

Bunkov Yuriy

List of Publications by Year in descending order

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141
papers

3,121
citations

186209

28
h-index

175177

52
g-index

145
all docs

145
docs citations

145
times ranked

984
citing authors

#	ARTICLE	IF	CITATIONS
1	Laboratory simulation of cosmic string formation in the early Universe using superfluid ^3He . Nature, 1996, 382, 332-334.	13.7	451
2	Magnetic Vortices in Rotating Superfluid $^3\text{He-B}$. Physical Review Letters, 1983, 51, 1362-1365.	2.9	177
3	Multiple-Spin Exchange on a Triangular Lattice: A Quantitative Interpretation of Thermodynamic Properties of Two-Dimensional Solid ^3He . Physical Review Letters, 1998, 80, 1308-1311.	2.9	161
4	Potential Dark Matter Detector? The Detection of Low Energy Neutrons by Superfluid ^3He . Physical Review Letters, 1995, 75, 1887-1890.	2.9	130
5	Investigation of spin supercurrents in ^3He . Physical Review Letters, 1989, 62, 1631-1634.	2.9	108
6	Two-dimensional Fermi liquid in the highly correlated regime: The second layer of ^3He adsorbed on graphite. Physical Review B, 1996, 53, 2658-2661.	1.1	96
7	Single-Vortex Nucleation in Rotating Superfluid $^3\text{He-B}$. Europhysics Letters, 1995, 31, 449-454.	0.7	83
8	Magnon Condensation into a QBall in $^3\text{He-B}$. Physical Review Letters, 2007, 98, 265302.	2.9	80
9	Persistent spin precession in ^3He in the regime of vanishing quasiparticle density. Physical Review Letters, 1992, 69, 3092-3095.	2.9	74
10	“Cosmological” Scenario for ^3He Phase Transition in Superfluid ^3He . Physical Review Letters, 1998, 80, 4927-4930.	2.9	70
11	Bose-Einstein Condensation of Magnons in ^3He . Journal of Low Temperature Physics, 2008, 150, 135-144.	0.6	63
12	Temperature scale and heat capacity of superfluid $^3\text{He-B}$ in the $100^{1/4}\text{K}$ range. Physical Review B, 1998, 57, 14381-14386.	1.1	60
13	Orientation effect on superfluid ^3He in anisotropic aerogel. JETP Letters, 2007, 86, 216-220.	0.4	55
14	Strong Orientational Effect of Stretched Aerogel on the ^3He Order Parameter. Physical Review Letters, 2008, 100, 215304.	2.9	49
15	High- T_c Spin Superfluidity in Antiferromagnets. Physical Review Letters, 2012, 108, 177002.	2.9	49
16	Quantum Frustration in the “Spin Liquid” Phase of Two-Dimensional ^3He . Physical Review Letters, 2001, 86, 2447-2450.	2.9	46
17	Magnetic dissipation in superfluid $^3\text{He-B}$ in the transition regime to nonhydrodynamic conditions. Journal of Low Temperature Physics, 1997, 108, 461-486.	0.6	44
18	Magnon Bose-Einstein condensation and spin superfluidity. Journal of Physics Condensed Matter, 2010, 22, 164210.	0.7	44

