Hermann Krebs

List of Publications by Year
in descending order

101 papers	4,861 citations	87888 38 h-index	91884 69 g-index
101 all docs	101 docs citations	101 times ranked	1167 citing authors

#	Article	IF	Citations
1	Improved chiral nucleon-nucleon potential up to next-to-next-to-next-to-leading order. European Physical Journal A, 2015, 51, 1.	2.5	351
2	AbÂInitioCalculation of the Hoyle State. Physical Review Letters, 2011, 106, 192501.	7.8	297
3	Precision Nucleon-Nucleon Potential at Fifth Order in the Chiral Expansion. Physical Review Letters, 2015, 115, 122301.	7.8	276
4	Structure and Rotations of the Hoyle State. Physical Review Letters, 2012, 109, 252501.	7.8	201
5	Semilocal momentum-space regularized chiral two-nucleon potentials up to fifth order. European Physical Journal A, 2018, 54, 1.	2.5	196
6	Subleading contributions to the chiral three-nucleon force: Long-range terms. Physical Review C, 2008, 77, .	2.9	194
7	Subleading contributions to the chiral three-nucleon force. II. Short-range terms and relativistic corrections. Physical Review C, 2011, 84, .	2.9	155
8	Chiral three-nucleon force at N<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msup><mml:mrow /><mml:mn>4</mml:mn></mml:msup></mml:math>LO: Longest-range contributions. Physical Review C, 2012, 85, .	2.9	133
9	Ab initio alphaâ€“alpha scattering. Nature, 2015, 528, 111-114.	27.8	130
10	AbÂInitioCalculation of the Spectrum and Structure of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mmultiscripts><mml:mrow><mml:mi mathvariant="normal">O</mml:mi></mml:mrow><mml:mprescripts /><mml:none /><mml:mrow><mml:mn>16</mml:mn></mml:mrow></mml:mmultiscripts></mml:mrow></mml:math>. Physical Review Letters, 2014, 112, 102501.	7.8	117
11	Nuclear forces with Î” excitations up to next-to-next-to-leading order, part I: Peripheral nucleon-nucleon waves. European Physical Journal A, 2007, 32, 127-137.	2.5	115
12	Two-pion exchange electromagnetic current in chiral effective field theory using the method of unitary transformation. Physical Review C, 2009, 80, .	2.9	111
13	Few-nucleon systems with state-of-the-art chiral nucleon-nucleon forces. Physical Review C, 2016, 93, .	2.9	106
14	Lattice effective field theory for medium-mass nuclei. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2014, 732, 110-115.	4.1	99
15	Two-nucleon electromagnetic current in chiral effective field theory: One-pion exchange and short-range contributions. Physical Review C, 2011, 84, .	2.9	92
16	Lattice simulations for light nuclei: Chiral effective field theory at leading order. European Physical Journal A, 2007, 31, 105-123.	2.5	91
17	Chiral three-nucleon force at N<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msup><mml:mrow /><mml:mn>4</mml:mn></mml:msup></mml:math>LO. II. Intermediate-range contributions. Physical Review C, 2013, 87, .	2.9	86
18	High-Precision Nuclear Forces From Chiral EFT: State-of-the-Art, Challenges, and Outlook. Frontiers in Physics, 2020, 8, .	2.1	86

