

Alvaro Martin Rodero

List of Publications by Year in descending order

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84
papers

4,695
citations

94433

37
h-index

91884

69
g-index

84
all docs

84
docs citations

84
times ranked

2060
citing authors

#	ARTICLE	IF	CITATIONS
1	The signature of chemical valence in the electrical conduction through a single-atom contact. Nature, 1998, 394, 154-157.	27.8	597
2	Hamiltonian approach to the transport properties of superconducting quantum point contacts. Physical Review B, 1996, 54, 7366-7379.	3.2	438
3	Microscopic Origin of Conducting Channels in Metallic Atomic-Size Contacts. Physical Review Letters, 1998, 80, 1066-1069.	7.8	245
4	Josephson and Andreev transport through quantum dots. Advances in Physics, 2011, 60, 899-958.	14.4	227
5	Josephson current through a correlated quantum level: σ Andreev states and π junction behavior. Physical Review B, 2003, 68, .	3.2	184
6	Electron correlation resonances in the transport through a single quantum level. Physical Review Letters, 1993, 71, 2991-2994.	7.8	181
7	Evolution of Conducting Channels in Metallic Atomic Contacts under Elastic Deformation. Physical Review Letters, 1998, 81, 2990-2993.	7.8	154
8	Resonant tunneling through a small quantum dot coupled to superconducting leads. Physical Review B, 1997, 55, R6137-R6140.	3.2	147
9	Contact resistance in the scanning tunneling microscope at very small distances. Physical Review B, 1988, 38, 10113-10115.	3.2	129
10	Even-Odd Effect in Andreev Transport through a Carbon Nanotube Quantum Dot. Physical Review Letters, 2007, 99, 126602.	7.8	127
11	Entangled Andreev pairs and collective excitations in nanoscale superconductors. Nature Physics, 2007, 3, 455-459.	16.7	107
12	Kondo effect in normal-superconductor quantum dots. Physical Review B, 2001, 63, .	3.2	106
13	Universal features of electron-phonon interactions in atomic wires. Physical Review B, 2006, 73, .	3.2	100
14	Electron Resonances in Sharp Tips and Their Role in Tunneling Spectroscopy. Physical Review Letters, 1998, 80, 357-360.	7.8	94
15	Shot Noise and Coherent Multiple Charge Transfer in Superconducting Quantum Point Contacts. Physical Review Letters, 1999, 82, 4086-4089.	7.8	91
16	A new solution to the Anderson-Newns Hamiltonian of chemisorption. Solid State Communications, 1982, 44, 911-914.	1.9	82
17	Microscopic theory of Josephson mesoscopic constrictions. Physical Review Letters, 1994, 72, 554-557.	7.8	75
18	Inverse proximity effect in superconductor-ferromagnet structures: From the ballistic to the diffusive limit. Physical Review B, 2005, 72, .	3.2	72

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19	Thermal noise in superconducting quantum point contacts. <i>Physical Review B</i> , 1996, 53, R8891-R8894.	3.2	70
20	Transport in Multilevel Quantum Dots: From the Kondo Effect to the Coulomb Blockade Regime. <i>Physical Review Letters</i> , 1999, 83, 600-603.	7.8	68
21	Self-consistent theory of superconducting mesoscopic weak links. <i>Physical Review B</i> , 1995, 51, 3743-3753.	3.2	67
22	Molecular orbital theory for chemisorption and physisorption: The case of He on metals. <i>Physical Review B</i> , 1989, 39, 5684-5693.	3.2	58
23	Local-density approach and quasiparticle levels for generalized Hubbard Hamiltonians. <i>Physical Review B</i> , 2000, 62, 4309-4331.	3.2	57
24	Direct Link between Coulomb Blockade and Shot Noise in a Quantum-Coherent Structure. <i>Physical Review Letters</i> , 2001, 87, 046802.	7.8	56
25	Transient dynamics and waiting time distribution of molecular junctions in the polaronic regime. <i>Physical Review B</i> , 2015, 92, .	3.2	56
26	Electrochemical-potential variations across a constriction. <i>Physical Review B</i> , 1990, 41, 8553-8556.	3.2	55
27	Temperature dependence of Andreev spectra in a superconducting carbon nanotube quantum dot. <i>Physical Review B</i> , 2014, 89, .	3.2	53
28	Microscopic theory of the proximity effect in superconductor-graphene nanostructures. <i>Physical Review B</i> , 2008, 77, .	3.2	52
29	Conductance quantization and electron resonances in sharp tips and atomic-size contacts. <i>Physical Review B</i> , 1997, 56, 10369-10372.	3.2	50
30	Subharmonic Shapiro Steps and Assisted Tunneling in Superconducting Point Contacts. <i>Physical Review Letters</i> , 2002, 88, 157001.	7.8	45
31	Molecular orbital theory and tunnelling currents. <i>Nuovo Cimento Della Societa Italiana Di Fisica D - Condensed Matter, Atomic, Molecular and Chemical Physics, Biophysics</i> , 1988, 10, 303-311.	0.4	44
32	Different wavelength oscillations in the conductance of 5d metal atomic chains. <i>Physical Review B</i> , 2004, 70, .	3.2	44
33	Interplay between Josephson effect and magnetic interactions in double quantum dots. <i>Physical Review B</i> , 2006, 74, .	3.2	42
34	Interpolative solution for the periodic Anderson model of mixed-valence compounds. <i>Physical Review B</i> , 1986, 33, 1814-1822.	3.2	41
35	Nonequilibrium Dynamics of Andreev States in the Kondo Regime. <i>Physical Review Letters</i> , 2003, 91, 266802.	7.8	40
36	Long transient dynamics in the Anderson-Holstein model out of equilibrium. <i>Physical Review B</i> , 2013, 87, .	3.2	40