#	ARTICLE	IF	CITATIONS
19	Magnetization and spin diffusion of liquid ^3He in aerogel. <i>Physical Review B</i> , 2005, 72, .	1.1	39
20	Self-Trapping of Magnon Bose-Einstein Condensates in the Ground State and on Excited Levels: From Harmonic to Box Confinement. <i>Physical Review Letters</i> , 2012, 108, 145303.	2.9	39
21	Nonhydrodynamic spin transport in superfluid ^3He . <i>Physical Review Letters</i> , 1990, 65, 867-870.	2.9	38
22	Catastrophic Relaxation in $^3\text{He-B}$ at $0.4 T_c$. <i>Europhysics Letters</i> , 1989, 8, 645-649.	0.7	37
23	Coherent Precession of Magnetization in the Superfluid ^3He . <i>Physical Review Letters</i> , 2008, 101, 055301.	2.9	36
24	Normal-Mode Splitting in the Coupled System of Hybridized Nuclear Magnons and Microwave Photons. <i>Physical Review Letters</i> , 2015, 114, 226402.	2.9	36
25	Semisuperfluidity of ^3He in Aerogel?. <i>Physical Review Letters</i> , 2000, 85, 3456-3459.	2.9	32
26	Spin superfluidity and coherent spin precession. <i>Journal of Physics Condensed Matter</i> , 2009, 21, 164201.	0.7	32
27	Low frequency oscillations of the homogeneously precessing domain in $^3\text{He-B}$. <i>Physica B: Condensed Matter</i> , 1992, 178, 196-201.	1.3	31
28	Spin superfluidity and magnons Bose-Einstein condensation. <i>Physics-Uspexhi</i> , 2010, 53, 848-853.	0.8	28
29	Discovery of the classical Bose-Einstein condensation of magnons in solid antiferromagnets. <i>JETP Letters</i> , 2011, 94, 68-72.	0.4	27
30	Magnon condensation and spin superfluidity. <i>Journal of Magnetism and Magnetic Materials</i> , 2018, 452, 30-34.	1.0	27
31	A compact dilution refrigerator with vertical heat exchangers for operation to 2 mK. <i>Journal of Low Temperature Physics</i> , 1991, 83, 257-272.	0.6	26
32	Chapter 2 Spin supercurrent and novel properties of nmr in ^3He . <i>Progress in Low Temperature Physics</i> , 1995, 14, 69-158.	0.2	25
33	Nonwetting Conditions for Coherent Quantum Precession in Superfluid $^3\text{He-B}$. <i>Physical Review Letters</i> , 1994, 73, 1817-1820.	2.9	23
34	Search for supersymmetric Dark Matter with superfluid ^3He (MACHe3). <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2002, 538, 257-265.	1.5	23
35	Addressing geometric nonlinearities with cantilever microelectromechanical systems: Beyond the Duffing model. <i>Physical Review B</i> , 2010, 82, .	1.1	23
36	Resonant observation of the Landau field in superfluid ^3He by NMR. <i>Physical Review Letters</i> , 1992, 68, 600-603.	2.9	22

