

Hermann J Suderow

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/5220743/publications.pdf>

Version: 2024-02-01

127
papers

3,018
citations

136950

32
h-index

182427

51
g-index

127
all docs

127
docs citations

127
times ranked

2996
citing authors

#	ARTICLE	IF	CITATIONS
1	Superconducting Density of States and Vortex Cores of $2H\text{-NbS}_2$. Physical Review Letters, 2008, 101, 166407.	7.8	183
2	Tunneling Spectroscopy in Small Grains of Superconducting MgB_2 . Physical Review Letters, 2001, 86, 5582-5584.	7.8	160
3	Direct observation of melting in a two-dimensional superconducting vortex lattice. Nature Physics, 2009, 5, 651-655.	16.7	115
4	Pressure Induced Effects on the Fermi Surface of Superconducting $2H\text{-NbSe}_2$. Physical Review Letters, 2005, 95, 117006.	7.8	107
5	Strong enhancement of superconductivity at high pressures within the charge-density-wave states of $2H\text{-NbSe}_2$. Physical Review B, 2016, 93, .	3.2	82
6	Magnetic field-induced dissipation-free state in superconducting nanostructures. Nature Communications, 2013, 4, 1437.	12.8	90
7	Intrinsic atomic-scale modulations of the superconducting gap of $2H\text{-NbSe}_2$. Physical Review B, 2008, 77, .	3.2	82
8	Imaging superconducting vortex cores and lattices with a scanning tunneling microscope. Superconductor Science and Technology, 2014, 27, 063001.	3.5	81
9	Thermal conductivity and gap structure of the superconducting phases of UPt_3 . Journal of Low Temperature Physics, 1997, 108, 11-30.	1.4	72
10	On the use of STM superconducting tips at very low temperatures. European Physical Journal B, 2004, 40, 483-488.	1.5	69
11	Enhancement of long-range correlations in a $2D\text{-NbSe}_2$ vortex lattice by an incommensurate $1D$ disorder potential. Nature Physics, 2014, 10, 851-856.	16.7	69
12	Very-low-temperature tunneling spectroscopy in the heavy-fermion superconductor $\text{PrOs}_4\text{Sb}_{12}$. Physical Review B, 2004, 69, .	3.2	67
13	Nanoscale superconducting properties of amorphous W -based deposits grown with a focused-ion-beam. New Journal of Physics, 2008, 10, 093005.	2.9	66
14	Pressure dependence of superconducting critical temperature and upper critical field of $2H\text{-NbS}_2$. Physical Review B, 2013, 87, .	3.2	63
15	Influence of Magnetic Ordering between Cr Adatoms on the Yu-Shiba-Rusinov States of the Bi/Fe Superconductor. Physical Review Letters, 2018, 120, 167001.	7.8	54
16	Three-Dimensional Superconducting Nanohelices Grown by He^+ -Focused-Ion-Beam Direct Writing. Nano Letters, 2019, 19, 8597-8604.	9.1	52
17	Phonon-mediated anisotropic superconductivity in the Y and Lu nickel borocarbides. Physical Review B, 2003, 67, .	3.2	50
18	Magnetic field dependence of the density of states in the multiband superconductor MgB_2 . Physical Review B, 2015, 92, .	3.2	50

