Steffen Grohmann

List of Publications by Year
in descending order

64 papers	1,103 citations	430843 18 h-index	414395 32 g-index
64 all docs	64 docs citations	64 times ranked	1068 citing authors

#	Article	IF	Citations
1	Improved Upper Limit on the Neutrino Mass from a Direct Kinematic Method by KATRIN. Physical Review Letters, 2019, 123, 221802.	7.8	322
2	Measurement and modeling of single-phase and flow-boiling heat transfer in microtubes. International Journal of Heat and Mass Transfer, 2005, 48, 4073-4089.	4.8	78
3	The KATRIN neutrino mass experiment. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2010, 623, 442-444.	1.6	67
4	Monitoring of the operating parameters of the KATRIN Windowless Gaseous Tritium Source. New Journal of Physics, 2012, 14, 103046.	2.9	62
5	KATRIN - direct measurement of a sub-eV neutrino mass. Nuclear Physics, Section B, Proceedings Supplements, 2005, 145, 263-267.	0.4	51
6	The design, construction, and commissioning of the KATRIN experiment. Journal of Instrumentation, 2021, 16, T08015.	1.2	30
7	Commissioning of the vacuum system of the KATRIN Main Spectrometer. Journal of Instrumentation, 2016, 11, P04011-P04011.	1.2	29
8	First transmission of electrons and ions through the KATRIN beamline. Journal of Instrumentation, 2018, 13, P04020-P04020.	1.2	28
9	Modelling of 3D temperature profiles and pressure drop in concentric three-phase HTS power cables. Cryogenics, 2017, 81, 24-32.	1.7	27
10	Solar neutrino detection sensitivity in DARWIN via electron scattering. European Physical Journal C, 2020, 80, 1.	3.9	26
11	First operation of the KATRIN experiment with tritium. European Physical Journal C, 2020, 80, 1.	3.9	26
12	Vapor-liquid and vapor-liquid-liquid equilibrium measurements and correlation of the binary mixtures 2,3,3,3-tetrafluoroprop-1-ene (R1234yf)Â+Â(tetrafluoromethane (R14), trifluoromethane (R23),) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 3 (R23). Fluid Phase Equilibria, 2017, 450, 13-23.	2.5	23
13	The thermal behaviour of the tritium source in KATRIN. Cryogenics, 2013, 55-56, 5-11.	1.7	22
14	The effect of charge collection recovery in silicon pâ€“n junction detectors irradiated by different particles. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2003, 514, 47-61.	1.6	21
15	Stability analyses of the beam tube cooling system in the KATRIN source cryostat. Cryogenics, 2009, 49, 413-420.	1.7	20
16	Evaluation of a Two-stage Mixed Refrigerant Cascade for HTS Cooling Below 60 K. Physics Procedia, 2015, 67, 227-232.	1.2	20
17	The KATRIN superconducting magnets: overview and first performance results. Journal of Instrumentation, 2018, 13, T08005-T08005.	1.2	20
18	Calibration of high voltages at the ppm level by the difference of $$^{83{mathrm{m}}}$$Kr conversion electron lines at the KATRIN experiment. European Physical Journal C, 2018, 78, 1.	3.9	20

#	ARTICLE	IF	CITATIONS
19	Precise temperature measurement at 30K in the KATRIN source cryostat. Cryogenics, 2011, 51, 438-445.	1.7	16
20	Neutral tritium gas reduction in the KATRIN differential pumping sections. Vacuum, 2021, 184, 109979.	3.5	16
21	High-resolution spectroscopy of gaseous ^{83m}Kr conversion electrons with the KATRIN experiment. Journal of Physics G: Nuclear and Particle Physics, 2020, 47, 065002.	3.6	16
22	Muon-induced background in the KATRIN main spectrometer. Astroparticle Physics, 2019, 108, 40-49.	4.3	12
23	CRYOGENIC DESIGN OF THE KATRIN SOURCE CRYOSTAT. AIP Conference Proceedings, 2008, , .	0.4	9
24	Atomic force microscopy and thermodynamics on taro, a self-cleaning plant leaf. Applied Physics Letters, 2009, 95, 033702.	3.3	9
25	Opportunities for High-Voltage AC Superconducting Cables as Part of New Long-Distance Transmission Lines. IEEE Transactions on Applied Superconductivity, 2017, 27, 1-5.	1.7	9
26	Pressure-driven dynamic process simulation using a new generic stream object. Chemical Engineering Science, 2020, 215, 115171.	3.8	9
27	Flow-induced noise generation at the outlet of a capillary tube. International Journal of Refrigeration, 2020, 111, 188-196.	3.4	9
28	Qualification of electron-beam welded joints between copper and stainless steel for cryogenic application. IOP Conference Series: Materials Science and Engineering, 2015, 102, 012017.	0.6	8
29	A new method for flow measurement in cryogenic systems. Cryogenics, 2014, 60, 9-18.	1.7	7
30	Recent results from the CERN RD39 Collaboration on super-radiation hard cryogenic silicon detectors for LHC and LHC upgrade. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2004, 535, 384-388.	1.6	6
31	Modeling the pressure increase in liquid helium cryostats after failure of the insulating vacuum. , 2014, , .		6
32	Suppression of Penning discharges between the KATRIN spectrometers. European Physical Journal C, 2020, 80, 1.	3.9	6
33	The development of the KATRIN magnet system. Journal of Physics: Conference Series, 2006, 43, 710-713.	0.4	5
34	The Windowless Gaseous Tritium Source for the KATRIN Experiment. IEEE Transactions on Applied Superconductivity, 2008, 18, 1459-1462.	1.7	5
35	Study on the heat transfer of helium cryostats following loss of insulating vacuum. IOP Conference Series: Materials Science and Engineering, 0, 502, 012170.	0.6	5
36	Conceptual design of pressure relief systems for cryogenic application. , 2014, , .		4