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37	Nonadiabatic features of electron pumping through a quantum dot in the Kondo regime. <i>Physical Review B</i> , 2008, 77, .	3.2	38
38	The Andreev states of a superconducting quantum dot: mean field versus exact numerical results. <i>Journal of Physics Condensed Matter</i> , 2012, 24, 385303.	1.8	33
39	Solution for the U-negative Hubbard superconductor including second-order correlation effects. <i>Physical Review B</i> , 1992, 45, 13008-13016.	3.2	32
40	Tight-binding theory of tunneling current with chemisorbed species. <i>Physical Review B</i> , 1988, 38, 10047-10050.	3.2	29
41	Dressed tunneling approximation for electronic transport through molecular transistors. <i>Physical Review B</i> , 2014, 89, .	3.2	29
42	Quench dynamics in superconducting nanojunctions: Metastability and dynamical Yang-Lee zeros. <i>Physical Review B</i> , 2017, 96, .	3.2	29
43	Andreev Bound States Formation and Quasiparticle Trapping in Quench Dynamics Revealed by Time-Dependent Counting Statistics. <i>Physical Review Letters</i> , 2016, 117, 267701.	7.8	28
44	Interpolative approach for electron-electron and electron-phonon interactions: From the Kondo to the polaronic regime. <i>Physical Review B</i> , 2008, 78, .	3.2	27
45	Josephson effect through a quantum dot array. <i>Physical Review B</i> , 2007, 76, .	3.2	25
46	Equation of motion approach to the Anderson-Holstein Hamiltonian. <i>Physical Review B</i> , 2009, 79, .	3.2	22
47	Contact resistance and saturation effects in the scanning tunnelling microscope: the resistance quantum unit. <i>Journal of Microscopy</i> , 1988, 152, 317-323.	1.8	20
48	Distribution of conduction channels in nanoscale contacts: Evolution towards the diffusive limit. <i>Europhysics Letters</i> , 2005, 70, 663-669.	2.0	19
49	Recursion method for nonhomogeneous superconductors: Proximity effect in superconductor-ferromagnet nanostructures. <i>Physical Review B</i> , 2001, 64, .	3.2	17
50	Nonequilibrium transport in molecular junctions with strong electron-phonon interactions. <i>Physical Review B</i> , 2010, 82, .	3.2	17
51	Quasiparticle spectral density of low-dimensional Hubbard Hamiltonians. <i>Physical Review B</i> , 1984, 29, 476-478.	3.2	16
52	Simple solution to the Newns-Anderson Hamiltonian of chemisorption. <i>Physical Review B</i> , 1983, 28, 6640-6646.	3.2	15
53	Interpolative solution for the Anderson model of an impurity. <i>Physical Review B</i> , 1987, 36, 6149-6151.	3.2	15
54	Long-range crossed Andreev reflections in high-temperature superconductors. <i>Physical Review B</i> , 2009, 79, .	3.2	15

