

# Yuriy M Bunkov

## List of Publications by Year in descending order

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142  
papers

2,695  
citations

236833

25  
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214721

47  
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146  
all docs

146  
docs citations

146  
times ranked

926  
citing authors

#	ARTICLE	IF	CITATIONS
1	Laboratory simulation of cosmic string formation in the early Universe using superfluid $^3\text{He}$ . 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	Potential Dark Matter Detector? The Detection of Low Energy Neutrons by Superfluid $^3\text{He}$ . Physical Review Letters, 1995, 75, 1887-1890.	2.9	130
4	Investigation of spin supercurrents in $^3\text{He}$ . Physical Review Letters, 1989, 62, 1631-1634.	2.9	108
5	Single-Vortex Nucleation in Rotating Superfluid $^3\text{He-B}$ . Europhysics Letters, 1995, 31, 449-454.	0.7	83
6	Magnon Condensation into a QBall in $^3\text{He-B}$ . Physical Review Letters, 2007, 98, 265302.	2.9	80
7	Persistent spin precession in $^3\text{He}$ in the regime of vanishing quasiparticle density. Physical Review Letters, 1992, 69, 3092-3095.	2.9	74
8	Bose-Einstein Condensation of Magnons in $^3\text{He}$ . Journal of Low Temperature Physics, 2008, 150, 135-144.	0.6	63
9	Orientation effect on superfluid $^3\text{He}$ in anisotropic aerogel. JETP Letters, 2007, 86, 216-220.	0.4	55
10	Strong Orientational Effect of Stretched Aerogel on the $^3\text{He}$ Order Parameter. Physical Review Letters, 2008, 100, 215304.	2.9	49
11	High- $T_c$ Spin Superfluidity in Antiferromagnets. Physical Review Letters, 2012, 108, 177002.	2.9	49
12	Quantum Frustration in the $^3\text{He}$ Spin Liquid Phase of Two-Dimensional $^3\text{He}$ . Physical Review Letters, 2001, 86, 2447-2450.	2.9	46
13	Magnon Bose-Einstein condensation and spin superfluidity. Journal of Physics Condensed Matter, 2010, 22, 164210.	0.7	44
14	Magnetization and spin diffusion of liquid $^3\text{He}$ in aerogel. Physical Review B, 2005, 72, .	1.1	39
15	Self-Trapping of Magnon Bose-Einstein Condensates in the Ground State and on Excited Levels: From Harmonic to Box Confinement. Physical Review Letters, 2012, 108, 145303.	2.9	39
16	Nonhydrodynamic spin transport in superfluid $^3\text{He}$ . Physical Review Letters, 1990, 65, 867-870.	2.9	38
17	Catastrophic Relaxation in $^3\text{He-B}$ at $0.4 T_c$ . Europhysics Letters, 1989, 8, 645-649.	0.7	37
18	Coherent Precession of Magnetization in the Superfluid $^3\text{He-A}$ Phase. Physical Review Letters, 2008, 101, 055301.	2.9	36

