

# Lloren Serra

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

128  
papers

2,234  
citations

26  
h-index

42  
g-index

133  
ext. papers

2,363  
ext. citations

2.9  
avg, IF

4.87  
L-index

#	Paper	IF	Citations
128	Geometry effects in topologically confined bilayer graphene loops. <i>New Journal of Physics</i> , <b>2022</b> , 24, 013001	2.9	0
127	Beating Carnot efficiency with periodically driven chiral conductors.. <i>Nature Communications</i> , <b>2022</b> , 13, 2512	17.4	0
126	Scattering of topological kink-antikink states in bilayer graphene structures. <i>Physical Review B</i> , <b>2021</b> , 104,	3.3	1
125	Evidence for Majorana phases in the magnetoconductance of topological junctions based on two-dimensional electron gases. <i>Physical Review B</i> , <b>2020</b> , 101,	3.3	4
124	Magnetic orbital motion and $0.5e^2/h$ conductance of quantum-anomalous-Hall hybrid strips. <i>Applied Physics Letters</i> , <b>2019</b> , 114, 133105	3.4	
123	Complex band-structure analysis and topological physics of Majorana nanowires. <i>European Physical Journal B</i> , <b>2019</b> , 92, 1	1.2	5
122	Spatial coupling of quantum-anomalous-Hall and chiral-Majorana modes. <i>European Physical Journal: Special Topics</i> , <b>2019</b> , 227, 2025-2035	2.3	
121	Conductance oscillations and speed of chiral Majorana mode in a quantum anomalous Hall two-dimensional strip. <i>Physical Review B</i> , <b>2018</b> , 98,	3.3	3
120	Circular dichroism of chiral Majorana states. <i>Beilstein Journal of Nanotechnology</i> , <b>2018</b> , 9, 1194-1199	3	2
119	Current distributions in stripe Majorana junctions. <i>European Physical Journal B</i> , <b>2017</b> , 90, 1	1.2	8
118	In-gap corner states in core-shell polygonal quantum rings. <i>Scientific Reports</i> , <b>2017</b> , 7, 40197	4.9	8
117	Topological suppression of magnetoconductance oscillations in normal-superconductor junctions. <i>Physica Status Solidi (B): Basic Research</i> , <b>2017</b> , 254, 1700135	1.3	4
116	Majorana states in prismatic core-shell nanowires. <i>Physical Review B</i> , <b>2017</b> , 96,	3.3	21
115	Resonant Anderson localization in segmented wires. <i>Physical Review E</i> , <b>2016</b> , 93, 032105	2.4	2
114	Interplay between resonant tunneling and spin precession oscillations in all-electric all-semiconductor spin transistors. <i>Physical Review B</i> , <b>2016</b> , 94,	3.3	6
113	A scattering model of 1D quantum wire regular polygons. <i>Superlattices and Microstructures</i> , <b>2015</b> , 83, 184-192	2.8	6
112	Electromagnetic absorption of semiconductor 2D Majorana nanowires. <i>Journal of Physics Condensed Matter</i> , <b>2015</b> , 27, 125302	1.8	1

