William Halperin

List of Publications by Year
in descending order

108 papers	2,583 citations	201674 27 h-index	206112 48 g-index
112 all docs	112 docs citations	112 times ranked	1263 citing authors

#	Article	IF	Citations
1	Homogeneous Equal-Spin Pairing Superfluid State of3Hein Aerogel. Physical Review Letters, 1995, 75, 661-664.	7.8	202
2	Observation of broken time-reversal symmetry in the heavy-fermion superconductor UPt ₃. Science, 2014, 345, 190-193.	12.6	177
3	Spatially resolved electronic structure inside and outside the vortex cores of a high-temperature superconductor. Nature, 2001, 413, 501-504.	27.8	172
4	Properties of melting 3He: Specific heat, entropy, latent heat, and temperature. Journal of Low Temperature Physics, 1978, 31, 617-698.	1.4	164
5	Observation of Nuclear Magnetic Order in SolidHe3. Physical Review Letters, 1974, 32, 927-930.	7.8	153
6	Measurements of High-Frequency Sound Propagation inHe3-B. Physical Review Letters, 1980, 45, 266-269.	7.8	114
7	Effect of Magnetic Scattering on the3HeSuperfluid State in Aerogel. Physical Review Letters, 1996, 77, 4568-4571.	7.8	108
8	The Transition Between Real and Complex Superconducting Order Parameter Phases in UPt ₃. Science, 2010, 328, 1368-1369.	12.6	67
9	Discovery of the acoustic Faraday effect in superfluid 3He-B. Nature, 1999, 400, 431-433.	27.8	54
10	Evidence for Complex Superconducting Order Parameter Symmetry in the Low-Temperature Phase of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>UPt</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:math>from Josephson Interferometry. Physical Review Letters, 2009, 103, 197002.	7.8	52
11	Nonlinear Spin Dynamics and Magnetic Field Distortion of the Superfluid3He-BOrder Parameter. Physical Review Letters, 1996, 77, 1314-1317.	7.8	51
12	Impurity Effects of Aerogel in Superfluid³He. Journal of the Physical Society of Japan, 2008, 77, 111002.	1.6	45
13	Surface Specific Heat ofHe3and Andreev Bound States. Physical Review Letters, 2006, 96, 125301.	7.8	44
14	Broken time-reversal symmetry in the topological superconductor UPt3. Nature Physics, 2020, 16, 531-535.	16.7	41
15	New chiral phases of superfluid 3HeÂstabilized by anisotropic silica aerogel. Nature Physics, 2012, 8, 317-320.	16.7	40
16	Antiferromagnetism in the vortex cores ofYBa2Cu3O7â˜Îˊ. Physical Review B, 2003, 67, .	3.2	39
17	Two-dimensional vortices in superconductors. Nature Physics, 2007, 3, 239-242.	16.7	39
18	Modification of the Superfluid3HePhase Diagram by Impurity Scattering. Physical Review Letters, 2001, 87, 035701.	7.8	38

