

Pauli Virtanen

List of Publications by Year in descending order

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74
papers

30,082
citations

236925

25
h-index

79698

73
g-index

75
all docs

75
docs citations

75
times ranked

33616
citing authors

#	ARTICLE	IF	CITATIONS
1	SciPy 1.0: fundamental algorithms for scientific computing in Python. <i>Nature Methods</i> , 2020, 17, 261-272.	19.0	17,539
2	Array programming with NumPy. <i>Nature</i> , 2020, 585, 357-362.	27.8	10,143
3	Predicted Very Large Thermoelectric Effect in Ferromagnet-Superconductor Junctions in the Presence of a Spin-Splitting Magnetic Field. <i>Physical Review Letters</i> , 2014, 112, 057001.	7.8	143
4	<i>Colloquium</i> : Nonequilibrium effects in superconductors with a spin-splitting field. <i>Reviews of Modern Physics</i> , 2018, 90, .	45.6	127
5	Thermal, electric and spin transport in superconductor/ferromagnetic-insulator structures. <i>Progress in Surface Science</i> , 2019, 94, 100540.	8.3	64
6	Induced Superconductivity in the Three-Dimensional Topological Insulator HgTe. <i>Physical Review Letters</i> , 2012, 109, 186806.	7.8	63
7	Electron-Phonon Coupling in Suspended Graphene: Supercollisions by Ripples. <i>Nano Letters</i> , 2014, 14, 3009-3013.	9.1	52
8	Lindblad-equation approach for the full counting statistics of work and heat in driven quantum systems. <i>Physical Review E</i> , 2014, 90, 022103.	2.1	52
9	Self-Oscillating Josephson Quantum Heat Engine. <i>Physical Review Applied</i> , 2016, 6, .	3.8	46
10	Magnetotransport Experiments on Fully Metallic Superconducting Dayem-Bridge Field-Effect Transistors. <i>Physical Review Applied</i> , 2019, 11, .	3.8	44
11	Thermoelectric effects in superconducting proximity structures. <i>Applied Physics A: Materials Science and Processing</i> , 2007, 89, 625-637.	2.3	43
12	Thermopower Induced by a Supercurrent in Superconductor-Normal-Metal Structures. <i>Physical Review Letters</i> , 2004, 92, 177004.	7.8	42
13	Long-Range Spin Accumulation from Heat Injection in Mesoscopic Superconductors with Zeeman Splitting. <i>Physical Review Letters</i> , 2015, 114, 167002.	7.8	39
14	Measuring Non-Gaussian Fluctuations through Incoherent Cooper-Pair Current. <i>Physical Review Letters</i> , 2004, 93, 247005.	7.8	37
15	Theory of Microwave-Assisted Supercurrent in Quantum Point Contacts. <i>Physical Review Letters</i> , 2010, 105, 117001.	7.8	37
16	Microwave spectroscopy of Josephson junctions in topological superconductors. <i>Physical Review B</i> , 2013, 88, .	3.2	34
17	Phase-controllable thermal Josephson junction. <i>Nature Nanotechnology</i> , 2017, 12, 425-429.	31.5	34
18	Signatures of Rashba spin-orbit interaction in the superconducting proximity effect in helical Luttinger liquids. <i>Physical Review B</i> , 2012, 85, .	3.2	31

