

Valerii Vinokour

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

109
papers

7,734
citations

25
h-index

87
g-index

118
ext. papers

8,467
ext. citations

5.6
avg, IF

5.54
L-index

#	Paper	IF	Citations
109	Converting of Boolean Expression to Linear Equations, Inequalities and QUBO Penalties for Cryptanalysis. <i>Algorithms</i> , 2022 , 15, 33	1.8	2
108	Phase Diagram of a Strained Ferroelectric Nanowire. <i>Crystals</i> , 2022 , 12, 453	2.3	2
107	Universal Upper Bound for the Entropy of Superconducting Vortices and the Quantum Nernst Effect. <i>Quantum Reports</i> , 2022 , 4, 16-21	2.1	0
106	Linear Ascending Metrological Algorithm. <i>Physical Review Research</i> , 2021 , 3,	3.9	2
105	Thermoelectric current in a graphene Cooper pair splitter. <i>Nature Communications</i> , 2021 , 12, 138	17.4	7
104	Quantum magnetic monopole condensate. <i>Communications Physics</i> , 2021 , 4,	5.4	4
103	Topological Nature of High Temperature Superconductivity. <i>Advanced Quantum Technologies</i> , 2021 , 4, 2000135	4.3	2
102	Specific Features of the Destruction of a Superinsulating State by Voltage Pulses in NbTiN Films. <i>JETP Letters</i> , 2021 , 114, 76-80	1.2	
101	Supercapacitance and superinductance of TiN and NbTiN films in the vicinity of superconductor-to-insulator transition. <i>Scientific Reports</i> , 2021 , 11, 16181	4.9	0
100	Heat generation due to the Anderson catastrophe in mesoscopic devices. <i>Physical Review B</i> , 2020 , 102,	3.3	2
99	Hopfions emerge in ferroelectrics. <i>Nature Communications</i> , 2020 , 11, 2433	17.4	16
98	Controllable skyrmion chirality in ferroelectrics. <i>Scientific Reports</i> , 2020 , 10, 8657	4.9	10
97	Phase estimation algorithm for the multibeam optical metrology. <i>Scientific Reports</i> , 2020 , 10, 8715	4.9	1
96	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	2.3	8
95	Zhao et al. Reply. <i>Physical Review Letters</i> , 2020 , 124, 249702	7.4	1
94	Observation of Unconventional Dynamics of Domain Walls in Uniaxial Ferroelectric Lead Germanate. <i>Advanced Functional Materials</i> , 2020 , 30, 2000284	15.6	9
93	Superconducting phase transitions in disordered NbTiN films. <i>Scientific Reports</i> , 2020 , 10, 1471	4.9	5

