

# Nicholas Butch

## List of Publications by Year in descending order

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70  
papers

3,019  
citations

172207

29  
h-index

161609

54  
g-index

70  
all docs

70  
docs citations

70  
times ranked

3290  
citing authors

#	ARTICLE	IF	CITATIONS
1	Nearly ferromagnetic spin-triplet superconductivity. <i>Science</i> , 2019, 365, 684-687.	6.0	351
2	Surface conduction of topological Dirac electrons in bulk insulating Bi <sub>2</sub> Se <sub>3</sub> . <i>Nature Physics</i> , 2012, 8, 459-463.	6.5	330
3	Chiral superconductivity in heavy-fermion metal UTe <sub>2</sub> . <i>Nature</i> , 2020, 579, 523-527.	13.7	193
4	Link between spin fluctuations and electron pairing in copper oxide superconductors. <i>Nature</i> , 2011, 476, 73-75.	13.7	171
5	Structural collapse and superconductivity in rare-earth-doped CaFe <sub>2</sub> As <sub>2</sub> . <i>Physical Review B</i> , 2012, 85, .	1.1	145
6	Extreme magnetic field-boosted superconductivity. <i>Nature Physics</i> , 2019, 15, 1250-1254.	6.5	138
7	Spatially resolved femtosecond pump-probe study of topological insulator Bi <sub>2</sub> Se <sub>3</sub> . <i>Physical Review B</i> , 2019, 100, .	1.1	106
8	Coexistence of ferromagnetic fluctuations and superconductivity in the actinide superconductor UTe <sub>2</sub> . <i>Physical Review B</i> , 2019, 100, .	1.1	87
9	Multicomponent superconducting order parameter in UTe <sub>2</sub> . <i>Science</i> , 2021, 373, 797-801.	6.0	83
10	Point-node gap structure of the spin-triplet superconductor UTe <sub>2</sub> . <i>Physical Review B</i> , 2019, 100, .	6.0	69
11	Emergent order in the kagome Ising magnet Dy <sub>3</sub> Mg <sub>2</sub> Sb <sub>3</sub> O <sub>14</sub> . <i>Nature Communications</i> , 2016, 7, 13842.	5.8	67
12	Non-Fermi-Liquid Behavior within the Ferromagnetic Phase in URu <sub>2</sub> Si <sub>2</sub> . <i>Physical Review Letters</i> , 2005, 94, 046401.	2.9	65
13	Nonreciprocal Magnons and Symmetry-Breaking in the Noncentrosymmetric Antiferromagnet. <i>Physical Review Letters</i> , 2017, 119, 047201.	2.9	62
14	Low Energy Band Structure and Symmetries of UTe <sub>2</sub> . Angle-Resolved Photoemission Spectroscopy. <i>Physical Review Letters</i> , 2020, 124, 076401.	2.9	59
15	Noncollinear spin-density-wave antiferromagnetism in FeAs. <i>Physical Review B</i> , 2011, 83, .	1.1	57
16	Antiferromagnetic critical pressure in URu <sub>2</sub> Si <sub>2</sub> under hydrostatic conditions. <i>Physical Review B</i> , 2010, 82, .	1.1	55
17	Non-Fermi Liquid Regimes and Superconductivity in the Low Temperature Phase Diagrams of Strongly Correlated d- and f-Electron Materials. <i>Journal of Low Temperature Physics</i> , 2010, 161, 4-54.	0.6	54
18	Evolution of Critical Scaling Behavior near a Ferromagnetic Quantum Phase Transition. <i>Physical Review Letters</i> , 2009, 103, 076404.	2.9	50

