

Mario Centelles

List of Publications by Year in descending order

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104
papers

3,727
citations

126907

33
h-index

128289

60
g-index

106
all docs

106
docs citations

106
times ranked

1331
citing authors

#	ARTICLE	IF	CITATIONS
1	Nuclear Symmetry Energy Probed by Neutron Skin Thickness of Nuclei. Physical Review Letters, 2009, 102, 122502.	7.8	416
2	Neutron Skin of ^{208}Pb , Nuclear Symmetry Energy, and the Parity Radius Experiment. Physical Review Letters, 2011, 106, 252501.	7.8	310
3	Electric dipole polarizability in ^{208}Pb and ^{120}Sn . Physical Review C, 2015, 92, .	2.9	175
4	Neutron skin thickness in the droplet model with surface width dependence: Indications of softness of the nuclear symmetry energy. Physical Review C, 2009, 80, .	2.9	166
5	Relativistic mean-field interaction with density-dependent meson-nucleon vertices based on microscopical calculations. Physical Review C, 2011, 84, .	2.9	157
6	Electric dipole polarizability in ^{208}Pb : Insights from the droplet model. Physical Review C, 2013, 88, .	2.9	146
7	Incompressibility of neutron-rich matter. Physical Review C, 2009, 79, .	2.9	138
8	Unified equation of state for neutron stars on a microscopic basis. Astronomy and Astrophysics, 2015, 584, A103.	5.1	117
9	Pairing properties in relativistic mean field models obtained from effective field theory. Physical Review C, 2001, 63, .	2.9	86
10	Origin of the neutron skin thickness of ^{208}Pb in nuclear mean-field models. Physical Review C, 2010, 82, .	2.9	79
11	EQUATION OF STATE FOR NUCLEONIC AND HYPERONIC NEUTRON STARS WITH MASS AND RADIUS CONSTRAINTS. Astrophysical Journal, 2017, 834, 3.	4.5	79
12	Effects of new nonlinear couplings in relativistic effective field theory. Physical Review C, 2001, 63, .	2.9	77
13	Density dependence of the symmetry energy from neutron skin thickness in finite nuclei. European Physical Journal A, 2014, 50, 1.	2.5	77
14	Analysis of bulk and surface contributions in the neutron skin of nuclei. Physical Review C, 2010, 81, .	2.9	76
15	Atomic parity nonconservation, neutron radii, and effective field theories of nuclei. Physical Review C, 2005, 71, .	2.9	68
16	Semiclassical treatment of asymmetric semi-infinite nuclear matter: surface and curvature properties in relativistic and non-relativistic models. Nuclear Physics A, 1998, 635, 193-230.	1.5	67
17	The Equation of State for the Nucleonic and Hyperonic Core of Neutron Stars. Publications of the Astronomical Society of Australia, 2017, 34, .	3.4	66
18	Superheavy nuclei in a relativistic effective Lagrangian model. Physical Review C, 2004, 69, .	2.9	55

