Maria del Carmen Carmona Benitez

List of Publications by Year
in descending order

49 papers	4,584 citations	236925 25 h-index	214800 47 g-index
50 all docs	50 docs citations	50 times ranked	6993 citing authors

#	Article	IF	Citations
1	First Results from the LUX Dark Matter Experiment at the Sanford Underground Research Facility. Physical Review Letters, 2014, 112, 091303.	7.8	1,248
2	Results from a Search for Dark Matter in the Complete LUX Exposure. Physical Review Letters, 2017, 118, 021303.	7.8	1,081
3	Improved Limits on Scattering of Weakly Interacting Massive Particles from Reanalysis of 2013 LUX Data. Physical Review Letters, 2016, 116, 161301.	7.8	333
4	The Large Underground Xenon (LUX) experiment. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2013, 704, 111-126.	1.6	239
5	Limits on Spin-Dependent WIMP-Nucleon Cross Section Obtained from the Complete LUX Exposure. Physical Review Letters, 2017, 118, 251302.	7.8	175
6	Results on the Spin-Dependent Scattering of Weakly Interacting Massive Particles on Nucleons from the Run 3 Data of the LUX Experiment. Physical Review Letters, 2016, 116, 161302.	7.8	146
7	Projected WIMP sensitivity of the LUX-ZEPLIN dark matter experiment. Physical Review D, 2020, 101, .	4.7	141
8	Results of a Search for Sub-GeV Dark Matter Using 2013 LUX Data. Physical Review Letters, 2019, 122, 131301.	7.8	119
9	First Searches for Axions and Axionlike Particles with the LUX Experiment. Physical Review Letters, 2017, 118, 261301.	7.8	108
10	The LUX-ZEPLIN (LZ) experiment. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2020, 953, 163047.	1.6	105
11	Radiogenic and muon-induced backgrounds in the LUX dark matter detector. Astroparticle Physics, 2015, 62, 33-46.	4.3	71
12	Tritium calibration of the LUX dark matter experiment. Physical Review D, 2016, 93, .	4.7	70
13	Technical results from the surface run of the LUX dark matter experiment. Astroparticle Physics, 2013, 45, 34-43.	4.3	45
14	Characterization of ETL 9357FLA photomultiplier tubes for cryogenic temperature applications. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2006, 556, 146-157.	1.6	41
15	Signal yields, energy resolution, and recombination fluctuations in liquid xenon. Physical Review D, 2017, 95, .	4.7	39
16	The LUX-ZEPLIN (LZ) radioactivity and cleanliness control programs. European Physical Journal C, 2020, 80, 1.	3.9	38
17	Measurement of through-going particle momentum by means of multiple scattering with the ICARUS T600 TPC. European Physical Journal C, 2006, 48, 667-676.	3.9	36
18	An ultra-low background PMT for liquid xenon detectors. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2013, 703, 1-6.	1.6	36

