

# Sebastian Rothe

## List of Publications by Year in descending order

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113  
papers

2,543  
citations

186265

28  
h-index

243625

44  
g-index

115  
all docs

115  
docs citations

115  
times ranked

1384  
citing authors

#	ARTICLE	IF	CITATIONS
1	Producing gold at ISOLDE-CERN. Nuclear Instruments & Methods in Physics Research B, 2022, 513, 26-32.	1.4	0
2	A miniaturized low-power SiPM-based $\text{I}^2$ detector for the ISOLDE Fast Tapestation. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2022, 1026, 166213.	1.6	3
3	Coulomb excitation of $\text{Rn}$ . Physical Review C, 2022, 105, 222.	2.9	7
4	A cold electron-impact ion source driven by a photo-cathode – New opportunities for the delivery of radioactive molecular beams?. Journal of Physics: Conference Series, 2022, 2244, 012072.	0.4	2
5	A concept for the extraction of the most refractory elements at CERN-ISOLDE as carbonyl complex ions. European Physical Journal A, 2022, 58, .	2.5	2
6	CERN-MEDICIS: A Review Since Commissioning in 2017. Frontiers in Medicine, 2021, 8, 693682.	2.6	22
7	Isotope Shifts of Radium Monofluoride Molecules. Physical Review Letters, 2021, 127, 033001.	7.8	23
8	Laser-assisted nuclear decay spectroscopy of $\text{Au}$ . Physical Review C, 2021, 104, 014604.	2.9	7
9	First observation of $\text{Hg}$ $\text{I}^2$ -decay spectroscopy of $\text{Hg}$ . Physical Review Letters, 2021, 127, 012501.	7.8	27
10	First observation of $\text{In}$ $\text{I}^2$ -decay spectroscopy of $\text{In}$ and new $\text{In}$ $\text{I}^2$ -decay branches of $\text{In}$ . Physical Review Letters, 2021, 127, 192501.	2.9	5
11	Large Shape Staggering in Neutron-Deficient Bi Isotopes. Physical Review Letters, 2021, 127, 192501.	7.8	27
12	Charge radii, moments, and masses of mercury isotopes across the $\text{N} = 126$ shell closure. Physical Review C, 2021, 104, .	2.9	5
13	First demonstration of Doppler-free 2-photon in-source laser spectroscopy at the ISOLDE-RILIS. Nuclear Instruments & Methods in Physics Research B, 2020, 463, 476-481.	1.4	6
14	In-source laser spectroscopy of dysprosium isotopes at the ISOLDE-RILIS. Nuclear Instruments & Methods in Physics Research B, 2020, 463, 472-475.	1.4	2
15	Design and tests for the new CERN-ISOLDE spallation source: an integrated tungsten converter surrounded by an annular UC target operated at 2000°C. Nuclear Instruments & Methods in Physics Research B, 2020, 463, 357-363.	1.4	3
16	Upgrades of the GANDALPH photodetachment detector towards the determination of the electron affinity of astatine. Nuclear Instruments & Methods in Physics Research B, 2020, 463, 277-279.	1.4	3
17	MELISSA: Laser ion source setup at CERN-MEDICIS facility. Blueprint. Nuclear Instruments & Methods in Physics Research B, 2020, 463, 460-463.	1.4	13
18	Atom beam emersion from hot cavity laser ion sources. Nuclear Instruments & Methods in Physics Research B, 2020, 463, 449-454.	1.4	3

