

Dirk Peter van der Werf

List of Publications by Year in descending order

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155
papers

3,843
citations

159585

30
h-index

128289

60
g-index

156
all docs

156
docs citations

156
times ranked

2027
citing authors

#	ARTICLE	IF	CITATIONS
1	Production and detection of cold antihydrogen atoms. Nature, 2002, 419, 456-459.	27.8	719
2	Trapped antihydrogen. Nature, 2010, 468, 673-676.	27.8	298
3	Atomic-structure-dependent Schottky barrier at epitaxial Pb/Si(111) interfaces. Physical Review Letters, 1990, 64, 1589-1592.	7.8	196
4	Description and first application of a new technique to measure the gravitational mass of antihydrogen. Nature Communications, 2013, 4, 1785.	12.8	195
5	Resonant quantum transitions in trapped antihydrogen atoms. Nature, 2012, 483, 439-443.	27.8	134
6	Observation of the $1S \leftrightarrow 2S$ transition in trapped antihydrogen. Nature, 2017, 541, 506-510.	27.8	122
7	The GBAR antimatter gravity experiment. Hyperfine Interactions, 2015, 233, 21-27.	0.5	109
8	Characterization of the $1S \leftrightarrow 2S$ transition in antihydrogen. Nature, 2018, 557, 71-75.	27.8	107
9	Observation of the hyperfine spectrum of antihydrogen. Nature, 2017, 548, 66-69.	27.8	101
10	New Source of Dense, Cryogenic Positron Plasmas. Physical Review Letters, 2005, 95, 025002.	7.8	90
11	Evaporative Cooling of Antiprotons to Cryogenic Temperatures. Physical Review Letters, 2010, 105, 013003.	7.8	89
12	Production and detection of cold antihydrogen atoms. , 0, .		83
13	Spatial Distribution of Cold Antihydrogen Formation. Physical Review Letters, 2005, 94, 033403.	7.8	82
14	Antimatter Plasmas in a Multipole Trap for Antihydrogen. Physical Review Letters, 2007, 98, 023402.	7.8	75
15	Oxide muonics: II. Modelling the electrical activity of hydrogen in wide-gap and high-permittivity dielectrics. Journal of Physics Condensed Matter, 2006, 18, 1079-1119.	1.8	70
16	The ATHENA antihydrogen apparatus. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2004, 518, 679-711.	1.6	69
17	Antihydrogen accumulation for fundamental symmetry tests. Nature Communications, 2017, 8, 681.	12.8	64
18	Autoresonant Excitation of Antiproton Plasmas. Physical Review Letters, 2011, 106, 025002.	7.8	62

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19	Helium-vacancy interaction in tungsten. <i>Physical Review B</i> , 1993, 47, 14771-14777.	3.2	55
20	Effects of Extreme Magnetic Quadrupole Fields on Penning Traps and the Consequences for Antihydrogen Trapping. <i>Physical Review Letters</i> , 2005, 95, 155001.	7.8	53
21	Compression of Antiproton Clouds for Antihydrogen Trapping. <i>Physical Review Letters</i> , 2008, 100, 203401.	7.8	53
22	Observation of the $1S \rightarrow 2P$ Lyman- α transition in antihydrogen. <i>Nature</i> , 2018, 561, 211-215.	27.8	51
23	Complete nondestructive diagnostic of nonneutral plasmas based on the detection of electrostatic modes. <i>Physics of Plasmas</i> , 2003, 10, 3056-3064.	1.9	50
24	An improved limit on the charge of antihydrogen from stochastic acceleration. <i>Nature</i> , 2016, 529, 373-376.	27.8	48
25	Laser cooling of antihydrogen atoms. <i>Nature</i> , 2021, 592, 35-42.	27.8	47
26	Investigation of the fine structure of antihydrogen. <i>Nature</i> , 2020, 578, 375-380.	27.8	43
27	An experimental limit on the charge of antihydrogen. <i>Nature Communications</i> , 2014, 5, 3955.	12.8	40
28	Antiproton, positron, and electron imaging with a microchannel plate/phosphor detector. <i>Review of Scientific Instruments</i> , 2009, 80, 123701.	1.3	39
29	Design and operation of a two-stage positron accumulator. <i>Review of Scientific Instruments</i> , 2006, 77, 063302.	1.3	38
30	Evidence For The Production Of Slow Antiprotonic Hydrogen In Vacuum. <i>Physical Review Letters</i> , 2006, 97, 153401.	7.8	37
31	Production and detection of cold antihydrogen atoms. , 0, .		32
32	Search for Laser-Induced Formation of Antihydrogen Atoms. <i>Physical Review Letters</i> , 2006, 97, 213401.	7.8	31
33	Production of antihydrogen at reduced magnetic field for anti-atom trapping. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2008, 41, 011001.	1.5	30
34	Compression of Positron Clouds in the Independent Particle Regime. <i>Physical Review Letters</i> , 2011, 107, 033201.	7.8	28
35	Temporally Controlled Modulation of Antihydrogen Production and the Temperature Scaling of Antiproton-Positron Recombination. <i>Physical Review Letters</i> , 2008, 101, 053401.	7.8	26
36	Centrifugal Separation and Equilibration Dynamics in an Electron-Antiproton Plasma. <i>Physical Review Letters</i> , 2011, 106, 145001.	7.8	26

