

Igor Mishustin

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

145 papers	3,136 citations	33 h-index	50 g-index
155 ext. papers	3,377 ext. citations	2.6 avg, IF	5.14 L-index

#	Paper	IF	Citations
145	Chiral phase transition within effective models with constituent quarks. <i>Physical Review C</i> , 2001 , 64,	2.7	248
144	Fast hadronization of supercooled quark-gluon plasma. <i>Physical Review Letters</i> , 1995 , 74, 5005-5008	7.4	130
143	Physics of ion beam cancer therapy: a multiscale approach. <i>Physical Review E</i> , 2009 , 79, 011909	2.4	107
142	Nonequilibrium Phase Transition in Rapidly Expanding Matter. <i>Physical Review Letters</i> , 1999 , 82, 4779-4782	7.4	83
141	Bulk-viscosity-driven clusterization of quark-gluon plasma and early freeze-out in relativistic heavy-ion collisions. <i>Physical Review C</i> , 2008 , 77,	2.7	76
140	Isospin-dependent multifragmentation of relativistic projectiles. <i>Physical Review C</i> , 2011 , 83,	2.7	74
139	Statistical evolution of isotope composition of nuclear fragments. <i>Physical Review C</i> , 2001 , 63,	2.7	74
138	Strange quark stars within the Nambu-Jona-Lasinio model. <i>Physical Review D</i> , 2001 , 64,	4.9	71
137	Distributions of positron-emitting nuclei in proton and carbon-ion therapy studied with GEANT4. <i>Physics in Medicine and Biology</i> , 2006 , 51, 6099-112	3.8	65
136	Equation of state of hadron resonance gas and the phase diagram of strongly interacting matter. <i>Physics of Atomic Nuclei</i> , 2009 , 72, 1390-1415	0.4	64
135	Exactly soluble model for nuclear liquid-gas phase transition. <i>Physical Review C</i> , 2000 , 62,	2.7	62
134	Universality of the diffusion wake from stopped and punch-through jets in heavy-ion collisions. <i>Physical Review C</i> , 2009 , 79,	2.7	60
133	Instability of boost-invariant hydrodynamics with a QCD-inspired bulk viscosity. <i>Physical Review C</i> , 2008 , 78,	2.7	60
132	Chiral fluid dynamics with explicit propagation of the Polyakov loop. <i>Physical Review C</i> , 2013 , 87,	2.7	54
131	Chemical freeze-out of strange particles and possible root of strangeness suppression. <i>Europhysics Letters</i> , 2013 , 104, 22002	1.6	53
130	Antibaryons bound in nuclei. <i>Physical Review C</i> , 2005 , 71,	2.7	53
129	EMMI rapid reaction task force meeting on quark matter in compact stars. <i>Journal of Physics G: Nuclear and Particle Physics</i> , 2014 , 41, 123001	2.9	49

