Antonio JesÃºs Sarsa Rubio

List of Publications by Year
in descending order

99 papers	1,660 citations	331670 21 h-index	330143 37 g-index

99 all docs	99 docs citations	99 times ranked	1068 citing authors

#	Article	IF	Citations
1	A path integral ground state method. Journal of Chemical Physics, 2000, 113, 1366-1371.	3.0	185
2	Spin Susceptibility of Neutron Matter at Zero Temperature. Physical Review Letters, 2001, 87, .	7.8	116
3	Structure, Rotational Dynamics, and Superfluidity of Small OCS-Doped He Clusters. Physical Review Letters, 2003, 90, 143401.	7.8	111
4	Neutron matter at zero temperature with an auxiliary field diffusion Monte Carlo method. Physical Review C, 2003, 68, .	2.9	78
5	Spatio-temporal Complementarity between Solar and Wind Power in the Iberian Peninsula. Energy Procedia, 2013, 40, 48-57.	1.8	59
6	Parameterized optimized effective potential for the ground state of the atoms He through Xe. Atomic Data and Nuclear Data Tables, 2004, 88, 163-202.	2.4	51
7	A Molecular Dynamics Study of the Surfactant Surface Density of Alkanethiol Self-Assembled Monolayers on Gold Nanoparticles as a Function of the Radius. Journal of Physical Chemistry C, 2010, 114, 21309-21314.	3.1	50
8	Variational Monte Carlo Method with Dirichlet Boundary Conditions: Application to the Study of Confined Systems by Impenetrable Surfaces with Different Symmetries. Journal of Chemical Theory and Computation, 2011, 7, 2786-2794.	5.3	49
9	Correlated Monte Carlo electron-pair density for the atoms helium to neon. Journal of Chemical Physics, 1998, 109, 7075-7084.	3.0	41
10	Auxiliary field diffusion Monte Carlo calculation of ground state properties of neutron drops. Nuclear Physics A, 2004, 742, 255-268.	1.5	38
11	A parametrized optimized effective potential for atoms. Journal of Physics B: Atomic, Molecular and Optical Physics, 2003, 36, 4393-4402.	1.5	36
12	Correlated electron extracule densities in position and momentum spaces. Journal of Chemical Physics, 1999, 111, 3319-3326.	3.0	32
13	Atomic properties from energy-optimized wave functions. Journal of Chemical Physics, 2001, 115, 1166-1171.	3.0	30
14	Correlated two-electron momentum properties for helium to neon atoms. Journal of Chemical Physics, 1999, 110, 5721-5727.	3.0	27
15	Quantum confinement study of the H⁺₂ion with the Monte Carlo approach. Respective role of electron and nuclei confinement. Journal of Physics B: Atomic, Molecular and Optical Physics, 2012, 45, 205101.	1.5	27
16	A Monte Carlo Model Of The Nocturnal Surface Temperatures In Urban Canyons. Boundary-Layer Meteorology, 2000, 96, 433-452.	2.3	26
17	Quadratic diffusion Monte Carlo and pure estimators for atoms. Journal of Chemical Physics, 2002, 116, 5956-5962.	3.0	25
18	HF Dimer in Small Helium Clusters: Interchange-Tunneling Dynamics in a Quantum Environment. Physical Review Letters, 2002, 88, 123401.	7.8	22