111	Seebeck effects in two-dimensional spin transistors. <i>Physical Review B</i> , <b>2015</b> , 91,	3.3	5
110	Majorana states and magnetic orbital motion in planar hybrid nanowires. <i>Physical Review B</i> , <b>2015</b> , 91,	3.3	14
109	Electron localization and optical absorption of polygonal quantum rings. <i>Physical Review B</i> , <b>2015</b> , 91,	3.3	18
108	Electromagnetic absorption of quasi-1D Majorana nanowires. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , <b>2015</b> , 12, 1409-1411		2
107	Quasi-particle current in planar Majorana nanowires. <i>Journal of Physics: Conference Series</i> , <b>2015</b> , 647, 012063	0.3	1
106	Negative tunneling magneto-resistance in quantum wires with strong spin-orbit coupling. <i>Journal of Physics Condensed Matter</i> , <b>2015</b> , 27, 255002	1.8	3
105	Majorana mode stacking, robustness and size effect in cylindrical nanowires. <i>European Physical Journal B</i> , <b>2014</b> , 87, 1	1.2	3
104	Thermoelectrical detection of Majorana states. <i>Physical Review B</i> , <b>2014</b> , 89,	3.3	38
103	Effects of tilting the magnetic field in one-dimensional Majorana nanowires. <i>Physical Review B</i> , <b>2014</b> , 89,	3.3	17
102	Snaking states on a cylindrical surface in a perpendicular magnetic field. <i>European Physical Journal B</i> , <b>2013</b> , 86, 1	1.2	16
101	Majorana modes and complex band structure of quantum wires. <i>Physical Review B</i> , <b>2013</b> , 87,	3.3	16
100	Emergence of Majorana modes in cylindrical nanowires. <i>Europhysics Letters</i> , <b>2013</b> , 103, 37004	1.6	17
99	Majorana modes in smooth normal-superconductor nanowire junctions. <i>Physical Review B</i> , <b>2013</b> , 88,	3.3	4
98	Magnetic-field instability of Majorana modes in multiband semiconductor wires. <i>Physical Review B</i> , <b>2012</b> , 86,	3.3	49
97	Verticalgfactor of hole quantum wires. <i>Physica Scripta</i> , <b>2012</b> , T151, 014051	2.6	1
96	Transport through Majorana nanowires attached to normal leads. <i>New Journal of Physics</i> , <b>2012</b> , 14, 083020		14
95	Interference of Fano-Rashba conductance dips. <i>Journal of Physics Condensed Matter</i> , <b>2011</b> , 23, 115301	1.8	2
94	Conductance oscillations of a spin-orbit stripe with polarized contacts. <i>European Physical Journal B</i> , <b>2011</b> , 79, 341-349	1.2	6

93	Thermoelectric transport of mesoscopic conductors coupled to voltage and thermal probes. <i>Physical Review B</i> , <b>2011</b> , 84,	3-3	81
92	g-factor anisotropy of hole quantum wires induced by Rashba interaction. <i>Physical Review B</i> , <b>2011</b> , 84,	3-3	9
91	Linear conductance oscillations in quantum wires and stripes with Rashba interaction. <i>Journal of Physics: Conference Series</i> , <b>2010</b> , 248, 012016	0-3	
90	Multichannel effects in Rashba quantum wires. <i>Physical Review B</i> , <b>2010</b> , 81,	3-3	24
89	Localized magnetic states in Rashba dots. <i>Physical Review B</i> , <b>2009</b> , 79,	3-3	16
88	Spin polarized current from localized Rashba interaction in a quantum wire. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , <b>2009</b> , 6, 2123-2127		5
87	Conductance of tubular nanowires with disorder. <i>European Physical Journal B</i> , <b>2009</b> , 71, 97-103	1-2	5
86	Strongly modulated transmission of a spin-split quantum wire with local Rashba interaction. <i>Physical Review B</i> , <b>2008</b> , 77,	3-3	40
85	Local spin polarization in a quantum wire induced by the Rashba interaction. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , <b>2008</b> , 40, 1479-1480	3	1
84	Singlet-triplet transition of a two-electron quantum ring in magnetic and electric fields. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , <b>2008</b> , 40, 1492-1494	3	4
83	Quantum-Transmitting-Boundary Algorithm with Local Spin-Orbit Coupling. <i>Mathematics in Industry</i> , <b>2008</b> , 449-453	0-2	
82	Evanescent states in quantum wires with Rashba spin-orbit coupling. <i>Physical Review B</i> , <b>2007</b> , 76,	3-3	16
81	Exchange-correlation effects on quantum wires with spin-orbit interactions under the influence of in-plane magnetic fields. <i>Physical Review B</i> , <b>2007</b> , 76,	3-3	11
80	From Coulomb blockade to the Kondo regime in a Rashba dot. <i>Physical Review B</i> , <b>2007</b> , 76,	3-3	44
79	Addition energies and density dipole response of quantum rings under the influence of in-plane electric fields. <i>Physical Review B</i> , <b>2007</b> , 76,	3-3	1
78	The Fano-Rashba effect. <i>Journal of Physics: Conference Series</i> , <b>2007</b> , 61, 1037-1041	0-3	5
77	Brueckner-Hartree-Fock study of circular quantum dots. <i>Physical Review B</i> , <b>2006</b> , 73,	3-3	7
76	Fano-Rashba effect in a quantum wire. <i>Physical Review B</i> , <b>2006</b> , 74,	3-3	110

