Blas Cabrera

List of Publications by Year
in descending order

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82	3,355	279487 23	143772 57
papers	citations	h-index	g-index

82	82	82	5497
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Search for Low-Mass Weakly Interacting Massive Particles with SuperCDMS. Physical Review Letters, 2014, 112, 241302.	2.9	440
2	Silicon Detector Dark Matter Results from the Final Exposure of CDMS II. Physical Review Letters, 2013, 111, 251301.	2.9	410
3	Detection of single infrared, optical, and ultraviolet photons using superconducting transition edge sensors. Applied Physics Letters, 1998, 73, 735-737.	1.5	310
4	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.	2.9	275
5	Search for Low-Mass Weakly Interacting Massive Particles Using Voltage-Assisted Calorimetric Ionization Detection in the SuperCDMS Experiment. Physical Review Letters, 2014, 112, 041302.	2.9	221
6	Projected sensitivity of the SuperCDMS SNOLAB experiment. Physical Review D, 2017, 95, .	1.6	191
7	First Dark Matter Constraints from a SuperCDMS Single-Charge Sensitive Detector. Physical Review Letters, 2018, 121, 051301.	2.9	183
8	Low-mass dark matter search with CDMSlite. Physical Review D, 2018, 97, .	1.6	142
9	A quasiparticleâ€trapâ€assisted transitionâ€edge sensor for phononâ€mediated particle detection. Review of Scientific Instruments, 1995, 66, 5322-5326.	0.6	119
10	Results from the Super Cryogenic Dark Matter Search Experiment at Soudan. Physical Review Letters, 2018, 120, 061802.	2.9	92
11	Diamond detectors for direct detection of sub-GeV dark matter. Physical Review D, 2019, 99, .	1.6	90
12	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
13	Thermal detection of single e-h pairs in a biased silicon crystal detector. Applied Physics Letters, 2018, 112, .	1.5	53
14	Light Dark Matter Search with a High-Resolution Athermal Phonon Detector Operated above Ground. Physical Review Letters, 2021, 127, 061801.	2.9	53
15	Demonstration of surface electron rejection with interleaved germanium detectors for dark matter searches. Applied Physics Letters, 2013, 103, .	1.5	51
16	The CDMS II Z-sensitive ionization and phonon germanium detector. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2000, 444, 308-311.	0.7	46
17	Constraints on dark photons and axionlike particles from the SuperCDMS Soudan experiment. Physical Review D, 2020, 101, .	1.6	40
18	Introduction to TES Physics. Journal of Low Temperature Physics, 2008, 151, 82-93.	0.6	33

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19	A self-biasing cryogenic particle detector utilizing electrothermal feedback and a SQUID readout. IEEE Transactions on Applied Superconductivity, 1995, 5, 2690-2693.	1.1	30
20	Measurement of Tc suppression in tungsten using magnetic impurities. Journal of Applied Physics, 1999, 86, 6975-6978.	1.1	28
21	Pulse estimation in nonlinear detectors with nonstationary noise. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2004, 520, 555-558.	0.7	27
22	Exclusion limits on the WIMP-nucleon scattering cross-section from the Cryogenic Dark Matter Search. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2000, 444, 345-349.	0.7	26
23	Cryogenic detectors based on superconducting transition-edge sensors for time-energy-resolved single-photon counters and for dark matter searches. Physica B: Condensed Matter, 2000, 280, 509-514.	1.3	25
24	New apparatus for detecting micron-scale deviations from Newtonian gravity. Physical Review D, 2008, 77, .	1.6	23
25	Enhanced ballistic phonon production for surface events in cryogenic silicon detector. Applied Physics Letters, 2000, 76, 2958-2960.	1.5	22
26	Magnetic monopoles: Evidence since the Dirac conjecture. Foundations of Physics, 1983, 13, 195-215.	0.6	20
27	Design and performance of a modular low-radioactivity readout system for cryogenic detectors in the CDMS experiment. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2008, 591, 476-489.	0.7	20
28	First Direct Limits on Lightly Ionizing Particles with Electric Charge Less than e/6. Physical Review Letters, 2015, 114, 111302.	2.9	20
29	SQUID based Wî—¸Al quasiparticle trapping assisted transition edge sensor. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1996, 370, 187-189.	0.7	19
30	Nonlinear optimal filter technique for analyzing energy depositions in TES sensors driven into saturation. AIP Advances, 2014, 4, .	0.6	17
31	Optimal filter analysis of energy-dependent pulse shapes and its application to TES detectors. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2000, 444, 453-456.	0.7	16
32	Design considerations for TES and QET sensors. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2000, 444, 304-307.	0.7	15
33	Design of QET phonon sensors for the CDMS ZIP detectors. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2000, 444, 300-303.	0.7	13
34	Acoustic detection of single particles for neutrino experiments and dark matter searches. IEEE Transactions on Magnetics, 1987, 23, 469-472.	1.2	12
35	Charge collection and trapping in lowâ€temperature silicon detectors. Journal of Applied Physics, 1996, 79, 8179-8186.	1.1	12
36	Transition edge sensors as single photon detectors. IEEE Transactions on Applied Superconductivity, 1999, 9, 4205-4208.	1.1	12

