

# Igor Burmistrov

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/8701944/publications.pdf>

Version: 2024-02-01

92  
papers

1,317  
citations

331670

21  
h-index

414414

32  
g-index

93  
all docs

93  
docs citations

93  
times ranked

935  
citing authors

#	ARTICLE	IF	CITATIONS
1	Enhancement of the Critical Temperature of Superconductors by Anderson Localization. Physical Review Letters, 2012, 108, 017002.	7.8	102
2	Quantum elasticity of graphene: Thermal expansion coefficient and specific heat. Physical Review B, 2016, 94, .	3.2	50
3	Stress-controlled Poisson ratio of a crystalline membrane: Application to graphene. Physical Review B, 2018, 97, .	3.2	45
4	Superconductor-insulator transitions: Phase diagram and magnetoresistance. Physical Review B, 2015, 92, .	3.2	44
5	Multifractality at Anderson Transitions with Coulomb Interaction. Physical Review Letters, 2013, 111, 066601.	7.8	42
6	Wave function multifractality and dephasing at metal-insulator and quantum Hall transitions. Annals of Physics, 2011, 326, 1457-1478.	2.8	39
7	Strongly correlated two-dimensional plasma explored from entropy measurements. Nature Communications, 2015, 6, 7298.	12.8	38
8	The instanton vacuum of generalized CPN <sup>n-1</sup> models. Annals of Physics, 2005, 316, 285-356.	2.8	36
9	Half-integer quantum Hall effect of disordered Dirac fermions at a topological insulator surface. Physical Review B, 2014, 90, .	3.2	36
10	Metal-Insulator Transition in Two Dimensions: Experimental Test of the Two-Parameter Scaling. Physical Review Letters, 2008, 100, 046405.	7.8	35
11	Indirect exchange interaction between magnetic impurities near the helical edge. Physical Review B, 2017, 95, .	3.2	32
12	Differential Poisson's ratio of a crystalline two-dimensional membrane. Annals of Physics, 2018, 396, 119-136.	2.8	32
13	Dissipative and Hall Viscosity of a Disordered 2D Electron Gas. Physical Review Letters, 2019, 123, 026804.	7.8	32
14	Conductance oscillations with magnetic field of a two-dimensional electron gas-superconductor junction. Physical Review B, 2007, 75, .	3.2	31
15	$\hat{I}$ renormalization, electron-electron interactions and super universality in the quantum Hall regime. Annals of Physics, 2007, 322, 1265-1334.	2.8	30
16	Domain wall effects in ferromagnet-superconductor structures. Physical Review B, 2005, 72, .	3.2	29
17	Non-Fermi-liquid theory for disordered metals near two dimensions. Physical Review B, 2002, 66, .	3.2	28
18	Andreev conductance of a domain wall. Physical Review B, 2003, 68, .	3.2	26

#	ARTICLE	IF	CITATIONS
19	Helical edge transport in the presence of a magnetic impurity. JETP Letters, 2017, 106, 593-599.	1.4	26
20	Berezinskii-Kosterlitz-Thouless transition in homogeneously disordered superconducting films. Physical Review B, 2015, 92, .	3.2	24
21	Charge relaxation resistance in the Coulomb blockade problem. Physical Review B, 2009, 80, .	3.2	23
22	Interaction and disorder effects in three-dimensional topological insulator thin films. Physical Review B, 2013, 88, .	3.2	22
23	Local density of states and its mesoscopic fluctuations near the transition to a superconducting state in disordered systems. Physical Review B, 2016, 93, .	3.2	21
24	Non-fermi liquid criticality and superuniversality in the quantum hall regime. JETP Letters, 2008, 87, 220-224.	1.4	20
25	Multifractality and electron-electron interaction at Anderson transitions. Physical Review B, 2015, 91, .	3.2	20
26	Geometric Quantum Noise of Spin. Physical Review Letters, 2015, 114, 176806.	7.8	18
27	Multifractally-enhanced superconductivity in thin films. Annals of Physics, 2021, 435, 168499.	2.8	18
28	Critical behavior of transport and magnetotransport in a 2D electron system in Si near the metal-insulator transition. JETP Letters, 2007, 84, 662-666.	1.4	17
29	Electronic properties in a two-dimensional disordered electron liquid: Spin-valley interplay. Physical Review B, 2008, 77, .	3.2	17
30	Helical edge transport in the presence of a magnetic impurity: The role of local anisotropy. Physical Review B, 2019, 99, .	3.2	17
31	Spin and charge correlations in quantum dots: An exact solution. JETP Letters, 2010, 92, 179-184.	1.4	16
32	Indirect exchange interaction between magnetic impurities in the two-dimensional topological insulator based on CdTe/HgTe/CdTe quantum wells. Physical Review B, 2016, 94, .	3.2	16
33	Interaction of a Néel-type skyrmion with a superconducting vortex. Physical Review B, 2021, 103, .	3.2	16
34	Exact solution for spin and charge correlations in quantum dots: Effect of level fluctuations and Zeeman splitting. Physical Review B, 2012, 85, .	3.2	15
35	On the effect of far impurities on the density of states of two-dimensional electron gas in a strong magnetic field. JETP Letters, 2003, 78, 156-161.	1.4	12
36	Coulomb Blockade and Superuniversality of the $\nu=1$ Angle. Physical Review Letters, 2008, 101, 056801.	7.8	12

