

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	Laser cooling of antihydrogen atoms. Nature, 2021, 592, 35-42.	27.8	47
2	Sympathetic cooling of positrons to cryogenic temperatures for antihydrogen production. Nature Communications, 2021, 12, 6139.	12.8	18
3	Investigation of the fine structure of antihydrogen. Nature, 2020, 578, 375-380.	27.8	43
4	Investigation of buffer gas trapping of positrons. Journal of Physics B: Atomic, Molecular and Optical Physics, 2020, 53, 185201.	1.5	2
5	Characterization of the $1S \leftarrow 2S$ transition in antihydrogen. Nature, 2018, 557, 71-75.	27.8	107
6	Enhanced Control and Reproducibility of Non-Neutral Plasmas. Physical Review Letters, 2018, 120, 025001.	7.8	18
7	Observation of the $1S \leftarrow 2P$ Lyman- β transition in antihydrogen. Nature, 2018, 561, 211-215.	27.8	51
8	Observation of the $1S \leftarrow 2S$ transition in trapped antihydrogen. Nature, 2017, 541, 506-510.	27.8	122
9	Antihydrogen accumulation for fundamental symmetry tests. Nature Communications, 2017, 8, 681.	12.8	64
10	Observation of the hyperfine spectrum of antihydrogen. Nature, 2017, 548, 66-69.	27.8	101
11	Limit on the electric charge of antihydrogen. Hyperfine Interactions, 2017, 238, 1.	0.5	0
12	The Role of Antihydrogen Formation in the Radial Transport of Antiprotons in Positron Plasmas. , 2017, , .		0
13	Towards a test of the weak equivalence principle of gravity using anti-hydrogen at CERN. , 2016, , .		0
14	An improved limit on the charge of antihydrogen from stochastic acceleration. Nature, 2016, 529, 373-376.	27.8	48
15	Antiproton cloud compression in the ALPHA apparatus at CERN. Hyperfine Interactions, 2015, 235, 21-28.	0.5	4
16	The GBAR antimatter gravity experiment. Hyperfine Interactions, 2015, 233, 21-27.	0.5	109
17	Exciting positronium with a solid-state UV laser: the Doppler-broadened Lyman- β transition. Journal of Physics B: Atomic, Molecular and Optical Physics, 2015, 48, 175001.	1.5	19
18	In situ electromagnetic field diagnostics with an electron plasma in a Penning-Malmberg trap. New Journal of Physics, 2014, 16, 013037.	2.9	17

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19	Metastable states in antihydrogen formation. <i>Hyperfine Interactions</i> , 2014, 228, 81-83.	0.5	0
20	An experimental limit on the charge of antihydrogen. <i>Nature Communications</i> , 2014, 5, 3955.	12.8	40
21	The GBAR experiment. <i>International Journal of Modern Physics Conference Series</i> , 2014, 30, 1460263.	0.7	17
22	Description and first application of a new technique to measure the gravitational mass of antihydrogen. <i>Nature Communications</i> , 2013, 4, 1785.	12.8	195
23	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
24	Electron plasmas as a diagnostic tool for hyperfine spectroscopy of antihydrogen. , 2013, , .		1
25	Evaporative cooling of antiprotons for the production of trappable antihydrogen. , 2013, , .		0
26	Positron annihilation in small molecules. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2013, 46, 195001.	1.5	4
27	Manipulation of the magnetron orbit of a positron cloud in a Penning trap. <i>Physics of Plasmas</i> , 2013, 20, .	1.9	10
28	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
29	Antihydrogen in a bottle. <i>Physics Education</i> , 2013, 48, 212-220.	0.5	1
30	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
31	Discriminating between antihydrogen and mirror-trapped antiprotons in a minimum-B trap. <i>New Journal of Physics</i> , 2012, 14, 015010.	2.9	18
32	Antiparticle plasmas for antihydrogen trapping. , 2012, , .		0
33	Resonant quantum transitions in trapped antihydrogen atoms. <i>Nature</i> , 2012, 483, 439-443.	27.8	134
34	The ALPHA " detector: Module Production and Assembly. <i>Journal of Instrumentation</i> , 2012, 7, C01051-C01051.	1.2	5
35	Antihydrogen formation by autoresonant excitation of antiproton plasmas. <i>Hyperfine Interactions</i> , 2012, 212, 61-67.	0.5	0
36	Compression of positron clouds using rotating wall electric fields. <i>Hyperfine Interactions</i> , 2012, 212, 125-132.	0.5	1