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19	Interdependence of different symmetry energy elements. <i>Physical Review C</i> , 2017, 96, .	2.9	55
20	Theoretical study of elastic electron scattering off stable and exotic nuclei. <i>Physical Review C</i> , 2008, 78, .	2.9	53
21	Higher-order symmetry energy and neutron star core-crust transition with Gogny forces. <i>Physical Review C</i> , 2017, 96, .	2.9	53
22	Self-consistent extended Thomas-Fermi calculations in nuclei. <i>Nuclear Physics A</i> , 1990, 510, 397-416.	1.5	50
23	Versatility of field theory motivated nuclear effective Lagrangian approach. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2004, 601, 51-55.	4.1	48
24	Interplay between Delta Particles and Hyperons in Neutron Stars. <i>Astrophysical Journal</i> , 2019, 883, 168.	4.5	46
25	Microscopic-macroscopic approach for binding energies with the Wigner-Kirkwood method. <i>Physical Review C</i> , 2010, 81, .	2.9	43
26	New Gogny interaction suitable for astrophysical applications. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2018, 779, 195-200.	4.1	43
27	A Semiclassical Approach to Relativistic Nuclear Mean Field Theory. <i>Annals of Physics</i> , 1993, 221, 165-204.	2.8	42
28	Excitation energy dependence of the symmetry energy of finite nuclei. <i>Physical Review C</i> , 2007, 76, .	2.9	42
29	Ground-state properties and spins of the odd $Z=N+1$ nuclei $^{61}\text{Ga} \sim ^{97}\text{In}$. <i>Physical Review C</i> , 2001, 63, .	2.9	39
30	On the relativistic extended Thomas-Fermi method. <i>Nuclear Physics A</i> , 1990, 519, 73-82.	1.5	37
31	Cooling of Small and Massive Hyperonic Stars. <i>Astrophysical Journal</i> , 2018, 863, 104.	4.5	36
32	Model dependence of the neutron-skin thickness on the symmetry energy. <i>Physical Review C</i> , 2016, 93, .	2.9	34
33	Semiclassical approximations in non-linear $\hat{\rho}$ models. <i>Nuclear Physics A</i> , 1992, 537, 486-500.	1.5	33
34	Surface incompressibility from semiclassical relativistic mean field calculations. <i>Physical Review C</i> , 2002, 65, .	2.9	31
35	Garvey-Kelson relations for nuclear charge radii. <i>European Physical Journal A</i> , 2010, 46, 379-386.	2.5	31
36	Semiclassical approach to the description of semi-infinite nuclear matter in relativistic mean-field theory. <i>Nuclear Physics A</i> , 1993, 563, 173-204.	1.5	27

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37	Nuclear surface properties in relativistic effective field theory. Nuclear Physics A, 1999, 650, 443-468.	1.5	27
38	Thomasâ€™Fermi theory for atomic nuclei revisited. Annals of Physics, 2007, 322, 363-396.	2.8	26
39	Symmetry energy of warm nuclear systems. European Physical Journal A, 2014, 50, 1.	2.5	23
40	Isospin-rich nuclei in neutron star matter. Physical Review C, 2002, 66, .	2.9	22
41	Electron scattering in isotonic chains as a probe of the proton shell structure of unstable nuclei. Physical Review C, 2013, 87, .	2.9	22
42	Core-crust transition in neutron stars with finite-range interactions: The dynamical method. Physical Review C, 2019, 100, .	2.9	22
43	A density functional model for the surface properties of liquid ⁴ He. Journal of Physics Condensed Matter, 1992, 4, 667-678.	1.8	21
44	Semiclassical evaluation of average nuclear one- and two-body matrix elements. Physical Review C, 2003, 67, .	2.9	20
45	Microscopic-macroscopic approach for binding energies with the Wigner-Kirkwood method. II. Deformed nuclei. Physical Review C, 2012, 86, .	2.9	20
46	Influence of the single-particle structure on the nuclear surface and the neutron skin. Physical Review C, 2014, 89, .	2.9	19
47	Exact versus Taylor-expanded energy density in the study of the neutron star crustâ€™core transition. Journal of Physics G: Nuclear and Particle Physics, 2016, 43, 105101.	3.6	19
48	Deformation properties with a finite-range simple effective interaction. Journal of Physics G: Nuclear and Particle Physics, 2016, 43, 045115.	3.6	19
49	Density dependence of the symmetry free energy of hot nuclei. Physical Review C, 2008, 78, .	2.9	18
50	Variational Wignerâ€™Kirkwood â„•Expansion. Annals of Physics, 1998, 266, 207-243.	2.8	17
51	From the crust to the core of neutron stars on a microscopic basis. Physics of Atomic Nuclei, 2014, 77, 1157-1165.	0.4	17
52	Structure and composition of the inner crust of neutron stars from Gogny interactions. Physical Review C, 2020, 102, .	2.9	17
53	Nuclei beyond the drip line. Physical Review C, 2001, 64, .	2.9	16
54	The influence of the symmetry energy on the giant monopole resonance of neutron-rich nuclei analyzed in Thomasâ€™Fermi theory. Journal of Physics G: Nuclear and Particle Physics, 2010, 37, 075107.	3.6	15

