

Jorge Piekarewicz

List of Publications by Year in descending order

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170
papers

8,281
citations

44069

48
h-index

48315

88
g-index

171
all docs

171
docs citations

171
times ranked

2609
citing authors

#	ARTICLE	IF	CITATIONS
1	Neutron Star Structure and the Neutron Radius of P208b. Physical Review Letters, 2001, 86, 5647-5650.	7.8	713
2	Neutron-Rich Nuclei and Neutron Stars: A New Accurately Calibrated Interaction for the Study of Neutron-Rich Matter. Physical Review Letters, 2005, 95, 122501.	7.8	580
3	Neutron Skins and Neutron Stars in the Multimessenger Era. Physical Review Letters, 2018, 120, 172702.	7.8	331
4	Implications of PREX-2 on the Equation of State of Neutron-Rich Matter. Physical Review Letters, 2021, 126, 172503.	7.8	295
5	Relativistic effective interaction for nuclei, giant resonances, and neutron stars. Physical Review C, 2010, 82, .	2.9	237
6	A way forward in the study of the symmetry energy: experiment, theory, and observation. Journal of Physics G: Nuclear and Particle Physics, 2014, 41, 093001.	3.6	226
7	Neutron radii of ^{208}Pb and neutron stars. Physical Review C, 2001, 64, .	2.9	217
8	Electric dipole polarizability and the neutron skin. Physical Review C, 2012, 85, .	2.9	198
9	Neutrino- α -particle scattering: The opacity of nonuniform neutron-rich matter. Physical Review C, 2004, 69, .	2.9	191
10	Low-Mass Neutron Stars and the Equation of State of Dense Matter. Astrophysical Journal, 2003, 593, 463-471.	4.5	187
11	Neutron skin thickness from the measured electric dipole polarizability in ^{68}Ni and ^{120}Sn . Physical Review C, 2015, 92, .	2.9	175
12	Pygmy dipole resonance as a constraint on the neutron skin of heavy nuclei. Physical Review C, 2006, 73, .	2.9	153
13	Electric dipole polarizability in ^{208}Pb : Insights from the droplet model. Physical Review C, 2013, 88, .	2.9	146
14	Constraining URCA cooling of neutron stars from the neutron radius of ^{208}Pb . Physical Review C, 2002, 66, .	2.9	143
15	Nuclear mass predictions for the crustal composition of neutron stars: A Bayesian neural network approach. Physical Review C, 2016, 93, .	2.9	141
16	Building relativistic mean field models for finite nuclei and neutron stars. Physical Review C, 2014, 90, .	2.9	140
17	Incompressibility of neutron-rich matter. Physical Review C, 2009, 79, .	2.9	138
18	Pygmy resonances and neutron skins. Physical Review C, 2011, 83, .	2.9	132

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19	Dynamical response of the nuclear ϵ -pasta in neutron star crusts. <i>Physical Review C</i> , 2005, 72, .	2.9	129
20	Reduction of the Spin-Orbit Splittings at the $N=28$ Shell Closure. <i>Physical Review Letters</i> , 2006, 97, 092501.	7.8	120
21	Nonuniform neutron-rich matter and coherent neutrino scattering. <i>Physical Review C</i> , 2004, 70, .	2.9	115
22	Do we understand the incompressibility of neutron-rich matter?. <i>Journal of Physics G: Nuclear and Particle Physics</i> , 2010, 37, 064038.	3.6	105
23	CW190814: Impact of a 2.6 solar mass neutron star on the nucleonic equations of state. <i>Physical Review C</i> , 2020, 102, .	2.9	101
24	Unmasking the nuclear matter equation of state. <i>Physical Review C</i> , 2004, 69, .	2.9	99
25	Pulsar glitches: The crust may be enough. <i>Physical Review C</i> , 2014, 90, .	2.9	99
26	Nuclear ϵ -bubble structure in ^{34}Si . <i>Physical Review C</i> , 2009, 79, .	2.9	98
27	Searching for isovector signatures in the neutron-rich oxygen and calcium isotopes. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2015, 748, 284-288.	4.1	95
28	Medium modifications to the ρ -meson mass in the Walecka model. <i>Physical Review C</i> , 1994, 49, 1981-1988.	2.9	94
29	Nuclear charge radii: density functional theory meets Bayesian neural networks. <i>Journal of Physics G: Nuclear and Particle Physics</i> , 2016, 43, 114002.	3.6	88
30	Neutron skins of atomic nuclei: per aspera ad astra. <i>Journal of Physics G: Nuclear and Particle Physics</i> , 2019, 46, 093003.	3.6	83
31	Correlating the giant-monopole resonance to the nuclear-matter incompressibility. <i>Physical Review C</i> , 2002, 66, .	2.9	80
32	Relativistic mean-field study of neutron-rich nuclei. <i>Physical Review C</i> , 2003, 67, .	2.9	76
33	Sensitivity of the moment of inertia of neutron stars to the equation of state of neutron-rich matter. <i>Physical Review C</i> , 2010, 82, .	2.9	72
34	Why is the equation of state for tin so soft?. <i>Physical Review C</i> , 2007, 76, .	2.9	71
35	Self-consistent description of nuclear compressional modes. <i>Physical Review C</i> , 2001, 64, .	2.9	69
36	Atomic parity nonconservation, neutron radii, and effective field theories of nuclei. <i>Physical Review C</i> , 2005, 71, .	2.9	68