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19	Microwave nanobolometer based on proximity Josephson junctions. <i>Physical Review B</i> , 2014, 90, .	3.2	30
20	Theory of Microwave-Assisted Supercurrent in Diffusive SNS Junctions. <i>Physical Review Letters</i> , 2010, 104, 247003.	7.8	28
21	Probing the dynamics of Andreev states in a coherent Normal/Superconducting ring. <i>Scientific Reports</i> , 2011, 1, 3.	3.3	28
22	Nonequilibrium transport in mesoscopic multi-terminal SNS Josephson junctions. <i>Physical Review B</i> , 2008, 77, .	3.2	27
23	Thermal Conductance by the Inverse Proximity Effect in a Superconductor. <i>Physical Review Letters</i> , 2010, 105, 097004.	7.8	27
24	Superconducting spintronic tunnel diode. <i>Nature Communications</i> , 2022, 13, 2431.	12.8	27
25	Dephasing of spin and charge interference in helical Luttinger liquids. <i>Physical Review B</i> , 2011, 83, .	3.2	25
26	Coexistence of superconductivity and spin-splitting fields in superconductor/ferromagnetic insulator bilayers of arbitrary thickness. <i>Physical Review Research</i> , 2021, 3, .	3.6	25
27	Supercurrent and Andreev bound state dynamics in superconducting quantum point contacts under microwave irradiation. <i>Physical Review B</i> , 2011, 84, .	3.2	24
28	Coupling between electrons and optical phonons in suspended bilayer graphene. <i>Physical Review B</i> , 2015, 91, .	3.2	24
29	Thermopower in Andrew Interferometers. <i>Journal of Low Temperature Physics</i> , 2004, 136, 401-434.	1.4	23
30	Thermodynamic cycles in Josephson junctions. <i>Scientific Reports</i> , 2019, 9, 3238.	3.3	23
31	Linear ac response of diffusive SNS junctions. <i>Physical Review B</i> , 2011, 83, .	3.2	22
32	Majorana bound states in hybrid two-dimensional Josephson junctions with ferromagnetic insulators. <i>Physical Review B</i> , 2018, 98, .	3.2	20
33	Superconducting size effect in thin films under electric field: Mean-field self-consistent model. <i>Physical Review B</i> , 2019, 100, .	3.2	20
34	Josephson Photodetectors via Temperature-to-Phase Conversion. <i>Physical Review Applied</i> , 2018, 9, .	3.8	18
35	Spectral Characteristics of a Fully Superconducting SQUIPT. <i>Physical Review Applied</i> , 2016, 6, .	3.8	17
36	Phase-driven collapse of the Cooper condensate in a nanosized superconductor. <i>Physical Review B</i> , 2017, 96, .	3.2	17

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37	Superconductivity near a magnetic domain wall. <i>Physical Review B</i> , 2019, 99, .	3.2	17
38	High operating temperature in V-based superconducting quantum interference proximity transistors. <i>Scientific Reports</i> , 2017, 7, 8810.	3.3	14
39	On-chip cooling by heating with superconducting tunnel junctions. <i>Europhysics Letters</i> , 2018, 124, 48005.	2.0	14
40	Controlling spin polarization of a quantum dot via a helical edge state. <i>Physical Review B</i> , 2015, 92, .	3.2	13
41	Stimulated quasiparticles in spin-split superconductors. <i>Physical Review B</i> , 2016, 93, .	3.2	13
42	Phase-dependent microwave response of a graphene Josephson junction. <i>Physical Review Research</i> , 2022, 4, .	3.6	13
43	Supercurrent-Induced Temperature Gradient across a Nonequilibrium SNS Josephson Junction. <i>Physical Review Letters</i> , 2006, 96, 167004.	7.8	11
44	Spin Hanle effect in mesoscopic superconductors. <i>Physical Review B</i> , 2015, 91, .	3.2	11
45	Electron-phonon coupling in single-walled carbon nanotubes determined by shot noise. <i>Applied Physics Letters</i> , 2010, 97, 262115.	3.3	10
46	Quasiparticle entropy in superconductor/normal metal/superconductor proximity junctions in the diffusive limit. <i>Physical Review B</i> , 2017, 96, .	3.2	10
47	Hypersensitive Tunable Josephson Escape Sensor for Gigahertz Astronomy. <i>Physical Review Applied</i> , 2020, 14, .	3.8	10
48	Giant enhancement to spin battery effect in superconductor/ferromagnetic insulator systems. <i>Physical Review B</i> , 2021, 103, .	3.2	10
49	Energy transport via multiphonon processes in graphene. <i>Physical Review B</i> , 2014, 89, .	3.2	9
50	Quasiclassical free energy of superconductors: Disorder-driven first-order phase transition in superconductor/ferromagnetic-insulator bilayers. <i>Physical Review B</i> , 2020, 101, .	3.2	9
51	Spectral representation of the heat current in a driven Josephson junction. <i>Physical Review B</i> , 2017, 95, .	3.2	8
52	Nonlinear spin torque, pumping, and cooling in superconductor/ferromagnet systems. <i>Physical Review B</i> , 2020, 101, .	3.2	8
53	Nonadiabatic dynamics in strongly driven diffusive Josephson junctions. <i>Physical Review Research</i> , 2019, 1, .	3.6	8
54	Nonequilibrium characteristics in all-superconducting tunnel structures. <i>Physical Review B</i> , 2007, 75, .	3.2	7

