

V N Fedosseev

List of Publications by Year in descending order

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129
papers

3,485
citations

117625

34
h-index

161849

54
g-index

130
all docs

130
docs citations

130
times ranked

2216
citing authors

#	ARTICLE	IF	CITATIONS
1	Revised rates for the stellar triple- α process from measurement of ^{12}C nuclear resonances. Nature, 2005, 433, 136-139.	27.8	205
2	New Type of Asymmetric Fission in Proton-Rich Nuclei. Physical Review Letters, 2010, 105, 252502.	7.8	197
3	Acceleration of electrons in the plasma wakefield of a proton bunch. Nature, 2018, 561, 363-367.	27.8	162
4	Nuclear Spins and Magnetic Moments of ^{71}Cu and ^{73}Cu Isotopes beyond ^{75}Cu . Inversion of ^{71}Cu and ^{73}Cu Isotopes beyond ^{75}Cu . Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2013, 261, 1-5.	7.8	150
5	The Miniball spectrometer. European Physical Journal A, 2013, 49, 1.	2.5	126
6	Characterization of the shape-staggering effect in mercury nuclei. Nature Physics, 2018, 14, 1163-1167.	16.7	106
7	Ion beam production and study of radioactive isotopes with the laser ion source at ISOLDE. Journal of Physics C: Nuclear and Particle Physics, 2017, 44, 084006.	3.6	97
8	Resonance laser ionization of atoms for nuclear physics. Physica Scripta, 2012, 85, 058104.	2.5	92
9	Measurement of the first ionization potential of astatine by laser ionization spectroscopy. Nature Communications, 2013, 4, 1835.	12.8	89
10	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
11	Interplay between Single-Particle and Collective Effects in the Odd- ^{71}Cu and ^{73}Cu Isotopes beyond ^{75}Cu . Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2016, 829, 76-82.	7.8	80
12	AWAKE, The Advanced Proton Driven Plasma Wakefield Acceleration Experiment at CERN. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2016, 829, 76-82.	1.6	77
13	Coulomb Excitation of $^{68,70}\text{Cu}$: First Use of Postaccelerated Isomeric Beams. Physical Review Letters, 2007, 98, 122701.	7.8	70
14	Coulomb Excitation of Neutron-Rich Zn Isotopes: First Observation of the 21^+ State in ^{80}Zn . Physical Review Letters, 2007, 99, 142501.	7.8	66
15	Collinear Resonance Ionization Spectroscopy of Neutron-Deficient Francium Isotopes. Physical Review Letters, 2013, 111, 212501.	7.8	63
16	A complementary laser system for ISOLDE RILIS. Journal of Physics: Conference Series, 2011, 312, 052020.	0.4	60
17	Low-energy Coulomb excitation of neutron-rich zinc isotopes. Physical Review C, 2009, 79, .	2.9	58
18	Path to AWAKE: Evolution of the concept. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2016, 829, 3-16.	1.6	55

