John L Orrell

List of Publications by Year
in descending order

83 papers	10,162 citations	136950 32 h-index	62596 80 g-index
85 all docs	85 docs citations	85 times ranked	6388 citing authors

#	Article	IF	Citations
1	nEXO: neutrinoless double beta decay search beyond 10²⁸ year half-life sensitivity. Journal of Physics G: Nuclear and Particle Physics, 2022, 49, 015104.	3.6	51
2	Antineutrino Detectors Remain Impractical for Nuclear Explosion Monitoring. Pure and Applied Geophysics, 2021, 178, 2753-2763.	1.9	2
3	Decision trees for optimizing the minimum detectable concentration of radioxenon detectors. Journal of Environmental Radioactivity, 2021, 229-230, 106542.	1.7	0
4	Constraints on Lightly Ionizing Particles from CDMSlite. Physical Review Letters, 2021, 127, 081802.	7.8	4
5	Sensor-Assisted Fault Mitigation in Quantum Computation. Physical Review Applied, 2021, 16, .	3.8	6
6	Effect of interfacial structures on phonon transport across atomically precise Si/Al heterojunctions. Physical Review Materials, 2021, 5, .	2.4	1
7	Light Dark Matter Search with a High-Resolution Athermal Phonon Detector Operated above Ground. Physical Review Letters, 2021, 127, 061801.	7.8	53
8	Characterization of a low background proportional counter for a high throughput Argon-37 collection and measurement system. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2020, 954, 161794.	1.6	4
9	Evaluation and mitigation of trace 210Pb contamination on copper surfaces. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2020, 967, 163870.	1.6	11
10	Constraints on dark photons and axionlike particles from the SuperCDMS Soudan experiment. Physical Review D, 2020, 101, .	4.7	40
11	Measurements of electron transport in liquid and gas Xenon using a laser-driven photocathode. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2020, 972, 163965.	1.6	5
12	Impact of ionizing radiation on superconducting qubit coherence. Nature, 2020, 584, 551-556.	27.8	118
13	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
14	Reflectivity and PDE of VUV4 Hamamatsu SiPMs in liquid xenon. Journal of Instrumentation, 2020, 15, P01019-P01019.	1.2	9
15	Reflectance of Silicon Photomultipliers at Vacuum Ultraviolet Wavelengths. IEEE Transactions on Nuclear Science, 2020, 67, 2501-2510.	2.0	8
16	Characterization of the Hamamatsu VUV4 MPPCs for nEXO. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2019, 940, 371-379.	1.6	28
17	Simulation of charge readout with segmented tiles in nEXO. Journal of Instrumentation, 2019, 14, P09020-P09020.	1.2	8
18	Search for low-mass dark matter with CDMSlite using a profile likelihood fit. Physical Review D, 2019, 99, .	4.7	72

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19	Imaging individual barium atoms in solid xenon for barium tagging in nEXO. Nature, 2019, 569, 203-207.	27.8	26
20	Production rate measurement of Tritium and other cosmogenic isotopes in Germanium with CDMSlite. Astroparticle Physics, 2019, 104, 1-12.	4.3	17
21	Results from the Super Cryogenic Dark Matter Search Experiment at Soudan. Physical Review Letters, 2018, 120, 061802.	7.8	92
22	Low-mass dark matter search with CDMSlite. Physical Review D, 2018, 97, .	4.7	142
23	Search for Neutrinoless Double-<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>Î²</mml:mi></mml:math> Decay in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mmultiscripts><mml:mrow><mml:mi>Ge</mml:mi></mml:mrow><mml:mprescripts /><mml:none /><mml:mrow><mml:mn>76</mml:mn></mml:mrow></mml:mmultiscripts></mml:mrow></mml:math> with the Majorana Demonstrator. Physical Review Letters, 2018, 120, 132502.	7.8	162
24	Naturally occurring 32Si and low-background silicon dark matter detectors. Astroparticle Physics, 2018, 99, 9-20.	4.3	7
25	Characterization of an Ionization Readout Tile for nEXO. Journal of Instrumentation, 2018, 13, P01006-P01006.	1.2	14
26	VUV-Sensitive Silicon Photomultipliers for Xenon Scintillation Light Detection in nEXO. IEEE Transactions on Nuclear Science, 2018, 65, 2823-2833.	2.0	29
27	Study of silicon photomultiplier performance in external electric fields. Journal of Instrumentation, 2018, 13, T09006-T09006.	1.2	5
28	Energy loss due to defect formation from 206Pb recoils in SuperCDMS germanium detectors. Applied Physics Letters, 2018, 113, .	3.3	4
29	First Dark Matter Constraints from a SuperCDMS Single-Charge Sensitive Detector. Physical Review Letters, 2018, 121, 051301.	7.8	183
30	Sensitivity and discovery potential of the proposed nEXO experiment to neutrinoless double-<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>Î²</mml:mi></mml:math> decay. Physical Review C, 2018, 97, .	2.9	115
31	Recent Bremsstrahlung-based assays of 210 Pb in lead and comments on current availability of low-background lead in North America. Applied Radiation and Isotopes, 2017, 126, 185-187.	1.5	4
32	Muon flux measurements at the davis campus of the sanford underground research facility with the majorana demonstrator veto system. Astroparticle Physics, 2017, 93, 70-75.	4.3	21
33	Background characterization of an ultra-low background liquid scintillation counter. Applied Radiation and Isotopes, 2017, 126, 168-170.	1.5	8
34	Observation of coherent elastic neutrino-nucleus scattering. Science, 2017, 357, 1123-1126.	12.6	500
35	The Majorana Demonstrator calibration system. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2017, 872, 16-22.	1.6	19
36	Projected sensitivity of the SuperCDMS SNOLAB experiment. Physical Review D, 2017, 95, .	4.7	191

