

Sergey Morozov

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/8289684/publications.pdf>

Version: 2024-02-01

97
papers

19,809
citations

471371

17
h-index

58549

82
g-index

98
all docs

98
docs citations

98
times ranked

21285
citing authors

#	ARTICLE	IF	CITATIONS
1	Two-dimensional gas of massless Dirac fermions in graphene. <i>Nature</i> , 2005, 438, 197-200.	13.7	18,948
2	Temperature-driven massless Kane fermions in HgCdTe crystals. <i>Nature Communications</i> , 2016, 7, 12576.	5.8	73
3	Stimulated emission from HgCdTe quantum well heterostructures at wavelengths up to 19.5 μm . <i>Applied Physics Letters</i> , 2017, 111, .	1.5	58
4	Temperature-Induced Topological Phase Transition in HgTe Quantum Wells. <i>Physical Review Letters</i> , 2018, 120, 086401.	2.9	43
5	Temperature-driven single-valley Dirac fermions in HgTe quantum wells. <i>Physical Review B</i> , 2017, 96, .	1.1	38
6	Study of lifetimes and photoconductivity relaxation in heterostructures with $\text{Hg}_x\text{Cd}_{1-x}\text{Te}/\text{Cd}_{1-y}\text{Hg}_y\text{Te}$ quantum wells. <i>Semiconductors</i> , 2012, 46, 1362-1366.	0.2	34
7	Spectra and kinetics of THz photoconductivity in narrow-gap $\text{Hg}_{1-x}\text{Cd}_x\text{Te}$ ($x < 0.2$) epitaxial films. <i>Semiconductor Science and Technology</i> , 2013, 28, 125007.	1.0	29
8	GaAsSb/GaAs strained structures with quantum wells for lasers with emission wavelength near 1.3 μm . <i>Semiconductors</i> , 2010, 44, 405-412.	0.2	27
9	Terahertz photoconductivity of double acceptors in narrow gap HgCdTe epitaxial films grown by molecular beam epitaxy on GaAs(013) and Si(013) substrates. <i>Semiconductor Science and Technology</i> , 2017, 32, 095007.	1.0	27
10	Anticrossing of Landau levels in HgTe/CdHgTe (013) quantum wells with an inverted band structure. <i>JETP Letters</i> , 2015, 100, 790-794.	0.4	26
11	Electron transport and detection of terahertz radiation in a GaN/AlGaIn submicrometer field-effect transistor. <i>Semiconductors</i> , 2007, 41, 232-234.	0.2	24
12	Temperature-dependent terahertz spectroscopy of inverted-band three-layer InAs/GaSb/InAs quantum well. <i>Physical Review B</i> , 2018, 97, .	1.1	24
13	Electron transport and terahertz radiation detection in submicrometer-sized GaAs/AlGaAs field-effect transistors with two-dimensional electron gas. <i>Physics of the Solid State</i> , 2004, 46, 146-149.	0.2	23
14	Radiative recombination in narrow gap HgTe/CdHgTe quantum well heterostructures for laser applications. <i>Journal of Physics Condensed Matter</i> , 2018, 30, 495301.	0.7	22
15	Fundamental Limits to Far-Infrared Lasing in Auger-Suppressed HgCdTe Quantum Wells. <i>ACS Photonics</i> , 2020, 7, 98-104.	3.2	21
16	Temperature limitations for stimulated emission in 4 μm range due to threshold and non-threshold Auger recombination in HgTe/CdHgTe quantum wells. <i>Applied Physics Letters</i> , 2020, 117, 083103.	1.5	20
17	Specific features of the spectra and relaxation kinetics of long-wavelength photoconductivity in narrow-gap HgCdTe epitaxial films and heterostructures with quantum wells. <i>Semiconductors</i> , 2013, 47, 1438-1441.	0.2	18
18	Spectra of Persistent Photoconductivity in InAs \cdot AlSb Quantum-Well Heterostructures. <i>Semiconductors</i> , 2005, 39, 22.	0.2	17

