

Louis Taillefer

List of Publications by Year in descending order

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143
papers

14,033
citations

12330

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19749

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144
all docs

144
docs citations

144
times ranked

5780
citing authors

#	ARTICLE	IF	CITATIONS
1	Quantum oscillations and the Fermi surface in an underdoped high-Tc superconductor. Nature, 2007, 447, 565-568.	27.8	836
2	Broken rotational symmetry in the pseudogap phase of a high-Tc superconductor. Nature, 2010, 463, 519-522.	27.8	487
3	Electron pockets in the Fermi surface of hole-doped high-Tc superconductors. Nature, 2007, 450, 533-536.	27.8	443
4	The superconducting phases of UPt ₃ . Reviews of Modern Physics, 2002, 74, 235-294.	45.6	409
5	Effect of spin fluctuations on the magnetic equation of state of ferromagnetic or nearly ferromagnetic metals. Journal of Physics C: Solid State Physics, 1985, 18, 4339-4371.	1.5	403
6	Field-Induced Quantum Critical Point in CeCoIn ₅ . Physical Review Letters, 2003, 91, 246405.	7.8	314
7	Change of carrier density at the pseudogap critical point of a cuprate superconductor. Nature, 2016, 531, 210-214.	27.8	296
8	Scattering and Pairing in Cuprate Superconductors. Annual Review of Condensed Matter Physics, 2010, 1, 51-70.	14.5	277
9	Phase diagram of UPt ₃ from ultrasonic velocity measurements. Physical Review Letters, 1990, 65, 2298-2301.	7.8	269
10	Critical point in the superconducting phase diagram of UPt ₃ . Physical Review Letters, 1989, 63, 93-96.	7.8	252
11	Small Fermi Surface Pockets in Underdoped High Temperature Superconductors: Observation of Shubnikov- \ddot{u} de Haas Oscillations in $YBa_2Cu_3O_{7-x}$. Physical Review Letters, 2008, 100, 047004.	7.8	212
12	Muon spin relaxation in UPt ₃ . Physical Review Letters, 1993, 71, 1466-1469.	7.8	215
13	Heat Conduction in the Vortex State of NbSe ₂ : Evidence for Multiband Superconductivity. Physical Review Letters, 2003, 90, 117003.	7.8	210
14	Thermal conductivity across the phase diagram of cuprates: Low-energy quasiparticles and doping dependence of the superconducting gap. Physical Review B, 2003, 67, .	3.2	208
15	Heavy-fermion quasiparticles in UPt ₃ . Physical Review Letters, 1988, 60, 1570-1573.	7.8	206
16	Heat Transport in a Strongly Overdoped Cuprate: Fermi Liquid and a Pured-Wave BCS Superconductor. Physical Review Letters, 2002, 89, 147003.	7.8	204
17	Universal Heat Conduction in YBa ₂ Cu ₃ O _{6.9} . Physical Review Letters, 1997, 79, 483-486.	7.8	200
18	Universal T-linear resistivity and Planckian dissipation in overdoped cuprates. Nature Physics, 2019, 15, 142-147.	16.7	197

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19	The Remarkable Underlying Ground States of Cuprate Superconductors. Annual Review of Condensed Matter Physics, 2019, 10, 409-429.	14.5	196
20	Lifshitz critical point in the cuprate superconductor $YBa_2Cu_3O_{7-x}$ from high-field Hall effect measurements. Physical Review B, 2011, 83, .	18.9	189
21	Linear temperature dependence of resistivity and change in the Fermi surface at the pseudogap critical point of a high-Tc superconductor. Nature Physics, 2009, 5, 31-34.	16.7	185
22	Low-energy quasiparticles in cuprate superconductors: A quantitative analysis. Physical Review B, 2000, 62, 3554-3558.	3.2	182
23	Direct measurement of the upper critical field in cuprate superconductors. Nature Communications, 2014, 5, 3280.	12.8	171
24	Fermi-liquid breakdown in the paramagnetic phase of a pure metal. Nature, 2003, 425, 595-599.	27.8	169
25	New Features in the Vortex Phase Diagram of $YBa_2Cu_3O_{7-x}$. Physical Review Letters, 1997, 79, 2121-2124.	7.8	164
26	Breakdown of Fermi-liquid theory in a copper-oxide superconductor. Nature, 2001, 414, 711-715.	27.8	163
27	Antiferromagnetic order in UTe_2 under pressure: Evidence for a direct coupling to superconductivity. Physical Review B, 1992, 46, 8675-8678.	3.2	158
28	Universal Heat Conduction in the Iron Arsenide Superconductor KFe_2As_2 . Evidence of a d-Wave State. Physical Review Letters, 2012, 109, 067001.	7.8	155
29	Breakdown of Fermi-liquid theory in the Bechgaard salts and the pnictide superconductor $LiFePO_4$.		

