

# Gennady Gusev

## List of Publications by Year in descending order

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121  
papers

1,948  
citations

279798

23  
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315739

38  
g-index

122  
all docs

122  
docs citations

122  
times ranked

1000  
citing authors

#	ARTICLE	IF	CITATIONS
1	Transport in disordered two-dimensional topological insulators. Physical Review B, 2011, 84, .	3.2	116
2	Interference oscillations of microwave photoresistance in double quantum wells. Physical Review B, 2008, 78, .	3.2	74
3	Viscous electron flow in mesoscopic two-dimensional electron gas. AIP Advances, 2018, 8, .	1.3	72
4	Temperature dependence of the resistance of a two-dimensional topological insulator in a HgTe quantum well. Physical Review B, 2014, 89, .	3.2	63
5	Persistence of a Two-Dimensional Topological Insulator State in Wide HgTe Quantum Wells. Physical Review Letters, 2015, 114, 126802.	7.8	63
6	Microwave Zero-Resistance States in a Bilayer Electron System. Physical Review Letters, 2010, 105, 026804.	7.8	62
7	Viscous transport and Hall viscosity in a two-dimensional electron system. Physical Review B, 2018, 98, .	3.2	62
8	Resonance oscillations of magnetoresistance in double quantum wells. Physical Review B, 2008, 77, .	3.2	61
9	Vorticity-induced negative nonlocal resistance in a viscous two-dimensional electron system. Physical Review B, 2018, 97, .	3.2	55
10	Quantum Hall Effect near the Charge Neutrality Point in a Two-Dimensional Electron-Hole System. Physical Review Letters, 2010, 104, 166401.	7.8	46
11	Linear magnetoresistance in HgTe quantum wells. Physical Review B, 2013, 87, .	3.2	41
12	Temperature dependence of the Aharonov-Bohm oscillations and the energy spectrum in a single-mode ballistic ring. Physical Review B, 2000, 62, 2624-2629.	3.2	36
13	Magnetoresistance oscillations in multilayer systems: Triple quantum wells. Physical Review B, 2009, 80, .	3.2	35
14	Nonlocal Transport Near Charge Neutrality Point in a Two-Dimensional Electron-Hole System. Physical Review Letters, 2012, 108, 226804.	7.8	34
15	Stokes flow around an obstacle in viscous two-dimensional electron liquid. Scientific Reports, 2020, 10, 7860.	3.3	34
16	Observation of the intrinsic spin Hall effect in a two-dimensional electron gas. Physical Review B, 2013, 88, .	3.2	33
17	Large positive magnetoresistance in a high-mobility two-dimensional electron gas: Interplay of short- and long-range disorder. Physical Review B, 2004, 70, .	3.2	32
18	Negative quasiclassical magnetoresistance in a high density two-dimensional electron gas in a $\text{Al}_x\text{Ga}_{1-x}\text{N}/\text{GaN}$ heterostructure. Physical Review B, 2005, 71, .	3.2	31

