Volker Sonnenschein

List of Publications by Year
in descending order

83	1,062	361413	454955
papers	citations	20 h-index	30 g-index

85	85	85	903
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Towards commissioning the new IGISOL-4 facility. Nuclear Instruments & Methods in Physics Research B, 2013, 317, 208-213.	1.4	102
2	Towards high-resolution laser ionization spectroscopy of the heaviest elements in supersonic gas jet expansion. Nature Communications, 2017, 8, 14520.	12.8	90
3	Precision Mass Measurements beyond<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mmultiscripts><mml:mi>Sn</mml:mi><mml:mprescripts /><mml:none /><mml:mn>132</mml:mn></mml:mmultiscripts></mml:math>: Anomalous Behavior of Odd-Even Staggering of Binding Energies. Physical Review Letters, 2012, 109, 032501.	7.8	74
4	High-precision mass measurement of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mmultiscripts><mml:mi mathvariant="normal">S</mml:mi><mml:mprescripts /><mml:none /><mml:mrow><mml:mn>31</mml:mn></mml:mrow></mml:mmultiscripts></mml:math>with the double Penning trap JYFLTRAP improves the mass value for<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mmultiscripts><mml:mi [illegible]	2.9	50
5	Isomeric states close to doubly magic<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msup><mml:mrow /><mml:mn>132</mml:mn></mml:msup></mml:math>Sn studied with the double Penning trap JYFLTRAP. Physical Review C, 2013, 87, .	2.9	45
6	Enhanced<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>Î³</mml:mi></mml:math>-Ray Emission from Neutron Unbound States Populated in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>Î²</mml:mi></mml:math>Decay. Physical Review Letters, 2015, 115, 062502.	7.8	37
7	Total absorption spectroscopy of the <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>Î³</mml:mi></mml:math> -ray spectroscopy of the <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>Î²</mml:mi></mml:math> -delayed neutron emitters <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mmultiscripts><mml:mi>Br</mml:mi><mml:mprescripts	2.9	35
8	Characterization of a pulsed injection-locked Ti:sapphire laser and its application to high resolution resonance ionization spectroscopy of copper. Laser Physics, 2017, 27, 085701.	1.2	33
9	Resonance ionization spectroscopy of thorium isotopesâ€“towards a laser spectroscopic identification of the low-lying 7.6 eV isomer of²²⁹Th. Journal of Physics B: Atomic, Molecular and Optical Physics, 2011, 44, 165005.	1.5	32
10	Efficient, high-resolution resonance laser ionization spectroscopy using weak transitions to long-lived excited states. Physical Review A, 2017, 95, .	2.5	32
11	The search for the existence of 229mTh at IGISOL. European Physical Journal A, 2012, 48, 1.	2.5	30
12	Total absorption spectroscopy study of the <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>Î²</mml:mi></mml:math> decay of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mmultiscripts><mml:mi mathvariant="normal">Br</mml:mi><mml:mprescripts /><mml:none /><mml:mn>86</mml:mn></mml:mmultiscripts></mml:math> and <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mmultiscripts><mml:mi mathvariant="normal"> [illegible]	2.9	29
13	Large Impact of the Decay of Niobium Isomers on the 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 stretchy="false">Â¯</mml:mo></mml:mover><mml:mi>e</mml:mi></mml:msub></mml:math> Summation Calculations. Physical Review Letters, 2019, 122, 042502.	7.8	29
14	In-gas laser ionization and spectroscopy of actinium isotopes near the N=126 closed shell. Physical Review C, 2017, 96, .	2.9	27
15	A cavity ring-down spectrometer for study of biomedical radiocarbon-labeled samples. Journal of Applied Physics, 2018, 124, .	2.5	24
16	Gas jet studies towards an optimization of the IGISOL LIST method. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2011, 635, 24-34.	1.6	22
17	Laser developments and resonance ionization spectroscopy at IGISOL. European Physical Journal A, 2012, 48, 1.	2.5	22
18	Recommissioning of JYFLTRAP at the new IGISOL-4 facility. Nuclear Instruments & Methods in Physics Research B, 2013, 317, 506-509.	1.4	21

