Ben Loer

List of Publications by Year in descending order

94 papers	6,717 citations	81900 39 h-index	58581 82 g-index
97 all docs	97 docs citations	97 times ranked	6719 citing authors

#	Article	IF	Citations
1	Precision Measurement of the<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mmultiscripts><mml:mi>Be</mml:mi><mml:mprescripts /><mml:none /><mml:mn>7</mml:mn></mml:mmultiscripts></mml:math>Solar Neutrino Interaction Rate in Borexino. Physical Review Letters, 2011, 107, 141302.	7.8	441
2	Search for Low-Mass Weakly Interacting Massive Particles with SuperCDMS. Physical Review Letters, 2014, 112, 241302.	7.8	440
3	Silicon Detector Dark Matter Results from the Final Exposure of CDMS II. Physical Review Letters, 2013, 111, 251301.	7.8	410
4	Direct Measurement of the<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mmultiscripts><mml:mi>Be</mml:mi><mml:mprescripts /><mml:none /><mml:mn>7</mml:mn></mml:mmultiscripts></mml:math>Solar Neutrino Flux with 192 Days of Borexino Data. Physical Review Letters, 2008, 101, 091302.	7.8	344
5	The Borexino detector at the Laboratori Nazionali del Gran Sasso. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2009, 600, 568-593.	1.6	292
6	New Results from the Search for Low-Mass Weakly Interacting Massive Particles with the CDMS Low Ionization Threshold Experiment. Physical Review Letters, 2016, 116, 071301.	7.8	275
7	Low-Mass Dark Matter Search with the DarkSide-50 Experiment. Physical Review Letters, 2018, 121, 081307.	7.8	259
8	DarkSide-20k: A 20 tonne two-phase LAr TPC for direct dark matter detection at LNGS. European Physical Journal Plus, 2018, 133, 1.	2.6	247
9	Search for Low-Mass Weakly Interacting Massive Particles Using Voltage-Assisted Calorimetric Ionization Detection in the SuperCDMS Experiment. Physical Review Letters, 2014, 112, 041302.	7.8	221
10	Measurement of the solar<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mmultiscripts><mml:mi mathvariant="normal">B</mml:mi><mml:mprescripts /><mml:none /><mml:mn>8</mml:mn></mml:mmultiscripts></mml:math>neutrino rate with a liquid scintillator target and 3ÂMeV energy threshold in the Borexino detector. Physical Review D, 2010, 82, .	4.7	214
11	First Evidence of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>p</mml:mi><mml:mi>e</mml:mi><mml:mi>p</mml:mi></mml:math>Solar Neutrinos by Direct Detection in Borexino. Physical Review Letters, 2012, 108, 051302.	7.8	213
12	Final results of Borexino Phase-I on low-energy solar neutrino spectroscopy. Physical Review D, 2014, 89, .	4.7	204
13	Projected sensitivity of the SuperCDMS SNOLAB experiment. Physical Review D, 2017, 95, .	4.7	191
14	Observation of geo-neutrinos. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2010, 687, 299-304.	4.1	187
15	First results from the DarkSide-50 dark matter experiment at Laboratori Nazionali del Gran Sasso. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2015, 743, 456-466.	4.1	186
16	First Dark Matter Constraints from a SuperCDMS Single-Charge Sensitive Detector. Physical Review Letters, 2018, 121, 051301.	7.8	183
17	Constraints on Sub-GeV Dark-Matterâ€“Electron Scattering from the DarkSide-50 Experiment. Physical Review Letters, 2018, 121, 111303.	7.8	179
18	Dark matter search results from the complete exposure of the PICO-60 <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow><mml:mi mathvariant="normal">C</mml:mi></mml:mrow><mml:mn>3</mml:mn></mml:msub><mml:mrow><mml:msub><mml:mrow><mml:mi mathvariant="normal">F</mml:mi></mml:mrow><mml:mrow><mml:mn>8</mml:mn></mml:mrow></mml:msub></mml:mrow></mml:mi bubble chamber. Physical Review D, 2019, 100, .	4.7	152

