

Xavier Roca-Maza

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/3401361/publications.pdf>

Version: 2024-02-01

84
papers

3,654
citations

236925

25
h-index

128289

60
g-index

86
all docs

86
docs citations

86
times ranked

1520
citing authors

#	ARTICLE	IF	CITATIONS
1	Constraints on the symmetry energy and neutron skins from experiments and theory. Physical Review C, 2012, 86, .	2.9	566
2	Nuclear Symmetry Energy Probed by Neutron Skin Thickness of Nuclei. Physical Review Letters, 2009, 102, 122502.	7.8	416
3	Neutron Skin of ^{208}Pb , Nuclear Symmetry Energy, and the Parity Radius Experiment. Physical Review Letters. 2011, 106, 252501.	7.8	310
4	Electric dipole polarizability and the neutron skin. Physical Review C, 2012, 85, .	2.9	198
5	Neutron skin thickness from the measured electric dipole polarizability in ^{68}Ni and ^{120}Sn . Physical Review C, 2015, 92, .	2.9	175
6	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
7	Relativistic mean-field interaction with density-dependent meson-nucleon vertices based on microscopical calculations. Physical Review C, 2011, 84, .	2.9	157
8	Nuclear equation of state from ground and collective excited state properties of nuclei. Progress in Particle and Nuclear Physics, 2018, 101, 96-176.	14.4	155
9	Electric dipole polarizability in ^{208}Pb : Insights from the droplet model. Physical Review C, 2013, 88, .	2.9	146
10	Giant quadrupole resonances in ^{208}Pb , the nuclear symmetry energy, and the neutron skin thickness. Physical Review C, 2013, 87, .	2.9	113
11	New Skyrme interaction with improved spin-isospin properties. Physical Review C, 2012, 86, .	2.9	112
12	Origin of the neutron skin thickness of ^{208}Pb in nuclear mean-field models. Physical Review C, 2010, 82, .	2.9	79
13	Neutron skin thickness of ^{68}Ni and ^{132}Sn , and the parity radius experiment. Physical Review Letters, 2011, 106, 252501.	2.9	79
14	Density dependence of the symmetry energy from neutron skin thickness in finite nuclei. European Physical Journal A, 2014, 50, 1.	2.5	77
15	Analysis of bulk and surface contributions in the neutron skin of nuclei. Physical Review C, 2010, 81, .	2.9	76
16	Information Content of the Parity-Violating Asymmetry in ^{208}Pb . Physical Review Letters, 2021, 127, 232501.	7.8	70
17	Impact of the symmetry energy on the outer crust of nonaccreting neutron stars. Physical Review C, 2008, 78, .	2.9	55
18	Theoretical study of elastic electron scattering off stable and exotic nuclei. Physical Review C, 2008, 78, .	2.9	53

#	ARTICLE	IF	CITATIONS
19	Information content of the weak-charge form factor. <i>Physical Review C</i> , 2013, 88, .	2.9	43
20	Nuclear Symmetry Energy and the Breaking of the Isospin Symmetry: How Do They Reconcile with Each Other?. <i>Physical Review Letters</i> , 2018, 120, 202501.	7.8	35
21	Covariance analysis for energy density functionals and instabilities. <i>Journal of Physics G: Nuclear and Particle Physics</i> , 2015, 42, 034033.	3.6	34
22	Model dependence of the neutron-skin thickness on the symmetry energy. <i>Physical Review C</i> , 2016, 93, .	2.9	34
23	Localized form of Fock terms in nuclear covariant density functional theory. <i>Physical Review C</i> , 2012, 86, .	2.9	33
24	Garvey-Kelson relations for nuclear charge radii. <i>European Physical Journal A</i> , 2010, 46, 379-386.	2.5	31
25	Skyrme functional with tensor terms from <i>ab initio</i> calculations of neutron-proton drops. <i>Physical Review C</i> , 2019, 99, .	2.9	26
26	Second-order equation of state with the full Skyrme interaction: Toward new effective interactions for beyond-mean-field models. <i>Physical Review C</i> , 2012, 85, .	2.9	23
27	Electron scattering in isotonic chains as a probe of the proton shell structure of unstable nuclei. <i>Physical Review C</i> , 2013, 87, .	2.9	22
28	Towards a self-consistent dynamical nuclear model. <i>Journal of Physics G: Nuclear and Particle Physics</i> , 2017, 44, 044001.	3.6	22
29	Outer crust of a cold non-accreting magnetar. <i>Physical Review C</i> , 2015, 92, .	2.9	20
30	Fully self-consistent study of charge-exchange resonances and the impact on the symmetry energy parameters. <i>Physical Review C</i> , 2016, 94, .	2.9	20
31	Influence of the single-particle structure on the nuclear surface and the neutron skin. <i>Physical Review C</i> , 2014, 89, .	2.9	19
32	Constraints on the neutron skin and symmetry energy from the anti-analog giant dipole resonance in ^{208}Pb . <i>Physical Review C</i> , 2015, 92, .	2.9	19
33	Evolution of the dipole polarizability in the stable tin isotope chain. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2020, 810, 135804.	4.1	17
34	Interplay between low-lying isoscalar and isovector dipole modes: A comparative analysis between semiclassical and quantum approaches. <i>Physical Review C</i> , 2019, 99, .	2.9	16
35	Nuclear energy density functionals grounded in <i>ab initio</i> calculations. <i>Physical Review C</i> , 2021, 104, .	2.9	16
36	The influence of the symmetry energy on the giant monopole resonance of neutron-rich nuclei analyzed in Thomas-Fermi theory. <i>Journal of Physics G: Nuclear and Particle Physics</i> , 2010, 37, 075107.	3.6	15

