Sergey Morozov

List of Publications by Citations

90 papers	17,099 citations	14 h-index	98 g-index
98 ext. papers	18,707 ext. citations	1.9 avg, IF	5.88 L-index

#	Paper	IF	Citations
90	Two-dimensional gas of massless Dirac fermions in graphene. *Nature*, **2005**, 438, 197-200	50.4	16518
89	Temperature-driven massless Kane fermions in HgCdTe crystals. *Nature Communications*, **2016**, 7, 12576	17.4	47
88	Stimulated emission from HgCdTe quantum well heterostructures at wavelengths up to 19.5 Th. *Applied Physics Letters*, **2017**, 111, 192101	3.4	44
87	Temperature-Induced Topological Phase Transition in HgTe Quantum Wells. *Physical Review Letters* , **2018**, 120, 086401	7.4	28
86	Study of lifetimes and photoconductivity relaxation in heterostructures with Hg x Cd1 □x Te/Cd y Hg1 □y Te quantum wells. *Semiconductors*, **2012**, 46, 1362-1366	0.7	27
85	Anticrossing of Landau levels in HgTe/CdHgTe (013) quantum wells with an inverted band structure. *JETP Letters*, **2015**, 100, 790-794	1.2	23
84	Temperature-driven single-valley Dirac fermions in HgTe quantum wells. *Physical Review B*, **2017**, 96,	3.3	23
83	Spectra and kinetics of THz photoconductivity in narrow-gap Hg1□CdxTe (xSemiconductor Science and Technology, **2013**, 28, 125007	1.8	21
82	Electron transport and detection of terahertz radiation in a GaN/AlGaN submicrometer field-effect transistor. *Semiconductors*, **2007**, 41, 232-234	0.7	21
81	GaAsSb/GaAs strained structures with quantum wells for lasers with emission wavelength near 1.3 Th. *Semiconductors*, **2010**, 44, 405-412	0.7	19
80	Electron transport and terahertz radiation detection in submicrometer-sized GaAs/AlGaAs field-effect transistors with two-dimensional electron gas. *Physics of the Solid State*, **2004**, 46, 146-149	0.8	19
79	Terahertz photoconductivity of double acceptors in narrow gap HgCdTe epitaxial films grown by molecular beam epitaxy on GaAs(013) and Si(013) substrates. *Semiconductor Science and Technology*, **2017**, 32, 095007	1.8	17
78	Specific features of the spectra and relaxation kinetics of long-wavelength photoconductivity in narrow-gap HgCdTe epitaxial films and heterostructures with quantum wells. *Semiconductors*, **2013** , 47, 1438-1441	0.7	15
77	Spectra of persistent photoconductivity in InAs/AlSb quantum-well heterostructures. *Semiconductors*, **2005**, 39, 22	0.7	15
76	Long-wavelength injection lasers based on Pb1□ Sn x Se alloys and their use in solid-state spectroscopy. *Semiconductors*, **2015**, 49, 1623-1626	0.7	13
75	Fundamental Limits to Far-Infrared Lasing in Auger-Suppressed HgCdTe Quantum Wells. *ACS Photonics*, **2020**, 7, 98-104	6.3	13
74	Temperature-dependent terahertz spectroscopy of inverted-band three-layer InAs/GaSb/InAs quantum well. *Physical Review B*, **2018**, 97,	3.3	13