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19	Mg impurity in helium droplets. Journal of Chemical Physics, 2012, 136, 054301.	3.0	22
20	Quantum Confinement of the Covalent Bond beyond the Bornâ€“Oppenheimer Approximation. Journal of Physical Chemistry B, 2013, 117, 7270-7276.	2.6	22
21	Correlated one-body momentum density for helium to neon atoms. Journal of Physics B: Atomic, Molecular and Optical Physics, 1999, 32, 2245-2255.	1.5	21
22	Excited states of beryllium atom from explicitly correlated wave functions. Journal of Chemical Physics, 2002, 117, 6071-6082.	3.0	21
23	Correlated wave functions for the ground state of the atoms Li through Kr. Chemical Physics Letters, 2006, 428, 241-244.	2.6	21
24	Study of confined many electron atoms by means of the POEP method. Journal of Physics B: Atomic, Molecular and Optical Physics, 2014, 47, 185002.	1.5	21
25	A variational Monte Carlo study of the 2s-2p near degeneracy in beryllium, boron, and carbon atoms. Journal of Chemical Physics, 1998, 109, 3346-3351.	3.0	19
26	One- and two-body densities for the beryllium isoelectronic series. Journal of Chemical Physics, 1999, 111, 10903-10909.	3.0	19
27	Excited states of boron isoelectronic series from explicitly correlated wave functions. Journal of Chemical Physics, 2005, 122, 154307.	3.0	18
28	Constraint dynamics for quantum Monte Carlo calculations. Journal of Chemical Physics, 2000, 113, 44-47.	3.0	17
29	(HCl)2 and (HF)2 in small helium clusters: Quantum solvation of hydrogen-bonded dimers. Journal of Chemical Physics, 2005, 123, 224313.	3.0	17
30	Jastrow correlations and near degeneracy effects in neutral atoms and cations with 3â©½Zâ©½36. Chemical Physics Letters, 2007, 436, 352-356.	2.6	17
31	Quantum Monte Carlo ground state energies for the singly charged ions from Li through Ar. Journal of Chemical Physics, 2010, 133, 064102.	3.0	17
32	Spin-orbit induced backflow in neutron matter with auxiliary field diffusion Monte Carlo method. Physical Review C, 2003, 67, .	2.9	15
33	Excited states of beryllium isoelectronic series from explicitly correlated wave functions. Journal of Chemical Physics, 2003, 118, 6858-6867.	3.0	15
34	Correlated wave functions for the ground and some excited states of the iron atom. Journal of Chemical Physics, 2006, 124, 154101.	3.0	15
35	Isotopic Effects on Covalent Bond Confined in a Penetrable Sphere. Journal of Physical Chemistry B, 2015, 119, 14364-14372.	2.6	15
36	Relative stabilities of the two isomers of the methanol-water dimer: The effects of the internal rotations of the hydroxyl and methyl groups of methanol. Journal of Chemical Physics, 2001, 114, 10294-10299.	3.0	14

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37	1s22p3 and 1s22s23l, l=s,p,d, excited states of boron isoelectronic series from explicitly correlated wave functions. Journal of Chemical Physics, 2005, 123, 034302.	3.0	14
38	Multi-configurational explicitly correlated wave functions for the study of confined many electron atoms. Journal of Physics B: Atomic, Molecular and Optical Physics, 2016, 49, 145003.	1.5	14
39	Momentum space densities for the beryllium isoelectronic series. Journal of Chemical Physics, 2000, 113, 8631-8636.	3.0	12
40	Two-electron properties for the beryllium atom from explicitly correlated wavefunctions. Chemical Physics Letters, 2003, 378, 330-336.	2.6	12
41	Numerical-parameterized optimized effective potential for atoms. Journal of Physics B: Atomic, Molecular and Optical Physics, 2006, 39, 3575-3585.	1.5	12
42	Quantum Monte Carlo ground state energies for the atoms Li through Ar. Journal of Chemical Physics, 2009, 131, 044115.	3.0	12
43	Quantum Monte Carlo ionization potential and electron affinity for transition metal atoms. Chemical Physics Letters, 2013, 559, 12-17.	2.6	12
44	Quantum Monte Carlo for 3d Transition-Metal Atoms. Journal of Physical Chemistry A, 2008, 112, 2074-2076.	2.5	11
45	Relativistic effects on complexity indexes in atoms in position and momentum spaces. Physics Letters, Section A: General, Atomic and Solid State Physics, 2010, 374, 3847-3853.	2.1	10
46	Confinement effects on the electronic structure of M-shell atoms: A study with explicitly correlated wave functions. International Journal of Quantum Chemistry, 2017, 117, e25421.	2.0	10
47	Central Jastrow and linear state-dependent correlations in nuclei. Journal of Physics G: Nuclear and Particle Physics, 2000, 26, 1795-1807.	3.6	9
48	Simple analysis of correlation in few-body Coulomb systems: Application in the diffusion Monte Carlo method. Physical Review A, 2001, 63, .	2.5	9
49	Jastrow correlated and quantum Monte Carlo calculations for the low-lying states of the carbon atom. Journal of Chemical Physics, 2011, 134, 134102.	3.0	9
50	Explicitly correlated energies for neutral atoms and cations with 37â©½Zâ©½54. Chemical Physics Letters, 2008, 465, 190-192.	2.6	8
51	Optimized effective potential energies and ionization potentials for the atoms Li to Ra. European Physical Journal D, 2008, 50, 229-235.	1.3	8
52	Singlet vs. triplet interelectronic repulsion in confined atoms. Chemical Physics Letters, 2018, 702, 106-110.	2.6	8
53	Two-dimensional clusters of liquid4He. Physical Review B, 2003, 68, .	3.2	7
54	One- and two-body densities of carbon isoelectronic series in their low-lying multiplet states from explicitly correlated wave functions. Journal of Chemical Physics, 2006, 124, 044319.	3.0	7