#	ARTICLE	IF	CITATIONS
19	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
20	Electromagnetic moments of odd- A nuclei. Physical Review C, 2014, 89, .	2.9	51
21	Experimental Observation of Plasma Wakefield Growth Driven by the Seeded Self-Modulation of a Proton Bunch. Physical Review Letters, 2019, 122, 054801.	7.8	49
22	Experimental Observation of Proton Bunch Modulation in a Plasma at Varying Plasma Densities. Physical Review Letters, 2019, 122, 054802.	7.8	49
23	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
24	Characterization of the low-lying 0^+ states in ^{193}Po and ^{203}Po . Physical Review C, 2014, 89, .	2.9	42
25	The electron affinity of astatine. Nature Communications, 2020, 11, 3824.	12.8	42
26	^{180}Th -delayed fission of ^{180}Th . Physical Review C, 2013, 88, .	2.9	41
27	^{58}Cr and ^{63}Cr . Nuclear Collectivity Towards the $N=40$ Island. Physical Review C, 2014, 90, .	7.8	40
28	Laser spectroscopy of francium isotopes at the borders of the region of reflection asymmetry. Physical Review C, 2014, 90, .	2.9	39
29	Evolution of fission-fragment mass distributions in the neutron-deficient lead region. Physical Review C, 2014, 90, .	2.9	39
30	The ISOLDE RILIS pump laser upgrade and the LARIS Laboratory. Hyperfine Interactions, 2010, 196, 129-141.	0.5	37
31	AWAKE readiness for the study of the seeded self-modulation of a 400 GeV proton bunch. Plasma Physics and Controlled Fusion, 2018, 60, 014046.	2.1	37
32	Laser Spectroscopy of Neutron-Rich ^{207}Hg and ^{208}Hg Isotopes: Illuminating the Kink and Odd-Even Staggering in Charge Radii across the Coulomb Excitation of ^{208}Hg . Physical Review Letters, 2021, 127, 192501.	7.8	37
33	In-source laser spectroscopy of ^{28}F and ^{68}F at ^{28}F and ^{68}F . Physical Review C, 2014, 90, .	2.9	35
34	Direct evidence for a change in the quasiparticle energy sequence in ^{77}At and ^{78}At . Physical Review C, 2018, 97, .	2.9	35
35	Charge radii and electromagnetic moments of ^{77}At and ^{78}At . Physical Review C, 2018, 97, .	2.9	35
36	Large Shape Staggering in Neutron-Deficient Bi Isotopes. Physical Review Letters, 2021, 127, 192501.	7.8	27

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37	First observation of the \hat{I}^2 decay of neutron-rich ^{218}Bi by the pulsed-release technique and resonant laser ionization. <i>Physical Review C</i> , 2004, 69, .	2.9	24
38	Hyperfine anomaly in gold and magnetic moments of ^{199}Au gold isomers. <i>Physical Review C</i> , 2020, 101, .	2.9	24
39	The laser ion source trap for highest isobaric selectivity in online exotic isotope production. <i>Review of Scientific Instruments</i> , 2010, 81, 02A515.	1.3	23
40	Decay of the ^{137}Ba β^- -process nuclides. <i>Physical Review C</i> , 2020, 101, .	2.9	23
41	Changes in mean squared charge radii and magnetic moments of ^{137}Ba and ^{138}Ba β^- -decay nuclides measured by in-source laser spectroscopy. <i>Physical Review C</i> , 2017, 95, .	2.9	23
42	Alkali suppression within laser ion-source cavities and time structure of the laser ionized ion-bunches. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2003, 204, 363-367.	1.4	22
43	CERN-MEDICIS: A Review Since Commissioning in 2017. <i>Frontiers in Medicine</i> , 2021, 8, 693682.	2.6	22
44	Laser-spectroscopy studies of the nuclear structure of neutron-rich radium. <i>Physical Review C</i> , 2018, 97, .	2.9	21
45	Structure of ^{191}Pb from \hat{I}^{\pm} - and \hat{I}^2 -decay spectroscopy. <i>Journal of Physics G: Nuclear and Particle Physics</i> , 2010, 37, 125103.	3.6	20
46	X-ray Photoemission Spectroscopy Studies of Cesium Antimonide Photocathodes for Photoinjector Applications. <i>Physics Procedia</i> , 2015, 77, 34-41.	1.2	20
47	Ionization Scheme Development at the ISOLDE RILIS. <i>Hyperfine Interactions</i> , 2006, 162, 15-27.	0.5	19
48	In-trap decay of ^{61}Mn and Coulomb excitation of $^{61}\text{Mn}/^{61}\text{Fe}$. <i>European Physical Journal A</i> , 2009, 42, 401.	2.5	19
49	Alternative approach to populate and study the ^{229}Th nuclear clock isomer. <i>Physical Review C</i> , 2019, 100, .	2.9	19
50	Continuously tunable diamond Raman laser for resonance laser ionization. <i>Optics Letters</i> , 2019, 44, 3924.	3.3	19
51	\hat{I}^2 -decay properties of ^{72}Ni and ^{72}Cu . <i>Physical Review C</i> , 2006, 74, .	2.9	18
52	Coulomb excitation of ^{73}Ga . <i>Physical Review C</i> , 2010, 82, .	2.9	17
53	The electron accelerators for the AWAKE experiment at CERN – Baseline and Future Developments. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2018, 909, 102-106.	1.6	16
54	Recent developments in production of radioactive ion beams with the selective laser ion source at the on-line isotope separator ISOLDE. <i>Review of Scientific Instruments</i> , 2004, 75, 1614-1616.	1.3	15