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37	A Low-Noise Germanium Ionization Spectrometer for Low-Background Science. IEEE Transactions on Nuclear Science, 2016, 63, 2782-2792.	2.0	4
38	The Majorana Demonstrator radioassay program. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2016, 828, 22-36.	1.6	86
39	High voltage testing for the Majorana Demonstrator. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2016, 823, 83-90.	1.6	7
40	Development of a low-level 37Ar calibration standard. Applied Radiation and Isotopes, 2016, 109, 430-434.	1.5	8
41	Search for Pauli exclusion principle violating atomic transitions and electron decay with a p-type point contact germanium detector. European Physical Journal C, 2016, 76, 1.	3.9	14
42	Assay methods for 238U, 232Th, and 210Pb in lead and calibration of 210Bi bremsstrahlung emission from lead. Journal of Radioanalytical and Nuclear Chemistry, 2016, 309, 1271-1281.	1.5	12
43	Shielding concepts for low-background proportional counter arrays in surface laboratories. Applied Radiation and Isotopes, 2016, 108, 92-99.	1.5	8
44	Liquid scintillation counting of environmental radionuclides: a review of the impact of background reduction. Journal of Radioanalytical and Nuclear Chemistry, 2016, 307, 2495-2504.	1.5	12
45	Status of the Majorana Demonstrator. AIP Conference Proceedings, 2015, , .	0.4	2
46	Low background signal readout electronics for the MAJORANA DEMONSTRATOR. AIP Conference Proceedings, 2015, , .	0.4	1
47	Analysis techniques for background rejection at the MAJORANA DEMONSTRATOR. AIP Conference Proceedings, 2015, , .	0.4	0
48	The Majorana Demonstrator: A Search for Neutrinoless Double-beta Decay of76Ge. Journal of Physics: Conference Series, 2015, 606, 012004.	0.4	7
49	Low Background Signal Readout Electronics for the Majorana Demonstrator. Journal of Physics: Conference Series, 2015, 606, 012009.	0.4	5
50	The DarkSide Multiton Detector for the Direct Dark Matter Search. Advances in High Energy Physics, 2015, 2015, 1-8.	1.1	21
51	Status of the MAJORANA DEMONSTRATOR: A search for neutrinoless double-beta decay. International Journal of Modern Physics A, 2015, 30, 1530032.	1.5	0
52	The Majorana Parts Tracking Database. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2015, 779, 52-62.	1.6	13
53	Method of fission product beta spectra measurements for predicting reactor anti-neutrino emission. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2015, 776, 75-82.	1.6	1
54	Optical design considerations for efficient light collection from liquid scintillation counters. Applied Optics, 2015, 54, 2413.	1.8	5