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19	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
20	Semisuperfluidity of $^3\text{He}$ Aerogel?. <i>Physical Review Letters</i> , 2000, 85, 3456-3459.	2.9	32
21	Spin superfluidity and coherent spin precession. <i>Journal of Physics Condensed Matter</i> , 2009, 21, 164201.	0.7	32
22	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
23	Spin superfluidity and magnons Bose-Einstein condensation. <i>Physics-Uspexhi</i> , 2010, 53, 848-853.	0.8	28
24	Discovery of the classical Bose-Einstein condensation of magnons in solid antiferromagnets. <i>JETP Letters</i> , 2011, 94, 68-72.	0.4	27
25	Magnon condensation and spin superfluidity. <i>Journal of Magnetism and Magnetic Materials</i> , 2018, 452, 30-34.	1.0	27
26	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
27	Nonwetting Conditions for Coherent Quantum Precession in Superfluid $^3\text{He-B}$ . <i>Physical Review Letters</i> , 1994, 73, 1817-1820.	2.9	23
28	Search for supersymmetric Dark Matter with superfluid $^3\text{He}$ (MACHe3). <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2002, 538, 257-265.	1.5	23
29	Addressing geometric nonlinearities with cantilever microelectromechanical systems: Beyond the Duffing model. <i>Physical Review B</i> , 2010, 82, .	1.1	23
30	Resonant observation of the Landau field in superfluid $^3\text{He}$ by NMR. <i>Physical Review Letters</i> , 1992, 68, 600-603.	2.9	22
31	Evidence for Magnon BEC in Superfluid $^3\text{He-A}$ . <i>Journal of Low Temperature Physics</i> , 2010, 158, 129-134.	0.6	22
32	High-Field Magnetotransport in a Percolating Medium. <i>Europhysics Letters</i> , 1993, 21, 851-857.	0.7	21
33	Superconducting aluminium heat switch prepared by diffusion welding. <i>Cryogenics</i> , 1989, 29, 938-939.	0.9	20
34	Fast-exchange model visualized with $\langle H \rangle$	1.1	18
35	NMR in Superfluid Helium-3 in the Non-Hydrodynamic Regime. <i>Journal of Low Temperature Physics</i> , 2004, 135, 337-359.	0.6	17
36	A Tunable Hybrid Electro-magnetomotive NEMS Device for Low Temperature Physics. <i>Journal of Low Temperature Physics</i> , 2011, 162, 653-660.	0.6	17

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37	Silicon Vibrating Wires at Low Temperatures. Journal of Low Temperature Physics, 2008, 150, 739-790.	0.6	16
38	Metallic coatings of microelectromechanical structures at low temperatures: Stress, elasticity, and nonlinear dissipation. Journal of Applied Physics, 2010, 107, .	1.1	16
39	Pinning of Texture and Vortices of the Rotating B-like Phase of Superfluid He-3 Confined in a 98% Aerogel. Physical Review Letters, 2005, 94, 075301.	2.9	15
40	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
41	Direct Observation of a Majorana Quasiparticle Heat Capacity in 3He. Journal of Low Temperature Physics, 2014, 175, 385-394.	0.6	15
42	Magnon BEC Versus Atomic BEC. Journal of Low Temperature Physics, 2016, 185, 399-408.	0.6	15
43	Quantum Magnonics. Journal of Experimental and Theoretical Physics, 2020, 131, 18-28.	0.2	15
44	Solution of the problem of catastrophic relaxation of homogeneous spin precession in superfluid 3He-B. JETP Letters, 2006, 83, 530-535.	0.4	14
45	Spin Supercurrent in 3He-B. Japanese Journal of Applied Physics, 1987, 26, 1809.	0.8	13
46	Homogeneous spin precession in rotating vortex-free He-3-B: Measurement of the superfluid density anisotropy. Physical Review B, 1992, 46, 13983-13990.	1.1	13
47	Exchange interactions in multilayer 3He films adsorbed on graphite. Physica B: Condensed Matter, 1994, 194-196, 675-676.	1.3	13
48	Persistent Signal; Coherent NMR state trapped by orbital texture. Journal of Low Temperature Physics, 2005, 138, 753-758.	0.6	12
49	Probing Cosmological Defects in Superfluid He-3 with a Vibrating-Wire Resonator. Physical Review Letters, 2006, 96, 205301.	2.9	12
50	Nonlinear parametric amplification in a triport nanoelectromechanical device. Physical Review B, 2011, 84, .	1.1	12
51	In-situ comprehensive calibration of a tri-port nano-electro-mechanical device. Review of Scientific Instruments, 2012, 83, 045005.	0.6	12
52	Long-Lived Induction Signal in Yttrium Iron Garnet. JETP Letters, 2020, 111, 62-66.	0.4	12
53	Simultaneous spin and space rotation experiments in 3He-B. Journal of Low Temperature Physics, 1991, 83, 323-330.	0.6	11
54	Persistent spin precession in superfluid 3He. Physica B: Condensed Matter, 1994, 194-196, 827-828.	1.3	11

