

Fernando Sols

List of Publications by Year in descending order

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136
all docs

136
docs citations

136
times ranked

4108
citing authors

#	ARTICLE	IF	CITATIONS
1	Continuous-time crystal from a spontaneous many-body Floquet state. Physical Review A, 2022, 105, .	2.5	2
2	Expansion of a one-dimensional Bose gas: the role of interactions and kinetic-energy driving. Journal of Physics B: Atomic, Molecular and Optical Physics, 2022, 55, 135301.	1.5	1
3	Long time universality of black-hole lasers. New Journal of Physics, 2021, 23, 023040.	2.9	5
4	Cat states in a driven superfluid: role of signal shape and switching protocol. European Physical Journal: Special Topics, 2021, 230, 1013-1019.	2.6	3
5	Strong-field-driven dynamics and high-harmonic generation in interacting one dimensional systems. Physical Review Research, 2020, 2, .	3.6	14
6	Layered chaos in mean-field and quantum many-body dynamics. Physical Review A, 2019, 99, .	2.5	4
7	Protected cat states from kinetic driving of a boson gas. Physical Review Research, 2019, 1, .	3.6	6
8	Generation of atypical hopping and interactions by kinetic driving. New Journal of Physics, 2018, 20, 073045.	2.9	7
9	Many-Body Quantum Chaos and Entanglement in a Quantum Ratchet. Physical Review Letters, 2018, 120, 234101.	7.8	11
10	Wannier-Bloch approach to localization in high-order harmonic generation in solids. , 2018, , .		0
11	Many-body effects in doped graphene on a piezoelectric substrate. Physical Review B, 2017, 96, .	3.2	1
12	Wannier-Bloch Approach to Localization in High-Harmonics Generation in Solids. Physical Review X, 2017, 7, .	8.9	83
13	Quantum Transport in the Black-Hole Configuration of an Atom Condensate Outcoupled Through an Optical Lattice. Annalen Der Physik, 2017, 529, 1600385.	2.4	1
14	Realization of uniform synthetic magnetic fields by periodically shaking an optical square lattice. New Journal of Physics, 2016, 18, 093013.	2.9	29
15	Reprint of : Heat pump driven by the shot noise of a tunnel contact. Physica E: Low-Dimensional Systems and Nanostructures, 2016, 82, 50-57.	2.7	0
16	Heat pump driven by the shot noise of a tunnel contact. Physica E: Low-Dimensional Systems and Nanostructures, 2016, 77, 156-163.	2.7	3
17	Electron-phonon vertex and its influence on the superconductivity of two-dimensional metals on a piezoelectric substrate. Physical Review B, 2016, 94, .	3.2	2
18	Certeza razonable en ciencia y filosofÃa. Scientia Et Fides, 2016, 4, 483.	0.7	1

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19	Entanglement and violation of classical inequalities in the Hawking radiation of flowing atom condensates. <i>New Journal of Physics</i> , 2015, 17, 105003.	2.9	16
20	Violation of classical inequalities by resonant Hawking radiation in a sonic black hole. <i>Physica Scripta</i> , 2015, T165, 014035.	2.5	2
21	Birth of a quasi-stationary black hole in an outcoupled Bose-Einstein condensate. <i>New Journal of Physics</i> , 2014, 16, 123033.	2.9	11
22	Violation of Cauchy-Schwarz inequalities by spontaneous Hawking radiation in resonant boson structures. <i>Physical Review A</i> , 2014, 89, .	2.5	29
23	Feshbach-type resonances for two-particle scattering in graphene. <i>Physical Review B</i> , 2014, 89, .	3.2	6
24	Generation of uniform synthetic magnetic fields by split driving of an optical lattice. <i>Physical Review A</i> , 2014, 90, .	2.5	18
25	Tunneling, self-trapping, and manipulation of higher modes of a Bose-Einstein condensate in a double well. <i>Physical Review A</i> , 2014, 89, .	2.5	29
26	Coupling Light into Graphene Plasmons through Surface Acoustic Waves. <i>Physical Review Letters</i> , 2013, 111, 237405.	7.8	95
27	Minimal coupling in oscillator models of quantum dissipation. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2013, 392, 1989-1993.	2.6	11
28	Effective Josephson dynamics in resonantly driven Bose-Einstein condensates. <i>New Journal of Physics</i> , 2013, 15, 103006.	2.9	22
29	Comment on "Creating artificial magnetic fields for cold atoms by photon-assisted tunneling" by Kolovsky A. R.. <i>Europhysics Letters</i> , 2013, 101, 40001.	2.0	34
30	Uncertainty, Incompleteness, Chance, and Design. , 2013, , 98-119.		1
31	Coupling Light into Graphene Plasmons through Surface Acoustic Waves. <i>Physical Review Letters</i> , 2013, 111, .	7.8	1
32	Orbital Josephson effect and interactions in driven atom condensates on a ring. <i>New Journal of Physics</i> , 2012, 14, 075023.	2.9	13
33	Triplet Pair Correlations ins-Wave Superfluids as a Signature of the Fulde-Ferrell-Larkin-Ovchinnikov State. <i>Physical Review Letters</i> , 2012, 109, 155304.	7.8	6
34	Macroscopic amplification of electroweak effects in molecular Bose-Einstein condensates. <i>Physical Review A</i> , 2012, 85, .	2.5	3
35	Temperature dependence of the conductivity of graphene on boron nitride. <i>Physical Review B</i> , 2012, 85, .	3.2	33
36	Coulomb drag in graphene-boron nitride heterostructures: Effect of virtual phonon exchange. <i>Physical Review B</i> , 2012, 86, .	3.2	21

