

# Steffen Grohmann

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

61  
papers

706  
citations

14  
h-index

24  
g-index

64  
ext. papers

940  
ext. citations

1.8  
avg, IF

3.98  
L-index

#	Paper	IF	Citations
61	Neutral tritium gas reduction in the KATRIN differential pumping sections. <i>Vacuum</i> , <b>2021</b> , 184, 109979	3.7	5
60	The design, construction, and commissioning of the KATRIN experiment. <i>Journal of Instrumentation</i> , <b>2021</b> , 16, T08015	1	5
59	Investigation of cryogenic mixed-refrigerant cooled current leads in combination with peltier elements. <i>IOP Conference Series: Materials Science and Engineering</i> , <b>2020</b> , 755, 012138	0.4	
58	Suppression of Penning discharges between the KATRIN spectrometers. <i>European Physical Journal C</i> , <b>2020</b> , 80, 1	4.2	3
57	High-resolution spectroscopy of gaseous 83m Kr conversion electrons with the KATRIN experiment. <i>Journal of Physics G: Nuclear and Particle Physics</i> , <b>2020</b> , 47, 065002	2.9	8
56	Flow-induced noise generation at the outlet of a capillary tube. <i>International Journal of Refrigeration</i> , <b>2020</b> , 111, 188-196	3.8	3
55	Measurement of heat flux in multi-layer insulated helium cryostats after loss of insulating vacuum. <i>IOP Conference Series: Materials Science and Engineering</i> , <b>2020</b> , 755, 012155	0.4	
54	Commissioning of the Cryogenic Phase Equilibria Test Stand CryoPHAEQTS. <i>IOP Conference Series: Materials Science and Engineering</i> , <b>2020</b> , 755, 012150	0.4	0
53	Solar neutrino detection sensitivity in DARWIN via electron scattering. <i>European Physical Journal C</i> , <b>2020</b> , 80, 1	4.2	10
52	Pressure-driven dynamic process simulation using a new generic stream object. <i>Chemical Engineering Science</i> , <b>2020</b> , 215, 115171	4.4	6
51	First operation of the KATRIN experiment with tritium. <i>European Physical Journal C</i> , <b>2020</b> , 80, 1	4.2	14
50	Development of 10 kA Current Leads Cooled by a Cryogenic Mixed-Refrigerant Cycle. <i>IOP Conference Series: Materials Science and Engineering</i> , <b>2019</b> , 502, 012138	0.4	1
49	Status of a European Standard for the protection of helium cryostats against excessive pressure. <i>IOP Conference Series: Materials Science and Engineering</i> , <b>2019</b> , 502, 012171	0.4	2
48	Heat transfer and pressure drop in the main heat exchanger of a cryogenic mixed refrigerant cycle. <i>IOP Conference Series: Materials Science and Engineering</i> , <b>2019</b> , 502, 012027	0.4	0
47	Study on the heat transfer of helium cryostats following loss of insulating vacuum. <i>IOP Conference Series: Materials Science and Engineering</i> , <b>2019</b> , 502, 012170	0.4	3
46	Improved Upper Limit on the Neutrino Mass from a Direct Kinematic Method by KATRIN. <i>Physical Review Letters</i> , <b>2019</b> , 123, 221802	7.4	163
45	Muon-induced background in the KATRIN main spectrometer. <i>Astroparticle Physics</i> , <b>2019</b> , 108, 40-49	2.4	9

44	Modeling of Two-Phase Heat Exchangers With Zeotropic Fluid Mixtures. <i>Journal of Heat Transfer</i> , <b>2018</b> , 140,	1.8	4
43	Calibration of high voltages at the ppm level by the difference of ( $^{83}\text{m}$ )Kr conversion electron lines at the KATRIN experiment. <i>European Physical Journal C</i> , <b>2018</b> , 78, 1	4.2	14
42	First transmission of electrons and ions through the KATRIN beamline. <i>Journal of Instrumentation</i> , <b>2018</b> , 13, P04020-P04020	1	18
41	The KATRIN superconducting magnets: overview and first performance results. <i>Journal of Instrumentation</i> , <b>2018</b> , 13, T08005-T08005	1	12
40	Reduction of stored-particle background by a magnetic pulse method at the KATRIN experiment. <i>European Physical Journal C</i> , <b>2018</b> , 78, 1	4.2	3
39	Opportunities for High-Voltage AC Superconducting Cables as Part of New Long-Distance Transmission Lines. <i>IEEE Transactions on Applied Superconductivity</i> , <b>2017</b> , 27, 1-5	1.8	9
38	Experimental validation of a self-calibrating cryogenic mass flowmeter. <i>IOP Conference Series: Materials Science and Engineering</i> , <b>2017</b> , 278, 012077	0.4	
37	Vapor-liquid and vapor-liquid-liquid equilibrium measurements and correlation of the binary mixtures 2,3,3,3-tetrafluoroprop-1-ene (R1234yf) + [tetrafluoromethane (R14), trifluoromethane (R23), octafluoropropane (R218), nitrogen (R728) and argon (R740)] and ethane (R170) + trifluoromethane (R23). <i>Fluid Phase Equilibria</i> , <b>2017</b> , 450, 13-23	2.5	17
36	Modelling of 3D temperature profiles and pressure drop in concentric three-phase HTS power cables. <i>Cryogenics</i> , <b>2017</b> , 81, 24-32	1.8	24
35	Micro-structured heat exchanger for cryogenic mixed refrigerant cycles. <i>IOP Conference Series: Materials Science and Engineering</i> , <b>2017</b> , 278, 012061	0.4	2
34	Safety studies on vacuum insulated liquid helium cryostats. <i>IOP Conference Series: Materials Science and Engineering</i> , <b>2017</b> , 278, 012169	0.4	2
33	Signal-to-noise ratio of temperature measurement with Cernox sensors at various supply currents. <i>IOP Conference Series: Materials Science and Engineering</i> , <b>2017</b> , 171, 012117	0.4	1
32	First experimental data of the cryogenic safety test facility PICARD. <i>IOP Conference Series: Materials Science and Engineering</i> , <b>2017</b> , 171, 012044	0.4	2
31	Commissioning of the vacuum system of the KATRIN Main Spectrometer. <i>Journal of Instrumentation</i> , <b>2016</b> , 11, P04011-P04011	1	24
30	Evaluation of a Two-stage Mixed Refrigerant Cascade for HTS Cooling Below 60 K. <i>Physics Procedia</i> , <b>2015</b> , 67, 227-232		14
29	Commissioning of the cryogenic safety test facility PICARD. <i>IOP Conference Series: Materials Science and Engineering</i> , <b>2015</b> , 101, 012161	0.4	4
28	Qualification of electron-beam welded joints between copper and stainless steel for cryogenic application. <i>IOP Conference Series: Materials Science and Engineering</i> , <b>2015</b> , 102, 012017	0.4	4
27	A new method for flow measurement in cryogenic systems. <i>Cryogenics</i> , <b>2014</b> , 60, 9-18	1.8	6