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37	Trapped antihydrogen. <i>Hyperfine Interactions</i> , 2012, 212, 15-29.	0.5	12
38	Antihydrogen detection in ALPHA. <i>Hyperfine Interactions</i> , 2012, 212, 91-99.	0.5	0
39	Microwave-plasma interactions studied via mode diagnostics in ALPHA. <i>Hyperfine Interactions</i> , 2012, 212, 117-123.	0.5	0
40	Alternative method for reconstruction of antihydrogen annihilation vertices. <i>Hyperfine Interactions</i> , 2012, 212, 101-107.	0.5	1
41	Further evidence for low-energy protonium production in vacuum. <i>European Physical Journal Plus</i> , 2012, 127, 1.	2.6	7
42	Antiparticle sources for antihydrogen production and trapping. <i>Journal of Physics: Conference Series</i> , 2011, 262, 012001.	0.4	1
43	Search for trapped antihydrogen in ALPHA This paper was presented at the International Conference on Precision Physics of Simple Atomic Systems, held at <i>École de Physique, les Houches, France</i> , 30 May – 4 June, 2010.. <i>Canadian Journal of Physics</i> , 2011, 89, 7-16.		0
44	Towards antihydrogen trapping and spectroscopy at ALPHA. <i>Hyperfine Interactions</i> , 2011, 199, 39-48.	0.5	0
45	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
46	Centrifugal Separation and Equilibration Dynamics in an Electron-Antiproton Plasma. <i>Physical Review Letters</i> , 2011, 106, 145001.	7.8	26
47	Autoresonant Excitation of Antiproton Plasmas. <i>Physical Review Letters</i> , 2011, 106, 025002.	7.8	62
48	Compression of Positron Clouds in the Independent Particle Regime. <i>Physical Review Letters</i> , 2011, 107, 033201.	7.8	28
49	Simulations of antihydrogen formation in a nested Penning trap. <i>Journal of Physics: Conference Series</i> , 2010, 199, 012008.	0.4	0
50	Magnetised positronium. <i>Journal of Physics: Conference Series</i> , 2010, 199, 012005.	0.4	3
51	Trapped antihydrogen. <i>Nature</i> , 2010, 468, 673-676.	27.8	298
52	Evaporative Cooling of Antiprotons to Cryogenic Temperatures. <i>Physical Review Letters</i> , 2010, 105, 013003.	7.8	89
53	Antimatter transport processes. <i>Journal of Physics: Conference Series</i> , 2010, 257, 012004.	0.4	0
54	Antihydrogen Physics at ALPHA/CERN This paper was presented at the International Conference on Precision Physics of Simple Atomic Systems, held at <i>University of Windsor, Windsor, Ontario, Canada</i> on 21 – 26 July 2008.. <i>Canadian Journal of Physics</i> , 2009, 87, 791-797.	1.1	13