75	Spin-orbit effects in GaAs quantum wells: Interplay between Rashba, Dresselhaus, and Zeeman interactions. <i>Physical Review B</i> , <b>2006</b> , 74,	3-3	26
74	Optical response of two-dimensional few-electron concentric double quantum rings: A local-spin-density-functional theory study. <i>Physical Review B</i> , <b>2006</b> , 74,	3-3	19
73	Rashba interaction in quantum wires with in-plane magnetic fields. <i>Physical Review B</i> , <b>2005</b> , 72,	3-3	55
72	Quantum dots based on spin properties of semiconductor heterostructures. <i>Physical Review B</i> , <b>2004</b> , 69,	3-3	22
71	Spin splitting and precession in quantum dots with spin-orbit coupling: The role of spatial deformation. <i>Physical Review B</i> , <b>2004</b> , 69,	3-3	36
70	Roto-vibrational spectrum and Wigner crystallization in two-electron parabolic quantum dots. <i>Physical Review B</i> , <b>2004</b> , 69,	3-3	36
69	Zeeman energy and anomalous spin splitting in lateral GaAs quantum dots. <i>European Physical Journal B</i> , <b>2004</b> , 39, 87-92	1.2	13
68	Spin-orbit-induced semiconductor spin guides. <i>Nanotechnology</i> , <b>2003</b> , 14, 882-885	3-4	5
67	Electron spin precession in semiconductor quantum wires with Rashba spin-orbit coupling. <i>European Physical Journal B</i> , <b>2003</b> , 34, 359-365	1.2	6
66	Spin-orbit coupling and the far infrared response of quantum dots in magnetic fields. <i>Surface Science</i> , <b>2003</b> , 532-535, 576-581	1.8	2
65	Spin-orbit effects in the FIR absorption of quantum bars. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , <b>2003</b> , 17, 347-348	3	1
64	Breathing modes of 2-D quantum dots with elliptical shape in magnetic fields. <i>International Journal of Quantum Chemistry</i> , <b>2003</b> , 91, 483-489	2.1	5
63	Symmetry breaking and the random-phase approximation in small quantum dots. <i>Physical Review B</i> , <b>2003</b> , 68,	3-3	27
62	Moment of inertia in elliptical quantum dots. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , <b>2002</b> , 14, 391-396	3	
61	Wigner localization and dynamics in two-electron semiconductor rings. <i>International Journal of Quantum Chemistry</i> , <b>2002</b> , 86, 27-34	2.1	2
60	Magnetic dipole and electric quadrupole responses of elliptic quantum dots in magnetic fields. <i>European Physical Journal B</i> , <b>2002</b> , 27, 409-415	1.2	6
59	Characterization of Bernstein modes in quantum dots. <i>European Physical Journal B</i> , <b>2002</b> , 28, 111-115	1.2	1
58	Role of spin-orbit coupling in the far-infrared absorption of lateral semiconductor dots. <i>Physical Review B</i> , <b>2002</b> , 66,	3-3	20

