Fernando D Amaro

List of Publications by Year
in descending order

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108 papers	8,063 citations	126907 33 h-index	46799 89 g-index
109 all docs	109 docs citations	109 times ranked	8595 citing authors

#	Article	IF	Citations
1	Dark Matter Search Results from a One Ton-Year Exposure of XENON1T. Physical Review Letters, 2018, 121, 111302.	7.8	1,517
2	The size of the proton. Nature, 2010, 466, 213-216.	27.8	1,113
3	First Dark Matter Search Results from the XENON1T Experiment. Physical Review Letters, 2017, 119, 181301.	7.8	757
4	Proton Structure from the Measurement of 2S-2P Transition Frequencies of Muonic Hydrogen. Science, 2013, 339, 417-420.	12.6	676
5	Light Dark Matter Search with Ionization Signals in XENON1T. Physical Review Letters, 2019, 123, 251801.	7.8	344
6	Excess electronic recoil events in XENON1T. Physical Review D, 2020, 102, .	4.7	302
7	DARWIN: towards the ultimate dark matter detector. Journal of Cosmology and Astroparticle Physics, 2016, 2016, 017-017.	5.4	288
8	Physics reach of the XENON1T dark matter experiment.. Journal of Cosmology and Astroparticle Physics, 2016, 2016, 027-027.	5.4	246
9	Laser spectroscopy of muonic deuterium. Science, 2016, 353, 669-673.	12.6	225
10	Constraining the Spin-Dependent WIMP-Nucleon Cross Sections with XENON1T. Physical Review Letters, 2019, 122, 141301.	7.8	183
11	Projected WIMP sensitivity of the XENONnT dark matter experiment. Journal of Cosmology and Astroparticle Physics, 2020, 2020, 031-031.	5.4	159
12	Search for Light Dark Matter Interactions Enhanced by the Migdal Effect or Bremsstrahlung in XENON1T. Physical Review Letters, 2019, 123, 241803.	7.8	158
13	The XENON1T dark matter experiment. European Physical Journal C, 2017, 77, 1.	3.9	157
14	Thin-Disk Yb:YAG Oscillator-Amplifier Laser, ASE, and Effective Yb:YAG Lifetime. IEEE Journal of Quantum Electronics, 2009, 45, 993-1005.	1.9	92
15	XENON100 dark matter results from a combination of 477 live days. Physical Review D, 2016, 94, .	4.7	92
16	Observation of two-neutrino double electron capture in 124Xe with XENON1T. Nature, 2019, 568, 532-535.	27.8	89
17	Low-mass dark matter search using ionization signals in XENON100. Physical Review D, 2016, 94, .	4.7	86
18	Measuring the Î±-particle charge radius with muonic helium-4 ions. Nature, 2021, 589, 527-531.	27.8	62