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55	Study of spin polarized nuclear matter and finite nuclei with finite range simple effective interaction. Journal of Physics G: Nuclear and Particle Physics, 2015, 42, 045103.	3.6	15
56	Scaling calculation of isoscalar giant resonances in relativistic Thomas-Fermi theory. Nuclear Physics A, 2002, 703, 240-268.	1.5	14
57	Average ground-state energy of finite Fermi systems. Physical Review C, 2006, 74, .	2.9	14
58	GW170817 constraints analyzed with Gogny forces and momentum-dependent interactions. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2020, 803, 135306.	4.1	14
59	Nuclear expansion with excitation. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2006, 638, 160-165.	4.1	13
60	Unified Equation of State for Neutron Stars Based on the Gogny Interaction. Symmetry, 2021, 13, 1613.	2.2	13
61	Title is missing!. Acta Physica Polonica B, 2012, 43, 209.	0.8	12
62	Relativistic extended Thomas-Fermi calculations of finite nuclei with realistic nucleon-nucleon interactions. Physical Review C, 1993, 47, 1091-1102.	2.9	11
63	Giant monopole energies from a constrained relativistic mean-field approach. Physical Review C, 2013, 88, .	2.9	11
64	Pasta-phase Transitions in the Inner Crust of Neutron Stars. Acta Physica Polonica B, Proceedings Supplement, 2017, 10, 259.	0.1	11
65	Symmetry coefficients and incompressibility of clusterized supernova matter. Physical Review C, 2009, 80, .	2.9	10
66	Sum rule approach to the isoscalar giant monopole resonance in drip line nuclei. Physical Review C, 2005, 72, .	2.9	9
67	Density reorganization in hot nuclei. Physical Review C, 2007, 75, .	2.9	9
68	Density dependence of the symmetry energy from neutron skin thickness in finite nuclei. , 2012, , .		8
69	Relativistic extended Thomas-Fermi calculations of finite nuclei. Journal of Physics G: Nuclear and Particle Physics, 1991, 17, L193-L199.	3.6	7
70	Scaling in relativistic Thomas-Fermi approach for nuclei. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2001, 523, 67-72.	4.1	7
71	SEMICLASSICAL DESCRIPTION OF EXOTIC NUCLEAR SHAPES. International Journal of Modern Physics E, 2008, 17, 177-189.	1.0	7
72	Influence of the nuclear matter equation of state on the i -mode instability using the finite-range simple effective interaction. Journal of Physics G: Nuclear and Particle Physics, 2018, 45, 055202.	3.6	7

