

# Viktor Tsepelin

## List of Publications by Year in descending order

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81  
papers

1,227  
citations

394421

19  
h-index

434195

31  
g-index

82  
all docs

82  
docs citations

82  
times ranked

420  
citing authors

#	ARTICLE	IF	CITATIONS
1	Producing and imaging quantum turbulence via pair-breaking in superfluid $^3\text{He}$ . <i>Physical Review B</i> , 2022, 105, .	3.2	4
2	Nanoscale real-time detection of quantum vortices at millikelvin temperatures. <i>Nature Communications</i> , 2021, 12, 2645.	12.8	14
3	On the origin of the controversial electrostatic field effect in superconductors. <i>Nature Communications</i> , 2021, 12, 2747.	12.8	33
4	Fundamental dissipation due to bound fermions in the zero-temperature limit. <i>Nature Communications</i> , 2020, 11, 4742.	12.8	12
5	Effect of the boundary condition on the Kapitza resistance between superfluid $^3\text{He}$ and sintered metal. <i>Physical Review B</i> , 2020, 102, .	3.2	6
6	Detecting a phonon flux in superfluid $^4\text{He}$ by a nanomechanical resonator. <i>Physical Review B</i> , 2020, 101, .	3.2	9
7	Probing superfluid $^3\text{He}$ with high-frequency nanomechanical resonators down to millikelvin temperatures. <i>Physical Review B</i> , 2019, 100, .	3.2	13
8	Multimode probing of superfluid $^4\text{He}$ by tuning forks. <i>Applied Physics Letters</i> , 2019, 115, .	3.3	3
9	Dynamical similarity and instabilities in high-Stokes-number oscillatory flows of superfluid helium. <i>Physical Review B</i> , 2019, 99, .	3.2	13
10	Acoustic damping of quartz tuning forks in normal and superfluid $^3\text{He}$ . <i>Physical Review B</i> , 2019, 100, .	3.2	2
11	LEGO® Block Structures as a Sub-Kelvin Thermal Insulator. <i>Scientific Reports</i> , 2019, 9, 19642.	3.3	4
12	Andreev Reflection in Superfluid $^3\text{He}$ : A Probe for Quantum Turbulence. <i>Annual Review of Condensed Matter Physics</i> , 2017, 8, 407-430.	14.5	6
13	Observation of quantum turbulence in superfluid $^3\text{He}$ using reflection and transmission of ballistic thermal excitations. <i>Physical Review B</i> , 2017, 95, .	3.2	5
14	Visualization of quantum turbulence in superfluid $^3\text{He}$ : Combined numerical and experimental study of Andreev reflection. <i>Physical Review B</i> , 2017, 96, .	3.2	8
15	Operating Nanobeams in a Quantum Fluid. <i>Scientific Reports</i> , 2017, 7, 4876.	3.3	17
16	Multiple critical velocities in oscillatory flow of superfluid $^3\text{He}$ due to quartz tuning forks. <i>Physical Review B</i> , 2016, 94, .	3.2	15
17	Probing Bogoliubov Quasiparticles in Superfluid $^3\text{He}$ with a Vibrating-Wire Like™ MEMS Device. <i>Journal of Low Temperature Physics</i> , 2016, 183, 284-291.	1.4	13
18	Probing Liquid $^4\text{He}$ with Quartz Tuning Forks Using a Novel Multifrequency Lock-in Technique. <i>Journal of Low Temperature Physics</i> , 2016, 184, 1080-1091.	1.4	8