128	Neutrons from fragmentation of light nuclei in tissue-like media: a study with the GEANT4 toolkit. <i>Physics in Medicine and Biology</i> , 2005 , 50, 5493-507	3.8	49
127	The three-dimensional (2 + 1)-fluid model for relativistic nuclear collisions. <i>Zeitschrift für Physik A</i> , 1993 , 346, 209-216		47
126	Thermodynamics of dense hadronic matter in a parity doublet model. <i>Physical Review C</i> , 2010 , 82,	2.7	46
125	Mutual heavy ion dissociation in peripheral collisions at ultrarelativistic energies. <i>Physical Review C</i> , 2001 , 64,	2.7	45
124	Chiral Fluid Dynamics and Collapse of Vacuum Bubbles. <i>Physical Review Letters</i> , 1999 , 83, 3134-3137	7.4	43
123	Antibaryon(\bar{p} , $\bar{\Lambda}$) production in relativistic nuclear collisions. <i>Zeitschrift für Physik A</i> , 1991 , 341, 47-52		43
122	Nuclear fragmentation reactions in extended media studied with Geant4 toolkit. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2010 , 268, 604-615	1.2	42
121	Role of fluctuations in the linear σ -model with quarks. <i>Physical Review C</i> , 2004 , 70,	2.7	42
120	Production of heavy and superheavy neutron-rich nuclei in neutron capture processes. <i>Physical Review C</i> , 2011 , 84,	2.7	41
119	Formation of droplets with high baryon density at the QCD phase transition in expanding matter. <i>Nuclear Physics A</i> , 2014 , 925, 14-24	1.3	39
118	Isotopic and microcanonical temperatures in nuclear multifragmentation. <i>Physical Review C</i> , 1998 , 58, R27-R30	2.7	38
117	Production of spectator hypermatter in relativistic heavy-ion collisions. <i>Physical Review C</i> , 2011 , 84,	2.7	37
116	The impact of dissipation and noise on fluctuations in chiral fluid dynamics. <i>Journal of Physics G: Nuclear and Particle Physics</i> , 2013 , 40, 055108	2.9	36
115	Charge-changing interactions of ultrarelativistic Pb nuclei. <i>Physical Review C</i> , 2004 , 70,	2.7	36
114	Formation and breakup of extra-large composite system in central Au+Au collisions. <i>Physical Review Letters</i> , 1994 , 73, 628-631	7.4	36
113	Comparative study of depth-dose distributions for beams of light and heavy nuclei in tissue-like media. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2008 , 266, 1094-1098	1.2	33
112	Modification of surface energy in nuclear multifragmentation. <i>Physical Review C</i> , 2006 , 74,	2.7	32
111	Longitudinal fluid dynamics for ultrarelativistic heavy-ion collisions. <i>Physical Review C</i> , 2007 , 75,	2.7	32

110	Multifragmentation reactions and properties of stellar matter at subnuclear densities. <i>Physical Review C</i> , 2005 , 72,	2.7	32
109	Collective deceleration of ultrarelativistic nuclei and creation of quark-gluon plasma. <i>Physical Review Letters</i> , 2002 , 88, 112501	7.4	32
108	Hydrodynamic modeling of the deconfinement phase transition in heavy-ion collisions in the NICA-BAR energy domain. <i>Physical Review C</i> , 2011 , 84,	2.7	29
107	Unusual bound states of quark matter within the Nambu-Jona-Lasinio model. <i>Physical Review C</i> , 2000 , 62,	2.7	29
106	Microscopic study of freeze-out in relativistic heavy-ion collisions at 160 A GeV/c energy. <i>Physical Review C</i> , 1999 , 60,	2.7	29
105	TABULATED EQUATION OF STATE FOR SUPERNOVA MATTER INCLUDING FULL NUCLEAR ENSEMBLE. <i>Astrophysical Journal</i> , 2014 , 789, 33	4.7	28
104	Baryon-antibaryon pair production in strong meson fields. <i>Journal of Physics G: Nuclear and Particle Physics</i> , 1993 , 19, 1303-1318	2.9	27
103	Radial oscillations of neutral and charged hybrid stars. <i>Europhysics Letters</i> , 2014 , 105, 39001	1.6	26
102	Particle emission following Coulomb excitation in ultrarelativistic heavy-ion collisions. <i>Physical Review C</i> , 1999 , 60,	2.7	26
101	PET monitoring of cancer therapy with ^3He and ^{12}C beams: a study with the GEANT4 toolkit. <i>Physics in Medicine and Biology</i> , 2007 , 52, 7295-312	3.8	25
100	Nuclear multifragmentation induced by electromagnetic fields of ultrarelativistic heavy ions. <i>Physical Review C</i> , 1998 , 57, 1920-1926	2.7	25
99	Intermediate mass fragment emission in Fe+Au collisions. <i>Physical Review C</i> , 1992 , 46, 1404-1415	2.7	25
98	Antiproton-nucleus collisions simulation within a kinetic approach with relativistic mean fields. <i>Physical Review C</i> , 2009 , 80,	2.7	24
97	Microdosimetry spectra and RBE of ^1H , ^4He , ^7Li and ^{12}C nuclei in water studied with Geant4. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2014 , 320, 89-99	1.2	23
96	Dynamical simulation of bound antiproton-nuclear systems and observable signals of cold nuclear compression. <i>Physical Review C</i> , 2008 , 78,	2.7	23
95	Statistical description of nuclear break-up. <i>European Physical Journal A</i> , 2006 , 30, 121	2.5	22
94	Effective model for hot gluodynamics. <i>Physical Review C</i> , 2000 , 61,	2.7	21
93	Glueballs amass at the RHIC and LHC! The early quarkless first-order phase transition at $T = 270$ MeV from pure Yang-Mills glue plasma to Hagedorn glueball states. <i>Journal of Physics G: Nuclear and Particle Physics</i> , 2016 , 43, 015105	2.9	20