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19	Viability of Carbon-Based Life as a Function of the Light Quark Mass. Physical Review Letters, 2013, 110, 112502.	7.8	83
20	Lattice Effective Field Theory Calculations for<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>A</mml:mi><mml:mo>=</mml:mo><mml:mn>3</mml:mn></mml:math>, 4, 6, 12 Nuclei. Physical Review Letters, 2010, 104, 142501.	7.8	81
21	Efficient calculation of chiral three-nucleon forces up to<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msup><mml:mi mathvariant="normal">N</mml:mi><mml:mn>3</mml:mn></mml:msup><mml:mtext>LO</mml:mtext></mml:math>forab initiostudies. Physical Review C, 2015, 91, .	2.9	74
22	Nuclear Binding Near a Quantum Phase Transition. Physical Review Letters, 2016, 117, 132501.	7.8	74
23	Ground-state energy of dilute neutron matter at next-to-leading order in lattice chiral effective field theory. European Physical Journal A, 2009, 40, 199-213.	2.5	72
24	Reconciling threshold and subthreshold expansions for pionâ€“nucleon scattering. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2017, 770, 27-34.	4.1	68
25	Few- and many-nucleon systems with semilocal coordinate-space regularized chiral two- and three-body forces. Physical Review C, 2019, 99, .	2.9	68
26	Pion-nucleon scattering in covariant baryon chiral perturbation theory with explicit Delta resonances. Journal of High Energy Physics, 2016, 2016, 1.	4.7	67
27	Î”-excitations and the three-nucleon force. Nuclear Physics A, 2008, 806, 65-78.	1.5	66
28	Nuclear axial current operators to fourth order in chiral effective field theory. Annals of Physics, 2017, 378, 317-395.	2.8	65
29	Few-nucleon and many-nucleon systems with semilocal coordinate-space regularized chiral nucleon-nucleon forces. Physical Review C, 2018, 98, .	2.9	59
30	Lattice calculations for A = 3 , 4, 6, 12 nuclei using chiral effective field theory. European Physical Journal A, 2010, 45, 335-352.	2.5	55
31	Towards high-order calculations of three-nucleon scattering in chiral effective field theory. European Physical Journal A, 2020, 56, 1.	2.5	52
32	Light nuclei with semilocal momentum-space regularized chiral interactions up to third order. Physical Review C, 2021, 103, .	2.9	52
33	Lattice chiral effective field theory with three-body interactions at next-to-next-to-leading order. European Physical Journal A, 2009, 41, 125-139.	2.5	51
34	Extraction of the Neutron Charge Radius from a Precision Calculation of the Deuteron Structure Radius. Physical Review Letters, 2020, 124, 082501.	7.8	48
35	Dependence of the triple-alpha process on the fundamental constants of nature. European Physical Journal A, 2013, 49, 1.	2.5	47
36	AbÂinitio Calculations of the Isotopic Dependence of Nuclear Clustering. Physical Review Letters, 2017, 119, 222505.	7.8	47

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37	Low-energy neutron-deuteron reactions with N 3 LO chiral forces. European Physical Journal A, 2014, 50, 1.	2.5	45
38	Two-particle scattering on the lattice: Phase shifts, spin-orbit coupling, and mixing angles. European Physical Journal A, 2007, 34, 185-196.	2.5	44
39	New insights into the spin structure of the nucleon. Physical Review D, 2013, 87, .	4.7	39
40	Elastic pion-nucleon scattering in chiral perturbation theory: A fresh look. Physical Review C, 2016, 94, .	2.9	36
41	Redundancy of the off-shell parameters in chiral effective field theory with explicit spin-3/2 degrees of freedom. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2010, 683, 222-228.	4.1	34
42	Triton with long-range chiral N<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msup><mml:mrow /><mml:mn>3</mml:mn></mml:msup></mml:math>LO three-nucleon forces. Physical Review C, 2011, 84, .	2.9	34
43	Precision Determination of Pion-Nucleon Coupling Constants Using Effective Field Theory. Physical Review Letters, 2021, 126, 092501.	7.8	33
44	The triton and three-nucleon force in nuclear lattice simulations. Nuclear Physics A, 2006, 768, 179-193.	1.5	31
45	High-accuracy calculation of the deuteron charge and quadrupole form factors in chiral effective field theory. Physical Review C, 2021, 103, .	2.9	30
46	1S0 nucleon-nucleon scattering in the modified Weinberg approach. European Physical Journal A, 2015, 51, 1.	2.5	27
47	Three-nucleon force in chiral effective field theory with explicit <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi mathvariant="normal">Î”</mml:mi></mml:math> (1232) degrees of freedom: Longest-range contributions at fourth order. Physical Review C, 2018, 98, .	2.9	26
48	Chiral effective field theory on the lattice at next-to-leading order. European Physical Journal A, 2008, 35, 343-355.	2.5	25
49	Dilute neutron matter on the lattice at next-to-leading order in chiral effective field theory. European Physical Journal A, 2008, 35, 357-367.	2.5	25
50	On-shell consistency of the Rarita-Schwinger field formulation. Physical Review C, 2009, 80, .	2.9	25
51	Signatures of the chiral two-pion exchange electromagnetic currents in the<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mmultiscripts><mml:mi mathvariant="normal">H</mml:mi><mml:mprescripts /><mml:none /><mml:mrow><mml:mn>2</mml:mn></mml:mrow></mml:mmultiscripts></mml:math>and<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mmultiscripts><mml:mi mathvariant="normal">He</mml:mi><mml:mprescripts /><mml:none /><mml:mrow><mml:mn>3</mml:mn></mml:mrow></mml:mmultiscripts></mml:math>	2.9	25
52	Three-nucleon force at large distances: Insights from chiral effective field theory and the large-Nc expansion. European Physical Journal A, 2015, 51, 1.	2.5	25
53	Nuclear Electromagnetic Currents to Fourth Order in Chiral Effective Field Theory. Few-Body Systems, 2019, 60, 1.	1.5	24
54	Nuclear currents in chiral effective field theory. European Physical Journal A, 2020, 56, 1.	2.5	24