#	ARTICLE	IF	CITATIONS
19	Nodeless multiband superconductivity in stoichiometric single-crystalline $\text{CaKFe}_4\text{As}_{10}$. Physical Review B, 2017, 95, .	3.2	41
20	Pressure dependence of the upper critical field of MgB_2 and of $\text{YNi}_2\text{B}_2\text{C}$. Physical Review B, 2004, 70, .	3.2	47
21	Chiral charge order in the superconductor 2H-TaS_2 . New Journal of Physics, 2011, 13, 103020.	2.9	45
22	Influence of multiband sign-changing superconductivity on vortex cores and vortex pinning in stoichiometric high- T_c MgB_2 . Physical Review B, 2018, 97, .	3.2	45
23	Compact very low temperature scanning tunneling microscope with mechanically driven horizontal linear positioning stage. Review of Scientific Instruments, 2011, 82, 033711.	1.3	43
24	Scanning tunneling spectroscopy in MgB_2 . Physica C: Superconductivity and Its Applications, 2003, 385, 233-243.	1.2	42
25	Single-gap superconductivity in MgB_2 . Physical Review B, 2001, 63, 020407.	3.2	40
26	Scaling and Thermal Conductivity in Unconventional Superconductors: The Case of UPt_3 . Physical Review Letters, 1998, 80, 165-168.	7.8	39
27	A nodeless superconducting gap in Sr_2RuO_4 from tunneling spectroscopy. New Journal of Physics, 2009, 11, 093004.	2.9	39
28	Superconducting nanostructures fabricated with the scanning tunnelling microscope. Journal of Physics Condensed Matter, 2004, 16, R1151-R1182.	1.8	38
29	Tunneling spectroscopy in the magnetic superconductor $\text{TmNi}_2\text{B}_2\text{C}$. Physical Review B, 2001, 64, .	3.2	36
30	Proximity effect and strong-coupling superconductivity in nanostructures built with an STM. Physical Review B, 2002, 65, .	3.2	36
31	Local Superconducting Density of States of $\text{ErNi}_2\text{B}_2\text{C}$. Physical Review Letters, 2006, 96, 027003.	7.8	35
32	Scanning tunneling measurements of layers of superconducting H-TaSe_2 : Evidence for a zero-bias anomaly in single layers. Physical Review B, 2013, 87, .	3.2	33
33	Scanning tunneling spectroscopy with superconducting tips of Al. Physica C: Superconductivity and Its Applications, 2008, 468, 537-542.	1.2	32
34	Field dependence of the vortex core size probed by scanning tunneling microscopy. Physical Review B, 2016, 94, .	3.2	31
35	Field-induced renormalization observed by magnetoresistance in CeRu_2Si_2 . Solid State Communications, 1995, 95, 449-453.	1.9	30
36	Superconducting gap and vortex lattice of the heavy-fermion compound CeCu_2Si_2 . Physical Review B, 2016, 93, .	1.2	30

