

Anton Akhmerov

List of Publications by Year in descending order

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80
papers

8,491
citations

66234

42
h-index

62479

80
g-index

80
all docs

80
docs citations

80
times ranked

5266
citing authors

#	ARTICLE	IF	CITATIONS
1	Multiplet supercurrent in Josephson tunneling circuits. SciPost Physics, 2022, 12, .	1.5	12
2	Weyl Josephson circuits. Physical Review Research, 2021, 3, .	1.3	34
3	Minimal Zeeman field requirement for a topological transition in superconductors. SciPost Physics, 2021, 10, .	1.5	5
4	Amorphous topological phases protected by continuous rotation symmetry. SciPost Physics, 2021, 11, .	1.5	19
5	Enhanced Proximity Effect in Zigzag-Shaped Majorana Josephson Junctions. Physical Review Letters, 2020, 125, 086802.	2.9	31
6	Computation of topological phase diagram of disordered $\langle \text{mml:math} \text{xmlns:mml="http://www.w3.org/1998/Math/MathML"} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:msub} \rangle \langle \text{mml:mi} \rangle \text{Pb} \langle \text{mml:mi} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mn} \rangle 1 \langle \text{mml:mn} \rangle$ using the kernel polynomial method. Physical Review Research, 2020, 2, .	1.5	12
7	Topological Phases without Crystalline Counterparts. Physical Review Letters, 2019, 123, 196401.	2.9	84
8	Deterministic Creation and Braiding of Chiral Edge Vortices. Physical Review Letters, 2019, 122, 146803.	2.9	41
9	Supercurrent carried by nonequilibrium quasiparticles in a multiterminal Josephson junction. Physical Review B, 2019, 99, .	1.1	19
10	Influence of lattice termination on the edge states of the quantum spin Hall insulator monolayer $\langle \text{mml:math} \text{xmlns:mml="http://www.w3.org/1998/Math/MathML"} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mn} \rangle 1 \langle \text{mml:mn} \rangle \langle \text{mml:msup} \rangle \langle \text{mml:mi} \rangle T \langle \text{mml:mi} \rangle \langle \text{mml:mn} \rangle 1 \langle \text{mml:mn} \rangle$ Physical Review Materials, 2019, 3, .	0.9	31
11	Supercurrent-induced Majorana bound states in a planar geometry. SciPost Physics, 2019, 7, .	1.5	21
12	Reproducing topological properties with quasi-Majorana states. SciPost Physics, 2019, 7, .	1.5	164
13	Andreev rectifier: A nonlocal conductance signature of topological phase transitions. Physical Review B, 2018, 97, .	1.1	89
14	Tailoring supercurrent confinement in graphene bilayer weak links. Nature Communications, 2018, 9, 1722.	5.8	18
15	Breakdown of the Law of Reflection at a Disordered Graphene Edge. Physical Review Letters, 2018, 121, 136803.	2.9	3
16	Qsymm: algorithmic symmetry finding and symmetric Hamiltonian generation. New Journal of Physics, 2018, 20, 093026.	1.2	29
17	Majorana-Based Fermionic Quantum Computation. Physical Review Letters, 2018, 120, 220504.	2.9	27
18	A general algorithm for computing bound states in infinite tight-binding systems. SciPost Physics, 2018, 4, .	1.5	12