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55	Ionization probability of the hydrogen atom suddenly released from confinement. International Journal of Quantum Chemistry, 2018, 118, e25563.	2.0	7
56	Non-linear Characterizations for Functions of Hypergeometric Type and Their Derivatives of Any Order. Journal of Mathematical Analysis and Applications, 1994, 184, 35-43.	1.0	6
57	A new quantum Monte Carlo method for nucleon systems. Progress in Particle and Nuclear Physics, 2000, 44, 63-73.	14.4	6
58	Correlated one-electron and two-electron densities for the ground state of the lithium atom. Physical Review A, 2000, 61, .	2.5	6
59	Projected-deformed wavefunctions with central Jastrow and linear state-dependent correlations for8Be and12C. Journal of Physics G: Nuclear and Particle Physics, 2001, 27, 2211-2223.	3.6	6
60	Number-conserving model for boson pairing. Physical Review A, 2002, 66, .	2.5	6
61	Electron pair properties for the helium atom from explicitly correlated wave functions. Chemical Physics Letters, 2003, 370, 327-333.	2.6	6
62	A simple and accurate analytical model of the Stark profile and its application to plasma characterization. Journal of Quantitative Spectroscopy and Radiative Transfer, 2018, 207, 89-94.	2.3	6
63	Variational calculation of some S-states of Coulomb three-body systems. European Physical Journal D, 2001, 13, 201-206.	1.3	5
64	Projected multicluster model with Jastrow and linear state dependent correlations for12â©½Aâ©½16nuclei. Physical Review C, 2004, 70, .	2.9	5
65	Density functional study of two-dimensionalHe4clusters. Physical Review B, 2005, 72, .	3.2	5
66	Determination of simple correlated wave functions for few-electron systems using a Jastrow factor. Physical Review A, 2006, 73, .	2.5	5
67	Numerical-parameterized relativistic optimized effective potential for atoms. Journal of Physics B: Atomic, Molecular and Optical Physics, 2007, 40, 3045-3056.	1.5	5
68	Ionisation and excitation probabilities of a hydrogen atom suddenly released from penetrable confinement. Molecular Physics, 2019, 117, 1621-1628.	1.7	5
69	Study of Quantum Confinement of $$ {ext{H}}_{2}^{ + } $$ Ion and H2 Molecule with Monte Carlo. Respective Role of the Electron and Nuclei Confinement. , 2014, , 227-253.		5
70	Margenauâ€“Brink alpha model with central Jastrow and linear state-dependent correlations for p-shell nuclei. Nuclear Physics A, 2002, 710, 29-41.	1.5	4
71	Simple correlated wave functions for the ground and some excited states ofsdshell nuclei. Physical Review C, 2003, 67, .	2.9	4
72	Relativistic, numerically parameterized, optimized, effective potentials for the ground state of the atoms He through Ra. Atomic Data and Nuclear Data Tables, 2011, 97, 109-133.	2.4	4