73	Features of impurity-photoconductivity relaxation in boron-doped silicon. *Semiconductors*, **2012**, 46, 1387-1391	0.7	12
72	Radiative recombination in narrow gap HgTe/CdHgTe quantum well heterostructures for laser applications. *Journal of Physics Condensed Matter*, **2018**, 30, 495301	1.8	10
71	Kinetics of terahertz photoconductivity in p-Ge under impurity breakdown conditions. *Semiconductors*, **2010**, 44, 1476-1479	0.7	9
70	The influence of P+, B+, and N+ ion implantation on the luminescence properties of the SiO2: nc-Si system. *Physics of the Solid State*, **2004**, 46, 17-21	0.8	9
69	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	0.7	8
68	Temperature limitations for stimulated emission in 34 th range due to threshold and non-threshold Auger recombination in HgTe/CdHgTe quantum wells. *Applied Physics Letters*, **2020**, 117, 083103	3.4	8
67	Terahertz imaging of Landau levels in HgTe-based topological insulators. *Applied Physics Letters*, **2016**, 108, 262102	3.4	8
66	Effect of coalescence and of the character of the initial oxide on the photoluminescence of ion-synthesized Si nanocrystals in SiO2. *Physics of the Solid State*, **2005**, 47, 13	0.8	7
65	Long-wavelength stimulated emission and carrier lifetimes in HgCdTe-based waveguide structures with quantum wells. *Semiconductors*, **2016**, 50, 1651-1656	0.7	7
64	Features of Photoluminescence of Double Acceptors in HgTe/CdHgTe Heterostructures with Quantum Wells in a Terahertz Range. *JETP Letters*, **2019**, 109, 657-662	1.2	6
63	Waveguide effect of GaAsSb quantum wells in a laser structure based on GaAs. *Semiconductors*, **2013**, 47, 1475-1477	0.7	6
62	Investigation of HgCdTe waveguide structures with quantum wells for long-wavelength stimulated emission. *Semiconductors*, **2017**, 51, 1557-1561	0.7	6
61	Impurity-induced photoconductivity of narrow-gap Cadmium Mercury Telluride structures. *Semiconductors*, **2015**, 49, 1605-1610	0.7	6
60	Giant negative photoconductivity of PbSnTe:In films with wavelength cutoff near 30 th. *Semiconductors*, **2016**, 50, 1684-1690	0.7	6
59	On the band spectrum in p-type HgTe/CdHgTe heterostructures and its transformation under temperature variation. *Semiconductors*, **2017**, 51, 1531-1536	0.7	5
58	Mercury vacancies as divalent acceptors in Hg y Te1 y /Cd x Hg1 x Te structures with quantum wells. *Semiconductors*, **2016**, 50, 1662-1668	0.7	5
57	Second-Harmonic Generation of Subterahertz Gyrotron Radiation by Frequency Doubling in InP:Fe and Its Application for Magnetospectroscopy of Semiconductor Structures. *Semiconductors*, **2019**, 53, 1217-1221	0.7	4
56	Study of the Auger Recombination Energy Threshold in a Series of Waveguide Heterostructures with HgTe/Cd0.7Hg0.3Te QWs Near 14 th. *Semiconductors*, **2019**, 53, 1154-1157	0.7	4

