

Louis Taillefer

List of Publications by Year in descending order

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#	ARTICLE	IF	CITATIONS
1	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
2	Fermi surface transformation at the pseudogap critical point of a cuprate superconductor. <i>Nature Physics</i> , 2022, 18, 558-564.	16.7	20
3	Thermal Hall conductivity of electron-doped cuprates. <i>Physical Review B</i> , 2022, 105, .	3.2	10
4	Subphases in the superconducting state of $CeIrIn$ revealed by low-temperature c -axis heat transport. <i>Physical Review Research</i> , 2022, 4, .	3.6	0
5	Evidence of a Phonon Hall Effect in the Kitaev Spin Liquid Candidate $RuCl_2$. <i>Physical Review X</i> , 2022, 12, .	8.9	37
6	Ultrasound evidence for a two-component superconducting order parameter in Sr_2RuO_4 . <i>Nature Physics</i> , 2021, 17, 194-198.	16.7	74
7	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
8	Thermopower across the phase diagram of the cuprate $La_{1.6}xNd_{0.4}Sr_xCuO_4$: Signatures of the pseudogap and charge density wave phases. <i>Physical Review B</i> , 2021, 103, .	3.2	21
9	Normal state specific heat in the cuprate superconductors $La_{2-x}Bi_xCuO_4$ and $Bi_{2-x}Sr_xCuO_4$. <i>Physical Review B</i> , 2021, 103, .	3.2	26
10	Linear-in temperature resistivity from an isotropic Planckian scattering rate. <i>Nature</i> , 2021, 595, 667-672.	27.8	55
11	Transport signatures of the pseudogap critical point in the cuprate superconductor $Bi_{2-x}Sr_xCuO_4$. <i>Physical Review B</i> , 2021, 104, .	3.2	15
12	Thermal Hall conductivity in the cuprate Mott insulators Nd_2CuO_4 and $Sr_2CuO_2Cl_2$. <i>Nature Communications</i> , 2020, 11, 5325.	12.8	42
13	Chiral phonons in the pseudogap phase of cuprates. <i>Nature Physics</i> , 2020, 16, 1108-1111.	16.7	95
14	High density of states in the pseudogap phase of the cuprate superconductor $HgBa_2CuO_4$ from low-temperature normal-state specific heat. <i>Physical Review B</i> , 2020, 102, .	16.7	15
15	Field-angle dependence of sound velocity in the Weyl semimetal TaAs. <i>Physical Review B</i> , 2020, 102, .	3.2	9
16	The 2021 quantum materials roadmap. <i>JPhys Materials</i> , 2020, 3, 042006.	4.2	111
17	Materials preparation, single-crystal growth, and the phase diagram of the cuprate high-temperature superconductor $La_{1.6-x}Nd_xCuO_4$. <i>Physical Review B</i> , 2020, 102, .	3.2	12
18	Giant thermal Hall conductivity in the pseudogap phase of cuprate superconductors. <i>Nature</i> , 2019, 571, 376-380.	27.8	105