#	ARTICLE	IF	CITATIONS
37	Second-order equation of state with the Skyrme interaction: Cutoff and dimensional regularization with the inclusion of rearrangement terms. <i>Physical Review C</i> , 2016, 94, .	2.9	15
38	Title is missing!. <i>Acta Physica Polonica B</i> , 2012, 43, 209.	0.8	12
39	Theoretical calculations for precision polarimetry based on Mott scattering. <i>Europhysics Letters</i> , 2017, 120, 33002.	2.0	12
40	High precision 5 MeV Mott polarimeter. <i>Physical Review C</i> , 2020, 102, .	2.9	12
41	Particle-vibration coupling for giant resonances beyond the diagonal approximation. <i>Physical Review C</i> , 2020, 101, .	2.9	12
42	Coulomb exchange functional with generalized gradient approximation for self-consistent Skyrme Hartree-Fock calculations. <i>Physical Review C</i> , 2019, 99, .	2.9	11
43	Regularization of zero-range effective interactions in finite nuclei. <i>Physical Review C</i> , 2014, 90, .	2.9	10
44	Second and fourth moments of the charge density and neutron-skin thickness of atomic nuclei. <i>Physical Review C</i> , 2021, 104, .	2.9	10
45	Evidence Against Nuclear Polarization as Source of Fine-Structure Anomalies in Muonic Atoms. <i>Physical Review Letters</i> , 2022, 128, .	7.8	10
46	Effects of finite nucleon size, vacuum polarization, and electromagnetic spin-orbit interaction on nuclear binding energies and radii in spherical nuclei. <i>Physical Review C</i> , 2020, 101, .	2.9	9
47	Density dependence of the symmetry energy from neutron skin thickness in finite nuclei. , 2012, , .		8
48	$\langle mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML">\langle mml:mrow>\langle mml:mi>E\langle mml:mn>1\langle mml:mrow>\langle mml:r$ moments from a coherent set of measured photoneutron cross sections. <i>Physical Review C</i> , 2020, 102, .	2.9	8
49	First step in the nuclear inverse Kohn-Sham problem: From densities to potentials. <i>Physical Review C</i> , 2020, 101, .	2.9	8
50	Toward <i>ab initio</i> charge symmetry breaking in nuclear energy density functionals. <i>Physical Review C</i> , 2022, 105, .	2.9	8
51	The nuclear symmetry energy and the breaking of the isospin symmetry: how do they reconcile with each other?. <i>EPL Web of Conferences</i> , 2018, 194, 01002.	0.3	6
52	Beam-normal single-spin asymmetry in elastic scattering of electrons from a spin-0 nucleus. <i>Physical Review C</i> , 2021, 103, .	2.9	6
53	New Skyrme energy density functional for a better description of the Gamowâ€™Teller resonance. <i>Physica Scripta</i> , 2013, T154, 014011.	2.5	5
54	Collective excitations involving spin and isospin degrees of freedom. <i>European Physical Journal A</i> , 2019, 55, 1.	2.5	5