#	ARTICLE	IF	CITATIONS
19	Negative differential magnetoresistance and commensurability oscillations of two-dimensional electrons in a disordered array of antidots. <i>Journal of Physics Condensed Matter</i> , 1994, 6, 73-78.	1.8	30
20	Nonlinear transport and oscillating magnetoresistance in double quantum wells. <i>Physical Review B</i> , 2009, 80, .	3.2	29
21	Crossover between distinct mechanisms of microwave photoresistance in bilayer systems. <i>Physical Review B</i> , 2010, 81, .	3.2	29
22	Magnetotransport of a quasi-three-dimensional electron gas in the lowest Landau level. <i>Physical Review B</i> , 2002, 65, .	3.2	25
23	Quantum Hall ferromagnet in a parabolic well. <i>Physical Review B</i> , 2003, 67, .	3.2	24
24	Weak antilocalization in HgTe quantum wells near a topological transition. <i>JETP Letters</i> , 2010, 91, 347-350.	1.4	24
25	Magnetoresistance oscillations in a two-dimensional electron gas with a periodic array of scatters. <i>Journal of Physics Condensed Matter</i> , 1992, 4, L269-L274.	1.8	23
26	Quasiclassical negative magnetoresistance of a two-dimensional electron gas in a random magnetic field. <i>Physical Review B</i> , 2001, 65, .	3.2	23
27	Transition from insulating to metallic phase induced by in-plane magnetic field in HgTe quantum wells. <i>Physical Review B</i> , 2013, 88, .	3.2	22
28	Landau-level crossing in two-subband systems in a tilted magnetic field. <i>Physical Review B</i> , 2007, 76, .	3.2	21
29	Manifestations of classical size effect and electronic viscosity in the magnetoresistance of narrow two-dimensional conductors: Theory and experiment. <i>Physical Review B</i> , 2020, 101, .	3.2	21
30	Classical and quantum magnetoresistance in a two-subband electron system. <i>Physical Review B</i> , 2009, 80, .	3.2	20
31	Nonlinear transport phenomena in a two-subband system. <i>Physical Review B</i> , 2011, 84, .	3.2	20
32	Viscous magnetotransport and Gurzhi effect in bilayer electron system. <i>Physical Review B</i> , 2021, 103, .	3.2	20
33	Coexistence of a two- and three-dimensional Landau states in a wide parabolic quantum well. <i>Physical Review B</i> , 2001, 64, .	3.2	19
34	Quantum interference in intentionally disordered doped GaAs/Al <sub>x</sub> Ga <sub>1-x</sub> As superlattices. <i>Physical Review B</i> , 2002, 66, .	3.2	19
35	Single-particle relaxation time in a spatially fluctuating magnetic field. <i>Physical Review B</i> , 1999, 59, 5711-5716	3.2	18
36	Quantum Hall Effect in $\hat{\alpha}^n$ and $\hat{\alpha}^p$ $\hat{\alpha}^n$ and $\hat{\alpha}^p$ 2D Topological Insulator	7.8	18

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37	Microwave-Induced Magneto-Oscillations and Signatures of Zero-Resistance States in Phonon-Drag Voltage in Two-Dimensional Electron Systems. <i>Physical Review Letters</i> , 2015, 115, 206801.	7.8	18
38	Giant microwave photo-conductance of a tunnel point contact with a bridged gate. <i>Applied Physics Letters</i> , 2015, 107, .	3.3	18
39	Topological insulators based on HgTe. <i>Physics-Usppekhi</i> , 2020, 63, 629-647.	2.2	18
40	Magneto-oscillations in a two-dimensional electron gas with a Penrose lattice of artificial scatterers. <i>Physical Review B</i> , 1993, 47, 9928-9930.	3.2	17
41	Mesoscopic transport in two-dimensional topological insulators. <i>Solid State Communications</i> , 2019, 302, 113701.	1.9	17
42	High-order fractional microwave-induced resistance oscillations in two-dimensional systems. <i>Physical Review B</i> , 2009, 80, .	3.2	16
43	Hall effect in a spatially fluctuating magnetic field with zero mean. <i>Physical Review B</i> , 2000, 61, 5505-5510.	3.2	15
44	Reentrant Quantum Hall Effect and Anisotropic Transport in a Bilayer System at High Filling Factors. <i>Physical Review Letters</i> , 2007, 99, 126804.	7.8	15
45	Interlayer interference in double wells in a tilted magnetic field. <i>Physical Review B</i> , 2008, 78, .	3.2	15
46	Thermally activated intersubband scattering and oscillating magnetoresistance in quantum wells. <i>Physical Review B</i> , 2010, 82, .	3.2	15
47	Unconventional Hall effect near charge neutrality point in a two-dimensional electron-hole system. <i>Physical Review B</i> , 2012, 86, .	3.2	15
48	Macroscopic transverse drift of long current-induced spin coherence in two-dimensional electron gases. <i>Physical Review B</i> , 2016, 94, .	3.2	15
49	Resistively detected NMR of the $\nu = 1/2$ quantum Hall state: A tilted magnetic field study. <i>Physical Review B</i> , 2010, 81, .	3.2	14
50	Evidence for zero-differential resistance states in electronic bilayers. <i>Physical Review B</i> , 2011, 83, .	3.2	14
51	Negative linear classical magnetoresistance in a corrugated two-dimensional electron gas. <i>Physical Review B</i> , 2004, 70, .	3.2	13
52	Anomalous dephasing scattering rate of two-dimensional electrons in double quantum well structures. <i>Physical Review B</i> , 2008, 78, .	3.2	13
53	Two-dimensional topological insulator state in double HgTe quantum well. <i>Physical Review B</i> , 2020, 101, .	3.2	13
54	Quantum interference effects in a strongly fluctuating magnetic field. <i>Physical Review B</i> , 1996, 53, 13641-13644.	3.2	12

