

# Alexander S Volya

## List of Publications by Year in descending order

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143  
papers

2,564  
citations

218677

26  
h-index

223800

46  
g-index

174  
all docs

174  
docs citations

174  
times ranked

1406  
citing authors

#	ARTICLE	IF	CITATIONS
1	Discrete and Continuum Spectra in the Unified Shell Model Approach. Physical Review Letters, 2005, 94, 052501.	7.8	145
2	Continuum shell model. Physical Review C, 2006, 74, .	2.9	121
3	Proton drip-line calculations and therpprocess. Physical Review C, 2002, 65, .	2.9	117
4	First Observation of Ground State Dineutron Decay: ${}^{16}\text{Be}$ Shell Gap near ${}^{16}\text{Z}$ . Physical Review Letters, 2012, 108, 102501.	7.8	117
5	Gap near ${}^{100}\text{Sn}$ from Intermediate-Energy Coulomb Excitations in Even-Mass ${}^{100}\text{Z}$ . Physical Review Letters, 2011, 106, 102501.	7.8	112
6	Exact solution of the nuclear pairing problem. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2001, 509, 37-42.	4.1	98
7	Non-Hermitian effective Hamiltonian and continuum shell model. Physical Review C, 2003, 67, .	2.9	98
8	Nuclear structure, random interactions and mesoscopic physics. Physics Reports, 2004, 391, 311-352.	25.6	77
9	Geometric Chaoticity Leads to Ordered Spectra for Randomly Interacting Fermions. Physical Review Letters, 2000, 85, 4016-4019.	7.8	73
10	Na29: Defining the Edge of the Island of Inversion for $Z=11$ . Physical Review Letters, 2005, 94, 162501.	7.8	73
11	Chaotic Wave Functions and Exponential Convergence of Low-Lying Energy Eigenvalues. Physical Review Letters, 1999, 82, 2064-2067.	7.8	64
12	Triple configuration coexistence in ${}^{44}\text{S}$ . Physical Review C, 2011, 83, 044301.	2.9	64
13	Isobars ${}^{33}\text{Mg}$ and ${}^{33}\text{Al}$ . Physical Review C, 2006, 73, .	7.8	56
14	${}^{12}\text{-delayed } {}^{13}\text{ spectroscopy of neutron rich } {}^{27,28,29}\text{Na}$ . Physical Review C, 2006, 73, .	2.9	45
15	Nuclear clustering using a modern shell model approach. Physical Review C, 2015, 91, .	2.9	44
16	Nuclear pairing: New perspectives. Physics of Atomic Nuclei, 2003, 66, 1781-1801.	0.4	43
17	Non-exponential and oscillatory decays in quantum mechanics. Europhysics Letters, 2014, 107, 40001.	2.0	42
18	Time-dependent approach to the continuum shell model. Physical Review C, 2009, 79, .	2.9	39