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55	General transport properties of superconducting quantum point contacts: a Green functions approach. Superlattices and Microstructures, 1999, 25, 925-936.	3.1	14
56	Correlation effects for H chemisorbed on transition metals. Surface Science, 1983, 128, 237-248.	1.9	13
57	Second-order self-energy of the Hubbard Hamiltonian: Absence of quasiparticle excitations near half-filling. Physical Review B, 1993, 48, 13654-13660.	3.2	13
58	Transient dynamics in interacting nanojunctions within self-consistent perturbation theory. New Journal of Physics, 2018, 20, 083039.	2.9	13
59	Indirect interactions between CO molecules on transition-metal surfaces and the interpretation of thermal desorption experiments. Journal of Physics C: Solid State Physics, 1987, 20, 3381-3389.	1.5	12
60	Surface States in the (111) and (111) Faces of Zincblende Compounds. Physica Status Solidi (B): Basic Research, 1978, 88, 591-597.	1.5	11
61	Dynamical Coulomb Blockade of Multiple Andreev Reflections. Physical Review Letters, 2005, 95, 056804.	7.8	11
62	Electronic structure and conformation of ethene when adsorbed on transition and noble metals. Surface Science, 1984, 140, 400-414.	1.9	9
63	Buildup of vibron-mediated electron correlations in molecular junctions. Physical Review B, 2019, 99, .	3.2	9
64	Quasi-one-dimensional structures and metallization for the deposition of K on GaAs(100) As-rich surfaces. Physical Review B, 1995, 52, 16345-16348.	3.2	8
65	Microscopic theory of the phase-dependent linear conductance in highly transmissive superconducting quantum point contacts. Physica B: Condensed Matter, 1996, 218, 126-129.	2.7	8
66	Structure of gold monoatomic wires connected to two electrodes. Physica B: Condensed Matter, 2007, 398, 309-312.	2.7	8
67	Analysis of universality in transient dynamics of coherent electronic transport. Fortschritte Der Physik, 2017, 65, 1600062.	4.4	8
68	Dimensional and geometrical effects on the electronic structure of polycyclic hydrocarbons. International Journal of Quantum Chemistry, 1984, 26, 783-791.	2.0	5
69	Hubbard Hamiltonian for high-T _c superconductors: The antiferromagnetic-paramagnetic transition. Physical Review B, 1991, 44, 415-418.	3.2	5
70	Metal-insulator transition for K on GaAs(100)-As rich surfaces. Applied Surface Science, 1996, 104-105, 248-252.	6.1	5
71	The phase-dependent linear conductance of a superconducting quantum point contact. Journal of Physics Condensed Matter, 1996, 8, 449-456.	1.8	5
72	Transient dynamics of a magnetic impurity coupled to superconducting electrodes: Exact numerics versus perturbation theory. Physical Review B, 2021, 104, .	3.2	5

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73	General solution of the periodic Anderson Hamiltonian in one dimension at $T=0K$: Symmetric and nonsymmetric cases. <i>Physical Review B</i> , 1984, 30, 7299-7301.	3.2	3
74	Self-consistent theory for the DC Josephson effect in a superconducting STM junction. <i>Surface Science</i> , 1994, 307-309, 973-977.	1.9	3
75	Electronic properties of Si(111) semiconductor surfaces. <i>Surface Science</i> , 1985, 162, 156-162.	1.9	2
76	Interpolative Method for Transport Properties of Quantum Dots in the Kondo Regime. , 1999, , 27-34.		2
77	Raman scattering from atomic adsorbates. <i>Physica Scripta</i> , 1988, 38, 180-187.	2.5	1
78	An ab initio molecular orbital theory for chemisorption: H on metals. <i>Surface Science</i> , 1991, 251-252, 861-865.	1.9	1
79	FORMATION OF METAL-SEMICONDUCTOR BARRIERS FOR GaAs-INTERFACES IN THE LOW METAL COVERAGE LIMIT. <i>Progress in Surface Science</i> , 1997, 54, 229-240.	8.3	1
80	Short-Range Effects in Germanium-Silicon. <i>Physica Status Solidi (B): Basic Research</i> , 1980, 99, 501-505.	1.5	0
81	Interaction of helium with metal surfaces: A first-principle tight-binding approach. <i>Surface Science</i> , 1989, 211-212, 256-262.	1.9	0
82	Quantum Noise and Multiple Andreev Reflections in Superconducting Contacts. , 2003, , 51-71.		0
83	Josephson Effect and Magnetic Interactions in Double Quantum Dots. <i>Mathematics in Industry</i> , 2008, , 426-430.	0.3	0
84	Photoinduced Currents in Normal and Superconducting Micro-Junctions. , 1995, , 281-294.		0