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37	Two-step condensation of the charged Bose gas. Physical Review E, 2012, 86, 031102.	2.1	7
38	Directed transport in driven optical lattices by gauge generation. Physical Review A, 2011, 84, .	2.5	31
39	Friction-induced enhancement in the optical activity of interacting chiral molecules. Chemical Physics Letters, 2011, 516, 29-34.	2.6	15
40	Resonant Hawking radiation in Bose-Einstein condensates. New Journal of Physics, 2011, 13, 063048.	2.9	45
41	Expansion of matter waves in static and driven periodic potentials. Physical Review A, 2010, 82, .	2.5	33
42	Aspects of quantum cooling in electron and atom systems. Physica E: Low-Dimensional Systems and Nanostructures, 2010, 42, 466-471.	2.7	6
43	Variational approach to the Caldeira-Leggett model. Physica E: Low-Dimensional Systems and Nanostructures, 2010, 42, 378-382.	2.7	0
44	Weakly driven quantum coherent ratchets in cold-atom systems. Physical Review A, 2010, 82, .	2.5	15
45	Creffield and Sols Reply:. Physical Review Letters, 2010, 104, .	7.8	4
46	Variational approach to the excitonic phase transition in graphene. Physical Review B, 2010, 82, .	3.2	43
47	Two-body problem in graphene. Physical Review B, 2010, 81, .	3.2	70
48	Deterministic Ratchet from Stationary Light Fields. Physical Review Letters, 2009, 103, 130601.	7.8	20
49	Thermalization Dynamics Close to a Quantum Phase Transition. Physical Review Letters, 2009, 102, 245701.	7.8	15
50	Andreev Reflection in Bosonic Condensates. Physical Review Letters, 2009, 102, 180405.	7.8	32
51	Coherent Ratchets in Driven Bose-Einstein Condensates. Physical Review Letters, 2009, 103, 200601.	7.8	24
52	Temperature dependence of the magnetic Casimir-Polder interaction. Physical Review A, 2009, 80, .	2.5	38
53	Electrostatic interactions between graphene layers and their environment. Physical Review B, 2008, 77, .	3.2	125
54	Dirac-point engineering and topological phase transitions in honeycomb optical lattices. New Journal of Physics, 2008, 10, 103027.	2.9	174

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55	Controlled Generation of Coherent Matter Currents Using a Periodic Driving Field. Physical Review Letters, 2008, 100, 250402.	7.8	28
56	Quantum frustration of dissipation by a spin bath. New Journal of Physics, 2008, 10, 115017.	2.9	9
57	Transmission through a defect in polyacene: the extreme limit of ultranarrow graphene. Journal of Physics Condensed Matter, 2008, 20, 255207.	1.8	9
58	Vortex trapping in suddenly connected Josephson junctions of Bose-Einstein condensates. Physical Review A, 2008, 77, .	2.5	9
59	Interactions and Magnetism in Graphene Boundary States. Physical Review Letters, 2008, 101, 036803.	7.8	51
60	Phase diagram of the dissipative quantum particle in a box. Physical Review B, 2008, 78, .	3.2	3
61	Nonadiabatic electron heat pump. Physical Review B, 2007, 76, .	3.2	64
62	Coulomb Blockade in Graphene Nanoribbons. Physical Review Letters, 2007, 99, 166803.	7.8	286
63	Dissipative quantum oscillator with two competing heat baths. New Journal of Physics, 2006, 8, 149-149.	2.9	19
64	Dynamical polarization of graphene at finite doping. New Journal of Physics, 2006, 8, 318-318.	2.9	966
65	Dissipation-Driven Quantum Phase Transitions in a Tomonaga-Luttinger Liquid Electrostatically Coupled to a Metallic Gate. Physical Review Letters, 2006, 97, 076401.	7.8	41
66	Divergent beams of nonlocally entangled electrons emitted from hybrid normal-superconducting structures. New Journal of Physics, 2005, 7, 231-231.	2.9	6
67	New light on cavity QED with ultracold atoms. Journal of Physics: Conference Series, 2005, 19, 34-39.	0.4	6
68	Transport suppression in heterostructures driven by an ac gate voltage. Chemical Physics, 2005, 319, 360-367.	1.9	5
69	Current and noise suppression in ac-driven coherent transport. AIP Conference Proceedings, 2005, , .	0.4	0
70	Quasiclassical frustration. Physical Review B, 2005, 72, .	3.2	15
71	Electromotive force and internal resistance of an electron pump. Physical Review B, 2004, 70, .	3.2	4
72	Electronic lifetimes in ballistic quantum dots electrostatically coupled to metallic environments. Physical Review B, 2004, 70, .	3.2	15

