

# Christophe Berthod

## List of Publications by Year in descending order

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56  
papers

2,212  
citations

304743

22  
h-index

214800

47  
g-index

57  
all docs

57  
docs citations

57  
times ranked

2707  
citing authors

#	ARTICLE	IF	CITATIONS
1	Scanning tunneling spectroscopy of high-temperature superconductors. <i>Reviews of Modern Physics</i> , 2007, 79, 353-419.	45.6	817
2	Collapse of the Mott Gap and Emergence of a Nodal Liquid in Lightly Doped $\text{Sr}_2\text{CuO}_7$ . <i>Physical Review Letters</i> , 2015, 115, 176402.	7.8	140
3	Spectroscopic evidence for Fermi liquid-like energy and temperature dependence of the relaxation rate in the pseudogap phase of the cuprates. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, 5774-5778.	7.1	108
4	High-Resolution Photoemission on $\text{Sr}_2\text{CuO}_7$ Reveals Correlation-Enhanced Effective Spin-Orbit Coupling and Dominantly Local Self-Energies. <i>Physical Review X</i> , 2019, 9, .	8.9	90
5	Optical Response of $\text{Sr}_2\text{CuO}_7$ : Universal Fermi-Liquid Scaling and Quasiparticles Beyond Landau Theory. <i>Physical Review Letters</i> , 2014, 113, 087404.	7.8	61
6	Modeling scanning tunneling spectra of $\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_8+\hat{f}$ . <i>Physical Review B</i> , 2003, 67, .	3.2	57
7	Breakup of the Fermi Surface Near the Mott Transition in Low-Dimensional Systems. <i>Physical Review Letters</i> , 2006, 97, 136401.	7.8	50
8	Non-Drude universal scaling laws for the optical response of local Fermi liquids. <i>Physical Review B</i> , 2013, 87, .	3.2	50
9	First direct observation of the Van Hove singularity in the tunnelling spectra of cuprates. <i>Nature Communications</i> , 2011, 2, 221.	12.8	46
10	Large modulation of the Shubnikov-de Haas oscillations by the Rashba interaction at the $\text{LaAlO}_3/\text{SrTiO}_3$ interface. <i>New Journal of Physics</i> , 2014, 16, 112002.	2.9	46
11	Schottky barrier heights at polar metal/semiconductor interfaces. <i>Physical Review B</i> , 2003, 68, .	3.2	43
12	Preeminent Role of the Van Hove Singularity in the Strong-Coupling Analysis of Scanning Tunneling Spectroscopy for Two-Dimensional Cuprate Superconductors. <i>Physical Review Letters</i> , 2008, 101, 267004.	7.8	41
13	Two-Dimensional Fermi Liquid with Attractive Interactions. <i>Physical Review Letters</i> , 2012, 109, 130403.	7.8	41
14	Imaging the Essential Role of Spin Fluctuations in High- $T_c$ Superconductivity. <i>Physical Review Letters</i> , 2009, 103, 227001.	7.8	40
15	$\text{SnMo}_6\text{S}_8$ and $\text{PbMo}_6\text{S}_8$ Tunneling conductance and local density of states in tight-binding junctions. <i>Physical Review B</i> , 2011, 84, .	7.8	36
16	Observation of Caroli-de Gennes-Matricon Vortex States in $\text{YBa}_2\text{Cu}_3\text{O}_7$ . <i>Physical Review Letters</i> , 2017, 119, 237001.	7.8	32
17	Band Filling and Cross Quantum Capacitance in Ion-Gated Semiconducting Transition Metal Dichalcogenide Monolayers. <i>Nano Letters</i> , 2019, 19, 8836-8845.	9.1	32

