

John L Orrell

List of Publications by Year in descending order

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83
papers

10,162
citations

136740

32
h-index

62479

80
g-index

85
all docs

85
docs citations

85
times ranked

6388
citing authors

#	ARTICLE	IF	CITATIONS
1	Direct Evidence for Neutrino Flavor Transformation from Neutral-Current Interactions in the Sudbury Neutrino Observatory. Physical Review Letters, 2002, 89, 011301.	2.9	2,236
2	Measurement of the Rate of $\bar{\nu}_e + p \rightarrow e^+ + n$ Interactions Produced by 8B Solar Neutrinos at the Sudbury Neutrino Observatory. Physical Review Letters, 2001, 87, 071301.	2.9	1,593
3	Measurement of Day and Night Neutrino Energy Spectra at SNO and Constraints on Neutrino Mixing Parameters. Physical Review Letters, 2002, 89, 011302.	2.9	812
4	Results from a Search for Light-Mass Dark Matter with a p -Type Point Contact Germanium Detector. Physical Review Letters, 2011, 106, 131301.	2.9	657
5	Measurement of the Total Active 8B Solar Neutrino Flux at the Sudbury Neutrino Observatory with Enhanced Neutral Current Sensitivity. Physical Review Letters, 2004, 92, 181301.	2.9	654
6	Observation of coherent elastic neutrino-nucleus scattering. Science, 2017, 357, 1123-1126.	6.0	500
7	Electron energy spectra, fluxes, and day-night asymmetries of 8B solar neutrinos from measurements with NaCl dissolved in the heavy-water detector at the Sudbury Neutrino Observatory. Physical Review C, 2005, 72, .	1.1	459
8	Search for an Annual Modulation in a p -Type Point Contact Germanium Dark Matter Detector. Physical Review Letters, 2011, 107, 141301.	2.9	428
9	CoGeNT: A search for low-mass dark matter using p -type point contact germanium detectors. Physical Review D, 2013, 88, .	1.6	299
10	Projected sensitivity of the SuperCDMS SNOLAB experiment. Physical Review D, 2017, 95, .	1.6	191
11	First Dark Matter Constraints from a SuperCDMS Single-Charge Sensitive Detector. Physical Review Letters, 2018, 121, 051301.	2.9	183
12	Search for Neutrinoless Double- β Decay in ^{76}Ge . Physical Review Letters, 2013, 111, 111301.	2.9	162
13	The MAJORANA DEMONSTRATOR Neutrinoless Double-Beta Decay Experiment. Advances in High Energy Physics, 2014, 2014, 1-18.	0.5	158
14	Low-mass dark matter search with CDMSlite. Physical Review D, 2018, 97, .	1.6	142
15	Experimental Constraints on a Dark Matter Origin for the DAMA Annual Modulation Effect. Physical Review Letters, 2008, 101, 251301.	2.9	129
16	Impact of ionizing radiation on superconducting qubit coherence. Nature, 2020, 584, 551-556.	18.7	118
17	Sensitivity and discovery potential of the proposed nEXO experiment to neutrinoless double- β decay. Physical Review C, 2018, 97, .	1.1	115
18	Determination of the 8B and total 8B solar neutrino fluxes using the Sudbury Neutrino Observatory Phase I data set. Physical Review C, 2007, 75, .	1.1	112