#	ARTICLE	IF	CITATIONS
37	Superconductivity and magnetism on flux-grown single crystals of NiBi. $\langle \text{mml:math} \text{xmlns:mml="http://www.w3.org/1998/Math/MathML"} \text{display="inline"} \rangle \langle \text{mml:msub} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mn} \rangle 3 \langle \text{mml:mn} \rangle \langle \text{mml:msub} \rangle \langle \text{mml:math} \rangle$. Physical Review B, 2013, 88, .	3.2	28
38	Spin-Fluctuation Mediated Thermal Conductivity Around the Magnetic Instability of CeNi ₂ Ge ₂ . Journal of Low Temperature Physics, 1999, 117, 101-112.	1.4	27
39	Direct Observation of Stress Accumulation and Relaxation in Small Bundles of Superconducting Vortices in Tungsten Thin Films. Physical Review Letters, 2011, 106, 077001.	7.8	27
40	Three axis vector magnet set-up for cryogenic scanning probe microscopy. Review of Scientific Instruments, 2015, 86, 013706.	1.3	26
41	Andreev scattering in nanoscopic junctions in a magnetic field. Europhysics Letters, 2000, 50, 749-755.	2.0	25
42	Scanning tunneling microscopy and spectroscopy at very low temperatures. Physica C: Superconductivity and Its Applications, 2002, 369, 106-112.	1.2	23
43	Zero-bias conductance peak in detached flakes of superconducting $2 \langle \text{mml:math} \text{xmlns:mml="http://www.w3.org/1998/Math/MathML"} \rangle \langle \text{mml:mi} \rangle H \langle \text{mml:mi} \rangle \langle \text{mml:math} \rangle - \langle \text{mml:math} \text{xmlns:mml="http://www.w3.org/1998/Math/MathML"} \rangle \langle \text{mml:msub} \rangle \langle \text{mml:mi} \text{mathvariant="normal"} \rangle \text{TaS} \langle \text{mml:mi} \rangle \langle \text{mml:mn} \rangle 2 \langle \text{mml:mn} \rangle \langle \text{mml:msub} \rangle \langle \text{mml:math} \rangle$ probed by scanning tunneling spectroscopy. Physical Review B, 2014, 89, .	3.2	22
44	Heavy fermion superconductivity. Physica B: Condensed Matter, 2000, 280, 165-171.	2.7	20
45	Incommensurate and commensurate magnetic structures of the ternary germanide CeNiGe ₃ . Journal of Physics Condensed Matter, 2003, 15, 77-90.	1.8	20
46	Excitations in heavy fermion systems. Physica B: Condensed Matter, 1996, 223-224, 135-140.	2.7	19
47	Topological Superconducting State of Lead Nanowires in an External Magnetic Field. Physical Review Letters, 2012, 109, 237003.	7.8	19
48	Long-range vortex transfer in superconducting nanowires. Scientific Reports, 2019, 9, 12386.	3.3	18
49	Superconducting nanobridges under magnetic fields. Physica Status Solidi (B): Basic Research, 2003, 237, 386-393.	1.5	17
50	Intrinsic granularity in nanocrystalline boron-doped diamond films measured by scanning tunneling microscopy. Physical Review B, 2009, 80, .	3.2	17
51	Low-Temperature Specific Heat of Graphite and CeSb ₂ : Validation of a Quasi-adiabatic Continuous Method. Journal of Low Temperature Physics, 2013, 173, 4-20.	1.4	17
52	Huge linear magnetoresistance due to open orbits in $\langle \text{mml:math} \text{xmlns:mml="http://www.w3.org/1998/Math/MathML"} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mi} \rangle \hat{I}^3 \langle \text{mml:mi} \rangle \langle \text{mml:mtext} \rangle \hat{a}'' \langle \text{mml:mtext} \rangle \langle \text{mml:msub} \rangle \langle \text{mml:math} \rangle$. Physical Review Research, 2020, 2, .	1.7	17
53	Quasi-particle vortex scattering in UPt ₃ . Physics Letters, Section A: General, Atomic and Solid State Physics, 1997, 234, 64-68.	2.1	15
54	Supercurrent on a vortex core in 2H-NbSe ₂ : Current-driven scanning tunneling spectroscopy measurements. Physical Review B, 2013, 88, .	3.2	15

#	ARTICLE	IF	CITATIONS
55	Charge density wave in layered $\text{LaFeAsO}_{1-x}\text{F}_x$. Physical Review B, 2015, 92, .	3.2	15
56	Observation of a gel of quantum vortices in a superconductor at very low magnetic fields. Physical Review Research, 2020, 2, .	3.6	15
57	Thermal conductivity and symmetry of the superconductivity in UPt3. Physics Letters, Section A: General, Atomic and Solid State Physics, 1995, 209, 365-372.	2.1	14
58	Scanning tunneling microscopy in the superconductor LaSb LaSb . Physical Review B, 2013, 87, .	3.2	14
59	Direct visualization of phase separation between superconducting and nematic domains in Co-doped CaFe_2As_2 close to a first-order phase transition. Physical Review B, 2018, 97, .	3.2	14
60	Tilted vortex cores and superconducting gap anisotropy in 2H-NbSe_2 . Communications Physics, 2018, 1, .	5.3	14
61	Very low temperature thermal conductivity in the layered perovskite superconductor. Journal of Physics Condensed Matter, 1998, 10, L597-L602.	1.8	13
62	Transport properties of superconducting amorphous W-based nanowires fabricated by focused-ion-beam-induced-deposition for applications in Nanotechnology. Materials Research Society Symposia Proceedings, 2009, 1180, 1.	0.1	13
63	Pressure effect on the superconducting and the normal state of Bi_2Pd . Physical Review B, 2018, 97, .	3.2	13
64	Interior and Edge Magnetization in Thin Exfoliated CrGeTe_3 Films. Nano Letters, 2022, 22, 3165-3172.	9.1	12
65	Scanning tunneling spectroscopy under large current flow through the sample. Review of Scientific Instruments, 2011, 82, 073710.	1.3	11
66	Evolution of the Local Superconducting Density of States in ErRh_4B_4 Close to the Ferromagnetic Transition. Physical Review Letters, 2009, 102, 237002.	7.8	10
67	Low temperature magnetic transitions of single crystal HoBi. Solid State Communications, 2013, 171, 59-63.	1.9	10
68	Atomic resolution and vortex lattice studies of magnetic superconductors: A first approach in the nickel borocarbide $\text{TmNi}_2\text{B}_2\text{C}$. Physica C: Superconductivity and Its Applications, 2010, 470, 771-775.	1.2	9
69	Andreev reflection under high magnetic fields in ferromagnet-superconductor nanocontacts. Physical Review B, 2011, 84, .	3.2	9
70	Attractive interaction between superconducting vortices in tilted magnetic fields. Communications Physics, 2019, 2, .	5.3	9
71	3D superconducting hollow nanowires with tailored diameters grown by focused He ⁺ beam direct writing. Beilstein Journal of Nanotechnology, 2020, 11, 1198-1206.	2.8	9
72	Millikelvin scanning tunneling microscope at 20/22 Å with a graphite enabled stick-slip approach and an energy resolution below 8 μeV : Application to conductance quantization at 20 Å in single atom point contacts of Al and Au and to the charge density wave of 2H-NbSe_2 . Review of Scientific Instruments, 2021, 92, 093701.	1.3	9