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19	Phase diagram of the superfluid phases of3Hein 98% aerogel. Physical Review B, 2002, 66, .	3.2	38
20	Absence of Static Loop-Current Magnetism at the Apical Oxygen Site inHgBa2CuO4+Î´from NMR. Physical Review Letters, 2013, 111, 187003.	7.8	38
21	Strong coupling corrections to the Ginzburg-Landau theory of superfluid<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mmultiscripts><mml:mi mathvariant="normal">He</mml:mi><mml:mprescripts /><mml:none /><mml:mn>3</mml:mn></mml:mmultiscripts></mml:math>. Physical Review B, 2007, 75, .	3.2	36
22	Aâ€”Btransition of superfluidHe3in aerogel and the effect of anisotropic scattering. Physical Review B, 2005, 72, .	3.2	35
23	Internal Structure of Porous Silica: A Model System for Characterization by Nuclear Magnetic Resonance. Journal of the American Ceramic Society, 1989, 72, 2126-2130.	3.8	31
24	Suppression of superconductivity inUPt3single crystals. Physical Review B, 1998, 58, R603-R606.	3.2	31
25	The superfluid glass phase of 3He-A. Nature Physics, 2013, 9, 775-779.	16.7	31
26	Anomalous Attenuation of Transverse Sound in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mmultiscripts><mml:mi>He</mml:mi><mml:mprescripts /><mml:none /><mml:mn>3</mml:mn></mml:mmultiscripts></mml:math>. Physical Review Letters, 2008, 101, 085301.	7.8	30
27	Anisotropic dc Magnetization of SuperconductingUPt3and Antiferromagnetic Ordering Below 20 mK. Physical Review Letters, 1999, 82, 2378-2381.	7.8	28
28	Vortex melting in polycrystallineYBa2Cu3O7fromO17NMR. Physical Review B, 1997, 55, R14737-R14740.	3.2	27
29	The impact of helium shortages on basic research. Nature Physics, 2014, 10, 467-470.	16.7	27
30	High-Frequency Acoustics of3Hein Aerogel. Physical Review Letters, 2000, 85, 4325-4328.	7.8	26
31	Energy gap and Korringa constant in the high-temperature superconductorLa1.83Sr0.17CuO4determined by NMR. Physical Review B, 1987, 36, 2378-2381.	3.2	23
32	High-Field Vortex Dynamics inYBa2Cu3O7fromO17Nuclear Magnetic Resonance. Physical Review Letters, 1998, 80, 1726-1729.	7.8	23
33	Identification of Superfluid Phases of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mmultiscripts><mml:mi>He</mml:mi><mml:mprescripts /><mml:none /><mml:mn>3</mml:mn></mml:mmultiscripts></mml:math>in Uniformly Isotropic 98.2% Aerogel. Physical Review Letters, 2011, 107, 195301.	7.8	23
34	Specific Heat of Disordered SuperfluidHe3. Physical Review Letters, 2004, 93, 145301.	7.8	22
35	A1andA2Transitions in SuperfluidHe3in 98% Porosity Aerogel. Physical Review Letters, 2004, 93, 145302.	7.8	22
36	Nodal gap structure and order parameter symmetry of the unconventional superconductor UPt₃. New Journal of Physics, 2015, 17, 023041.	2.9	21

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37	Discovery of an excited pair state in superfluid 3He. Nature Physics, 2008, 4, 571-575.	16.7	19
38	Thallium magnetic resonance in superconductingTl2Ba2Ca2Cu3O10+Î´. Physical Review B, 1989, 40, 817-820.	3.2	17
39	Progressive saturation NMR relaxation. Physical Review B, 2001, 64, .	3.2	17
40	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mmultiscripts><mml:mi mathvariant="normal">As</mml:mi><mml:mprescripts /><mml:none /><mml:mrow><mml:mn>75</mml:mn></mml:mrow></mml:mmultiscripts></mml:math>NMR of		