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19	Laser-assisted decay spectroscopy for the ground states of $^{180}\text{Au}$ and $^{182}\text{Au}$ . Physical Review C, 2020, 102, .	2.9	10
20	Addendum: The observation of vibrating pear-shapes in radon nuclei. Nature Communications, 2020, 11, 3560.	12.8	9
21	$\hat{I}^2$ -delayed fission of isomers in Bi188. Physical Review C, 2020, 102, .	2.9	7
22	The electron affinity of astatine. Nature Communications, 2020, 11, 3824.	12.8	42
23	Detailed spectroscopy of doubly magic $^{132}\text{Sn}$ . Physical Review C, 2020, 102, .	2.9	10
24	Laser-assisted decay spectroscopy and mass spectrometry of $^{178}\text{Au}$ . Physical Review C, 2020, 102, .	2.9	8
25	Spectroscopy of short-lived radioactive molecules. Nature, 2020, 581, 396-400.	27.8	78
26	Determination of the electron affinity of astatine. Journal of Physics: Conference Series, 2020, 1412, 132024.	0.4	0
27	Hyperfine anomaly in gold and magnetic moments of $^{199}\text{Au}$ and $^{201}\text{Au}$ gold isomers. Physical Review C, 2020, 101, .	2.9	24
28	In-source laser photoionization spectroscopy of Bi isotopes: accuracy of the technique and methods of data analysis. Hyperfine Interactions, 2020, 241, 1.	0.5	3
29	Measurement and microscopic description of odd-even staggering of charge radii of exotic copper isotopes. Nature Physics, 2020, 16, 620-624.	16.7	76
30	Evolution of Octupole Deformation in Radium Nuclei from Coulomb Excitation of Radioactive $^{222}\text{Ra}$ . Physical Review C, 2019, 99, .	7.8	50
31	Fine structure in the $\hat{I}^{\pm}$ decay of At218. Physical Review C, 2019, 99, .	2.9	5
32	The observation of vibrating pear-shapes in radon nuclei. Nature Communications, 2019, 10, 2473.	12.8	32
33	Inverse odd-even staggering in nuclear charge radii and possible octupole collectivity in At217,218,219 revealed by in-source laser spectroscopy. Physical Review C, 2019, 99, .	2.9	13
34	Shape staggering of midshell mercury isotopes from in-source laser spectroscopy compared with density-functional-theory and Monte Carlo shell-model calculations. Physical Review C, 2019, 99, .	2.9	43
35	Determination of the first ionization energy of polonium by resonance ionization spectroscopy – Part II: Measurement of odd-parity Rydberg states at CERN-ISOLDE. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2019, 151, 72-82.	2.9	10
36	$\hat{I}^2$ decay of In133 : $\hat{I}^3$ emission from neutron-unbound states in Sn133. Physical Review C, 2019, 99, .	2.9	9

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37	High-resolution and low-background $^{163}\text{Ho}$ spectrum: interpretation of the resonance tails. European Physical Journal C, 2019, 79, 1.	3.9	15
38	Developments towards the delivery of selenium ion beams at ISOLDE. European Physical Journal A, 2019, 55, 1.	2.5	3
39	Coulomb excitation of pear-shaped nuclei. EPJ Web of Conferences, 2019, 223, 01007.	0.3	0
40	Production, isolation and characterization of radiochemically pure $^{163}\text{Ho}$ samples for the ECHO-project. Radiochimica Acta, 2018, 106, 535-547.	1.2	10
41	Laser-spectroscopy studies of the nuclear structure of neutron-rich radium. Physical Review C, 2018, 97, .	2.9	21
42	Development of a proton-to-neutron converter for radioisotope production at ISAC-TRIUMF. Journal of Physics: Conference Series, 2018, 1067, 082022.	0.4	2
43	Change in structure between the $\lambda^{\pi} = \lambda^{-1/2}$ states in $^{181}\text{Tl}$ and $^{177,179}\text{Au}$ . Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2018, 786, 355-363.	4.1	22
44	Characterization of the shape-staggering effect in mercury nuclei. Nature Physics, 2018, 14, 1163-1167.	16.7	106
45	Radium ionization scheme development: The first observed autoionizing states and optical pumping effects in the hot cavity environment. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2018, 150, 99-104.	2.9	3
46	Charge radii and electromagnetic moments of $^{195}\text{Au}$ and $^{211}\text{Po}$ . Physical Review C, 2018, 97, .	2.9	35
47	Enhancing the extraction of laser-ionized beams from an arc discharge ion source volume. Nuclear Instruments & Methods in Physics Research B, 2018, 431, 59-66.	1.4	14
48	Optimizing Ti:Sapphire laser for quantitative biomedical imaging. , 2018, , .		0
49	The identification of autoionizing states of atomic chromium for the resonance ionization laser ion source of the ISOLDE radioactive ion beam facility. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2017, 129, 58-63.	2.9	7
50	Towards high-resolution laser ionization spectroscopy of the heaviest elements in supersonic gas jet expansion. Nature Communications, 2017, 8, 14520.	12.8	90
51	Changes in mean-squared charge radii and magnetic moments of $^{179}\text{Tl}$ and $^{184}\text{Au}$ . Spectroscopy of the long-lived excited state in the neutron-deficient nuclides $^{195}\text{Au}$ and $^{197}\text{Po}$ by precision mass measurements. Physical Review C, 2017, 96, .	2.9	23
52	Dipole and quadrupole moments of $^{195}\text{Au}$ and $^{197}\text{Po}$ . Physical Review C, 2017, 96, .	2.9	15
53	Dipole and quadrupole moments of $^{28}\text{Ga}$ and $^{28}\text{Cu}$ . Physical Review C, 2017, 96, .	2.9	15
54	as a test of the robustness of the $^{28}\text{Cu}$ ground-state properties in the region near $^{28}\text{Cu}$ . Physical Review C, 2017, 96, .	2.9	41