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55	<p>Laser and decay spectroscopy of the short-lived isotope ^{214}Po in the vicinity of the ^{214}Pb β-decay. Physical Review C, 2016, 93, .</p> <p>Spectroscopy of the long-lived excited state in the neutron-deficient nuclides ^{126}N and ^{126}O. Physical Review C, 2016, 93, .</p>	2.9	15
56	<p>Laser spectroscopy of the long-lived excited state in the neutron-deficient nuclides ^{195}Po and ^{199}Po. Physical Review C, 2017, 96, .</p>	2.9	15
57	<p>Combined high-resolution laser spectroscopy and nuclear decay spectroscopy for the study of the low-lying states in ^{192}Pb, ^{190}Pb, and ^{199}Pb. Physical Review C, 2017, 96, .</p>	2.9	14
58	<p>Combined high-resolution laser spectroscopy and nuclear decay spectroscopy for the study of the low-lying states in ^{206}Fr, ^{202}At, and ^{198}Bi. Physical Review C, 2016, 93, .</p>	2.9	14
59	<p>Broadly tunable linewidth-invariant Raman Stokes comb for selective resonance photoionization. Optics Express, 2020, 28, 8589.</p>	3.4	14
60	<p>Spectral synthesis of multimode lasers to the Fourier limit in integrated Fabry-Pérot diamond resonators. Optica, 2022, 9, 317.</p>	9.3	14
61	<p>Laser spectroscopy of the chain ^{179}Tl to levels in ^{179}Pb. Physical Review C, 2013, 88, .</p>	2.9	13
62	<p>Laser spectroscopy of the chain ^{61}Mn to levels in ^{61}Fe. Physical Review C, 2013, 88, .</p>	2.9	13
63	<p>Shape coexistence studied in $^{182,184}\text{Hg}$ via the $^{182,184}\text{Pb}$ β-decay of $^{182,184}\text{Tl}$. Journal of Physics G: Nuclear and Particle Physics, 2017, 44, 074001.</p>	3.6	13
64	<p>Laser photodetachment of radioactive ^{128}I. Journal of Physics G: Nuclear and Particle Physics, 2017, 44, 104003.</p>	3.6	13
65	<p>Inverse odd-even staggering in nuclear charge radii and possible octupole collectivity in $^{217,218,219}\text{At}$ revealed by in-source laser spectroscopy. Physical Review C, 2019, 99, .</p>	2.9	13
66	<p>Transition between Instability and Seeded Self-Modulation of a Relativistic Particle Bunch in Plasma. Physical Review Letters, 2021, 126, 164802.</p>	7.8	13
67	<p>Development of a RILIS ionisation scheme for gold at ISOLDE, CERN. Hyperfine Interactions, 2006, 171, 109-116.</p>	0.5	12
68	<p>Structure of low-lying states in ^{140}Sm studied by Coulomb excitation. Physical Review C, 2016, 93, .</p>	2.9	12
69	<p>Penning-trap mass spectrometry and mean-field study of nuclear shape coexistence in the neutron-deficient lead region. Physical Review C, 2017, 95, .</p>	2.9	12
70	<p>The high resolution spectrometer at ISOLDE. Nuclear Instruments & Methods in Physics Research B, 2003, 204, 497-501.</p>	1.4	11
71	<p>Fast phase switching within the bunch train of the PHIN photo-injector at CERN using fiber-optic modulators on the drive laser. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2011, 659, 1-8.</p>	1.6	11
72	<p>Coulomb excitation of the ^{70}Cu isomer in ^{70}Zn. Physical Review C, 2011, 84, .</p>	2.9	11

