 228-233.	3.1	3
62	Photoluminescence in InGaAsSb/AlGaAsSb quantum wells: impact of nonradiative recombination. Journal of Physics: Conference Series, 2017, 816, 012017.	0.4	3
63	Optical characterization of mid-infrared range quantum-cascade laser structures grown by MBE. Journal of Physics: Conference Series, 2017, 917, 052019.	0.4	3
64	Spectral Shift of Quantum-Cascade Laser Emission under the Action of Control Voltage. Technical Physics Letters, 2019, 45, 1136-1139.	0.7	3
65	Characteristics of a far-infrared germanium hot-hole laser in the Voigt and Faraday field configurations. Semiconductors, 1997, 31, 1273-1279.	0.5	2
66	Modulation of optical absorption of GaAs/AlGaAs quantum wells in a transverse electric field. Semiconductors, 1998, 32, 754-756.	0.5	2
67	Light absorption and refraction due to intersubband transitions of hot electrons in coupled GaAs/AlGaAs quantum wells. Semiconductors, 1998, 32, 757-761.	0.5	2
68	Spontaneous long-wavelength interlevel emission in quantum-dot laser structures. Technical Physics Letters, 1998, 24, 590-592.	0.7	2
69	Optical Phenomena in InAsâ^•GaAs Heterostructures with Doped Quantum Dots and Artificial Molecules. Semiconductors, 2005, 39, 50.	0.5	2
70	Emission of terahertz radiation from GaN/AlGaN heterostructure under electron heating in lateral electric field. , 2013, , .		2
71	Terahertz reflection and emission associated with nonequilibrium surface plasmon polaritons in n-GaN. Journal of Physics: Conference Series, 2015, 586, 012005.	0.4	2
72	Intersubband light absorption in double GaAs/AlGaAs quantum wells under lateral electric field. Journal of Physics: Conference Series, 2016, 690, 012017.	0.4	2

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73	Terahertz emission from CdHgTe/HgTe quantum wells with an inverted band structure. Semiconductors, 2016, 50, 915-919.	0.5	2
74	Optical properties of GaN/AlGaN nanostructures in the terahertz frequency range. Journal of Physics: Conference Series, 2017, 816, 012019.	0.4	2
75	Multi-particle effects in far-IR optical transmission spectra of Ge/Si quantum dots. Journal of Physics: Conference Series, 2017, 816, 012026.	0.4	2
76	Quantum-Cascade Lasers Generating at the 4.8-Î¼m Wavelength at Room Temperature. Technical Physics Letters, 2018, 44, 814-816.	0.7	2
77	Two-dimensional plasmons in a GaN/AlGaN heterojunction. Journal of Physics: Conference Series, 2019, 1199, 012014.	0.4	2
78	Far-infrared spectroscopy of folded transverse acoustic phonons in 4Hâ€“SiC. Applied Physics Letters, 2020, 117, 202105.	3.3	2
79	Optical access to folded transverse acoustic phonon doublet in 6H-SiC. Journal of Applied Physics, 2021, 129, 235701.	2.5	2
80	Impurity-related terahertz emission from quantum well nanostructures. Lithuanian Journal of Physics, 2014, 54, 46-49.	0.4	2
81	Implementation of Moshinsky Atom Model for Electron Gas in Quantum Dots. Springer Proceedings in Physics, 2021, , 169-175.	0.2	2
82	Terahertz emission from square wells in a longitudinal electric field. JETP Letters, 1998, 67, 533-538.	1.4	1
83	Optical absorption and birefringence in GaAs/AlAs MQW structures due to intersubband electron transitions. Nanotechnology, 2000, 11, 218-220.	2.6	1
84	Near- and mid-infrared spectroscopy of InGaAs/GaAs quantum dot structures. Nanotechnology, 2001, 12, 447-449.	2.6	1
85	<title>Screened Coulomb potential approach for the study of resonant impurity states in uniaxially deformed p-Ge</title>. , 2001, , .		1
86	<title>Light absorption and emission in InAs/GaAs quantum dots and stepped quantum wells</title>. , 2002, 5023, 209.		1
87	Intersubband Absorption of Light in Heterostructures with Double Tunnel-Coupled GaAsâ^•AlGaAs Quantum Wells. Semiconductors, 2005, 39, 41.	0.5	1
88	LIGHT EMISSION, ABSORPTION AND AMPLIFICATION IN InAs/GaAs QUANTUM DOTS AND GaAs/AlGaAs QUANTUM WELLS RESULTING FROM OPTICAL PUMPING. International Journal of Nanoscience, 2007, 06, 241-244.	0.7	1
89	Light absorption related to hole transitions in quantum dots and impurity centers in quantum wells under external excitation. Journal of Physics: Conference Series, 2009, 193, 012059.	0.4	1
90	Emission of terahertz radiation from selectively doped AlGaN/GaN heterostructures under the heating of two-dimensional electrons by an electric field. Bulletin of the Russian Academy of Sciences: Physics, 2012, 76, 207-210.	0.6	1

