

Kai Hebler

List of Publications by Year in descending order

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65
papers

6,878
citations

71102

41
h-index

110387

64
g-index

66
all docs

66
docs citations

66
times ranked

2913
citing authors

#	ARTICLE	IF	CITATIONS
1	Constraints on the symmetry energy and neutron skins from experiments and theory. <i>Physical Review C</i> , 2012, 86, .	2.9	566
2	EQUATION OF STATE AND NEUTRON STAR PROPERTIES CONSTRAINED BY NUCLEAR PHYSICS AND OBSERVATION. <i>Astrophysical Journal</i> , 2013, 773, 11.	4.5	546
3	Improved nuclear matter calculations from chiral low-momentum interactions. <i>Physical Review C</i> , 2011, 83, .	2.9	362
4	Chiral three-nucleon forces and neutron matter. <i>Physical Review C</i> , 2010, 82, .	2.9	312
5	Neutron Matter at Next-to-Next-to-Next-to-Leading Order in Chiral Effective Field Theory. <i>Physical Review Letters</i> , 2013, 110, 032504.	7.8	300
6	Constraints on Neutron Star Radii Based on Chiral Effective Field Theory Interactions. <i>Physical Review Letters</i> , 2010, 105, 161102.	7.8	293
7	Neutron and weak-charge distributions of the ^{48}Ca nucleus. <i>Nature Physics</i> , 2016, 12, 186-190.	16.7	268
8	Quantum Monte Carlo Calculations with Chiral Effective Field Theory Interactions. <i>Physical Review Letters</i> , 2013, 111, 032501.	7.8	257
9	Unexpectedly large charge radii of neutron-rich calcium isotopes. <i>Nature Physics</i> , 2016, 12, 594-598.	16.7	257
10	Colloquium: Measuring the neutron star equation of state using x-ray timing. <i>Reviews of Modern Physics</i> , 2016, 88, .	45.6	234
11	Equation-of-state dependence of the gravitational-wave signal from the ring-down phase of neutron-star mergers. <i>Physical Review D</i> , 2012, 86, .	4.7	197
12	Neutron matter from chiral effective field theory interactions. <i>Physical Review C</i> , 2013, 88, .	2.9	197
13	Constraints on the Dense Matter Equation of State and Neutron Star Properties from NICER's Mass-Radius Estimate of PSR J0740+6620 and Multimessenger Observations. <i>Astrophysical Journal Letters</i> , 2021, 918, L29.	8.3	190
14	Local chiral effective field theory interactions and quantum Monte Carlo applications. <i>Physical Review C</i> , 2014, 90, .	2.9	186
15	Chiral Interactions up to Next-to-Next-to-Next-to-Leading Order and Nuclear Saturation. <i>Physical Review Letters</i> , 2019, 122, 042501.	7.8	181
16	Nuclear Forces and Their Impact on Neutron-Rich Nuclei and Neutron-Rich Matter. <i>Annual Review of Nuclear and Particle Science</i> , 2015, 65, 457-484.	10.2	177
17	A NICER View of PSR J0030+0451: Implications for the Dense Matter Equation of State. <i>Astrophysical Journal Letters</i> , 2019, 887, L22.	8.3	162
18	Constraining the Dense Matter Equation of State with Joint Analysis of NICER and LIGO/Virgo Measurements. <i>Astrophysical Journal Letters</i> , 2020, 893, L21.	8.3	143

#	ARTICLE	IF	CITATIONS
19	Saturation with chiral interactions and consequences for finite nuclei. <i>Physical Review C</i> , 2017, 96, .	2.9	135
20	Asymmetric nuclear matter based on chiral two- and three-nucleon interactions. <i>Physical Review C</i> , 2016, 93, .	2.9	121
21	Neutron matter from chiral two- and three-nucleon calculations up to $N < 3$. <i>Physical Review C</i> , 2016, 94, .	2.9	120
22	Few-nucleon systems with state-of-the-art chiral nucleon-nucleon forces. <i>Physical Review C</i> , 2016, 93, .	2.9	106
23	Equation of state sensitivities when inferring neutron star and dense matter properties. <i>Monthly Notices of the Royal Astronomical Society</i> , 2019, 485, 5363-5376.	4.4	89
24	Exploring nuclei from two- and three-nucleon interactions with realistic saturation properties. <i>Physical Review C</i> , 2016, 93, .	2.9	81
25	Dense matter with eXTP. <i>Science China: Physics, Mechanics and Astronomy</i> , 2019, 62, 1.	5.1	81
26	Efficient calculation of chiral three-nucleon forces up to $N < 3$. <i>Physical Review C</i> , 2015, 91, .	2.9	74
27	New applications of renormalization group methods in nuclear physics. <i>Reports on Progress in Physics</i> , 2013, 76, 126301.	20.1	72
28	Few- and many-nucleon systems with semilocal coordinate-space regularized chiral two- and three-body forces. <i>Physical Review C</i> , 2019, 99, .	2.9	68
29	Momentum-space evolution of chiral three-nucleon forces. <i>Physical Review C</i> , 2012, 85, .	2.9	61
30	Few-nucleon and many-nucleon systems with semilocal coordinate-space regularized chiral nucleon-nucleon forces. <i>Physical Review C</i> , 2018, 98, .	2.9	59
31	Three-nucleon forces: Implementation and applications to atomic nuclei and dense matter. <i>Physics Reports</i> , 2021, 890, 1-116.	25.6	57
32	Symmetric Nuclear Matter from the Strong Interaction. <i>Physical Review Letters</i> , 2020, 125, 142502.	7.8	56
33	Towards high-order calculations of three-nucleon scattering in chiral effective field theory. <i>European Physical Journal A</i> , 2020, 56, 1.	2.5	52
34	Light nuclei with semilocal momentum-space regularized chiral interactions up to third order. <i>Physical Review C</i> , 2021, 103, .	2.9	52
35	Eigenvector continuation as an efficient and accurate emulator for uncertainty quantification. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2020, 810, 135814.	4.1	51
36	Equation of State Constraints from Nuclear Physics, Neutron Star Masses, and Future Moment of Inertia Measurements. <i>Astrophysical Journal</i> , 2020, 901, 155.	4.5	51