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55	On the problem of catastrophic relaxation in superfluid $^3\text{He-B}$ . JETP Letters, 2006, 84, 289-293.	0.4	11
56	ULTIMA: A bolometric detector for dark matter search using superfluid $^3\text{He}$ . Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2006, 559, 384-386.	0.7	11
57	Magnon BEC in superfluid $^3\text{He-A}$ . JETP Letters, 2009, 89, 306-310.	0.4	11
58	3D-XY critical behavior of $\text{CsMnF}_3$ from static and dynamic thermal properties. Journal of Physics Condensed Matter, 2014, 26, 096001.	0.7	11
59	Magnon BEC in Antiferromagnets with Suhl-Nakamura Interaction. Journal of Low Temperature Physics, 2014, 175, 167-176.	0.6	11
60	Bose-Einstein Condensation and Spin Superfluidity of Magnons in a Perpendicularly Magnetized Yttrium Iron Garnet Film. JETP Letters, 2020, 112, 299-304.	0.4	11
61	Design optimization of MACHe3, a project of superfluid $^3\text{He}$ detector for direct Dark Matter search. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2000, 455, 554-563.	0.7	10
62	Magnon Bose-Einstein condensation in $\text{CsMnF}_3$ and $\text{MnCO}_3$ . Journal of Physics: Conference Series, 2011, 324, 012006.	0.3	10
63	Quantum paradigm of the foldover magnetic resonance. Scientific Reports, 2021, 11, 7673.	1.6	10
64	Surface instability of coherent precession in the non-hydrodynamic regime. European Physical Journal D, 1996, 46, 213-214.	0.4	9
65	Topological defects and coherent magnetization precession of in aerogel. Physica B: Condensed Matter, 2003, 329-333, 305-306.	1.3	9
66	Spin vortex in magnon BEC of superfluid $^3\text{He-B}$ . Physica C: Superconductivity and Its Applications, 2008, 468, 609-612.	0.6	9
67	Evolution of a neutron-initiated micro big bang in superfluid $^3\text{He-B}$ . Physical Review B, 2014, 90, .	1.1	9
68	Proton Zeeman relaxation in $\text{NH}_4\text{ClO}_4$ with natural and enriched deuteron concentrations. Journal of Physics C: Solid State Physics, 1977, 10, 4149-4154.	1.5	8
69	Spin supercurrent. Journal of Magnetism and Magnetic Materials, 2007, 310, 1476-1478.	1.0	8
70	Novel "Vibrating Wire Like" NEMS and MEMS Structures for Low Temperature Physics. Journal of Low Temperature Physics, 2010, 158, 678-684.	0.6	8
71	Magnonics and Supermagnonics. Spin, 2019, 09, 1940005.	0.6	8
72	Magnonic Superfluidity Versus Bose Condensation. Applied Magnetic Resonance, 2020, 51, 1711-1721.	0.6	8