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55	Conductivity corrections in a strongly correlated and disordered two-dimensional electron system. Physical Review B, 2002, 65, .	3.2	12
56	Robust helical edge transport at $\nu = \frac{1}{2}$ quantum Hall state. Physical Review B, 2017, 96, .	3.2	12
57	Spin relaxation time in a two-dimensional hole gas. Journal of Physics C: Solid State Physics, 1984, 17, L683-L688.	1.5	11
58	Resonant optical control of the electrically induced spin polarization by periodic excitation. Physical Review B, 2014, 90, .	3.2	11
59	Long-lived nanosecond spin coherence in high-mobility 2DEGs confined in double and triple quantum wells. Journal of Applied Physics, 2016, 119, 215701.	2.5	11
60	Gate control of the spin mobility through the modification of the spin-orbit interaction in two-dimensional systems. Physical Review B, 2017, 95, .	3.2	11
61	Chaotic electron dynamics in antidot lattice subjected to strong in-plane magnetic field. Physical Review B, 2002, 66, .	3.2	10
62	High mobility of a three-dimensional hole gas in parabolic quantum wells grown on GaAs(311)A substrates. Journal of Applied Physics, 2005, 97, 076107.	2.5	10
63	Magnetic-field-induced transition in a wide parabolic well superimposed with a superlattice. Physical Review B, 2010, 81, .	3.2	10
64	Circularly Polarized Photoluminescence as a Probe of Density of States in $\text{AlGaAs}/\text{GaAs}/\text{AlGaAs}$ Quantum Hall Bilayers. Physical Review Letters, 2012, 109, 046802.	7.8	9
65	Spectroscopic evidence of quantum Hall interlayer tunneling gap collapse caused by tilted magnetic field in a GaAs/AlGaAs triple quantum well. Physical Review B, 2014, 89, .	3.2	9
66	Scaling of local and nonlocal resistances in a 2D topological insulator based on HgTe quantum well. 2D Materials, 2015, 2, 044015.	4.4	9
67	Diffusion of Photoexcited Holes in a Viscous Electron Fluid. Physical Review Letters, 2022, 128, 136801.	7.8	9
68	Electron spin resonance in a wide parabolic quantum well. Physical Review B, 2005, 72, .	3.2	8
69	Many-body effects in wide parabolic AlGaAs quantum wells. Journal of Applied Physics, 2007, 102, 093715.	2.5	7
70	Emergent and reentrant fractional quantum Hall effect in trilayer systems in a tilted magnetic field. Physical Review B, 2009, 80, .	3.2	7
71	Magnetic-field asymmetry of nonlinear transport in a small ring. Europhysics Letters, 2009, 88, 47007.	2.0	7
72	Linear and nonlinear transport in a small charge-tunable open quantum ring. Physical Review B, 2011, 84, .	3.2	7