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19	XENON1T dark matter data analysis: Signal and background models and statistical inference. Physical Review D, 2019, 99, .	4.7	56
20	XENON1T dark matter data analysis: Signal reconstruction, calibration, and event selection. Physical Review D, 2019, 100, .	4.7	51
21	Pionic Hydrogen. Lecture Notes in Physics, 2008, , 165-186.	0.7	51
22	Search for WIMP inelastic scattering off xenon nuclei with XENON100. Physical Review D, 2017, 96, .	4.7	50
23	Pionic deuterium. European Physical Journal A, 2011, 47, 1.	2.5	49
24	Search for Electronic Recoil Event Rate Modulation with 4 Years of XENON100 Data. Physical Review Letters, 2017, 118, 101101.	7.8	49
25	Energy resolution and linearity of XENON1T in the MeV energy range. European Physical Journal C, 2020, 80, 1.	3.9	40
26	Ion-induced effects in GEM and GEM/MHSP gaseous photomultipliers for the UV and the visible spectral range. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2005, 553, 46-52.	1.6	38
27	Sensitivity of the DARWIN observatory to the neutrinoless double beta decay of ^{136}Xe. European Physical Journal C, 2020, 80, 1.	3.9	38
28	Powerful fast triggerable 6 Î¼m laser for the muonic hydrogen 2S-Lamb shift experiment. Optics Communications, 2005, 253, 362-374.	2.1	37
29	Planar LAAPDs: temperature dependence, performance, and application in low-energy X-ray spectroscopy. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2005, 540, 169-179.	1.6	36
30	Effective field theory search for high-energy nuclear recoils using the XENON100 dark matter detector. Physical Review D, 2017, 96, .	4.7	36
31	Material radioassay and selection for the XENON1T dark matter experiment. European Physical Journal C, 2017, 77, 1.	3.9	36
32	Efficient ion blocking in gaseous detectors and its application to gas-avalanche photomultipliers sensitive in the visible-light range. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2009, 598, 116-120.	1.6	35
33	Removing krypton from xenon by cryogenic distillation to the ppq level. European Physical Journal C, 2017, 77, 1.	3.9	35
34	Development of high-gain gaseous photomultipliers for the visible spectral range. Journal of Instrumentation, 2009, 4, P07005-P07005.	1.2	34
35	The muonic hydrogen Lamb-shift experiment. Canadian Journal of Physics, 2005, 83, 339-349.	1.1	31
36	Further progress in ion back-flow reduction with patterned gaseous hole-multipliers. Journal of Instrumentation, 2007, 2, P08004-P08004.	1.2	29

#	ARTICLE	IF	CITATIONS
37	The Thick-COBRA: a new gaseous electron multiplier for radiation detectors. Journal of Instrumentation, 2010, 5, P10002-P10002.	1.2	29
38	Online ^{222} 222 Rn removal by cryogenic distillation in the XENON100 experiment. European Physical Journal C, 2017, 77, 1.	3.9	29
39	Signal yields of keV electronic recoils and their discrimination from nuclear recoils in liquid xenon. Physical Review D, 2018, 97, .	4.7	29
40	Secondary scintillation yield from gaseous micropattern electron multipliers in direct Dark Matter detection. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2009, 677, 133-138.	4.1	28
41	Status of the muonic hydrogen Lamb-shift experiment. Canadian Journal of Physics, 2007, 85, 469-478.	1.1	27
42	Characterization of large area avalanche photodiodes in X-ray and VUV-light detection. Journal of Instrumentation, 2007, 2, P08005-P08005.	1.2	26
43	Solar neutrino detection sensitivity in DARWIN via electron scattering. European Physical Journal C, 2020, 80, 1.	3.9	26
44	Results from a calibration of XENON100 using a source of dissolved radon-220. Physical Review D, 2017, 95, .	4.7	26
45	Operation of MHSP multipliers in high pressure pure noble-gas. Journal of Instrumentation, 2006, 1, P04003-P04003.	1.2	24
46	First Results on the Scalar WIMP-Pion Coupling, Using the XENON1T Experiment. Physical Review Letters, 2019, 122, 071301.	7.8	23
47	Application of the microhole and strip plate detector for neutron detection. IEEE Transactions on Nuclear Science, 2004, 51, 2104-2109.	2.0	22
48	Advances in ion back-flow reduction in cascaded gaseous electron multipliers incorporating R-MHSP elements. Journal of Instrumentation, 2006, 1, P10004-P10004.	1.2	22
49	Precision Determination of the<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>d</mml:mi><mml:mi>Ï€</mml:mi><mml:mo>â†”</mml:mo><mml:mi>N</mml:mi><mml:mi>N</mml:mi></m Strength at Threshold. Physical Review Letters, 2010, 104, 142503.	7.8	22
50	The Lamb-shift experiment in Muonic helium. Hyperfine Interactions, 2012, 212, 195-201.	0.5	22
51	Search for bosonic super-WIMP interactions with the XENON100 experiment. Physical Review D, 2017, 96, .	4.7	21
52	Experiments towards resolving the proton charge radius puzzle. EPJ Web of Conferences, 2016, 113, 01006.	0.3	20
53	The next generation of laser spectroscopy experiments using light muonic atoms. Journal of Physics: Conference Series, 2018, 1138, 012010.	0.4	19
54	The CYGNO Experiment. Instruments, 2022, 6, 6.	1.8	18

