Igor Burmistrov

List of Publications by Year
in descending order

92	1,317	331670 21	414414 32
papers	citations	h-index	g-index

93	93	93	935
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Effect of elastic disorder on single-electron transport through a buckled nanotube. Physical Review Research, 2022, 4, .	3.6	0
2	Emergent Continuous Symmetry in Anisotropic Flexible Two-Dimensional Materials. Physical Review Letters, 2022, 128, 096101.	7.8	1
3	Broadened Yu-Shiba-Rusinov states in dirty superconducting films and heterostructures. Physical Review Research, 2022, 4, .	3.6	1
4	Interaction of a NÃ©el-type skyrmion with a superconducting vortex. Physical Review B, 2021, 103, .	3.2	16
5	Multifractally-enhanced superconductivity in thin films. Annals of Physics, 2021, 435, 168499.	2.8	18
6	Residual bulk viscosity of a disordered two-dimensional electron gas. Physical Review B, 2021, 103, .	3.2	4
7	Multifractal correlations of the local density of states in dirty superconducting films. Physical Review Research, 2021, 3, .	3.6	11
8	Finite frequency backscattering current noise at a helical edge. Physical Review B, 2020, 102, .	3.2	8
9	Mesoscopic Stoner Instability in Open Quantum Dots: Suppression of Coleman-Weinberg Mechanism by Electron Tunneling. Physical Review Letters, 2020, 124, 196801.	7.8	6
10	The effect of superconducting fluctuations on the ac conductivity of a 2D electron system in the diffusive regime. Annals of Physics, 2020, 418, 168201.	2.8	1
11	Absolute Poissonâ€™s ratio and the bending rigidity exponent of a crystalline two-dimensional membrane. Annals of Physics, 2020, 414, 168108.	2.8	12
12	Effect of anomalous elasticity on bubbles in van der Waals heterostructures. Physical Review E, 2020, 101, 033005.	2.1	6
13	Interaction-Induced Metallicity in a Two-Dimensional Disordered Non-Fermi Liquid. Physical Review Letters, 2020, 125, 256604.	7.8	8
14	Current noise geometrically generated by a driven magnet. Physical Review Research, 2020, 2, .	3.6	6
15	Phase diagram of a flexible two-dimensional material. Physical Review Research, 2020, 2, .	3.6	7
16	Unrestricted Electron Bunching at the Helical Edge. Physical Review Letters, 2019, 123, 056803.	7.8	10
17	Comment on â€œNoise in the Helical Edge Channel Anisotropically Coupled to a Local Spinâ€•(JETP Letters) Tj ETQq1 1 0.784314 rgBT	1.4	2
18	Dissipative and Hall Viscosity of a Disordered 2D Electron Gas. Physical Review Letters, 2019, 123, 026804.	7.8	32

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19	Thermally driven spin transfer torque system far from equilibrium: Enhancement of thermoelectric current via pumping current. Physical Review B, 2019, 99, .	3.2	4
20	Helical edge transport in the presence of a magnetic impurity: The role of local anisotropy. Physical Review B, 2019, 99, .	3.2	17
21	Finkelâ€™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
22	Stress-controlled Poisson ratio of a crystalline membrane: Application to graphene. Physical Review B, 2018, 97, .	3.2	45
23	Magnetic disorder in superconductors: Enhancement by mesoscopic fluctuations. Physical Review B, 2018, 97, .	3.2	5
24	Probing spin susceptibility of a correlated two-dimensional electron system by transport and magnetization measurements. Physical Review B, 2018, 98, .	3.2	12
25	Magnetism of Bi₂Se₃ thin films with Eu-rich flat inclusions. Journal of Physics Condensed Matter, 2018, 30, 445801.	1.8	2
26	Quantum corrections to conductivity of disordered electrons due to inelastic scattering off magnetic impurities. Physical Review B, 2018, 98, .	3.2	4
27	Differential Poissonâ€™s ratio of a crystalline two-dimensional membrane. Annals of Physics, 2018, 396, 119-136.	2.8	32
28	Two-instanton approximation to the Coulomb blockade problem. Low Temperature Physics, 2017, 43, 95-100.	0.6	3
29	Strong nonequilibrium effects in spin-torque systems. Physical Review B, 2017, 95, .	3.2	12
30	Entanglement entropy and particle number cumulants of disordered fermions. Annals of Physics, 2017, 383, 140-156.	2.8	5
31	Indirect exchange interaction between magnetic impurities near the helical edge. Physical Review B, 2017, 95, .	3.2	32
32	Mesoscopic fluctuations of the local density of states in interacting electron systems. JETP Letters, 2017, 106, 272-281.	1.4	4
33	Helical edge transport in the presence of a magnetic impurity. JETP Letters, 2017, 106, 593-599.	1.4	26
34	Mesoscopic fluctuations of the single-particle Green's function at Anderson transitions with Coulomb interaction. Physical Review B, 2016, 94, .	3.2	11
35	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
36	Quantum elasticity of graphene: Thermal expansion coefficient and specific heat. Physical Review B, 2016, 94, .	3.2	50