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19	First experiment with the NUSTAR/FAIR Decay Total Absorption <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si3.gif" overflow="scroll"><mml:mrow><mml:mi>Î³</mml:mi></mml:mrow></mml:math>-Ray Spectrometer (DTAS) at the IGISOL IV facility. Nuclear Instruments & Methods in Physics Research B, 2016, 376, 334-337.	1.4	21
20	Developments towards in-gas-jet laser spectroscopy studies of actinium isotopes at LISOL. Nuclear Instruments & Methods in Physics Research B, 2016, 376, 382-387.	1.4	20
21	High-resolution laser spectroscopy of long-lived plutonium isotopes. Physical Review A, 2017, 95, .	2.5	19
22	Characterization and performance of the DTAS detector. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2018, 910, 79-89.	1.6	17
23	First Measurements with the BEta deLayEd Neutron Detector (BELEN-20) at JYFLTRAP. Journal of Physics: Conference Series, 2011, 312, 052008.	0.4	15
24	Experimental study of Tc100 Î² decay with total absorption Î³ -ray spectroscopy. Physical Review C, 2017, 96, .	2.9	15
25	Determination of the ground-state hyperfine structure in neutral229Th. Journal of Physics B: Atomic, Molecular and Optical Physics, 2012, 45, 165005.	1.5	12
26	Characterization of a dual-etalon Ti:sapphire laser via resonance ionization spectroscopy of stable copper isotopes. Hyperfine Interactions, 2014, 227, 113-123.	0.5	11
27	Intracavity Frequency Doubling and Difference Frequency Mixing for Pulsed ns Ti:Sapphire Laser Systems at On-Line Radioactive Ion Beam Facilities. , 2015, , .		11
28	Total Absorption Study of Beta Decays Relevant for Nuclear Applications and Nuclear Structure. Nuclear Data Sheets, 2014, 120, 12-15.	2.2	9
29	Isotope-selective Microscale Imaging of Radioactive Cs without Isobaric Interferences Using Sputtered Neutral Mass Spectrometry with Two-step Resonant Ionization Employing Newly-developed Ti:Sapphire Lasers. Analytical Sciences, 2018, 34, 1265-1270.	1.6	9
30	Mid-infrared cavity ring-down spectroscopy using DFB quantum cascade laser with optical feedback for radiocarbon detection. Japanese Journal of Applied Physics, 2020, 59, 092007.	1.5	9
31	In-gas-cell laser ionization studies of plutonium isotopes at IGISOL. Nuclear Instruments & Methods in Physics Research B, 2016, 376, 233-239.	1.4	8
32	Total absorption <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>Î³</mml:mi></mml:math> -ray spectroscopy of the <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>Î²</mml:mi></mml:math> -delayed neutron emitters <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mmultiscripts><mml:mi mathvariant="normal">I</mml:mi><mml:mprescripts /><mml:none /><mml:mn>137</mml:mn></mml:mmu	2.9	8
33	Total absorption Î³ -ray spectroscopy of niobium isomers. Physical Review C, 2019, 100, .	2.9	8
34	Optical feedback in dfb quantum cascade laser for mid-infrared cavity ring-down spectroscopy. Hyperfine Interactions, 2017, 238, 1.	0.5	7
35	Highly coherent tunable mid-infrared frequency comb pumped by supercontinuum at 1 Âµm. Applied Physics Express, 2017, 10, 012503.	2.4	7
36	Development of high resolution resonance ionization mass spectrometry for trace analysis of 93mNb. Hyperfine Interactions, 2013, 216, 41-46.	0.5	6