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19	Thermodynamic signatures of quantum criticality in cuprate superconductors. Nature, 2019, 567, 218-222	27.8	120
20	Thermal Conductivity of the Quantum Spin Liquid Candidate $\chi_{\text{EtMe}}^{\text{Pd}}$ of cuprate superconductors from the Nernst effect. Physical Review B, 2018, 97, .	8.9	39
21	The Remarkable Underlying Ground States of Cuprate Superconductors. Annual Review of Condensed Matter Physics, 2019, 10, 409-429.	14.5	196
22	Universal T-linear resistivity and Planckian dissipation in overdoped cuprates. Nature Physics, 2019, 15, 142-147.	16.7	197
23	Pseudogap temperature T^* of cuprate superconductors from the Nernst effect. Physical Review B, 2018, 97, .	8.9	39
24	Wiedemann-Franz Law and Abrupt Change in Conductivity across the Pseudogap Critical Point of a Cuprate Superconductor. Physical Review X, 2018, 8, .	8.9	16
25	Unusual Interplay between Superconductivity and Field-induced Charge Order in $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$ Sensitivity of $\chi_{\text{EtMe}}^{\text{Pd}}$ to pressure and magnetic field in the cuprate superconductor $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$.	3.2	32
26	Field-dependent heat transport in the Kondo insulator SmB_6 : Phonons scattered by magnetic impurities. Physical Review B, 2018, 97, .	3.2	29
27	Anisotropy of the Seebeck Coefficient in the Cuprate Superconductor $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$.	8.9	82
28	Pseudogap phase of cuprate superconductors confined by Fermi surface topology. Nature Communications, 2017, 8, 2044.	12.8	60
29	Vertical Line Nodes in the Superconducting Gap Structure of $\text{SrYBa}_2\text{Cu}_3\text{O}_{7-x}$ Physical Review X, 2017, 7, .	8.9	82
30	Fermi-surface transformation across the pseudogap critical point of the cuprate superconductor $\text{LaYBa}_2\text{Cu}_3\text{O}_{7-x}$ Physical Review B, 2017, 95, .	3.2	78
31	Thermal Conductivity of the Iron-Based Superconductor FeSe: Nodeless Gap with a Strong Two-Band Character. Physical Review Letters, 2016, 117, 097003.	7.8	47
32	Wiedemann-Franz law in the underdoped cuprate superconductor $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$ Physical Review B, 2016, 93, .	3.2	29
33	Heat transport study of field-tuned quantum criticality in CeIrIn_5 . Physical Review B, 2016, 93, .	3.2	4
34	Expansion of the tetragonal magnetic phase with pressure in the iron arsenide superconductor $\text{Ba}_{1-x}\text{K}_x\text{Fe}_2\text{As}_2$. Physical Review B, 2016, 93, .	3.2	19
35	Quantum Critical Quasiparticle Scattering within the Superconducting State of CeCoIn_5 Physical Review Letters, 2016, 117, 016601.	7.8	7

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37	Doping evolution of the superconducting gap structure in the underdoped iron arsenide $\text{Ba}_{1-x}\text{K}_x\text{Fe}_2\text{As}_2$ by thermal conductivity. <i>Physical Review B</i> , 2016, 93, .	3.2	15
38	Critical Doping for the Onset of Fermi-Surface Reconstruction by Charge-Density-Wave Order in the Cuprate Superconductor $\text{La}_{2-x}\text{Y}_x\text{CuO}_4$. <i>Physical Review X</i> , 2016, 6, .	8.9	28
39	Change of carrier density at the pseudogap critical point of a cuprate superconductor. <i>Nature</i> , 2016, 531, 210-214.	27.8	296
40	Two types of nematicity in the phase diagram of the cuprate superconductor $\text{YBa}_2\text{Cu}_3\text{O}_{7-2\delta}$. <i>Physical Review B</i> , 2015, 92, .	3.2	73
41	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
42	Universal V-shaped temperature-pressure phase diagram in the iron-based superconductors KFe_2As_2 and $\text{KFe}_2\text{P}_2\text{As}_2$. <i>Physical Review B</i> , 2015, 91, .	3.2	29
43	Interplane resistivity of underdoped single crystals $\text{Ba}_{1-x}\text{Tl}_x\text{FeO}_4$. <i>Physical Review B</i> , 2014, 90, .	3.2	40
44	Sudden reversal in the pressure dependence of T_c in the iron-based superconductor CsFeAs_2 . <i>Physical Review B</i> , 2014, 90, .	3.2	22
45	Direct measurement of the upper critical field in cuprate superconductors. <i>Nature Communications</i> , 2014, 5, 3280.	3.2	36
46	Wiedemann-Franz law and nonvanishing temperature scale across the field-tuned quantum critical point of YbRh_2Si_2 . <i>Physical Review B</i> , 2014, 89, .	12.8	171
47	Hall, Seebeck, and Nernst Coefficients of Underdoped $\text{HgBa}_2\text{CuO}_4$. <i>Physical Review X</i> , 2013, 3, .	8.9	62
48	Fermi-Surface Reconstruction in an Archetypal Cuprate Superconductor. <i>Physical Review X</i> , 2013, 3, .	3.2	135
49	Superconductivity in the noncentrosymmetric half-Heusler compound LuPtBi : A candidate for topological superconductivity. <i>Physical Review B</i> , 2013, 87, .	3.2	135
50	Sudden reversal in the pressure dependence of T_c in the iron-based superconductor KFe_2As_2 . <i>Nature Physics</i> , 2013, 9, 349-352.	16.7	119
51	Universal Fermi surface reconstruction in the iron-arsenide superconductor $\text{Ba}_{1-x}\text{K}_x\text{Fe}_2\text{As}_2$. <i>Physical Review B</i> , 2012, 86, .	3.2	54
52	Universal Heat Conduction in the Iron Arsenide Superconductor KFe_2As_2 . <i>Physical Review Letters</i> , 2012, 109, 087001.	7.8	155
53	Evidence of a d -Wave State. <i>Physical Review Letters</i> , 2012, 109, 087001.	16.7	77
54	Decrease of upper critical field with underdoping in cuprate superconductors. <i>Nature Physics</i> , 2012, 8, 751-756.	1.2	24
54	Quantum critical point for stripe order: An organizing principle of cuprate superconductivity. <i>Physica C: Superconductivity and Its Applications</i> , 2012, 481, 161-167.		