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55	Nuclear lattice simulations using symmetry-sign extrapolation. European Physical Journal A, 2015, 51, 1.	2.5	22
56	Scattering cluster wave functions on the lattice using the adiabatic projection method. Physical Review C, 2015, 92, .	2.9	20
57	Testing semilocal chiral two-nucleon interaction in selected electroweak processes. Physical Review C, 2016, 93, .	2.9	20
58	Improved analysis of coherent neutral pion electroproduction on deuterium in chiral perturbation theorya. European Physical Journal A, 2004, 22, 503-514.	2.5	19
59	Isospin-breaking two-nucleon force with explicit Î” excitations. Physical Review C, 2008, 77, .	2.9	18
60	Elastic and inelastic pion-nucleon scattering to fourth order in chiral perturbation theory. Physical Review C, 2017, 96, .	2.9	17
61	Neutral pion electroproduction off deuterium. Physical Review C, 2000, 61, .	2.9	15
62	Near threshold neutral pion electroproduction on deuterium in chiral perturbation theory. Nuclear Physics A, 2003, 713, 405-437.	1.5	15
63	Pion production in nucleon-nucleon collisions in chiral effective field theory: Next-to-next-to-leading order contributions. Physical Review C, 2012, 85, .	2.9	14
64	Finite volume effects in low-energy neutronâ€“deuteron scattering. Journal of Physics G: Nuclear and Particle Physics, 2014, 41, 015105.	3.6	13
65	The reactionÏ€Nâ†'Ï€Ï€Nin chiral effective field theory with explicitÎ”(1232)degrees of freedom. Physical Review C, 2014, 89, .	2.9	13
66	Pion production in nucleon-nucleon collisions in chiral effective field theory with<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>Î”</mml:mi><mml:mo>(</mml:mo><mml:mn>1232</mml:mn></mml:mrow></mml:math>) degrees of freedom. Physical Review C, 2013, 88, .	2.9	11
67	Properties of⁴He and⁶Li with improved chiral EFT interactions. EPJ Web of Conferences, 2016, 113, 04015.	0.3	11
68	Role of the Total Isospin 3/2 Component in Three-Nucleon Reactions. Few-Body Systems, 2016, 57, 1213-1225.	1.5	11
69	Calculations of Three-Nucleon Reactions. Few-Body Systems, 2013, 54, 897-902.	1.5	9
70	Uncertainty of three-nucleon continuum observables arising from uncertainties of two-nucleon potential parameters. Journal of Physics G: Nuclear and Particle Physics, 2020, 47, 104001.	3.6	9
71	Hidden Spin-Isospin Exchange Symmetry. Physical Review Letters, 2021, 127, 062501.	7.8	9
72	Orthonormalization procedure for chiral effective nuclear field theory. Annals of Physics, 2005, 316, 160-186.	2.8	8