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	Uniform energy calibration of LUX detector using <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mmultiscripts><mml:mrow><mml:mi>Xe</mml:mi></mml:mrow><mml:mprescripts /><mml:none /><mml:mrow><mml:mn>127</mml:mn></mml:mrow></mml:mmultiscripts></mml:mrow></mml:math> electron capture. Physical Review D, 2017, 96, .		
19		4.7	36
20	Search for annual and diurnal rate modulations in the LUX experiment. Physical Review D, 2018, 98, .	4.7	34
21	LUXSim: A component-centric approach to low-background simulations. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2012, 675, 63-77.	1.6	31
22	Development of wavelength shifter coated reflectors for the ArDM argon dark matter detector. Journal of Instrumentation, 2009, 4, P06001-P06001.	1.2	30
23	ArDM: a ton-scale LAr detector for direct Dark Matter searches. Journal of Physics: Conference Series, 2011, 308, 012006.	0.4	30
24	Calibration, event reconstruction, data analysis, and limit calculation for the LUX dark matter experiment. Physical Review D, 2018, 97, .	4.7	29
25	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mmultiscripts><mml:mrow><mml:mi>Kr</mml:mi></mml:mrow><mml:mprescripts /><mml:none /><mml:mrow><mml:mn>83</mml:mn><mml:mi mathvariant="normal">m</mml:mi></mml:mrow></mml:mmultiscripts></mml:mrow></mml:math> calibration of the 2013 LUX dark matter search. Physical Review D, 2017, 96, .	4.7	28
26	Position reconstruction in LUX. Journal of Instrumentation, 2018, 13, P02001-P02001.	1.2	25
27	Observation of coherent neutrino-nucleus elastic scattering at a beta beam. Physical Review D, 2006, 74, .	4.7	24
28	Identification of radiopure titanium for the LZ dark matter experiment and future rare event searches. Astroparticle Physics, 2017, 96, 1-10.	4.3	24
29	Projected sensitivity of the LUX-ZEPLIN experiment to the <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mn>0</mml:mn><mml:mi>Î½</mml:mi><mml:mi>Î²</mml:mi></mml:mrow></mml:math> decay 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>136</mml:mn></mml:mmultiscripts></mml:math>. Physical Review C, 2020, 102, .	2.9	23
30	Data acquisition and readout system for the LUX dark matter experiment. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2012, 668, 1-8.	1.6	22
31	3D modeling of electric fields in the LUX detector. Journal of Instrumentation, 2017, 12, P11022-P11022.	1.2	21
32	First results on light readout from the 1-ton ArDM liquid argon detector for dark matter searches. Journal of Instrumentation, 2010, 5, P11003-P11003.	1.2	20
33	Chromatographic separation of radioactive noble gases from xenon. Astroparticle Physics, 2018, 97, 80-87.	4.3	20
34	Liquid xenon scintillation measurements and pulse shape discrimination in the LUX dark matter detector. Physical Review D, 2018, 97, .	4.7	19
35	Extending light WIMP searches to single scintillation photons in LUX. Physical Review D, 2020, 101, .	4.7	18
36	FPGA-based trigger system for the LUX dark matter experiment. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2016, 818, 57-67.	1.6	12

#	Article	IF	Citations
37	Measurement of the gamma ray background in the Davis cavern at the Sanford Underground Research Facility. Astroparticle Physics, 2020, 116, 102391.	4.3	12
38	Improved measurements of the Î² -decay response of liquid xenon with the LUX detector. Physical Review D, 2019, 100, .	4.7	11
39	Radon-related Backgrounds in the LUX Dark Matter Search. Physics Procedia, 2015, 61, 658-665.	1.2	9
40	First direct detection constraint on mirror dark matter kinetic mixing using LUX 2013 data. Physical Review D, 2020, 101, .	4.7	9
41	Results from the LUX dark matter experiment. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2015, 784, 504-507.	1.6	8
42	Projected sensitivity of the LUX-ZEPLIN experiment to the two-neutrino and neutrinoless double <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>Î²</mml:mi></mml:math> decays 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>134</mml:mn></mml:mmultiscripts></mml:math>. Physical Review C, 2021, 104, .	2.9	5
43	Direct WIMP identification: physics performance of a segmented noble liquid target immersed in a Gd-doped water veto. Journal of Cosmology and Astroparticle Physics, 2008, 2008, 019.	5.4	4
44	LUX Cryogenics and Circulation. Physics Procedia, 2012, 37, 1122-1130.	1.2	3
45	First Results of the LUX Dark Matter Experiment. Nuclear and Particle Physics Proceedings, 2016, 273-275, 309-313.	0.5	3
46	LUX trigger efficiency. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2018, 908, 401-410.	1.6	2
47	Search for two neutrino double electron capture of 124 Xe and 126 Xe in the full exposure of the LUX detector. Journal of Physics G: Nuclear and Particle Physics, 2020, 47, 105105.	3.6	1
48	Cryogenic Large Liquid Xenon Detector for Dark Matter Searches. Journal of Physics: Conference Series, 2012, 400, 052021.	0.4	0
49	The LUX Experiment. Physics Procedia, 2015, 61, 74-76.	1.2	0