

# Valerii Vinokour

## List of Publications by Year in descending order

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Version: 2024-02-01

116  
papers

9,113  
citations

172386

29  
h-index

38368

95  
g-index

118  
all docs

118  
docs citations

118  
times ranked

4996  
citing authors



#	ARTICLE	IF	CITATIONS
19	Superinsulator–superconductor duality in two dimensions. <i>Annals of Physics</i> , 2013, 331, 236-257.	1.0	45
20	Ferroelectric symmetry-protected multibit memory cell. <i>Scientific Reports</i> , 2017, 7, 42196.	1.6	45
21	Fluctuation spectroscopy of disordered two-dimensional superconductors. <i>Physical Review B</i> , 2011, 84, .	1.1	43
22	Superconductivity between standard types: Multiband versus single-band materials. <i>Physical Review B</i> , 2016, 93, .	1.1	41
23	Reversible Magnetization of Irradiated High-Tc Superconductors. <i>Physical Review Letters</i> , 1996, 77, 936-939.	2.9	40
24	Critical behavior at a dynamic vortex insulator-to-metal transition. <i>Science</i> , 2015, 349, 1202-1205.	6.0	40
25	Electrodynamics of ferroelectric films with negative capacitance. <i>Physical Review B</i> , 2018, 98, .	1.1	40
26	Depinning and dynamics of vortices confined in mesoscopic flow channels. <i>New Journal of Physics</i> , 2005, 7, 71-71.	1.2	36
27	Harnessing ferroelectric domains for negative capacitance. <i>Communications Physics</i> , 2019, 2, .	2.0	36
28	Thermoelectric current in a graphene Cooper pair splitter. <i>Nature Communications</i> , 2021, 12, 138.	5.8	33
29	Arrow of time and its reversal on the IBM quantum computer. <i>Scientific Reports</i> , 2019, 9, 4396.	1.6	32
30	Theory of fluctuations in a two-band superconductor: MgB <sub>2</sub> . <i>Physical Review B</i> , 2005, 72, .	1.1	28
31	Nanopattern-stimulated superconductor-insulator transition in thin TiN films. <i>Europhysics Letters</i> , 2011, 93, 47002.	0.7	28
32	Quantum-critical region of the disorder-driven superconductor–insulator transition. <i>Physica C: Superconductivity and Its Applications</i> , 2008, 468, 316-321.	0.6	27
33	Charge Berezinskii-Kosterlitz-Thouless transition in superconducting NbTiN films. <i>Scientific Reports</i> , 2018, 8, 4082.	1.6	27
34	Confinement and asymptotic freedom with Cooper pairs. <i>Communications Physics</i> , 2018, 1, .	2.0	27
35	Controllable skyrmion chirality in ferroelectrics. <i>Scientific Reports</i> , 2020, 10, 8657.	1.6	26
36	H-theorem in quantum physics. <i>Scientific Reports</i> , 2016, 6, 32815.	1.6	25

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37	Suppression of surface barriers in superconductors by columnar defects. <i>Physical Review B</i> , 2001, 64, .	1.1	24
38	Parity-time symmetry-breaking mechanism of dynamic Mott transitions in dissipative systems. <i>Physical Review B</i> , 2016, 94, .	1.1	24
39	Hyperactivated resistance in TiN films on the insulating side of the disorder-driven superconductor-insulator transition. <i>JETP Letters</i> , 2008, 88, 752-757.	0.4	23
40	Bosonic topological insulator intermediate state in the superconductor-insulator transition. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2020, 384, 126570.	0.9	23
41	Rayleigh instability of confined vortex droplets in critical superconductors. <i>Nature Physics</i> , 2015, 11, 21-25.	6.5	22
42	Parity-time symmetry breaking in spin chains. <i>Physical Review B</i> , 2018, 97, .	1.1	20
43	Tunneling density of states of granular metals. <i>Physical Review B</i> , 2004, 70, .	1.1	18
44	The ferroelectric field-effect transistor with negative capacitance. <i>Npj Computational Materials</i> , 2022, 8, .	3.5	18
45	Laser-induced micropore formation and modification of cartilage structure in osteoarthritis healing. <i>Journal of Biomedical Optics</i> , 2017, 22, 091515.	1.4	17
46	Optical properties of TiN thin films close to the superconductor-insulator transition. <i>New Journal of Physics</i> , 2009, 11, 113017.	1.2	16
47	Reentrant Resistive Behavior and Dimensional Crossover in Disordered Superconducting TiN Films. <i>Scientific Reports</i> , 2017, 7, 1718.	1.6	15
48	Exceptional points in classical spin dynamics. <i>Scientific Reports</i> , 2019, 9, 17484.	1.6	15
49	Weak localization in metallic granular media. <i>Physical Review B</i> , 2006, 73, .	1.1	14
50	Geometrical vortex lattice pinning and melting in YBaCuO submicron bridges. <i>Scientific Reports</i> , 2016, 6, 38677.	1.6	14
51	Observation of Unconventional Dynamics of Domain Walls in Uniaxial Ferroelectric Lead Germanate. <i>Advanced Functional Materials</i> , 2020, 30, 2000284.	7.8	14
52	Superconducting phase transitions in disordered NbTiN films. <i>Scientific Reports</i> , 2020, 10, 1471.	1.6	14
53	Quantum magnetic monopole condensate. <i>Communications Physics</i> , 2021, 4, .	2.0	14
54	Transport properties of semiconducting nanocrystal arrays at low temperatures. <i>Physical Review B</i> , 2007, 75, .	1.1	13