92	Neutron production and energy deposition in fissile spallation targets studied with Geant4 toolkit. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2012 , 289, 79-90	1.2	19
91	Nuclear liquid-gas phase transition at large N_c in the van der Waals approximation. <i>Physical Review C</i> , 2010 , 82,	2.7	19
90	Thermodynamically anomalous regions as a mixed phase signal. <i>Physics of Particles and Nuclei Letters</i> , 2015 , 12, 238-245	0.5	18
89	Electromagnetic probes of a pure-gluon initial state in nucleus-nucleus collisions at energies available at the CERN Large Hadron Collider. <i>Physical Review C</i> , 2016 , 94,	2.7	18
88	Metastable quark-antiquark droplets within the Nambu-Jona-Lasinio model. <i>Physical Review C</i> , 1999 , 59, 3343-3356	2.7	18
87	Surface and symmetry energies in isoscaling for multifragmentation reactions. <i>Journal of Physics G: Nuclear and Particle Physics</i> , 2009 , 36, 115106	2.9	17
86	Mechanisms of fragment production in heavy-ion reactions at intermediate energies. <i>Zeitschrift für Physik A</i> , 1993 , 345, 297-303		17
85	Comparative study of dose distributions and cell survival fractions for ^1H , ^4He , ^{12}C and ^{16}O beams using Geant4 and Microdosimetric Kinetic model. <i>Physics in Medicine and Biology</i> , 2015 , 60, 3313-31	3.8	16
84	Equation of state and sound velocity of a hadronic gas with a hard-core interaction. <i>Physical Review C</i> , 2015 , 91,	2.7	16
83	Fluctuations and intermittency in multifragmentation processes. <i>Physical Review C</i> , 1992 , 45, R2541-R2544	2.7	16
82	Microdosimetry of radiation field from a therapeutic ^{12}C beam in water: A study with Geant4 toolkit. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2013 , 310, 37-53	1.2	15
81	Elliptic flow and dissipation in heavy-ion collisions at $\sqrt{s_{NN}} = 2.76$ and 4.60 A GeV. <i>Physical Review C</i> , 2009 , 80,	2.7	15
80	Phase structure of a chiral model with dilatons in hot and dense matter. <i>Physical Review C</i> , 2012 , 85,	2.7	14
79	Multipion droplets. <i>Journal of Physics G: Nuclear and Particle Physics</i> , 1993 , 19, L101-L109	2.9	14
78	Thermodynamically anomalous regions and possible new signals of mixed-phase formation. <i>European Physical Journal A</i> , 2016 , 52, 1	2.5	14
77	Bose-Einstein condensation and liquid-gas phase transition in strongly interacting matter composed of particles. <i>Journal of Physics G: Nuclear and Particle Physics</i> , 2017 , 44, 125102	2.9	12
76	Possibility of cold nuclear compression in antiproton-nucleus collisions. <i>Physical Review C</i> , 2010 , 82,	2.7	12
75	Strange-quark matter within the Nambu-Jona-Lasinio model. <i>Physics of Atomic Nuclei</i> , 2001 , 64, 802-811	0.4	12