#	ARTICLE	IF	CITATIONS
19	Coherent Emission in the Vicinity of 10 THz due to Auger-Suppressed Recombination of Dirac Fermions in HgCdTe Quantum Wells. ACS Photonics, 2021, 8, 3526-3535.	3.2	17
20	Long-wavelength injection lasers based on Pb _{1-x} Sn _x Se alloys and their use in solid-state spectroscopy. Semiconductors, 2015, 49, 1623-1626.	0.2	16
21	Features of impurity-photoconductivity relaxation in boron-doped silicon. Semiconductors, 2012, 46, 1387-1391.	0.2	14
22	Terahertz imaging of Landau levels in HgTe-based topological insulators. Applied Physics Letters, 2016, 108, .	1.5	13
23	Wide-aperture detector of terahertz radiation based on GaAs/InGaAs transistor structure with large-area slit grating gate. Technical Physics Letters, 2010, 36, 365-368.	0.2	11
24	Auger recombination in narrow gap HgCdTe/CdHgTe quantum well heterostructures. Journal of Applied Physics, 2021, 129, .	1.1	11
25	Kinetics of terahertz photoconductivity in p-Ge under impurity breakdown conditions. Semiconductors, 2010, 44, 1476-1479.	0.2	10
26	Features of Photoluminescence of Double Acceptors in HgTe/CdHgTe Heterostructures with Quantum Wells in a Terahertz Range. JETP Letters, 2019, 109, 657-662.	0.4	10
27	The influence of P+, B+, and N+ ion implantation on the luminescence properties of the SiO ₂ : nc-Si system. Physics of the Solid State, 2004, 46, 17-21.	0.2	9
28	Effect of Coalescence and of the Character of the Initial Oxide on the Photoluminescence of Ion-Synthesized Si Nanocrystals in SiO ₂ . Physics of the Solid State, 2005, 47, 13.	0.2	8
29	Giant negative photoconductivity of PbSnTe:In films with wavelength cutoff near 30 μm. Semiconductors, 2016, 50, 1684-1690.	0.2	8
30	On the band spectrum in p-type HgTe/CdHgTe heterostructures and its transformation under temperature variation. Semiconductors, 2017, 51, 1531-1536.	0.2	8
31	Threshold energies of Auger recombination in HgTe/CdHgTe quantum well heterostructures with 30-70 meV bandgap. Journal of Physics Condensed Matter, 2019, 31, 425301.	0.7	8
32	Waveguide effect of GaAsSb quantum wells in a laser structure based on GaAs. Semiconductors, 2013, 47, 1475-1477.	0.2	7
33	Long-wavelength stimulated emission and carrier lifetimes in HgCdTe-based waveguide structures with quantum wells. Semiconductors, 2016, 50, 1651-1656.	0.2	7
34	Mid-IR stimulated emission in Hg(Cd)Te/CdHgTe quantum well structures up to 200 K due to suppressed Auger recombination. Laser Physics, 2021, 31, 015801.	0.6	7
35	Toward Peltier-cooled mid-infrared HgCdTe lasers: Analyzing the temperature quenching of stimulated emission at 4.6 μm wavelength from HgCdTe quantum wells. Journal of Applied Physics, 1.1 2021, 130, .		7
36	Impurity-induced photoconductivity of narrow-gap Cadmium-Mercury-Telluride structures. Semiconductors, 2015, 49, 1605-1610.	0.2	6