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73	Entangled electron current through finite size normal-superconductor tunneling structures. European Physical Journal B, 2004, 40, 379-396.	1.5	53
74	Quantum electrodynamic fluctuations of the macroscopic Josephson phase. Annals of Physics, 2004, 310, 127-154.	2.8	10
75	Phase dynamics after connection of two separate Bose-Einstein condensates. Physical Review A, 2003, 67, .	2.5	39
76	Chemical potential standard for atomic Bose-Einstein condensates. New Journal of Physics, 2003, 5, 94-94.	2.9	27
77	Split vortices in optically coupled Bose-Einstein condensates. Physical Review A, 2002, 66, .	2.5	36
78	Oscillatory Decay of a Two-Component Bose-Einstein Condensate. Physical Review Letters, 2002, 89, 060403.	7.8	57
79	John Bardeen (1908-1991). Ferroelectrics, 2002, 267, 61-68.	0.6	1
80	Vortex matter in atomic Bose-Einstein condensates. Physica C: Superconductivity and Its Applications, 2002, 369, 125-134.	1.2	7
81	Self-Consistent Theory of Transport in Quasi-One-Dimensional Superconducting Wires. Journal of Low Temperature Physics, 2001, 122, 11-35.	1.4	10
82	The Josephson plasmon as a Bogoliubov quasiparticle. Journal of Physics B: Atomic, Molecular and Optical Physics, 2001, 34, 4689-4696.	1.5	74
83	Phase-resolution limit in the macroscopic interference between Bose-Einstein condensates. Physical Review A, 2001, 63, .	2.5	11
84	Nonlinear and nonlocal Meissner effect in superconducting wires. Physical Review B, 2001, 63, .	3.2	7
85	Macroscopic Quantum Phenomena in Atomic Bose-Einstein Condensates. , 2001, , 41-50.		0
86	Pipeline model of a Fermi-sea electron pump. Annalen Der Physik, 2000, 9, 776-784.	2.4	3
87	Conductances in normal and normal/superconductor structures. Superlattices and Microstructures, 1999, 25, 627-638.	3.1	16
88	Subsea Electron Transport: Pumping Deep within the Fermi Sea. Physical Review Letters, 1999, 83, 4377-4380.	7.8	41
89	A Fermi Pump. , 1999, , 158-167.		0
90	Transport in normal-superconductor-normal structures with local conservation of current. Physica B: Condensed Matter, 1998, 252, 304-311.	2.7	10

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91	Josephson effect between trapped Bose-Einstein condensates. Physical Review A, 1998, 57, R28-R31.	2.5	255
92	Comment on "Phase and Phase Diffusion of a Split Bose-Einstein Condensate". Physical Review Letters, 1998, 81, 1344-1344.	7.8	57
93	Tunneling Center as a Source of Voltage Rectification in Josephson Junctions. Physical Review Letters, 1998, 80, 829-832.	7.8	63
94	Voltage Rectification in a Driven Asymmetric SQUID. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 1998, 08, 849-851.	1.7	1
95	Self-consistent scattering description of transport in normal-superconductor structures. Physical Review B, 1997, 55, 531-543.	3.2	26
96	Effect of QED Fluctuations on the Dynamics of the Macroscopic Phase. , 1997, , 403-413.		1
97	The absence of charge backscattering in the nonequilibrium current of normal - superconductor structures. Journal of Physics Condensed Matter, 1996, 8, L207-L213.	1.8	4
98	Supercurrent flow through an effective double-barrier structure. Physical Review B, 1996, 53, 6693-6704.	3.2	23
99	Current-conserving description of nonlinear transport in NS and NSN structures. European Physical Journal D, 1996, 46, 579-580.	0.4	1
100	Voltage Rectification by a SQUID Ratchet. Physical Review Letters, 1996, 77, 2292-2295.	7.8	240
101	A model of quantum measurement in Josephson junctions. Foundations of Physics, 1995, 25, 681-700.	1.3	6
102	Self-consistent current-voltage characteristics of normal-superconductor interfaces. Journal of Physics Condensed Matter, 1995, 7, L317-L323.	1.8	16
103	Dynamics and Measurement of the Absolute Phase in Macroscopic Quantum Systems. , 1995, , 299-310.		0
104	Recursive Tight-Binding Green's Function Method: Application to Ballistic and Dissipative Transport in Semiconductor Nanostructures. NATO ASI Series Series B: Physics, 1995, , 329-338.	0.2	1
105	Macroscopic description of phase-coherent transport in quasi-one-dimensional superconducting structures. Physica B: Condensed Matter, 1994, 203, 467-474.	2.7	5
106	Randomization of the phase after suppression of the Josephson coupling. Physica B: Condensed Matter, 1994, 194-196, 1389-1390.	2.7	47
107	Zero bias supercurrent flow with arbitrary scattering. Physica B: Condensed Matter, 1994, 194-196, 1751-1752.	2.7	2
108	Translational symmetry and microscopic preparation in oscillator models of quantum dissipation. Physica A: Statistical Mechanics and Its Applications, 1994, 212, 181-193.	2.6	25