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91	Influence of Auger recombination on the lifetime of nonequilibrium carriers in InGaAsSb/AlGaAsSb quantum well structures. Bulletin of the Russian Academy of Sciences: Physics, 2012, 76, 211-213.	0.6	1
92	Far- and near-infrared photoluminescence from n-GaAs/AlGaAs multiple quantum wells. Journal of Physics: Conference Series, 2014, 541, 012082.	0.4	1
93	Optical properties of GaAs/AlGaAs double quantum wells in lateral electric field. Journal of Physics: Conference Series, 2016, 741, 012149.	0.4	1
94	Terahertz radiation related to the electron relaxation after interband optical pumping in doped quantum wells. , 2016, , .		1
95	Effect of Auger recombination on non-equilibrium charge carrier concentration in InGaAsSb/AlGaAsSb quantum wells. St Petersburg Polytechnical University Journal Physics and Mathematics, 2016, 2, 287-293.	0.3	1
96	Charge carrier kinetics in GeSi/Si quantum dots probed by mid-infrared radiation. Journal of Physics: Conference Series, 2017, 864, 012069.	0.4	1
97	Non-equilibrium hole capture to excited acceptor states in quantum wells due to optical scattering. Journal of Physics: Conference Series, 2018, 993, 012016.	0.4	1
98	Quantum-cascade lasers in the 7-8 Î¼m spectral range with full top metallization. Journal of Physics: Conference Series, 2018, 993, 012031.	0.4	1
99	Study of the Spectra of Arched-Cavity Quantum-Cascade Lasers. Optics and Spectroscopy (English) Tj ETQq1 1 0.784314 rgBT /Overlock	0.6	1
100	Near-infrared optical absorption in GaN/AlN quantum wells grown by molecular-beam epitaxy. Journal of Physics: Conference Series, 2020, 1482, 012021.	0.4	1
101	Acceptor-related terahertz and infrared photoconductivity in p-type GaAs/AlGaAs quantum wells. Journal of Physics: Conference Series, 2020, 1482, 012025.	0.4	1
102	The drag of photons by electric current in quantum wells. Journal of Physics Condensed Matter, 2021, 33, 165301.	1.8	1
103	Electron heating in GaN/AlGaN quantum well in a longitudinal electric field. Journal of Physics: Conference Series, 2022, 2227, 012011.	0.4	1
104	Amplification of radiation in the far infrared range by hot holes in germanium in crossed electric and magnetic fields. Semiconductors, 1997, 31, 1280-1283.	0.5	0
105	Photoionization of short-range acceptor states in uniaxially deformed semiconductors. Semiconductors, 1999, 33, 640-644.	0.5	0
106	<title>Resonant intersubband transitions of holes in uniaxially stressed p-Ge</title>. , 2001, , .		0
107	Dynamics and collective properties of non-equilibrium carriers in highly photoexcited quantum wells. Semiconductor Science and Technology, 2004, 19, S290-S292.	2.0	0
108	The Engineering and Properties of InAs Quantum Dot Molecules in a GaAs Matrix. Semiconductors, 2005, 39, 124.	0.5	0

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109	POLARIZED PHOTOLUMINESCENCE OF EXCITONS IN n-, p- AND UNDOPED InAs/GaAs QUANTUM DOTS. International Journal of Nanoscience, 2007, 06, 319-322.	0.7	0
110	Intraband emission and absorption of terahertz radiation in GaAs/AlGaAs quantum wells. , 2007, , .		0
111	Stressed GaAsN/GaAs Heterostructures as a Base of THz Radiation Sources. AIP Conference Proceedings, 2007, , .	0.4	0
112	THz electroluminescence from strained GaAsN layers doped with shallow acceptors. , 2007, , .		0
113	Intersubband emission and carrier dynamics in GaAs/AlGaAs tunnel-coupled quantum wells after ultrafast optical pumping. AIP Conference Proceedings, 2007, , .	0.4	0
114	Hot charge-carrier electroluminescence from laser nanostructures in the spontaneous and stimulated emission modes and absorption of IR radiation by hot electrons in quantum wells. Bulletin of the Russian Academy of Sciences: Physics, 2009, 73, 73-76.	0.6	0
115	Charge carrier recombination mechanisms in Sb-containing quantum well laser structures. Bulletin of the Russian Academy of Sciences: Physics, 2010, 74, 69-71.	0.6	0
116	Absorption and modulation of absorption in p-GaAs/AlGaAs quantum well nanostructures. Bulletin of the Russian Academy of Sciences: Physics, 2010, 74, 82-85.	0.6	0
117	Terahertz emission from GaN epilayers at lateral electric field. , 2010, , .		0
118	Polarization dependence of Fano resonances in impurity photoconductivity of quantum wells doped with shallow donors. Physics of the Solid State, 2011, 53, 1253-1262.	0.6	0
119	Mid infrared optical properties of Ge/Si quantum dots with different doping level. , 2013, , .		0
120	Dynamics of charge carrier recombination and capture in laser nanostructures with InGaAsSb/AlGaAsSb quantum wells. , 2013, , .		0
121	Photoinduced absorption and photoconductivity of Ge/Si quantum dots in mid-infrared range under interband excitation. Journal of Physics: Conference Series, 2014, 541, 012087.	0.4	0
122	16th Russian Youth Conference on Physics of Semiconductors and Nanostructures, Opto- and Nanoelectronics. Journal of Physics: Conference Series, 2015, 586, 011001.	0.4	0
123	Mid-infrared light absorption by photo-excited charge carriers in Ge/Si quantum dots. Journal of Physics: Conference Series, 2015, 586, 012001.	0.4	0
124	Dynamics of mid-infrared light absorption related to photoexcited charge carriers in Ge/Si quantum dots. Journal of Physics: Conference Series, 2015, 643, 012077.	0.4	0
125	Refraction index modulation induced with transverse electric field in double tunnel-coupled GaAs/AlGaAs quantum wells. Journal of Physics: Conference Series, 2015, 643, 012076.	0.4	0
126	Intersubband absorption modulation in the GaAs/AlGaAs double tunnel-coupled quantum wells. Journal of Physics: Conference Series, 2015, 586, 012012.	0.4	0

