

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	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
2	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
3	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
4	Finite-size instabilities in finite-range forces. <i>Physical Review C</i> , 2021, 103, .	2.9	5
5	Reexamination of the $N=50$ and $Z=28$ shell closure. <i>Physical Review C</i> , 2021, 104, .	2.9	5
6	Unified Equation of State for Neutron Stars Based on the Gogny Interaction. <i>Symmetry</i> , 2021, 13, 1613.	2.2	13
7	Structure and composition of the inner crust of neutron stars from Gogny interactions. <i>Physical Review C</i> , 2020, 102, .	2.9	17
8	GW170817 constraints analyzed with Gogny forces and momentum-dependent interactions. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2020, 803, 135306.	4.1	14
9	Core-crust transition in neutron stars with finite-range interactions: The dynamical method. <i>Physical Review C</i> , 2019, 100, .	2.9	22
10	Interplay between Delta Particles and Hyperons in Neutron Stars. <i>Astrophysical Journal</i> , 2019, 883, 168.	4.5	46
11	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
12	Gogny Force Useful for Neutron Star Calculations. <i>Springer Proceedings in Physics</i> , 2019, , 199-201.	0.2	0
13	Influence of the nuclear matter equation of state on the r -mode instability using the finite-range simple effective interaction. <i>Journal of Physics G: Nuclear and Particle Physics</i> , 2018, 45, 055202.	3.6	7
14	Cooling of Small and Massive Hyperonic Stars. <i>Astrophysical Journal</i> , 2018, 863, 104.	4.5	36
15	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
16	EQUATION OF STATE FOR NUCLEONIC AND HYPERONIC NEUTRON STARS WITH MASS AND RADIUS CONSTRAINTS. <i>Astrophysical Journal</i> , 2017, 834, 3.	4.5	79
17	Interdependence of different symmetry energy elements. <i>Physical Review C</i> , 2017, 96, .	2.9	55
18	The Equation of State for the Nucleonic and Hyperonic Core of Neutron Stars. <i>Publications of the Astronomical Society of Australia</i> , 2017, 34, .	3.4	66

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19	Higher-order symmetry energy and neutron star core-crust transition with Gogny forces. <i>Physical Review C</i> , 2017, 96, .	2.9	53
20	Pasta-phase Transitions in the Inner Crust of Neutron Stars. <i>Acta Physica Polonica B, Proceedings Supplement</i> , 2017, 10, 259.	0.1	11
21	Properties of nuclear matter and finite nuclei with finite range simple effective interaction. <i>EPJ Web of Conferences</i> , 2016, 117, 07009.	0.3	0
22	Exact versus Taylor-expanded energy density in the study of the neutron star crustâ€‘core transition. <i>Journal of Physics G: Nuclear and Particle Physics</i> , 2016, 43, 105101.	3.6	19
23	Model dependence of the neutron-skin thickness on the symmetry energy. <i>Physical Review C</i> , 2016, 93, .	2.9	34
24	Deformation properties with a finite-range simple effective interaction. <i>Journal of Physics G: Nuclear and Particle Physics</i> , 2016, 43, 045115.	3.6	19
25	Neutron skin thickness from the measured electric dipole polarizability in ^{68}Ni and ^{120}Sn . <i>Physical Review C</i> , 2015, 92, .	2.9	175
26	Applications to nuclear properties of the microscopicâ€‘macroscopic model based on the semiclassical Wignerâ€‘Kirkwood method. <i>Physica Scripta</i> , 2015, 90, 114001.	2.5	3
27	Unified equation of state for neutron stars on a microscopic basis. <i>Astronomy and Astrophysics</i> , 2015, 584, A103.	5.1	117
28	Study of spin polarized nuclear matter and finite nuclei with finite range simple effective interaction. <i>Journal of Physics G: Nuclear and Particle Physics</i> , 2015, 42, 045103.	3.6	15
29	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
30	Gogny-force Inspired Mass Formula Within the Wignerâ€‘Kirkwood Averaging Scheme. <i>Acta Physica Polonica B, Proceedings Supplement</i> , 2015, 8, 699.	0.1	0
31	Nuclear Symmetry Energy: constraints from Giant Quadrupole Resonances and Parity Violating Electron Scattering. <i>EPJ Web of Conferences</i> , 2014, 66, 02092.	0.3	0
32	From the crust to the core of neutron stars on a microscopic basis. <i>Physics of Atomic Nuclei</i> , 2014, 77, 1157-1165.	0.4	17
33	Density dependence of the nuclear symmetry energy from measurements of neutron radii in nuclei. , 2014, , .		2
34	Density dependence of the symmetry energy from neutron skin thickness in finite nuclei. <i>European Physical Journal A</i> , 2014, 50, 1.	2.5	77
35	Symmetry energy of warm nuclear systems. <i>European Physical Journal A</i> , 2014, 50, 1.	2.5	23
36	Influence of the single-particle structure on the nuclear surface and the neutron skin. <i>Physical Review C</i> , 2014, 89, .	2.9	19