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55	Comment on "Vortex-assisted photon counts and their magnetic field dependence in single-photon superconducting detectors". Physical Review B, 2012, 86, .	1.1	13
56	Rayleigh approximation to ground state of the Bose and Coulomb glasses. Scientific Reports, 2015, 5, 7821.	1.6	13
57	Effects of fluctuations and Coulomb interaction on the transition temperature of granular superconductors. Physical Review B, 2005, 71, .	1.1	12
58	Insulating state of granular superconductors in a strong-coupling regime. Physical Review B, 2006, 74, .	1.1	12
59	Edge effect pinning in mesoscopic superconducting strips with non-uniform distribution of defects. Scientific Reports, 2019, 9, 211.	1.6	12
60	Topological Nature of High Temperature Superconductivity. Advanced Quantum Technologies, 2021, 4, 2000135.	1.8	12
61	Linear dynamics of classical spin as Möbius transformation. Scientific Reports, 2017, 7, 1168.	1.6	11
62	Scaling universality at the dynamic vortex Mott transition. Physical Review B, 2018, 97, .	1.1	11
63	Magnetic Monopoles and Superinsulation in Josephson Junction Arrays. Quantum Reports, 2020, 2, 388-399.	0.6	11
64	Spatially correlated incommensurate lattice modulations in an atomically thin high-temperature $\langle \mathbf{m} \rangle = \langle \mathbf{m}_0 \rangle + \langle \mathbf{m}_1 \rangle + \langle \mathbf{m}_2 \rangle + \dots$ Physical Review Materials, 2020, 4, .		
65	Vortex phase separation in mesoscopic superconductors. Scientific Reports, 2013, 3, .	1.6	10
66	Mechanically assisted spin-dependent transport of electrons. Physical Review B, 2005, 71, .	1.1	9
67	Depinning Transition of a Domain Wall in Ferromagnetic Films. Scientific Reports, 2015, 5, 14062.	1.6	9
68	Electronic transport in two-dimensional high dielectric constant nanosystems. Scientific Reports, 2015, 5, 9667.	1.6	9
69	Superconductor-Insulator Transition in NbTiN Films. JETP Letters, 2017, 106, 749-753.	0.4	9
70	Vogel-Fulcher-Tamman criticality of 3D superinsulators. Scientific Reports, 2018, 8, 15718.	1.6	9
71	Dynamical instability of the electric transport in superconductors. Scientific Reports, 2018, 8, 14104.	1.6	9
72	Direct probe of the interior of an electric pion in a Cooper pair superinsulator. Communications Physics, 2020, 3, .	2.0	9

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73	Superconductor-insulator transition in the absence of disorder. <i>Physical Review B</i> , 2021, 103, .	1.1	9
74	Extended quantum Maxwell demon acting over macroscopic distances. <i>Physical Review B</i> , 2018, 98, .	1.1	8
75	Entropy Dynamics in the System of Interacting Qubits. <i>Journal of Russian Laser Research</i> , 2018, 39, 120-127.	0.3	8
76	Temperature Dependence of Dielectric Properties of Ferroelectric Heterostructures with Domain-Provided Negative Capacitance. <i>Nanomaterials</i> , 2022, 12, 75.	1.9	8
77	Solving Large-Scale Linear Systems of Equations by a Quantum Hybrid Algorithm. <i>Annalen Der Physik</i> , 2022, 534, .	0.9	8
78	Correlation functions for an elastic string in a random potential: an Instanton approach. <i>Physical Review B</i> , 2002, 66, .	1.1	7
79	Dual threshold diode based on the superconductor-to-insulator transition in ultrathin TiN films. <i>Applied Physics Letters</i> , 2013, 102, .	1.5	7
80	Quantum-to-classical crossover near quantum critical point. <i>Scientific Reports</i> , 2016, 5, 18600.	1.6	7
81	Disordered Berezinskii-Kosterlitz-Thouless transition and superinsulation. <i>Physical Review B</i> , 2018, 97, .	1.1	7
82	Shot noise spectroscopy of electronic spin flips in quantum dots. <i>Applied Physics Letters</i> , 2007, 90, 192105.	1.5	6
83	Heating effects in a chain of quantum dots. <i>Physical Review B</i> , 2010, 82, .	1.1	6
84	Synchronized Andreev transmission in SNS junction arrays. <i>Physical Review B</i> , 2010, 82, .	1.1	6
85	Transport properties of clean and disordered Josephson-junction arrays. <i>Physical Review B</i> , 2009, 80, .	1.1	5
86	Self-organized superconducting textures in thin films. <i>Physical Review B</i> , 2011, 84, .	1.1	5
87	Weak links in proximity-superconducting two-dimensional electron systems. <i>Physical Review B</i> , 2014, 89, .	1.1	5
88	Phase estimation algorithm for the multibeam optical metrology. <i>Scientific Reports</i> , 2020, 10, 8715.	1.6	5
89	Linear Ascending Metrological Algorithm. <i>Physical Review Research</i> , 2021, 3, .	1.3	5
90	Superconductivity in a disordered metal with Coulomb interactions. <i>Physical Review Research</i> , 2020, 2, .	1.3	5