#	ARTICLE	IF	CITATIONS
19	White paper: from bound states to the continuum. Journal of Physics G: Nuclear and Particle Physics, 2020, 47, 123001.	3.6	38
20	Lowest $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mi} \rangle \langle \text{mml:mi} \rangle \langle \text{mml:mo} \rangle = \langle \text{mml:mo} \rangle \langle \text{mml:mn} \rangle 0 \langle \text{mml:mn} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:math} \rangle$ proton resonance in $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" \rangle \langle \text{mml:mmultiscripts} \rangle \langle \text{mml:mi mathvariant="normal" \rangle Si \langle \text{mml:mi} \rangle \langle \text{mml:mprescripts} \rangle \langle \text{mml:none} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mn} \rangle 26 \langle \text{mml:mn} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mmultiscripts} \rangle \langle \text{mml:math} \rangle$ and implications	2.9	37
21	Thermodynamics of pairing in mesoscopic systems. Physical Review C, 2007, 76, .	2.9	36
22	Study of Nuclear Clustering from an $\langle i \rangle Ab \hat{A} \text{Initio} \langle /i \rangle$ Perspective. Physical Review Letters, 2017, 119, 062501.	7.8	36
23	First observation of the $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" \rangle \langle \text{mml:msup} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mn} \rangle 13 \langle \text{mml:mn} \rangle \langle \text{mml:msup} \rangle \langle \text{mml:math} \rangle$ Li ground state. Physical Review C, 2013, 87, .	2.9	33
24	Invariant correlational entropy as a signature of quantum phase transitions in nuclei. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2003, 574, 27-34.	4.1	32
25	Competition between normal and intruder states inside the $\hat{A} \text{island of inversion} \hat{A}$ . Physical Review C, 2007, 76, .	2.9	28
26	Approaching the $\hat{A} \text{island of inversion} \hat{A}$ . $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" \rangle \langle \text{mml:mmultiscripts} \rangle \langle \text{mml:mi mathvariant="normal" \rangle P \langle \text{mml:mi} \rangle \langle \text{mml:mprescripts} \rangle \langle \text{mml:none} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mn} \rangle 34 \langle \text{mml:mn} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mmultiscripts} \rangle \langle \text{mml:math} \rangle$ . Physical Review C, 2009, 80, .	2.9	28
27	Continuum shell model and nuclear physics at the edge of stability. Physics of Atomic Nuclei, 2014, 77, 969-982.	0.4	25
28	Structure of $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" \rangle \langle \text{mml:mmultiscripts} \rangle \langle \text{mml:mi} \rangle Ne \langle \text{mml:mi} \rangle \langle \text{mml:mprescripts} \rangle \langle \text{mml:none} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mn} \rangle 20 \langle \text{mml:mn} \rangle \langle \text{mml:mmultiscripts} \rangle \langle \text{mml:math} \rangle$ states in resonance	2.9	23
29	Structure of $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mmultiscripts} \rangle \langle \text{mml:mi mathvariant="normal" \rangle O \langle \text{mml:mi} \rangle \langle \text{mml:mprescripts} \rangle \langle \text{mml:none} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mn} \rangle 16 \langle \text{mml:mn} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mmultiscripts} \rangle \langle \text{mml:math} \rangle$ and the quest for a comprehensive shell model interaction. Physical Review C, 2019, 100, .	2.9	21
30	$\hat{p} \hat{s} \text{Shell Gap Reduction in Neutron-Rich Systems and Cross-Shell Excitations in } O_{20}$ . Physical Review Letters, 2005, 94, 132501.	7.8	20
31	Evolution of the $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mi} \rangle N \langle \text{mml:mi} \rangle \langle \text{mml:mo} \rangle = \langle \text{mml:mo} \rangle \langle \text{mml:mn} \rangle 20 \langle \text{mml:mn} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mmultiscripts} \rangle \langle \text{mml:math} \rangle$ and 28 shell gaps and two-particle-two-hole states in the FSU interaction. Physical Review Research, 2020, 2, .	3.6	20
32	Coherent and chaotic properties of nuclear pairing. Physical Review C, 2002, 65, .	2.9	19
33	Relativistic mean field plus exact pairing approach to open shell nuclei. Physical Review C, 2014, 89, .	2.9	19
34	Nuclear structure of $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" \rangle \langle \text{mml:mmultiscripts} \rangle \langle \text{mml:mi mathvariant="normal" \rangle N \langle \text{mml:mi} \rangle \langle \text{mml:mprescripts} \rangle \langle \text{mml:none} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mn} \rangle 18 \langle \text{mml:mn} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mmultiscripts} \rangle \langle \text{mml:math} \rangle$ and the neighboring $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mi} \rangle N \langle \text{mml:mi} \rangle \langle \text{mml:mo} \rangle = \langle \text{mml:mo} \rangle \langle \text{mml:mn} \rangle 11 \langle \text{mml:mn} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:math} \rangle$ isotone	2.9	18
35	Neutron Resonance Widths and the Porter-Thomas Distribution. Physical Review Letters, 2015, 115, 052501.	7.8	18
36	$\hat{A} \text{Super-radiance} \hat{A}$ and the width of exotic baryons. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2004, 590, 45-50.	4.1	17