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37	Trap mutation in He-doped ion-implanted tungsten. <i>Hyperfine Interactions</i> , 1993, 79, 787-791.	0.5	23
38	Positron plasma control techniques for the production of cold antihydrogen. <i>Physical Review A</i> , 2007, 76, .	2.5	19
39	Experimental and computational study of the injection of antiprotons into a positron plasma for antihydrogen production. <i>Physics of Plasmas</i> , 2013, 20, .	1.9	19
40	Exciting positronium with a solid-state UV laser: the Doppler-broadened Lyman- $\hat{\pm}$ transition. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2015, 48, 175001.	1.5	19
41	Discriminating between antihydrogen and mirror-trapped antiprotons in a minimum-B trap. <i>New Journal of Physics</i> , 2012, 14, 015010.	2.9	18
42	Enhanced Control and Reproducibility of Non-Neutral Plasmas. <i>Physical Review Letters</i> , 2018, 120, 025001.	7.8	18
43	Sympathetic cooling of positrons to cryogenic temperatures for antihydrogen production. <i>Nature Communications</i> , 2021, 12, 6139.	12.8	18
44	In situ electromagnetic field diagnostics with an electron plasma in a Penningâ€™Malmberg trap. <i>New Journal of Physics</i> , 2014, 16, 013037.	2.9	17
45	The GBAR experiment. <i>International Journal of Modern Physics Conference Series</i> , 2014, 30, 1460263.	0.7	17
46	Antihydrogen Physics at ALPHA/CERN This paper was presented at the International Conference on Precision Physics of Simple Atomic Systems, held at University of Windsor, Windsor, Ontario, Canada on 21â€™26 July 2008.. <i>Canadian Journal of Physics</i> , 2009, 87, 791-797.	1.1	13
47	Production and detection of cold antihydrogen atoms. , 0, .		13
48	Cold Antihydrogen at ATHENA: Experimental Observation and Beyond. <i>AIP Conference Proceedings</i> , 2005, , .	0.4	12
49	Trapped antihydrogen. <i>Hyperfine Interactions</i> , 2012, 212, 15-29.	0.5	12
50	Production of slow protonium in vacuum. <i>Hyperfine Interactions</i> , 2006, 172, 97-105.	0.5	11
51	Particle Physics Aspects of Antihydrogen Studies with ALPHA at CERN. <i>AIP Conference Proceedings</i> , 2008, , .	0.4	11
52	The muon spin response to intermittent hyperfine interaction: modelling the high-temperature electrical activity of hydrogen in silicon. <i>Journal of Physics Condensed Matter</i> , 2004, 16, S4739-S4760.	1.8	10
53	Sideband cooling of ions in a non-neutral buffer gas. <i>Physical Review A</i> , 2006, 73, .	2.5	10
54	Manipulation of the magnetron orbit of a positron cloud in a Penning trap. <i>Physics of Plasmas</i> , 2013, 20, .	1.9	10