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37	Quasielastic Electron Scattering and Vacuum Polarization. <i>Physical Review Letters</i> , 1989, 62, 391-394.	7.8	67
38	Nuclear response functions in quasielastic electron scattering. <i>Nuclear Physics A</i> , 1990, 511, 461-486.	1.5	64
39	Momentum dependence of the T_{11} mixing amplitude in a hadronic model. <i>Physical Review C</i> , 1993, 47, R2462-R2466.	2.9	64
40	Has a Thick Neutron Skin in ^{208}Pb Been Ruled Out?. <i>Physical Review Letters</i> , 2013, 111, 162501.	7.8	64
41	Refining mass formulas for astrophysical applications: A Bayesian neural network approach. <i>Physical Review C</i> , 2017, 96, .	2.9	63
42	Giant monopole resonance in even-A Cd isotopes, the asymmetry term in nuclear incompressibility, and the "softness" of Sn and Cd nuclei. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2012, 718, 447-450.	4.1	62
43	Spin-orbit splitting in low-j-neutron orbits and proton densities in the nuclear interior. <i>Physical Review C</i> , 2004, 69, .	2.9	60
44	Accurate calibration of relativistic mean-field models: Correlating observables and providing meaningful theoretical uncertainties. <i>Physical Review C</i> , 2011, 84, .	2.9	60
45	Neutron skins and neutron stars. <i>Physical Review C</i> , 2012, 86, .	2.9	59
46	Impact of the symmetry energy on the outer crust of nonaccreting neutron stars. <i>Physical Review C</i> , 2008, 78, .	2.9	55
47	Validating relativistic models of nuclear structure against theoretical, experimental, and observational constraints. <i>Physical Review C</i> , 2007, 76, .	2.9	52
48	Impact of the neutron star crust on the tidal polarizability. <i>Physical Review C</i> , 2019, 99, .	2.9	48
49	Relativistic nuclear structure effects in quasielastic neutrino scattering. <i>Physical Review C</i> , 1995, 51, 2739-2749.	2.9	43
50	Relativistic approach to isoscalar giant resonances in ^{208}Pb . <i>Physical Review C</i> , 2000, 62, .	2.9	43
51	Information content of the weak-charge form factor. <i>Physical Review C</i> , 2013, 88, .	2.9	43
52	Pygmy and core polarization dipole modes in ^{206}Pb : Connecting nuclear structure to stellar nucleosynthesis. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2017, 773, 20-25.	4.1	43
53	Symmetry energy constraints from giant resonances: A relativistic mean-field theory overview. <i>European Physical Journal A</i> , 2014, 50, 1.	2.5	42
54	Validating neural-network refinements of nuclear mass models. <i>Physical Review C</i> , 2018, 97, .	2.9	39