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37	Thermodynamic signatures of quantum criticality in cuprate superconductors. <i>Nature</i> , 2019, 567, 218-222.	27.8	120
38	Angular Position of Nodes in the Superconducting Gap of YBCO. <i>Physical Review Letters</i> , 1997, 78, 2624-2627.	7.8	119
39	Anisotropic Violation of the Wiedemann-Franz Law at a Quantum Critical Point. <i>Science</i> , 2007, 316, 1320-1322.	12.6	119
40	Sudden reversal in the pressure dependence of Tc in the iron-based superconductor KFe2As2. <i>Nature Physics</i> , 2013, 9, 349-352.	16.7	119
41	Nernst and Seebeck Coefficients of the Cuprate Superconductor $YBa_2Cu_3O_{6.67}$: A Study of Fermi Surface Reconstruction. <i>Physical Review Letters</i> , 2010, 104, 057005.	3.2	118
42	T2dependence of the resistivity in the Cu-O chains of $YBa_2Cu_3O_{6.9}$. <i>Physical Review B</i> , 1994, 50, 3458-3461.	3.2	116
43	Pressure dependence of the superconducting phases in UPt_3 . <i>Physical Review B</i> , 1991, 43, 13714-13716.	3.2	112
44	The 2021 quantum materials roadmap. <i>JPhys Materials</i> , 2020, 3, 042006.	4.2	111
45	Determining the Wiedemann-Franz Ratio from the Thermal Hall Conductivity: Application to Cu and $YBa_2Cu_3O_{6.95}$. <i>Physical Review Letters</i> , 2000, 84, 2219-2222.	7.8	106
46	Giant thermal Hall conductivity in the pseudogap phase of cuprate superconductors. <i>Nature</i> , 2019, 571, 376-380.	27.8	105
47	Quasiparticle Transport in the Vortex State of $YBa_2Cu_3O_{6.9}$. <i>Physical Review Letters</i> , 1999, 82, 2943-2946.	7.8	104
48	Quasiparticle heat transport in single-crystalline $YBa_2Cu_3O_{7-x}$. <i>Physical Review B</i> , 2009, 80, .	3.2	104
49	Onset of Plasticity and Hardening of the Hysteretic Response in the Vortex System of $YBa_2Cu_3O_{7-x}$. <i>Physical Review Letters</i> , 1999, 82, 5116-5119.	7.8	101
50	Vortex channeling along twin planes in $YBa_2Cu_3O_{7-x}$. <i>Physical Review B</i> , 1995, 51, 1389-1392.	3.2	98
51	Chiral phonons in the pseudogap phase of cuprates. <i>Nature Physics</i> , 2020, 16, 1108-1111.	16.7	95
52	Unpaired Electrons in the Heavy-Fermion Superconductor $CeCoIn_5$. <i>Physical Review Letters</i> , 2005, 95, 067002.	7.8	94
53	Highly Anisotropic Gap Function in Borocarbide Superconductor $LuNi_2B_2C$. <i>Physical Review Letters</i> , 2001, 87, 237001.	7.8	92
54	Anisotropy of point-contact spectra in the heavy-fermion superconductor UPt_3 . <i>Physical Review Letters</i> , 1993, 70, 2008-2011.	7.8	91