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37	Tc tuning of tungsten transition edge sensors using iron implantation. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2000, 444, 296-299.	0.7	12
38	Quasiparticle propagation in aluminum fins and tungsten TES dynamics in the CDMS ZIP detector. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2006, 559, 405-407.	0.7	11
39	Lowâ€frequency noise reduction in SQUID measurements using a laserâ€driven superconducting switch. Part A: Direct input circuit switching. Review of Scientific Instruments, 1989, 60, 202-208.	0.6	10
40	Development of wide-band, time and energy resolving, optical photon detectors with application to imaging astronomy. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2000, 444, 445-448.	0.7	10
41	Effect of implanted metal impurities on superconducting tungsten films. Journal of Applied Physics, 2002, 91, 6516.	1.1	9
42	TES spectrophotometers for near IR/optical/UV. , 2002, , .		9
43	Lowâ€frequency noise reduction in SQUID measurements using a laserâ€driven superconducting switch. Part B: Modulated inductance switching. Review of Scientific Instruments, 1989, 60, 209-213.	0.6	8
44	Detector Development for the Next Phases ofÂtheÂCryogenic Dark Matter Search: Results fromÂ1ÂInch Ge and Si Detectors. Journal of Low Temperature Physics, 2008, 151, 211-215.	0.6	8
45	Spatial imaging of charge transport in silicon at low temperature. Applied Physics Letters, 2019, 114, .	1.5	8
46	Imaging the oblique propagation of electrons in germanium crystals at low temperature and low electric field. Applied Physics Letters, 2016, 108, .	1.5	6
47	Phonon-mediated particle detection utilizing titanium superconducting transition edge sensors on silicon crystal surfaces. IEEE Transactions on Magnetics, 1991, 27, 2753-2756.	1.2	5
48	Low-Mass WIMP Sensitivity and Statistical Discrimination of Electron and Nuclear Recoils by Varying Luke-Neganov Phonon Gain in Semiconductor Detectors. Journal of Low Temperature Physics, 2012, 167, 1081-1086.	0.6	5
49	Report on the stanford octagonal magnetic monopole detector. IEEE Transactions on Magnetics, 1987, 23, 1134-1137.	1.2	4
50	William Martin Fairbank (1917â€“1989). Nature, 1989, 342, 125-125.	13.7	4
51	Monte Carlo comparisons to a cryogenic dark matter search detector with low transition-edge-sensor transition temperature. Journal of Applied Physics, 2011, 110, .	1.1	4
52	Comparison of CDMS [100] and [111] Oriented Germanium Detectors. Journal of Low Temperature Physics, 2012, 167, 1106-1111.	0.6	4
53	Time Evolution of Electric Fields in CDMS Detectors. Journal of Low Temperature Physics, 2012, 167, 1099-1105.	0.6	4
54	Spatial Imaging of Charge Transport in Germanium at Low Temperature. Journal of Low Temperature Physics, 2014, 176, 943-951.	0.6	4