74	Self-consistent calculation of the nuclear composition in hot and dense stellar matter. <i>Physical Review C</i> , 2017 , 95,	2.7	11
73	Under-saturation of quarks at early stages of relativistic nuclear collisions: The hot glue initial scenario and its observable signatures. <i>Astronomische Nachrichten</i> , 2015 , 336, 744-748	0.7	11
72	Isotopic yields and symmetry energy in nuclear multifragmentation reactions. <i>Journal of Physics G: Nuclear and Particle Physics</i> , 2012 , 39, 115102	2.9	11
71	Partitioning composite finite systems. <i>Physical Review E</i> , 2000 , 62, R64-7	2.4	11
70	Nonequilibrium phase transition in compact stars through a violent shock. <i>Physical Review C</i> , 2015 , 91,	2.7	10
69	Role of bulk energy in nuclear multifragmentation. <i>Physical Review C</i> , 2008 , 77,	2.7	10
68	(1 + 1) dimensional hydrodynamics for high-energy heavy-ion collisions. <i>Physics of Atomic Nuclei</i> , 2007 , 70, 1773-1796	0.4	10
67	Monte Carlo modeling of spallation targets containing uranium and americium. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2014 , 334, 8-17	1.2	9
66	Production of exotic hypernuclei from excited nuclear systems. <i>Physical Review C</i> , 2012 , 86,	2.7	9
65	Possible links between the liquid-gas and deconfinement-hadronization phase transitions. <i>European Physical Journal A</i> , 2006 , 30, 311-316	2.5	9
64	Entropy production in chemically nonequilibrium quark-gluon plasma created in central Pb+Pb collisions at energies available at the CERN Large Hadron Collider. <i>Physical Review C</i> , 2016 , 93,	2.7	8
63	POSSIBILITY OF SYNTHESIZING SUPERHEAVY ELEMENTS IN NUCLEAR EXPLOSIONS. <i>International Journal of Modern Physics E</i> , 2010 , 19, 2063-2075	0.7	8
62	Distributions of deposited energy and ionization clusters around ion tracks studied with Geant4 toolkit. <i>Physics in Medicine and Biology</i> , 2016 , 61, 3698-711	3.8	7
61	Evolution of antibaryon abundances in the early universe and in heavy-ion collisions. <i>Physical Review C</i> , 2013 , 88,	2.7	7
60	Constraints on possible phase transitions above the nuclear saturation density. <i>Physical Review C</i> , 2002 , 66,	2.7	7
59	Baryon-antibaryon pair production in time-dependent meson fields. <i>Physical Review C</i> , 1995 , 52, 3315-3337	2.7	7
58	Phase transitions and Bose-Einstein condensation in μ -nucleon matter. <i>Physical Review C</i> , 2019 , 99,	2.7	6
57	Equilibrium nuclear ensembles taking into account vaporization of hot nuclei in dense stellar matter. <i>Physical Review C</i> , 2018 , 97,	2.7	6