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55	Fluctuation of heat current in Josephson junctions. AIP Advances, 2015, 5, 027140.	1.3	7
56	Microwave Admittance of Gold-Palladium Nanowires with Proximity-Induced Superconductivity. Advanced Electronic Materials, 2017, 3, 1600227.	5.1	7
57	Spin Pumping and Torque Statistics in the Quantum Noise Limit. Physical Review Letters, 2017, 118, 237701.	7.8	7
58	Microwave photoassisted dissipation and supercurrent of a phase-biased graphene-superconductor ring. Physical Review Research, 2021, 3, .	3.6	6
59	Magnetolectric effects in superconductors due to spin-orbit scattering: Nonlinear \int -model description. Physical Review B, 2021, 104, .	3.2	6
60	Effect of disorder on Majorana localization in topological superconductors: A quasiclassical approach. Physical Review B, 2020, 102, .	3.2	6
61	Current Rectification in Junctions with Spin-Split Superconductors. Physical Review Applied, 2022, 17, .	3.8	6
62	Thermodynamics of a Phase-Driven Proximity Josephson Junction. Entropy, 2019, 21, 1005.	2.2	5
63	Peltier effects in Andreev interferometers. Physical Review B, 2007, 75, .	3.2	4
64	Thermal transport through ac-driven transparent Josephson weak links. Physical Review B, 2014, 90, .	3.2	4
65	Circuit theory for noise in incoherent normal-superconducting structures. New Journal of Physics, 2006, 8, 50-50.	2.9	3
66	Phase-dependent noise correlations in normal-superconducting structures. Physical Review B, 2007, 76, .	3.2	3
67	Nonlinear \int model for disordered systems with intrinsic spin-orbit coupling. Physical Review B, 2022, 105, .	3.2	3
68	Influence of Supercurrents on Low-temperature Thermopower in Mesoscopic N/S Structures. Journal of Low Temperature Physics, 2007, 146, 193-212.	1.4	2
69	Thermal fluctuations and flux-tunable barrier in proximity Josephson junctions. Physical Review B, 2011, 84, .	3.2	2
70	Absorption of Heat into a Superconductor-Normal Metal-Superconductor Junction from a Fluctuating Environment. Physical Review Letters, 2012, 109, 067002.	7.8	2
71	Phase States of Multiterminal Mesoscopic Normal-Metal-Superconductor Structures. Physical Review Letters, 2007, 99, 217003.	7.8	1
72	Local and non-local shot noise in multiwalled carbon nanotubes. Europhysics Letters, 2009, 85, 37004.	2.0	1

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73	Rectifying Non-Gaussian Noise with Incoherent Cooper Pair Tunneling. AIP Conference Proceedings, 2006, , .	0.4	0
74	Nanoelectronic Devices: Microwave Admittance of Gold-Palladium Nanowires with Proximity-Induced Superconductivity (Adv. Electron. Mater. 6/2017). Advanced Electronic Materials, 2017, 3, .	5.1	0