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109	Crossover from the Josephson effect to bulk superconducting flow. Physical Review B, 1994, 49, 15913-15919.	3.2	67
110	Scattering, dissipation, and transport in mesoscopic systems. Annals of Physics, 1992, 214, 386-438.	2.8	59
111	On the concept of spontaneously broken gauge symmetry in condensed matter physics. Foundations of Physics, 1991, 21, 353-364.	1.3	194
112	Gauge-invariant formulation of electron linear transport. Physical Review Letters, 1991, 67, 2874-2877.	7.8	31
113	Approaches to Quantum Transport in Semiconductor Nanostructures. NATO ASI Series Series B: Physics, 1991, , 223-253.	0.2	0
114	Circular bends in electron waveguides. Physical Review B, 1990, 41, 11887-11891.	3.2	96
115	On the possibility of transistor action based on quantum interference phenomena. Applied Physics Letters, 1989, 54, 350-352.	3.3	298
116	Theory for a quantum modulated transistor. Journal of Applied Physics, 1989, 66, 3892-3906.	2.5	386
117	A broad theoretical approach to the investigation of mesoscopic electron devices. Solid-State Electronics, 1989, 32, 1371-1375.	1.4	3
118	Quantum Devices and Transistors. , 1989, , 147-217.		0
119	Self-energy of a charge near an interface. Surface Science, 1988, 194, 275-311.	1.9	8
120	Inelastic cross sections and charge states for B, C, N, and O ions moving in metals. Physical Review A, 1988, 37, 1469-1475.	2.5	15
121	Interaction between tunneling impurities in metals. Physical Review B, 1988, 38, 12263-12276.	3.2	3
122	Self-energy of an electron in a gap between two metals and near a metallic slab. Physical Review B, 1987, 35, 9314-9317.	3.2	16
123	Bulk and surface diffusion of heavy particles in metals: A path-integral approach. Physical Review B, 1987, 36, 7775-7785.	3.2	28
124	The interaction between an electron and the polarization modes of a metal-insulator interface. Solid State Communications, 1987, 63, 245-249.	1.9	6
125	Charge state distributions for ions moving in metals. Nuclear Instruments & Methods in Physics Research B, 1986, 13, 171-174.	1.4	10
126	Lifetime of Image Surface States. Physical Review Letters, 1985, 55, 2348-2350.	7.8	111

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127	Dissipation energy for a charge moving near a metal surface. Surface Science, 1985, 161, 33-38.	1.9	17
128	Charge transfer processes for light ions moving in metals. Physical Review B, 1984, 30, 4878-4880.	3.2	52
129	Trapping probabilities of H ₂ and D ₂ molecules in compact metallic surfaces by electron-hole pair interaction. Surface Science Letters, 1984, 146, L577-L581.	0.1	0
130	Trapping probabilities of H ₂ and D ₂ molecules in compact metallic surfaces by electron-hole pair interaction. Surface Science, 1984, 146, L577-L581.	1.9	12
131	Friction and sticking coefficients of rare gases approaching a metal surface. Surface Science, 1984, 137, 167-180.	1.9	21
132	Charge states for protons moving in an electron gas: intra-atomic correlation and surface effects. Journal of Physics C: Solid State Physics, 1983, 16, 809-815.	1.5	5
133	Dynamic interactions between a charge or an atom and a metal surface. Solid State Communications, 1982, 42, 687-690.	1.9	14