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19	Demonstration of an ac Josephson junction laser. <i>Science</i> , 2017, 355, 939-942.	6.0	71
20	Robustness of Majorana bound states in the short-junction limit. <i>Physical Review B</i> , 2017, 95, .	1.1	27
21	Observation of Electron Coherence and Fabry-Pérot Standing Waves at a Graphene Edge. <i>Nano Letters</i> , 2017, 17, 7380-7386.	4.5	26
22	Supercurrent Interference in Few-Mode Nanowire Josephson Junctions. <i>Physical Review Letters</i> , 2017, 119, 187704.	2.9	43
23	Two-dimensional Josephson vortex lattice and anomalously slow decay of the Fraunhofer oscillations in a ballistic SNS junction with a warped Fermi surface. <i>Physical Review B</i> , 2016, 94, .	1.1	13
24	Orbital effect of magnetic field on the Majorana phase diagram. <i>Physical Review B</i> , 2016, 93, .	1.1	65
25	Attractive critical point from weak antilocalization on fractals. <i>Physical Review B</i> , 2016, 94, .	1.1	10
26	Quantized conductance doubling and hard gap in a two-dimensional semiconductor-superconductor heterostructure. <i>Nature Communications</i> , 2016, 7, 12841.	5.8	146
27	Detecting Majorana nonlocality using strongly coupled Majorana bound states. <i>Physical Review B</i> , 2016, 94, .	1.1	17
28	Effects of the electrostatic environment on the Majorana nanowire devices. <i>New Journal of Physics</i> , 2016, 18, 033013.	1.2	60
29	Spatially resolved edge currents and guided-wave electronic states in graphene. <i>Nature Physics</i> , 2016, 12, 128-133.	6.5	105
30	Realization of Microwave Quantum Circuits Using Hybrid Superconducting-Semiconducting Nanowire Josephson Elements. <i>Physical Review Letters</i> , 2015, 115, 127002.	2.9	185
31	Ballistic Josephson junctions in edge-contacted graphene. <i>Nature Nanotechnology</i> , 2015, 10, 761-764.	15.6	194
32	Kwant: a software package for quantum transport. <i>New Journal of Physics</i> , 2014, 16, 063065.	1.2	862
33	Single fermion manipulation via superconducting phase differences in multiterminal Josephson junctions. <i>Physical Review B</i> , 2014, 90, .	1.1	79
34	Statistical topological insulators. <i>Physical Review B</i> , 2014, 89, .	1.1	71
35	Phase-locked magnetoconductance oscillations as a probe of Majorana edge states. <i>Physical Review B</i> , 2013, 87, .	1.1	13
36	Topological Blockade and Measurement of Topological Charge. <i>Physical Review Letters</i> , 2013, 110, 086803.	2.9	9

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37	Flux-controlled quantum computation with Majorana fermions. <i>Physical Review B</i> , 2013, 88, .	1.1	253
38	Braiding of non-Abelian anyons using pairwise interactions. <i>Physical Review A</i> , 2013, 87, .	1.0	16
39	Adaptive tuning of Majorana fermions in a quantum dot chain. <i>New Journal of Physics</i> , 2013, 15, 045020.	1.2	75
40	Coulomb-assisted braiding of Majorana fermions in a Josephson junction array. <i>New Journal of Physics</i> , 2012, 14, 035019.	1.2	257
41	Transmission probability through a \mathbb{Z}_2 glass and comparison with a \mathbb{Z}_2 walk. <i>Physical Review E</i> , 2012, 85, 021138.	0.8	21
42	Scattering theory of topological insulators and superconductors. <i>Physical Review B</i> , 2012, 85, .	1.1	137
43	Thermal metal-insulator transition in a helical topological superconductor. <i>Physical Review B</i> , 2012, 86, .	1.1	23
44	Zero-bias conductance peak and Josephson effect in graphene-NbTiN junctions. <i>Physical Review B</i> , 2012, 85, .	1.1	45
45	Spin-triplet supercurrent carried by quantum Hall edge states through a Josephson junction. <i>Physical Review B</i> , 2011, 83, .	1.1	54
46	Dirac boundary condition at the reconstructed zigzag edge of graphene. <i>Physical Review B</i> , 2011, 84, .	1.1	43
47	Majorana Fermions in Equilibrium and in Driven Cold-Atom Quantum Wires. <i>Physical Review Letters</i> , 2011, 106, 220402.	2.9	606
48	Coulomb stability of the 4π -periodic Josephson effect of Majorana fermions. <i>Physical Review B</i> , 2011, 84, .	1.1	105
49	Topological quantum number and critical exponent from conductance fluctuations at the quantum Hall plateau transition. <i>Physical Review B</i> , 2011, 84, .	1.1	34
50	Random-matrix theory of Andreev reflection from a topological superconductor. <i>Physical Review B</i> , 2011, 83, .	1.1	42
51	Effects of disorder on the transmission of nodal fermions through ad-wave superconductor. <i>Physical Review B</i> , 2011, 83, .	1.1	1
52	Quantum point contact as a probe of a topological superconductor. <i>New Journal of Physics</i> , 2011, 13, 053016.	1.2	228
53	Quantized Conductance at the Majorana Phase Transition in a Disordered Superconducting Wire. <i>Physical Review Letters</i> , 2011, 106, 057001.	2.9	252
54	The top-transmon: a hybrid superconducting qubit for parity-protected quantum computation. <i>New Journal of Physics</i> , 2011, 13, 095004.	1.2	118

