Magnus SchlÃ¶sser

List of Publications by Year
in descending order

55 papers	1,255 citations	430874 18 h-index	377865 34 g-index
59 all docs	59 docs citations	59 times ranked	899 citing authors

#	Article	IF	Citations
1	Direct neutrino-mass measurement with sub-electronvolt sensitivity. Nature Physics, 2022, 18, 160-166.	16.7	175
2	Improved eV-scale sterile-neutrino constraints from the second KATRIN measurement campaign. Physical Review D, 2022, 105, .	4.7	14
3	Rotational level spacings in HD from vibrational saturation spectroscopy. Physical Review A, 2022, 105, .	2.5	11
4	New Constraint on the Local Relic Neutrino Background Overdensity with the First KATRIN Data Runs. Physical Review Letters, 2022, 129, .	7.8	14
5	Probing the Neutrino-Mass Scale with the KATRIN Experiment. Annual Review of Nuclear and Particle Science, 2022, 72, 259-282.	10.2	1
6	Bound on <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mn>3</mml:mn><mml:mo>+</mml:mo><mml:mn>1</mml:mn></mml:mrow></mml:math> Active-Sterile Neutrino Mixing from the First Four-Week Science Run of KATRIN. Physical Review Letters, 2021, 126, 091803.	7.8	29
7	Analysis methods for the first KATRIN neutrino-mass measurement. Physical Review D, 2021, 104, .	4.7	28
8	The design, construction, and commissioning of the KATRIN experiment. Journal of Instrumentation, 2021, 16, T08015.	1.2	30
9	Accurate Reference Gas Mixtures Containing Tritiated Molecules: Their Production and Raman-Based Analysis. Sensors, 2021, 21, 6170.	3.8	6
10	Analysis of the <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si48.svg"><mml:mrow><mml:msub><mml:mi>Î½</mml:mi><mml:mn>1</mml:mn></mml:msub><mml:mo linebreak="goodbreak">+</mml:mo><mml:mn>2</mml:mn><mml:msub><mml:mi>Î½</mml:mi><mml:mn>2</mml:mn></mml:msub>< <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si49.svg"><mml:mrow><mml:msub><mml:mi>Î½</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:mo linebreak="goodbreak">+</mml:mo><mml:msub><mml:mi>Î½</mml:mi><mml:. Journal of Quantitative Spe	2.3	4
11	From First Tritium Operation of the Karlsruhe Tritium Neutrino Experiment Toward Precise Determination of the Neutrino Mass. Fusion Science and Technology, 2020, 76, 170-178.	1.1	5
12	Quantitative Long-Term Monitoring of the Circulating Gases in the KATRIN Experiment Using Raman Spectroscopy. Sensors, 2020, 20, 4827.	3.8	11
13	The fundamental <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si73.svg"><mml:mrow><mml:msub><mml:mrow><mml:mi>Î½</mml:mi></mml:mrow><mml:mrow><mml:mn>3</mml:mn></ band of DTO and the <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si74.svg"><mml:mrow><mml:mn>2</mml:mn><mml:msub><mml:mrow><mml:mi>Î½</mml:mi></mml:mrow><mml:mrow><m overtone band of HTO from the analysis of a. Journal of Molecular Spectroscopy, 2020, 370, 111295.	1.2	6
14	Precision measurement of the fundamental vibrational frequencies of tritium-bearing hydrogen molecules: T₂, DT, HT. Physical Chemistry Chemical Physics, 2020, 22, 8973-8987.	2.8	12
15	First operation of the KATRIN experiment with tritium. European Physical Journal C, 2020, 80, 1.	3.9	26
16	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
17	Suppression of Penning discharges between the KATRIN spectrometers. European Physical Journal C, 2020, 80, 1.	3.9	6
18	Gamma-induced background in the KATRIN main spectrometer. European Physical Journal C, 2019, 79, 1.	3.9	6