#	ARTICLE	IF	CITATIONS
55	Weak charge and weak radius of ^{12}C . Physical Review C, 2020, 102, .	2.9	5
56	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
57	Double charge-exchange phonon states. Physical Review C, 2020, 101, .	2.9	4
58	Isospin Symmetry Breaking Effects on the Mass-Radius Relation of a Neutron Star. Symmetry, 2021, 13, 144.	2.2	4
59	The Determination of the Bulk Symmetry Incompressibility from the Isoscalar Giant Monopole Resonance Revisited. Acta Physica Polonica B, Proceedings Supplement, 2015, 8, 707.	0.1	3
60	Density dependence of the nuclear symmetry energy from measurements of neutron radii in nuclei. , 2014, , .		2
61	The Nuclear Symmetry Energy and Other Isovector Observables from the Point of View of Nuclear Structure. Acta Physica Polonica B, 2015, 46, 395.	0.8	2
62	Study of the neutron skin thickness of ^{208}Pb in mean field models. Journal of Physics: Conference Series, 2011, 321, 012052.	0.4	1
63	Local covariant density functional constrained by the relativistic Hartree-Fock theory. , 2012, , .		1
64	Sensitivity of the electric dipole polarizability to the neutron skin thickness in ^{208}Pb . , 2012, , .		1
65	Nuclear charge-exchange excitations in localized covariant density functional theory. EPJ Web of Conferences, 2014, 66, 02064.	0.3	1
66	Progress in nuclear structure beyond the mean-field approximation. Physica Scripta, 2014, 89, 054006.	2.5	1
67	Isobaric analog state energy in deformed nuclei: A toy model. Physical Review C, 2020, 102, .	2.9	1
68	Extended Lipkin-Meshkov-Glick Hamiltonian. Journal of Physics G: Nuclear and Particle Physics, 2021, 48, 05LT01.	3.6	1
69	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
70	A beyond-mean-field example with zero-range effective interactions in infinite nuclear matter. EPJ Web of Conferences, 2012, 38, 06002.	0.3	0
71	Microscopic calculations beyond mean-field with zero-range effective interactions. EPJ Web of Conferences, 2012, 38, 04005.	0.3	0
72	Low-lying dipole response in stable and unstable nuclei. Physica Scripta, 2013, T154, 014020.	2.5	0

#	ARTICLE	IF	CITATIONS
73	Nuclear Symmetry Energy: constraints from Giant Quadrupole Resonances and Parity Violating Electron Scattering. EPJ Web of Conferences, 2014, 66, 02092.	0.3	0
74	A microscopic model beyond mean-field: from giant resonances properties to the fit of new effective interactions. EPJ Web of Conferences, 2014, 66, 02015.	0.3	0
75	A microscopic model beyond mean-field: from giant resonance properties to the fit of new effective interactions. Journal of Physics: Conference Series, 2014, 533, 012027.	0.4	0
76	A new Skyrme energy density functional for a better description of spin-isospin resonances. AIP Conference Proceedings, 2015, , .	0.4	0
77	Towards the improvement of spin-isospin properties in nuclear energy density functionals. Journal of Physics: Conference Series, 2016, 724, 012041.	0.4	0
78	Harmonic Potential Theorem: Extension to Spin-, Velocity-, and Density-Dependent Interactions. Physical Review Letters, 2019, 123, 112501.	7.8	0
79	Coulomb Energy Density Functionals for Nuclear Systems: Recent Studies of Coulomb Exchange and Correlation Functionals. EPJ Web of Conferences, 2019, 223, 01044.	0.3	0
80	Evolution of nuclear spin-orbit splittings with Skyrme functional SAMi-T. EPJ Web of Conferences, 2019, 223, 01059.	0.3	0
81	Towards a Universal Nuclear Structure Model. , 2018, , 243-252.		0
82	Skyrme Functional with Tensor Terms from ab initio Calculations: Results for the Spin-Orbit Splittings. Acta Physica Polonica B, Proceedings Supplement, 2019, 12, 699.	0.1	0
83	Nuclear Symmetry Energy and the Breaking of the Isospin Symmetry: How Do They Reconcile with Each Other ? . , 2020, , .		0
84	Complete solution to the inverse Kohn-Sham problem: From the density to the energy. Physical Review C, 2022, 105, .	2.9	0