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55	lattice melting and underdoped $\text{YBaCu}_3\text{O}_{6-x}$. <i>Physical Review B</i> , 2011, 83, .	3.2	46
56	From d-wave to s-wave pairing in the iron-pnictide superconductor $(\text{Ba,K})\text{FeAs}_2$. <i>Superconductor Science and Technology</i> , 2012, 25, 084013.	3.5	50
57	Fermi-surface reconstruction by stripe order in cuprate superconductors. <i>Nature Communications</i> , 2011, 2, 432.	12.8	149
58	The metallic transport of $(\text{TMTSF})_2\text{X}$ organic conductors close to the superconducting phase. <i>Journal of Physics Condensed Matter</i> , 2011, 23, 345702.	1.8	12
59	Lifshitz critical point in the cuprate superconductor $\text{YBaCu}_3\text{O}_{6-x}$. <i>Physical Review B</i> , 2011, 83, .	3.2	189
60	Isotropic three-dimensional gap in the iron arsenide superconductor LiFeAs from directional heat transport measurements. <i>Physical Review B</i> , 2011, 84, .	3.2	35
61	Nernst effect in the cuprate superconductor $\text{YBaCu}_3\text{O}_{6-x}$. <i>Physical Review B</i> , 2010, 82, .	3.2	30
62	Linear-T scattering and pairing from antiferromagnetic fluctuations in the $(\text{TMTSF})_2\text{X}$ organic superconductors. <i>European Physical Journal B</i> , 2010, 78, 23-36.	1.5	19
63	Zooming on the quantum critical point in Nd-LSCO. <i>Physica C: Superconductivity and Its Applications</i> , 2010, 470, S12-S13.	1.2	11
64	Broken rotational symmetry in the pseudogap phase of a high- T_c superconductor. <i>Nature</i> , 2010, 463, 519-522.	27.8	487
65	Nernst and Seebeck Coefficients of the Cuprate Superconductor $\text{YBaCu}_3\text{O}_{6-x}$. <i>Physical Review B</i> , 2010, 82, .	3.2	118
66	Doping Dependence of Heat Transport in the Iron-Arsenide Superconductor BaFeAs_2 . <i>Physical Review Letters</i> , 2010, 104, 067002.	7.8	137
67	Universal heat conduction and nodal gap structure of the heavy-fermion superconductor CeIrIn_5 . <i>Physical Review B</i> , 2010, 82, .	3.2	11
68	Nodes in the gap structure of the iron arsenide superconductor BaFeAs_2 . <i>Physical Review B</i> , 2010, 82, .	3.2	143
69	Scattering and Pairing in Cuprate Superconductors. <i>Annual Review of Condensed Matter Physics</i> , 2010, 1, 51-70.	14.5	277
70	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
71	Quasiparticle heat transport in single-crystalline BaFeAs_2 . <i>Physical Review B</i> , 2009, 80, .	3.2	104
72	Multiple Quantum Oscillations in the de Haas-van Alphen Spectra of the Underdoped High-Temperature Superconductor $\text{YBaCu}_3\text{O}_{6-x}$. <i>Physical Review Letters</i> , 2009, 103, 157003.	3.2	81

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73	Heat transport as a probe of superconducting gap structure. <i>New Journal of Physics</i> , 2009, 11, 055065.	2.9	79
74	Fermi surface reconstruction in high- T_c superconductors. <i>Journal of Physics Condensed Matter</i> , 2009, 21, 164212.	1.8	78
75	Enhancement of the Nernst effect by stripe order in a high- T_c superconductor. <i>Nature</i> , 2009, 458, 743-745.	27.8	123
76	Linear temperature dependence of resistivity and change in the Fermi surface at the pseudogap critical point of a high- T_c superconductor. <i>Nature Physics</i> , 2009, 5, 31-34.	16.7	185
77	Correlation between linear resistivity and $\langle \rho_{xx} \rangle \propto T^2$ in the Bechgaard salts and the pnictide superconductor		