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19	Low-mass dark matter search with CDMSlite. Physical Review D, 2018, 97, .	4.7	142
20	Impact of ionizing radiation on superconducting qubit coherence. Nature, 2020, 584, 551-556.	27.8	118
21	Measurement of geo-neutrinos from 1353 days of Borexino. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2013, 722, 295-300.	4.1	92
22	Results from the Super Cryogenic Dark Matter Search Experiment at Soudan. Physical Review Letters, 2018, 120, 061802.	7.8	92
23	Absence of a dayâ€“night asymmetry in the 7Be solar neutrino rate in Borexino. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2012, 707, 22-26.	4.1	83
24	Constraints on low-mass, relic dark matter candidates from a surface-operated SuperCDMS single-charge sensitive detector. Physical Review D, 2020, 102, .	4.7	83
25	Search for low-mass dark matter with CDMSlite using a profile likelihood fit. Physical Review D, 2019, 99, .	4.7	72
26	The liquid handling systems for the Borexino solar neutrino detector. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2009, 609, 58-78.	1.6	71
27	Muon and cosmogenic neutron detection in Borexino. Journal of Instrumentation, 2011, 6, P05005-P05005.	1.2	68
28	Cosmogenic Backgrounds in Borexino at 3800 m water-equivalent depth. Journal of Cosmology and Astroparticle Physics, 2013, 2013, 049-049.	5.4	63
29	Study of solar and other unknown anti-neutrino fluxes with Borexino at LNGS. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2011, 696, 191-196.	4.1	60
30	Borexino calibrations: hardware, methods, and results. Journal of Instrumentation, 2012, 7, P10018-P10018.	1.2	60
31	Improved WIMP-search reach of the CDMS II germanium data. Physical Review D, 2015, 92, .	4.7	59
32	New experimental limits on the Pauli-forbidden transitions in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mmultiscripts><mml:mi mathvariant="normal">C</mml:mi><mml:mprescripts /><mml:none /><mml:mrow><mml:mn>12</mml:mn></mml:mrow></mml:mmultiscripts></mml:math>nuclei obtained with<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mn>485</mml:mn></mml:mrow></mml:math>days Borexino data.	2.9	56
33	xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>p</mml:mi><mml:mo stretchy="false">(</mml:mo><mml:mi>d</mml:mi><mml:mo>,</mml:mo><mml:mmultiscripts><mml:mi>He</mml:mi><mml:mprescr ph Borexino detector. Physical Review D, 2012, 85, .	4.7	54
34	Light Dark Matter Search with a High-Resolution Athermal Phonon Detector Operated above Ground. Physical Review Letters, 2021, 127, 061801.	7.8	53
35	Demonstration of surface electron rejection with interleaved germanium detectors for dark matter searches. Applied Physics Letters, 2013, 103, .	3.3	51
36	Cosmic-muon flux and annual modulation in Borexino at 3800 m water-equivalent depth. Journal of Cosmology and Astroparticle Physics, 2012, 2012, 015-015.	5.4	47