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55	The behaviour of positron clouds in the single-particle regime under the influence of rotating wall electric fields. <i>New Journal of Physics</i> , 2012, 14, 075022.	2.9	9
56	A novel antiproton radial diagnostic based on octupole induced ballistic loss. <i>Physics of Plasmas</i> , 2008, 15, 032107.	1.9	8
57	Producing Slow Antihydrogen for a Test of CPT Symmetry with ATHENA. <i>Hyperfine Interactions</i> , 2001, 138, 153-158.	0.5	7
58	Hydrogen In Oxides, Modelled By Muonium. <i>AIP Conference Proceedings</i> , 2005, , .	0.4	7
59	Further evidence for low-energy protonium production in vacuum. <i>European Physical Journal Plus</i> , 2012, 127, 1.	2.6	7
60	Hydrogen-vacancy interaction in molybdenum. <i>Journal of Physics Condensed Matter</i> , 1993, 5, 1801-1810.	1.8	5
61	Results from ATHENA. <i>AIP Conference Proceedings</i> , 2005, , .	0.4	5
62	Weakly bound positron-electron pairs in a strong magnetic field. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2008, 41, 245003.	1.5	5
63	Magnetic multipole induced zero-rotation frequency bounce-resonant loss in a Penning-Malmberg trap used for antihydrogen trapping. <i>Physics of Plasmas</i> , 2009, 16, 100702.	1.9	5
64	The ALPHA detector: Module Production and Assembly. <i>Journal of Instrumentation</i> , 2012, 7, C01051-C01051.	1.2	5
65	Development and applications of time-bunched and velocity-selected positron beams. <i>Review of Scientific Instruments</i> , 2003, 74, 3284-3292.	1.3	4
66	The ALPHA Experiment: A Cold Antihydrogen Trap. <i>AIP Conference Proceedings</i> , 2005, , .	0.4	4
67	Simple loss scaling laws for quadrupoles and higher-order multipoles used in antihydrogen traps. <i>AIP Conference Proceedings</i> , 2006, , .	0.4	4
68	First Attempts at Antihydrogen Trapping in ALPHA. <i>AIP Conference Proceedings</i> , 2008, , .	0.4	4
69	The temperature and density dependence of positron annihilation in CO ₂ and SF ₆ . <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2011, 44, 175204.	1.5	4
70	Positron annihilation in small molecules. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2013, 46, 195001.	1.5	4
71	Antiproton cloud compression in the ALPHA apparatus at CERN. <i>Hyperfine Interactions</i> , 2015, 235, 21-28.	0.5	4
72	Electric-field-gradient calculations on cadmium in cadmium-helium vacancy clusters in tungsten. <i>Physical Review B</i> , 1995, 52, 3909-3916.	3.2	3

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73	Phase transitions in monolayer hydrogen and deuterium on graphite. <i>Physical Review B</i> , 2000, 62, 17031-17034.	3.2	3
74	Recent progress on the ATHENA positron accumulator. <i>AIP Conference Proceedings</i> , 2002, , .	0.4	3
75	Three-body effects in positron annihilation on molecules. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2006, 39, L329-L334.	1.5	3
76	Towards antihydrogen confinement with the ALPHA antihydrogen trap. <i>Hyperfine Interactions</i> , 2006, 172, 81-89.	0.5	3
77	Antihydrogen for precision tests in physics. <i>Contemporary Physics</i> , 2008, 49, 29-41.	1.8	3
78	Magnetised positronium. <i>Journal of Physics: Conference Series</i> , 2010, 199, 012005.	0.4	3
79	Production and detection of cold antihydrogen atoms. , 0, .		3
80	Production and detection of cold antihydrogen atoms. , 0, .		2
81	Investigation of buffer gas trapping of positrons. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2020, 53, 185201.	1.5	2
82	Hydrogen-vacancy interaction in W and Mo. <i>Hyperfine Interactions</i> , 1993, 79, 783-786.	0.5	1
83	Antihydrogen Formation using Cold Plasmas. <i>AIP Conference Proceedings</i> , 2004, , .	0.4	1
84	Antiproton compression and radial measurements. <i>AIP Conference Proceedings</i> , 2008, , .	0.4	1
85	Antiparticle sources for antihydrogen production and trapping. <i>Journal of Physics: Conference Series</i> , 2011, 262, 012001.	0.4	1
86	Compression of positron clouds using rotating wall electric fields. <i>Hyperfine Interactions</i> , 2012, 212, 125-132.	0.5	1
87	Alternative method for reconstruction of antihydrogen annihilation vertices. <i>Hyperfine Interactions</i> , 2012, 212, 101-107.	0.5	1
88	Electron plasmas as a diagnostic tool for hyperfine spectroscopy of antihydrogen. , 2013, , .		1
89	Antihydrogen in a bottle. <i>Physics Education</i> , 2013, 48, 212-220.	0.5	1
90	Production and detection of cold antihydrogen atoms. , 0, .		1