57	Electronic spin precession in semiconductor quantum dots with spin-orbit coupling. <i>Physical Review B</i> , <b>2002</b> , 66,	3-3	28
56	Spin switching in semiconductor quantum dots through spin-orbit coupling. <i>Physical Review B</i> , <b>2002</b> , 66,	3-3	16
55	Transverse dipole spin response of elliptic quantum dots. <i>Nanotechnology</i> , <b>2002</b> , 13, 409-412	3-4	
54	Magnetic Thomas-Fermi-Weizsäcker model for quantum dots: A comparison with Kohn-Sham ground states. <i>European Physical Journal D</i> , <b>2001</b> , 14, 77-81	1-3	6
53	Far-infrared response of quantum-dot molecules. <i>European Physical Journal D</i> , <b>2001</b> , 16, 387-390	1-3	3
52	Collective oscillations of 2D electron gas clusters in the ultimate jellium model. <i>Europhysics Letters</i> , <b>2001</b> , 55, 73-79	1-6	2
51	Far-Infrared Excitations in an Antidot at Finite Magnetic Fields. <i>Japanese Journal of Applied Physics</i> , <b>2001</b> , 40, 518-524	1-4	2
50	Multipole response of doped 3He drops. <i>Journal of Chemical Physics</i> , <b>2001</b> , 115, 10154	3-9	5
49	Ground state and far-infrared absorption of two-electron rings in a magnetic field. <i>Physical Review B</i> , <b>2001</b> , 63,	3-3	29
48	Far-infrared absorption in triangular and square quantum dots: Characterization of corner and side modes. <i>Physical Review B</i> , <b>2001</b> , 64,	3-3	9
47	Hartree-Fock dynamics in highly excited quantum dots. <i>Physical Review B</i> , <b>2001</b> , 64,	3-3	7
46	A semiclassical approach to the ground state and density oscillations of quantum dots. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , <b>2000</b> , 8, 387-397	3	11
45	Collective oscillations in quantum rings: A broken symmetry case. <i>European Physical Journal D</i> , <b>2000</b> , 12, 493-498	1-3	7
44	Wave-vector dependence of spin and density multipole excitations in quantum dots. <i>Physical Review B</i> , <b>2000</b> , 61, 8289-8297	3-3	17
43	Spin and density longitudinal response of quantum dots in the time-dependent local-spin-density approximation. <i>Physical Review B</i> , <b>1999</b> , 59, 15290-15300	3-3	38
42	Orbital current mode in elliptical quantum dots. <i>Physical Review B</i> , <b>1999</b> , 60, R13966-R13969	3-3	42
41	Oscillation Modes of Two-Dimensional Nanostructures within the Time-Dependent Local-Spin-Density Approximation. <i>Physical Review Letters</i> , <b>1999</b> , 83, 3266-3269	7-4	30
40	Approximate density matrices for spherical metal clusters. <i>Physical Review B</i> , <b>1999</b> , 60, 2117-2121	3-3	

- 39 Density-functional calculations of magnetoplasmons in quantum rings. *Physical Review B*, **1999**, 59, 15303-15307
- 38 Transverse dipole spin modes in quantum dots. *Physical Review B*, **1999**, 60, 8734-8742 3.3 12
- 37 Generalized time-dependent density-functional theory including core polarization. *European Physical Journal D*, **1998**, 48, 756-759
- 36 Collective spin states in the electron gas in different dimensions and geometries. *European Physical Journal D*, **1998**, 48, 725-731 1
- 35 The Structure and Response of Doped 3He Clusters. *Journal of Low Temperature Physics*, **1998**, 113, 381-386 3
- 34 Plasmon response in K, Na and Li clusters: systematics using the separable random-phase-approximation with pseudo-Hamiltonians. *European Physical Journal D*, **1998**, 4, 343-352 1.3 14
- 33 Ground-state properties of doped 3He clusters. *Journal of Chemical Physics*, **1998**, 108, 9102-9106 3.9 20
- 32 Structure and far-infrared edge modes of quantum antidots at zero magnetic field. *Physical Review B*, **1998**, 58, 6732-6735 3.3 2
- 31 Nonradiative electronic deexcitation time scales in metal clusters. *Physical Review B*, **1998**, 57, 4895-4899 3.3 3
- 30 Spin-wave excitations in quantum dots. *Physical Review B*, **1998**, 57, R6830-R6833 3.3 14
- 29 Current-density-functional approach to large quantum dots in intense magnetic fields. *Physical Review B*, **1998**, 57, 14783-14792 3.3 26
- 28 Far-infrared edge modes in quantum dots. *Physical Review B*, **1997**, 56, 12375-12385 3.3 26
- 27 Core Polarization in the Optical Response of Metal Clusters: Generalized Time-Dependent Density-Functional Theory. *Physical Review Letters*, **1997**, 78, 1428-1431 7.4 47
- 26 Spin response of unpolarized quantum dots. *Europhysics Letters*, **1997**, 40, 667-672 1.6 256
- 25 Optical response of Ag clusters. *Zeitschrift für Physik D-Atoms Molecules and Clusters*, **1997**, 40, 262 22
- 24 Sum Rules for the spin surface response of metal clusters within the time dependent local spin density approximation. *Zeitschrift für Physik D-Atoms Molecules and Clusters*, **1997**, 42, 227-230 4
- 23 Optical response of Ag clusters **1997**, 262-264
- 22 van der Waals attraction between simple metal clusters: Core effects using realistic pseudopotentials. *Physical Review B*, **1996**, 53, 7006-7009 3.3 4