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37	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
38	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
39	U(1) and SU(2) quantum dissipative systems: the Caldeiraâ€“Leggett Versus Ambegaokarâ€“Eckernâ€“SchÃ¶n approaches. Journal of Experimental and Theoretical Physics, 2016, 122, 576-586.	0.9	2
40	Two-loop renormalization of the Finkelâ€™stein theory: The specific heat. Annals of Physics, 2016, 364, 120-135.	2.8	4
41	Chapter 3. Transport in a Two-Dimensional Disordered Electron Liquid with Isospin Degrees of Freedom. , 2016, , 65-116.		0
42	Tunneling density of states in quantum dots with anisotropic exchange. Physical Review B, 2015, 92, .	3.2	0
43	Charge relaxation resistance in the cotunneling regime of multichannel Coulomb blockade: Violation of Korringa-Shiba relation. Physical Review B, 2015, 92, .	3.2	4
44	Berezinskii-Kosterlitz-Thouless transition in homogeneously disordered superconducting films. Physical Review B, 2015, 92, .	3.2	24
45	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
46	Superconductor-insulator transitions: Phase diagram and magnetoresistance. Physical Review B, 2015, 92, .	3.2	44
47	Strongly correlated two-dimensional plasma explored from entropy measurements. Nature Communications, 2015, 6, 7298.	12.8	38
48	Temperature derivative of the chemical potential and its magneto-oscillations in a two-dimensional system. JETP Letters, 2015, 101, 125-129.	1.4	4
49	Geometric Quantum Noise of Spin. Physical Review Letters, 2015, 114, 176806.	7.8	18
50	Thermodynamic Studies of Two-Dimensional Correlated Electron Systems. Journal of Low Temperature Physics, 2015, 181, 99-111.	1.4	4
51	Multifractality and electron-electron interaction at Anderson transitions. Physical Review B, 2015, 91, .	3.2	20
52	Spin fluctuations in quantum dots. Physical Review B, 2014, 90, .	3.2	5
53	Half-integer quantum Hall effect of disordered Dirac fermions at a topological insulator surface. Physical Review B, 2014, 90, .	3.2	36
54	Statistics of spin fluctuations in quantum dots with Ising exchange. Physical Review B, 2014, 89, .	3.2	5

