

# Nils Paar

## List of Publications by Year in descending order

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127  
papers

4,088  
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136950

32  
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128  
docs citations

128  
times ranked

1269  
citing authors

#	ARTICLE	IF	CITATIONS
1	Statistical Hauser-Feshbach Model Description of $(n, \hat{1}_{\pm})$ Reaction Cross Sections for the Weak s-Process. Universe, 2022, 8, 25.	2.5	8
2	Description of weak-interaction rates within the relativistic energy density functional theory. EPJ Web of Conferences, 2022, 260, 11032.	0.3	0
3	Finite-temperature electron-capture rates for neutron-rich nuclei near $\langle \text{mml:math} \text{xmlns:mml="http://www.w3.org/1998/Math/MathML"} \langle \text{mml:mrow} \langle \text{mml:mi} \rangle N \langle \text{mml:mi} \rangle \langle \text{mml:mo} \rangle = \langle \text{mml:mo} \rangle \langle \text{mml:mn} \rangle 50 \langle \text{mml:mn} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:math} \rangle$ and effects on core-collapse supernova simulations. Physical Review C, 2022, 105, .		
4	Two-neutrino double- $\langle \text{mml:math} \text{xmlns:mml="http://www.w3.org/1998/Math/MathML"} \langle \text{mml:mi} \rangle \hat{1}^2 \langle \text{mml:mi} \rangle \langle \text{mml:math} \rangle$ decay matrix elements based on a relativistic nuclear energy density functional. Physical Review C, 2022, 105, .	2.9	3
5	Symmetry breaking of Gamow-Teller and magnetic-dipole transitions and its restoration in calcium isotopes. Physical Review C, 2022, 105, .	2.9	2
6	Nuclear magnetic transitions in the relativistic energy density functional approach. EPJ Web of Conferences, 2021, 252, 02002.	0.3	0
7	Nuclear Equation of State in the Relativistic Point-Coupling Model Constrained by Excitations in Finite Nuclei. Universe, 2021, 7, 71.	2.5	4
8	Evolution of magnetic dipole strength in $\langle \text{mml:math} \text{xmlns:mml="http://www.w3.org/1998/Math/MathML"} \langle \text{mml:mmultiscripts} \rangle \langle \text{mml:mi} \rangle Sn \langle \text{mml:mi} \rangle \langle \text{mml:mprescripts} \rangle \langle \text{mml:math} \rangle$ isotope chain and the quenching of nucleon $\langle \text{mml:math} \text{xmlns:mml="http://www.w3.org/1998/Math/MathML"} \langle \text{mml:mi} \rangle \hat{1}^2 \langle \text{mml:mi} \rangle \langle \text{mml:math} \rangle$ factors. Physical Review C, 2021, 103, .		
9	Nuclear charge-exchange excitations based on a relativistic density-dependent point-coupling model. Physical Review C, 2021, 103, .	2.9	12
10	Discerning nuclear pairing properties from magnetic dipole excitation. European Physical Journal A, 2021, 57, 1.	2.5	5
11	$\langle \text{mml:math} \text{xmlns:mml="http://www.w3.org/1998/Math/MathML"} \langle \text{mml:mi} \rangle \hat{1}^2 \langle \text{mml:mi} \rangle \langle \text{mml:math} \rangle$ -delayed neutron-emission and fission calculations within relativistic quasiparticle random-phase approximation and a statistical model. Physical Review C, 2021, 104, .	2.9	27
12	Evolution of $\langle \text{mml:math} \text{xmlns:mml="http://www.w3.org/1998/Math/MathML"} \langle \text{mml:mi} \rangle \hat{1}^2 \langle \text{mml:mi} \rangle \langle \text{mml:math} \rangle$ -decay half-lives in stellar environments. Physical Review C, 2021, 104, .	2.9	11
13	Finite-temperature linear response theory based on relativistic Hartree Bogoliubov model with point-coupling interaction. Physical Review C, 2021, 104, .	2.9	5
14	Magnetic dipole excitations based on the relativistic nuclear energy density functional. Physical Review C, 2020, 102, .	2.9	16
15	Evolution of the dipole polarizability in the stable tin isotope chain. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2020, 810, 135804.	4.1	17
16	Gamow-Teller excitations at finite temperature: Competition between pairing and temperature effects. Physical Review C, 2020, 101, .	2.9	17
17	Role of residual interaction in the relativistic description of M1 excitation. Journal of Physics G: Nuclear and Particle Physics, 2020, 47, 115106.	3.6	12
18	Stellar electron-capture rates based on finite-temperature relativistic quasiparticle random-phase approximation. Physical Review C, 2020, 102, .	2.9	13