26	Modeling the pressure increase in liquid helium cryostats after failure of the insulating vacuum <b>2014,</b>		6
25	Conceptual design of pressure relief systems for cryogenic application <b>2014,</b>		3
24	The thermal behaviour of the tritium source in KATRIN. <i>Cryogenics</i> , <b>2013</b> , 55-56, 5-11	1.8	18
23	Monitoring of the operating parameters of the KATRIN Windowless Gaseous Tritium Source. <i>New Journal of Physics</i> , <b>2012</b> , 14, 103046	2.9	56
22	Precise temperature measurement at 30 K in the KATRIN source cryostat. <i>Cryogenics</i> , <b>2011</b> , 51, 438-445	1.8	14
21	COMMISSIONING OF THE CRYOGENIC TRANSFER LINE FOR THE KATRIN EXPERIMENT <b>2010,</b>		2
20	The KATRIN neutrino mass experiment. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , <b>2010</b> , 623, 442-444	1.2	56
19	EURECA □The Future of Cryogenic Dark Matter Detection in Europe. <i>EAS Publications Series</i> , <b>2009</b> , 36, 249-255	0.2	3
18	Atomic force microscopy and thermodynamics on taro, a self-cleaning plant leaf. <i>Applied Physics Letters</i> , <b>2009</b> , 95, 033702	3.4	7
17	Stability analyses of the beam tube cooling system in the KATRIN source cryostat. <i>Cryogenics</i> , <b>2009</b> , 49, 413-420	1.8	18
16	The Windowless Gaseous Tritium Source for the KATRIN Experiment. <i>IEEE Transactions on Applied Superconductivity</i> , <b>2008</b> , 18, 1459-1462	1.8	5
15	CRYOGENIC DESIGN OF THE KATRIN SOURCE CRYOSTAT. <i>AIP Conference Proceedings</i> , <b>2008</b> ,	0	7
14	Cryogenic detector modules and edgeless silicon sensors. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , <b>2007</b> , 570, 308-311	1.2	1
13	The development of the KATRIN magnet system. <i>Journal of Physics: Conference Series</i> , <b>2006</b> , 43, 710-713	0.3	5
12	KATRIN - direct measurement of a sub-eV neutrino mass. <i>Nuclear Physics, Section B, Proceedings Supplements</i> , <b>2005</b> , 145, 263-267		48
11	Measurement and modeling of single-phase and flow-boiling heat transfer in microtubes. <i>International Journal of Heat and Mass Transfer</i> , <b>2005</b> , 48, 4073-4089	4.9	27
10	Status of the Neutrino Mass Experiment KATRIN. <i>Nuclear Physics, Section B, Proceedings Supplements</i> , <b>2005</b> , 143, 575		1
9	Development of a miniature cryogenic fluid circuit and a cryogenic micropump. <i>Cryogenics</i> , <b>2005</b> , 45, 432-438	1.8	3

8	Recent results from the CERN RD39 Collaboration on super-radiation hard cryogenic silicon detectors for LHC and LHC upgrade. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , <b>2004</b> , 535, 384-388	1.2	5
7	Low-temperature tracking detectors. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , <b>2004</b> , 520, 87-92	1.2	2
6	The effect of charge collection recovery in silicon p $\bar{n}$ junction detectors irradiated by different particles. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , <b>2003</b> , 514, 47-61	1.2	18
5	Recent progress in low-temperature silicon detectors. <i>Nuclear Physics, Section B, Proceedings Supplements</i> , <b>2003</b> , 125, 169-174		1
4	Radiation hardness of cryogenic silicon detectors. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , <b>2002</b> , 476, 569-582 <sup>1,2</sup>		2
3	Silicon detectors irradiated in situ at cryogenic temperatures. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , <b>2002</b> , 476, 583-587	1.2	3
2	Cryogenic technology for tracking detectors. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , <b>2001</b> , 461, 197-199	1.2	
1	Set-up of the cryogenic phase equilibria test stand CryoPHAEQTS. <i>IOP Conference Series: Materials Science and Engineering</i> , <b>502</b> , 012087	0.4	2