#	ARTICLE	IF	CITATIONS
37	Mercury vacancies as divalent acceptors in $\text{Hg}_{1-y}\text{Te}/\text{Cd}_x\text{Hg}_{1-x}\text{Te}$ structures with quantum wells. <i>Semiconductors</i> , 2016, 50, 1662-1668.	0.2	6
38	Investigation of HgCdTe waveguide structures with quantum wells for long-wavelength stimulated emission. <i>Semiconductors</i> , 2017, 51, 1557-1561.	0.2	6
39	Terahertz Photoluminescence of Double Acceptors in Bulky Epitaxial HgCdTe Layers and HgTe/CdHgTe Structures with Quantum Wells. <i>Journal of Experimental and Theoretical Physics</i> , 2018, 127, 1125-1129.	0.2	6
40	Effect of Features of the Band Spectrum on the Characteristics of Stimulated Emission in Narrow-Gap Heterostructures with HgCdTe Quantum Wells. <i>Semiconductors</i> , 2018, 52, 1375-1379.	0.2	6
41	Second-Harmonic Generation of Subterahertz Gyrotron Radiation by Frequency Doubling in InP:Fe and Its Application for Magneto spectroscopy of Semiconductor Structures. <i>Semiconductors</i> , 2019, 53, 1217-1221.	0.2	6
42	Optical Studies and Transmission Electron Microscopy of HgCdTe Quantum Well Heterostructures for Very Long Wavelength Lasers. <i>Nanomaterials</i> , 2021, 11, 1855.	1.9	6
43	Experimental study of nonlinear mode mixing in dual-wavelength semiconductor lasers. <i>Laser Physics</i> , 2007, 17, 684-687.	0.6	5
44	Experimental Observation of Temperature-Driven Topological Phase Transition in HgTe/CdHgTe Quantum Wells. <i>Condensed Matter</i> , 2019, 4, 27.	0.8	5
45	Stimulated Emission at a Wavelength of 2.86 μm from In(Sb, As)/In(Ga, Al)As/GaAs Metamorphic Quantum Wells under Optical Pumping. <i>JETP Letters</i> , 2019, 110, 313-318.	0.4	5
46	Probing States of a Double Acceptor in CdHgTe Heterostructures via Optical Gating. <i>JETP Letters</i> , 2020, 111, 575-581.	0.4	5
47	Specific Growth Features of Nanostructures for Terahertz Quantum Cascade Lasers and Their Physical Properties. <i>Semiconductors</i> , 2020, 54, 1092-1095.	0.2	5
48	A multifrequency interband two-cascade laser. <i>Semiconductors</i> , 2007, 41, 1209-1213.	0.2	4
49	Difference-frequency generation in a butt-join diode laser. <i>Semiconductors</i> , 2009, 43, 208-211.	0.2	4
50	Determination of the heterojunction type in structures with GaAsSb/GaAs quantum wells with various antimony fractions by optical methods. <i>Semiconductors</i> , 2012, 46, 1376-1380.	0.2	4
51	Picosecond photoluminescence dynamics in an InGaAs/GaAs quantum-well heterostructure. <i>Semiconductors</i> , 2012, 46, 917-920.	0.2	4
52	Effect of the direct capture of holes with the emission of optical phonons on impurity-photoconductivity relaxation in p-Si:B. <i>Semiconductors</i> , 2015, 49, 187-190.	0.2	4
53	Calculation of Multiply Charged States of Impurity-Defect Centers in Epitaxial $\text{Hg}_{1-x}\text{Cd}_x\text{Te}$ Layers. <i>Semiconductors</i> , 2018, 52, 1369-1374.	0.2	4
54	Study of the Auger Recombination Energy Threshold in a Series of Waveguide Heterostructures with HgTe/Cd _{0.7} Hg _{0.3} Te QWs Near 14 μm . <i>Semiconductors</i> , 2019, 53, 1154-1157.	0.2	4