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37	Evidence for Magnon BEC in Superfluid 3He-A. Journal of Low Temperature Physics, 2010, 158, 129-134.	0.6	22
38	High-Field Magnetotransport in a Percolating Medium. Europhysics Letters, 1993, 21, 851-857.	0.7	21
39	Superconducting aluminium heat switch prepared by diffusion welding. Cryogenics, 1989, 29, 938-939.	0.9	20
40	Fast-exchange model visualized with $H = \sum_{\mathbf{k}} \left[\frac{1}{2} \left(\frac{d\mathbf{r}_k}{dt} \right)^2 + \frac{1}{2} \left(\frac{d\mathbf{p}_k}{dt} \right)^2 \right] + \sum_{\mathbf{k}} \left[\frac{1}{2} \left(\frac{d\mathbf{r}_k}{dt} \right)^2 + \frac{1}{2} \left(\frac{d\mathbf{p}_k}{dt} \right)^2 \right]$ confined in aerogel: A Fermi liquid in contact with a ferromagnetic solid. Physical Review B, 2009, 80, .	1.1	18
41	Nonlinear NMR and magnon BEC in antiferromagnetic materials with coupled electron and nuclear spin precession. Physical Review B, 2018, 97, .	1.1	18
42	NMR in Superfluid Helium-3 in the Non-Hydrodynamic Regime. Journal of Low Temperature Physics, 2004, 135, 337-359.	0.6	17
43	A Tunable Hybrid Electro-magnetomotive NEMS Device for Low Temperature Physics. Journal of Low Temperature Physics, 2011, 162, 653-660.	0.6	17
44	Silicon Vibrating Wires at Low Temperatures. Journal of Low Temperature Physics, 2008, 150, 739-790.	0.6	16
45	Metallic coatings of microelectromechanical structures at low temperatures: Stress, elasticity, and nonlinear dissipation. Journal of Applied Physics, 2010, 107, .	1.1	16
46	Pinning of Texture and Vortices of the Rotating B-like Phase of Superfluid He3 Confined in a 98% Aerogel. Physical Review Letters, 2005, 94, 075301.	2.9	15
47	Bolometric calibration of a superfluid 3He detector for Dark Matter search: Direct measurement of the scintillated energy fraction for neutron, electron and muon events. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2007, 574, 264-271.	0.7	15
48	Direct Observation of a Majorana Quasiparticle Heat Capacity in 3He. Journal of Low Temperature Physics, 2014, 175, 385-394.	0.6	15
49	Magnon BEC Versus Atomic BEC. Journal of Low Temperature Physics, 2016, 185, 399-408.	0.6	15
50	Solution of the problem of catastrophic relaxation of homogeneous spin precession in superfluid 3He-B. JETP Letters, 2006, 83, 530-535.	0.4	14
51	Spin Supercurrent in 3He-B. Japanese Journal of Applied Physics, 1987, 26, 1809.	0.8	13
52	Homogeneous spin precession in rotating vortex-free He3-B: Measurement of the superfluid density anisotropy. Physical Review B, 1992, 46, 13983-13990.	1.1	13
53	Exchange interactions in multilayer 3He films adsorbed on graphite. Physica B: Condensed Matter, 1994, 194-196, 675-676.	1.3	13
54	Persistent Signal; Coherent NMR state trapped by orbital texture. Journal of Low Temperature Physics, 2005, 138, 753-758.	0.6	12

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55	Probing α -Cosmological Defects in Superfluid $^3\text{He-B}$ with a Vibrating-Wire Resonator. <i>Physical Review Letters</i> , 2006, 96, 205301.	2.9	12
56	Nonlinear parametric amplification in a triport nanoelectromechanical device. <i>Physical Review B</i> , 2011, 84, .	1.1	12
57	In-situ comprehensive calibration of a tri-port nano-electro-mechanical device. <i>Review of Scientific Instruments</i> , 2012, 83, 045005.	0.6	12
58	Simultaneous spin and space rotation experiments in $^3\text{He-B}$. <i>Journal of Low Temperature Physics</i> , 1991, 83, 323-330.	0.6	11
59	Persistent spin precession in superfluid ^3He . <i>Physica B: Condensed Matter</i> , 1994, 194-196, 827-828.	1.3	11
60	Bunkov and Timofeevskaya Reply:. <i>Physical Review Letters</i> , 1999, 82, 3926-3926.	2.9	11
61	On the problem of catastrophic relaxation in superfluid $^3\text{He-B}$. <i>JETP Letters</i> , 2006, 84, 289-293.	0.4	11
62	ULTIMA: A bolometric detector for dark matter search using superfluid ^3He . <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2006, 559, 384-386.	0.7	11
63	Magnon BEC in superfluid $^3\text{He-A}$. <i>JETP Letters</i> , 2009, 89, 306-310.	0.4	11
64	3D-XY critical behavior of CsMnF_3 from static and dynamic thermal properties. <i>Journal of Physics Condensed Matter</i> , 2014, 26, 096001.	0.7	11
65	Magnon BEC in Antiferromagnets with Suhl-Nakamura Interaction. <i>Journal of Low Temperature Physics</i> , 2014, 175, 167-176.	0.6	11
66	Goldstone mode of a magnon Bose-Einstein condensate in MnCO_3 . <i>JETP Letters</i> , 2017, 106, 677-681.	0.4	11
67	Design optimization of MACH 3 , a project of superfluid ^3He detector for direct Dark Matter search. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2000, 455, 554-563.	0.7	10
68	Magnon Bose-Einstein condensation in CsMnF_3 and MnCO_3 . <i>Journal of Physics: Conference Series</i> , 2011, 324, 012006.	0.3	10
69	Surface instability of coherent precession in the non-hydrodynamic regime. <i>European Physical Journal D</i> , 1996, 46, 213-214.	0.4	9
70	Topological defects and coherent magnetization precession of in aerogel. <i>Physica B: Condensed Matter</i> , 2003, 329-333, 305-306.	1.3	9
71	Spin vortex in magnon BEC of superfluid $^3\text{He-B}$. <i>Physica C: Superconductivity and Its Applications</i> , 2008, 468, 609-612.	0.6	9
72	Evolution of a neutron-initiated micro big bang in superfluid $^3\text{He-B}$. <i>Physical Review B</i> , 2014, 90, .	1.1	9