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37	Coulomb displacement energies as a probe for nucleon pairing in thef7/2shell. Physical Review C, 2014, 89, .	2.9	6
38	3.1â€“5.2 Î¼m Coherent MIR Frequency Comb Based on Yb-Doped Fiber Laser. IEEE Journal of Selected Topics in Quantum Electronics, 2018, 24, 1-7.	2.9	6
39	Determination of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>Î²</mml:mi></mml:math> -decay ground state feeding of nuclei of importance for reactor applications. Physical Review C, 2020, 102, .	2.9	6
40	Development of two-color resonance ionization scheme for Th using an automated wide-range tunable Ti:sapphire laser system. Progress in Nuclear Science and Technology, 2018, 5, 97-99.	0.3	6
41	Production of negative osmium ions by laser desorption and ionization. Review of Scientific Instruments, 2010, 81, 013301.	1.3	5
42	A direct diode pumped Ti:sapphire laser with single-frequency operation for high resolution spectroscopy. Hyperfine Interactions, 2020, 241, 1.	0.5	5
43	Study of the $eta $ Decay of Fission Products with the DTAS Detector. Acta Physica Polonica B, 2017, 48, 529.	0.8	5
44	Total absorption <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>Î³</mml:mi></mml:math> -ray spectroscopy of the <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>Î²</mml:mi></mml:math> decays of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mmultiscripts><mml:mi mathvariant="normal">Y</mml:mi><mml:mprescripts /><mml:none /><mml:mrow><mml:mn>96</mml:m	2.9	5
45	The FURIOS laser ion source at IGISOL-4. Nuclear Instruments & Methods in Physics Research B, 2013, 317, 422-425.	1.4	4
46	Control of RILIS lasers at IGISOL facilities using a compact atomic beam reference cell. Hyperfine Interactions, 2013, 216, 53-58.	0.5	4
47	Development of resonance ionization in a supersonic gas-jet for studies of short-lived and long-lived radioactive nuclei. Nuclear Instruments & Methods in Physics Research B, 2013, 317, 586-589.	1.4	4
48	Laser spectroscopy at IGISOL IV. Hyperfine Interactions, 2014, 227, 139-145.	0.5	4
49	The laser and optical system for the RIBF-PALIS experiment. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2018, 877, 118-123.	1.6	4
50	A direct diode pumped continuous-wave Ti:sapphire laser as seed of a pulsed amplifier for high-resolution resonance ionization spectroscopy. Nuclear Instruments & Methods in Physics Research B, 2020, 463, 512-514.	1.4	4
51	A Hybrid Self-Seeded Ti:sapphire Laser with a Pumping Scheme Based on Spectral Beam Combination of Continuous Wave Diode and Pulsed DPSS Lasers. Applied Sciences (Switzerland), 2022, 12, 4727.	2.5	4
52	An inductively heated hot cavity catcher laser ion source. Review of Scientific Instruments, 2015, 86, 123501.	1.3	3
53	Development of Analytical Method for ¹⁴C Determination in Biomedical Sample by Laser Spectroscopy. Radioisotopes, 2018, 67, 85-91.	0.2	3
54	Development of two-color resonant ionization sputtered neutral mass spectrometry and microarea imaging for Sr. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2020, 38, 044001.	1.2	3