#	ARTICLE	IF	CITATIONS
37	Family of chiral two- plus three-nucleon interactions for accurate nuclear structure studies. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2020, 808, 135651.	4.1	49
38	Converged <i>ab initio</i> calculations of heavy nuclei. Physical Review C, 2022, 105, .	2.9	48
39	Non-empirical pairing energy functional in nuclear matter and finite nuclei. Physical Review C, 2009, 80, .	2.9	46
40	Low-energy neutron-deuteron reactions with N ³ LO chiral forces. European Physical Journal A, 2014, 50, 1.	2.5	45
41	Regulator artifacts in uniform matter for chiral interactions. Physical Review C, 2016, 94, .	2.9	41
42	Pairing in neutron matter: New uncertainty estimates and three-body forces. Physical Review C, 2017, 95, .	2.9	39
43	Weinberg eigenvalues for chiral nucleon-nucleon interactions. Physical Review C, 2017, 96, .	2.9	36
44	Probing chiral interactions up to next-to-next-to-next-to-leading order in medium-mass nuclei. Physical Review C, 2019, 100, .	2.9	35
45	Dependence of the BCS ISO superfluid pairing gap on nuclear interactions. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2007, 648, 176-180.	4.1	34
46	Symmetry energy, neutron skin, and neutron star radius from chiral effective field theory interactions. European Physical Journal A, 2014, 50, 1.	2.5	33
47	Neutron matter based on consistently evolved chiral three-nucleon interactions. Physical Review C, 2013, 87, .	2.9	28
48	Improved many-body expansions from eigenvector continuation. Physical Review C, 2020, 101, .	2.9	28
49	Neutron matter at finite temperature based on chiral effective field theory interactions. Physical Review C, 2021, 103, .	2.9	28
50	In-medium similarity renormalization group with three-body operators. Physical Review C, 2021, 103, .	2.9	27
51	Natural orbitals for many-body expansion methods. Physical Review C, 2021, 103, .	2.9	20
52	Chiral three-nucleon forces and pairing in nuclei. Journal of Physics G: Nuclear and Particle Physics, 2012, 39, 015108.	3.6	17
53	To which densities is spin-polarized neutron matter a weakly interacting Fermi gas?. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2015, 744, 18-21.	4.1	17
54	The chiral condensate in neutron matter. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2013, 726, 412-416.	4.1	16

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55	Uncertainties in constraining low-energy constants from $3H \rightarrow \eta + \pi^2$ decay. <i>European Physical Journal A</i> , 2017, 53, 1.	2.5	16
56	Deuteron electrodisintegration with unitarily evolved potentials. <i>Physical Review C</i> , 2015, 92, .	2.9	12
57	Role of Chiral Two-Body Currents in ^6Li Magnetic Properties in Light of a New Precision Measurement with the Relative Self-Absorption Technique. <i>Physical Review Letters</i> , 2021, 126, 102501.	7.8	10
58	LOWEST-ORDER CONTRIBUTIONS OF CHIRAL THREE-NUCLEON INTERACTIONS TO PAIRING PROPERTIES OF NUCLEAR GROUND STATES. <i>Modern Physics Letters A</i> , 2010, 25, 1989-1992.	1.2	9
59	Excited states from eigenvector continuation: The anharmonic oscillator. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2022, 830, 137101.	4.1	9
60	Application of Semilocal Coordinate-Space Regularized Chiral Forces to Elastic Nd Scattering and Breakup. <i>Few-Body Systems</i> , 2019, 60, 1.	1.5	7
61	Low-rank matrix decompositions for ab initio nuclear structure. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2021, 821, 136623.	4.1	5
62	Importance truncation for the in-medium similarity renormalization group. <i>Physical Review C</i> , 2022, 105, .	2.9	2
63	NON-EMPIRICAL ENERGY DENSITY FUNCTIONAL FOR NUCLEI: THE PAIRING PART. <i>International Journal of Modern Physics E</i> , 2009, 18, 2007-2008.	1.0	1
64	Neutron Matter from Low-Momentum Interactions. <i>Progress of Theoretical Physics Supplement</i> , 2007, 168, 639-642.	0.1	0
65	New applications of renormalization group methods to nuclear matter. , 2013, , .		0