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91	Production and detection of cold antihydrogen atoms. , 0, .		1
92	Production and detection of cold antihydrogen atoms. , 0, .		1
93	Production and detection of cold antihydrogen atoms. , 0, .		1
94	Production and detection of cold antihydrogen atoms. , 0, .		1
95	Production and detection of cold antihydrogen atoms. , 0, .		1
96	Production and detection of cold antihydrogen atoms. , 0, .		1
97	Production and detection of cold antihydrogen atoms. , 0, .		1
98	Production and detection of cold antihydrogen atoms. , 0, .		1
99	Production and detection of cold antihydrogen atoms. , 0, .		1
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101	Production and detection of cold antihydrogen atoms. , 0, .		1
102	Production and detection of cold antihydrogen atoms. , 0, .		1
103	Production and detection of cold antihydrogen atoms. , 0, .		1
104	Production and detection of cold antihydrogen atoms. , 0, .		1
105	Production and detection of cold antihydrogen atoms. , 0, .		1
106	Production and detection of cold antihydrogen atoms. , 0, .		1
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109	Production and detection of cold antihydrogen atoms. , 0, .		1
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125	Production and detection of cold antihydrogen atoms. , 0, .		1
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127	Production and detection of cold antihydrogen atoms. , 0, .		1
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129	Production and detection of cold antihydrogen atoms. , 0, .		1
130	Production and detection of cold antihydrogen atoms. , 0, .		1
131	Production and detection of cold antihydrogen atoms. , 0, .		1
132	Production and detection of cold antihydrogen atoms. , 0, .		1
133	Production and detection of cold antihydrogen atoms. , 0, .		1
134	Production and detection of cold antihydrogen atoms. , 0, .		1
135	Production and detection of cold antihydrogen atoms. , 0, .		1
136	Evidence for positronium formation at incommensurate monolayers of argon on graphite. Journal of Physics Condensed Matter, 2003, 15, L771-L776.	1.8	0
137	Non-Destructive Positron Plasma Diagnostics for Antihydrogen Production. AIP Conference Proceedings, 2003, , .	0.4	0
138	Production and Detection of Cold Anti-Hydrogen Atoms. A First Step Towards High Precision CPT Test. AIP Conference Proceedings, 2004, , .	0.4	0
139	DETECTION OF ANTIHYDROGEN ANNIHILATIONS WITH A SIâ€MICROâ€STRIP AND PURE CSI DETECTOR. , 2004, , .		0
140	Simulations of antihydrogen formation in a nested Penning trap. Journal of Physics: Conference Series, 2010, 199, 012008.	0.4	0
141	Antimatter transport processes. Journal of Physics: Conference Series, 2010, 257, 012004.	0.4	0
142	Search for trapped antihydrogen in ALPHA This paper was presented at the International Conference on Precision Physics of Simple Atomic Systems, held at \AA cole de Physique, les Houches, France, 30 Mayâ€™â€™â€™ June, 2010.. Canadian Journal of Physics, 2011, 89, 7-16.		0
143	Towards antihydrogen trapping and spectroscopy at ALPHA. Hyperfine Interactions, 2011, 199, 39-48.	0.5	0
144	Antiparticle plasmas for antihydrogen trapping. , 2012, , .		0

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145	Antihydrogen formation by autoresonant excitation of antiproton plasmas. <i>Hyperfine Interactions</i> , 2012, 212, 61-67.	0.5	0
146	Antihydrogen detection in ALPHA. <i>Hyperfine Interactions</i> , 2012, 212, 91-99.	0.5	0
147	Microwave-plasma interactions studied via mode diagnostics in ALPHA. <i>Hyperfine Interactions</i> , 2012, 212, 117-123.	0.5	0
148	Autoresonant-spectrometric determination of the residual gas composition in the ALPHA experiment apparatus. <i>Review of Scientific Instruments</i> , 2013, 84, 065110.	1.3	0
149	Evaporative cooling of antiprotons for the production of trappable antihydrogen. , 2013, , .		0
150	Metastable states in antihydrogen formation. <i>Hyperfine Interactions</i> , 2014, 228, 81-83.	0.5	0
151	Towards a test of the weak equivalence principle of gravity using anti-hydrogen at CERN. , 2016, , .		0
152	Limit on the electric charge of antihydrogen. <i>Hyperfine Interactions</i> , 2017, 238, 1.	0.5	0
153	The Role of Antihydrogen Formation in the Radial Transport of Antiprotons in Positron Plasmas. , 2017, , .		0
154	ATHENA " FIRST PRODUCTION OF COLD ANTIHYDROGEN AND BEYOND. , 2005, , .		0
155	PRODUCTION AND STUDY OF ANTIHYDROGEN IN THE ATHENA EXPERIMENT. , 2006, , 41-48.		0