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73	Observation of vortex-like spin supercurrent in $^3\text{He}$ —B. <i>Physica B: Condensed Matter</i> , 1990, 165-166, 649-650.	1.3	7
74	Low-energy conversion electron detection in superfluid $^3\text{He}$ at ultra-low temperature. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2005, 548, 411-417.	0.7	7
75	Heat Capacity of Adsorbed Helium-3 at Ultra-Low Temperatures. <i>Journal of Low Temperature Physics</i> , 2007, 148, 749-753.	0.6	7
76	Experimental Setup for Observation the Bose-Einstein Condensation of Magnons in Solid Antiferromagnets $\text{CsMnF}_3$ and $\text{MnCO}_3$ . <i>Applied Magnetic Resonance</i> , 2013, 44, 595-603.	0.6	7
77	Critical parameters of nuclear magnon Bose-Einstein condensation in systems with dynamic frequency shift. <i>JETP Letters</i> , 2015, 102, 766-770.	0.4	7
78	Features of the Interaction of a Magnon Bose-Einstein Condensate with Acoustic Modes in Yttrium Iron Garnet Films. <i>JETP Letters</i> , 2020, 112, 710-714.	0.4	7
79	Diffusion-welded laminar nuclear stage. <i>Physica B: Condensed Matter</i> , 1990, 165-166, 53-54.	1.3	6
80	Field dependence of the magnetization of adsorbed $^3\text{He}$ films at ultra low temperatures. <i>Journal of Low Temperature Physics</i> , 1995, 101, 457-462.	0.6	6
81	Magnetic field dependence of the nuclear magnetization of $^3\text{He}$ films adsorbed on graphite in the ferromagnetic regime. <i>European Physical Journal D</i> , 1996, 46, 403-404.	0.4	6
82	Surface oscillations of homogeneously precessing domain with axial symmetry. <i>Europhysics Letters</i> , 1997, 40, 539-544.	0.7	6
83	Superfluid $^3\text{He}$ from cosmology to particle detection. <i>Physica B: Condensed Matter</i> , 2003, 329-333, 70-74.	1.3	6
84	Spin-Orbital Dynamics in the B-Phase of Superfluid Helium-3. <i>Journal of Low Temperature Physics</i> , 2004, 137, 625-654.	0.6	6
85	Ferromagnetic nanoclusters in two-dimensional $^3\text{He}$ . <i>Physical Review B</i> , 2006, 73, .	1.1	6
86	The new types of nuclear spin echo experiments in antiferromagnets. <i>Physica B: Physics of Condensed Matter &amp; C: Atomic, Molecular and Plasma Physics, Optics</i> , 1977, 86-88, 1301-1302.	0.9	5
87	Spin supercurrent solitons: The magnetic envelope of the propagating A-B boundary in $^3\text{He}$ . <i>Physical Review Letters</i> , 1992, 69, 3662-3665.	2.9	5
88	A chaotic regime of internal precession in $^3\text{He}$ -B. <i>Journal of Low Temperature Physics</i> , 1993, 90, 167-179.	0.6	5
89	2D liquid $^3\text{He}$ near solidification: a highly correlated Fermi liquid. <i>Journal of Low Temperature Physics</i> , 1995, 101, 161-166.	0.6	5
90	$^3\text{He}$ /graphite commensurate bilayer films in the antiferromagnetic regime. <i>European Physical Journal D</i> , 1996, 46, 401-402.	0.4	5