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19	Results from the Super Cryogenic Dark Matter Search Experiment at Soudan. Physical Review Letters, 2018, 120, 061802.	2.9	92
20	The Majorana Demonstrator radioassay program. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2016, 828, 22-36.	0.7	86
21	Constraints on low-mass, relic dark matter candidates from a surface-operated SuperCDMS single-charge sensitive detector. Physical Review D, 2020, 102, .	1.6	83
22	Search for low-mass dark matter with CDMSlite using a profile likelihood fit. Physical Review D, 2019, 99, .	1.6	72
23	Search for periodicities in the B8solar neutrino flux measured by the Sudbury Neutrino Observatory. Physical Review D, 2005, 72, .	1.6	54
24	Light Dark Matter Search with a High-Resolution Athermal Phonon Detector Operated above Ground. Physical Review Letters, 2021, 127, 061801.	2.9	53
25	nEXO: neutrinoless double beta decay search beyond 10^{28} year half-life sensitivity. Journal of Physics G: Nuclear and Particle Physics, 2022, 49, 015104.	1.4	51
26	The proposed Majorana ^{76}Ge double-beta decay experiment. Nuclear Physics, Section B, Proceedings Supplements, 2005, 138, 217-220.	0.5	48
27	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.	0.7	46
28	Constraints on Nucleon Decay via Invisible Modes from the Sudbury Neutrino Observatory. Physical Review Letters, 2004, 92, 102004.	2.9	40
29	Constraints on dark photons and axionlike particles from the SuperCDMS Soudan experiment. Physical Review D, 2020, 101, .	1.6	40
30	Measurement of ^{37}Ar 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.	0.7	34
31	Electron antineutrino search at the Sudbury Neutrino Observatory. Physical Review D, 2004, 70, .	1.6	33
32	VUV-Sensitive Silicon Photomultipliers for Xenon Scintillation Light Detection in nEXO. IEEE Transactions on Nuclear Science, 2018, 65, 2823-2833.	1.2	29
33	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.	0.7	28
34	Imaging individual barium atoms in solid xenon for barium tagging in nEXO. Nature, 2019, 569, 203-207.	18.7	26
35	The DarkSide Multiton Detector for the Direct Dark Matter Search. Advances in High Energy Physics, 2015, 2015, 1-8.	0.5	21
36	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.	1.9	21

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37	The Majorana Demonstrator calibration system. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2017, 872, 16-22.	0.7	19
38	Production rate measurement of Tritium and other cosmogenic isotopes in Germanium with CDMSlite. Astroparticle Physics, 2019, 104, 1-12.	1.9	17
39	The MAJORANA experiment: an ultra-low background search for neutrinoless double-beta decay. Journal of Physics: Conference Series, 2012, 381, 012044.	0.3	14
40	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.	1.4	14
41	Characterization of an Ionization Readout Tile for nEXO. Journal of Instrumentation, 2018, 13, P01006-P01006.	0.5	14
42	The Majorana Parts Tracking Database. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2015, 779, 52-62.	0.7	13
43	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.	0.7	12
44	Production of ^{37}Ar in The University of Texas TRIGA reactor facility. Journal of Radioanalytical and Nuclear Chemistry, 2012, 291, 257-260.	0.7	12
45	Development of a low background liquid scintillation counter for a shallow underground laboratory. Applied Radiation and Isotopes, 2015, 105, 209-218.	0.7	12
46	Assay methods for ^{238}U , ^{232}Th , and ^{210}Pb in lead and calibration of ^{210}Bi bremsstrahlung emission from lead. Journal of Radioanalytical and Nuclear Chemistry, 2016, 309, 1271-1281.	0.7	12
47	Liquid scintillation counting of environmental radionuclides: a review of the impact of background reduction. Journal of Radioanalytical and Nuclear Chemistry, 2016, 307, 2495-2504.	0.7	12
48	Evaluation and mitigation of trace ^{210}Pb contamination on copper surfaces. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2020, 967, 163870.	0.7	11
49	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.	0.7	10
50	The MAJORANA Project. Journal of Physics: Conference Series, 2010, 203, 012057.	0.3	9
51	Reflectivity and PDE of VUV4 Hamamatsu SiPMs in liquid xenon. Journal of Instrumentation, 2020, 15, P01019-P01019.	0.5	9
52	Development of a low-level ^{37}Ar calibration standard. Applied Radiation and Isotopes, 2016, 109, 430-434.	0.7	8
53	Shielding concepts for low-background proportional counter arrays in surface laboratories. Applied Radiation and Isotopes, 2016, 108, 92-99.	0.7	8
54	Background characterization of an ultra-low background liquid scintillation counter. Applied Radiation and Isotopes, 2017, 126, 168-170.	0.7	8

