Heung-Sun Sim

List of Publications by Year
in descending order

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87	1,668	279701	330025
papers	citations	23 h-index	37 g-index

87	87	87	1551
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Magnetic Edge States in a Magnetic Quantum Dot. Physical Review Letters, 1998, 80, 1501-1504.	2.9	102
2	Even-Odd Behavior of Conductance in Monatomic Sodium Wires. Physical Review Letters, 2001, 87, 096803.	2.9	102
3	Detailed Balance of Thermalization Dynamics in Rydberg-Atom Quantum Simulators. Physical Review Letters, 2018, 120, 180502.	2.9	80
4	Charge Frustration in a Triangular Triple Quantum Dot. Physical Review Letters, 2013, 110, 046803.	2.9	68
5	Magnetic edge states in graphene in nonuniform magnetic fields. Physical Review B, 2008, 77, .	1.1	66
6	Complete gate control of supercurrent in graphene pâ€“n junctions. Nature Communications, 2013, 4, 2525.	5.8	58
7	Quantum noise and mode nonorthogonality in non-Hermitian<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi mathvariant="script">PT</mml:mi></mml:math>-symmetric optical resonators. Physical Review A, 2011, 84, .	1.0	56
8	Observation of the Kondo screening cloud. Nature, 2020, 579, 210-213.	13.7	52
9	Nonequilibrium Dephasing in an Electronic Mach-Zehnder Interferometer. Physical Review Letters, 2008, 100, 196807.	2.9	50
10	Stabilization of single-electron pumps by high magnetic fields. Physical Review B, 2012, 86, .	1.1	49
11	Electronic structure of a magnetic quantum ring. Physical Review B, 1999, 60, 8767-8772.	1.1	39
12	Resonant transport in single-wall armchair carbon nanotubes with local mirror-symmetry-breaking deformations. Physical Review B, 2001, 63, .	1.1	38
13	Improvement of electron pump accuracy by a potential-shape-tunable quantum dot pump. Physical Review B, 2014, 90, .	1.1	34
14	How to Directly Measure a Kondo Cloudâ€™s Length. Physical Review Letters, 2013, 110, 246603.	2.9	33
15	Macroscopic Quantum Entanglement of a Kondo Cloud at Finite Temperature. Physical Review Letters, 2015, 114, 057203.	2.9	32
16	Ultrafast Emission and Detection of a Single-Electron Gaussian Wave Packet: A Theoretical Study. Physical Review Letters, 2016, 117, 146802.	2.9	32
17	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>Ï€</mml:mi></mml:math>Berry phase and Veselago lens in a bilayer graphene<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>n</mml:mi><mml:mi>p</mml:mi></mml:mrow></mml:math>junction. Physical Review B, 2011, 84, .	1.1	30
18	Electronic and transport properties of single-wall carbon nanotubes encapsulating fullerene-based structures. Physical Review B, 2001, 64, .	1.1	29

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19	Picosecond coherent electron motion in a silicon single-electron source. Nature Nanotechnology, 2019, 14, 1019-1023.	15.6	29
20	Quantum Hall Valley Splitters and a Tunable Mach-Zehnder Interferometer in Graphene. Physical Review Letters, 2021, 126, 146803.	2.9	28
21	Detecting perfect transmission in Josephson junctions on the surface of three dimensional topological insulators. New Journal of Physics, 2014, 16, 053007.	1.2	27
22	LO-Phonon Emission Rate of Hot Electrons from an On-Demand Single-Electron Source in a GaAs/AlGaAs Heterostructure. Physical Review Letters, 2018, 121, 137703.	2.9	27
23	Shot noise and transport in small quantum cavities with large openings. Physical Review B, 2002, 66, .	1.1	24
24	Magnetic Quantum Dot: A Magnetic Transmission Barrier and Resonator. Physical Review Letters, 2001, 87, 146601.	2.9	23
25	Fano resonance in a two-level quantum dot side-coupled to leads. Physical Review B, 2008, 77, .	1.1	23
26	Construction of an Optimal Witness for Unknown Two-Qubit Entanglement. Physical Review Letters, 2010, 105, 230404.	2.9	23
27	Electronic structure of collapsed C, BN, and BC3 nanotubes. Current Applied Physics, 2001, 1, 39-44.	1.1	22
28	Electron interactions in an antidot in the integer quantum Hall regime. Physics Reports, 2008, 456, 127-165.	10.3	22
29	Modified magnetic quantum dot with electric confining potentials. Physical Review B, 2001, 63, .	1.1	20
30	Topological vacuum bubbles by anyon braiding. Nature Communications, 2016, 7, 11131.	5.8	20
31	Phonon emission and arrival times of electrons from a single-electron source. Physical Review B, 2016, 93, .	1.1	19
32	Anisotropic Charge Kondo Effect in a Triple Quantum Dot. Physical Review Letters, 2014, 113, 236601.	2.9	18
33	Fractional Mutual Statistics on Integer Quantum Hall Edges. Physical Review Letters, 2020, 125, 196802.	2.9	18
34	Coulomb Blockade and Kondo Effect in a Quantum Hall Antidot. Physical Review Letters, 2003, 91, 266801.	2.9	17
35	Fractionalization and anyonic statistics in the integer quantum Hall collider. Physical Review B, 2022, 105, .	1.1	17
36	Shot Noise in Ballistic Quantum Dots with a Mixed Classical Phase Space. Physical Review Letters, 2002, 89, 066801.	2.9	16