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73	Quantum oscillations of spin polarization in a GaAs/AlGaAs double quantum well. Physical Review B, 2012, 86, .	3.2	7
74	Large anisotropic spin relaxation time of exciton bound to donor states in triple quantum wells. Journal of Applied Physics, 2017, 121, .	2.5	7
75	Chaotic electron dynamics around a single elliptically shaped antidot. Physical Review B, 1996, 54, 13859-13867.	3.2	6
76	Percolation network in a smooth artificial potential. Physical Review B, 1998, 58, 4636-4643.	3.2	6
77	Thermopower of a Two-Dimensional Semimetal in a HgTe Quantum Well. JETP Letters, 2018, 107, 789-793.	1.4	6
78	Thermoelectric transport in two-dimensional topological insulator state based on HgTe quantum well. 2D Materials, 2019, 6, 014001.	4.4	6
79	Electrical control of spin relaxation anisotropy during drift transport in a two-dimensional electron gas. Physical Review B, 2020, 102, .	3.2	6
80	Microwave Photoresistance of a Two-Dimensional Topological Insulator in a HgTe Quantum Well. JETP Letters, 2020, 111, 121-125.	1.4	6
81	Shubnikov-de Haas oscillations in a nonplanar two-dimensional electron gas. Semiconductor Science and Technology, 1999, 14, 1114-1118.	2.0	5
82	Vertical longitudinal magnetoresistance of semiconductor superlattices. Physical Review B, 2001, 63, .	3.2	5
83	Spin-dependent Hall effect in a parabolic well with a quasi-three-dimensional electron gas. Physical Review B, 2005, 71, .	3.2	5
84	Enhanced Hall slope in wideAlxGa1-xAsparabolic wells. Physical Review B, 2007, 75, .	3.2	5
85	Excitons in undoped AlGaAs/GaAs wide parabolic quantum wells. Journal of Physics: Conference Series, 2010, 210, 012052.	0.4	5
86	Microwave-induced Hall resistance in bilayer electron systems. Physical Review B, 2011, 83, .	3.2	5
87	Microwave response of a ballistic quantum dot. JETP Letters, 2014, 98, 713-716.	1.4	5
88	Magnetocapacitance oscillations and thermoelectric effect in a two-dimensional electron gas irradiated by microwaves. Physical Review B, 2016, 94, .	3.2	5
89	Tailoring multilayer quantum wells for spin devices. Pramana - Journal of Physics, 2018, 91, 1.	1.8	5
90	Transport through the network of topological channels in HgTe based quantum well. 2D Materials, 2022, 9, 015021.	4.4	5