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55	Laser photodetachment of radioactive $^{128}\text{I}^{\sim}$ . Journal of Physics G: Nuclear and Particle Physics, 2017, 44, 104003.	3.6	13
56	Penning-trap mass spectrometry and mean-field study of nuclear shape coexistence in the neutron-deficient lead region. Physical Review C, 2017, 95, .	2.9	12
57	In-gas laser ionization and spectroscopy of actinium isotopes near the N=126 closed shell. Physical Review C, 2017, 96, .	2.9	27
58	RILIS-ionized mercury and tellurium beams at ISOLDE CERN. Hyperfine Interactions, 2017, 238, 1.	0.5	11
59	Resonance ionization scheme development for europium. Hyperfine Interactions, 2017, 238, 1.	0.5	1
60	Ion beam production and study of radioactive isotopes with the laser ion source at ISOLDE. Journal of Physics G: Nuclear and Particle Physics, 2017, 44, 084006.	3.6	97
61	The electron capture in $^{163}\text{Ho}$ experiment "ECHO. European Physical Journal: Special Topics, 2017, 226, 1623-1694.	2.6	97
62	Continuously tunable pulsed Ti:Sa laser self-seeded by an extended grating cavity. Optics Express, 2017, 25, 1123.	3.4	9
63	The CERN/ISOLDE Laser Ion Source. , 2017, , .		0
64	Laser and decay spectroscopy of the short-lived isotope $^{214}\text{Fr}$ in the vicinity of the N=126 shell closure. Physical Review C, 2016, 94, .	2.9	15
65	High-resolution laser spectroscopy with the Collinear Resonance Ionisation Spectroscopy (CRIS) experiment at CERN-ISOLDE. Nuclear Instruments & Methods in Physics Research B, 2016, 376, 284-287.	1.4	16
66	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
67	$^{214}\text{Fr}$ -delayed fission and $^{214}\text{Fr}$ decay of $^{214}\text{Fr}$ in the vicinity of the N=126 shell closure. Physical Review C, 2016, 94, .	2.9	10
68	Quadrupole moments of odd-A $^{53}\text{Mn}$ : Onset of collectivity towards N = 40. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2016, 760, 387-392.	4.1	21
69	Structure of low-lying states in $^{140}\text{Sm}$ studied by Coulomb excitation. Physical Review C, 2016, 93, .	2.9	12
70	Combined high-resolution laser spectroscopy and nuclear decay spectroscopy for the study of the low-lying states in $^{206}\text{Fr}$ , $^{202}\text{At}$ , and $^{198}\text{Bi}$ . Physical Review C, 2016, 93, .	2.9	14
71	Laser resonance ionization scheme development for tellurium and germanium at the dual Ti:Sa "Dye ISOLDE RILIS. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2016, 830, 510-514.	1.6	9
72	Advances in surface ion suppression from RILIS: Towards the Time-of-Flight Laser Ion Source (ToF-LIS). Nuclear Instruments & Methods in Physics Research B, 2016, 376, 86-90.	1.4	6

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73	Recent Results for the ECHo Experiment. Journal of Low Temperature Physics, 2016, 184, 910-921.	1.4	17
74	Laser ion beam production at CERN-ISOLDE: New features â€œ More possibilities. Nuclear Instruments & Methods in Physics Research B, 2016, 376, 91-96.	1.4	38
75	Blurring the boundaries between ion sources: The application of the RILIS inside a FEBIAD type ion source at ISOLDE. Nuclear Instruments & Methods in Physics Research B, 2016, 376, 39-45.	1.4	22
76	Use of a Continuous Wave Laser and Pockels Cell for Sensitive High-Resolution Collinear Resonance Ionization Spectroscopy. Physical Review Letters, 2015, 115, 132501.	7.8	54
77	In-Source Laser Spectroscopy with the Laser Ion Source and Trap: First Direct Study of the Ground-State Properties of $^{217}\text{Po}$ . Physical Review X, 2015, 5, .	8.9	18
78	An inductively heated hot cavity catcher laser ion source. Review of Scientific Instruments, 2015, 86, 123501.	1.3	3
79	On-line implementation and first operation of the Laser Ion Source and Trap at ISOLDE/CERN. Nuclear Instruments & Methods in Physics Research B, 2015, 344, 83-95.	1.4	24
80	Experimental tests of an advanced proton-to-neutron converter at ISOLDE-CERN. Nuclear Instruments & Methods in Physics Research B, 2014, 336, 143-148.	1.4	22
81	Laser spectroscopy of francium isotopes at the borders of the region of reflection asymmetry. Physical Review C, 2014, 90, .	2.9	39
82	Decay-Assisted Laser Spectroscopy of Neutron-Deficient Francium. Physical Review X, 2014, 4, .	8.9	34
83	Evolution of fission-fragment mass distributions in the neutron-deficient lead region. Physical Review C, 2014, 90, .	2.9	39
84	RILIS applications at CERN/ISOLDE. Hyperfine Interactions, 2014, 227, 101-111.	0.5	10
85	Measurement of the first ionization potential of astatine by laser ionization spectroscopy. Nature Communications, 2013, 4, 1835.	12.8	89
86	The Collinear Resonance Ionization Spectroscopy (CRIS) experimental setup at CERN-ISOLDE. Nuclear Instruments & Methods in Physics Research B, 2013, 317, 565-569.	1.4	36
87	First results from the CRIS experiment. Hyperfine Interactions, 2013, 227, 131.	0.5	2
88	Status of GISELE: a resonant ionization laser ion source for the production of radioactive ions at GANIL. Hyperfine Interactions, 2013, 216, 121-126.	0.5	1
89	Narrow linewidth operation of the RILIS titanium: Sapphire laser at ISOLDE/CERN. Nuclear Instruments & Methods in Physics Research B, 2013, 317, 561-564.	1.4	33
90	A dedicated decay-spectroscopy station for the collinear resonance ionization experiment at ISOLDE. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2013, 707, 35-39.	1.6	19