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55	Muonic hydrogen cascade time and lifetime of the short-lived2Sstate. Physical Review A, 2007, 75, .	2.5	17
56	The XENON1T data acquisition system. Journal of Instrumentation, 2019, 14, P07016-P07016.	1.2	17
57	First in-beam studies of a Resistive-Plate WELL gaseous multiplier. Journal of Instrumentation, 2016, 11, P01005-P01005.	1.2	16
58	Intrinsic backgrounds from Rn and Kr in the XENON100 experiment. European Physical Journal C, 2018, 78, 1.	3.9	15
59	The size of the proton and the deuteron. Journal of Physics: Conference Series, 2011, 264, 012008.	0.4	14
60	THCOBRA: Ion back flow reduction in patterned THGEM cascades. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2011, 639, 134-136.	1.6	14
61	MHSP in reversed-bias operation mode for ion blocking in gas-avalanche multipliers. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2005, 548, 375-382.	1.6	13
62	The Resistive-Plate WELL with Argon mixtures â€“ A robust gaseous radiation detector. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2017, 845, 262-265.	1.6	13
63	MHSP operation in pure xenon. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2005, 552, 259-262.	1.6	12
64	Operation of a single-GEM in noble gases at high pressures. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2007, 579, 62-66.	1.6	12
65	Novel concept for neutron detection: proportional counter filled with 10B nanoparticle aerosol. Scientific Reports, 2017, 7, 41699.	3.3	12
66	Laser Spectroscopy of Muonic Atoms and Ions. , 2017, , .		12
67	Search for two-neutrino double electron capture of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mmultiscripts><mml:mi>Xe</mml:mi><mml:mprescripts /><mml:none /><mml:mn>124</mml:mn></mml:mmultiscripts></mml:math> with XENON100. Physical Review C, 2017, 95, .	2.9	12
68	The 2S Lamb shift in muonic hydrogen and the proton rms charge radius. AIP Conference Proceedings, 2005, , .	0.4	11
69	The Photon-Assisted Cascaded Electron Multiplier: a concept for potential avalanche-ion blocking. Journal of Instrumentation, 2006, 1, P08003-P08003.	1.2	10
70	Micro-hole and strip plate-based photosensor. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2007, 580, 214-217.	1.6	10
71	Noble-gas operation of Micro-Hole and Strip Plate electron multipliers at atmospheric-to-high pressures. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2004, 535, 341-346.	1.6	10
72	Lifetime and population of the<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mn>2</mml:mn><mml:mi>S</mml:mi></mml:mrow></mml:math>state in muonic hydrogen and deuterium. Physical Review A, 2013, 88, .	2.5	9

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73	In-beam evaluation of a medium-size Resistive-Plate WELL gaseous particle detector. Journal of Instrumentation, 2016, 11, P09013-P09013.	1.2	9
74	Characterization of the Hamamatsu S8664 avalanche photodiode for X-ray and VUV-light detection. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2012, 685, 11-15.	1.6	8
75	Improved x-ray detection and particle identification with avalanche photodiodes. Review of Scientific Instruments, 2015, 86, 053102.	1.3	8
76	The proton radius puzzle. Journal of Physics: Conference Series, 2011, 312, 032002.	0.4	7
77	The size of the proton. Hyperfine Interactions, 2012, 212, 185-194.	0.5	7
78	Pionic hydrogen and deuterium. Hyperfine Interactions, 2012, 209, 57-62.	0.5	7
79	Experimental Study of Xe-Ne Proportional Counters for X-Ray Detection. IEEE Transactions on Nuclear Science, 2007, 54, 224-227.	2.0	6
80	Progress in gaseous photomultipliers for the visible spectral range. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2010, 623, 318-320.	1.6	6
81	Search for magnetic inelastic dark matter with XENON100. Journal of Cosmology and Astroparticle Physics, 2017, 2017, 039-039.	5.4	6
82	PACEM: a new concept for high avalanche-ion blocking. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2007, 581, 261-264.	1.6	5
83	The Lamb shift in muonic hydrogenThis paper was presented at the International Conference on Precision Physics of Simple Atomic Systems, held at Ã‰cole de Physique, les Houches, France, 30 Mayâ€‰â€“â€‰ June, 2010.. Canadian Journal of Physics, 2011, 89, 37-45.	1.1	5
84	Pionic hydrogen and friends. Hyperfine Interactions, 2015, 234, 105-111.	0.5	5
85	High-pressure xenon GPSC/MSGC hybrid detector. IEEE Transactions on Nuclear Science, 2003, 50, 855-858.	2.0	4
86	The Lamb shift in muonic hydrogen and the proton radius. Physics Procedia, 2011, 17, 10-19.	1.2	4
87	Is the proton radius a player in the redefinition of the International System of Units?. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2011, 369, 4064-4077.	3.4	4
88	Laser spectroscopy of muonic hydrogen. Annalen Der Physik, 2013, 525, 647-651.	2.4	4
89	Conclusions from recent pionicâ€"atom experiments. AIP Conference Proceedings, 2008, , .	0.4	3
90	A robust large area x-ray imaging system based on 100 Î¼m thick Gas Electron Multiplier. Journal of Instrumentation, 2015, 10, C12005-C12005.	1.2	3