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73	Proton Zeeman relaxation in NH ₄ ClO ₄ with natural and enriched deuteron concentrations. Journal of Physics C: Solid State Physics, 1977, 10, 4149-4154.	1.5	8
74	A Nuclear Demagnetization Cryostat and ³ He- ⁴ He Dilution Refrigerator. Japanese Journal of Applied Physics, 1987, 26, 1719.	0.8	8
75	Spin supercurrent. Journal of Magnetism and Magnetic Materials, 2007, 310, 1476-1478.	1.0	8
76	Novel "Vibrating Wire Like" NEMS and MEMS Structures for Low Temperature Physics. Journal of Low Temperature Physics, 2010, 158, 678-684.	0.6	8
77	Nuclear magnetic relaxation induced by the relaxation of electron spins. JETP Letters, 2017, 105, 21-25.	0.4	8
78	Observation of vortex-like spin supercurrent in ³ He-B. Physica B: Condensed Matter, 1990, 165-166, 649-650.	1.3	7
79	Low-energy conversion electron detection in superfluid ³ He at ultra-low temperature. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2005, 548, 411-417.	0.7	7
80	Heat Capacity of Adsorbed Helium-3 at Ultra-Low Temperatures. Journal of Low Temperature Physics, 2007, 148, 749-753.	0.6	7
81	Experimental Setup for Observation the Bose-Einstein Condensation of Magnons in Solid Antiferromagnets CsMnF ₃ and MnCO ₃ . Applied Magnetic Resonance, 2013, 44, 595-603.	0.6	7
82	Critical parameters of nuclear magnon Bose-Einstein condensation in systems with dynamic frequency shift. JETP Letters, 2015, 102, 766-770.	0.4	7
83	Diffusion-welded laminar nuclear stage. Physica B: Condensed Matter, 1990, 165-166, 53-54.	1.3	6
84	Field dependence of the magnetization of adsorbed ³ He films at ultra low temperatures. Journal of Low Temperature Physics, 1995, 101, 457-462.	0.6	6
85	Magnetic field dependence of the nuclear magnetization of ³ He films adsorbed on graphite in the ferromagnetic regime. European Physical Journal D, 1996, 46, 403-404.	0.4	6
86	Surface oscillations of homogeneously precessing domain with axial symmetry. Europhysics Letters, 1997, 40, 539-544.	0.7	6
87	Superfluid "from cosmology to particle detection. Physica B: Condensed Matter, 2003, 329-333, 70-74.	1.3	6
88	Spin-Orbital Dynamics in the B-Phase of Superfluid Helium-3. Journal of Low Temperature Physics, 2004, 137, 625-654.	0.6	6
89	Ferromagnetic nanoclusters in two-dimensional ³ He. Physical Review B, 2006, 73, .	1.1	6
90	The new types of nuclear spin echo experiments in antiferromagnets. Physica B: Physics of Condensed Matter & C: Atomic, Molecular and Plasma Physics, Optics, 1977, 86-88, 1301-1302.	0.9	5