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55	Microscopic coexistence of a two-component incommensurate spin density wave with superconductivity in underdoped NaFe<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mrow><mml:mn>0.983</mml:mn></mml:mrow></mml:msub></mml:math>Co<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mrow><mml:mn>0.017</mml:mn></mml:mrow></mml:msub></mml:math>As. Physical Review B,	3.2	10
56	Spin pairing and penetration depth measurements from nuclear magnetic resonance in NaFe0.975Co0.025As. Physical Review B, 2013, 87, .	3.2	10
57	Orientation of the Angular Momentum in Superfluid 3He-A in a Stretched Aerogel. Journal of Low Temperature Physics, 2014, 175, 31-36.	1.4	10
58	Superfluid helium-3 in confined quarters. Physics Today, 2018, 71, 30-36.	0.3	10
59	Effect of Magnetic Impurities on Superfluid <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mmultiscripts><mml:mrow><mml:mi>He</mml:mi></mml:mrow><mml:mprescripts /><mml:none /><mml:mrow><mml:mn>3</mml:mn></mml:mrow></mml:mmultiscripts></mml:mrow></mml:math>.	7.8	10
60	Spin-Density Wave near the Vortex Cores in the High-Temperature Superconductor<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>Bi</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:msub><mml:mi>Sr</mml:mi><mml:mn mathvariant="normal">O</mml:mi><mml:mrow><mml:mn>8</mml:mn><mml:mo>+</mml:mo><mml:mi>y</mml:mi></mml:mrow></m	7.8	9
61	Physical Review Letters, 2011, 106, 057003. Persistence of slow fluctuations in the overdoped regime of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>Ba</mml:mi><mml:mrow><mml:mo>(</mml:mo><mml:m /><mml:mn>2</mml:mn></mml:msub><mml:msub><mml:mi>As</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:mrow></mml: Physical Review B, 2016, 93, .	3.2	8
62	Recent Progress and New Challenges in Quantum Fluids and Solids. Journal of Low Temperature Physics, 2017, 189, 1-14.	1.4	8
63	High frequency acoustic measurements in liquid3He near the transition temperature. Journal of Low Temperature Physics, 1996, 103, 265-272.	1.4	7
64	Stability of the axial phase of superfluid<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mmultiscripts><mml:mi mathvariant="normal">He</mml:mi><mml:mprescripts /><mml:none /><mml:mn>3</mml:mn></mml:mmultiscripts></mml:math>in aerogel with globally anisotropic scattering. Physical Review B, 2008, 77, .	3.2	7
65	Low temperature thermal resistance for a new design of silver sinter heat exchanger. Journal of Physics: Conference Series, 2009, 150, 012037.	0.4	7
66	Charge-induced vortex lattice instability. Nature Physics, 2011, 7, 125-128.	16.7	7
67	Crystallization ofHe4in aerogel via mass flow from surrounding solidHe4. Physical Review B, 2016, 94, .	3.2	7
68	Impurity phases of superfluid in aerogel. Physica B: Condensed Matter, 2003, 329-333, 288-291.	2.7	6
69	High Frequency Sound in Superfluid 3He-B. Journal of Low Temperature Physics, 2008, 153, 1-14.	1.4	6
70	Coherent charge and spin density waves in underdoped HgBa2CuO4+Î´. New Journal of Physics, 2017, 19, 033024.	2.9	6
71	Spin susceptibility of the topological superconductor <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi mathvariant="bold">UPt</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:math> from polarized neutron diffraction. Physical Review B, 2017, 96, .	3.2	6
72	Stripe antiferromagnetism and disorder in the Mott insulator <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>NaFe</mml:mi><mml:mrow><mml:mn>1</m <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mo>(</mml:mo><mml:mi>x</mml:mi><mml:mo>â‰²</mml Physical Review B, 2020, 101, .	3.2	6

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73	Enhanced self-diffusion of adsorbed methanol in silica aerogel. Physical Review B, 2014, 90, .	3.2	5
74	NMR Frequency Shifts and Phase Identification in Superfluid $$^3hbox {He}$$. Journal of Low Temperature Physics, 2019, 195, 358-364.	1.4	5
75	Toward the Mott state with magnetic cluster formation in heavily Cu-doped NaFe1â^'xCuxAs. Physical Review B, 2019, 99, .	3.2	5
76	Anisotropy and penetration depth of MgB2from11B NMR. New Journal of Physics, 2006, 8, 274-274.	2.9	4
77	Nuclear magnetic resonance studies of vortices in high temperature superconductors. Frontiers of Physics, 2011, 6, 450-462.	5.0	4
78	Magnetic field dependence of spin-lattice relaxation in the<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>s</mml:mi><mml:mo>Â±</mml:mo></mml:msub></mml:math>state of Ba<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mrow><mml:mn>0.67</mml:mn></mml:mrow></mml:msub></mml:math>K<mml:math xmlns:mml	3.2	4
79	Nonlinear field dependence andf-wave interactions in superfluid3He. Physical Review B, 2013, 87, .	3.2	4
80	Dissipation signatures of the normal and superfluid phases in torsion pendulum experiments withHe3in aerogel. Physical Review B, 2014, 89, .	3.2	4
81	Corrections to Higgs mode masses in superfluid He3 from acoustic spectroscopy. Physical Review B, 2019, 99, .	3.2	4
82	Fingerprinting triangular-lattice antiferromagnet by excitation gaps. Physical Review B, 2021, 103, .	3.2	4
83	Acoustic Spectroscopy of Superfluid 3He in Aerogel. AIP Conference Proceedings, 2006, , .	0.4	3
84	Orbital-Flop Transition of Angular Momentum in a Topological Superfluid. Physical Review Letters, 2018, 121, 255303.	7.8	3
85	Eighty years of superfluidity. Nature, 2018, 553, 413-414.	27.8	3
86	NMR and Quantum Effects in Metal Particles. Materials Research Society Symposia Proceedings, 1987, 111, 79.	0.1	2
87	Alkali ionâ€“cryptand interactions and their effects on electrolyte conductivity. Physical Chemistry Chemical Physics, 2003, 5, 2072-2081.	2.8	2
88	Anisotropic Aerogels for Studying Superfluid 3He. Journal of Low Temperature Physics, 2007, 148, 579-583.	1.4	2
89	Magnetoresistance of UPt3. Journal of Low Temperature Physics, 2007, 148, 863-867.	1.4	2
90	Superfluid phase stability of3He in axially anisotropic aerogel. Journal of Physics: Conference Series, 2009, 150, 032084.	0.4	2