#	Article	IF	Citations
37	Multiparticle Interference, Greenberger-Horne-Zeilinger Entanglement, and Full Counting Statistics. Physical Review Letters, 2006, 96, 020407.	2.9	16
38	Detecting Kondo Entanglement by Electron Conductance. Physical Review Letters, 2018, 120, 146801.	2.9	16
39	Negative Excess Shot Noise by Anyon Braiding. Physical Review Letters, 2019, 123, 016803.	2.9	16
40	Composite-Fermion Edge States in Fractional Quantum Hall Systems. Physical Review Letters, 1999, 82, 596-599.	2.9	14
41	Minimax optimization of entanglement witness operator for the quantification of three-qubit mixed-state entanglement. Physical Review A, 2012, 86, .	1.0	14
42	Attractive Coulomb interactions in a triple quantum dot. Physical Review B, 2018, 97, .	1.1	14
43	Edge state formation in magnetic quantum structures. Physica B: Condensed Matter, 1998, 249-251, 291-294.	1.3	13
44	Topological dephasing in the<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>Î½</mml:mi><mml:mo>=</mml:mo><mml:mn>2</mml:mn></mml:mrow></mml:math> quantum Hall regime. Physical Review B, 2015, 92, .	1.1	12
45	Electron and composite-fermion edge states in nonuniform magnetic fields. Physical Review B, 2001, 63, .	1.1	12
46	Towards unified understanding of conductance of stretched monatomic contacts. Physical Review B, 2003, 68, .	1.1	12
47	Maximum density hole droplets of an antidot in strong magnetic fields. Physical Review B, 2004, 70, .	1.1	12
48	Bilayer Graphene Interferometry: Phase Jump and Wave Collimation. Physical Review Letters, 2009, 103, 196802.	2.9	11
49	Quantifying mixed-state quantum entanglement by optimal entanglement witnesses. Physical Review A, 2012, 85, .	1.0	11
50	Evenâ€“odd behavior and quantization of conductance in monovalent atomic contacts. Physica E: Low-Dimensional Systems and Nanostructures, 2002, 14, 347-354.	1.3	10
51	Nonlocal Entanglement of 1D Thermal States Induced by Fermion Exchange Statistics. Physical Review Letters, 2017, 119, 210501.	2.9	10
52	Adjustable Quantum Interference Oscillations in Sb-Doped Bi₂Se₃ Topological Insulator Nanoribbons. ACS Nano, 2020, 14, 14118-14125.	7.3	10
53	Universal Thermal Entanglement of Multichannel Kondo Effects. Physical Review Letters, 2021, 127, 226801.	2.9	10
54	Electron-Pair Resonance in the Coulomb Blockade. Physical Review Letters, 2008, 100, 056809.	2.9	9