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91	Directional Dark Matter Searches with CYGNO. Particles, 2021, 4, 343-353.	1.7	3
92	Operation of a novel large area, high gain, single stage gaseous electron multiplier. Journal of Instrumentation, 2021, 16, P01033-P01033.	1.2	3
93	The Photon-Assisted Cascaded Electron Multiplier Operation in CF<formula formulatype="inline"><tex>$_{4}$</tex></formula> for Ion Backflow Suppression. IEEE Transactions on Nuclear Science, 2008, 55, 1652-1656.	2.0	2
94	Pionic deuterium. Hyperfine Interactions, 2009, 193, 47-52.	0.5	2
95	High-gain continuous-mode operated gaseous photomultipliers for the visible spectral range. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2009, 610, 161-163.	1.6	2
96	Pionic Deuterium. EPJ Web of Conferences, 2010, 3, 03006.	0.3	2
97	Operation of the Zero Ion Backflow electron multiplier in pure argon. Journal of Instrumentation, 2014, 9, P12002-P12002.	1.2	2
98	The photon-assisted cascaded electron multiplier operation in CF<inf>4</inf> for ion backflow suppression. , 2007, , .		1
99	High Pressure Operation of the Photon-Assisted Cascaded Electron Multiplier. IEEE Transactions on Nuclear Science, 2009, 56, 1097-1101.	2.0	1
100	Zero Ion Backflow electron multiplier operating in noble gases. Journal of Instrumentation, 2014, 9, P02004-P02004.	1.2	1
101	Gain Characteristics of a 100 Î¼m thick Gas Electron Multiplier (GEM). Journal of Instrumentation, 2015, 10, C12006-C12006.	1.2	1
102	Gain characteristics of a 100 Î¼m thick GEM in Krypton-CO₂ mixtures. Journal of Instrumentation, 2017, 12, C12061-C12061.	1.2	1
103	On the double peak structure of avalanche photodiode response to monoenergetic x-rays at various temperatures and bias voltages. Journal of Instrumentation, 2018, 13, C01033-C01033.	1.2	1
104	Spatial resolution properties of krypton-based mixtures using a 100 Î¼m thick Gas Electron Multiplier. Journal of Instrumentation, 2018, 13, P10010-P10010.	1.2	1
105	Muonic hydrogen spectroscopy: the proton radius puzzle. Proceedings of SPIE, 2010, , .	0.8	0
106	Pionic Hydrogen. Physics Procedia, 2011, 17, 69-76.	1.2	0
107	Operational properties of fine powder aerosol as radiation detection medium in gaseous proportional counters. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2019, 942, 162392.	1.6	0
108	Fine Powder Proportional Counters for Neutron Detection. U Porto Journal of Engineering, 2022, 8, 24-28.	0.4	0