Nathaniel Bowden

List of Publications by Year
in descending order

70 papers	3,823 citations	331670 21 h-index	138484 58 g-index
71 all docs	71 docs citations	71 times ranked	4004 citing authors

#	Article	IF	Citations
1	Indication of Reactor<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mover accent="true"><mml:mi>Î½</mml:mi><mml:mo>Â¯</mml:mo></mml:mover><mml:mi>e</mml:mi></mml:msub></mml:math>Disappea in the Double Chooz Experiment. Physical Review Letters, 2012, 108, 131801.	7.8	979
2	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
3	Background-Free Observation of Cold Antihydrogen with Field-Ionization Analysis of Its States. Physical Review Letters, 2002, 89, 213401.	7.8	515
4	Reactor<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mover accent="true"><mml:mi>Î½</mml:mi><mml:mo>Â¯</mml:mo></mml:mover><mml:mi>e</mml:mi></mml:msub></mml:math>disappea in the Double Chooz experiment. Physical Review D, 2012, 86, .	4.7	275
5	Driven Production of Cold Antihydrogen and the First Measured Distribution of Antihydrogen States. Physical Review Letters, 2002, 89, 233401.	7.8	191
6	First positron cooling of antiprotons. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2001, 507, 1-6.	4.1	126
7	First Search for Short-Baseline Neutrino Oscillations at HFIR with PROSPECT. Physical Review Letters, 2018, 121, 251802.	7.8	99
8	First measurement of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si1.gif" overflow="scroll"><mml:msub><mml:mrow><mml:mi>Î¸</mml:mi></mml:mrow><mml:mrow><mml:mn>13</mml:mn></mml:mrow></r from delayed neutron capture on hydrogen in the Double Chooz experiment. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2013, 723, 66-70.	4.1	84
9	Experimental results from an antineutrino detector for cooperative monitoring of nuclear reactors. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2007, 572, 985-998.	1.6	66
10	Stacking of cold antiprotons. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2002, 548, 140-145.	4.1	53
11	The PROSPECT physics program. Journal of Physics G: Nuclear and Particle Physics, 2016, 43, 113001.	3.6	53
12	Monitoring the thermal power of nuclear reactors with a prototype cubic meter antineutrino detector. Journal of Applied Physics, 2008, 103, .	2.5	46
13	<i>Colloquium</i> : Neutrino detectors as tools for nuclear security. Reviews of Modern Physics, 2020, 92, .	45.6	42
14	Observation of the isotopic evolution of pressurized water reactor fuel using an antineutrino detector. Journal of Applied Physics, 2009, 105, .	2.5	41
15	First test of Lorentz violation with a reactor-based antineutrino experiment. Physical Review D, 2012, 86, .	4.7	41
16	The PROSPECT reactor antineutrino experiment. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2019, 922, 287-309.	1.6	40
17	Measurement of the Antineutrino Spectrum from <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mmultiscripts><mml:mrow><mml:mi mathvariant="normal">U</mml:mi></mml:mrow><mml:mprescripts /><mml:none /><mml:mrow><mml:mn>235</mml:mn></mml:mrow></mml:mmultiscripts></mml:mrow></mml:math> Fission at HFIR with PROSPECT. Physical Review Letters, 2019, 122, 251801.	7.8	39
18	Observation of neutrons with a Gadolinium doped water Cherenkov detector. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2009, 607, 616-619.	1.6	29

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19	Performance of a segmented ⁶Li-loaded liquid scintillator detector for the PROSPECT experiment. Journal of Instrumentation, 2018, 13, P06023-P06023.	1.2	23
20	Background radiation measurements at high power research reactors. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2016, 806, 401-419.	1.6	22
21	Direct measurement of backgrounds using reactor-off data in Double Chooz. Physical Review D, 2013, 87, .	4.7	21
22	Applying a Template of Expected Uncertainties to Updating 239Pu(n,f) Cross-section Covariances in the Neutron Data Standards Database. Nuclear Data Sheets, 2020, 163, 228-248.	2.2	21
23	Fission fragment angular anisotropy in neutron-induced fission of U235 measured with a time projection chamber. Physical Review C, 2019, 99, .	2.9	20
24	Light collection and pulse-shape discrimination in elongated scintillator cells for the PROSPECT reactor antineutrino experiment. Journal of Instrumentation, 2015, 10, P11004-P11004.	1.2	19
25	Energy of the superallowed Î² decay of38Km. Physical Review C, 1998, 58, 821-825.	2.9	16
26	Directional fast neutron detection using a time projection chamber. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2010, 624, 153-161.	1.6	16
27	Measurement of the normalized <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mmultiscripts><mml:mi mathvariant="normal">U</mml:mi><mml:mprescripts /><mml:none /><mml:mn>238</mml:mn></mml:mmultiscripts><mml:mo>(</mml:mo><mml:mi>n</mml:mi><mml:mo>,</mml:mo><mml:mi>f</mml mathvariant="normal">U</mml:mi><mml:mprescripts /><mml:none		