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127	Terahertz absorption in GaN epitaxial layers under lateral electric field. Journal of Physics: Conference Series, 2016, 741, 012147.	0.4	0
128	Electric-field-induced mid-infrared birefringence of the double quantum wells. Journal of Physics: Conference Series, 2016, 741, 012124.	0.4	0
129	Photo- and electroluminescence in strong electric fields in Sb-containing narrow gap semiconductor materials. Journal of Physics: Conference Series, 2016, 741, 012148.	0.4	0
130	Polarization anisotropy of interband electroluminescence in narrow gap Sb-based semiconductors. , 2016, , .		0
131	Impurity-assisted terahertz luminescence in quantum well nanostructures under interband photoexÑitation. St Petersburg Polytechnical University Journal Physics and Mathematics, 2016, 2, 281-286.	0.3	0
132	Intraband absorption and interband photoconductivity transients in Ge/Si quantum dots. Journal of Physics: Conference Series, 2017, 816, 012027.	0.4	0
133	Excitation and decay of surface plasmon polaritons in n-GaN. Journal of Physics: Conference Series, 2017, 864, 012073.	0.4	0
134	Electric field influence on mid-infrared absorption and interband photoluminescence in tunnel-coupled GaAs/AlGaAs quantum wells. Journal of Physics: Conference Series, 2017, 864, 012070.	0.4	0
135	Luminescence and carrier concentration in Sb-containing narrow bandgap quantum wells under optical excitation. Journal of Physics: Conference Series, 2017, 917, 062027.	0.4	0
136	Polarization anisotropy of electroluminescence in indium antimonide. Journal of Physics: Conference Series, 2018, 993, 012001.	0.4	0
137	Impurity-assisted terahertz photoluminescence in quantum wells under conditions of interband stimulated emission. Journal of Physics: Conference Series, 2018, 993, 012017.	0.4	0
138	Terahertz Optical Transmission of Charged Ge/Si Quantum Dots. , 2018, , .		0
139	Acceptor and band states in quantum wells in multiband model. Journal of Physics: Conference Series, 2019, 1236, 012006.	0.4	0
140	Determination of sign during phase correction of sign-variable modulation spectra of intersubband light absorption in GaAs/AlGaAs quantum wells. Journal of Physics: Conference Series, 2019, 1236, 012021.	0.4	0
141	Terahertz Emission due to Radiative Decay of Hot 2D Plasmons in AlGaN/GaN Heterojunction. , 2019, , .		0
142	2D electrons and 2D plasmons in AlGaN/GaN nanostructure under highly non-equilibrium conditions. Journal of Physics: Conference Series, 2020, 1482, 012022.	0.4	0
143	Terahertz luminescence and photoconductivity associated with the impurity electron transitions in GaAs/AlGaAs quantum wells. Journal of Physics: Conference Series, 2020, 1482, 012019.	0.4	0
144	Effect of compensation and near-infrared lasing on donor-related terahertz photoluminescence in GaAs/AlGaAs quantum wells. , 2021, , .		0

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145	Hot electron optical phenomena in GaAs/AlAs MQW structures in strong lateral electric field. Springer Proceedings in Physics, 2001, , 731-732.	0.2	0
146	Photoconductivity and Infrared-Light Absorption in p-GaAs/AlGaAs Quantum Wells. Semiconductors, 2021, 55, 710.	0.5	0