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19	Magneto-thermoelectric properties of Bi <sub>2</sub> Se <sub>3</sub> . Physical Review B, 2013, 87, .	1.1	49
20	Enhancement and reentrance of spin triplet superconductivity in UTe <sub>2</sub> under pressure. Physical Review B, 2020, 101, .	1.1	48
21	Quantum critical scaling at the edge of Fermi liquid stability in a cuprate superconductor. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 8440-8444.	3.3	43
22	Anomalous normal fluid response in a chiral superconductor UTe <sub>2</sub> . Nature Communications, 2021, 12, 2644.	5.8	38
23	Degree of electron localization in URu <sub>2</sub> Si <sub>2</sub> . Electron energy-loss spectroscopy and spin-orbit sum rule. Physical Review B, 2010, 82, .	1.1	36
24	Josephson effect between electron-doped and hole-doped iron pnictide single crystals. Applied Physics Letters, 2009, 95, 062510.	1.5	34
25	Electrostatic Coupling between Two Surfaces of a Topological Insulator Nanodevice. Physical Review Letters, 2014, 113, 206801.	2.9	33
26	Spectroscopic Determination of the Atomic-Symmetry Underlying Hidden Order in URu <sub>2</sub> Si <sub>2</sub> . Physical Review Letters, 2015, 114, 236401.	2.9	32
27	Symmetry and correlations underlying hidden order in URu <sub>2</sub> Si <sub>2</sub> . Physical Review B, 2015, 91, .	1.2	30
28	Tuning magnetic confinement of spin-triplet superconductivity. Npj Quantum Materials, 2020, 5, .	1.8	31
29	Pressure-Resistant Intermediate Valence in the Kondo Insulator SmB <sub>6</sub> . Physical Review Letters, 2016, 116, 156401.	2.9	30
30	Low-temperature crystal structure of the unconventional spin-triplet superconductor UTe <sub>2</sub> from single-crystal neutron diffraction. Acta Crystallographica Section B: Structural Science, Crystal Engineering and Materials, 2020, 76, 137-143.	0.5	26
31	The evolution of the ordered states of single-crystal URu <sub>2</sub> Si <sub>2</sub> under pressure. Journal of Physics Condensed Matter, 2008, 20, 095225.	0.7	24
32	Tricritical point of the URu <sub>2</sub> Si <sub>2</sub> -electron antiferromagnet. Physical Review B, 2017, 95, .	1.1	23
33	Orbital-selective Kondo lattice and enigmatic <i>f</i> electrons emerging from inside the antiferromagnetic phase of a heavy fermion. Science Advances, 2019, 5, eaaw9061.	4.7	22
34	Quantum-critical scale invariance in a transition metal alloy. Communications Physics, 2020, 3, .	2.0	22
35	Evidence of a universal and isotropic $k_F$ in 122-type iron pnictide superconductors over a wide doping range. Physical Review B, 2010, 82, .	1.1	21
36	The suppression of hidden order and the onset of ferromagnetism in URu <sub>2</sub> Si <sub>2</sub> via Re substitution. Journal of Physics Condensed Matter, 2010, 22, 164204.	0.7	20

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37	Interplay between magnetism and superconductivity in $\text{UTe}_2$ . Physical Review B, 2022, 105, .		
38	Quantum critical behavior in the asymptotic limit of high disorder in the medium entropy alloy $\text{NiCoCr}_0.8$ . Npj Quantum Materials, 2017, 2, .	1.8	18
39	Topologically driven linear magnetoresistance in helimagnetic FeP. Npj Quantum Materials, 2021, 6, .	1.8	18
40	Emergent ferromagnetism and $T$ -linear scattering in $\text{USb}$ at high pressure. Physical Review B, 2016, 93, .	1.1	17
41	Magnetic interactions in $\text{Ge}_{1-x}\text{Cr}_x\text{Te}$ semimagnetic semiconductors. Journal of Applied Physics, 2012, 112, .	1.1	15
42	Expansion of the high field-boosted superconductivity in $\text{UTe}_2$ under pressure. Npj Quantum Materials, 2021, 6, .	1.8	15
43	Tuning magnetism in FeAs-based materials via a tetrahedral structure. Physical Review B, 2012, 86, .	1.1	14
44	Distinct magnetic spectra in the hidden order and antiferromagnetic phases in $\text{URu}_2\text{Si}_2$ . Physical Review B, 2016, 94, .		
45	Quantum oscillations from the reconstructed Fermi surface in electron-doped cuprate superconductors. New Journal of Physics, 2018, 20, 043019.	1.2	14
46	Disorder effects near a magnetic instability in $\text{CePtSi}_{1-x}\text{Ge}_x$ ( $x=0, 0.1$ ). Physical Review B, 2004, 70, .	1.1	13
47	Multiple high-temperature transitions driven by dynamical structures in NaI. Physical Review B, 2014, 89, .	1.1	12
48	High temperature singlet-based magnetism from Hund's rule correlations. Nature Communications, 2019, 10, 644.	5.8	12
49	Precipitating ordered skyrmion lattices from helical spaghetti and granular powders. Physical Review Materials, 2019, 3, .	0.9	12
50	Resistivity at low temperatures in electron-doped cuprate superconductors. Physical Review B, 2010, 82, .	1.1	11
51	Interplay between magnetism, structure, and strong electron-phonon coupling in binary FeAs under pressure. Physical Review B, 2011, 83, .	1.1	11
52	Symmetry of magnetic correlations in spin-triplet superconductor $\text{UTe}_2$ . Npj Quantum Materials, 2022, 7, .	1.8	11
53	Hydrostaticity and hidden order: effects of experimental conditions on the temperature-pressure phase diagram of $\text{URu}_2\text{Si}_2$ . High Pressure Research, 2009, 29, 335-343.	0.4	10
54	Suppressed-moment 2-k order in the canonical frustrated antiferromagnet $\text{Gd}_2\text{Ti}_2\text{O}_7$ . Npj Quantum Materials, 2021, 6, .	1.8	10