#	ARTICLE	IF	CITATIONS
73	Title is missing!. Journal of Low Temperature Physics, 1999, 116, 393-405.	1.4	8
74	Transport in the superconducting phase of UPt3 at low-temperature: magnetic field and impurity effects. Physica B: Condensed Matter, 2000, 281-282, 872-877.	2.7	8
75	Superconducting lead nanobridges under magnetic fields. Physica C: Superconductivity and Its Applications, 2000, 332, 327-332.	1.2	8
76	Scanning Tunneling Microscopy and Spectroscopy of (LaSe) _{1.14} (NbSe ₂) at Very Low Temperatures and in Magnetic Field. European Physical Journal D, 2004, 54, 489-492.	0.4	8
77	Magnetic phase diagram, magnetotransport and inverse magnetocaloric effect in the noncollinear antiferromagnet Mn ₅ Si ₃ . Journal of Magnetism and Magnetic Materials, 2019, 489, 165451.	2.3	8
78	Superconducting density of states at the border of an amorphous thin film grown by focused-ion-beam. Journal of Physics: Conference Series, 2009, 150, 052064.	0.4	7
79	Tunneling spectroscopy of the superconducting state of URu ₂ Si ₂ . Physical Review B, 2012, 85, 020407.	3.2	7
80	Scanning microscopies of superconductors at very low temperatures. Physica C: Superconductivity and Its Applications, 2012, 479, 19-23.	1.2	7
81	Thickness-modulated tungsten-carbon superconducting nanostructures grown by focused ion beam induced deposition for vortex pinning up to high magnetic fields. Beilstein Journal of Nanotechnology, 2016, 7, 1698-1708.	2.8	7
82	Subsurface bending and reorientation of tilted vortex lattices in bulk isotropic superconductors due to Coulomb-like repulsion at the surface. Physical Review B, 2017, 96, .	3.2	7
83	Generating strong magnetic flux shielding regions in a single crystal of Bi ₂ Sr ₂ CaCu ₂ O ₈ using a blind hole array. Superconductor Science and Technology, 2012, 25, 095016.	3.5	6
84	Properties of nanopatterned pins generated in a superconductor with FIB. Applied Surface Science, 2012, 258, 4199-4202.	6.1	6
85	Magnetic and superconducting phase diagrams in ErNi ₂ B ₂ C. Solid State Communications, 2012, 152, 1076-1079.	1.9	6
86	Methods to simplify cooling of liquid Helium cryostats. HardwareX, 2019, 5, e00058.	2.2	6
87	Disordered hyperuniformity in superconducting vortex lattices. Physical Review Research, 2020, 2, .	3.6	6
88	Superconducting density of states and band structure at the surface of the candidate topological superconductor Au ₂ Pb ₂ . Physical Review Research, 2022, 4, .	3.6	6
89	Nonequilibrium effects in superconducting necks of nanoscopic dimensions. Physics Letters, Section A: General, Atomic and Solid State Physics, 2000, 275, 299-305.	2.1	5
90	Anisotropic superconductivity in borocarbide superconductors and spin disorder. Journal of Magnetism and Magnetic Materials, 2004, 272-276, 158-159.	2.3	5