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73	Hall, Seebeck, and Nernst Coefficients of Underdoped $\text{HgBa}_2\text{CuO}_x$ Fermi-Surface Reconstruction in an Archetypal Cuprate Superconductor. <i>Physical Review X</i> , 2013, 3, .	8.9	62
74	Delocalized Fermions in Underdoped Cuprate Superconductors. <i>Physical Review Letters</i> , 2005, 94, 147004.	7.8	61
75	Single-Cuprate Cu_xTiSe_2 -Wave Superconductivity near the Charge-Density-Wave Quantum Critical Point in Cu_xTiSe_2 . <i>Physical Review Letters</i> , 2007, 99, 107001.	7.8	61
76	Anisotropy of Heat Conduction in $\text{YBa}_2\text{Cu}_3\text{O}_{6.9}$: A Probe of Chain Superconductivity. <i>Physical Review Letters</i> , 1997, 78, 1976-1979.	7.8	60
77	Evidence for a small hole pocket in the Fermi surface of underdoped $\text{YBa}_2\text{Cu}_3\text{O}_y$. <i>Nature Communications</i> , 2015, 6, 6034.	12.8	60
78	Pseudogap phase of cuprate superconductors confined by Fermi surface topology. <i>Nature Communications</i> , 2017, 8, 2044.	12.8	60
79	Washboard Frequency of the Moving Vortex Lattice in $\text{YBa}_2\text{Cu}_3\text{O}_{6.93}$ Detected by ac-dc Interference. <i>Physical Review Letters</i> , 1995, 74, 3684-3687.	7.8	55
80	Oscillatory Melting Temperature of the Vortex Smectic Phase in Layered Superconductors. <i>Physical Review Letters</i> , 2000, 85, 4594-4597.	7.8	55
81	Linear-in temperature resistivity from an isotropic Planckian scattering rate. <i>Nature</i> , 2021, 595, 667-672.	27.8	55
82	Pressure-induced Fermi-surface reconstruction in the iron-arsenide superconductor BaKFeAs_2 . <i>Physical Review Letters</i> , 2017, 118, 077001.	3.2	54
83	Origin of anomalous low-temperature downturns in the thermal conductivity of cuprates. <i>Physical Review B</i> , 2005, 71, .	3.2	51
84	Superconducting phase diagram of UPt_3 studied by thermal expansion and specific heat. <i>Journal of Low Temperature Physics</i> , 1990, 81, 299-315.	1.4	50
85	From d-wave to s-wave pairing in the iron-pnictide superconductor $(\text{Ba},\text{K})\text{FeAs}_2$. <i>Superconductor Science and Technology</i> , 2012, 25, 084013.	3.5	50
86	Vortex Pinning by Competing Disorder: Bose-Glass to Vortex-Glass Crossover. <i>Physical Review Letters</i> , 1996, 76, 2559-2562.	7.8	47
87	Quasiparticle Thermal Hall Angle and Magnetoconductance in $\text{YBa}_2\text{Cu}_3\text{O}_x$. <i>Physical Review Letters</i> , 1999, 82, 5108-5111.	7.8	47
88	Thermal Conductivity of the Iron-Based Superconductor FeSe : Nodeless Gap with a Strong Two-Band Character. <i>Physical Review Letters</i> , 2016, 117, 097003.	7.8	47
89	Thermal conductivity of underdoped $\text{YBa}_2\text{Cu}_3\text{O}_x$. <i>Physical Review Letters</i> , 1991, 66, 1037-1040.	3.2	46
90	Thermal conductivity of superconducting UPt_3 . <i>Journal of Low Temperature Physics</i> , 1991, 84, 261-278.	1.4	44