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91	On the spin-liquid phase of two-dimensional $^3\text{He}$ . Journal of Physics Condensed Matter, 2004, 16, S691-S699.	0.7	5
92	Quantum Fluid Dynamics of Rotating Superfluid $^3\text{He}$ in Aerogel. Journal of Low Temperature Physics, 2008, 150, 435-444.	0.6	5
93	$^3\text{He}$ : cosmological and atomic physics experiments. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2008, 366, 2821-2832.	1.6	5
94	Features of the Coupled Nuclear-Electron Spin Precession in the Bose-Einstein Condensate of Magnons. JETP Letters, 2020, 112, 95-100.	0.4	5
95	Observation of Phase Slips in Spin Supercurrents in $^3\text{He-B}$ . Japanese Journal of Applied Physics, 1987, 26, 175.	0.8	5
96	A new NMR mode in the Landau field in superfluid $^3\text{He-B}$ . Journal of Low Temperature Physics, 1992, 89, 27-36.	0.6	4
97	NMR in superfluid $^3\text{He}$ at very low temperatures. Journal of Low Temperature Physics, 1995, 101, 123-134.	0.6	4
98	Spin dynamics of superfluid $^3\text{He}$ in non-hydrodynamic regime. European Physical Journal D, 1996, 46, 3003-3010.	0.4	4
99	Simulated cosmic strings in a $\Lambda$ -big bang in superfluid $^3\text{He}$ at $100\ \mu\text{K}$ . European Physical Journal D, 1996, 46, 5-6.	0.4	4
100	The new grenoble $100\ \mu\text{K}$ refrigerator. European Physical Journal D, 1996, 46, 2791-2792.	0.4	4
101	$^3\text{He}$ NMR in aerogel. Journal of Physics and Chemistry of Solids, 2005, 66, 1325-1329.	1.9	4
102	Electron-Nuclear Recoil Discrimination by Pulse Shape Analysis. Journal of Low Temperature Physics, 2008, 150, 536-543.	0.6	4
103	$^3\text{He}$ Experiments: Insights into Cosmology and Atomic Physics. Journal of Low Temperature Physics, 2010, 158, 118-128.	0.6	4
104	Superfluid transition in superfluid $^3\text{He}$ in radially compressed aerogel. Journal of Physics: Conference Series, 2012, 400, 012019.	0.3	4
105	The multiuniverse transition in superfluid $^3\text{He}$ . Journal of Physics Condensed Matter, 2013, 25, 404205.	0.7	4
106	Bose-Einstein condensation in antiferromagnets at low temperatures. Journal of Physics: Conference Series, 2014, 568, 042001.	0.3	4
107	Direct observation of the specific heat of Majorana quasiparticles in superfluid $^3\text{He-B}$ . Scientific Reports, 2020, 10, 20120.	1.6	4
108	Magneto-optical imaging of coherent spin dynamics in ferrites. Optics Express, 2022, 30, 1737-1744.	1.7	4

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109	$^3\text{He}$ – $^4\text{He}$ texture relaxation with parallel-plate geometry. Physics Letters, Section A: General, Atomic and Solid State Physics, 1984, 102, 194-196.	0.9	3
110	Instability of the homogeneous precession in $^3\text{He}$ – $^4\text{He}$ (catastrophic relaxation). Physica B: Condensed Matter, 1990, 165-166, 675-676.	1.3	3
111	Observation of a new relaxation mechanism in $^3\text{He}$ - $^4\text{He}$ . Physica B: Condensed Matter, 1994, 194-196, 803-804.	1.3	3
112	Systematic study of $^3\text{He}$ adsorbed on graphite by NMR techniques. European Physical Journal D, 1996, 46, 399-400.	0.4	3
113	Textures of Superfluid $^3\text{He}$ A-like and B-like Phases in Aerogel under Rotation. Journal of Low Temperature Physics, 2007, 148, 591-596.	0.6	3
114	Atomic type magnon Bose-Einstein condensation in antiferromagnet.. Journal of Physics: Conference Series, 2012, 400, 032001.	0.3	3
115	Anomalous magnetic relaxation in normal $^3\text{He}$ at low temperatures. Physica B: Condensed Matter, 1992, 178, 181-186.	1.3	2
116	Principles of HPD NMR spectroscopy of $^3\text{He}$ - $^4\text{He}$ . Physica B: Condensed Matter, 1992, 178, 187-195.	1.3	2
117	A highly sensitive nuclear recoil detector based on superfluid $^3\text{He}$ - $^4\text{He}$ . Journal of Low Temperature Physics, 1995, 101, 9-16.	0.6	2
118	A geometry dependent thermal resistance between a saturated dilute $^3\text{He}$ - $^4\text{He}$ solution and sintered silver powder. Journal of Low Temperature Physics, 1995, 101, 259-264.	0.6	2
119	Coherent spin precession and texture in $^3\text{He}$ - $^4\text{He}$ . European Physical Journal D, 1996, 46, 231-232.	0.4	2
120	Magnetic susceptibility of liquid $^3\text{He}$ . Journal of Physics: Conference Series, 2009, 150, 032024.	0.3	2
121	Coherent precession of magnetization in superfluid $^3\text{He}$ A-phase in aerogel. Journal of Physics: Conference Series, 2009, 150, 032052.	0.3	2
122	Observation of Majorana Quasiparticles™ Edge States in Superfluid $^3\text{He}$ . Applied Magnetic Resonance, 2014, 45, 1219-1224.	0.6	2
123	The magnon BEC observation by switch off method. Low Temperature Physics, 2017, 43, 930-935.	0.2	2
124	Spin superfluid state at room temperature. AIP Conference Proceedings, 2020, , .	0.3	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	Identification of a new source of magnon relaxation in interface between epitaxial iron garnet ferrite films and GGG substrate. Materials Research Bulletin, 2022, 149, 111691.	2.7	2