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37	Discovery of underground argon with low level of radioactive 39Ar and possible applications to WIMP dark matter detectors. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2008, 587, 46-51.	1.6	44
38	Dark matter effective field theory scattering in direct detection experiments. Physical Review D, 2015, 91, .	4.7	40
39	Constraints on dark photons and axionlike particles from the SuperCDMS Soudan experiment. Physical Review D, 2020, 101, .	4.7	40
40	Light yield in DarkSide-10: A prototype two-phase argon TPC for dark matter searches. Astroparticle Physics, 2013, 49, 44-51.	4.3	36
41	DarkSide search for dark matter. Journal of Instrumentation, 2013, 8, C11021-C11021.	1.2	36
42	A method for measuring coherent elastic neutrino-nucleus scattering at a far off-axis high-energy neutrino beam target. Physical Review D, 2014, 89, .	4.7	34
43	Measurement of CNGS muon neutrino speed with Borexino. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2012, 716, 401-405.	4.1	33
44	Simulation of argon response and light detection in the DarkSide-50 dual phase TPC. Journal of Instrumentation, 2017, 12, P10015-P10015.	1.2	31
45	Observation of the dependence on drift field of scintillation from nuclear recoils in liquid argon. Physical Review D, 2013, 88, .	4.7	30
46	New limits on heavy sterile neutrino mixing in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mmultiscripts><mml:mi mathvariant="normal">B</mml:mi><mml:mprescripts /><mml:none /><mml:mn>8</mml:mn></mml:mmultiscripts></mml:math>decay obtained with the Borexino detector. Physical Review D, 2013, 88, .	4.7	29
47	A highly efficient neutron veto for dark matter experiments. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2011, 644, 18-26.	1.6	28
48	A study of the trace 39Ar content in argon from deep underground sources. Astroparticle Physics, 2015, 66, 53-60.	4.3	22
49	The WArP experiment. Journal of Physics: Conference Series, 2010, 203, 012006.	0.4	20
50	First Direct Limits on Lightly Ionizing Particles with Electric Charge Less than e/6. Physical Review Letters, 2015, 114, 111302.	7.8	20
51	Lifetime measurements of 214Po and 212Po with the CTF liquid scintillator detector at LNGS. European Physical Journal A, 2013, 49, 1.	2.5	17
52	Production rate measurement of Tritium and other cosmogenic isotopes in Germanium with CDMSlite. Astroparticle Physics, 2019, 104, 1-12.	4.3	17
53	Cryogenic Characterization of FBK RGB-HD SiPMs. Journal of Instrumentation, 2017, 12, P09030-P09030.	1.2	16
54	Liquid Argon Time Projection Chamber research and development in the United States. Journal of Instrumentation, 2014, 9, T05005-T05005.	1.2	13

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55	Electroluminescence pulse shape and electron diffusion in liquid argon measured in a dual-phase TPC. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2018, 904, 23-34.	1.6	13
56	Reducing potassium contamination for AMS detection of 39Ar with an electron-cyclotron-resonance ion source. Nuclear Instruments & Methods in Physics Research B, 2012, 283, 77-83.	1.4	10
57	DarkSide-50: A WIMP Search with a Two-phase Argon TPC. Physics Procedia, 2015, 61, 124-129.	1.2	10
58	Maximum likelihood analysis of low energy CDMS II germanium data. Physical Review D, 2015, 91, .	4.7	10
59	The electronics, trigger and data acquisition system for the liquid argon time projection chamber of the DarkSide-50 search for dark matter. Journal of Instrumentation, 2017, 12, P12011-P12011.	1.2	10
60	CALISâ€"A CALibration Insertion System for the DarkSide-50 dark matter search experiment. Journal of Instrumentation, 2017, 12, T12004-T12004.	1.2	10
61	Discovery of underground argon with a low level of radioactive³⁹Ar and possible applications to WIMP dark matter detectors. Journal of Physics: Conference Series, 2008, 120, 042015.	0.4	9
62	The WArP Experiment. Journal of Physics: Conference Series, 2011, 308, 012005.	0.4	9
63	Direct Search for Dark Matter with DarkSide. Journal of Physics: Conference Series, 2015, 650, 012006.	0.4	9
64	Radon daughter plate-out measurements at SNOLAB for polyethylene and copper. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2018, 880, 92-97.	1.6	9
65	SuperCDMS status from Soudan and plans for SNOLab. , 2013, , .		8
66	Data-driven modeling of electron recoil nucleation in PICO <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow><mml:mi mathvariant="normal">C</mml:mi></mml:mrow><mml:mn>3</mml:mn></mml:msub><mml:msub><mml:mi mathvariant="normal">F</mml:mi><mml:mn>8</mml:mn></mml:msub></mml:math> bubble chambers. Physical Review D, 2019, 100, .	4.7	8
67	The DarkSide Experiment: Present Status and Future. Journal of Physics: Conference Series, 2017, 798, 012109.	0.4	7
68	Sensor-Assisted Fault Mitigation in Quantum Computation. Physical Review Applied, 2021, 16, .	3.8	6
69	Depleted Argon from Underground Sources. Physics Procedia, 2012, 37, 1105-1112.	1.2	5
70	Effect of low electric fields on alpha scintillation light yield in liquid argon. Journal of Instrumentation, 2017, 12, P01021-P01021.	1.2	5
71	Ionization yield measurement in a germanium CDMSlite detector using photo-neutron sources. Physical Review D, 2022, 105, .	4.7	5
72	Energy loss due to defect formation from 206Pb recoils in SuperCDMS germanium detectors. Applied Physics Letters, 2018, 113, .	3.3	4