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91	Field-Induced Thermal Metal-to-Insulator Transition in Underdoped $\text{La}_{2-x}\text{Sr}_x\text{CuO}_4$. Physical Review Letters, 2003, 90, 197004.	7.8	43
92	Heat Transport as a Probe of Electron Scattering by Spin Fluctuations: The Case of Antiferromagnetic CeRhIn_5 . Physical Review Letters, 2005, 94, 216602.	7.8	43
93	Thermal Hall conductivity in the cuprate Mott insulators Nd_2CuO_4 and $\text{Sr}_2\text{CuO}_2\text{Cl}_2$. Nature Communications, 2020, 11, 5325.	12.8	42
94	Neutron scattering search for static magnetism in oxygen-ordered $\text{YBa}_2\text{Cu}_3\text{O}_{6.5}$. Physical Review B, 2002, 66, .	3.2	41
95	Transport in Ultraclean $\text{YBa}_2\text{Cu}_3\text{O}_7$: Neither Unitary nor Born Impurity Scattering. Physical Review Letters, 2004, 92, 027001.	7.8	41
96	Multiband Order Parameters for the $\text{PrOs}_4\text{Sb}_{12}$. Physical Review Letters, 2008, 101, 237005.	7.8	41
97	Thermopower across the stripe critical point of La_2CuO_4 . Physical Review Letters, 2008, 101, 237005.	3.2	40
98	Nernst effect in the electron-doped cuprate superconductor $\text{Pr}_2\text{CeCu}_4\text{O}_{14}$. Physical Review Letters, 2008, 101, 237005.	3.2	40
99	Universal V-shaped temperature-pressure phase diagram in the iron-based superconductors KFe_2As_2 . Physical Review B, 2015, 91, .	3.2	39
100	Thermal Conductivity of the Quantum Spin Liquid Candidate MnNi_3S_2 . Physical Review B, 2015, 91, .	8.9	39
101	Elastic tensor of Sr_2RuO_4 . Physical Review B, 2002, 65, .	3.2	38
102	Ballistic Magnon Transport and Phonon Scattering in the Antiferromagnet Nd_2CuO_4 . Physical Review Letters, 2005, 95, 156603.	7.8	38
103	Doping dependence of the superconducting gap in $\text{Tl}_2\text{Ba}_2\text{CuO}_6$ from heat transport. Physical Review B, 2007, 75, .	3.2	38
104	Onset of a Boson Mode at the Superconducting Critical Point of Underdoped $\text{YBa}_2\text{Cu}_3\text{O}_y$. Physical Review Letters, 2006, 97, 207001.	7.8	37
105	Evidence of a Phonon Hall Effect in the Kitaev Spin Liquid Candidate RuCl_3 . Physical Review X, 2022, 12, 041043.	8.9	37
106	Sudden reversal in the pressure dependence of the iron-based superconductor CsFeAs_2 . Physical Review B, 2011, 84, .	3.2	36
107	Isotropic three-dimensional gap in the iron arsenide superconductor LiFeAs from directional heat transport measurements. Physical Review B, 2011, 84, .	3.2	35
108	Unusual Interplay between Superconductivity and Field-Induced Charge Order in $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$. Physical Review Letters, 2018, 121, 167002.	7.8	32

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109	Neel effect in the cuprate superconductor YBaCu ₂ to pressure and magnetic field in the cuprate superconductor YBaCu ₂ . Physical Review Letters, 2007, 99, 187004.	3.2	32
110	Wiedemann-Franz law in the underdoped cuprate superconductor YBaCu ₂ . Physical Review B, 2016, 93, .	3.2	30
111	Critical Doping for the Onset of Fermi-Surface Reconstruction by Charge-Density-Wave Order in the Cuprate Superconductor La _{1.6} xNd _{0.4} SrxCuO ₄ . Physical Review X, 2016, 6, .	3.2	29
112	Thermal Conductivity in the Vicinity of the Quantum Critical End Point in Sr ₃ Ru ₂ O ₇ . Physical Review Letters, 2006, 97, 067005.	7.8	27
113	Hybrid Gap Structure of the Heavy-Fermion Superconductor CeIrIn ₅ . Physical Review Letters, 2007, 99, 187004.	7.8	27
114	Normal state specific heat in the cuprate superconductors La _{1.6} xNd _{0.4} SrxCuO ₄ and Bi ₂ . Physical Review B, 2003, 68, .	3.2	26
115	Quantum critical point for stripe order: An organizing principle of cuprate superconductivity. Physica C: Superconductivity and Its Applications, 2012, 481, 161-167.	1.2	24
116	Bulk Evidence for Single-Gaps-Wave Superconductivity in the Intercalated Graphite Superconductor C ₆ Yb. Physical Review Letters, 2007, 98, 067003.	7.8	22
117	Interplane resistivity of underdoped single crystals (Ba _{1-x} Bi _x) ₂ Te ₃ . Physical Review B, 2008, 77, .	3.2	22
118	Thermopower across the phase diagram of the cuprate La _{1.6} xNd _{0.4} SrxCuO ₄ : Signatures of the pseudogap and charge density wave phases. Physical Review B, 2021, 103, .	3.2	21
119	Ambient-pressure bulk superconductivity deep in the magnetic state of CeRhIn ₅ . Physical Review B, 2008, 77, .	3.2	20
120	Field-dependent heat transport in the Kondo insulator SmB ₆ : Phonons scattered by magnetic impurities. Physical Review B, 2018, 97, .	3.2	20
121	Fermi surface transformation at the pseudogap critical point of a cuprate superconductor. Nature Physics, 2022, 18, 558-564.	16.7	20
122	Linear-T scattering and pairing from antiferromagnetic fluctuations in the (TMTSF) ₂ X organic superconductors. European Physical Journal B, 2010, 78, 23-36.	1.5	19
123	Expansion of the tetragonal magnetic phase with pressure in the iron arsenide superconductor Ba _{1-x} K _x Fe ₂ As ₂ . Physical Review B, 2016, 93, .	3.2	19
124	Anisotropy of the Seebeck Coefficient in the Cuprate Superconductor YBaCu ₂ . Physical Review B, 2014, 89, .	3.2	18
125	Wiedemann-Franz law and nonvanishing temperature scale across the field-tuned quantum critical point of YbRh ₂ Si. Physical Review B, 2014, 89, .	3.2	16
126			