#	ARTICLE	IF	CITATIONS
37	Structure of $N_{12}$ using $C_{11}$ + resonance scattering. Physical Review C, 2006, 74, .	2.9	17
38	Quantum tunneling and scattering of a composite object reexamined. Physical Review C, 2010, 82, .	2.9	17
39	Split Isobaric Analog State in $Ni_{55}$ : Case of Strong Isospin Mixing. Physical Review Letters, 2013, 111, 262501.	7.8	17
40	Interplay of pairing and multipole interactions in a simple model. Physical Review C, 2002, 65, .	2.9	16
41	$\hat{I}^2$ -delayed $\hat{I}_{\pm}$ emission of $N_{18}$ : Broad $\hat{I}^{\pm}=1\hat{a}^{\pm}$ states in the $C_{14}+\hat{I}_{\pm}$ system. Physical Review C, 2007, 75, .	2.9	16
42	Intruder excitations in $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"} \langle \text{mml:mmultiscripts} \langle \text{mml:mi mathvariant="normal"} \rangle P \langle \text{mml:mi} \langle \text{mml:mprescripts} / \rangle \langle \text{mml:none} / \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mn} \rangle 35 \langle \text{mml:mn} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mmultiscripts} \rangle \langle \text{mml:math} \rangle .$ Physical Review C, 2008, 78, .	2.9	16
43	Complementary studies of $T=2A_{130}$ and the systematics of intruder states. Physical Review C, 2008, 77, .	2.9	16
44	Isomeric Character of the Lowest Observed $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"} \langle \text{mml:mrow} \rangle \langle \text{mml:msup} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mn} \rangle 4 \langle \text{mml:mn} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mo} \rangle + \langle \text{mml:mo} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mi} \rangle \langle \text{mml:math} \rangle$ State in $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"} \langle \text{mml:mrow} \rangle \langle \text{mml:mn} \rangle 8 \langle \text{mml:mn} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mmultiscripts} \rangle \langle \text{mml:math} \rangle$ .	7.8	16
45	Super-radiance and open quantum systems. AIP Conference Proceedings, 2005, .	0.4	15
46	Low-lying states in $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"} \langle \text{mml:mmultiscripts} \rangle \langle \text{mml:mi mathvariant="normal"} \rangle B \langle \text{mml:mi} \langle \text{mml:mprescripts} / \rangle \langle \text{mml:none} / \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mn} \rangle 8 \langle \text{mml:mn} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mmultiscripts} \rangle \langle \text{mml:math} \rangle .$ Physical Review C, 2010, 82, .	2.9	15
47	Exploring quantum dynamics in an open many-body system: transition to superradiance. Journal of Optics B: Quantum and Semiclassical Optics, 2003, 5, S450-S456.	1.4	14
48	Emergence of Symmetry from Random $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"} \langle \text{mml:mi} \rangle n \langle \text{mml:mi} \rangle \langle \text{mml:math} \rangle$ -Body Interactions. Physical Review Letters, 2008, 100, 162501.	7.8	14
49	Nuclear Schiff moment and soft vibrational modes. Physical Review C, 2008, 78, .	2.9	14
50	Porter-Thomas distribution in unstable many-body systems. Physical Review C, 2011, 83, .	2.9	14
51	Multi-intruder structures in $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"} \langle \text{mml:msup} \rangle \langle \text{mml:mrow} / \rangle \langle \text{mml:mn} \rangle 34 \langle \text{mml:mn} \rangle \langle \text{mml:msup} \rangle \langle \text{mml:math} \rangle$ P. Physical Review C, 2012, 85, .	2.9	13
52	Inverse-kinematics proton scattering from $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"} \langle \text{mml:mmultiscripts} \rangle \langle \text{mml:mi mathvariant="normal"} \rangle S \langle \text{mml:mprescripts} / \rangle \langle \text{mml:none} / \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mn} \rangle 42 \langle \text{mml:mn} \rangle \langle \text{mml:mo} \rangle , \langle \text{mml:mo} \rangle \langle \text{mml:mn} \rangle 44 \langle \text{mml:mn} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mmultiscripts} \rangle \langle \text{mml:mo} \rangle , \langle \text{mml:math} \rangle$ .	2.9	13
53	Clustering in structure and reactions using configuration interaction techniques. Physical Review C, 2019, 100, .	2.9	13
54	Physics of unstable nuclei: from structure to sequential decays. EPJ Web of Conferences, 2012, 38, 03003.	0.3	12