#	ARTICLE	IF	CITATIONS
91	First application of the Laser Ion Source and Trap (LIST) for on-line experiments at ISOLDE. Nuclear Instruments & Methods in Physics Research B, 2013, 317, 417-421.	1.4	22
92	Data acquisition, remote control and equipment monitoring for ISOLDE RILIS. Nuclear Instruments & Methods in Physics Research B, 2013, 317, 557-560.	1.4	17
93	New developments of the in-source spectroscopy method at RILIS/ISOLDE. Nuclear Instruments & Methods in Physics Research B, 2013, 317, 550-556.	1.4	47
94	Collinear Resonance Ionization Spectroscopy of Neutron-Deficient Francium Isotopes. Physical Review Letters, 2013, 111, 212501.	7.8	63
95	Hyperfine structure and isotope shift in the $3s^2$ $^3P^o$ state of $^{229}\text{Th}$ . $s^2$ $^3P^o$ $^{229}\text{Th}$	2.5	6
96	CRIS: A new method in isomeric beam production. EPJ Web of Conferences, 2013, 63, 01007.	0.3	3
97	Status of GISELE: a resonant ionization laser ion source for the production of radioactive ions at GANIL. , 2013, , 121-126.		2
98	Upgrade of the resonance ionization laser ion source at ISOLDE on-line isotope separation facility: New lasers and new ion beams. Review of Scientific Instruments, 2012, 83, 02A903.	1.3	83
99	Development of the CRIS (Collinear Resonant Ionisation Spectroscopy) beam line. Journal of Physics: Conference Series, 2012, 381, 012070.	0.4	19
100	Laser assisted decay spectroscopy at the CRIS beam line at ISOLDE. Journal of Physics: Conference Series, 2012, 381, 012128.	0.4	12
101	Laser developments and resonance ionization spectroscopy at IGISOL. European Physical Journal A, 2012, 48, 1.	2.5	22
102	Laser developments and resonance ionization spectroscopy at IGISOL. , 2012, , 295-309.		0
103	A complementary laser system for ISOLDE RILIS. Journal of Physics: Conference Series, 2011, 312, 052020.	0.4	60
104	Resonance ionization spectroscopy of thorium isotopes towards a laser spectroscopic identification of the low-lying 7.6 eV isomer of $^{229}\text{Th}$ . Journal of Physics B: Atomic, Molecular and Optical Physics, 2011, 44, 165005.	1.5	32
105	The selective and efficient laser ion source and trap project LIST for on-line production of exotic nuclides. Hyperfine Interactions, 2010, 196, 151-160.	0.5	6
106	In-source resonance ionization spectroscopy of high lying energy levels in atomic uranium. Hyperfine Interactions, 2010, 196, 71-79.	0.5	12
107	Determination of the first ionization potential of technetium. Physical Review A, 2010, 81, .	2.5	13
108	GISELE: A resonant ionization laser ion source for the production of radioactive ions at GANIL. Review of Scientific Instruments, 2010, 81, 02A910.	1.3	33

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109	Ion production from solid state laser ion sources. Review of Scientific Instruments, 2010, 81, 02A514.	1.3	9
110	The laser ion source trap for highest isobaric selectivity in online exotic isotope production. Review of Scientific Instruments, 2010, 81, 02A515.	1.3	23
111	Laser Spectroscopy of Niobium Fission Fragments: First Use of Optical Pumping in an Ion Beam Cooler Buncher. Physical Review Letters, 2009, 102, 222501.	7.8	88
112	A hot cavity laser ion source at IGISOL. European Physical Journal A, 2009, 42, 509.	2.5	15
113	An All-Solid-State High Repetition Rate Titanium:Sapphire Laser System For Resonance Ionization Laser Ion Sources. , 2009, , .		31