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55	Antiproton, positron, and electron imaging with a microchannel plate/phosphor detector. Review of Scientific Instruments, 2009, 80, 123701.	1.3	39
56	Magnetic multipole induced zero-rotation frequency bounce-resonant loss in a Penning-Malmberg trap used for antihydrogen trapping. Physics of Plasmas, 2009, 16, 100702.	1.9	5
57	Production of antihydrogen at reduced magnetic field for anti-atom trapping. Journal of Physics B: Atomic, Molecular and Optical Physics, 2008, 41, 011001.	1.5	30
58	Temporally Controlled Modulation of Antihydrogen Production and the Temperature Scaling of Antiproton-Positron Recombination. Physical Review Letters, 2008, 101, 053401.	7.8	26
59	Weakly bound positron-electron pairs in a strong magnetic field. Journal of Physics B: Atomic, Molecular and Optical Physics, 2008, 41, 245003.	1.5	5
60	Particle Physics Aspects of Antihydrogen Studies with ALPHA at CERN. AIP Conference Proceedings, 2008, , .	0.4	11
61	First Attempts at Antihydrogen Trapping in ALPHA. AIP Conference Proceedings, 2008, , .	0.4	4
62	Antiproton compression and radial measurements. AIP Conference Proceedings, 2008, , .	0.4	1
63	Antihydrogen for precision tests in physics. Contemporary Physics, 2008, 49, 29-41.	1.8	3
64	A novel antiproton radial diagnostic based on octupole induced ballistic loss. Physics of Plasmas, 2008, 15, 032107.	1.9	8
65	Compression of Antiproton Clouds for Antihydrogen Trapping. Physical Review Letters, 2008, 100, 203401.	7.8	53
66	Antimatter Plasmas in a Multipole Trap for Antihydrogen. Physical Review Letters, 2007, 98, 023402.	7.8	75
67	Positron plasma control techniques for the production of cold antihydrogen. Physical Review A, 2007, 76, .	2.5	19
68	Simple loss scaling laws for quadrupoles and higher-order multipoles used in antihydrogen traps. AIP Conference Proceedings, 2006, , .	0.4	4
69	Three-body effects in positron annihilation on molecules. Journal of Physics B: Atomic, Molecular and Optical Physics, 2006, 39, L329-L334.	1.5	3
70	Towards antihydrogen confinement with the ALPHA antihydrogen trap. Hyperfine Interactions, 2006, 172, 81-89.	0.5	3
71	Production of slow protonium in vacuum. Hyperfine Interactions, 2006, 172, 97-105.	0.5	11
72	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

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73	Search for Laser-Induced Formation of Antihydrogen Atoms. Physical Review Letters, 2006, 97, 213401.	7.8	31
74	Design and operation of a two-stage positron accumulator. Review of Scientific Instruments, 2006, 77, 063302.	1.3	38
75	Evidence For The Production Of Slow Antiprotonic Hydrogen In Vacuum. Physical Review Letters, 2006, 97, 153401.	7.8	37
76	Sideband cooling of ions in a non-neutral buffer gas. Physical Review A, 2006, 73, .	2.5	10
77	PRODUCTION AND STUDY OF ANTIHYDROGEN IN THE ATHENA EXPERIMENT. , 2006, , 41-48.		0
78	Cold Antihydrogen at ATHENA: Experimental Observation and Beyond. AIP Conference Proceedings, 2005, , .	0.4	12
79	Hydrogen In Oxides, Modelled By Muonium. AIP Conference Proceedings, 2005, , .	0.4	7
80	The ALPHA Experiment: A Cold Antihydrogen Trap. AIP Conference Proceedings, 2005, , .	0.4	4
81	Results from ATHENA. AIP Conference Proceedings, 2005, , .	0.4	5
82	Spatial Distribution of Cold Antihydrogen Formation. Physical Review Letters, 2005, 94, 033403.	7.8	82
83	Effects of Extreme Magnetic Quadrupole Fields on Penning Traps and the Consequences for Antihydrogen Trapping. Physical Review Letters, 2005, 95, 155001.	7.8	53
84	New Source of Dense, Cryogenic Positron Plasmas. Physical Review Letters, 2005, 95, 025002.	7.8	90
85	ATHENA â€œ FIRST PRODUCTION OF COLD ANTIHYDROGEN AND BEYOND. , 2005, , .		0
86	The muon spin response to intermittent hyperfine interaction: modelling the high-temperature electrical activity of hydrogen in silicon. Journal of Physics Condensed Matter, 2004, 16, S4739-S4760.	1.8	10
87	Production and Detection of Cold Anti-Hydrogen Atoms. A First Step Towards High Precision CPT Test. AIP Conference Proceedings, 2004, , .	0.4	0
88	Antihydrogen Formation using Cold Plasmas. AIP Conference Proceedings, 2004, , .	0.4	1
89	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
90	DETECTION OF ANTIHYDROGEN ANNIHILATIONS WITH A SIâ€œMICROâ€œSTRIP AND PURE CSI DETECTOR. , 2004, , .		0