92	Realization of the Werner-Holevo and Landau-Streater Quantum Channels for Qutrits on Quantum Computers. <i>Journal of Russian Laser Research</i> , 2020 , 41, 40-53	0.7	0
91	Broadband Nonreciprocity Enabled by Strong Coupling of Magnons and Microwave Photons. <i>Physical Review Applied</i> , 2020 , 13,	4.3	21
90	Spatially correlated incommensurate lattice modulations in an atomically thin high-temperature Bi _{2.1} Sr _{1.9} CaCu _{2.0} O _{8+y} superconductor. <i>Physical Review Materials</i> , 2020 , 4,	3.2	2
89	Superconductivity in a disordered metal with Coulomb interactions. <i>Physical Review Research</i> , 2020 , 2,	3.9	1
88	[Formula: see text]-Symmetric Effective Model for Nonequilibrium Phase Transitions in a Dissipative Fermionic Mott Insulator Chain. <i>Scientific Reports</i> , 2020 , 10, 7304	4.9	1
87	Magnetic Monopoles and Superinsulation in Josephson Junction Arrays. <i>Quantum Reports</i> , 2020 , 2, 388-399	4	
86	Direct probe of the interior of an electric pion in a Cooper pair superinsulator. <i>Communications Physics</i> , 2020 , 3,	5.4	6
85	Dimension Effects in Insulating NbTiN Disordered Films and the Asymptotic Freedom of Cooper Pairs. <i>JETP Letters</i> , 2019 , 109, 795-798	1.2	2
84	Edge effect pinning in mesoscopic superconducting strips with non-uniform distribution of defects. <i>Scientific Reports</i> , 2019 , 9, 211	4.9	8
83	Sign-Reversing Hall Effect in Atomically Thin High-Temperature Bi _{2.1} Sr _{1.9} CaCu _{2.0} O _{8+y} Superconductors. <i>Physical Review Letters</i> , 2019 , 122, 247001	7.4	19
82	The Superconductor-Superinsulator Transition: S-duality and the QCD on the Desktop. <i>Journal of Superconductivity and Novel Magnetism</i> , 2019 , 32, 47-51	1.5	2
81	Arrow of time and its reversal on the IBM quantum computer. <i>Scientific Reports</i> , 2019 , 9, 4396	4.9	17
80	Harnessing ferroelectric domains for negative capacitance. <i>Communications Physics</i> , 2019 , 2,	5.4	23
79	Exceptional points in classical spin dynamics. <i>Scientific Reports</i> , 2019 , 9, 17484	4.9	5
78	H-theorem and Maxwell demon in quantum physics 2018 ,		3
77	Scaling universality at the dynamic vortex Mott transition. <i>Physical Review B</i> , 2018 , 97,	3.3	5
76	Disordered Berezinskii-Kosterlitz-Thouless transition and superinsulation. <i>Physical Review B</i> , 2018 , 97,	3.3	4
75	Charge Berezinskii-Kosterlitz-Thouless transition in superconducting NbTiN films. <i>Scientific Reports</i> , 2018 , 8, 4082	4.9	18

74	Electrodynamics of ferroelectric films with negative capacitance. <i>Physical Review B</i> , 2018 , 98,	3.3	25
73	Entropy Dynamics in the System of Interacting Qubits. <i>Journal of Russian Laser Research</i> , 2018 , 39, 120-127		5
72	Topological gauge theory of the superconductor-insulator transition 2018 , 197-221		3
71	Confinement and asymptotic freedom with Cooper pairs. <i>Communications Physics</i> , 2018 , 1,	5.4	13
70	Vogel-Fulcher-Tamman criticality of 3D superinsulators. <i>Scientific Reports</i> , 2018 , 8, 15718	4.9	6
69	Extended quantum Maxwell demon acting over macroscopic distances. <i>Physical Review B</i> , 2018 , 98,	3.3	4
68	Dynamical instability of the electric transport in superconductors. <i>Scientific Reports</i> , 2018 , 8, 14104	4.9	7
67	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	4.9	4
66	Parity-time symmetry breaking in spin chains. <i>Physical Review B</i> , 2018 , 97,	3.3	13
65	Gate-tunable electron interaction in high- κ dielectric films. <i>Scientific Reports</i> , 2017 , 7, 42770	4.9	2
64	Ferroelectric symmetry-protected multibit memory cell. <i>Scientific Reports</i> , 2017 , 7, 42196	4.9	30
63	Laser-induced micropore formation and modification of cartilage structure in osteoarthritis healing. <i>Journal of Biomedical Optics</i> , 2017 , 22, 91515	3.5	14
62	Reentrant Resistive Behavior and Dimensional Crossover in Disordered Superconducting TiN Films. <i>Scientific Reports</i> , 2017 , 7, 1718	4.9	10
61	Universality and critical behavior of the dynamical Mott transition in a system with long-range interactions. <i>Scientific Reports</i> , 2017 , 7, 44044	4.9	0
60	Linear dynamics of classical spin as Möbius transformation. <i>Scientific Reports</i> , 2017 , 7, 1168	4.9	7
59	Superconductor-Insulator Transition in NbTiN Films. <i>JETP Letters</i> , 2017 , 106, 749-753	1.2	9
58	Superconductivity between standard types: Multiband versus single-band materials. <i>Physical Review B</i> , 2016 , 93,	3.3	30
57	Parity-time symmetry breaking in magnetic systems. <i>Physical Review B</i> , 2016 , 94,	3.3	33