#	ARTICLE	IF	CITATIONS
37	Relaxation dynamics of the electron distribution in the Coulomb-blockade problem. Physical Review B, 2010, 82, .	3.2	12
38	Strong nonequilibrium effects in spin-torque systems. Physical Review B, 2017, 95, .	3.2	12
39	Probing spin susceptibility of a correlated two-dimensional electron system by transport and magnetization measurements. Physical Review B, 2018, 98, .	3.2	12
40	Absolute Poisson's ratio and the bending rigidity exponent of a crystalline two-dimensional membrane. Annals of Physics, 2020, 414, 168108.	2.8	12
41	Mesoscopic fluctuations of the single-particle Green's function at Anderson transitions with Coulomb interaction. Physical Review B, 2016, 94, .	3.2	11
42	Multifractal correlations of the local density of states in dirty superconducting films. Physical Review Research, 2021, 3, .	3.6	11
43	Energy Relaxation in the Spin-Polarized Disordered Electron Liquid. Physical Review Letters, 2008, 100, 206804.	7.8	10
44	Macroscopic charge quantization in single-electron devices. Physical Review B, 2010, 81, .	3.2	10
45	Tunneling into the localized phase near Anderson transitions with Coulomb interaction. Physical Review B, 2014, 89, .	3.2	10
46	Unrestricted Electron Bunching at the Helical Edge. Physical Review Letters, 2019, 123, 056803.	7.8	10
47	A quantum dot close to Stoner instability: The role of the Berry phase. Annals of Physics, 2012, 327, 2543-2559.	2.8	9
48	Finite frequency backscattering current noise at a helical edge. Physical Review B, 2020, 102, .	3.2	8
49	Interaction-Induced Metallicity in a Two-Dimensional Disordered Non-Fermi Liquid. Physical Review Letters, 2020, 125, 256604.	7.8	8
50	Finkel'stein Nonlinear Sigma Model: Interplay of Disorder and Interaction in 2D Electron Systems. Journal of Experimental and Theoretical Physics, 2019, 129, 669-679.	0.9	8
51	Comment on "Topological Oscillations of the Magnetoconductance in Disordered GaAs Layers": Physical Review Letters, 2005, 95, 189701; author reply 189702.	7.8	7
52	Phase diagram of a flexible two-dimensional material. Physical Review Research, 2020, 2, .	3.6	7
53	Two-dimensional electron liquid with disorder in a weak magnetic field. Journal of Experimental and Theoretical Physics, 2002, 95, 132-144.	0.9	6
54	Disordered electron liquid in double quantum well heterostructures: Renormalization group analysis and dephasing rate. Physical Review B, 2011, 84, .	3.2	6

#	ARTICLE	IF	CITATIONS
55	Surface states in a 3D topological insulator: The role of hexagonal warping and curvature. Journal of Experimental and Theoretical Physics, 2015, 121, 509-520.	0.9	6
56	Mesoscopic Stoner Instability in Open Quantum Dots: Suppression of Coleman-Weinberg Mechanism by Electron Tunneling. Physical Review Letters, 2020, 124, 196801.	7.8	6
57	Effect of anomalous elasticity on bubbles in van der Waals heterostructures. Physical Review E, 2020, 101, 033005.	2.1	6
58	Current noise geometrically generated by a driven magnet. Physical Review Research, 2020, 2, .	3.6	6
59	Out-of-equilibrium admittance of single electron box under strong Coulomb blockade. JETP Letters, 2010, 92, 696-702.	1.4	5
60	Spin fluctuations in quantum dots. Physical Review B, 2014, 90, .	3.2	5
61	Statistics of spin fluctuations in quantum dots with Ising exchange. Physical Review B, 2014, 89, .	3.2	5
62	Entanglement entropy and particle number cumulants of disordered fermions. Annals of Physics, 2017, 383, 140-156.	2.8	5
63	Magnetic disorder in superconductors: Enhancement by mesoscopic fluctuations. Physical Review B, 2018, 97, .	3.2	5
64	Non-Fermi liquid theory of quantum Hall effects. JETP Letters, 2005, 82, 150-154.	1.4	4
65	Charge relaxation resistance in the cotunneling regime of multichannel Coulomb blockade: Violation of Korryng-Shiba relation. Physical Review B, 2015, 92, .	3.2	4
66	Temperature derivative of the chemical potential and its magneto-oscillations in a two-dimensional system. JETP Letters, 2015, 101, 125-129.	1.4	4
67	Thermodynamic Studies of Two-Dimensional Correlated Electron Systems. Journal of Low Temperature Physics, 2015, 181, 99-111.	1.4	4
68	Inelastic electron scattering off a quantum dot in the cotunneling regime: The signature of mesoscopic Stoner instability. Physical Review B, 2016, 93, .	3.2	4
69	Two-loop renormalization of the Finkelâ€™stein theory: The specific heat. Annals of Physics, 2016, 364, 120-135.	2.8	4
70	Mesoscopic fluctuations of the local density of states in interacting electron systems. JETP Letters, 2017, 106, 272-281.	1.4	4
71	Quantum corrections to conductivity of disordered electrons due to inelastic scattering off magnetic impurities. Physical Review B, 2018, 98, .	3.2	4
72	Thermally driven spin transfer torque system far from equilibrium: Enhancement of thermoelectric current via pumping current. Physical Review B, 2019, 99, .	3.2	4