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73	Gas-cell-based setup for the production and study of neutron rich heavy nuclei. Hyperfine Interactions, 2014, 227, 181-189.	0.5	11
74	RILIS-ionized mercury and tellurium beams at ISOLDE CERN. Hyperfine Interactions, 2017, 238, 1.	0.5	11
75	\hat{I}^{\pm} -decay study of the $^{182,184}\text{Tl}$. Journal of Physics G: Nuclear and Particle Physics, 2016, 43, 025102.	2.9	11
76	Production of Mass-Separated Erbium-169 Towards the First Preclinical in vitro Investigations. Frontiers in Medicine, 2021, 8, 643175.	2.6	11
77	Gamma Factory at CERN -- Novel Research Tools Made of Light. Acta Physica Polonica B, 2019, 50, 1191.	0.8	11
78	Efficient Production of High Specific Activity Thulium-167 at Paul Scherrer Institute and CERN-MEDICIS. Frontiers in Medicine, 2021, 8, 712374.	2.6	11
79	FIRST USE OF POST-ACCELERATED ISOMERIC BEAMS FOR COULOMB EXCITATION STUDIES OF ODD-ODD NUCLEI AROUND N=40. International Journal of Modern Physics E, 2006, 15, 1505-1512.	1.0	10
80	RILIS applications at CERN/ISOLDE. Hyperfine Interactions, 2014, 227, 101-111.	0.5	10
81	\hat{I}^{\pm} -decay study of $^{182,184}\text{Tl}$. Journal of Physics G: Nuclear and Particle Physics, 2016, 43, 025102.	3.6	10
82	\hat{I}^{\pm} -delayed fission and \hat{I}^{\pm} -decay of $^{182,184}\text{Tl}$. Journal of Physics G: Nuclear and Particle Physics, 2016, 43, 025102.	2.9	10
83	Laser-assisted decay spectroscopy for the ground states of $^{180,182}\text{Au}$. Physical Review C, 2020, 102, 014302.	2.9	10
84	Detailed spectroscopy of doubly magic ^{132}Sn . Physical Review C, 2020, 102, 014302.	2.9	10
85	Charge radii, moments, and masses of mercury isotopes across the shell closure. Physical Review C, 2021, 104, .	2.9	10
86	Experimental study of the $^{66}\text{Ni}(d,p)^{67}\text{Ni}$ one-neutron transfer reaction. Physical Review C, 2015, 91, .	2.9	9
87	\hat{I}^{\pm} decay of ^{133}In : \hat{I}^{\pm} emission from neutron-unbound states in ^{133}Sn . Physical Review C, 2019, 99, .	2.9	9
88	Measurement of the ^{7}Be cross section at thermal energy. Physical Review C, 2019, 99, .	2.9	9
89	Proton-driven plasma wakefield acceleration in AWAKE. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2019, 377, 20180418.	3.4	8
90	Microscopic structure of coexisting ^{68}Ni states in ^{68}Ni probed via two-neutron transfer. Physical Review C, 2019, 99, .	2.9	8