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91	Spin supercurrent solitons: The magnetic envelope of the propagating A-boundary in ^3He . Physical Review Letters, 1992, 69, 3662-3665.	2.9	5
92	A chaotic regime of internal precession in ^3He -B. Journal of Low Temperature Physics, 1993, 90, 167-179.	0.6	5
93	2D liquid ^3He near solidification: a highly correlated Fermi liquid. Journal of Low Temperature Physics, 1995, 101, 161-166.	0.6	5
94	^3He /graphite commensurate bilayer films in the antiferromagnetic regime. European Physical Journal D, 1996, 46, 401-402.	0.4	5
95	On the spin-liquid phase of two-dimensional ^3He . Journal of Physics Condensed Matter, 2004, 16, S691-S699.	0.7	5
96	Quantum Fluid Dynamics of Rotating Superfluid ^3He in Aerogel. Journal of Low Temperature Physics, 2008, 150, 435-444.	0.6	5
97	^3He : cosmological and atomic physics experiments. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2008, 366, 2821-2832.	1.6	5
98	Observation of Phase Slips in Spin Supercurrents in ^3He -B. Japanese Journal of Applied Physics, 1987, 26, 175.	0.8	5
99	A new NMR mode in the Landau field in superfluid ^3He -B. Journal of Low Temperature Physics, 1992, 89, 27-36.	0.6	4
100	NMR in superfluid ^3He at very low temperatures. Journal of Low Temperature Physics, 1995, 101, 123-134.	0.6	4
101	Spin dynamics of superfluid ^3He in non-hydrodynamic regime. European Physical Journal D, 1996, 46, 3003-3010.	0.4	4
102	Simulated cosmic strings in a ^3He in superfluid ^3He at 100 μK . European Physical Journal D, 1996, 46, 5-6.	0.4	4
103	The new grenoble 100 μK refrigerator. European Physical Journal D, 1996, 46, 2791-2792.	0.4	4
104	^3He NMR in aerogel. Journal of Physics and Chemistry of Solids, 2005, 66, 1325-1329.	1.9	4
105	Electron-Nuclear Recoil Discrimination by Pulse Shape Analysis. Journal of Low Temperature Physics, 2008, 150, 536-543.	0.6	4
106	^3He Experiments: Insights into Cosmology and Atomic Physics. Journal of Low Temperature Physics, 2010, 158, 118-128.	0.6	4
107	Superfluid transition in superfluid ^3He in radially compressed aerogel. Journal of Physics: Conference Series, 2012, 400, 012019.	0.3	4
108	The multiuniverse transition in superfluid ^3He . Journal of Physics Condensed Matter, 2013, 25, 404205.	0.7	4