#	ARTICLE	IF	CITATIONS
19	dc transport in perturbed multichannel quantum wires. Physical Review B, 1994, 50, 18299-18311.	3.2	31
20	Vorticity and vortex-core states in type-II superconductors. Physical Review B, 2005, 71, .	3.2	27
21	Local interface dipoles and the tuning of the Al/GaAs(100) Schottky-barrier height with ultrathin Si interlayers. Europhysics Letters, 1996, 36, 67-72.	2.0	26
22	Density of States in High-TcSuperconductor Vortices. Physical Review Letters, 2001, 87, 277002. Strong-coupling analysis of scanning tunneling spectra in Bi	7.8	23
23	$\text{SrCa}_2\text{Mn}_2\text{O}_7$ interface. Physical Review B, 2017, 96, .	3.2	22
24	BCS superconductivity near the band edge: Exact results for one and several bands. Physical Review B, 2016, 94, .	3.2	22
25	Modulation of the superconducting critical temperature due to quantum confinement at the interface. Physical Review B, 2017, 96, .	3.2	22
26	Dimensional Crossover in a Charge Density Wave Material Probed by Angle-Resolved Photoemission Spectroscopy. Physical Review Letters, 2017, 118, 206401.	7.8	22
27	Rise and fall of shape resonances in thin films of BCS superconductors. Physical Review B, 2016, 94, .	3.2	21
28	Revisiting the vortex-core tunnelling spectroscopy in $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ . Nature Communications, 2016, 7, 11139.	12.8	21
29	A theory of the strain-dependent critical field in $\text{Nb}_3\text{Sn}$ , based on anharmonic phonon generation. Superconductor Science and Technology, 2014, 27, 025008.	3.5	17
30	Formation energy, lattice relaxation, and electronic structure of Al/Si/GaAs(100)junctions. Physical Review B, 1998, 57, 9757-9762.	3.2	16
31	Gorkov equations for a pseudogapped high-temperature superconductor. Physical Review B, 2001, 63, .	3.2	16
32	Tilted vortex cores and superconducting gap anisotropy in $2\text{H-NbSe}_2$ . Communications Physics, 2018, 1, .	5.3	14
33	Hall effect in strongly correlated low-dimensional systems. Physical Review B, 2007, 75, .	3.2	13
34	Vortex spectroscopy in the vortex glass: A real-space numerical approach. Physical Review B, 2016, 94, .	3.2	13
35	Al/ZnSe(100) Schottky-barrier height versus initial ZnSe surface reconstruction. Physical Review B, 1998, 57, R9431-R9434.	3.2	10
36	Scanning Tunneling Spectroscopy in the Superconducting State and Vortex Cores of the $\text{Fe}^{2+}$ -Pyrochlore $\text{KOs}_2\text{O}_6$ . Physical Review Letters, 2008, 101, 057004.	7.8	10

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37	Node-like excitations in superconducting PbMo <sub>6</sub> S <sub>8</sub> probed by scanning tunneling spectroscopy. Physical Review B, 2007, 75, .	3.2	9
38	Quasiparticle spectra of Abrikosov vortices in a uniform supercurrent flow. Physical Review B, 2013, 88, .	3.2	9
39	Role of a higher-dimensional interaction in stabilizing charge density waves in quasi-one-dimensional $\text{NbSe}_3$ revealed by angle-resolved photoemission spectroscopy. Physical Review B, 2020, 101, .	3.2	9
40	Theory of cross quantum capacitance. Physical Review Research, 2021, 3, .	3.6	9
41	Ideal unreactive metal/semiconductor interfaces: The case of Zn/ZnSe(001). Physical Review B, 2001, 63, .	3.2	8
42	Tunneling spectra of strongly coupled superconductors: Role of dimensionality. Physical Review B, 2010, 82, .	3.2	8
43	Koster-Slater model for the interface-state problem. Physical Review B, 2000, 62, R10622-R10625.	3.2	7
44	Heterovalent interlayers and interface states: An ab initio study of GaAs $\cdot$ Si $\cdot$ GaAs(110) and (100) heterostructures. Physical Review B, 2005, 71, .	3.2	7
45	Hall effect on the triangular lattice. Physical Review B, 2008, 78, .	3.2	7
46	Signatures of nodeless multiband superconductivity and particle-hole crossover in the vortex cores of $\text{FeTe}_{1-x}\text{Se}_x$ . Physical Review B, 2018, 98, .	3.2	6
47	Impurity coupled to a lattice with disorder. Physical Review A, 2018, 98, .	2.5	5
48	Schottky barrier tuning with heterovalent interlayers: Al/Ge/GaAs versus Al/Si/GaAs. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2000, 18, 2114.	1.6	3
49	Levy de Castro et al. Reply. Physical Review Letters, 2010, 105, .	7.8	3
50	Resonant Inelastic X-Ray Scattering Study of Electron-Exciton Coupling in High- $T_c$ Cuprates. Physical Review X, 2022, 12, .	8.9	3
51	Cooperon propagator description of high-temperature superconductivity. Physica C: Superconductivity and Its Applications, 2001, 364-365, 467-470.	1.2	2
52	Bogoliubov quasiparticles coupled to the antiferromagnetic spin mode in a vortex core. Physical Review B, 2015, 92, .	3.2	2
53	Periodicity of superconducting shape resonances in thin films. Physical Review B, 2020, 102, .	3.2	2
54	Second-order response theory of radio-frequency spectroscopy for cold atoms. Physical Review A, 2015, 92, .	2.5	1

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55	Scanning Tunneling Spectroscopy of High T <sub>c</sub> Cuprates. Nanoscience and Technology, 2010, , 231-255.	1.5	0
56	Interplay of the pseudogap and the BCS gap for heteropairs in 40 K- 6 Li mixture. Europhysics Letters, 2016, 116, 36003.	2.0	0