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91	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
92	Evidence for positronium formation at incommensurate monolayers of argon on graphite. <i>Journal of Physics Condensed Matter</i> , 2003, 15, L771-L776.	1.8	0
93	Non-Destructive Positron Plasma Diagnostics for Antihydrogen Production. <i>AIP Conference Proceedings</i> , 2003, , .	0.4	0
94	Development and applications of time-bunched and velocity-selected positron beams. <i>Review of Scientific Instruments</i> , 2003, 74, 3284-3292.	1.3	4
95	Recent progress on the ATHENA positron accumulator. <i>AIP Conference Proceedings</i> , 2002, , .	0.4	3
96	Production and detection of cold antihydrogen atoms. <i>Nature</i> , 2002, 419, 456-459.	27.8	719
97	Producing Slow Antihydrogen for a Test of CPT Symmetry with ATHENA. <i>Hyperfine Interactions</i> , 2001, 138, 153-158.	0.5	7
98	Phase transitions in monolayer hydrogen and deuterium on graphite. <i>Physical Review B</i> , 2000, 62, 17031-17034.	3.2	3
99	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
100	Hydrogen-vacancy interaction in W and Mo. <i>Hyperfine Interactions</i> , 1993, 79, 783-786.	0.5	1
101	Trap mutation in He-doped ion-implanted tungsten. <i>Hyperfine Interactions</i> , 1993, 79, 787-791.	0.5	23
102	Helium-vacancy interaction in tungsten. <i>Physical Review B</i> , 1993, 47, 14771-14777.	3.2	55
103	Hydrogen-vacancy interaction in molybdenum. <i>Journal of Physics Condensed Matter</i> , 1993, 5, 1801-1810.	1.8	5
104	Atomic-structure-dependent Schottky barrier at epitaxial Pb/Si(111) interfaces. <i>Physical Review Letters</i> , 1990, 64, 1589-1592.	7.8	196
105	Production and detection of cold antihydrogen atoms. , 0, .		83
106	Production and detection of cold antihydrogen atoms. , 0, .		1
107	Production and detection of cold antihydrogen atoms. , 0, .		1
108	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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112	Production and detection of cold antihydrogen atoms. , 0, .		1
113	Production and detection of cold antihydrogen atoms. , 0, .		1
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115	Production and detection of cold antihydrogen atoms. , 0, .		1
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117	Production and detection of cold antihydrogen atoms. , 0, .		1
118	Production and detection of cold antihydrogen atoms. , 0, .		1
119	Production and detection of cold antihydrogen atoms. , 0, .		1
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121	Production and detection of cold antihydrogen atoms. , 0, .		1
122	Production and detection of cold antihydrogen atoms. , 0, .		2
123	Production and detection of cold antihydrogen atoms. , 0, .		1
124	Production and detection of cold antihydrogen atoms. , 0, .		1
125	Production and detection of cold antihydrogen atoms. , 0, .		1
126	Production and detection of cold antihydrogen atoms. , 0, .		1

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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, .		32
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	Production and detection of cold antihydrogen atoms. , 0, .		1
137	Production and detection of cold antihydrogen atoms. , 0, .		1
138	Production and detection of cold antihydrogen atoms. , 0, .		1
139	Production and detection of cold antihydrogen atoms. , 0, .		13
140	Production and detection of cold antihydrogen atoms. , 0, .		3
141	Production and detection of cold antihydrogen atoms. , 0, .		1
142	Production and detection of cold antihydrogen atoms. , 0, .		1
143	Production and detection of cold antihydrogen atoms. , 0, .		1
144	Production and detection of cold antihydrogen atoms. , 0, .		1

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149	Production and detection of cold antihydrogen atoms. , 0, .		1
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151	Production and detection of cold antihydrogen atoms. , 0, .		1
152	Production and detection of cold antihydrogen atoms. , 0, .		1
153	Production and detection of cold antihydrogen atoms. , 0, .		1
154	Production and detection of cold antihydrogen atoms. , 0, .		1
155	Production and detection of cold antihydrogen atoms. , 0, .		1