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37	Electron scattering in isotonic chains as a probe of the proton shell structure of unstable nuclei. Physical Review C, 2013, 87, .	2.9	22
38	Electric dipole polarizability in ^{208}Pb : Insights from the droplet model. Physical Review C, 2013, 88, .	2.9	146
39	Recent developments in the Wigner - Kirkwood mass formula. , 2013, , .		0
40	Giant monopole energies from a constrained relativistic mean-field approach. Physical Review C, 2013, 88, .	2.9	11
41	Title is missing!. Acta Physica Polonica B, 2012, 43, 209.	0.8	12
42	Density dependence of the symmetry energy from neutron skin thickness in finite nuclei. , 2012, , .		8
43	Effects of medium on nuclear properties in multifragmentation. Physical Review C, 2012, 86, .	2.9	4
44	Microscopic-macroscopic approach for binding energies with the Wigner-Kirkwood method. II. Deformed nuclei. Physical Review C, 2012, 86, .	2.9	20
45	NEUTRON SKIN THICKNESS IN NEUTRON-RICH NUCLEI: BULK AND SURFACE CONTRIBUTIONS AND SHELL EFFECTS. International Journal of Modern Physics E, 2012, 21, 1250029.	1.0	4
46	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
47	Neutron Skin of ^{208}Pb , Nuclear Symmetry Energy, and the Parity Radius Experiment. Physical Review Letters, 2011, 106, 252501.	7.8	310
48	Microscopicâ€“Macroscopic Mass Calculations with Wignerâ€“Kirkwood expansion. Journal of Physics: Conference Series, 2011, 321, 012053.	0.4	0
49	Study of the neutron skin thickness of ^{208}Pb in mean field models. Journal of Physics: Conference Series, 2011, 321, 012052.	0.4	1
50	Relativistic mean-field interaction with density-dependent meson-nucleon vertices based on microscopical calculations. Physical Review C, 2011, 84, .	2.9	157
51	Garvey-Kelson relations for nuclear charge radii. European Physical Journal A, 2010, 46, 379-386.	2.5	31
52	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
53	Analysis of bulk and surface contributions in the neutron skin of nuclei. Physical Review C, 2010, 81, .	2.9	76
54	Microscopic-macroscopic approach for binding energies with the Wigner-Kirkwood method. Physical Review C, 2010, 81, .	2.9	43

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55	Origin of the neutron skin thickness of ^{208}Pb in nuclear mean-field models. Physical Review C, 2010, 82, .	2.9	79
56	Symmetry coefficients and incompressibility of clusterized supernova matter. Physical Review C, 2009, 80, .	2.9	10
57	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
58	Nuclear Symmetry Energy Probed by Neutron Skin Thickness of Nuclei. Physical Review Letters, 2009, 102, 122502.	7.8	416
59	Incompressibility of neutron-rich matter. Physical Review C, 2009, 79, .	2.9	138
60	Theoretical study of elastic electron scattering off stable and exotic nuclei. Physical Review C, 2008, 78, .	2.9	53
61	SEMICLASSICAL DESCRIPTION OF EXOTIC NUCLEAR SHAPES. International Journal of Modern Physics E, 2008, 17, 177-189.	1.0	7
62	Density dependence of the symmetry free energy of hot nuclei. Physical Review C, 2008, 78, .	2.9	18
63	Density reorganization in hot nuclei. Physical Review C, 2007, 75, .	2.9	9
64	Excitation energy dependence of the symmetry energy of finite nuclei. Physical Review C, 2007, 76, .	2.9	42
65	Thomasâ€™ Fermi theory for atomic nuclei revisited. Annals of Physics, 2007, 322, 363-396.	2.8	26
66	Nuclear expansion with excitation. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2006, 638, 160-165.	4.1	13
67	Bose-Fermi mixtures in optical lattices. Laser Physics, 2006, 16, 360-366.	1.2	4
68	Average ground-state energy of finite Fermi systems. Physical Review C, 2006, 74, .	2.9	14
69	Sum rule approach to the isoscalar giant monopole resonance in drip line nuclei. Physical Review C, 2005, 72, .	2.9	9
70	Atomic parity nonconservation, neutron radii, and effective field theories of nuclei. Physical Review C, 2005, 71, .	2.9	68
71	Critical frequency for vortex nucleation in Bose-Fermi mixtures in optical lattices. Physical Review A, 2005, 72, .	2.5	3
72	Superheavy nuclei in a relativistic effective Lagrangian model. Physical Review C, 2004, 69, .	2.9	55

