

# Jay D Sau

## List of Publications by Year in descending order

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77  
papers

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citations

108046

37  
h-index

81351

76  
g-index

77  
all docs

77  
docs citations

77  
times ranked

4512  
citing authors

#	ARTICLE	IF	CITATIONS
1	Signatures of nontopological patches on the surface of topological insulators. <i>Physical Review B</i> , 2022, 105, .	1.1	2
2	Acoustic-phonon-mediated superconductivity in Bernal bilayer graphene. <i>Physical Review B</i> , 2022, 105, .	1.1	27
3	Acoustic-phonon-mediated superconductivity in moiré graphene multilayers. <i>Physical Review B</i> , 2022, 106, .	1.1	18
4	Electron-boson-interaction induced particle-hole symmetry breaking of conductance into subgap states in superconductors. <i>Physical Review Research</i> , 2021, 3, .	1.3	5
5	Symmetry-breaking signatures of multiple Majorana zero modes in one-dimensional spin-triplet superconductors. <i>Physical Review B</i> , 2021, 104, .	1.1	3
6	Acoustic-Phonon-Mediated Superconductivity in Rhombohedral Trilayer Graphene. <i>Physical Review Letters</i> , 2021, 127, 187001.	2.9	47
7	Correlation-Induced Triplet Pairing Superconductivity in Graphene-Based Moiré Systems. <i>Physical Review Letters</i> , 2021, 127, 217001.	2.9	25
8	Fermion parity gap and exponential ground state degeneracy of the one-dimensional Fermi gas with intrinsic attractive interaction. <i>Physical Review B</i> , 2020, 102, .	1.1	0
9	Presence versus absence of end-to-end nonlocal conductance correlations in Majorana nanowires: Majorana bound states versus Andreev bound states. <i>Physical Review B</i> , 2019, 100, .	1.1	32
10	Conductance smearing and anisotropic suppression of induced superconductivity in a Majorana nanowire. <i>Physical Review B</i> , 2019, 99, .	1.1	18
11	Emergent gauge field and the Lifshitz transition of spin-orbit coupled bosons in one dimension. <i>Scientific Reports</i> , 2019, 9, 7471.	1.6	2
12	Proposal for Measuring the Parity Anomaly in a Topological Superconductor Ring. <i>Physical Review Letters</i> , 2019, 122, 117001.	2.9	11
13	Curvature of gap closing features and the extraction of Majorana nanowire parameters. <i>Physical Review B</i> , 2019, 99, .	1.1	11
14	Disorder-induced half-integer quantized conductance plateau in quantum anomalous Hall insulator-superconductor structures. <i>Physical Review B</i> , 2018, 97, .	1.1	61
15	Conductance interference in a superconducting Coulomb blockaded Majorana ring. <i>Physical Review B</i> , 2018, 97, .	1.1	17
16	Quasiparticle gaps in multiprobe Majorana nanowires. <i>Physical Review B</i> , 2018, 98, .	1.1	10
17	Chiral anomaly without Landau levels: From the quantum to the classical regime. <i>Physical Review B</i> , 2018, 98, .	1.1	4
18	Chiral supercurrent through a quantum Hall weak link. <i>Physical Review B</i> , 2018, 98, .	1.1	9