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37	Directional Neutron Detection Using a Time Projection Chamber. IEEE Transactions on Nuclear Science, 2009, 56, 1218-1223.	2.0	11
38	A note on neutron capture correlation signals, backgrounds, and efficiencies. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2012, 693, 209-214.	1.6	11
39	Comparison of Lithium Gadolinium Borate Crystal Grains in Scintillating and Nonscintillating Plastic Matrices. IEEE Transactions on Nuclear Science, 2013, 60, 1416-1426.	2.0	11
40	A water-based neutron detector as a well multiplicity counter. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2015, 771, 32-38.	1.6	11
41	Neutron-induced fission fragment angular distributions, anisotropy, and linear momentum transfer measured with the NIFFTE fission time projection chamber. Physical Review C, 2020, 102, .	2.9	11
42	Joint Measurement of the <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mmultiscripts><mml:mrow><mml:mi mathvariant="normal">U</mml:mi></mml:mrow><mml:mprescripts /><mml:none /><mml:mrow><mml:mn>235</mml:mn></mml:mrow></mml:mmultiscripts></mml:mrow></mml:math> Antineutrino Spectrum by PROSPECT and STEREO. Physical Review Letters, 2022, 128, 081802.	7.8	11
43	Aperture method to determine the density and geometry ofÂantiparticle plasmas. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2004, 595, 60-67.	4.1	10
44	Performance of a MICROMEGAS-based TPC in a high-energy neutron beam. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2018, 881, 1-8.	1.6	10
45	A low mass optical grid for the PROSPECT reactor antineutrino detector. Journal of Instrumentation, 2019, 14, P04014-P04014.	1.2	10
46	A search for cosmogenic production of Î²-neutron emitting radionuclides in water. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2016, 821, 151-159.	1.6	9
47	Improved fast neutron spectroscopy via detector segmentation. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2009, 609, 32-37.	1.6	6
48	Observations of cold antihydrogen. Nuclear Instruments & Methods in Physics Research B, 2004, 214, 22-30.	1.4	5
49	PROSPECT-II physics opportunities. Journal of Physics G: Nuclear and Particle Physics, 2022, 49, 070501.	3.6	5
50	Reconstruction Algorithms for Directional Neutron Detection Using a Time Projection Chamber. Nuclear Technology, 2012, 180, 231-240.	1.2	4
51	Development of an advanced antineutrino detector for reactor monitoring. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2015, 771, 139-146.	1.6	4
52	Nonfuel antineutrino contributions in the ORNL High Flux Isotope Reactor (HFIR). Physical Review C, 2020, 101, .	2.9	4
53	The radioactive source calibration system of the PROSPECT reactor antineutrino detector. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2019, 944, 162465.	1.6	3
54	Measurement of material isotopics and atom number ratio with <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" id="d1e1323" altimg="si17.svg"><mml:mi>Î±</mml:mi></mml:math>-particle spectroscopy for a NIFFTE fission Time Projection Chamber actinide target. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2022, 1021, 165864.	1.6	3

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55	Pixellated NaI (Tl) Detector for Light Yield Nonproportionality Investigation. IEEE Transactions on Nuclear Science, 2007, 54, 1830-1835.	2.0	2
56	Advances towards readily deployable antineutrino detectors for reactor monitoring and safeguards. , 2009, , .		2
57	Integrated readout of organic scintillator and ZnS:Ag/⁶LiF for segmented antineutrino detectors. , 2010, , .		2
58	Reactor monitoring using antineutrino detectors. Nuclear Physics, Section B, Proceedings Supplements, 2011, 217, 134-136.	0.4	2
59	Measurement of muon-induced high-energy neutrons from rock in an underground Gd-doped water detector. Physical Review C, 2020, 102, .	2.9	2
60	Special Nuclear Material detection with a water Cherenkov based detector. , 2008, , .		1
61	Neutron Time Projection Chamber for Nuclear Security and Verification Applications. , 2011, , .		1
62	ANTINEUTRINOS FOR REACTOR SAFEGUARDS: EFFECT OF FUEL LOADING AND BURNUP ON THE SIGNAL. International Journal of Modern Physics Conference Series, 2014, 27, 1460159.	0.7	1
63	Background radiation studies for future, above ground antineutrino detectors. Journal of Physics: Conference Series, 2008, 136, 042003.	0.4	0
64	The deployment of three prototype detectors for reactor monitoring and safeguards. Journal of Physics: Conference Series, 2008, 136, 042001.	0.4	0
65	Neutron detection with water Cerenkov based detectors. , 2009, , .		0
66	Advances toward a transportable antineutrino detector system for reactor monitoring and safeguards. , 2011, , .		0
67	PROSPECT- A Precision Reactor Oscillation and Spectrum Experiment. Journal of Physics: Conference Series, 2019, 1216, 012010.	0.4	0
68	COLD ANTIHYDROGEN AND CPT. , 2002, , .		0
69	PROSPECT- A Precision Reactor Oscillation and Spectrum Experiment. , 2019, , .		0
70	PROSPECT â€“ A precision reactor oscillation and spectrum experiment. International Journal of Modern Physics Conference Series, 2020, 50, 2060001.	0.7	0