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55	Development of a micro imaging system for element-selective analysis by coupling of focused ion beam and resonance ionization mass spectrometry. Progress in Nuclear Science and Technology, 2018, 5, 179-182.	0.3	3
56	The Possibilities of the Extended IGISOL Facility at JYFL. Journal of the Korean Physical Society, 2011, 59, 1589-1592.	0.7	3
57	Development of High Resolution Resonance Ionization Spectroscopy on Titanium Using Injection-Locked Ti:Sapphire Laser System. , 2015, , .		2
58	Development of CO2 Cavity Ring-Down Spectroscopy for Medical Applications. , 2016, , .		2
59	Development of High Resolution Resonance Ionization Mass Spectrometry for Neutron Dosimetry Technique with93Nb(n,n')93mNb Reaction. EPJ Web of Conferences, 2016, 106, 05002.	0.3	2
60	Characterization of a cylindrical plastic Î²-detector with Monte Carlo simulations of optical photons. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2017, 854, 134-138.	1.6	2
61	Development of a saturated absorption spectroscopy setup at IGISOL for characterisation of Fabry-PÃ©rot interferometers. Hyperfine Interactions, 2017, 238, 1.	0.5	2
62	Total absorption spectroscopy of fission fragments relevant for reactor antineutrino spectra. EPJ Web of Conferences, 2017, 146, 10002.	0.3	2
63	Strong Î³-ray emission from neutron unbound states populated in Î²-decay: Impact on (n,Î³) cross-section estimates. EPJ Web of Conferences, 2017, 146, 01002.	0.3	2
64	TAGS measurements of 100Nb ground and isomeric states and 140Cs for neutrino physics with the new DTAS detector. EPJ Web of Conferences, 2017, 146, 10010.	0.3	2
65	Towards in-jet resonance ionization spectroscopy: An injection-locked Titanium:Sapphire laser system for the PALIS-facility. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2018, 908, 236-243.	1.6	2
66	Generation of ^{4} 4 He $$_2^*$$ 2 âˆ—. Journal of Low Temperature Physics, 2019, 196, 275-282.	1.4	2
67	Background Noise Reduction in Mid-Infrared Cavity Ring-Down Spectroscopy for Radiocarbon Analysis. , 2019, , .		2
68	Isotope-selective laser photodetachment for 129I accelerator mass spectrometry. Hyperfine Interactions, 2013, 216, 133-138.	0.5	1
69	Isomeric Yield Ratios of Fission Products Measured with the JYFLTRAP. Acta Physica Polonica B, 2014, 45, 211.	0.8	1
70	Laser spectroscopy with an electrostatic ConeTrap. Hyperfine Interactions, 2017, 238, 1.	0.5	1
71	Total absorption studies of high priority decays for reactor applications: 86Br and 91Rb. EPJ Web of Conferences, 2017, 146, 10001.	0.3	1
72	Conceptual study on parasitic low-energy RI beam production with in-flight separator BigRIPS and the first stopping examination for high-energy RI beams in the parasitic gas cell. Progress of Theoretical and Experimental Physics, 2019, 2019, .	6.6	1

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73	r Process (n, (gamma)) Rate Constraints from the (gamma) Emission of Neutron Unbound States in (eta)-Decay. , 2017, , .		1
74	Disentangling decaying isomers and searching for signatures of collective excitations in Î² decay. Journal of Physics: Conference Series, 2020, 1643, 012134.	0.4	1
75	Measuring independent yields of fission products using a penning trap. Bulletin of the Russian Academy of Sciences: Physics, 2015, 79, 869-871.	0.6	0
76	Yb-doped Fiber Laser Based Coherent Mid-Infrared Frequency Comb at Î» = 4.5 Î¼m for CRDS application. , 2018, , .		0
77	Resonant sputtered neutral mass spectrometry using multiple reflections of laser to counterbalance Doppler broadening. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2020, 38, 034001.	1.2	0
78	An experimental setup for creating and imaging 4He2* excimer cluster tracers in superfluid helium-4 via neutron-3He absorption reaction. Review of Scientific Instruments, 2020, 91, 033318.	1.3	0
79	Odd-parity autoionizing levels of uranium observed by two-color two-step photoionization optogalvanic spectroscopy. Journal of Physics B: Atomic, Molecular and Optical Physics, 2021, 54, 145003.	1.5	0
80	Laser developments and resonance ionization spectroscopy at IGISOL. , 2012, , 295-309.		0
81	4.4-5.2 Î¼m Wavelength Tunable, Coherent MIR Frequency Comb Generation Based on Yb-doped Fiber Laser. , 2017, , .		0
82	Coherent Mid-Infrared Optical Frequency Comb Working at 4.52 Î¼m Based on Yb-doped Fiber Laser. , 2017, , .		0
83	Mass spectral database for TOF-SIMS of stable isotopes of Sr and Zr. Surface Science Spectra, 2020, 27, 025001.	1.3	0