#	ARTICLE	IF	CITATIONS
19	Breaking the superfluid speed limit in a fermionic condensate. Nature Physics, 2016, 12, 1017-1021.	16.7	24
20	Measurements of Vortex Line Density Generated by a Quartz Tuning Fork in Superfluid $^4\text{He}$ . Journal of Low Temperature Physics, 2016, 183, 208-214.	1.4	11
21	Scattering length of Andreev reflection from quantized vortices in superfluid $^4\text{He}$ . Physical Review B, 2016, 93, 020407.	3.2	6
22	Visualizing Pure Quantum Turbulence in Superfluid $^4\text{He}$ . Nature Physics, 2016, 12, 1017-1021.	7.8	16
23	Superfluid and its Spectral Properties. Physical Review Letters, 2015, 115, 015302.	3.2	15
24	Frequency-dependent drag from quantum turbulence produced by quartz tuning forks in superfluid $^4\text{He}$ . Physical Review B, 2014, 89, 020407.	3.2	23
25	Andreev reflection, a tool to investigate vortex dynamics and quantum turbulence in $^3\text{He}$ -B. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 4659-4666.	7.1	21
26	Hysteresis, Switching and Anomalous Behaviour of a Quartz Tuning Fork in Superfluid $^4\text{He}$ . Journal of Low Temperature Physics, 2014, 175, 379-384.	1.4	7
27	Anomalous Damping of a Low Frequency Vibrating Wire in Superfluid $^3\text{He}$ -B due to Vortex Shielding. Journal of Low Temperature Physics, 2014, 175, 372-378.	1.4	2
28	Plastic Properties of Solid $^4\text{He}$ Probed by a Moving Wire: Viscoelastic and Stochastic Behavior Under High Stress. Journal of Low Temperature Physics, 2014, 175, 147-153.	1.4	4
29	Response of a Mechanical Oscillator in Solid $^4\text{He}$ . Journal of Low Temperature Physics, 2014, 175, 140-146.	1.4	8
30	A Quasiparticle Detector for Imaging Quantum Turbulence in Superfluid $^3\text{He}$ -B. Journal of Low Temperature Physics, 2014, 175, 725-738.	1.4	11
31	The Onset of Vortex Production by a Vibrating Wire in Superfluid $^3\text{He}$ -B. Journal of Low Temperature Physics, 2013, 171, 582-588.	1.4	7
32	Thermometry in Normal Liquid $^3\text{He}$ Using a Quartz Tuning Fork Viscometer. Journal of Low Temperature Physics, 2013, 171, 750-756.	1.4	12
33	Crossover from hydrodynamic to acoustic drag on quartz tuning forks in normal and superfluid $^4\text{He}$ . Physical Review B, 2012, 85, .	3.2	57
34	Turbulent drag on a low-frequency vibrating grid in superfluid $^4\text{He}$ at very low temperatures. Physical Review B, 2012, 85, .	3.2	19
35	Direct measurement of the energy dissipated by quantum turbulence. Nature Physics, 2011, 7, 473-476.	16.7	44
36	History Dependence of Turbulence Generated by a Vibrating Wire in Superfluid $^4\text{He}$ at 1.5 K. Journal of Low Temperature Physics, 2011, 162, 375-382.	1.4	8

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37	A New Device for Studying Low or Zero Frequency Mechanical Motion at Very Low Temperatures. Journal of Low Temperature Physics, 2011, 165, 114-131.	1.4	10
38	Measuring the Prong Velocity of Quartz Tuning Forks Used to Probe Quantum Fluids. Journal of Low Temperature Physics, 2010, 161, 536-547.	1.4	14
39	Generation, evolution, and decay of pure quantum turbulence: A full Biot-Savart simulation. Physical Review B, 2010, 81, .	3.2	32
40	Magnetic Phase Transition in a Nanonetwork of SolidHe3in Aerogel. Physical Review Letters, 2010, 105, 125303.	7.8	5
41	The Transition to Turbulent Drag for a Cylinder Oscillating in Superfluid 4He: A Comparison of Quantum and Classical Behavior. Journal of Low Temperature Physics, 2009, 154, 97-116.	1.4	27
42	Transition to Turbulence for a Quartz Tuning Fork in Superfluid 4He. Journal of Low Temperature Physics, 2009, 156, 116-131.	1.4	59
43	The Damping of a Quartz Tuning Fork in Superfluid 3He-B at Low Temperatures. Journal of Low Temperature Physics, 2009, 157, 476-501.	1.4	46
44	Experimental setup for the observation of crystallization waves in 3He. Journal of Physics: Conference Series, 2009, 150, 012026.	0.4	1
45	Elementary Excitations in Solid and Liquid 4He at the Melting Pressure. Journal of Low Temperature Physics, 2008, 150, 258-266.	1.4	6
46	Grid Turbulence in Superfluid 3He-B at Low Temperatures. Journal of Low Temperature Physics, 2008, 150, 364-372.	1.4	11
47	Magnetic Distortion of the B-like Phase of Superfluid 3He Confined in Aerogel. Journal of Low Temperature Physics, 2008, 150, 445-452.	1.4	4
48	Relic topological defects from brane annihilation simulated in superfluid 3He. Nature Physics, 2008, 4, 46-49.	16.7	38
49	Fluctuations and Correlations of Pure Quantum Turbulence in Superfluid He-3. Physical Review Letters, 2008, 101, 065302.	7.8	65
50	Annihilation of an AB/BA interface pair in superfluid helium-3 as a simulation of cosmological brane interaction. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2008, 366, 2803-2812.	3.4	2
51	The Annihilation of Two Phase Interfaces in Superfluid 3He: Simulated Brane Annihilation in the Laboratory. Journal of the Physical Society of Japan, 2008, 77, 111005.	1.6	3
52	Contrasting Mechanical Anisotropies of the Superfluid He-3 Phases in Aerogel. Physical Review Letters, 2007, 98, 075302.	7.8	12
53	Absence of low-temperature anomaly on the melting curve of 4He. JETP Letters, 2007, 85, 454-457.	1.4	17
54	First Observation of the Critical Size of Facets on 3He Crystals near 1 mK. Journal of Low Temperature Physics, 2007, 146, 85-93.	1.4	2