56	Modeling spallation reactions in tungsten and uranium targets with the Geant4 toolkit. <i>EPJ Web of Conferences</i> , 2012 , 21, 10006	0.3	6
55	Equilibration and freeze-out in an exploding system. <i>Physical Review C</i> , 2001 , 65,	2.7	6
54	Q-balls of clusterized baryonic matter. <i>Modern Physics Letters A</i> , 2017 , 32, 1750010	1.3	5
53	The QCD phase transition in a fully dynamical model of heavy-ion collisions. <i>Journal of Physics: Conference Series</i> , 2014 , 509, 012065	0.3	5
52	Nanolesions induced by heavy ions in human tissues: Experimental and theoretical studies. <i>Beilstein Journal of Nanotechnology</i> , 2012 , 3, 556-63	3	5
51	Bose-stimulated pion production in relativistic nuclear collisions. <i>Physical Review C</i> , 1995 , 51, 2099-2112	2.7	5
50	Condensation of interacting scalar bosons at finite temperatures. <i>Physical Review C</i> , 2019 , 100,	2.7	4
49	Strangeness in Quark Matter: Opening Talk. <i>Journal of Physics: Conference Series</i> , 2014 , 509, 012002	0.3	4
48	Monte Carlo simulations of Microdosimetry for Space Research at FAIR. <i>Journal of Physics: Conference Series</i> , 2013 , 426, 012006	0.3	4
47	Baryon stopping and partonic plasma production by strong chromofields. <i>Physical Review C</i> , 2011 , 84,	2.7	4
46	Ion-beam therapy: from electron production in tissue like media to DNA damage estimations 2008 ,		4
45	Possible glueball production in relativistic heavy-ion collisions. <i>Journal of Physics G: Nuclear and Particle Physics</i> , 2006 , 32, L59-L63	2.9	4
44	Comment on "Investigating the phase diagram of finite extensive and nonextensive systems". <i>Physical Review Letters</i> , 2003 , 90, 179201; author 179202	7.4	4
43	Evolution of pion phase-space density and Bose-enhancement effects in high-energy heavy-ion collisions. <i>Zeitschrift für Physik A</i> , 1992 , 342, 309-317		4
42	Lateral variations of radiobiological properties of therapeutic fields of H, He, C and O ions studied with Geant4 and microdosimetric kinetic model. <i>Physics in Medicine and Biology</i> , 2017 , 62, 5884-5907	3.8	3
41	Hydrodynamic modeling of deconfinement phase transition in nuclear collision. <i>Physics of Atomic Nuclei</i> , 2012 , 75, 776-780	0.4	3
40	Baryon deceleration and partonic plasma creation by strong chromofields in ultrarelativistic heavy-ion collisions. <i>Physics of Atomic Nuclei</i> , 2012 , 75, 371-392	0.4	3
39	Effects of medium on nuclear properties in multifragmentation. <i>Physical Review C</i> , 2012 , 86,	2.7	3

- 38 Dilepton production by bremsstrahlung of meson fields in nuclear collisions. *Physical Review C*, **1998**, 57, 2552-2558 2.7 3
- 37 RELATIVISTIC FLUID-DYNAMICAL APPROACH FOR NUCLEAR COLLISIONS AT ENERGIES FROM 1 TO 100 GeV PER NUCLEON. *International Review of Nuclear Physics*, **1991**, 179-218 3
- 36 The excitation function of Au + Au in the framework of the (2+1)-fluid model. *Zeitschrift für Physik A*, **1993**, 346, 251-252 3
- 35 MCHIT - Monte Carlo model for proton and Heavy-Ion Therapy **2007**, 3
- 34 Microscopic model for rapid hadronization of supercooled Quark-Gluon Plasma. *Acta Physica Hungarica A Heavy Ion Physics*, **1996**, 3, 151-176 3
- 33 Instability of Boson vacuum in highly compressed baryonic matter. *Journal of Physics G: Nuclear and Particle Physics*, **2015**, 42, 075104 2.9 2
- 32 Possible Bose-Einstein condensation of π particles in the ground state of nuclear matter. *Physical Review C*, **2020**, 101, 2.7 2
- 31 Realistic electrostatic potentials in a neutron star crust. *Journal of Physics G: Nuclear and Particle Physics*, **2015**, 42, 105201 2.9 2
- 30 Implementation of chromomagnetic gluons in Yang-Mills thermodynamics. *Physical Review D*, **2014**, 89, 4.9 2
- 29 Electromagnetic and hadronic interactions of ultrarelativistic nuclei. *Physics of Atomic Nuclei*, **2011**, 74, 139-150 0.4 2
- 28 Nonequilibrium effects in hadronic fireball expansion. *Physical Review C*, **2012**, 85, 2.7 2
- 27 Stellar matter in supernova explosions and nuclear multifragmentation. *Physics of Atomic Nuclei*, **2008**, 71, 1088-1093 0.4 2
- 26 Possible production of strongly bound baryonia in relativistic heavy-ion collisions. *Journal of Physics G: Nuclear and Particle Physics*, **2005**, 31, 803-808 2.9 2
- 25 Studying phase transitions in nuclear collisions. *AIP Conference Proceedings*, **2000**, 0 2
- 24 Collective mechanism of dilepton production in high-energy nuclear collisions. *Journal of Physics G: Nuclear and Particle Physics*, **1998**, 24, L17-L21 2.9 2
- 23 Anomalous Fragments and Quasi-One-Dimensional Nuclear Systems. *Physica Scripta*, **1984**, 30, 293-296 2.6 2
- 22 Possible Production of Neutron-Rich Heavy Nuclei in Fissile Spallation Targets **2015**, 151-161 2
- 21 Monte Carlo Modeling of Minor Actinide Burning in Fissile Spallation Targets **2014**, 2