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55	Relativistic models of the neutron-star matter equation of state. <i>Physical Review C</i> , 2010, 82, .	2.9	37
56	Implications of PREX-2 on the electric dipole polarizability of neutron-rich nuclei. <i>Physical Review C</i> , 2021, 104, .	2.9	35
57	Power of two: Assessing the impact of a second measurement of the weak-charge form factor of ^{208}Pb . <i>Physical Review C</i> , 2016, 94, .	2.9	34
58	Impact of spin-orbit currents on the electroweak skin of neutron-rich nuclei. <i>Physical Review C</i> , 2012, 86, .	2.9	33
59	Dirac-eikonal scattering amplitude. <i>Physical Review C</i> , 1983, 28, 1663-1667.	2.9	31
60	Relativistic Impulse Approximation, Nuclear Currents, and the Spin-Difference Function. <i>Physical Review Letters</i> , 1985, 54, 2207-2210.	7.8	31
61	Garvey-Kelson relations for nuclear charge radii. <i>European Physical Journal A</i> , 2010, 46, 379-386.	2.5	31
62	Charge Radius of Neutron-Deficient ^{54}Ni and Symmetry Energy Constraints Using the Difference in Mirror Pair Charge Radii. <i>Physical Review Letters</i> , 2021, 127, 182503.	7.8	29
63	Off-shell behavior of the \bar{K} -mixing amplitude. <i>Physical Review C</i> , 1993, 48, 1555-1561.	2.9	28
64	Macroscopic parity violation and supernova asymmetries. <i>Nuclear Physics A</i> , 1998, 640, 281-289.	1.5	27
65	Quasielastic neutrino-nucleus scattering. <i>Physical Review C</i> , 2004, 69, .	2.9	26
66	Insensitivity of the elastic proton-nucleus reaction to the neutron radius of ^{208}Pb . <i>Nuclear Physics A</i> , 2006, 778, 10-21.	1.5	26
67	Compactness of Neutron Stars. <i>Physical Review Letters</i> , 2015, 115, 161101.	7.8	26
68	Quark models of nuclear matter. <i>Nuclear Physics A</i> , 1992, 536, 669-696.	1.5	25
69	Quasielastic scattering. <i>Physical Review C</i> , 1995, 51, 669-679.	2.9	25
70	Neutron-rich matter in heaven and on Earth. <i>Physics Today</i> , 2019, 72, 30-37.	0.3	25
71	Sensitivity of the fusion cross section to the density dependence of the symmetry energy. <i>Physical Review C</i> , 2016, 93, .	2.9	24
72	Reexamining the proton-radius problem using constrained Gaussian processes. <i>Physical Review C</i> , 2019, 99, .	2.9	24

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73	Importance of the deuteron quadrupole moment in $sup2H(d,^3)4He$. Physical Review C, 1987, 36, 875-878.	2.9	23
74	On the Lorentz structure of the confining potential in the instantaneous Bethe-Salpeter equation. Nuclear Physics A, 1995, 585, 705-726.	1.5	23
75	Dynamic spin response for Heisenberg ladders. Physical Review B, 1998, 57, 10260-10263.	3.2	23
76	Microscopic relativistic nucleon-nucleus inelastic scattering. Physical Review C, 1984, 30, 1604-1611.	2.9	22
77	Relativistic treatment of spin-transfer observables in quasielastic (p,n') scattering. Physical Review C, 1994, 50, 2540-2552.	2.9	21
78	Difference in proton radii of mirror nuclei as a possible surrogate for the neutron skin. Physical Review C, 2018, 97, .	2.9	21
79	Relativistically generated asymmetry in the missing-momentum distribution from the ($e,e'p$) reaction. Physical Review C, 1994, 50, 2822-2833.	2.9	20
80	Charge-Symmetry-Breaking Potentials from Isospin-Violating Meson-Baryon Coupling Constants. Physical Review Letters, 1995, 75, 2462-2465.	7.8	20
81	Plaquette basis for the study of Heisenberg ladders. Physical Review B, 1997, 56, 5366-5372.	3.2	20
82	Proton fraction in the inner neutron-star crust. Physical Review C, 2012, 85, .	2.9	20
83	Relativistic mean field plus exact pairing approach to open shell nuclei. Physical Review C, 2014, 89, .	2.9	19
84	Electroweak probes of ground state densities. Physical Review C, 2019, 100, .	2.9	19
85	(p,n) quasifree excitations in p -shell nuclei at 186 MeV. Physical Review C, 1994, 50, 2438-2448.	2.9	18
86	Information and statistics: a new paradigm in theoretical nuclear physics. Journal of Physics G: Nuclear and Particle Physics, 2015, 42, 034018.	3.6	18
87	Covariant Density Functional Theory in Nuclear Physics and Astrophysics. Annual Review of Nuclear and Particle Science, 2020, 70, 21-41.	10.2	18
88	Spin-longitudinal to spin-transverse ratio in quasielastic scattering. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1993, 301, 321-327.	4.1	17
89	Relativistic and nuclear structure effects in parity-violating quasielastic electron scattering. Physical Review C, 1993, 47, 2924-2936.	2.9	17
90	Strange-quark contribution to the ratio of neutral- to charged-current cross sections in neutrino-nucleus scattering. Physical Review C, 2006, 73, .	2.9	17