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19	Metamorphosis of Andreev bound states into Majorana bound states in pristine nanowires. Physical Review B, 2018, 98, .	1.1	33
20	Dissipation-enabled fractional Josephson effect. Physical Review B, 2018, 98, .	1.1	13
21	Distinguishing topological Majorana bound states from trivial Andreev bound states: Proposed tests through differential tunneling conductance spectroscopy. Physical Review B, 2018, 97, .	1.1	84
22	Role of dissipation in realistic Majorana nanowires. Physical Review B, 2017, 95, .	1.1	62
23	Robust zero-energy bound states in a helical lattice. Physical Review B, 2017, 96, .	1.1	5
24	Andreev bound states versus Majorana bound states in quantum dot-nanowire-superconductor hybrid structures: Trivial versus topological zero-bias conductance peaks. Physical Review B, 2017, 96, .	1.1	310
25	Detecting topological superconductivity using low-frequency doubled Shapiro steps. Physical Review B, 2017, 95, .	1.1	28
26	Conductance of a superconducting Coulomb-blockaded Majorana nanowire. Physical Review B, 2017, 96, .	1.1	53
27	Electron temperature and tunnel coupling dependence of zero-bias and almost-zero-bias conductance peaks in Majorana nanowires. Physical Review B, 2017, 96, .	1.1	57
28	Z3 Parafermionic Zero Modes without Andreev Backscattering from the 2/3 Fractional Quantum Hall State. Physical Review Letters, 2017, 119, 217701.	2.9	13
29	Global Phase Diagram of a Three-Dimensional Dirty Topological Superconductor. Physical Review Letters, 2017, 118, 227002.	2.9	17
30	Effects of spin-orbit coupling on zero-energy bound states localized at magnetic impurities in multiband superconductors. Physical Review B, 2017, 95, .	1.1	4
31	Dirty Weyl semimetals: Stability, phase transition, and quantum criticality. Physical Review B, 2016, 93, .	1.1	90
32	Proposal to probe quantum nonlocality of Majorana fermions in tunneling experiments. Physical Review B, 2015, 92, .	1.1	34
33	Equivalence of topological mirror superconductivity and chiral superconductivity in one dimension. Physical Review B, 2015, 92, .	1.1	3
34	Bulk disorder in the superconductor affects proximity-induced topological superconductivity. Physical Review B, 2015, 92, .	1.1	42
35	Dynamical Detection of Topological Phase Transitions in Short-Lived Atomic Systems. Physical Review Letters, 2015, 115, 190401.	2.9	11
36	Bound States of a Ferromagnetic Wire in a Superconductor. Physical Review Letters, 2015, 115, 127003.	2.9	29

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37	Topological Yu-Shiba-Rusinov chain from spin-orbit coupling. Physical Review B, 2015, 91, .	1.1	108
38	Majorana fermions in ferromagnetic chains on the surface of bulk spin-orbit coupled s-wave superconductors. Scientific Reports, 2015, 5, 8880.	1.6	64
39	Majorana fermions in chiral topological ferromagnetic nanowires. Physical Review B, 2015, 91, .	1.1	70
40	Substrate-induced Majorana renormalization in topological nanowires. New Journal of Physics, 2015, 17, 075001.	1.2	13
41	Magnetic field response and chiral symmetry of time-reversal-invariant topological superconductors. Physical Review B, 2014, 90, .	1.1	44
42	Suppressing defect production during passage through a quantum critical point. Physical Review B, 2014, 90, .	1.1	16
43	Generalized Eilenberger theory for Majorana zero-mode-carrying disordered $p$ -wave superconductors. Physical Review B, 2014, 90, .	1.1	19
44	Surface theory of a family of topological Kondo insulators. Physical Review B, 2014, 90, .	1.1	45
45	Transport in Two-Dimensional Disordered Semimetals. Physical Review Letters, 2014, 113, 186801.	2.9	20
46	Multiparticle Exciton Ionization in Shallow Doped Carbon Nanotubes. Journal of Physical Chemistry Letters, 2013, 4, 982-986.	2.1	2
47	Density of states of disordered topological superconductor-semiconductor hybrid nanowires. Physical Review B, 2013, 88, .	1.1	81
48	Topological superconducting state and Majorana fermions in carbon nanotubes. Physical Review B, 2013, 88, .	1.1	34
49	Amplitude mode of the $d$ -density-wave state and its relevance to high- $T_c$ cuprates. Physical Review B, 2013, 87, .	1.1	5
50	Zero-bias conductance peak in Majorana wires made of semiconductor/superconductor hybrid structures. Physical Review B, 2012, 86, .	1.1	97
51	Splitting of the zero-bias conductance peak as smoking gun evidence for the existence of the Majorana mode in a superconductor-semiconductor nanowire. Physical Review B, 2012, 86, .	1.1	256
52	To Close or Not to Close: The Fate of the Superconducting Gap Across the Topological Quantum Phase Transition in Majorana-Carrying Semiconductor Nanowires. Physical Review Letters, 2012, 109, 266402.	2.9	58
53	Topologically protected surface Majorana arcs and bulk Weyl fermions in ferromagnetic superconductors. Physical Review B, 2012, 86, .	1.1	68
54	Avoidance of Majorana Resonances in Periodic Topological Superconductor-Nanowire Structures. Physical Review Letters, 2012, 108, 067001.	2.9	29