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37	Commissioning of the cryogenic safety test facility PICARD. IOP Conference Series: Materials Science and Engineering, 2015, 101, 012161.	0.6	4
38	Modeling of Two-Phase Heat Exchangers With Zeotropic Fluid Mixtures. Journal of Heat Transfer, 2018, 140, .	2.1	4
39	Cryogenic vacuum considerations for future gravitational wave detectors. Physical Review D, 2021, 104, .	4.7	4
40	Set-up of the cryogenic phase equilibria test stand CryoPHAEQTS. IOP Conference Series: Materials Science and Engineering, 0, 502, 012087.	0.6	4
41	Silicon detectors irradiated â€œin situâ€•at cryogenic temperatures. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2002, 476, 583-587.	1.6	3
42	Low-temperature tracking detectors. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2004, 520, 87-92.	1.6	3
43	Development of a miniature cryogenic fluid circuit and a cryogenic micropump. Cryogenics, 2005, 45, 432-438.	1.7	3
44	EURECA â€“ The Future of Cryogenic Dark Matter Detection in Europe. EAS Publications Series, 2009, 36, 249-255.	0.3	3
45	COMMISSIONING OF THE CRYOGENIC TRANSFER LINE FOR THE KATRIN EXPERIMENT. , 2010, , .		3
46	Reduction of stored-particle background by a magnetic pulse method at the KATRIN experiment. European Physical Journal C, 2018, 78, 1.	3.9	3
47	Radiation hardness of cryogenic silicon detectors. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2002, 476, 569-582.	1.6	2
48	Micro-structured heat exchanger for cryogenic mixed refrigerant cycles. IOP Conference Series: Materials Science and Engineering, 2017, 278, 012061.	0.6	2
49	Safety studies on vacuum insulated liquid helium cryostats. IOP Conference Series: Materials Science and Engineering, 2017, 278, 012169.	0.6	2
50	First experimental data of the cryogenic safety test facility PICARD. IOP Conference Series: Materials Science and Engineering, 2017, 171, 012044.	0.6	2
51	Development of 10 kA Current Leads Cooled by a Cryogenic Mixed-Refrigerant Cycle. IOP Conference Series: Materials Science and Engineering, 0, 502, 012138.	0.6	2
52	Status of a European Standard for the protection of helium cryostats against excessive pressure. IOP Conference Series: Materials Science and Engineering, 0, 502, 012171.	0.6	2
53	Cryogenic technology for tracking detectors. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2001, 461, 197-199.	1.6	1
54	Recent progress in low-temperature silicon detectors. Nuclear Physics, Section B, Proceedings Supplements, 2003, 125, 169-174.	0.4	1

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55	Status of the Neutrino Mass Experiment KATRIN. Nuclear Physics, Section B, Proceedings Supplements, 2005, 143, 575.	0.4	1
56	Cryogenic detector modules and edgeless silicon sensors. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2007, 570, 308-311.	1.6	1
57	Signal-to-noise ratio of temperature measurement with Cernox sensors at various supply currents. IOP Conference Series: Materials Science and Engineering, 2017, 171, 012117.	0.6	1
58	Experimental validation of a self-calibrating cryogenic mass flowmeter. IOP Conference Series: Materials Science and Engineering, 2017, 278, 012077.	0.6	1
59	Heat transfer and pressure drop in the main heat exchanger of a cryogenic mixed refrigerant cycle. IOP Conference Series: Materials Science and Engineering, 0, 502, 012027.	0.6	1
60	Commissioning of the Cryogenic Phase Equilibria Test Stand CryoPHAEQTS. IOP Conference Series: Materials Science and Engineering, 2020, 755, 012150.	0.6	1
61	Measurement of heat flux in multi-layer insulated helium cryostats after loss of insulating vacuum. IOP Conference Series: Materials Science and Engineering, 2020, 755, 012155.	0.6	0
62	Investigation of cryogenic mixed-refrigerant cooled current leads in combination with peltier elements. IOP Conference Series: Materials Science and Engineering, 2020, 755, 012138.	0.6	0
63	CRYOGENIC OPERATION OF EDGE-SENSITIVE SILICON MICROSTRIP DETECTORS. , 2006, , .		0
64	Vapor-liquid equilibrium of the nitrogen-argon system at 100 K. IOP Conference Series: Materials Science and Engineering, 2022, 1240, 012159.	0.6	0