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109	Dirac theory of nucleon-nucleus collective excitation. <i>Physical Review C</i> , 1983, 28, 2392-2396.	2.9	8
110	Nuclear dependence of the coherent π -photoproduction reaction in a relativistic approach. <i>Physical Review C</i> , 1998, 57, 2053-2056.	2.9	8
111	Mean-field theory for spin ladders using angular-momentum coupled bases. <i>Physical Review B</i> , 1999, 60, 9456-9467.	3.2	8
112	Nuclear breathing mode in neutron-rich nickel isotopes: Sensitivity to the symmetry energy and the role of the continuum. <i>Physical Review C</i> , 2015, 91, .	2.9	8
113	Levinson's theorem for Dirac particles. <i>Physical Review C</i> , 1993, 48, 2174-2181.	2.9	7
114	Isospin violations in the pion-nucleon system. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 1995, 358, 27-33.	4.1	7
115	Perturbation theory for spin ladders using angular-momentum coupled bases. <i>Physical Review B</i> , 1998, 58, 9326-9334.	3.2	7
116	Lessons to be learned from the coherent photoproduction of pseudoscalar mesons. <i>Physical Review C</i> , 1999, 60, .	2.9	7
117	Virtues and flaws of the Pauli potential. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2008, 41, 035308.	2.1	7
118	Charged Ising model of neutron star matter. <i>Physical Review C</i> , 2013, 88, .	2.9	7
119	Dirac oscillator: An alternative basis for nuclear structure calculations. <i>Physical Review C</i> , 2020, 102, .	2.9	7
120	Analytic expressions for the Dirac treatment of nucleon-nucleus scattering. <i>Physical Review C</i> , 1984, 29, 936-943.	2.9	6
121	Relativistic treatment of spin observables in the excitation of the $1+T=0$ state in ^{12}C . <i>Physical Review C</i> , 1985, 32, 1693-1699.	2.9	6
122	Relativistic treatment of $0+(p, \pi^0)0^+$ transitions. <i>Physical Review C</i> , 1987, 35, 675-680.	2.9	6
123	Emergence of low-energy monopole strength in the neutron-rich calcium isotopes. <i>Physical Review C</i> , 2017, 96, .	2.9	6
124	Comparison of the quasifree charge-exchange reaction for ^{12}C and ^{54}Fe . <i>Physical Review C</i> , 1993, 47, 260-266.	2.9	5
125	Dynamical color correlations in a $SU(2)$ quark exchange model of nuclear matter. <i>Physical Review C</i> , 1994, 50, 1137-1153.	2.9	5
126	The Okamoto-Nolen-Schiffer anomaly without p - \bar{n} mixing. <i>Nuclear Physics A</i> , 1997, 612, 429-448.	1.5	5