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91	Magnetic field induced charge redistribution in artificially disordered quantum Hall superlattices. Europhysics Letters, 2012, 97, 17010.	2.0	4
92	Microwave-induced nonlocal transport in a two-dimensional electron system. Physical Review B, 2014, 89, .	3.2	4
93	Coulomb-like mesoscopic fluctuations in a two-dimensional electron gas near filling factor $\nu=12$ . Physical Review B, 1997, 56, 12112-12115.	3.2	3
94	Spin Polarization by Tilted Magnetic Field in Wide Ga $\alpha$ xAlxAs Parabolic Quantum Wells. Journal of Superconductivity and Novel Magnetism, 2005, 18, 169-173.	0.5	3
95	Macroscopic transport of a current-induced spin polarization. Journal of Physics: Conference Series, 2017, 864, 012060.	0.4	3
96	Multiple crossings of Landau levels of two-dimensional fermions in double HgTe quantum wells. Physical Review B, 2021, 103, .	3.2	3
97	Phonon drag thermoelectric phenomena in mesoscopic two-dimensional conductors: Current stripes, large Nernst effect, and influence of electron-electron interaction. Physical Review B, 2020, 102, .	3.2	3
98	Engineering topological phases in triple HgTe/CdTe quantum wells. Scientific Reports, 2022, 12, 2617.	3.3	3
99	Commensurability oscillations in the antidot lattice in a quasi-three-dimensional electron gas. Physical Review B, 2003, 67, .	3.2	2
100	Electron dephasing scattering rate in two-dimensional GaAs/InGaAs heterostructures with embedded InAs quantum dots. Journal of Applied Physics, 2008, 104, 073723.	2.5	2
101	QUANTUM HALL FERROMAGNET IN A DOUBLE WELL WITH VANISHING $g$ -FACTOR. International Journal of Modern Physics B, 2009, 23, 2933-2937.	2.0	2
102	Low field magnetoresistance in a 2D topological insulator based on wide HgTe quantum well. Journal of Physics Condensed Matter, 2016, 28, 345801.	1.8	2
103	Magnetophonon oscillations of thermoelectric power and combined resonance in two-subband electron systems. Physical Review B, 2016, 94, .	3.2	2
104	Electronic thermal conductivity in 2D topological insulator in a HgTe quantum well. Scientific Reports, 2019, 9, 831.	3.3	2
105	Experimental analysis of the spin-orbit coupling dependence on the drift velocity of a spin packet. AIP Advances, 2020, 10, .	1.3	2
106	Quantum Transport of Dirac Fermions in HgTe Gapless Quantum Wells. Nanomaterials, 2022, 12, 2047.	4.1	2
107	Anomalous Hall effect in a wide parabolic well. Physica Status Solidi C: Current Topics in Solid State Physics, 2004, 1, S181-S187.	0.8	1
108	Emergent fractional quantum Hall effect at even denominator $\nu=3/2$ in a triple quantum well in tilted magnetic fields. Journal of Physics: Conference Series, 2011, 334, 012026.	0.4	1

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109	Two-dimensional semimetal-insulator transition in HgTe-based quantum wells induced by a longitudinal magnetic field. JETP Letters, 2012, 96, 251-254.	1.4	1
110	Robustness of spin polarization against temperature in multilayer structure: Triple quantum well. Journal of Applied Physics, 2018, 123, 214306.	2.5	1
111	Thermo emf in a two-dimensional electron-hole system in HgTe quantum wells in the presence of magnetic field. The role of the diffusive and the phonon-drag contributions. Low Temperature Physics, 2021, 47, 2-6.	0.6	1
112	Magnetohydrodynamics and electron-electron interaction of massless Dirac fermions. Physical Review Research, 2021, 3, .	3.6	1
113	Thermoelectric Transport in a Three-Dimensional HgTe Topological Insulator. Nanomaterials, 2021, 11, 3364.	4.1	1
114	MAGNETORESISTANCE OSCILLATIONS IN DOUBLE QUANTUM WELLS UNDER MICROWAVE IRRADIATION. International Journal of Modern Physics B, 2009, 23, 2943-2947.	2.0	0
115	TRANSPORT IN A BILAYER SYSTEM AT HIGH LANDAU FILLING FACTOR. International Journal of Modern Physics B, 2009, 23, 2603-2606.	2.0	0
116	Zero-resistance states in bilayer electron systems induced by microwave irradiation. Journal of Physics: Conference Series, 2011, 334, 012014.	0.4	0
117	Magnetotransport in a wide parabolic well superimposed with a superlattice. Journal of Applied Physics, 2011, 109, 102403.	2.5	0
118	Shubnikov-de Haas effect in tilted magnetic fields in wide quantum well. Journal of Physics: Conference Series, 2013, 456, 012025.	0.4	0
119	Giant microwave-induced B-periodic magnetoresistance oscillations in a two-dimensional electron gas with a bridged-gate tunnel point contact. Physical Review B, 2017, 95, .	3.2	0
120	Multiperiodic Spin Precession of the Optically Induced Spin Polarization in $\text{Al}_x\text{Ga}_{1-x}\text{As}/\text{AlAs}$ Single Quantum Well. Iranian Journal of Science and Technology, Transaction A: Science, 2020, 44, 549-555.	1.5	0
121	Nonzero Hall resistance in a spatially fluctuating magnetic field with zero mean. Springer Proceedings in Physics, 2001, , 817-818.	0.2	0