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55	Topological Invariants for Spin-Orbit Coupled Superconductor Nanowires. <i>Physical Review Letters</i> , 2012, 109, 150408.	2.9	217
56	Experimental and materials considerations for the topological superconducting state in electron- and hole-doped semiconductors: Searching for non-Abelian Majorana modes in 1D nanowires and 2D heterostructures. <i>Physical Review B</i> , 2012, 85, .	1.1	114
57	Realizing a robust practical Majorana chain in a quantum-dot-superconductor linear array. <i>Nature Communications</i> , 2012, 3, 964.	5.8	152
58	Topological minigap in quasi-one-dimensional spin-orbit-coupled semiconductor Majorana wires. <i>Physical Review B</i> , 2012, 86, .	1.1	48
59	Probing non-Abelian statistics with Majorana fermion interferometry in spin-orbit-coupled semiconductors. <i>Physical Review B</i> , 2011, 84, .	1.1	27
60	Controlling non-Abelian statistics of Majorana fermions in semiconductor nanowires. <i>Physical Review B</i> , 2011, 84, .	1.1	165
61	Majorana fermion exchange in quasi-one-dimensional networks. <i>Physical Review B</i> , 2011, 84, .	1.1	95
62	Electrodynamic and Excitonic Intertube Interactions in Semiconducting Carbon Nanotube Aggregates. <i>ACS Nano</i> , 2011, 5, 2611-2618.	7.3	42
63	Anisotropic surface transport in topological insulators in proximity to a helical spin density wave. <i>Physical Review B</i> , 2011, 83, .	1.1	17
64	Chiral Rashba spin textures in ultracold Fermi gases. <i>Physical Review B</i> , 2011, 83, .	1.1	101
65	Diamagnetic Susceptibility Obtained from the Six-Vertex Model and Its Implications for the High-Temperature Diamagnetic State of Cuprate Superconductors. <i>Physical Review Letters</i> , 2011, 107, 177006.	2.9	6
66	Number conserving theory for topologically protected degeneracy in one-dimensional fermions. <i>Physical Review B</i> , 2011, 84, .	1.1	98
67	Topologically non-trivial superconductivity in spin-orbit-coupled systems: bulk phases and quantum phase transitions. <i>New Journal of Physics</i> , 2011, 13, 065004.	1.2	58
68	Majorana Fermions and a Topological Phase Transition in Semiconductor-Superconductor Heterostructures. <i>Physical Review Letters</i> , 2010, 105, 077001.	2.9	2,726
69	Universal quantum computation in a semiconductor quantum wire network. <i>Physical Review A</i> , 2010, 82, .	1.0	110
70	A theorem for the existence of Majorana fermion modes in spin-orbit-coupled semiconductors. <i>Annals of Physics</i> , 2010, 325, 219-231.	1.0	44
71	Non-Abelian quantum order in spin-orbit-coupled semiconductors: Search for topological Majorana particles in solid-state systems. <i>Physical Review B</i> , 2010, 82, .	1.1	408
72	Non-Abelian topological order in noncentrosymmetric superconductors with broken time-reversal symmetry. <i>Physical Review B</i> , 2010, 82, .	1.1	96

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73	Robustness of Majorana fermions in proximity-induced superconductors. Physical Review B, 2010, 82, .	1.1	147
74	Generic New Platform for Topological Quantum Computation Using Semiconductor Heterostructures. Physical Review Letters, 2010, 104, 040502.	2.9	1,575
75	Proximity effect at the superconductorâ€“topological insulator interface. Physical Review B, 2010, 81, .	1.1	178
76	Theory of domain formation in inhomogeneous ferromagnetic dipolar condensates within the truncated Wigner approximation. Physical Review A, 2009, 80, .	1.0	30
77	Possible electric-field-induced one-dimensional excitonic insulators in pairs of carbon nanotubes. Physical Review B, 2008, 78, .	1.1	5