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91	Laser-assisted decay spectroscopy and mass spectrometry of ^{178}Au . Physical Review C, 2020, 102, .	2.9	8
92	Synthesis, surface chemical analysis, lifetime studies and degradation mechanisms of Cs-K-Sb photocathodes. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2021, 986, 164724.	1.6	8
93	Tunable spectral squeezers based on monolithically integrated diamond Raman resonators. Applied Physics Letters, 2022, 120, .	3.3	8
94	Controlled Growth of the Self-Modulation of a Relativistic Proton Bunch in Plasma. Physical Review Letters, 2022, 129, .	7.8	8
95	Gamow-Teller decay population of ^{64}Ni levels in the decay of ^{64}Ni . Physical Review C, 2013, 86, .	2.9	7
96	Internal decay of the ^{184}Tl state in ^{184}Tl . Physical Review C, 2015, 92, .	2.9	7
97	Low-energy Coulomb excitation of ^{62}Fe and ^{62}Mn following in-beam decay of ^{62}Mn . European Physical Journal A, 2015, 51, 1.	2.5	7
98	\hat{I}^2 -delayed fission of isomers in $\text{Bi}188$. Physical Review C, 2020, 102, .	2.9	7
99	Laser-assisted nuclear decay spectroscopy of ^{176}Au and ^{177}Au . Physical Review C, 2021, 104, .	2.9	7
100	Production and study of heavy neutron rich nuclei formed in multi-nucleon transfer reactions. Hyperfine Interactions, 2013, 216, 109-113.	0.5	6
101	The electron accelerator for the AWAKE experiment at CERN. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2016, 829, 73-75.	1.6	5
102	Fine structure in the \hat{I}^{\pm} decay of $\text{At}218$. Physical Review C, 2019, 99, .	2.9	5
103	Proton Bunch Self-Modulation in Plasma with Density Gradient. Physical Review Letters, 2020, 125, 264801.	7.8	5
104	First \hat{I}^2 -decay spectroscopy of ^{135}In and new \hat{I}^2 -decay branches. Physical Review C, 2017, 96, .	2.9	5
105	Detailed \hat{I}^2 -decay study of ^{180}Tl . Physical Review C, 2017, 96, .	2.9	4
106	Current status of GALS setup in JINR. Hyperfine Interactions, 2017, 238, 1.	0.5	4
107	Long-range propagation of ultrafast ionizing laser pulses in a resonant nonlinear medium. Physical Review A, 2021, 104, .	2.5	4
108	Early onset of deformation in the neutron-deficient polonium isotopes. Journal of Physics: Conference Series, 2012, 381, 012072.	0.4	3

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109	GALS - setup for production and study of multinucleon transfer reaction products: present status. Journal of Physics: Conference Series, 2016, 724, 012057.	0.4	3
110	Heavy neutron rich nuclei: production and investigation. Journal of Physics: Conference Series, 2018, 1023, 012004.	0.4	3
111	Developments towards the delivery of selenium ion beams at ISOLDE. European Physical Journal A, 2019, 55, 1.	2.5	3
112	Atom beam emersion from hot cavity laser ion sources. Nuclear Instruments & Methods in Physics Research B, 2020, 463, 449-454.	1.4	3
113	First results from the CRIS experiment. Hyperfine Interactions, 2013, 227, 131.	0.5	2
114	Multi-nucleon transfer reactions for production and study of heavy neutron rich nuclei. Journal of Physics: Conference Series, 2014, 533, 012025.	0.4	2
115	α -decay branching ratio of ^{219}Po ^{219}Po α -decay branching ratio of ^{219}Po . Physical Review C, 2020, 101,		2
116	GALS " setup for production and study of heavy neutron rich nuclei. EPJ Web of Conferences, 2015, 86, 00067.	0.3	1
117	Resonance ionization scheme development for europium. Hyperfine Interactions, 2017, 238, 1.	0.5	1
118	Development of a RILIS ionisation scheme for gold at ISOLDE, CERN. , 2007, , 109-116.		1
119	New \hat{T}^2 -decaying state in Bi214. Physical Review C, 2021, 104, ,	2.9	1
120	Monolithically integrated widely tunable single-frequency diamond Raman lasers. , 2021, , ,		1
121	Decay modes of the ^{219}Po isomeric state in ^{219}Po ^{219}Po isomeric state in ^{219}Po . Physical Review C, 2022, 105,	2.9	1
122	Coulomb Excitation of the ^{50}Zn nucleus [⁸⁰ Zn]. AIP Conference Proceedings, 2008, , ,	0.4	0
123	High-power UV light generation in picosecond pulse trains. , 2013, , ,		0
124	Production and investigation of heavy neutron rich nuclei. EPJ Web of Conferences, 2017, 163, 00065.	0.3	0
125	Production and study of neutron rich heavy nuclei, GALS setup. Journal of Physics: Conference Series, 2020, 1555, 012021.	0.4	0
126	The ISOLDE RILIS pump laser upgrade and the LARIS Laboratory. , 2010, , 129-141.		0

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127	Continuously tunable diamond Raman laser for resonance ionization experiments at CERN. , 2019, , .		0
128	Enabling the use of Raman lasers for spectroscopy: continuous tunability, narrow linewidth and efficient cascading in diamond. , 2020, , .		0
129	Spectral and polarization effects in cascaded narrow linewidth diamond Raman lasers. , 2020, , .		0