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73	Constraints on Lightly Ionizing Particles from CDMSlite. Physical Review Letters, 2021, 127, 081802.	7.8	4
74	Depleted Argon from Underground Sources. , 2011, , .		3
75	Recent results and future development of Borexino. Nuclear Physics, Section B, Proceedings Supplements, 2013, 235-236, 55-60.	0.4	3
76	Measurement of the solar 8B neutrino flux down to 2.8 MeV with Borexino. Nuclear Physics, Section B, Proceedings Supplements, 2009, 188, 127-129.	0.4	2
77	Solar neutrino results from Borexino and main future perspectives. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2011, 630, 210-213.	1.6	2
78	Borexino: recent results, detector calibration and future perspectives. Nuclear Physics, Section B, Proceedings Supplements, 2011, 217, 101-106.	0.4	2
79	Prototyping an active neutron veto for SuperCDMS. AIP Conference Proceedings, 2015, , .	0.4	2
80	Investigating the sources of low-energy events in a SuperCDMS-HVeV detector. Physical Review D, 2022, 105, .	4.7	2
81	First evidence ofpepsolar neutrinos by direct detection in Borexino. Journal of Physics: Conference Series, 2012, 375, 042030.	0.4	1
82	Solar neutrino results from Borexino. Nuclear Physics, Section B, Proceedings Supplements, 2013, 237-238, 104-106.	0.4	1
83	Lifetimes of 214Po and 212Po measured with Counting Test Facility at Gran Sasso National Laboratory. Journal of Environmental Radioactivity, 2014, 138, 444-446.	1.7	1
84	Geo-neutrinos from 1353 Days with the Borexino Detector. Physics Procedia, 2015, 61, 340-344.	1.2	1
85	200 days of Borexino data. Nuclear Physics, Section B, Proceedings Supplements, 2009, 188, 90-95.	0.4	0
86	A Highly Efficient Neutron Veto Using Boron-Loaded Liquid Scintillator. , 2011, , .		0
87	Production and suppression of [sup 11]C in the solar neutrino experiment Borexino. , 2011, , .		0
88	Neutrino interactions at few MeV: results from Borexino at Gran Sasso. Nuclear Physics, Section B, Proceedings Supplements, 2011, 212-213, 121-127.	0.4	0
89	High precision 7Be solar neutrinos measurement and day night effect obtained with Borexino. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2012, 692, 258-261.	1.6	0
90	Neutrinos from the sun and from radioactive sources. Nuclear Physics, Section B, Proceedings Supplements, 2013, 237-238, 77-81.	0.4	0

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91	STUDY OF THE RARE PROCESSES WITH THE BOREXINO DETECTOR. , 2013, , 177-180.		0
92	Low energy neutrinos. International Journal of Modern Physics Conference Series, 2014, 31, 1460285.	0.7	0
93	The DarkSide direct dark matter search with liquid argon. AIP Conference Proceedings, 2017, , .	0.4	0
94	Decision trees for optimizing the minimum detectable concentration of radioxenon detectors. Journal of Environmental Radioactivity, 2021, 229-230, 106542.	1.7	0