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55	Energy loss due to defect formation from 206Pb recoils in SuperCDMS germanium detectors. Applied Physics Letters, 2018, 113, .	1.5	4
56	High-field spatial imaging of charge transport in silicon at low temperature. AIP Advances, 2020, 10, .	0.6	4
57	Modeling of Impact Ionization and Charge Trapping in SuperCDMS HVeV Detectors. Journal of Low Temperature Physics, 2020, 199, 598-605.	0.6	4
58	Constraints on Lightly Ionizing Particles from CDMSlite. Physical Review Letters, 2021, 127, 081802.	2.9	4
59	Quasiparticle Diffusion in Al Films Coupled to Tungsten Transition Edge Sensors. Journal of Low Temperature Physics, 2014, 176, 168-175.	0.6	3
60	Reduction of excess lowâ€frequency noise in rfâ€biased SQUIDâ€™s. Review of Scientific Instruments, 1985, 56, 1835-1837.	0.6	2
61	Development of 100 g Si and 250 g Ge detectors for a dark matter search. European Physical Journal D, 1996, 46, 2887-2888.	0.4	2
62	Distributed transition-edge sensors for linearized position response in a phonon-mediated X-ray imaging spectrometer. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2004, 520, 502-504.	0.7	2
63	Phonon-mediated distributed transition-edge-sensor X-ray detectors for surveys of galaxy clusters and the warm-hot interstellar medium. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2006, 559, 488-490.	0.7	2
64	Phonon-Mediated Distributed Transition-Edge-Sensor X-Ray Detector with Deep Trenches. Journal of Low Temperature Physics, 2008, 151, 40-45.	0.6	2
65	Quasiparticle Transport in Thick Aluminum Films Coupled to Tungsten Transition Edge Sensors. Journal of Low Temperature Physics, 2016, 184, 30-37.	0.6	2
66	Photoelectric absorption cross section of silicon near the bandgap from room temperature to sub-Kelvin temperature. AIP Advances, 2021, 11, .	0.6	2
67	Effect on dark matter exclusion limits from new silicon photoelectric absorption measurements. Physical Review D, 2021, 104, .	1.6	2
68	Acoustic detection of low-energy radiation. AIP Conference Proceedings, 1986, , .	0.3	1
69	Macintosh movies for teaching undergraduate electricity and magnetism. , 0, , .		1
70	Absolute measurement of the diameter of a fused quartz hemisphere at 6 K. Review of Scientific Instruments, 1989, 60, 985-992.	0.6	1
71	Determination of the Tc distribution for 1000 Transition Edge Sensors. , 2002, , .		1
72	Charge Transport Asymmetry in Cryogenic High Purity Germanium. Journal of Low Temperature Physics, 2014, 176, 148-154.	0.6	1

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73	Confocal sputtering of conformal Î±-Î² phase W films on etched Al features. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2015, 33, 011203.	0.6	1
74	Signal detection in 1/f noise of SQUID magnetometers. AIP Conference Proceedings, 1978, , .	0.3	0
75	Superconducting detectors for laboratory dark matter searches. AIP Conference Proceedings, 1989, , .	0.3	0
76	FUNDAMENTAL PHYSICS EXPERIMENTS USING SQUIDS. , 1992, , 345-416.		0
77	SQUID based W-Al quasiparticle-trap assisted superconducting transition edge sensor with position resolution. IEEE Transactions on Applied Superconductivity, 1997, 7, 3430-3433.	1.1	0
78	Using SQUIDs to Detect Charge in Cryogenic Germanium Detectors. Journal of Low Temperature Physics, 2012, 167, 638-644.	0.6	0
79	Detector Fabrication Yield for SuperCDMS Soudan. Journal of Low Temperature Physics, 2014, 176, 194.	0.6	0
80	LIMITS ON THE WIMP-NUCLEON CROSS-SECTION FROM THE CRYOGENIC DARK MATTER SEARCH. , 2001, , .		0
81	PERFORMANCE AND BACKGROUND MEASUREMENTS OF THE CDMS II TOWER I DETECTORS AT THE STANFORD UNDERGROUND FACILITY. , 2003, , .		0
82	WIMP EXCLUSION RESULTS FROM THE CDMS EXPERIMENT. , 2003, , .		0