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127	Novel methods for determining effective interactions for the nuclear shell model. Physical Review C, 2002, 66, .	2.9	5
128	The nuclear physics of neutron stars. , 2014, , .		5
129	Weak charge and weak radius of C . Physical Review C, 2020, 102, .	2.9	5
130	Positron interactions with high-Z atoms at relativistic energies. Physical Review A, 1988, 38, 2274-2283.	2.5	4
131	Comparison of K - and α -quasielastic scattering. Physical Review C, 1995, 51, 806-821.	2.9	4
132	Density dependence of charge symmetry breaking. Physical Review C, 2000, 63, .	2.9	4
133	Parity violation, the neutron radius of lead, and neutron stars. European Physical Journal A, 2007, 32, 537-541.	2.5	4
134	Pygmies, giants, and skins as laboratory constraints on the equation of state of neutron-rich matter. Journal of Physics: Conference Series, 2014, 492, 012008.	0.4	4
135	Two more or less. Nature Physics, 2015, 11, 303-304.	16.7	4
136	From noise to information: The transfer function formalism for uncertainty quantification in reconstructing the nuclear density. Physical Review C, 2021, 104, .	2.9	4
137	Energy-dependent corrections to spin observables in nucleon-nucleus inelastic scattering. Physical Review C, 1989, 39, 1-7.	2.9	3
138	Quark-based description of nuclear matter with simulated annealing. Computers in Physics, 1994, 8, 223.	0.5	3
139	Relativistic treatment of hypernuclear decay. Physical Review C, 1999, 60, .	2.9	3
140	Low-energy operators in effective theories. Physical Review C, 2003, 68, .	2.9	3
141	Nuclear Physics of Neutron Stars. , 2009, , .		3
142	Relativistic density functional theory for finite nuclei and neutron stars. International Review of Nuclear Physics, 2016, , 625-658.	1.0	3
143	Spectroscopy of Ti^{54} and the systematic behavior of low-energy octupole states in Ca and Ti isotopes. Physical Review C, 2017, 96, .	2.9	3
144	Insights into the possible existence of a soft dipole mode in He . Physical Review C, 2022, 105, .	2.9	3

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145	Relativistic treatment of (p, n) reactions and the (n, e+) correlation function. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1988, 205, 167-170.	4.1	2
146	Relativistic treatment of (p,pâ€™ ³) reactions. Physical Review C, 1988, 37, 719-723.	2.9	2
147	High-momentum components in a relativistic mean-field ground state. Physical Review C, 1992, 45, 1654-1666.	2.9	2
148	Hadronic matter in a nontopological soliton model. Physical Review C, 1992, 45, 2963-2974.	2.9	2
149	Pygmies, Giants, and Skins. Journal of Physics: Conference Series, 2013, 420, 012143.	0.4	2
150	Nuclear collective excitations: A relativistic density functional approach. International Journal of Modern Physics E, 2015, 24, 1541003.	1.0	2
151	Analytic insights on the information content of new observables. Physical Review C, 2020, 102, .	2.9	2
152	Characterization of the inner edge of the neutron star crust. Physical Review C, 2022, 105, .	2.9	2
153	Relativistic models of the spin-isospin-weak quasielastic response. Nuclear Physics A, 1994, 577, 137-142.	1.5	1
154	Strange matter in the string-flip model. Physical Review C, 1999, 60, .	2.9	1
155	Extracting the spectral function of ⁴ He from a relativistic plane-wave treatment. Physical Review C, 2001, 64, .	2.9	1
156	Parity Violating Electron Scattering and Implications for Neutron-Star Matter. , 2009, , .		1
157	Neutron skins and neutron stars. , 2013, , .		1
158	Neutron Star Matter Equation of State. , 2017, , 1075-1094.		1
159	Electric Dipole Polarizability of Neutron Rich Nuclei. Annalen Der Physik, 0, , 2100185.	2.4	1
160	The Nuclear Physics of Neutron Stars. Acta Physica Polonica B, 2016, 47, 659.	0.8	1
161	Gardner, Horowitz, and Piekarewicz Reply. Physical Review Letters, 1997, 78, 1826-1826.	7.8	0
162	Strangeness-changing response functions: an alternative approach to hypernuclear structure. Journal of Physics G: Nuclear and Particle Physics, 2001, 27, 41-62.	3.6	0

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163	The Lead Nucleus as a Miniature Surrogate for a Neutron Star. Acta Physica Hungarica A Heavy Ion Physics, 2002, 16, 113-121.	0.4	0
164	The Fascinating World of Neutron Stars. , 2009, , .		0
165	Parity Violating Measurements of Neutron Densities: Implications for Neutron Stars. , 2002, , .		0
166	QUASIFREE PROCESSES FROM NUCLEI: MESON PHOTOPRODUCTION AND ELECTRON SCATTERING. , 2002, , .		0
167	THE TRANSITION TO STRANGE MATTER IN THE STRING-FLIP MODEL. , 2003, , .		0
168	Parity violation, the neutron radius of lead, and neutron stars. , 2007, , 233-237.		0
169	Energy Dependent Corrections to Spin Observables in Nucleon-Nucleus Scattering. , 1988, , 417-423.		0
170	Neutron Star Matter Equation of State. , 2016, , 1-20.		0