20	Fluid dynamical description of the chiral transition. <i>Acta Physica Hungarica A Heavy Ion Physics</i> , 1997 , 5, 377-385		2
19	Nuclear structure calculations for neutron star crusts. <i>European Physical Journal A</i> , 2018 , 54, 1	2.5	1
18	Modeling a delayed phase transition in the early universe. <i>Journal of Physics G: Nuclear and Particle Physics</i> , 2014 , 41, 125005	2.9	1
17	Nonlinear oscillations of compact stars in the vicinity of the maximum mass configuration. <i>Europhysics Letters</i> , 2015 , 111, 29001	1.6	1
16	Cold compression of nuclei induced by antiprotons. <i>Hyperfine Interactions</i> , 2009 , 194, 263-269	0.8	1
15	Towards the equation of state for dense stellar matter. <i>Journal of Physics: Conference Series</i> , 2010 , 202, 012003	0.3	1
14	TOWARDS MONTE CARLO CALCULATIONS OF BIOLOGICAL DOSE IN HEAVY-ION THERAPY: MODELING OF NUCLEAR FRAGMENTATION REACTIONS 2008 , 401-410		1
13	Degeneracy effects and Bose condensation in warm nuclear matter with light and heavy clusters. <i>Nuclear Physics A</i> , 2020 , 1002, 121991	1.3	1
12	More-Fluid Models for Ultrarelativistic Nuclear Collisions. <i>NATO ASI Series Series B: Physics</i> , 1994 , 697-707		1
11	Synthesis of neutron-rich transuranic nuclei in fissile spallation targets. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2015 , 349, 133-140	1.2	
10	How spinodal decomposition influences observables at FAIR energies. <i>Journal of Physics: Conference Series</i> , 2014 , 503, 012004	0.3	
9	Dynamics and stability of chiral fluid. <i>Physics of Atomic Nuclei</i> , 2014 , 77, 1130-1144	0.4	
8	Baryons and antibaryons in an anisotropic universe. <i>Astrophysics</i> , 1973 , 7, 158-163	0.6	
7	Statistical description of nuclear break-up 2006 , 121-128		
6	Possible links between the liquid-gas and deconfinement-hadronization phase transitions 2006 , 311-316		
5	Phase Transitions and BoseEinstein Condensation in Alpha-Nucleon Matter. <i>Ukrainian Journal of Physics</i> , 2019 , 64, 745	0.4	
4	PROPERTIES OF HEAVY AND SUPERHEAVY NUCLEI IN SUPERNOVA ENVIRONMENTS 2008 , 44-51		
3	Cold compression of nuclei induced by antiprotons 2009 , 611-617		

2 Superheavies: Short-Term Experiments and Far-Reaching Designs **2013**, 55-67

1 Rapid hadronization and strangeness production. *Acta Physica Hungarica A Heavy Ion Physics*, **1996**, 4, 45-54