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91	Electron pockets in the Fermi surface of hole-doped high-Tc superconductors. <i>Nature</i> , 2007, 450, 533-536.	27.8	443
92	Thermal Conductivity in the Vicinity of the Quantum Critical End Point in Sr ₃ Ru ₂ O ₇ . <i>Physical Review Letters</i> , 2006, 97, 067005.	7.8	27
93	Nonvanishing Energy Scales at the Quantum Critical Point of CeCoIn ₅ . <i>Physical Review Letters</i> , 2006, 97, 106606.	7.8	86
94	Onset of a Boson Mode at the Superconducting Critical Point of Underdoped YBa ₂ Cu ₃ O _y . <i>Physical Review Letters</i> , 2006, 97, 207001.	7.8	37
95	Origin of anomalous low-temperature downturns in the thermal conductivity of cuprates. <i>Physical Review B</i> , 2005, 71, .	3.2	51
96	Ballistic Magnon Transport and Phonon Scattering in the Antiferromagnet Nd ₂ CuO ₄ . <i>Physical Review Letters</i> , 2005, 95, 156603.	7.8	38
97	Heat Transport as a Probe of Electron Scattering by Spin Fluctuations: The Case of Antiferromagnetic CeRhIn ₅ . <i>Physical Review Letters</i> , 2005, 94, 216602.	7.8	43
98	Delocalized Fermions in Underdoped Cuprate Superconductors. <i>Physical Review Letters</i> , 2005, 94, 147004.	7.8	61
99	Unpaired Electrons in the Heavy-Fermion Superconductor CeCoIn ₅ . <i>Physical Review Letters</i> , 2005, 95, 067002.	7.8	94
100	Transport in Ultraclean YBa ₂ Cu ₃ O ₇ : Neither Unitary nor Born Impurity Scattering. <i>Physical Review Letters</i> , 2004, 92, 027001.	7.8	41
101	Fermi-liquid breakdown in the paramagnetic phase of a pure metal. <i>Nature</i> , 2003, 425, 595-599.	27.8	169
102	Heat Conduction in the Vortex State of NbSe ₂ : Evidence for Multiband Superconductivity. <i>Physical Review Letters</i> , 2003, 90, 117003.	7.8	210
103	Field-Induced Quantum Critical Point in CeCoIn ₅ . <i>Physical Review Letters</i> , 2003, 91, 246405.	7.8	314
104	Field-Induced Thermal Metal-to-Insulator Transition in Underdoped La _{2-x} Sr _x CuO ₄ . <i>Physical Review Letters</i> , 2003, 90, 197004.	7.8	43
105	Thermal conductivity across the phase diagram of cuprates: Low-energy quasiparticles and doping dependence of the superconducting gap. <i>Physical Review B</i> , 2003, 67, .	3.2	208
106	The superconducting phases of UPt ₃ . <i>Reviews of Modern Physics</i> , 2002, 74, 235-294.	45.6	409
107	Heat Transport in a Strongly Overdoped Cuprate: Fermi Liquid and a Pured-Wave BCS Superconductor. <i>Physical Review Letters</i> , 2002, 89, 147003.	7.8	204
108	Elastic tensor of Sr ₂ RuO ₄ . <i>Physical Review B</i> , 2002, 65, .	3.2	38