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73	Nuclear curvature energy in relativistic models. <i>Physical Review C</i> , 1996, 53, 1018-1021.	2.9	6
74	Variational Wigner-Kirkwood approach to relativistic mean field theory. <i>Physical Review C</i> , 1997, 56, 1774-1781.	2.9	5
75	Woods-Saxon type of mean-field potentials with effective mass derived from the D1S Gogny force. <i>Physical Review C</i> , 2021, 103, .	2.9	5
76	Finite-size instabilities in finite-range forces. <i>Physical Review C</i> , 2021, 103, .	2.9	5
77	Reexamination of the N and Z shell closure. <i>Physical Review C</i> , 2021, 104, .	2.9	5
78	Bose-Fermi mixtures in optical lattices. <i>Laser Physics</i> , 2006, 16, 360-366.	1.2	4
79	Effects of medium on nuclear properties in multifragmentation. <i>Physical Review C</i> , 2012, 86, .	2.9	4
80	NEUTRON SKIN THICKNESS IN NEUTRON-RICH NUCLEI: BULK AND SURFACE CONTRIBUTIONS AND SHELL EFFECTS. <i>International Journal of Modern Physics E</i> , 2012, 21, 1250029.	1.0	4
81	Influence of direct Urca on the r-mode spin down features of newborn neutron star pulsars. <i>Physica Scripta</i> , 2021, 96, 045301.	2.5	4
82	Microscopic-macroscopic approach for ground-state energies based on the Gogny force with the Wigner-Kirkwood averaging scheme. <i>Physical Review C</i> , 2021, 103, .	2.9	4
83	The Modified D1M Interactions: New Gogny Forces Adapted for Neutron Star Calculations. <i>Acta Physica Polonica B, Proceedings Supplement</i> , 2019, 12, 705.	0.1	4
84	Dynamic and quasistatic trajectories in quasifission reactions and particle emission. <i>Nuclear Physics A</i> , 2001, 679, 441-461.	1.5	3
85	Critical frequency for vortex nucleation in Bose-Fermi mixtures in optical lattices. <i>Physical Review A</i> , 2005, 72, .	2.5	3
86	Applications to nuclear properties of the microscopic-macroscopic model based on the semiclassical Wigner-Kirkwood method. <i>Physica Scripta</i> , 2015, 90, 114001.	2.5	3
87	The Determination of the Bulk Symmetry Incompressibility from the Isoscalar Giant Monopole Resonance Revisited. <i>Acta Physica Polonica B, Proceedings Supplement</i> , 2015, 8, 707.	0.1	3
88	Density dependence of the nuclear symmetry energy from measurements of neutron radii in nuclei. , 2014, , .		2
89	Comment on "Influence of bulk properties on the surface structure of finite nuclei". <i>Physical Review C</i> , 1994, 49, 2852-2853.	2.9	1
90	Semiclassical and statistical description of the nuclear Fermi liquid drop. <i>Physics of Atomic Nuclei</i> , 2002, 65, 731-735.	0.4	1

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91	Study of the neutron skin thickness of ^{208}Pb in mean field models. Journal of Physics: Conference Series, 2011, 321, 012052.	0.4	1
92	Level density parameter in relativistic models. Nuclear Physics A, 1994, 567, 611-625.	1.5	0
93	Statistical description of the nuclear fermi liquid drop. European Physical Journal D, 1998, 48, 789-798.	0.4	0
94	Microscopicâ€“Macroscopic Mass Calculations with Wignerâ€“Kirkwood expansion. Journal of Physics: Conference Series, 2011, 321, 012053.	0.4	0
95	The pygmy dipole strength, the neutron radius of ^{208}Pb and the symmetry energy. Journal of Physics: Conference Series, 2012, 342, 012009.	0.4	0
96	Recent developments in the Wigner - Kirkwood mass formula. , 2013, , .		0
97	Nuclear Symmetry Energy: constraints from Giant Quadrupole Resonances and Parity Violating Electron Scattering. EPJ Web of Conferences, 2014, 66, 02092.	0.3	0
98	Properties of nuclear matter and finite nuclei with finite range simple effective interaction. EPJ Web of Conferences, 2016, 117, 07009.	0.3	0
99	Effects of New Couplings from Relativistic Effective Field Theory Models. , 2002, , 97-102.		0
100	Kohn-Sham Approximation with Finite Range Forces. , 2002, , 353-358.		0
101	Pairing Properties in Relativistic Mean Field Models Based on Effective Field Theory. , 2002, , 175-180.		0
102	Density Functional Formalism in Relativistic Nuclear Mean Field Theory. NATO ASI Series Series B: Physics, 1995, , 173-189.	0.2	0
103	Gogny-force Inspired Mass Formula Within the Wigner-Kirkwood Averaging Scheme. Acta Physica Polonica B, Proceedings Supplement, 2015, 8, 699.	0.1	0
104	Gogny Force Useful for Neutron Star Calculations. Springer Proceedings in Physics, 2019, , 199-201.	0.2	0