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109	Bose-Einstein condensation in antiferromagnets at low temperatures. Journal of Physics: Conference Series, 2014, 568, 042001.	0.3	4
110	^3He -B texture relaxation with parallel-plate geometry. Physics Letters, Section A: General, Atomic and Solid State Physics, 1984, 102, 194-196.	0.9	3
111	Instability of the homogeneous precession in ^3He -B (catastrophic relaxation). Physica B: Condensed Matter, 1990, 165-166, 675-676.	1.3	3
112	Observation of a new relaxation mechanism in ^3He -B. Physica B: Condensed Matter, 1994, 194-196, 803-804.	1.3	3
113	Systematic study of ^3He adsorbed on graphite by NMR techniques. European Physical Journal D, 1996, 46, 399-400.	0.4	3
114	Textures of Superfluid ^3He A-like and B-like Phases in Aerogel under Rotation. Journal of Low Temperature Physics, 2007, 148, 591-596.	0.6	3
115	Atomic type magnon Bose-Einstein condensation in antiferromagnet.. Journal of Physics: Conference Series, 2012, 400, 032001.	0.3	3
116	Anomalous magnetic relaxation in normal ^3He at low temperatures. Physica B: Condensed Matter, 1992, 178, 181-186.	1.3	2
117	Principles of HPD NMR spectroscopy of ^3He -B. Physica B: Condensed Matter, 1992, 178, 187-195.	1.3	2
118	A highly sensitive nuclear recoil detector based on superfluid ^3He -B. Journal of Low Temperature Physics, 1995, 101, 9-16.	0.6	2
119	A geometry dependent thermal resistance between a saturated dilute ^3He - ^4He solution and sintered silver powder. Journal of Low Temperature Physics, 1995, 101, 259-264.	0.6	2
120	Coherent spin precession and texture in ^3He -B. European Physical Journal D, 1996, 46, 231-232.	0.4	2
121	Magnetic susceptibility of liquid ^3He . Journal of Physics: Conference Series, 2009, 150, 032024.	0.3	2
122	Coherent precession of magnetization in superfluid ^3He A-phase in aerogel. Journal of Physics: Conference Series, 2009, 150, 032052.	0.3	2
123	Observation of Majorana Quasiparticles' Edge States in Superfluid ^3He . Applied Magnetic Resonance, 2014, 45, 1219-1224.	0.6	2
124	The magnon BEC observation by switch off method. Low Temperature Physics, 2017, 43, 930-935.	0.2	2
125	An analysis method for time ordered data processing of 'dark' matter experiments. Astronomy and Astrophysics, 2006, 453, 761-768.	2.1	2
126	Studies with coherently precessing magnetization on counterflow and vortices in rotating ^3He -B. Physica B: Condensed Matter, 1994, 194-196, 761-762.	1.3	1

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127	Texture dependence of the persistent NMR signal in superfluid $^3\text{He-B}$. European Physical Journal D, 1996, 46, 233-234.	0.4	1
128	New concepts on the $A \leftrightarrow B$ transition in superfluid ^3He . Physica B: Condensed Matter, 2000, 284-288, 246-247.	1.3	1
129	Superfluidity of ^3He contained in aerogel. Physica B: Condensed Matter, 2000, 284-288, 311-312.	1.3	1
130	EU dissemination of the provisional ultra-low-temperature scale, PLTS-2000. Physica B: Condensed Matter, 2003, 329-333, 1564-1565.	1.3	1
131	“Catastrophic Relaxation”, Two Decades of Controversy. Journal of Low Temperature Physics, 2007, 148, 475-482.	0.6	1
132	ULTIMA: Magnetic Field Dependence of the Calibration Factor. Journal of Low Temperature Physics, 2008, 151, 860-864.	0.6	1
133	Magnon Bose-Einstein condensation at inhomogeneous conditions. Journal of Physics: Conference Series, 2013, 478, 012004.	0.3	1
134	The ^{55}Mn Spin Echo Test of Magnon BEC State in MnCO_3 . Applied Magnetic Resonance, 2017, 48, 625-633.	0.6	1
135	Magnetic relaxation in superfluid $^3\text{He-B}$. Physica B: Condensed Matter, 1990, 165-166, 681-682.	1.3	0
136	NMR and magnetic supercurrent in $^3\text{He-B}$. Physica Scripta, 1991, T35, 136-140.	1.2	0
137	The magnetic envelope of the propagating A-B boundary in ^3He . Physica B: Condensed Matter, 1994, 194-196, 759-760.	1.3	0
138	Temperature dependence of the Leggett-Takagi relaxation time and spin diffusion coefficient in $^3\text{He-B}$ for 6 bar. European Physical Journal D, 1996, 46, 223-224.	0.4	0
139	Ultra Low Temperature Instrumentation for Measurements in Astrophysics : ULTIMA. AIP Conference Proceedings, 2006, , .	0.3	0
140	Observation of vortex-creep in superfluid $^3\text{He B}$ -like phase in aerogel by the HPD. Physica C: Superconductivity and Its Applications, 2008, 468, 605-608.	0.6	0
141	Publisher’s Note: Nonlinear parametric amplification in a triport nanoelectromechanical device [Phys. Rev. B84, 054108 (2011)]. Physical Review B, 2011, 84, .	1.1	0