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19	Relativistic nuclear energy density functional approach to magnetic-dipole excitation. Journal of Physics: Conference Series, 2020, 1643, 012153.	0.4	1
20	Self-consistent calculation of the reactor antineutrino spectra including forbidden transitions. Journal of Physics G: Nuclear and Particle Physics, 2019, 46, 085103.	3.6	7
21	Magnetic dipole excitation and its sum rule in nuclei with two valence nucleons. Physical Review C, 2019, 100, .	2.9	8
22	Optimizing the relativistic energy density functional with nuclear ground state and collective excitation properties. Physical Review C, 2019, 99, .	2.9	36
23	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
24	Beta-Delayed Neutron Emission in Neutron-Rich Nuclei. , 2017, , .		0
25	Microscopic Calculations of $\beta$ -decay Rates for r-process. Acta Physica Polonica B, 2017, 48, 641.	0.8	2
26	Measurement of the $^{92,93,94,100}\text{Mo}(\bar{\nu}^3, n)$ reactions by Coulomb Dissociation. Journal of Physics: Conference Series, 2016, 665, 012034.	0.4	1
27	Hybrid method to resolve the neutrino mass hierarchy by supernova (anti)neutrino induced reactions. Journal of Cosmology and Astroparticle Physics, 2016, 2016, 007-007.	5.4	10
28	Beta decay rates of neutron-rich nuclei. AIP Conference Proceedings, 2016, , .	0.4	1
29	Pygmy dipole resonance in $^{140}\text{Ce}$ via inelastic scattering of $^{17}\text{O}$ . Physical Review C, 2016, 93, .	2.9	24
30	Model dependence of the neutron-skin thickness on the symmetry energy. Physical Review C, 2016, 93, .	2.9	34
31	Small amplitude motion. International Review of Nuclear Physics, 2016, , 413-468.	1.0	1
32	Neutron skin thickness from the measured electric dipole polarizability in $^{68}\text{Ni}$ and $^{120}\text{Sn}$ . Physical Review C, 2015, 92, .	2.9	175
33	Resolving neutrino mass hierarchy from supernova (anti)neutrino-nucleus reactions. AIP Conference Proceedings, 2015, , .	0.4	1
34	The symmetry energy, neutron skin thickness and isovector dipole response of neutron-rich nuclei. EPJ Web of Conferences, 2015, 88, 01008.	0.3	1
35	Optimizing relativistic energy density functionals: covariance analysis. Journal of Physics G: Nuclear and Particle Physics, 2015, 42, 034008.	3.6	16
36	Modeling nuclear weak-interaction processes with relativistic energy density functionals. International Journal of Modern Physics E, 2015, 24, 1541004.	1.0	8