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127	Studies with coherently precessing magnetization on counterflow and vortices in rotating $^3\text{He-B}$ . <i>Physica B: Condensed Matter</i> , 1994, 194-196, 761-762.	1.3	1
128	Texture dependence of the persistent NMR signal in superfluid $^3\text{He-B}$ . <i>European Physical Journal D</i> , 1996, 46, 233-234.	0.4	1
129	New concepts on the $A \leftrightarrow B$ transition in superfluid $^3\text{He}$ . <i>Physica B: Condensed Matter</i> , 2000, 284-288, 246-247.	1.3	1
130	EU dissemination of the provisional ultra-low-temperature scale, PLTS-2000. <i>Physica B: Condensed Matter</i> , 2003, 329-333, 1564-1565.	1.3	1
131	“Catastrophic Relaxation”, Two Decades of Controversy. <i>Journal of Low Temperature Physics</i> , 2007, 148, 475-482.	0.6	1
132	ULTIMA: Magnetic Field Dependence of the Calibration Factor. <i>Journal of Low Temperature Physics</i> , 2008, 151, 860-864.	0.6	1
133	Magnon Bose-Einstein condensation at inhomogeneous conditions. <i>Journal of Physics: Conference Series</i> , 2013, 478, 012004.	0.3	1
134	Magnetic relaxation in superfluid $^3\text{He-B}$ . <i>Physica B: Condensed Matter</i> , 1990, 165-166, 681-682.	1.3	0
135	NMR and magnetic supercurrent in $^3\text{He-B}$ . <i>Physica Scripta</i> , 1991, T35, 136-140.	1.2	0
136	The magnetic envelope of the propagating A-B boundary in $^3\text{He}$ . <i>Physica B: Condensed Matter</i> , 1994, 194-196, 759-760.	1.3	0
137	Temperature dependence of the Leggett-Takagi relaxation time and spin diffusion coefficient in $^3\text{He-B}$ for 6 bar. <i>European Physical Journal D</i> , 1996, 46, 223-224.	0.4	0
138	Ultra Low Temperature Instrumentation for Measurements in Astrophysics : ULTIMA. <i>AIP Conference Proceedings</i> , 2006, , .	0.3	0
139	Observation of vortex-creep in superfluid $^3\text{He}$ B-like phase in aerogel by the HPD. <i>Physica C: Superconductivity and Its Applications</i> , 2008, 468, 605-608.	0.6	0
140	Publisher’s Note: Nonlinear parametric amplification in a triport nanoelectromechanical device [Phys. Rev. B84, 054108 (2011)]. <i>Physical Review B</i> , 2011, 84, .	1.1	0
141	Magnon Quantization in the Magnetic Field Gradient. <i>Applied Magnetic Resonance</i> , 2021, 52, 1749-1756.	0.6	0
142	Micromagnetic modeling of magnon coherent states in a nonuniform magnetic field. <i>Journal of Physics Condensed Matter</i> , 2022, 34, 035802.	0.7	0