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73	The Role of Î”-Resonance in Chiral Few Nucleon Forces. Few-Body Systems, 2011, 50, 295-298.	1.5	8
74	Complex-mass renormalization in hadronic EFT: Applicability at two-loop order. European Physical Journal A, 2015, 51, 1.	2.5	8
75	Effective Forces Between Quantum Bound States. Physical Review Letters, 2017, 118, 232502.	7.8	8
76	Uncertainties of Euclidean time extrapolation in lattice effective field theory. Journal of Physics G: Nuclear and Particle Physics, 2015, 42, 034012.	3.6	7
77	Application of Semilocal Coordinate-Space Regularized Chiral Forces to Elastic Nd Scattering and Breakup. Few-Body Systems, 2019, 60, 1.	1.5	7
78	Box diagram contribution to the axial two-nucleon current. Physical Review C, 2020, 101, .	2.9	7
79	Threshold pion production in proton-proton collisions at NNLO in chiral EFT. European Physical Journal A, 2016, 52, 1.	2.5	5
80	Modern Chiral Forces Applied to the Nucleonâ€“Deuteron Radiative Capture. Few-Body Systems, 2017, 58, 1.	1.5	5
81	Application of a momentum-space semi-locally regularized chiral potential to selected disintegration processes. Physical Review C, 2021, 103, .	2.9	5
82	Nucleon polarizabilities in covariant baryon chiral perturbation theory with explicit Î” degrees of freedom. Physical Review C, 2021, 103, .	2.9	4
83	Comprehensive investigation of the symmetric space-star configuration in the nucleon-deuteron breakup. Physical Review C, 2021, 104, .	2.9	4
84	3H at Next-to-Next-to-Next-to Leading Order of the Chiral Expansion. Few-Body Systems, 2013, 54, 1315-1318.	1.5	3
85	The Hoyle state in nuclear lattice effective field theory. Pramana - Journal of Physics, 2014, 83, 651-659.	1.8	3
86	Scattering phase shifts and mixing angles for an arbitrary number of coupled channels on the lattice. Physical Review C, 2019, 100, .	2.9	3
87	Subleading contributions to the nuclear scalar isoscalar current. European Physical Journal A, 2020, 56, 1.	2.5	3
88	Double Virtual Compton Scattering and SpinStructure of the Nucleon. , 2020, , .		3
89	Electroweak Current Operators in Chiral Effective Field Theory. , 2020, , .		3
90	Greenâ€™s function of a free massive scalar field on the lattice. Physical Review D, 2005, 72, .	4.7	1

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91	Complete next-to-next-to-leading order calculation ofNNâ†'NNÏ€in chiral effective field theory. EPJ Web of Conferences, 2014, 81, 03003.	0.3	1
92	Radiative pion photoproduction in covariant chiral perturbation theory. Physical Review C, 2021, 103, .	2.9	1
93	Investigations of the few-nucleon systems within the LENPIC project. SciPost Physics Proceedings, 2020, , .	0.4	1
94	Renormalization of two-loop diagrams in scalar lattice field theory. Nuclear Physics B, 2006, 748, 1-23.	2.5	0
95	NUCLEAR FORCES AND FEW NUCLEON SYSTEMS IN CHIRAL EFFECTIVE FIELD THEORY. Modern Physics Letters A, 2009, 24, 921-930.	1.2	0
96	CHIRAL EFFECTIVE POTENTIAL WITH DELTA DEGREES OF FREEDOM. International Journal of Modern Physics A, 2009, 24, 511-514.	1.5	0
97	Nuclear Forces from Effective Field Theory. Few-Body Systems, 2011, 49, 3-9.	1.5	0
98	Nucleon-nucleon scattering in the1S0partial wave in the modified Weinberg approach. EPJ Web of Conferences, 2016, 113, 04024.	0.3	0
99	Chiral dynamics of/with unstable particles. EPJ Web of Conferences, 2017, 134, 04005.	0.3	0
100	High-Precision Nucleon-Nucleon Potentials from Chiral EFT. Springer Proceedings in Physics, 2020, , 497-501.	0.2	0
101	Lattice phase shifts and mixing angles for an arbitrary number of coupled channels. SciPost Physics Proceedings, 2020, , .	0.4	0