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55	coexistence of antiferromagnetic and ferromagnetic spin fluctuations in the spin-triplet superconductor $UTe_2$ revealed by NMR under pressure. <i>Physical Review Letters</i> , 2020, 125, 077201.	1.1	10
56	Quantum oscillations from networked topological interfaces in a Weyl semimetal. <i>Npj Quantum Materials</i> , 2020, 5, .	1.8	9
57	CHES: The future direct geometry spectrometer at the second target station. <i>Review of Scientific Instruments</i> , 2022, 93, .	0.6	9
58	Resource Letter Scy-3: Superconductivity. <i>American Journal of Physics</i> , 2008, 76, 106-118.	0.3	8
59	Three-dimensional magnetism and the Dzyaloshinskii-Moriya interaction in $S = 3/2$ kagome staircase $Co_3V_2O_8$ . <i>Science Advances</i> , 2020, 6, eaay9709.	4.7	8
60	Coupled spin waves and crystalline electric field levels in candidate multiferroic $ErFeO_3$ . <i>Journal of Applied Physics</i> , 2021, 130, .	1.1	6
61	Comparison of Two Different Synthesis Methods of Single Crystals of Superconducting Uranium Ditelluride. <i>Journal of Visualized Experiments</i> , 2021, , .	0.2	4
62	Global perspectives of the bulk electronic structure of $URu_2Si_2$ from angle-resolved photoemission. <i>Electronic Structure</i> , 2022, 4, 013001.	1.0	4
63	Rapid suppression of the energy gap and the possibility of a gapless hidden order state in $URu_2\tilde{x}RexSi_2$ . <i>Philosophical Magazine</i> , 2019, 99, 1751-1762.	0.7	3
64	New insights into water dynamics of Portland cement paste with nano-additives using quasielastic neutron scattering. <i>Journal of Materials Science</i> , 2019, 54, 4710-4718.	1.7	3
65	Effect of chemical substitution on the skyrmion phase in $Cu_2OSeO_3$ . <i>Physical Review B</i> , 2020, 102, .	1.1	1
66	Ungapped magnetic excitations beyond Hidden Order in $URu_2\tilde{x}RexSi_2$ . <i>Philosophical Magazine</i> , 2020, 100, 1282-1288.	0.7	1
67	Tuning of Hidden Order and Superconductivity in $URu_2Si_2$ by Applied Pressure and Re Substitution. <i>Materials Research Society Symposia Proceedings</i> , 2006, 986, 1.	0.1	0
68	Suppression of Hidden Order and Emergence of Ferromagnetism in $URu_2\tilde{x}RexSi_2$ . <i>Materials Research Society Symposia Proceedings</i> , 2008, 1104, 1.	0.1	0
69	Evolution of Superconducting and Hidden Order Phases in $URu_2Si_2$ Under Applied Pressure. <i>Materials Research Society Symposia Proceedings</i> , 2008, 1104, 1.	0.1	0
70	The pressure-temperature phase diagram of $URu_2Si_2$ under hydrostatic conditions. <i>Materials Research Society Symposia Proceedings</i> , 2010, 1264, 1.	0.1	0