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91	Converting of Boolean Expression to Linear Equations, Inequalities and QUBO Penalties for Cryptanalysis. <i>Algorithms</i> , 2022, 15, 33.	1.2	5
92	Phase Diagram of a Strained Ferroelectric Nanowire. <i>Crystals</i> , 2022, 12, 453.	1.0	5
93	Density of states of two-dimensional systems with long-range logarithmic interactions. <i>Physical Review B</i> , 2015, 92, .	1.1	4
94	H-theorem and Maxwell demon in quantum physics. <i>AIP Conference Proceedings</i> , 2018, , .	0.3	4
95	Current-driven production of vortex-antivortex pairs in planar Josephson junction arrays and phase cracks in long-range order. <i>Scientific Reports</i> , 2018, 8, 15460.	1.6	4
96	The Superconductor-Superinsulator Transition: S-duality and the QCD on the Desktop. <i>Journal of Superconductivity and Novel Magnetism</i> , 2019, 32, 47-51.	0.8	4
97	Zhao etÂal. Reply:. <i>Physical Review Letters</i> , 2020, 124, 249702.	2.9	4
98	Topological gauge theory of the superconductor-insulator transition. , 2018, , 197-221.		4
99	Giant super-Poissonian shot noise in spin-polarized SET structures. <i>Low Temperature Physics</i> , 2007, 33, 757-761.	0.2	3
100	Far-from-equilibrium superconductor in fluctuational regime. <i>Physical Review B</i> , 2011, 84, .	1.1	3
101	Heat generation due to the Anderson catastrophe in mesoscopic devices. <i>Physical Review B</i> , 2020, 102, .	1.1	3
102	Giant shot noise due to mechanical transportation of spin-polarized electrons. <i>Physical Review B</i> , 2008, 77, .	1.1	2
103	Gate-tunable electron interaction in high- $\hat{\epsilon}$ dielectric films. <i>Scientific Reports</i> , 2017, 7, 42770.	1.6	2
104	Universality and critical behavior of the dynamical Mott transition in a system with long-range interactions. <i>Scientific Reports</i> , 2017, 7, 44044.	1.6	2
105	Dimension Effects in Insulating NbTiN Disordered Films and the Asymptotic Freedom of Cooper Pairs. <i>JETP Letters</i> , 2019, 109, 795-798.	0.4	2
106	$\mathcal{P}\mathcal{T}$ -Symmetric Effective Model for Nonequilibrium Phase Transitions in a Dissipative Fermionic Mott Insulator Chain. <i>Scientific Reports</i> , 2020, 10, 7304.	1.6	2
107	Realization of the Wernerâ€“Holevo and Landauâ€“Streater Quantum Channels for Qutrits on Quantum Computers. <i>Journal of Russian Laser Research</i> , 2020, 41, 40-53.	0.3	2
108	Topological Model of the Pseudogap State: Experimental Signatures. <i>Frontiers in Physics</i> , 2022, 9, .	1.0	2

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109	Resonant tunneling of fluctuation Cooper pairs. Scientific Reports, 2015, 5, 8315.	1.6	1
110	Time-reversal of an unknown quantum state. Communications Physics, 2020, 3, .	2.0	1
111	Supercapacitance and superinductance of TiN and NbTiN films in the vicinity of superconductor-to-insulator transition. Scientific Reports, 2021, 11, 16181.	1.6	1
112	Universal Upper Bound for the Entropy of Superconducting Vortices and the Quantum Nernst Effect. Quantum Reports, 2022, 4, 16-21.	0.6	1
113	Properties of electrostatically-driven granular medium: Phase transitions and charge transfer. AIP Conference Proceedings, 2000, , .	0.3	0
114	Superinsulatorâ€™Superconductor Duality in Two Dimensions and Berezinskiiâ€™Kosterlitzâ€™Thouless Transition. , 2013, , 255-295.		0
115	Terra quantum at MIPT-QUANT 2020. AIP Conference Proceedings, 2021, , .	0.3	0
116	Specific Features of the Destruction of a Superinsulating State by Voltage Pulses in NbTiN Films. JETP Letters, 2021, 114, 76-80.	0.4	0