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55	Probing Majorana edge states with a flux qubit. Physical Review B, 2011, 84, .	1.1	10
56	Scattering formula for the topological quantum number of a disordered multimode wire. Physical Review B, 2011, 83, .	1.1	157
57	Majorana fermions emerging from magnetic nanoparticles on a superconductor without spin-orbit coupling. Physical Review B, 2011, 84, .	1.1	333
58	Domain Wall in a Chiral p -Wave Superconductor: A Pathway for Electrical Current. Physical Review Letters, 2010, 104, 147001.	2.9	34
59	Flat-lens focusing of electrons on the surface of a topological insulator. Physical Review B, 2010, 82, .	1.1	20
60	Topological quantum computation away from the ground state using Majorana fermions. Physical Review B, 2010, 82, .	1.1	84
61	Absence of a metallic phase in charge-neutral graphene with a random gap. Physical Review B, 2010, 81, .	1.1	48
62	Theory of non-Abelian Fabry-Perot interferometry in topological insulators. Physical Review B, 2010, 81, .	1.1	20
63	Anyonic interferometry without anyons: how a flux qubit can read out a topological qubit. New Journal of Physics, 2010, 12, 125002.	1.2	146
64	Majorana Bound States without Vortices in Topological Superconductors with Electrostatic Defects. Physical Review Letters, 2010, 105, 046803.	2.9	135
65	Geodesic scattering by surface deformations of a topological insulator. Physical Review B, 2010, 82, .	1.1	13
66	Robustness of edge states in graphene quantum dots. Physical Review B, 2010, 82, .	1.1	154
67	Switching of electrical current by spin precession in the first Landau level of an inverted-gap semiconductor. Physical Review B, 2009, 80, .	1.1	16
68	Nonalgebraic length dependence of transmission through a chain of barriers with a Λ spacing distribution. Physical Review B, 2009, 79, .	1.1	34
69	Pseudodiffusive transmission of nodal Dirac fermions through a clean d -wave superconductor. Physical Review B, 2009, 80, .	1.1	1
70	Theory of the Topological Anderson Insulator. Physical Review Letters, 2009, 103, 196805.	2.9	311
71	Electrically Detected Interferometry of Majorana Fermions in a Topological Insulator. Physical Review Letters, 2009, 102, 216404.	2.9	522
72	Quantum Goos-Hänchen Effect in Graphene. Physical Review Letters, 2009, 102, 146804.	2.9	215

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73	Splitting of a Cooper Pair by a Pair of Majorana Bound States. Physical Review Letters, 2008, 101, 120403.	2.9	394
74	Boundary conditions for Dirac fermions on a terminated honeycomb lattice. Physical Review B, 2008, 77, .	1.1	406
75	Correspondence between Andreev reflection and Klein tunneling in bipolar graphene. Physical Review B, 2008, 77, .	1.1	41
76	Theory of the valley-valve effect in graphene nanoribbons. Physical Review B, 2008, 77, .	1.1	161
77	Valley-isospin dependence of the quantum Hall effect in a graphene $p \sim n$ Physical Review B, 2007, 76, .	1.1	68
78	Pseudodiffusive conduction at the Dirac point of a normal-superconductor junction in graphene. Physical Review B, 2007, 75, .	1.1	34
79	Detection of Valley Polarization in Graphene by a Superconducting Contact. Physical Review Letters, 2007, 98, 157003.	2.9	162
80	Universal temperature dependence of the conductivity of a strongly disordered granular metal. JETP Letters, 2006, 83, 211-216.	0.4	3