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73	Nuclear pairing and Coriolis effects in proton emitters. European Physical Journal A, 2005, 25, 161-163.	2.5	7
74	<p> <math display="block">\hat{I}^3</math> </p> <p> <math display="block">45</math> </p> <p> <math display="block">N</math> </p> <p> <math display="block">15</math> </p>	2.9	7
75	Time-dependent relaxation of observables in complex quantum systems. Journal of Physics Complexity, 2020, 1, 025007.	2.2	7
76	Observation of Ground-state Two-neutron Decay. Acta Physica Polonica B, 2013, 44, 543.	0.8	7
78	Electromagnetic transitions in neutron-rich F22. Physical Review C, 2007, 76, .	2.9	6
79	Cluster properties of nuclear states in the modern shell model approach. Journal of Physics: Conference Series, 2014, 569, 012054.	0.4	6
80	Neutron correlations in the decay of the first excited state of $^{11}\text{Li}$ . Nuclear Physics A, 2016, 955, 27-40.	1.5	6
81	Radiative decay of neutron-unbound intruder states in $^{19}\text{O}$ . Physical Review C, 2016, 93, .	2.9	6
82	<p> <math display="block">\hat{I}^2</math> </p> <p> <math display="block">\text{Si}</math> </p>		







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127	Many-Body Physics On The Border Of Nuclear Stability. AIP Conference Proceedings, 2005, , .	0.4	0
128	Many-Body Dynamics Coupled to Continuum and $\alpha$ -Pygmy-Resonances. AIP Conference Proceedings, 2005, , .	0.4	0
129	Continuum Shell Model, Reactions and Giant Resonances. AIP Conference Proceedings, 2006, , .	0.4	0
130	A model study of scattering of a composite object. Journal of Physics: Conference Series, 2011, 312, 092011.	0.4	0
131	Structure of light nuclei in resonance scattering experiments. , 2013, , .		0
132	Study of Nuclear Clustering Using the Modern Shell Model Approach. , 2015, , .		0
133	Studies of X-ray burst reactions with radioactive ion beams from RESOLUT. EPJ Web of Conferences, 2017, 165, 01005.	0.3	0
134	Search for the high spin members of the $1\pm:2n:1\pm$ band in $^{10}\text{Be}$ . AIP Conference Proceedings, 2018, , .	0.4	0
135	Resonance reactions at Astana cyclotron. AIP Conference Proceedings, 2018, , .	0.4	0
136	Shell Model with Random Interactions. , 2002, , 345-352.		0
137	SUPER-RADIANCE: FROM NUCLEAR PHYSICS TO PENTAQUARKS. , 2005, , .		0
138	RANDOM INTERACTIONS AND GROUND STATE SPIN OF FINITE FERMI SYSTEMS. , 2006, , .		0
139	FROM SUPER-RADIANCE TO CONTINUUM SHELL MODEL. , 2006, , .		0
140	APPLICATIONS OF CONTINUUM SHELL MODEL. , 2007, , .		0
141	$^{16}\text{C}$ AND $^{18}\text{N}$ : LIFETIME MEASUREMENTS OF THEIR FIRST-EXCITED STATES. , 2008, , .		0
142	Isomeric Character of the Lowest $4+$ State in $^{44}\text{S}$ . , 2017, , .		0
143	Voyage to the $\alpha$ -Island of Inversion $^{29}\text{Na}$ . , 2005, , 101-103.		0