56	Parity-time symmetry-breaking mechanism of dynamic Mott transitions in dissipative systems. <i>Physical Review B</i> , 2016 , 94,	3.3	18
55	H-theorem in quantum physics. <i>Scientific Reports</i> , 2016 , 6, 32815	4.9	14
54	Geometrical vortex lattice pinning and melting in YBaCuO submicron bridges. <i>Scientific Reports</i> , 2016 , 6, 38677	4.9	10
53	Electronic transport in two-dimensional high dielectric constant nanosystems. <i>Scientific Reports</i> , 2015 , 5, 9667	4.9	7
52	Critical behavior at a dynamic vortex insulator-to-metal transition. <i>Science</i> , 2015 , 349, 1202-5	33.3	32
51	Rayleigh instability of confined vortex droplets in critical superconductors. <i>Nature Physics</i> , 2015 , 11, 21-25.2	35.2	16
50	Quantum-to-classical crossover near quantum critical point. <i>Scientific Reports</i> , 2015 , 5, 18600	4.9	4
49	Density of states of two-dimensional systems with long-range logarithmic interactions. <i>Physical Review B</i> , 2015 , 92,	3.3	3
48	Resonant tunneling of fluctuation Cooper pairs. <i>Scientific Reports</i> , 2015 , 5, 8315	4.9	
47	Depinning Transition of a Domain Wall in Ferromagnetic Films. <i>Scientific Reports</i> , 2015 , 5, 14062	4.9	6
46	Rayleigh approximation to ground state of the Bose and Coulomb glasses. <i>Scientific Reports</i> , 2015 , 5, 7821	4.9	10
45	Weak links in proximity-superconducting two-dimensional electron systems. <i>Physical Review B</i> , 2014 , 89,	3.3	5
44	Dual threshold diode based on the superconductor-to-insulator transition in ultrathin TiN films. <i>Applied Physics Letters</i> , 2013 , 102, 042601	3.4	7
43	Magnetic field-induced dissipation-free state in superconducting nanostructures. <i>Nature Communications</i> , 2013 , 4, 1437	17.4	75
42	Superinsulator-Superconductor duality in two dimensions. <i>Annals of Physics</i> , 2013 , 331, 236-257	2.5	36
41	Superinsulator-Superconductor Duality in Two Dimensions and Berezinskii-Kosterlitz-Thouless Transition 2013 , 255-295		
40	Vortex phase separation in mesoscopic superconductors. <i>Scientific Reports</i> , 2013 , 3,	4.9	9
39	Superconducting phase transitions in ultrathin TiN films. <i>Europhysics Letters</i> , 2012 , 97, 17012	1.6	47

38	Comment on Vortex-assisted photon counts and their magnetic field dependence in single-photon superconducting detectors <i>Physical Review B</i> , 2012 , 86,	3.3	13
37	Self-organized superconducting textures in thin films. <i>Physical Review B</i> , 2011 , 84,	3.3	3
36	Fluctuation spectroscopy of disordered two-dimensional superconductors. <i>Physical Review B</i> , 2011 , 84,	3.3	36
35	Nanopattern-stimulated superconductor-insulator transition in thin TiN films. <i>Europhysics Letters</i> , 2011 , 93, 47002	1.6	26
34	Far-from-equilibrium superconductor in fluctuational regime. <i>Physical Review B</i> , 2011 , 84,	3.3	3
33	Heating effects in a chain of quantum dots. <i>Physical Review B</i> , 2010 , 82,	3.3	6
32	Pseudogap in a thin film of a conventional superconductor. <i>Nature Communications</i> , 2010 , 1, 140	17.4	125
31	Synchronized Andreev transmission in SNS junction arrays. <i>Physical Review B</i> , 2010 , 82,	3.3	5
30	Transport properties of clean and disordered Josephson-junction arrays. <i>Physical Review B</i> , 2009 , 80,	3.3	5
29	Optical properties of TiN thin films close to the superconductor-insulator transition. <i>New Journal of Physics</i> , 2009 , 11, 113017	2.9	15
28	Superinsulator and quantum synchronization. <i>Nature</i> , 2008 , 452, 613-5	50.4	162
27	Hyperactivated resistance in TiN films on the insulating side of the disorder-driven superconductor-insulator transition. <i>JETP Letters</i> , 2008 , 88, 752-757	1.2	21
26	Disorder-induced inhomogeneities of the superconducting state close to the superconductor-insulator transition. <i>Physical Review Letters</i> , 2008 , 101, 157006	7.4	218
25	Collective Cooper-pair transport in the insulating state of Josephson-junction arrays. <i>Physical Review Letters</i> , 2008 , 100, 086805	7.4	53
24	Giant shot noise due to mechanical transportation of spin-polarized electrons. <i>Physical Review B</i> , 2008 , 77,	3.3	1
23	Quantum-critical region of the disorder-driven superconductor-insulator transition. <i>Physica C: Superconductivity and Its Applications</i> , 2008 , 468, 316-321	1.3	25
22	Shot noise spectroscopy of electronic spin flips in quantum dots. <i>Applied Physics Letters</i> , 2007 , 90, 192105	3.4	6
21	Transport properties of semiconducting nanocrystal arrays at low temperatures. <i>Physical Review B</i> , 2007 , 75,	3.3	12