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37	Nuclear Energy Density Functionals and Neutron Star Properties. Acta Physica Polonica B, 2015, 46, 369.	0.8	0
38	Covariance analysis for energy density functionals and instabilities. Journal of Physics G: Nuclear and Particle Physics, 2015, 42, 034033.	3.6	34
39	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
40	Probing the neutron skin thickness in collective modes of excitation. EPJ Web of Conferences, 2014, 66, 02078.	0.3	3
41	Nuclear Symmetry Energy: constraints from Giant Quadrupole Resonances and Parity Violating Electron Scattering. EPJ Web of Conferences, 2014, 66, 02092.	0.3	0
42	Neutron star structure and collective excitations of finite nuclei. Physical Review C, 2014, 90, .	2.9	27
43	DIRHBâ€”A relativistic self-consistent mean-field framework for atomic nuclei. Computer Physics Communications, 2014, 185, 1808-1821.	7.5	187
44	Stellar electron-capture rates on nuclei based on Skyrme functionals. EPJ Web of Conferences, 2014, 66, 02035.	0.3	1
45	Information content of the weak-charge form factor. Physical Review C, 2013, 88, .	2.9	43
46	Anti-analog giant dipole resonances and the neutron skin of nuclei. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2013, 720, 428-432.	4.1	18
47	Giant quadrupole resonances in $^{208}\text{Pb}$ , the nuclear symmetry energy, and the neutron skin thickness. Physical Review C, 2013, 87, .	2.9	113
48	Electric dipole polarizability in $^{208}\text{Pb}$ : Insights from the droplet model. Physical Review C, 2013, 88, .	2.9	146
49	A New Method for Measuring Neutron-skin Thickness in Rare Isotope Beams. Acta Physica Polonica B, 2013, 44, 559.	0.8	2
50	Neutron-skin thickness of $^{208}\text{Pb}$ from the energy of the anti-analogue giant dipole resonance. Physica Scripta, 2013, T154, 014018.	2.5	11
51	Large-scale calculations of supernova neutrino-induced reactions in $^{15}\text{O}$ target nuclei. Physical Review C, 2013, 87, .	2.9	15
52	Incompressibility of finite fermionic systems: Stable and exotic atomic nuclei. Physical Review C, 2013, 87, .	2.9	21
53	Pairing transitions in finite-temperature relativistic Hartree-Bogoliubov theory. Physical Review C, 2013, 88, .	2.9	47
54	STELLAR ELECTRON-CAPTURE RATES: A COVARIANT DENSITY FUNCTIONAL CALCULATION. , 2013, , .		0

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55	Role of momentum transfer in the quenching of the Gamow-Teller strength. , 2012, , .		0
56	Neutron-skin thickness from the study of the anti-analog giant dipole resonance. , 2012, , .		7
57	Sensitivity of the electric dipole polarizability to the neutron skin thickness in [ <sup>208</sup> Pb]. , 2012, , .		1
58	Role of momentum transfer in the quenching of Gamow-Teller strength. Physical Review C, 2012, 85, .	2.9	12
59	Low-energy isovector and isoscalar dipole response in neutron-rich nuclei. Physical Review C, 2012, 85, .	2.9	69
60	Electric dipole polarizability and the neutron skin. Physical Review C, 2012, 85, .	2.9	198
61	Stellar electron-capture rates on nuclei based on a microscopic Skyrme functional. Physical Review C, 2012, 86, .	2.9	39
62	Self-consistent theory of stellar electron capture rates. Journal of Physics: Conference Series, 2012, 337, 012013.	0.4	0
63	Neutral-current neutrino-nucleus cross sections based on relativistic nuclear energy density functional. Physical Review C, 2012, 86, .	2.9	18
64	Neutrino and antineutrino cross sections in <sup>12</sup> C. Journal of Physics: Conference Series, 2011, 312, 072009.	0.4	1
65	Finite temperature effects on monopole and dipole excitations. Journal of Physics: Conference Series, 2011, 312, 042017.	0.4	1
66	Exotic modes of excitation in proton rich nuclei. , 2011, , .		0
67	Stellar electron-capture rates calculated with the finite-temperature relativistic random-phase approximation. Physical Review C, 2011, 83, .	2.9	67
68	Low-energy monopole strength in exotic nickel isotopes. Physical Review C, 2011, 84, .	2.9	34
69	Neutrino and antineutrino charge-exchange reactions on $C$ . Physical Review C, 2011, 83, .	2.9	30
70	Uncertainties in modeling low-energy neutrino-induced reactions on iron-group nuclei. Physical Review C, 2011, 84, .	2.9	19
71	Exotic modes of excitation and weak interaction rates at finite temperature. , 2011, , .		0
72	The quest for novel modes of excitation in exotic nuclei. Journal of Physics G: Nuclear and Particle Physics, 2010, 37, 064014.	3.6	20