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55	Tunneling into the localized phase near Anderson transitions with Coulomb interaction. Physical Review B, 2014, 89, .	3.2	10
56	Interaction and disorder effects in three-dimensional topological insulator thin films. Physical Review B, 2013, 88, .	3.2	22
57	Multifractality at Anderson Transitions with Coulomb Interaction. Physical Review Letters, 2013, 111, 066601.	7.8	42
58	Enhancement of the Critical Temperature of Superconductors by Anderson Localization. Physical Review Letters, 2012, 108, 017002.	7.8	102
59	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
60	A quantum dot close to Stoner instability: The role of the Berry phase. Annals of Physics, 2012, 327, 2543-2559.	2.8	9
61	Cotunneling current through a two-level quantum dot coupled to magnetic leads: the role of exchange interaction. Journal of Physics Condensed Matter, 2012, 24, 155301.	1.8	2
62	Wave function multifractality and dephasing at metalâ€“insulator and quantum Hall transitions. Annals of Physics, 2011, 326, 1457-1478.	2.8	39
63	Disordered electron liquid in double quantum well heterostructures: Renormalization group analysis and dephasing rate. Physical Review B, 2011, 84, .	3.2	6
64	Spin and charge correlations in quantum dots: An exact solution. JETP Letters, 2010, 92, 179-184.	1.4	16
65	Out-of-equilibrium admittance of single electron box under strong Coulomb blockade. JETP Letters, 2010, 92, 696-702.	1.4	5
66	Macroscopic charge quantization in single-electron devices. Physical Review B, 2010, 81, .	3.2	10
67	Relaxation dynamics of the electron distribution in the Coulomb-blockade problem. Physical Review B, 2010, 82, .	3.2	12
68	The problem of Macroscopic Charge Quantization in the Coulomb Blockade. , 2009, , .		1
69	Charge relaxation resistance in the Coulomb blockade problem. Physical Review B, 2009, 80, .	3.2	23
70	Coulomb Blockade and Superuniversality of theÎ¸Angle. Physical Review Letters, 2008, 101, 056801.	7.8	12
71	Non-fermi liquid criticality and superuniversality in the quantum hall regime. JETP Letters, 2008, 87, 220-224.	1.4	20
72	Energy Relaxation in the Spin-Polarized Disordered Electron Liquid. Physical Review Letters, 2008, 100, 206804.	7.8	10

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73	Electronic properties in a two-dimensional disordered electron liquid: Spin-valley interplay. Physical Review B, 2008, 77, .	3.2	17
74	Metal-Insulator Transition in Two Dimensions: Experimental Test of the Two-Parameter Scaling. Physical Review Letters, 2008, 100, 046405.	7.8	35
75	The Problem Of True Macroscopic Charge Quantization In The Coulomb Blockade. NATO Science for Peace and Security Series B: Physics and Biophysics, 2008, , 59-68.	0.3	0
76	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
77	Conductance oscillations with magnetic field of a two-dimensional electron gasâ€“superconductor junction. Physical Review B, 2007, 75, .	3.2	31
78	Î¸ renormalization, electronâ€“electron interactions and super universality in the quantum Hall regime. Annals of Physics, 2007, 322, 1265-1334.	2.8	30
79	Crossover behavior of disordered interacting two-dimensional electron systems in a parallel magnetic field. JETP Letters, 2007, 84, 656-661.	1.4	3
80	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
81	Non-Fermi liquid theory of quantum Hall effects. JETP Letters, 2005, 82, 150-154.	1.4	4
82	The instanton vacuum of generalized CPNâ^'1 models. Annals of Physics, 2005, 316, 285-356.	2.8	36
83	Domain wall effects in ferromagnet-superconductor structures. Physical Review B, 2005, 72, .	3.2	29
84	Anisotropic conductivity tensor on a half-filled high Landau level. Physical Review B, 2005, 71, .	3.2	0
85	Comment on â€œTopological Oscillations of the Magnetoconductance in Disordered GaAs Layersâ€: Physical Review Letters, 2005, 95, 189701; author reply 189702.	7.8	7
86	The anisotropic conductivity of two-dimensional electrons on a half-filled high Landau evel. JETP Letters, 2004, 79, 177-182.	1.4	1
87	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
88	Andreev conductance of a domain wall. Physical Review B, 2003, 68, .	3.2	26
89	Mean-field phase diagram of two-dimensional electrons with disorder in a weak magnetic field. Physical Review B, 2003, 68, .	3.2	2
90	Non-Fermi-liquid theory for disordered metals near two dimensions. Physical Review B, 2002, 66, .	3.2	28

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91	Two-dimensional electron liquid with disorder in a weak magnetic field. Journal of Experimental and Theoretical Physics, 2002, 95, 132-144.	0.9	6
92	Attenuation of an optical wave propagating in a waveguide, formed by layers of a semiconductor heterostructure, owing to scattering on inhomogeneities. Quantum Electronics, 1999, 29, 500-504.	1.0	1