55	Effect of the direct capture of holes with the emission of optical phonons on impurity-photoconductivity relaxation in p-Si:B. *Semiconductors*, **2015**, 49, 187-190	0.7	4
54	Picosecond photoluminescence dynamics in an InGaAs/GaAs quantum-well heterostructure. *Semiconductors*, **2012**, 46, 917-920	0.7	4
53	Difference-frequency generation in a butt-join diode laser. *Semiconductors*, **2009**, 43, 208-211	0.7	4
52	A multifrequency interband two-cascade laser. *Semiconductors*, **2007**, 41, 1209-1213	0.7	4
51	Threshold energies of Auger recombination in HgTe/CdHgTe quantum well heterostructures with 30-70 meV bandgap. *Journal of Physics Condensed Matter*, **2019**, 31, 425301	1.8	4
50	Auger recombination in narrow gap HgCdTe/CdHgTe quantum well heterostructures. *Journal of Applied Physics*, **2021**, 129, 133106	2.5	4
49	Synthesis by Molecular Beam Epitaxy and Properties of InGaN Nanostructures of Branched Morphology on a Silicon Substrate. *Technical Physics Letters*, **2019**, 45, 1111-1113	0.7	4
48	Terahertz Photoluminescence of Double Acceptors in Bulky Epitaxial HgCdTe Layers and HgTe/CdHgTe Structures with Quantum Wells. *Journal of Experimental and Theoretical Physics*, **2018**, 127, 1125-1129	1	4
47	Effect of Features of the Band Spectrum on the Characteristics of Stimulated Emission in Narrow-Gap Heterostructures with HgCdTe Quantum Wells. *Semiconductors*, **2018**, 52, 1375-1379	0.7	4
46	Calculation of Multiply Charged States of Impurity-Defect Centers in Epitaxial Hg1 ⊠CdxTe Layers. *Semiconductors*, **2018**, 52, 1369-1374	0.7	4
45	Phase Diagrams of Thin Disordered Films Based on HTSC YBa2Cu3O7 ⊡x in External Magnetic Fields. *Physics of the Solid State*, **2019**, 61, 1523-1528	0.8	3
44	Observation of dynamics of impurity photoconductivity in n-GaAs caused by electron cooling. *Semiconductors*, **2015**, 49, 113-117	0.7	3
43	Lowering the Lasing Threshold by Doping in Mid-Infrared Lasers Based on HgCdTe with HgTe Quantum Wells. *Semiconductors*, **2018**, 52, 1221-1224	0.7	3
42	Relaxation kinetics of impurity photoconductivity in p-Si:B with various levels of doping and degrees of compensation in high electric fields. *Semiconductors*, **2013**, 47, 1461-1464	0.7	3
41	Determination of the heterojunction type in structures with GaAsSb/GaAs quantum wells with various antimony fractions by optical methods. *Semiconductors*, **2012**, 46, 1376-1380	0.7	3
40	Calculation of Wave Functions of Resonant Acceptor States in Narrow-Gap CdHgTe Compounds. *Semiconductors*, **2020**, 54, 827-831	0.7	3
39	Stimulated emission in heterostructures with double InGaAs/GaAsSb/GaAs quantum wells, grown on GaAs and Ge/Si(001) substrates. *Semiconductors*, **2016**, 50, 1435-1438	0.7	3
38	Stimulated Emission at a Wavelength of 2.86 ⊟m from In(Sb, As)/In(Ga, Al)As/GaAs Metamorphic Quantum Wells under Optical Pumping. *JETP Letters*, **2019**, 110, 313-318	1.2	3

37	Experimental Observation of Temperature-Driven Topological Phase Transition in HgTe/CdHgTe Quantum Wells. *Condensed Matter*, **2019**, 4, 27	1.8	2
36	Diagnostics of quantum cascade structures by optical methods in the near infrared region. *Semiconductors*, **2012**, 46, 1411-1414	0.7	2
35	Resonance detection of terahertz radiation in submicrometer field-effect GaAs/AlGaAs transistors with two-dimensional electron gas. *Semiconductors*, **2009**, 43, 528-531	0.7	2
34	Photoelectric properties and electroluminescence of p-i-n diodes based on GeSi/Si heterostructures with self-assembled nanoclusters. *Physics of the Solid State*, **2005**, 47, 22	0.8	2
33	Specific Growth Features of Nanostructures for Terahertz Quantum Cascade Lasers and Their Physical Properties. *Semiconductors*, **2020**, 54, 1092-1095	0.7	2
32	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	1.2	2
31	Probing States of a Double Acceptor in CdHgTe Heterostructures via Optical Gating. *JETP Letters*, **2020**, 111, 575-581	1.2	2
30	Synthesis of Morphologically Developed InGaN Nanostructures on Silicon: Influence of the Substrate Temperature on the Morphological and Optical Properties. *Semiconductors*, **2020**, 54, 1075-1077	0.7	2
29	Investigation into Microwave Absorption in Semiconductors for Frequency-Multiplication Devices and Radiation-Output Control of Continuous and Pulsed Gyrotrons. *Semiconductors*, **2020**, 54, 1069-1074	0.7	2
28	Observation of topological phase transition by terahertz photoconductivity in HgTe-based transistors. *Physica Status Solidi C: Current Topics in Solid State Physics*, **2016**, 13, 534-537		2
27	Evolution of the Impurity Photoconductivity in CdHgTe Epitaxial Films with Temperature. *Semiconductors*, **2019**, 53, 1266-1271	0.7	1
26	Experimental study of nonlinear mode mixing in dual-wavelength semiconductor lasers. *Laser Physics*, **2007**, 17, 684-687	1.2	1
25	Frequency shift in a system of two laser diodes. *Semiconductors*, **2007**, 41, 1364-1368	0.7	1
24	Calculation of the Resonance States of Coulomb Acceptors in Zero-Gap Semiconductors. *Semiconductors*, **2021**, 55, 537	0.7	1
23	Toward Peltier-cooled mid-infrared HgCdTe lasers: Analyzing the temperature quenching of stimulated emission at ~6 μm wavelength from HgCdTe quantum wells. *Journal of Applied Physics*, **2021**, 130, 214302	2.5	1
22	Continuous-Wave Stimulated Emission in the 10–14-μm Range under Optical Excitation in HgCdTe/CdHgTe-QW Structures with Quasirelativistic Dispersion. *Semiconductors*, **2020**, 54, 1371-1375	0.7	1
21	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	0.7	1
20	Application of the Scattering Matrix Method for Calculation of Impurity States in Semiconductor Structures. *Technical Physics Letters*, **2021**, 47, 360-363	0.7	1