21	Density functional calculations for 4He droplets. <i>Zeitschrift für Physik D-Atoms Molecules and Clusters</i> , <b>1995</b> , 35, 67-75		42
20	On inferring quantum energies and expectation values. <i>Physica A: Statistical Mechanics and Its Applications</i> , <b>1995</b> , 213, 376-390	3.3	3
19	Self-consistent calculations in spherical metal clusters with uniformly averaged realistic pseudopotentials. <i>Physical Review B</i> , <b>1995</b> , 52, 8488-8498	3.3	17
18	Pseudojellium Model and Systematics of Dipole Plasmons and Polarizabilities in Potassium Clusters. <i>Europhysics Letters</i> , <b>1995</b> , 29, 445-450	1.6	5
17	. <i>Journal of Physics Condensed Matter</i> , <b>1995</b> , 7, 4467-4478	1.8	5
16	Microscopic effective interaction between electrons: Application to sodium clusters. <i>Physical Review B</i> , <b>1994</b> , 49, 16733-16745	3.3	12
15	Dipole excitation of Na clusters with a non-local energy density functional. <i>Zeitschrift für Physik D-Atoms Molecules and Clusters</i> , <b>1994</b> , 31, 283-286		60
14	Single-particle and collective degrees of freedom in C60. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , <b>1994</b> , 27, L643-L649	1.3	63
13	Pseudojellium model with an application to lithium clusters. <i>Physical Review B</i> , <b>1993</b> , 48, 14708-14711	3.3	42
12	Collective spin excitations of alkali-metal clusters. <i>Physical Review A</i> , <b>1993</b> , 47, R1601-R1604	2.6	13
11	Dielectric screening effects on the photoabsorption cross section of embedded metallic clusters. <i>Physical Review B</i> , <b>1993</b> , 48, 18222-18229	3.3	42
10	Nonlocal approximation to the exchange and kinetic energy functionals: Application to metallic clusters. <i>International Journal of Quantum Chemistry</i> , <b>1993</b> , 45, 333-347	2.1	9
9	Microscopic study of the dipole surface response in large potassium cluster ions. <i>Zeitschrift für Physik D-Atoms Molecules and Clusters</i> , <b>1993</b> , 26, 118-121		5
8	Collective excitations of embedded potassium clusters. <i>Zeitschrift für Physik D-Atoms Molecules and Clusters</i> , <b>1993</b> , 26, 122-124		7
7	Electronic surface excitations of cavities in metals. <i>Physical Review B</i> , <b>1992</b> , 46, 9369-9379	3.3	14
6	Bulk-plasmon dispersion relations in metals. <i>Physical Review B</i> , <b>1991</b> , 44, 1492-1498	3.3	23
5	Collective states of 3He clusters. <i>Physical Review Letters</i> , <b>1991</b> , 67, 2311-2314	7.4	24
4	Static dipole polarizability of alkali-metal clusters: Electronic exchange and correlation effects. <i>Physical Review B</i> , <b>1990</b> , 42, 10950-10964	3.3	37



3	Multipole response of metal spheres to q-dependent excitation operators. <i>Physical Review B</i> , <b>1990</b> , 41, 3434-3446	3.3	22
2	Surface collective oscillations of metal clusters and spheres: Random-phase-approximation sum-rules approach. <i>Physical Review B</i> , <b>1989</b> , 39, 8247-8256	3.3	66
1	The static polarisability of metal clusters and spheres in an improved Thomas-Fermi approximation. <i>Journal of Physics Condensed Matter</i> , <b>1989</b> , 1, 10391-10405	1.8	26