#	ARTICLE	IF	CITATIONS
55	Phase Diagrams of Thin Disordered Films Based on HTSC YBa ₂ Cu ₃ O _{7-x} in External Magnetic Fields. <i>Physics of the Solid State</i> , 2019, 61, 1523-1528.	0.2	4
56	Terahertz Spectroscopy of Two-Dimensional Semimetal in Three-Layer InAs/GaSb/InAs Quantum Well. <i>JETP Letters</i> , 2019, 109, 96-101.	0.4	4
57	Synthesis by Molecular Beam Epitaxy and Properties of InGaN Nanostructures of Branched Morphology on a Silicon Substrate. <i>Technical Physics Letters</i> , 2019, 45, 1111-1113.	0.2	4
58	Calculation of Wave Functions of Resonant Acceptor States in Narrow-Gap CdHgTe Compounds. <i>Semiconductors</i> , 2020, 54, 827-831.	0.2	4
59	Investigation into Microwave Absorption in Semiconductors for Frequency-Multiplication Devices and Radiation-Output Control of Continuous and Pulsed Gyrotrons. <i>Semiconductors</i> , 2020, 54, 1069-1074.	0.2	4
60	Resonance detection of terahertz radiation in submicrometer field-effect GaAs/AlGaAs transistors with two-dimensional electron gas. <i>Semiconductors</i> , 2009, 43, 528-531.	0.2	3
61	Relaxation kinetics of impurity photoconductivity in p-Si:B with various levels of doping and degrees of compensation in high electric fields. <i>Semiconductors</i> , 2013, 47, 1461-1464.	0.2	3
62	Observation of dynamics of impurity photoconductivity in n-GaAs caused by electron cooling. <i>Semiconductors</i> , 2015, 49, 113-117.	0.2	3
63	Stimulated emission in heterostructures with double InGaAs/GaAsSb/GaAs quantum wells, grown on GaAs and Ge/Si(001) substrates. <i>Semiconductors</i> , 2016, 50, 1435-1438.	0.2	3
64	Lowering the Lasing Threshold by Doping in Mid-Infrared Lasers Based on HgCdTe with HgTe Quantum Wells. <i>Semiconductors</i> , 2018, 52, 1221-1224.	0.2	3
65	Experimental Observation of s-Component of Superconducting Pairing in Thin Disordered HTSC Films Based on YBCO. <i>Physics of the Solid State</i> , 2020, 62, 1598-1603.	0.2	3
66	Synthesis of Morphologically Developed InGaN Nanostructures on Silicon: Influence of the Substrate Temperature on the Morphological and Optical Properties. <i>Semiconductors</i> , 2020, 54, 1075-1077.	0.2	3
67	Photothermal Ionization Spectroscopy of Mercury Vacancies in HgCdTe Epitaxial Films. <i>JETP Letters</i> , 2021, 113, 402-408.	0.4	3
68	Formation of Short Microwave Pulses by Laser-Driven GaAs Switch with Sub-Nanosecond Transient Response. , 2021, , .		3
69	Photoelectric Properties and Electroluminescence of p-n Diodes Based on GeSi ⁺ •Si Heterostructures with Self-Assembled Nanoclusters. <i>Physics of the Solid State</i> , 2005, 47, 22.	0.2	2
70	Frequency shift in a system of two laser diodes. <i>Semiconductors</i> , 2007, 41, 1364-1368.	0.2	2
71	Diagnostics of quantum cascade structures by optical methods in the near infrared region. <i>Semiconductors</i> , 2012, 46, 1411-1414.	0.2	2
72	Observation of topological phase transition by terahertz photoconductivity in HgTe-based transistors. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2016, 13, 534-537.	0.8	2