19	Spectra of Double Acceptors in Layers of Barriers and Quantum Wells of HgTe/CdHgTe Heterostructures. *Semiconductors*, **2019**, 53, 1198-1202	0.7	0
18	Terahertz Spectroscopy of Two-Dimensional Semimetal in Three-Layer InAs/GaSb/InAs Quantum Well. *JETP Letters*, **2019**, 109, 96-101	1.2	0
17	Investigation of the Photosensitivity of Narrow-Gap and Gapless HgCdTe Solid Solutions in the Terahertz and Sub-Terahertz Range. *Semiconductors*, **2020**, 54, 1096-1102	0.7	0
16	Photothermal Ionization Spectroscopy of Mercury Vacancies in HgCdTe Epitaxial Films. *JETP Letters* , **2021**, 113, 402-408	1.2	0
15	Arsenic Doping Upon the Deposition of CdTe Layers from Dimethylcadmium and Diisopropyltellurium. *Semiconductors*, **2021**, 55, 7-13	0.7	0
14	3.3 THz Quantum Cascade Laser Based on a Three GaAs/AlGaAs Quantum-Well Active Module with an Operating Temperature above 120 K. *Semiconductors*,1	0.7	0
13	Investigation of GaAs/AlGaAs quantum cascade structures by optical methods based on hot luminescence in the near-infrared range. *Semiconductors*, **2014**, 48, 1463-1466	0.7	
12	Spectral-kinetic properties of heterostructures with GaAsSb/InGaAs/GaAs-based quantum wells emitting in the range of 1.0–1.2 μm. *Semiconductors*, **2013**, 47, 1504-1507	0.7	
11	Evolution of the photoresponse time of the GaAs/AlGaAs cyclotron resonance quantum Hall effect detector. *Semiconductors*, **2009**, 43, 223-227	0.7	
10	Study of interband cascade lasers with tunneling transition. *Bulletin of the Russian Academy of Sciences: Physics*, **2007**, 71, 96-99	0.4	
9	Generation of self-sustained pulsations of radiation in InGaAs/GaAs/InGaP quantum-well lasers. *Journal of Applied Spectroscopy*, **2007**, 74, 589-593	0.7	
8	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	0.7	
7	Generation of Terahertz Radiation in InP:Fe Crystals Due to Second-Order Lattice Nonlinearity. *Semiconductors*, **2021**, 55, 785	0.7	
6	Investigation of Stimulated Emission from HgTe/CdHgTe Quantum-Well Heterostructures in the 3–5 μm Atmospheric Transparency Window. *Semiconductors*, **2020**, 54, 1365-1370	0.7	
5	Experimental Observation of s-Component of Superconducting Pairing in Thin Disordered HTSC Films Based on YBCO. *Physics of the Solid State*, **2020**, 62, 1598-1603	0.8	
4	Photoluminescence Spectra of InAs/GaInSb/InAs Quantum Wells in the Mid-Infrared Region. *Semiconductors*, **2020**, 54, 1119-1122	0.7	
3	Calculation of the Temperature Dependence of the Coulomb-Acceptor State Energy in a Narrow-Gap HgCdTe Solid Solution. *Semiconductors*, **2021**, 55, 907-913	0.7	
2	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	0.7	

List of Publications

1	Quantum-Cascade Laser with Radiation Emission through a Textured Layer. *Semiconductors*, **2022**, 56, 1-4	0.7