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73	Versatility of field theory motivated nuclear effective Lagrangian approach. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2004, 601, 51-55.	4.1	48
74	Semiclassical evaluation of average nuclear one- and two-body matrix elements. Physical Review C, 2003, 67, .	2.9	20
75	Isospin-rich nuclei in neutron star matter. Physical Review C, 2002, 66, .	2.9	22
76	Surface incompressibility from semiclassical relativistic mean field calculations. Physical Review C, 2002, 65, .	2.9	31
77	Scaling calculation of isoscalar giant resonances in relativistic Thomas-Fermi theory. Nuclear Physics A, 2002, 703, 240-268.	1.5	14
78	Semiclassical and statistical description of the nuclear Fermi liquid drop. Physics of Atomic Nuclei, 2002, 65, 731-735.	0.4	1
79	Effects of New Couplings from Relativistic Effective Field Theory Models. , 2002, , 97-102.		0
80	Kohn-Sham Approximation with Finite Range Forces. , 2002, , 353-358.		0
81	Pairing Properties in Relativistic Mean Field Models Based on Effective Field Theory. , 2002, , 175-180.		0
82	Pairing properties in relativistic mean field models obtained from effective field theory. Physical Review C, 2001, 63, .	2.9	86
83	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
84	Dynamic and quasistatic trajectories in quasifission reactions and particle emission. Nuclear Physics A, 2001, 679, 441-461.	1.5	3
85	Effects of new nonlinear couplings in relativistic effective field theory. Physical Review C, 2001, 63, .	2.9	77
86	Ground-state properties and spins of the odd-Z=N+1 nuclei ^{61}Ga and ^{97}In . Physical Review C, 2001, 63, .	2.9	39
87	Nuclei beyond the drip line. Physical Review C, 2001, 64, .	2.9	16
88	Nuclear surface properties in relativistic effective field theory. Nuclear Physics A, 1999, 650, 443-468.	1.5	27
89	Statistical description of the nuclear fermi liquid drop. European Physical Journal D, 1998, 48, 789-798.	0.4	0
90	Variational Wigner-Kirkwood expansion. Annals of Physics, 1998, 266, 207-243.	2.8	17

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91	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
92	Variational Wigner-Kirkwood approach to relativistic mean field theory. Physical Review C, 1997, 56, 1774-1781.	2.9	5
93	Nuclear curvature energy in relativistic models. Physical Review C, 1996, 53, 1018-1021.	2.9	6
94	Density Functional Formalism in Relativistic Nuclear Mean Field Theory. NATO ASI Series Series B: Physics, 1995, , 173-189.	0.2	0
95	Comment on "Influence of bulk properties on the surface structure of finite nuclei". Physical Review C, 1994, 49, 2852-2853.	2.9	1
96	Level density parameter in relativistic models. Nuclear Physics A, 1994, 567, 611-625.	1.5	0
97	A Semiclassical Approach to Relativistic Nuclear Mean Field Theory. Annals of Physics, 1993, 221, 165-204.	2.8	42
98	Semiclassical approach to the description of semi-infinite nuclear matter in relativistic mean-field theory. Nuclear Physics A, 1993, 563, 173-204.	1.5	27
99	Relativistic extended Thomas-Fermi calculations of finite nuclei with realistic nucleon-nucleon interactions. Physical Review C, 1993, 47, 1091-1102.	2.9	11
100	A density functional model for the surface properties of liquid ^4He . Journal of Physics Condensed Matter, 1992, 4, 667-678.	1.8	21
101	Semiclassical approximations in non-linear models. Nuclear Physics A, 1992, 537, 486-500.	1.5	33
102	Relativistic extended Thomas-Fermi calculations of finite nuclei. Journal of Physics G: Nuclear and Particle Physics, 1991, 17, L193-L199.	3.6	7
103	Self-consistent extended Thomas-Fermi calculations in nuclei. Nuclear Physics A, 1990, 510, 397-416.	1.5	50
104	On the relativistic extended Thomas-Fermi method. Nuclear Physics A, 1990, 519, 73-82.	1.5	37