Christian Smorra

List of Publications by Year
in descending order

46 papers	1,198 citations	361413 20 h-index	361022 35 g-index
48 all docs	48 docs citations	48 times ranked	771 citing authors

#	Article	IF	Citations
1	High-precision comparison of the antiproton-to-proton charge-to-mass ratio. Nature, 2015, 524, 196-199.	27.8	114
2	TRIGA-SPEC: A setup for mass spectrometry and laser spectroscopy at the research reactor TRIGA Mainz. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2008, 594, 162-177.	1.6	113
3	A parts-per-billion measurement of the antiproton magnetic moment. Nature, 2017, 550, 371-374.	27.8	96
4	Double-trap measurement of the proton magnetic moment at 0.3 parts per billion precision. Science, 2017, 358, 1081-1084.	12.6	81
5	Direct high-precision measurement of the magnetic moment of the proton. Nature, 2014, 509, 596-599.	27.8	79
6	A high-resolution multi-reflection time-of-flight mass spectrograph for precision mass measurements at RIKEN/SLOWRI. Nuclear Instruments & Methods in Physics Research B, 2014, 335, 39-53.	1.4	62
7	BASE â€“ The Baryon Antibaryon Symmetry Experiment. European Physical Journal: Special Topics, 2015, 224, 3055-3108.	2.6	53
8	Direct limits on the interaction of antiprotons with axion-like dark matter. Nature, 2019, 575, 310-314.	27.8	47
9	Sixfold improved single particle measurement of the magnetic moment of the antiproton. Nature Communications, 2017, 8, 14084.	12.8	40
10	Highly sensitive superconducting circuits at â^¼700 kHz with tunable quality factors for image-current detection of single trapped antiprotons. Review of Scientific Instruments, 2016, 87, 113305.	1.3	32
11	Constraints on the Coupling between Axionlike Dark Matter and Photons Using an Antiproton Superconducting Tuned Detection Circuit in a Cryogenic Penning Trap. Physical Review Letters, 2021, 126, 041301.	7.8	32
12	Direct high-precision mass measurements on<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mmultiscripts><mml:mi>Am</mml:mi><mml:mprescripts /><mml:none /><mml:mrow><mml:mn>241</mml:mn><mml:mo>,</mml:mo><mml:mn>243</mml:mn></mml:mrow></mml:mmultiscripts></mml:m xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mmultiscripts><mml:mi>Pu</mml:mi><mml:mprescripts /><mml:none /><mml:mrow><mml:mn>244</mml:mn></mml:mrow></mml:mmultiscripts></mml:math>, a	2.9	31
13	Recent developments in ion detection techniques for Penning trap mass spectrometry at TRIGA-TRAP. European Physical Journal A, 2009, 42, 311-317.	2.5	30
14	Improved limit on the directly measured antiproton lifetime. New Journal of Physics, 2017, 19, 083023.	2.9	30
15	Sympathetic cooling of protons and antiprotons with a common endcap Penning trap. Journal of Modern Optics, 2018, 65, 568-576.	1.3	27
16	Demonstration of the double Penning Trap technique with a single proton. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2013, 723, 78-81.	4.1	26
17	A 16-parts-per-trillion measurement of the antiproton-to-proton chargeâ€“mass ratio. Nature, 2022, 601, 53-57.	27.8	25
18	A reservoir trap for antiprotons. International Journal of Mass Spectrometry, 2015, 389, 10-13.	1.5	23

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19	A novel ion cooling trap for multi-reflection time-of-flight mass spectrograph. Nuclear Instruments & Methods in Physics Research B, 2013, 317, 544-549.	1.4	21
20	Millicharged Dark Matter Detection with Ion Traps. PRX Quantum, 2022, 3, .	9.2	20
21	Transport of fission products with a helium gas-jet at TRIGA-SPEC. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2010, 613, 226-231.	1.6	19
22	Position-sensitive ion detection in precision Penning trap mass spectrometry. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2009, 606, 475-483.	1.6	18
23	A carbon-cluster laser ion source for TRIGA-TRAP. Journal of Physics B: Atomic, Molecular and Optical Physics, 2009, 42, 154028.	1.5	17
24	Observation of individual spin quantum transitions of a single antiproton. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2017, 769, 1-6.	4.1	17
25	Sympathetic cooling of a trapped proton mediated by an LC circuit. Nature, 2021, 596, 514-518.	27.8	17
26	Qvalue and half-life of double-electron capture in184Os. Physical Review C, 2012, 86, .	2.9	16
27	Accuracy studies with carbon clusters at the Penning trap mass spectrometer TRIGA-TRAP. European Physical Journal D, 2010, 58, 47-52.	1.3	14
28	An RFQ cooler and buncher for the TRIGA-SPEC experiment. Applied Physics B: Lasers and Optics, 2014, 114, 129-136.	2.2	14
29	Mass measurements on stable nuclides in the rare-earth region with the Penning-trap mass spectrometer TRIGA-TRAP. Physical Review C, 2011, 84, .	2.9	13
30	Direct mass measurements of cadmium and palladium isotopes and their double-<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>Î²</mml:mi></mml:math>transition<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>Q</mml:mi></mml:math>values. Physical Review C, 2012, 85, .	2.9	12
31	Measurement of Ultralow Heating Rates of a Single Antiproton in a Cryogenic Penning Trap. Physical Review Letters, 2019, 122, 043201.	7.8	10
32	First investigation of phase-shifted Ramsey excitation in Penning trap mass spectrometry. International Journal of Mass Spectrometry, 2011, 303, 27-30.	1.5	8
33	Towards a high-precision measurement of the antiproton magnetic moment. Hyperfine Interactions, 2014, 228, 31-36.	0.5	7
34	Superconducting Solenoid System with Adjustable Shielding Factor for Precision Measurements of the Properties of the Antiproton. Physical Review Applied, 2019, 12, .	3.8	6
35	Sympathetic cooling schemes for separately trapped ions coupled via image currents. New Journal of Physics, 2022, 24, 033021.	2.9	6
36	The magnetic moments of the proton and the antiproton. Journal of Physics: Conference Series, 2014, 488, 012033.	0.4	5

#	Article	IF	Citations
37	350-fold improved measurement of the antiproton magnetic moment using a multi-trap method. Hyperfine Interactions, 2018, 239, 1.	0.5	4
38	Targets on superhydrophobic surfaces for laser ablation ion sources. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2012, 676, 84-89.	1.6	3
39	Challenging the standard model by high-precision comparisons of the fundamental properties of protons and antiprotons. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2018, 376, 20170275.	3.4	3
40	Progress towards an improved comparison of the proton-to-antiproton charge-to-mass ratios. Hyperfine Interactions, 2018, 239, 1.	0.5	2
41	Precision Measurements of the Fundamental Properties of the Proton and Antiproton. Journal of Physics: Conference Series, 2020, 1412, 032001.	0.4	2
42	The Magnetic Moments of the Proton and the Antiproton. Springer Tracts in Modern Physics, 2014, , 165-201.	0.1	2
43	High-Precision Mass Measurements At TRIGA-TRAP. AIP Conference Proceedings, 2010, , .	0.4	1
44	Das magnetische Moment des Protons. Physik in Unserer Zeit, 2015, 46, 92-97.	0.0	0
45	Towards an Improved Measurement of the Proton Magnetic Moment. , 2017, , .		0
46	A Test of Charge-Parity-Time Invariance at the Atto-Electronvolt Scale. , 2017, , .		0