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19	First high-resolution spectrum and line-by-line analysis of the 2Î½2 band of HTO around 3.8Âmicrons. Journal of Quantitative Spectroscopy and Radiative Transfer, 2019, 230, 61-64.	2.3	9
20	Improved Upper Limit on the Neutrino Mass from a Direct Kinematic Method by KATRIN. Physical Review Letters, 2019, 123, 221802.	7.8	322
21	Muon-induced background in the KATRIN main spectrometer. Astroparticle Physics, 2019, 108, 40-49.	4.3	12
22	Precision tests of nonadiabatic perturbation theory with measurements on the DT molecule. Physical Review Research, 2019, 1, .	3.6	10
23	Custom-built light-pipe cell for high-resolution infrared absorption spectroscopy of tritiated water vapor and other hazardous gases. Optics Express, 2019, 27, 17251.	3.4	7
24	Relativistic and QED Effects in the Fundamental Vibration of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi mathvariant="normal">T</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn></mml:mrow></mml:msub></mml:mrow></mml:m Physical Review Letters, 2018, 120, 163002.	7.8	16
25	First transmission of electrons and ions through the KATRIN beamline. Journal of Instrumentation, 2018, 13, P04020-P04020.	1.2	28
26	The KATRIN superconducting magnets: overview and first performance results. Journal of Instrumentation, 2018, 13, T08005-T08005.	1.2	20
27	Reduction of stored-particle background by a magnetic pulse method at the KATRIN experiment. European Physical Journal C, 2018, 78, 1.	3.9	3
28	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
29	CARS spectroscopy of the $(v=0 ightarrow 1)$ band in ${{{m{T}}}_{2}}_{}$. Journal of Physics B: Atomic, Molecular and Optical Physics, 2017, 50, 214004.	1.5	7
30	Commissioning of the vacuum system of the KATRIN Main Spectrometer. Journal of Instrumentation, 2016, 11, P04011-P04011.	1.2	29
31	Relative Intensity Correction of Raman Systems with National Institute of Standards and Technology Standard Reference Material 2242 in 90Â°-Scattering Geometry. Applied Spectroscopy, 2015, 69, 597-607.	2.2	5
32	Enhanced Sensitivity of Raman Spectroscopy for Tritium Gas Analysis Using a Metal-Lined Hollow Glass Fiber. Fusion Science and Technology, 2015, 67, 547-550.	1.1	8
33	Raman Spectroscopy at the Tritium Laboratory Karlsruhe. Fusion Science and Technology, 2015, 67, 555-558.	1.1	16
34	CAPER as Central and Crucial Facility to Support R&D with Tritium at TLK. Fusion Science and Technology, 2015, 67, 308-311.	1.1	2
35	How to Make Raman-Inactive Helium Visible in Raman Spectra of Tritium-Helium Gas Mixtures. Fusion Science and Technology, 2015, 67, 559-562.	1.1	2
36	Radio-frequency ion deflector for mass separation. Review of Scientific Instruments, 2015, 86, 103302.	1.3	0

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37	First experimental photo-detachment spectrum of H2â^'. Chemical Physics Letters, 2015, 639, 41-46.	2.6	5
38	Theory of Quantitative Raman Spectroscopy. Springer Theses, 2014, , 53-74.	0.1	2
39	Comparison of Calibration Methods. Springer Theses, 2014, , 171-175.	0.1	0
40	Calibration Based on Theoretical Intensities and Spectral Sensitivity (Method I). Springer Theses, 2014, , 101-149.	0.1	0
41	Experimental Setup. Springer Theses, 2014, , 75-100.	0.1	0
42	Calibration Based on Accurate Gas Samples (Method II). Springer Theses, 2014, , 151-169.	0.1	0
43	The KATRIN Experiment. Springer Theses, 2014, , 31-51.	0.1	0
44	Accurate calibration of the laser Raman system for the Karlsruhe Tritium Neutrino Experiment. Journal of Molecular Structure, 2013, 1044, 61-66.	3.6	30
45	In-Line Calibration of Raman Systems for Analysis of Gas Mixtures of Hydrogen Isotopologues with Sub-Percent Accuracy. Analytical Chemistry, 2013, 85, 2739-2745.	6.5	18
46	Automated Quantitative Spectroscopic Analysis Combining Background Subtraction, Cosmic Ray Removal, and Peak Fitting. Applied Spectroscopy, 2013, 67, 949-959.	2.2	41
47	Evaluation method for Raman depolarization measurements including geometrical effects and polarization aberrations. Journal of Raman Spectroscopy, 2013, 44, 453-462.	2.5	11
48	Accurate depolarization ratio measurements for all diatomic hydrogen isotopologues. Journal of Raman Spectroscopy, 2013, 44, 857-865.	2.5	19
49	Monitoring of the operating parameters of the KATRIN Windowless Gaseous Tritium Source. New Journal of Physics, 2012, 14, 103046.	2.9	62
50	Overview of R&D at TLK for process and analytical issues on tritium management in breeder blankets of ITER and DEMO. Fusion Engineering and Design, 2012, 87, 1206-1213.	1.9	39
51	Laser Raman Spectroscopy for KATRIN. Nuclear Physics, Section B, Proceedings Supplements, 2012, 229-232, 492.	0.4	4
52	Design Implications for Laser Raman Measurement Systems for Tritium Sample-Analysis, Accountancy or Process-Control Applications. Fusion Science and Technology, 2011, 60, 976-981.	1.1	16
53	Monitoring of Tritium Purity During Long-Term Circulation in the KATRIN Test Experiment LOOPINO Using Laser Raman Spectroscopy. Fusion Science and Technology, 2011, 60, 925-930.	1.1	36
54	Monitoring of all hydrogen isotopologues at tritium laboratory Karlsruhe using Raman spectroscopy. Laser Physics, 2010, 20, 493-507.	1.2	48

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55	Analysis of the Î½₁+Î½₃ band of T₂¹⁶O and the Î½ ₁ + Î½ ₃ and 2Î½₂ + Î½₃ bands of DT¹⁶O. Molecular Physics, 0, , .	1.7	0