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55	Numerical renormalization group method for entanglement negativity at finite temperature. Physical Review B, 2018, 97, .	1.1	9
56	Absence of the Aharonov-Bohm effect of chiral Majorana fermion edge states. Physical Review B, 2014, 89, .	1.1	8
57	Geometric phase at a graphene edge: Scattering phase shift of Dirac fermions. Physical Review B, 2014, 89, .	1.1	8
58	Non-Ohmic conduction in exfoliated La0.7Ca0.3MnO3 thin films. Applied Physics Letters, 2020, 116, 022401.	1.5	8
59	Spectator Behavior in a Quantum Hall Antidot with Multiple Bound Modes. Physical Review Letters, 2010, 104, 196802.	2.9	7
60	Quasibound states at thresholds in multichannel impurity scattering. Journal of Physics A, 2003, 36, 1299-1314.	1.6	5
61	Revival of Electron Coherence in a Quantum Wire of Finite Length. Physical Review Letters, 2009, 102, 076401.	2.9	5
62	Visibility recovery by strong interaction in an electronic Mach-Zehnder interferometer. Physical Review B, 2012, 86, .	1.1	5
63	Electron Transport in a Multiple Quantum Dot: Recent Progress. Journal of the Korean Physical Society, 2018, 72, 1454-1466.	0.3	5
64	Electron-Tunneling-Assisted Non-Abelian Braiding of Rotating Majorana Bound States. Physical Review Letters, 2020, 125, 187702.	2.9	5
65	Edge-channel transport through quantum wires with a magnetic quantum dot. Physica E: Low-Dimensional Systems and Nanostructures, 2002, 12, 719-721.	1.3	4
66	Kondo effect of an antidot in the integer quantum Hall regime: a microscopic calculation. Physica E: Low-Dimensional Systems and Nanostructures, 2004, 22, 554-557.	1.3	4
67	Interferometric distillation and determination of unknown two-qubit entanglement. Physical Review A, 2009, 79, .	1.0	4
68	Capacitive interaction model for Aharonov-Bohm effects of a quantum Hall antidot. Physical Review B, 2011, 83, .	1.1	4
69	Tunable geometric phase of Dirac fermions in a topological junction. Physical Review B, 2013, 87, .	1.1	4
70	Parallelized Single-Electron Pumps Based on Gate-Tunable Quantum Dots. Journal of the Korean Physical Society, 2019, 75, 331-336.	0.3	4
71	Electronic interferometer capacitively coupled to a quantum dot. Physical Review B, 2009, 80, .	1.1	3
72	Charge Kondo effects in a quadruple quantum dot in spinless and spinful regimes. Physical Review B, 2020, 101, .	1.1	3

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73	Superconductor-ferromagnet-junction phase qubit. Journal of the Korean Physical Society, 2012, 60, 72-78.	0.3	2
74	Method of determining potential barrier heights at submonolayer AlAs/GaAs heterointerfaces. Physical Review B, 2001, 64, .	1.1	1
75	Effect of nonuniform continuum density of states on a Fano resonance in semiconductor quantum wells. Physical Review B, 2009, 80, .	1.1	1
76	Electron pair tunneling resonance in a double-dot interferometry. Physical Review B, 2010, 82, .	1.1	1
77	rf-Signal-induced heating effects in single-electron pumps composed of gate-tunable quantum dots. Physical Review B, 2021, 103, .	1.1	1
78	Significant energy relaxation of quantum dot emitted hot electrons. Physical Review Research, 2021, 3, .	1.3	1
79	Resonances in deformed carbon nanotubes. AIP Conference Proceedings, 2001, , .	0.3	0
80	Electron transport in carbon nanotubes encapsulating fullerenes. AIP Conference Proceedings, 2001, , .	0.3	0
81	HOLE MAXIMUM DENSITY DROPLETS OF A BELL SHAPE ANTIDOT POTENTIAL IN STRONG MAGNETIC FIELDS. International Journal of Modern Physics B, 2004, 18, 3657-3660.	1.0	0
82	Three-particle Hanbury Brownâ€“Twiss interferometer. Physica E: Low-Dimensional Systems and Nanostructures, 2006, 34, 472-475.	1.3	0
83	Kondo resonance in a spinless two-level quantum dot side-coupled to two leads. Physica E: Low-Dimensional Systems and Nanostructures, 2008, 40, 1624-1626.	1.3	0
84	The interplay between Zeeman splitting and spinâ€“orbit coupling in InAs nanowires. Nanoscale, 2018, 10, 23175-23181.	2.8	0
85	Asymmetric arms maximize visibility in hot-electron interferometers. Physical Review B, 2021, 104, .	1.1	0
86	Edge states in magnetic quantum structures and composite fermion systems. , 2001, , 178-193.		0
87	HOLE MAXIMUM DENSITY DROPLETS OF A BELL SHAPE ANTIDOT POTENTIAL IN STRONG MAGNETIC FIELDS. , 2005, , .		0