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55	Simulation of charge readout with segmented tiles in nEXO. Journal of Instrumentation, 2019, 14, P09020-P09020.	0.5	8
56	Reflectance of Silicon Photomultipliers at Vacuum Ultraviolet Wavelengths. IEEE Transactions on Nuclear Science, 2020, 67, 2501-2510.	1.2	8
57	The Majorana Demonstrator: A Search for Neutrinoless Double-beta Decay of ^{76}Ge . Journal of Physics: Conference Series, 2015, 606, 012004.	0.3	7
58	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.	0.7	7
59	Naturally occurring ^{32}Si and low-background silicon dark matter detectors. Astroparticle Physics, 2018, 99, 9-20.	1.9	7
60	Dark matter sensitivities of the Majorana Demonstrator. Journal of Physics: Conference Series, 2012, 375, 012014.	0.3	6
61	The $^{\mu}$ -Witness Detector: A Ruggedized, Portable, Flux Meter for Cosmogenic Activation Monitoring. IEEE Transactions on Nuclear Science, 2013, 60, 689-692.	1.2	6
62	Sensor-Assisted Fault Mitigation in Quantum Computation. Physical Review Applied, 2021, 16, .	1.5	6
63	Low Background Signal Readout Electronics for the Majorana Demonstrator. Journal of Physics: Conference Series, 2015, 606, 012009.	0.3	5
64	Optical design considerations for efficient light collection from liquid scintillation counters. Applied Optics, 2015, 54, 2413.	0.9	5
65	Study of silicon photomultiplier performance in external electric fields. Journal of Instrumentation, 2018, 13, T09006-T09006.	0.5	5
66	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.	0.7	5
67	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.	0.7	4
68	A Low-Noise Germanium Ionization Spectrometer for Low-Background Science. IEEE Transactions on Nuclear Science, 2016, 63, 2782-2792.	1.2	4
69	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.	0.7	4
70	Energy loss due to defect formation from ^{206}Pb recoils in SuperCDMS germanium detectors. Applied Physics Letters, 2018, 113, .	1.5	4
71	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.	0.7	4
72	Constraints on Lightly Ionizing Particles from CDMSlite. Physical Review Letters, 2021, 127, 081802.	2.9	4

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73	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.	0.7	2
74	Cryostat for Ultra-Low-Energy Threshold Germanium Spectrometers. IEEE Transactions on Nuclear Science, 2013, 60, 1168-1174.	1.2	2
75	Status of the Majorana Demonstrator. AIP Conference Proceedings, 2015, , .	0.3	2
76	Antineutrino Detectors Remain Impractical for Nuclear Explosion Monitoring. Pure and Applied Geophysics, 2021, 178, 2753-2763.	0.8	2
77	The Majorana Demonstrator: Progress towards showing the feasibility of a tonne-scale ^{76}Ge neutrinoless double- β decay experiment. Journal of Physics: Conference Series, 2014, 485, 012042.	0.3	1
78	Low background signal readout electronics for the MAJORANA DEMONSTRATOR. AIP Conference Proceedings, 2015, , .	0.3	1
79	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.	0.7	1
80	Effect of interfacial structures on phonon transport across atomically precise Si/Al heterojunctions. Physical Review Materials, 2021, 5, .	0.9	1
81	Analysis techniques for background rejection at the MAJORANA DEMONSTRATOR. AIP Conference Proceedings, 2015, , .	0.3	0
82	Status of the MAJORANA DEMONSTRATOR: A search for neutrinoless double-beta decay. International Journal of Modern Physics A, 2015, 30, 1530032.	0.5	0
83	Decision trees for optimizing the minimum detectable concentration of radioxenon detectors. Journal of Environmental Radioactivity, 2021, 229-230, 106542.	0.9	0