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127	Wiedemann-Franz Law and Abrupt Change in Conductivity across the Pseudogap Critical Point of a Cuprate Superconductor. <i>Physical Review X</i> , 2018, 8, .	8.9	16
128	Doping evolution of the superconducting gap structure in the underdoped iron arsenide $\text{BaK}_2\text{FeAs}_2$ by thermal conductivity. <i>Physical Review B</i> , 2016, 93, .	16	16
129	Superconductivity in the cuprate superconductor $\text{BiSr}_2\text{LaCuO}_{6+x}$. <i>Physical Review B</i> , 2021, 104, .	3.2	15
130	The metallic transport of TMTSF_2X organic conductors close to the superconducting phase. <i>Journal of Physics Condensed Matter</i> , 2011, 23, 345702.	1.8	12
131	Materials preparation, single crystal growth, and the phase diagram of the cuprate high-temperature superconductor $\text{LaNd}_{1.6}\text{Sr}_{0.4}\text{CuO}_6$. <i>Physical Review</i>	12	
132	Zooming on the quantum critical point in Nd-LSCO. <i>Physica C: Superconductivity and Its Applications</i> , 2010, 470, S12-S13.	1.2	11
133	Universal heat conduction and nodal gap structure of the heavy-fermion superconductor CeIrIn_5 . <i>Physical Review B</i> , 2010, 82, .	3.2	11
134	Seebeck Coefficient in a Cuprate Superconductor: Particle-Hole Asymmetry in the Strange Metal Phase and Fermi Surface Transformation in the Pseudogap Phase. <i>Physical Review X</i> , 2022, 12, .	8.9	11
135	Thermal Hall conductivity of electron-doped cuprates. <i>Physical Review B</i> , 2022, 105, .	3.2	10
136	Field-angle dependence of sound velocity in the Weyl semimetal TaAs. <i>Physical Review B</i> , 2020, 102, .	3.2	9
137	Quantum Critical Quasiparticle Scattering within the Superconducting State of CeCoIn_5 . <i>Physical Review Letters</i> , 2016, 117, 016601.	7.8	7
138	High density of states in the pseudogap phase of the cuprate superconductor $\text{HgBa}_2\text{CuO}_4$ from low-temperature normal-state specific heat. <i>Physical Review B</i> , 2020, 102, .	12	7
139	Heat transport study of field-tuned quantum criticality in CeIrIn_5 . <i>Physical Review B</i> , 2016, 93, .	3.2	4
140	Effect of pressure on the pseudogap and charge density wave phases of the cuprate Nd-LSCO probed by thermopower measurements. <i>Physical Review Research</i> , 2021, 3, .	3.6	3
141	Doiron-Leyraud and Taillefer Reply:. <i>Physical Review Letters</i> , 2008, 100, .	7.8	2
142	Reply to "Comment on "Low-temperature phonon thermal conductivity of single-crystalline Nd_2CuO_4 : Effects of sample size and surface roughness". <i>Physical Review B</i> , 2009, 79, .	3.2	1
143	Subphases in the superconducting state of CeIrIn_5 revealed by low-temperature c -axis heat transport. <i>Physical Review Research</i> , 2022, 4, .	3.6	0