#	ARTICLE	IF	CITATIONS
73	Residual bulk viscosity of a disordered two-dimensional electron gas. <i>Physical Review B</i> , 2021, 103, .	3.2	4
74	Crossover behavior of disordered interacting two-dimensional electron systems in a parallel magnetic field. <i>JETP Letters</i> , 2007, 84, 656-661.	1.4	3
75	Two-instanton approximation to the Coulomb blockade problem. <i>Low Temperature Physics</i> , 2017, 43, 95-100.	0.6	3
76	Mean-field phase diagram of two-dimensional electrons with disorder in a weak magnetic field. <i>Physical Review B</i> , 2003, 68, .	3.2	2
77	Cotunneling current through a two-level quantum dot coupled to magnetic leads: the role of exchange interaction. <i>Journal of Physics Condensed Matter</i> , 2012, 24, 155301.	1.8	2
78	U(1) and SU(2) quantum dissipative systems: the Caldeiraâ€“Leggett Versus Ambegaokarâ€“Eckernâ€“SchÅ“n approaches. <i>Journal of Experimental and Theoretical Physics</i> , 2016, 122, 576-586.	0.9	2
79	Magnetism of Bi<sub>2</sub>Se<sub>3</sub> thin films with Eu-rich flat inclusions. <i>Journal of Physics Condensed Matter</i> , 2018, 30, 445801.	1.8	2
80	Comment on â€œNoise in the Helical Edge Channel Anisotropically Coupled to a Local Spinâ€•( <i>JETP Letters</i> ) Tj ETQq0 0 0 rgBJ /Overlock	1.4	2
81	Attenuation of an optical wave propagating in a waveguide, formed by layers of a semiconductor heterostructure, owing to scattering on inhomogeneities. <i>Quantum Electronics</i> , 1999, 29, 500-504.	1.0	1
82	The anisotropic conductivity of two-dimensional electrons on a half-filled high Landau level. <i>JETP Letters</i> , 2004, 79, 177-182.	1.4	1
83	The problem of Macroscopic Charge Quantization in the Coulomb Blockade. , 2009, , .		1
84	The effect of superconducting fluctuations on the ac conductivity of a 2D electron system in the diffusive regime. <i>Annals of Physics</i> , 2020, 418, 168201.	2.8	1
85	Emergent Continuous Symmetry in Anisotropic Flexible Two-Dimensional Materials. <i>Physical Review Letters</i> , 2022, 128, 096101.	7.8	1
86	Broadened Yu-Shiba-Rusinov states in dirty superconducting films and heterostructures. <i>Physical Review Research</i> , 2022, 4, .	3.6	1
87	Anisotropic conductivity tensor on a half-filled high Landau level. <i>Physical Review B</i> , 2005, 71, .	3.2	0
88	The Problem Of True Macroscopic Charge Quantization In The Coulomb Blockade. <i>NATO Science for Peace and Security Series B: Physics and Biophysics</i> , 2008, , 59-68.	0.3	0
89	Tunneling density of states in quantum dots with anisotropic exchange. <i>Physical Review B</i> , 2015, 92, .	3.2	0
90	Chapter 3. Transport in a Two-Dimensional Disordered Electron Liquid with Isospin Degrees of Freedom. , 2016, , 65-116.		0

#	ARTICLE	IF	CITATIONS
91	Conductance Oscillations With Magnetic Field Of A Two-Dimensional Electron Gas-Superconductor Junction. NATO Science for Peace and Security Series B: Physics and Biophysics, 2008, , 281-292.	0.3	0
92	Effect of elastic disorder on single-electron transport through a buckled nanotube. Physical Review Research, 2022, 4, .	3.6	0