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73	Relativistic quantum similarities in atoms in position and momentum spaces. Physics Letters, Section A: General, Atomic and Solid State Physics, 2011, 375, 2544-2549.	2.1	4
74	Exclusion principle repulsion effects on the covalent bond beyond the Bornâ€“Oppenheimer approximation. Physical Chemistry Chemical Physics, 2019, 21, 10411-10416.	2.8	4
75	A practical method for plasma diagnosis with Balmer series hydrogen lines. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2020, 163, 105728.	2.9	4
76	Variational Monte Carlo calculations for some cations and anions of the first-row atoms using explicitly correlated wave functions. International Journal of Quantum Chemistry, 2002, 87, 270-274.	2.0	3
77	Near Degeneracy Effects on the Low-Lying Spectrum of the Iron Atom. Journal of Physical Chemistry A, 2010, 114, 1953-1956.	2.5	3
78	Quantum defect asymptotics at the critical charge: A study of the integrality conjecture. Chemical Physics Letters, 2018, 706, 380-382.	2.6	3
79	Simple and analytical function for the Stark profile of the HÎ± line and its application to plasma characterization. Journal of Quantitative Spectroscopy and Radiative Transfer, 2018, 217, 111-115.	2.3	3
80	A new Sierpinski-based fractal photonic crystal fiber design with low dispersion and confinement loss. Optik, 2021, 225, 165780.	2.9	3
81	Factored wave function for boundS-type states of two-electron atomic systems. International Journal of Quantum Chemistry, 1998, 68, 405-413.	2.0	2
82	Variational Monte Carlo calculation of two body properties in atoms: Importance sampling considerations. Computer Physics Communications, 1999, 121-122, 493-495.	7.5	2
83	A CONSTRAINED PATH MONTE CARLO METHOD FOR NUCLEON SYSTEMS. International Journal of Modern Physics B, 2001, 15, 1510-1518.	2.0	2
84	Constrained path calculations of the 4 He and 16 O nuclei. European Physical Journal A, 2003, 17, 469-473.	2.5	2
85	Momentum space properties for the atoms helium to neon from energy-optimized explicitly correlated wave functions. International Journal of Quantum Chemistry, 2004, 99, 247-255.	2.0	2
86	Correlated wave functions to approach the bound excited states of Li- and Be-. European Physical Journal D, 2006, 40, 161-167.	1.3	2
87	Patient radiation doses in uterine artery embolisation using Monte Carlo simulation. Radiation Protection Dosimetry, 2014, 158, 162-169.	0.8	2
88	Explicitly correlated wave functions for atoms and singly charged ions from Li through Sr: Variational and Diffusion Monte Carlo results. Chemical Physics Letters, 2014, 615, 21-25.	2.6	2
89	Stability after confinement of the H atom. Advances in Quantum Chemistry, 2019, 79, 323-336.	0.8	2
90	Hundâ€™s rule in open-shell states of two-electron systems: From free through confined and screened atoms, to quantum dots. Nanosystems: Physics, Chemistry, Mathematics, 2019, 10, 31-41.	0.4	2

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91	Two-body densities and effective potentials. International Journal of Quantum Chemistry, 2000, 79, 75-81.	2.0	1
92	Dynamical correlation effects in the transition probability: A study for the atoms Li to Ar. Chemical Physics Letters, 2012, 548, 1-6.	2.6	1
93	The hydrogen atom confined by one and two hard cones. Physics Letters, Section A: General, Atomic and Solid State Physics, 2017, 381, 780-786.	2.1	1
94	NUCLEAR MATTER WITH THE AUXILIARY FIELD DIFFUSION MONTE CARLO METHOD. , 2001, , .		1
95	Bounds for the electron density at the nucleus and for the intracule density at the coalescence point for two-electron atoms. Zeitschrift FÃ¼r Physik D-Atoms Molecules and Clusters, 1995, 35, 163-167.	1.0	0
96	Reply to Comment on `Correlated one-body momentum density for helium to neon atoms'. Journal of Physics B: Atomic, Molecular and Optical Physics, 2002, 35, 2191-2193.	1.5	0
97	State-dependent correlated wavefunctions forsd-shell nuclei. Journal of Physics G: Nuclear and Particle Physics, 2007, 34, 2129-2140.	3.6	0
98	A CONSTRAINED PATH MONTE CARLO METHOD FOR NUCLEON SYSTEMS. , 2000, , .		0
99	Analysis of the ion collisional contribution over the Stark profile in H line. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2022, , 106455.	2.9	0