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109	Neutron scattering search for static magnetism in oxygen-ordered $\text{YBa}_2\text{Cu}_3\text{O}_{6.5}$. <i>Physical Review B</i> , 2002, 66, .	3.2	41
110	Breakdown of Fermi-liquid theory in a copper-oxide superconductor. <i>Nature</i> , 2001, 414, 711-715.	27.8	163
111	Ultrasound Attenuation in Sr_2RuO_4 : An Angle-Resolved Study of the Superconducting Gap Function. <i>Physical Review Letters</i> , 2001, 86, 5986-5989.	7.8	132
112	Highly Anisotropic Gap Function in Borocarbide Superconductor $\text{LuNi}_2\text{B}_2\text{C}$. <i>Physical Review Letters</i> , 2001, 87, 237001.	7.8	92
113	Low-energy quasiparticles in cuprate superconductors: A quantitative analysis. <i>Physical Review B</i> , 2000, 62, 3554-3558.	3.2	182
114	Determining the Wiedemann-Franz Ratio from the Thermal Hall Conductivity: Application to Cu and $\text{YBa}_2\text{Cu}_3\text{O}_{6.95}$. <i>Physical Review Letters</i> , 2000, 84, 2219-2222.	7.8	106
115	Oscillatory Melting Temperature of the Vortex Smectic Phase in Layered Superconductors. <i>Physical Review Letters</i> , 2000, 85, 4594-4597.	7.8	55
116	Onset of Plasticity and Hardening of the Hysteretic Response in the Vortex System of $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$. <i>Physical Review Letters</i> , 1999, 82, 5116-5119.	7.8	101
117	Quasiparticle Transport in the Vortex State of $\text{YBa}_2\text{Cu}_3\text{O}_{6.9}$. <i>Physical Review Letters</i> , 1999, 82, 2943-2946.	7.8	104
118	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
119	Angular Position of Nodes in the Superconducting Gap of YBCO. <i>Physical Review Letters</i> , 1997, 78, 2624-2627.	7.8	119
120	New Features in the Vortex Phase Diagram of $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$. <i>Physical Review Letters</i> , 1997, 79, 2121-2124.	7.8	164
121	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
122	Universal Heat Conduction in $\text{YBa}_2\text{Cu}_3\text{O}_{6.9}$. <i>Physical Review Letters</i> , 1997, 79, 483-486.	7.8	200
123	Current-induced organization of vortex motion in type-II superconductors. <i>Nature</i> , 1997, 385, 324-326.	27.8	66
124	Vortex Pinning by Competing Disorder: Bose-Glass to Vortex-Glass Crossover. <i>Physical Review Letters</i> , 1996, 76, 2559-2562.	7.8	47
125	Determination of the gap structure in UPt_3 by thermal conductivity. <i>Physical Review B</i> , 1996, 53, 5145-5148.	3.2	73
126	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

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127	Vortex channeling along twin planes in $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$. <i>Physical Review B</i> , 1995, 51, 1389-1392.	3.2	98
128	Anisotropy of Heat Conduction in the Heavy Fermion Superconductor UPt_3 . <i>Physical Review Letters</i> , 1994, 73, 3294-3297.	7.8	69
129	Lock-in oscillations in magnetic hysteresis curves of $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$ single crystals. <i>Physical Review Letters</i> , 1994, 72, 3606-3609.	7.8	71
130	Andreev reflections on heavy-fermion superconductors. <i>Physical Review Letters</i> , 1994, 72, 2278-2281.	7.8	77
131	T^2 dependence of the resistivity in the Cu-O chains of $\text{YBa}_2\text{Cu}_3\text{O}_{6.9}$. <i>Physical Review B</i> , 1994, 50, 3458-3461.	3.2	116
132	Anisotropy of point-contact spectra in the heavy-fermion superconductor UPt_3 . <i>Physical Review Letters</i> , 1993, 70, 2008-2011.	7.8	91
133	Superconductivity and the incommensurate structural modulation in the heavy fermion UPt_3 . <i>Physical Review Letters</i> , 1993, 70, 678-681.	7.8	75
134	Muon spin relaxation in UPt_3 . <i>Physical Review Letters</i> , 1993, 71, 1466-1469.	7.8	215
135	Antiferromagnetic order in UPt_3 under pressure: Evidence for a direct coupling to superconductivity. <i>Physical Review B</i> , 1992, 46, 8675-8678.	3.2	158
136	Normal and superconducting phases of heavy fermions. <i>Physica B: Condensed Matter</i> , 1991, 169, 257-270.	2.7	84
137	Thermal conductivity of superconducting UPt_3 . <i>Journal of Low Temperature Physics</i> , 1991, 84, 261-278.	1.4	44
138	Pressure dependence of the superconducting phases in UPt_3 . <i>Physical Review B</i> , 1991, 43, 13714-13716.	3.2	112
139	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
140	Phase diagram of UPt_3 from ultrasonic velocity measurements. <i>Physical Review Letters</i> , 1990, 65, 2298-2301.	7.8	269
141	Critical point in the superconducting phase diagram of UPt_3 . <i>Physical Review Letters</i> , 1989, 63, 93-96.	7.8	252
142	Heavy-fermion quasiparticles in UPt_3 . <i>Physical Review Letters</i> , 1988, 60, 1570-1573.	7.8	206
143	Effect of spin fluctuations on the magnetic equation of state of ferromagnetic or nearly ferromagnetic metals. <i>Journal of Physics C: Solid State Physics</i> , 1985, 18, 4339-4371.	1.5	403