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91	Mass Coupling and Q â^'1 of Impurity-Limited Normal 3He inÂaÂTorsion Pendulum. Journal of Low Temperature Physics, 2011, 162, 174-181.	1.4	2
92	Pressure Dependence of the Longitudinal Resonance Frequency of3He Superfluid Phases in Aerogel. Journal of Physics: Conference Series, 2012, 400, 012039.	0.4	2
93	Magnetic-field-induced vortex-lattice transition in HgBa2CuO4+Î´. Physical Review B, 2017, 95, .	3.2	2
94	Reversible ordering and disordering of the vortex lattice in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi mathvariant="normal">UPt</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:math>. Physical Review B, 2022, 105, .	3.2	2
95	Pore Structure Evolution and State of Pore Water in Hydrating Cement Paste at Cryogenic Temperatures. , 1996, , 600.		1
96	Compressed Silica Aerogels for the Study of Superfluid 3He. AIP Conference Proceedings, 2006, , .	0.4	1
97	Magnetoresistance of UPt3. New Journal of Physics, 2008, 10, 043006.	2.9	1
98	Electron-beam floating-zone refined UCoGe. Physical Review Materials, 2021, 5, .	2.4	1
99	The AB Transition in Superfluid ^{3}He. Journal of Low Temperature Physics, 0, , 1.	1.4	1
100	RKKY coupled local-moment magnetism in NaFe1â^'xCuxAs. Physical Review B, 2021, 104, .	3.2	1
101	Effects of the Order Parameter Anisotropy on the Vortex Lattice in UPt3. Frontiers in Electronic Materials, 2022, 2, .	3.1	1
102	Collective modes in 3He-B. AIP Conference Proceedings, 1983, , .	0.4	0
103	High resolution sound velocity measurement in liquid3He using path length modulation technique. European Physical Journal D, 1996, 46, 59-60.	0.4	0
104	Imaginary Squashing Mode Spectroscopy of Helium Three B. Journal of Low Temperature Physics, 2007, 148, 501-505.	1.4	0
105	Analysis of Strong-Coupling Parameters for Superfluid 3He. Journal of Low Temperature Physics, 2007, 148, 507-511.	1.4	0
106	Nanoparticle-Aerogel Composites: Nanoparticle-Loaded Aerogels and Layered Aerogels Cast from Sol-Gel Mixtures (Small 18/2011). Small, 2011, 7, 2542-2542.	10.0	0
107	Caught speeding. Nature Physics, 2016, 12, 993-993.	16.7	0
108	Location of the oxygen dopant in the high temperature superconductor HgBa2CuO<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si3.gif" overflow="scroll"><mml:msub><mml:mrow /><mml:mrow><mml:mn>4</mml:mn><mml:mo>+</mml:mo><mml:mi>Î´</mml:mi></mml:mrow></mml:msub></mml:math> from 199Hg NMR. Physica C: Superconductivity and Its Applications, 2018, 555, 24-27.	1.2	0