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55	Development of a low background liquid scintillation counter for a shallow underground laboratory. Applied Radiation and Isotopes, 2015, 105, 209-218.	1.5	12
56	The MAJORANA DEMONSTRATOR Neutrinoless Double-Beta Decay Experiment. Advances in High Energy Physics, 2014, 2014, 1-18.	1.1	158
57	The Majorana Demonstrator: Progress towards showing the feasibility of a tonneâ€“scale⁷⁶Ge neutrinoless doubleâ€“beta decay experiment. Journal of Physics: Conference Series, 2014, 485, 012042.	0.4	1
58	CoGeNT: A search for low-mass dark matter using<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>p</mml:mi></mml:math>-type point contact germanium detectors. Physical Review D, 2013, 88, .	4.7	299
59	The /spl mu/-Witness Detector: A Ruggedized, Portable, Flux Meter for Cosmogenic Activation Monitoring. IEEE Transactions on Nuclear Science, 2013, 60, 689-692.	2.0	6
60	Cryostat for Ultra-Low-Energy Threshold Germanium Spectrometers. IEEE Transactions on Nuclear Science, 2013, 60, 1168-1174.	2.0	2
61	Characteristics of signals originating near the lithium-diffused N+ contact of high purity germanium p-type point contact detectors. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2013, 701, 176-185.	1.6	46
62	The C-4 dark matter experiment. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2013, 712, 27-33.	1.6	10
63	Dark matter sensitivities of the Majorana Demonstrator. Journal of Physics: Conference Series, 2012, 375, 012014.	0.4	6
64	The MAJORANA experiment: an ultra-low background search for neutrinoless double-beta decay. Journal of Physics: Conference Series, 2012, 381, 012044.	0.4	14
65	Production of 37Ar in The University of Texas TRIGA reactor facility. Journal of Radioanalytical and Nuclear Chemistry, 2012, 291, 257-260.	1.5	12
66	Search for an Annual Modulation in a<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>p</mml:mi></mml:math>-Type Point Contact Germanium Dark Matter Detector. Physical Review Letters, 2011, 107, 141301.	7.8	428
67	Astroparticle physics with a customized low-background broad energy Germanium detector. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2011, 652, 692-695.	1.6	12
68	Measurement of 37Ar to support technology for On-Site Inspection under the Comprehensive Nuclear-Test-BanTreaty. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2011, 652, 58-61.	1.6	34
69	Results from a Search for Light-Mass Dark Matter with a<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>p</mml:mi></mml:math>-Type Point Contact Germanium Detector. Physical Review Letters, 2011, 106, 131301.	7.8	657
70	The MAJORANA Project. Journal of Physics: Conference Series, 2010, 203, 012057.	0.4	9
71	Real-time digital signal-processor implementation of self-calibrating pulse-shape discriminator for high-purity germanium. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2008, 586, 276-285.	1.6	2
72	Experimental Constraints on a Dark Matter Origin for the DAMA Annual Modulation Effect. Physical Review Letters, 2008, 101, 251301.	7.8	129

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73	Determination of theÎ½eand totalB8solar neutrino fluxes using the Sudbury Neutrino Observatory Phase I data set. Physical Review C, 2007, 75, .	2.9	112
74	Operation of a high-purity germanium crystal in liquid argon as a Compton-suppressed radiation spectrometer. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2007, 579, 91-93.	1.6	4
75	The proposed Majorana 76Ge double-beta decay experiment. Nuclear Physics, Section B, Proceedings Supplements, 2005, 138, 217-220.	0.4	48
76	Search for periodicities in theB8solar neutrino flux measured by the Sudbury Neutrino Observatory. Physical Review D, 2005, 72, .	4.7	54
77	Electron energy spectra, fluxes, and day-night asymmetries of8B solar neutrinos from measurements with NaCl dissolved in the heavy-water detector at the Sudbury Neutrino Observatory. Physical Review C, 2005, 72, .	2.9	459
78	Constraints on Nucleon Decay via Invisible Modes from the Sudbury Neutrino Observatory. Physical Review Letters, 2004, 92, 102004.	7.8	40
79	Electron antineutrino search at the Sudbury Neutrino Observatory. Physical Review D, 2004, 70, .	4.7	33
80	Measurement of the Total ActiveB8Solar Neutrino Flux at the Sudbury Neutrino Observatory with Enhanced Neutral Current Sensitivity. Physical Review Letters, 2004, 92, 181301.	7.8	654
81	Measurement of Day and Night Neutrino Energy Spectra at SNO and Constraints on Neutrino Mixing Parameters. Physical Review Letters, 2002, 89, 011302.	7.8	812
82	Direct Evidence for Neutrino Flavor Transformation from Neutral-Current Interactions in the Sudbury Neutrino Observatory. Physical Review Letters, 2002, 89, 011301.	7.8	2,236
83	Measurement of the Rate ofÎ½e+dâ†'p+p+eâ^'Interactions Produced byB8Solar Neutrinos at the Sudbury Neutrino Observatory. Physical Review Letters, 2001, 87, 071301.	7.8	1,593