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73	NUCLEAR EXCITATIONS AND WEAK INTERACTION RATES AT FINITE TEMPERATURE. Modern Physics Letters A, 2010, 25, 1767-1770.	1.2	3
74	Calculation of stellar electron-capture cross sections on nuclei based on microscopic Skyrme functionals. Physical Review C, 2009, 80, .	2.9	68
75	Relativistic quasiparticle random-phase approximation calculation of total muon capture rates. Physical Review C, 2009, 79, .	2.9	25
76	Low-energy monopole and dipole response in nuclei at finite temperature. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2009, 681, 315-319.	4.1	41
77	Isoscalar and Isovector Splitting of Pygmy Dipole Structures. Physical Review Letters, 2009, 103, 032502.	7.8	67
78	Pygmy Dipole Strength in Exotic Nuclei and the Equation of State. , 2009, , .		0
79	Relativistic Point Coupling Model for Vibrational Excitations in the Continuum. , 2009, , .		0
80	Phenomenological Relativistic Energy Density Functionals. , 2009, , .		0
81	Relativistic Random Phase Approximation At Finite Temperature. , 2009, , .		0
82	Hierarchical structure of cascade of primary and secondary periodicities in Fourier power spectrum of aliphoid higher order repeats. BMC Bioinformatics, 2008, 9, 466.	2.6	16
83	Pygmy Dipole Strength and Neutron Skins in Exotic Nuclei. AIP Conference Proceedings, 2008, , .	0.4	1
84	Neutrino-nucleus reaction rates based on the relativistic quasiparticle random phase approximation. AIP Conference Proceedings, 2008, , .	0.4	0
85	Neutrinoâ€nucleus reactions with the relativistic quasiparticle RPA. Journal of Physics G: Nuclear and Particle Physics, 2008, 35, 014058.	3.6	9
86	Relativistic QRPA description of nuclear excitations. Journal of Physics G: Nuclear and Particle Physics, 2008, 35, 014039.	3.6	10
87	Relativistic Energy Density Functionals: Exotic modes of excitation. , 2008, , .		0
88	Inclusive charged-current neutrino-nucleus reactions calculated with the relativistic quasiparticle random-phase approximation. Physical Review C, 2008, 77, .	2.9	66
89	Comment on â€œPygmy dipole response of proton-rich argon nuclei in random-phase approximation and no-core shell modelâ€ Physical Review C, 2008, 78, .	2.9	1
90	Static and dynamic aspect of covariant density functional theory in proton rich nuclei. AIP Conference Proceedings, 2007, , .	0.4	0

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91	Nuclear collective excitations using correlated realistic interactions: The role of explicit random-phase approximation correlations. <i>Physical Review C</i> , 2007, 75, .	2.9	16
92	Nuclear symmetry energy and neutron skins derived from pygmy dipole resonances. <i>Physical Review C</i> , 2007, 76, .	2.9	334
93	Exotic modes of excitation in atomic nuclei far from stability. <i>Reports on Progress in Physics</i> , 2007, 70, 691-793.	20.1	464
94	Nuclear Structure in the UCOM Framework: From Realistic Interactions to Collective Excitations. <i>Nuclear Physics A</i> , 2007, 788, 12-19.	1.5	7
95	Exotic nuclear structure: Relativistic mean-field and beyond. <i>European Physical Journal: Special Topics</i> , 2007, 150, 193-196.	2.6	0
96	Dynamics of Exotic Nuclear Systems: Covariant QRPA and Extensions. <i>Nuclear Physics A</i> , 2007, 788, 194-201.	1.5	6
97	Collective multipole excitations based on correlated realistic nucleon-nucleon interactions. <i>Physical Review C</i> , 2006, 74, .	2.9	36
98	Hartree-Fock and many body perturbation theory with correlated realistic NN interactions. <i>Physical Review C</i> , 2006, 73, .	2.9	89
99	Collective excitations in the unitary correlation operator method and relativistic QRPA studies of exotic nuclei. <i>Physics of Atomic Nuclei</i> , 2006, 69, 1345-1352.	0.4	0
100	Nuclear Structure and Response based on Correlated Realistic NN interactions. <i>AIP Conference Proceedings</i> , 2006, , .	0.4	0
101	Self-consistent models for the collective excitation phenomena in exotic nuclei. <i>AIP Conference Proceedings</i> , 2006, , .	0.4	0
102	Relativistic quasiparticle random-phase approximation description of isoscalar compression modes in open-shell nuclei in the $A \approx 60$ mass region. <i>Physical Review C</i> , 2006, 74, .	2.9	7
103	SELF-CONSISTENT DESCRIPTION OF COLLECTIVE EXCITATIONS IN THE UNITARY CORRELATION OPERATOR METHOD. <i>International Journal of Modern Physics E</i> , 2006, 15, 346-353.	1.0	2
104	Covariant density functional theory for isospin properties of nuclei far from stability. <i>Journal of Physics: Conference Series</i> , 2005, 20, 119-124.	0.4	0
105	Isotopic dependence of the pygmy dipole resonance. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2005, 606, 288-294.	4.1	77
106	Low-energy dipole excitations towards the proton drip-line: Doubly magic $^{48}\text{Ni}$ . <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2005, 624, 195-202.	4.1	19
107	Self-consistent relativistic QRPA studies of soft modes and spin-isospin resonances in unstable nuclei. <i>European Physical Journal A</i> , 2005, 25, 531-534.	2.5	5
108	Spin-Isospin Giant Resonances and the Neutron Skin of Nuclei. <i>AIP Conference Proceedings</i> , 2005, , .	0.4	0