#	ARTICLE	IF	CITATIONS
73	Evolution of the Impurity Photoconductivity in CdHgTe Epitaxial Films with Temperature. Semiconductors, 2019, 53, 1266-1271.	0.2	2
74	Continuous-Wave Stimulated Emission in the 10 μ m–14 μ m Range under Optical Excitation in HgCdTe/CdHgTe-QW Structures with Quasirelativistic Dispersion. Semiconductors, 2020, 54, 1371-1375.	0.2	2
75	Calculation of discrete and resonant states of Coulomb acceptor in HgCdTe alloys. Semiconductor Science and Technology, 2022, 37, 025003.	1.0	2
76	Calculation of the Resonance States of Coulomb Acceptors in Zero-Gap Semiconductors. Semiconductors, 2021, 55, 537.	0.2	2
77	Application of the Scattering Matrix Method for Calculation of Impurity States in Semiconductor Structures. Technical Physics Letters, 2021, 47, 360-363.	0.2	2
78	Spectra of Double Acceptors in Layers of Barriers and Quantum Wells of HgTe/CdHgTe Heterostructures. Semiconductors, 2019, 53, 1198-1202.	0.2	1
79	Investigation of the Photosensitivity of Narrow-Gap and Gapless HgCdTe Solid Solutions in the Terahertz and Sub-Terahertz Range. Semiconductors, 2020, 54, 1096-1102.	0.2	1
80	Photoluminescence Spectra of InAs/GaSb/InAs Quantum Wells in the Mid-Infrared Region. Semiconductors, 2020, 54, 1119-1122.	0.2	1
81	Express Characterization of the HgCdTe/CdHgTe Quantum Well Waveguide Heterostructures with the Quasi-Relativistic Carrier Dispersion Law by Room-Temperature Photoluminescence Spectroscopy. Technical Physics Letters, 2021, 47, 154-157.	0.2	1
82	Arsenic Doping Upon the Deposition of CdTe Layers from Dimethylcadmium and Diisopropyltellurium. Semiconductors, 2021, 55, 7-13.	0.2	1
83	3.3 THz Quantum Cascade Laser Based on a Three GaAs/AlGaAs Quantum-Well Active Module with an Operating Temperature above 120 K. Semiconductors, 2022, 56, 71-77.	0.2	1
84	Observation of the Middle-Infrared Emission from Semiconductor Lasers Generating Two Frequency Lines in the Near-Infrared Region of the Spectrum. Semiconductors, 2005, 39, 139.	0.2	0
85	Study of interband cascade lasers with tunneling transition. Bulletin of the Russian Academy of Sciences: Physics, 2007, 71, 96-99.	0.1	0
86	Generation of self-sustained pulsations of radiation in InGaAs/GaAs/InGaP quantum-well lasers. Journal of Applied Spectroscopy, 2007, 74, 589-593.	0.3	0
87	Intracavity difference-frequency generation in GaAs/InGaAs/InGaP butt-joint diode lasers. , 2008, , .		0
88	Evolution of the photoresponse time of the GaAs/AlGaAs cyclotron resonance quantum Hall effect detector. Semiconductors, 2009, 43, 223-227.	0.2	0
89	Resonance detection of terahertz radiation in nanometer field-effect transistors with two-dimensional electron gas. , 2010, , .		0
90	Spectral-kinetic properties of heterostructures with GaAsSb/InGaAs/GaAs-based quantum wells emitting in the range of 1.0 μ m–1.2 μ m. Semiconductors, 2013, 47, 1504-1507.	0.2	0

#	ARTICLE	IF	CITATIONS
91	Investigation of GaAs/AlGaAs quantum cascade structures by optical methods based on hot luminescence in the near-infrared range. Semiconductors, 2014, 48, 1463-1466.	0.2	0
92	ABOUT THE IMPURITY EFFECT IN THE $\text{SiO}_2\text{:NC-Si}$ SYSTEM. , 2003, , .		0
93	Investigation of Stimulated Emission from HgTe/CdHgTe Quantum-Well Heterostructures in the $3\text{--}5\ \mu\text{m}$ Atmospheric Transparency Window. Semiconductors, 2020, 54, 1365-1370.	0.2	0
94	Generation of Terahertz Radiation in InP:Fe Crystals Due to Second-Order Lattice Nonlinearity. Semiconductors, 2021, 55, 785-789.	0.2	0
95	Calculation of the Temperature Dependence of the Coulomb-Acceptor State Energy in a Narrow-Gap HgCdTe Solid Solution. Semiconductors, 2021, 55, 907-913.	0.2	0
96	Effect of Internal Optical Losses on the Generation of Mid-IR Stimulated Emission in Waveguide Heterostructures with HgCdTe/CdHgTe Quantum Wells. Semiconductors, 2021, 55, 899-902.	0.2	0
97	Quantum-Cascade Laser with Radiation Emission through a Textured Layer. Semiconductors, 2022, 56, 1-4.	0.2	0