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55	Vortex Rings in Superfluid $^3\text{He}$ at Low Temperatures. Journal of Low Temperature Physics, 2007, 148, 235-243.	1.4	10
56	The AB Interface in Superfluid $^3\text{He}$ as a Simulated Cosmological Brane. Journal of Low Temperature Physics, 2007, 148, 465-473.	1.4	2
57	Growth Dynamics and Faceting of $^3\text{He}$ Crystals. Journal of Low Temperature Physics, 2007, 148, 635-643.	1.4	0
58	Non-linear Mechanical Response of the A-like Phase of Superfluid $^3\text{He}$ in Aerogel. Journal of Low Temperature Physics, 2007, 148, 603-607.	1.4	0
59	The Thermal Boundary Resistance of the Superfluid $^3\text{He}$ A-B Phase Interface in the Low Temperature Limit. AIP Conference Proceedings, 2006, , .	0.4	3
60	The Generation Of Quantum Turbulence In $^3\text{He}$ -B By A Vibrating Grid At Low Temperatures. AIP Conference Proceedings, 2006, , .	0.4	0
61	A Levitated Droplet of Superfluid $^3\text{He}$ -B Entirely Surrounded by $^3\text{He}$ -A. AIP Conference Proceedings, 2006, , .	0.4	2
62	Coupling between Solid $^3\text{He}$ on Aerogel and Superfluid $^3\text{He}$ in the Low Temperature Limit. AIP Conference Proceedings, 2006, , .	0.4	1
63	The Decay of Quantum Turbulence Generated by a Vibrating Grid at Low Temperatures in Superfluid $^3\text{He}$ -B. AIP Conference Proceedings, 2006, , .	0.4	0
64	Thermal Transport by Ballistic Quasiparticles in Superfluid $^3\text{He}$ -B in the Low Temperature Limit. AIP Conference Proceedings, 2006, , .	0.4	3
65	Decay of Pure Quantum Turbulence in Superfluid $^3\text{He}$ . Physical Review Letters, 2006, 96, 035301.	7.8	128
66	Melting Curve of $^4\text{He}$ : No Sign of a Supersolid Transition down to $10\text{ mK}$ . Physical Review Letters, 2006, 97, 165302.	7.8	27
67	Measurements on the Surface Tension of $^3\text{He}$ Crystals near $100\text{ mK}$ . Journal of Low Temperature Physics, 2005, 138, 811-816.	1.4	4
68	Emission of Discrete Vortex Rings by a Vibrating Grid In Superfluid $^3\text{He}$ : A Precursor to Quantum Turbulence. Physical Review Letters, 2005, 95, 035302.	7.8	89
69	Surface of a $^3\text{He}$ Crystal: Crossover from Quantum to Classical Behavior. Physical Review Letters, 2004, 93, 175301.	7.8	8
70	Faceting and growth kinetics of crystals. Physica B: Condensed Matter, 2003, 329-333, 360-363.	2.7	0
71	Faceting of crystals. Physica B: Condensed Matter, 2003, 329-333, 386-387.	2.7	5
72	Anisotropy of Growth Kinetics of $^3\text{He}$ Crystals below $1\text{ mK}$ . Physical Review Letters, 2002, 88, 045302.	7.8	19

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73	Faceting on $^3\text{He}$ crystals. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 1796-1800.	7.1	1
74	Morphology and Growth Kinetics of $^3\text{He}$ Crystals Below 1 mK. Journal of Low Temperature Physics, 2002, 129, 489-530.	1.4	21
75	Vibrating Wire Measurements in Superfluid $^3\text{He}$ at the Melting Curve Down to 0.53 mK. Journal of Low Temperature Physics, 2002, 126, 1449-1455.	1.4	22
76	Observations on Faceting of $^3\text{He}$ Crystals at $T=0.55$ mK. Journal of Low Temperature Physics, 2001, 124, 189-196.	1.4	8
77	Observation of Higher Order Facets on $^3\text{He}$ Crystals. Physical Review Letters, 2001, 86, 1042-1045.	7.8	18
78	Nucleation and growth of $^3\text{He}$ crystals below 1 mK. Physica B: Condensed Matter, 2000, 284-288, 351-352.	2.7	4
79	Direct Observation of (110), (100) and (211) Facets on $^3\text{He}$ Crystals. Journal of Low Temperature Physics, 2000, 121, 695-700.	1.4	11
80	Elementary Steps on the $^4\text{He}$ Crystal Interface Probed by $^3\text{He}$ Atoms. Physical Review Letters, 1999, 83, 4804-4807.	7.8	7
81	Using a superfluid to image its own vortices. SPIE Newsroom, 0, , .	0.1	0