20	Giant super-Poissonian shot noise in spin-polarized SET structures. <i>Low Temperature Physics</i> , 2007 , 33, 757-761	0.7	3
19	Localized superconductivity in the quantum-critical region of the disorder-driven superconductor-insulator transition in TiN thin films. <i>Physical Review Letters</i> , 2007 , 99, 257003	7.4	146
18	Insulating state of granular superconductors in a strong-coupling regime. <i>Physical Review B</i> , 2006 , 74,	3.3	11
17	Weak localization in metallic granular media. <i>Physical Review B</i> , 2006 , 73,	3.3	14
16	Mechanically assisted spin-dependent transport of electrons. <i>Physical Review B</i> , 2005 , 71,	3.3	9
15	Theory of fluctuations in a two-band superconductor: MgB ₂ . <i>Physical Review B</i> , 2005 , 72,	3.3	27
14	Depinning and dynamics of vortices confined in mesoscopic flow channels. <i>New Journal of Physics</i> , 2005 , 7, 71-71	2.9	34
13	Effects of fluctuations and Coulomb interaction on the transition temperature of granular superconductors. <i>Physical Review B</i> , 2005 , 71,	3.3	10
12	Tunneling density of states of granular metals. <i>Physical Review B</i> , 2004 , 70,	3.3	17
11	Correlation functions for an elastic string in a random potential: Instanton approach. <i>Physical Review B</i> , 2002 , 66,	3.3	6
10	Vortex avalanches and magnetic flux fragmentation in superconductors. <i>Physical Review Letters</i> , 2001 , 87, 067003	7.4	69
9	Suppression of surface barriers in superconductors by columnar defects. <i>Physical Review B</i> , 2001 , 64,	3.3	23
8	Reversible Magnetization of Irradiated High-T _c Superconductors. <i>Physical Review Letters</i> , 1996 , 77, 936-939	7.4	38
7	Transport properties of high-temperature superconductors: Surface vs bulk effect. <i>Physical Review B</i> , 1996 , 54, 6750-6757	3.3	68
6	Peak effect in twinned superconductors. <i>Physical Review Letters</i> , 1995 , 75, 2992-2995	7.4	70
5	Vortex line pinning and Bose-glass dynamics in heavy-ion irradiated Bi ₂ Sr ₂ CaCu ₂ O _{8+δ} single crystals. <i>Physical Review Letters</i> , 1995 , 74, 1214-1217	7.4	107
4	Bose and vortex glasses in high temperature superconductors. <i>Physical Review Letters</i> , 1995 , 75, 4666-4669	7.4	69
3	Geometrical barriers in high-temperature superconductors. <i>Physical Review Letters</i> , 1994 , 73, 1428-1431	7.4	531

2	Vortices in high-temperature superconductors. <i>Reviews of Modern Physics</i> , 1994 , 66, 1125-1388	40.5	5015
1	Solving Large-Scale Linear Systems of Equations by a Quantum Hybrid Algorithm. <i>Annalen Der Physik</i> , 2200082	2.6	1