Alexander Saunders

List of Publications by Year
in descending order

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40	1,082	394421	395702
papers	citations	19 h-index	33 g-index

41	41	41	533
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Measurement of the neutron lifetime using a magneto-gravitational trap and in situ detection. Science, 2018, 360, 627-632.	12.6	117
2	Demonstration of a solid deuterium source of ultra-cold neutrons. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2004, 593, 55-60.	4.1	94
3	Improved Neutron Lifetime Measurement with <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>UCN</mml:mi><mml:mi>Ï„</mml:mi></mml:mrow></mml:math>. Physical Review Letters, 2021, 127, 162501.	7.8	67
4	Performance of the Los Alamos National Laboratory spallation-driven solid-deuterium ultra-cold neutron source. Review of Scientific Instruments, 2013, 84, 013304.	1.3	61
5	Measurements of Ultracold-Neutron Lifetimes in Solid Deuterium. Physical Review Letters, 2002, 89, 272501.	7.8	60
6	Determination of the Axial-Vector Weak Coupling Constant with Ultracold Neutrons. Physical Review Letters, 2010, 105, 181803.	7.8	52
7	Charged particle radiography. Reports on Progress in Physics, 2013, 76, 046301.	20.1	49
8	Performance of the upgraded ultracold neutron source at Los Alamos National Laboratory and its implication for a possible neutron electric dipole moment experiment. Physical Review C, 2018, 97, .	2.9	49
9	Search for the Neutron Decay <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>n</mml:mi><mml:mo>â†’</mml:mo><mml:mi>X</mml:mi><mml:mo>+</mml:mo><mml:mi> , Where <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>X</mml:mi></mml:mrow></mml:math> is a Dark Matter Particle.	7.8	47
10	Measurement of the neutron<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>Î²</mml:mi></mml:math>-asymmetry parameter<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>A</mml:mi><mml:mn>0</mml:mn></mml:msub></mml:math>with ultracold neutrons. Physical Review C, 2012, 86, .	2.9	43
11	Proton radiography and accurate density measurements: A window into shock wave processes. Physical Review B, 2008, 77, .	3.2	38
12	Beta decay measurements with ultracold neutrons: a review of recent measurements and the research program at Los Alamos National Laboratory. Journal of Physics G: Nuclear and Particle Physics, 2014, 41, 114007.	3.6	36
13	First Measurement of the Neutron<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>Î²</mml:mi></mml:math>Asymmetry with Ultracold Neutrons. Physical Review Letters, 2009, 102, 012301.	7.8	31
14	Cold Neutron Energy Dependent Production of Ultracold Neutrons in Solid Deuterium. Physical Review Letters, 2007, 99, 262502.	7.8	30
15	A magneto-gravitational trap for absolute measurement of the ultra-cold neutron lifetime. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2009, 599, 82-92.	1.6	28
16	Search for dark matter decay of the free neutron from the UCNA experiment: nâ†’Ï‡+e+eâ¯. Physical Review C, 2018, 97, .	2.9	28
17	Storage of ultracold neutrons in the magneto-gravitational trap of the<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>UCN</mml:mi><mml:mi>Ï„</mml:mi></mml:math>experiment. Physical Review C, 2014, 89, .	2.9	27
18	A new method for measuring the neutron lifetime using an in situ neutron detector. Review of Scientific Instruments, 2017, 88, 053508.	1.3	21

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19	A multilayer surface detector for ultracold neutrons. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2015, 798, 30-35.	1.6	19
20	Improved limits on Fierz interference using asymmetry measurements from the Ultracold Neutron Asymmetry (UCNA) experiment. Physical Review C, 2020, 101, .	2.9	19
21	Multi-wire proportional chamber for ultra-cold neutron detection. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2009, 599, 248-250.	1.6	18
22	A high-field adiabatic fast passage ultracold neutron spin flipper for the UCNA experiment. Review of Scientific Instruments, 2012, 83, 073505.	1.3	18
23	Solid deuterium surface degradation at ultracold neutron sources. European Physical Journal A, 2018, 54, 1.	2.5	17
24	Performance of the prototype LANL solid deuterium ultra-cold neutron source. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2000, 440, 674-681.	1.6	15
25	First direct constraints on Fierz interference in free-neutron <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>Î²</mml:mi></mml:math> decay. Physical Review C, 2017, 96, .	2.9	15
26	An apparatus to control and monitor the para-D2 concentration in a solid deuterium, superthermal source of ultra-cold neutrons. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2003, 508, 257-267.	1.6	13
27	Inverse-collimated proton radiography for imaging thin materials. Review of Scientific Instruments, 2017, 88, 013709.	1.3	9
28	Evaluation of commercial nickelâ€“phosphorus coating for ultracold neutron guides using a pinhole bottling method. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2017, 872, 64-73.	1.6	9
29	Experimental observations of exploding bridgewire detonator function. Journal of Applied Physics, 2020, 128, .	2.5	8
30	Upscattering of ultracold neutrons from gases. Physical Review C, 2015, 92, .	2.9	7
31	Ultracold-neutron production in a pulsed-neutron beam line. Physical Review C, 2010, 82, .	2.9	6
32	Monte Carlo simulations of trapped ultracold neutrons in the <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>UCN</mml:mi><mml:mi>Ï„</mml:mi></mml:mrow></mm experiment. Physical Review C, 2019, 100, .	2.9	6
33	A next-generation inverse-geometry spallation-driven ultracold neutron source. Journal of Applied Physics, 2019, 126, 224901.	2.5	6
34	Total cross sections for ultracold neutrons scattered from gases. Physical Review C, 2017, 95, .	2.9	4
35	Status of the UCNÏ„ experiment. EPJ Web of Conferences, 2019, 219, 03004.	0.3	4
36	Spallation-driven Ultracold Neutron Sources: Concepts for a Next Generation Source. Physics Procedia, 2014, 51, 93-97.	1.2	3

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37	Dark field proton radiography. Applied Physics Letters, 2020, 117, .	3.3	3
38	Search for neutron dark decay: nâ€‰â†’â€‰+â€‰e⁺e^{â^’}. EPJ Web of Conferences, 2019, 219, 05008.	0.3	2
39	Projection imaging with ultracold neutrons. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2021, 1003, 165306.	1.6	2
40	Ultracold neutron properties of the Eljen-299-02D deuterated scintillator. Review of Scientific Instruments, 2021, 92, 023305.	1.3	1