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109	$\hat{I}^2$ -decay rates of r-process nuclei in the relativistic quasiparticle random phase approximation. <i>Physical Review C</i> , 2005, 71, .	2.9	76
110	Proton Electric Pygmy Dipole Resonance. <i>Physical Review Letters</i> , 2005, 94, 182501.	7.8	48
111	RELATIVISTIC DESCRIPTION OF EXOTIC COLLECTIVE EXCITATION PHENOMENA IN ATOMIC NUCLEI. <i>International Journal of Modern Physics E</i> , 2005, 14, 29-37.	1.0	3
112	Self-consistent relativistic QRPA studies of soft modes and spin-isospin resonances in unstable nuclei. , 2005, , 531-534.		0
113	Quasiparticle random phase approximation based on the relativistic Hartree-Bogoliubov model. II. Nuclear spin and isospin excitations. <i>Physical Review C</i> , 2004, 69, .	2.9	145
114	Relativistic QRPA description of low-lying dipole strength in neutron-rich nuclei. <i>Nuclear Physics A</i> , 2004, 731, 281-288.	1.5	15
115	Relativistic QRPA Description of Excitations in Exotic Nuclei. , 2004, , 661-663.		0
116	Relativistic Hartree-Bogoliubov and QRPA description of exotic nuclear structure. <i>European Physical Journal A</i> , 2003, 20, 75-80.	2.5	3
117	Collective excitations far from the valley of stability. <i>Nuclear Physics A</i> , 2003, 722, C372-C378.	1.5	5
118	Relativistic description of regular and chaotic dynamics in the giant monopole resonances. <i>Chaos, Solitons and Fractals</i> , 2003, 17, 585-590.	5.1	3
119	Spin-Isospin Resonances and the Neutron Skin of Nuclei. <i>Physical Review Letters</i> , 2003, 91, 262502.	7.8	40
120	Quasiparticle random phase approximation based on the relativistic Hartree-Bogoliubov model. <i>Physical Review C</i> , 2003, 67, .	2.9	216
121	Toroidal dipole resonances in the relativistic random phase approximation. <i>Physical Review C</i> , 2002, 65, .	2.9	79
122	Collectivity of the low-lying dipole strength in relativistic random phase approximation. <i>Nuclear Physics A</i> , 2001, 692, 496-517.	1.5	147
123	Pygmy dipole resonances in the relativistic random phase approximation. <i>Physical Review C</i> , 2001, 63, .	2.9	66
124	Nonlinear dynamics of a single-degree robot model Part 2: Onset of chaotic transients. <i>Robotica</i> , 2000, 18, 201-208.	1.9	3
125	Nonlinear dynamics of giant resonances in atomic nuclei. <i>Physical Review E</i> , 1999, 60, 308-319.	2.1	17
126	Relativistic mean-field description of the dynamics of giant resonances. <i>Nuclear Physics A</i> , 1999, 649, 29-36.	1.5	17



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127	Nonlinear regular dynamics of a single-degree robot model. Robotica, 1996, 14, 423-431.	1.9	6