#	ARTICLE	IF	CITATIONS
91	Gap opening with ordering in PrFe ₄ P ₁₂ studied by local tunneling spectroscopy. Physical Review B, 2008, 77, .	3.2	5
92	Vortex creep at very low temperatures in single crystals of the extreme type-II superconductor S_{Rh} . Physical Review B, 2017, 95, .	3.2	5
93	Coherent coupling between vortex bound states and magnetic impurities in 2D layered superconductors. Nature Communications, 2021, 12, 4668.	12.8	5
94	Linear nonsaturating magnetoresistance in the Nowotny chimney ladder compound S_{Ru} . Physical Review B, 2020, 101, .	3.2	5
95	Superconductivity in a disordered metal with Coulomb interactions. Physical Review Research, 2020, 2, .	3.6	5
96	Simplified feedback control system for scanning tunneling microscopy. Review of Scientific Instruments, 2021, 92, 103705.	1.3	5
97	Probing the superconducting gap of UPt ₃ by very low-temperature thermal conductivity. Physica B: Condensed Matter, 1996, 223-224, 47-49.	2.7	4
98	Scanning Tunneling Spectroscopy in Anisotropic s-Wave Superconductors. International Journal of Modern Physics B, 2003, 17, 3300-3303.	2.0	4
99	Thermal expansion measured by STM in the magnetic superconductor. Physica B: Condensed Matter, 2006, 378-380, 471-472.	2.7	4
100	In/extrinsic granularity in superconducting boron-doped diamond. Physica C: Superconductivity and Its Applications, 2010, 470, 853-856.	1.2	4
101	Thermometry with a nearly temperature independent sensitivity using a normal-superconducting tunnel diode biased close to the superconducting gap. Cryogenics, 2010, 50, 397-400.	1.7	4
102	Topological superconductivity in metallic nanowires fabricated with a scanning tunneling microscope. New Journal of Physics, 2013, 15, 055020.	2.9	4
103	Nanostructuring superconducting vortex matter with focused ion beams. Physica C: Superconductivity and Its Applications, 2014, 503, 70-74.	1.2	4
104	Opening the gate on superconductivity. Science, 2015, 350, 1316-1317.	12.6	4
105	Thermal diffusivity and conductivity measurements for Si:P near the metal - insulator transition. Journal of Physics Condensed Matter, 1996, 8, 999-1009.	1.8	3
106	Observation of a spin-polarized current through single atom quantum point contacts. Physica E: Low-Dimensional Systems and Nanostructures, 2003, 18, 264-265.	2.7	3
107	Intrinsic Josephson junction behaviour of the low T _c superconductor (LaSe) _{1.14} (NbSe ₂). Physica C: Superconductivity and Its Applications, 2008, 468, 543-546.	1.2	3
108	Temperature dependent tunneling spectroscopy in the heavy fermion CeRu ₂ Si ₂ and in the antiferromagnet CeRh ₂ Si ₂ . Journal of Physics Condensed Matter, 2012, 24, 475602.	1.8	3

#	ARTICLE	IF	CITATIONS
109	Demonstration experiments for solid-state physics using a table-top mechanical Stirling refrigerator. European Journal of Physics, 2012, 33, 757-770.	0.6	3
110	Vortex cores and vortex motion in superconductors with anisotropic Fermi surfaces. Physica C: Superconductivity and Its Applications, 2017, 533, 2-8.	1.2	3
111	Thermal creep induced by cooling a superconducting vortex lattice. Physical Review Research, 2020, 2, .	3.6	3
112	Magnetic levitation on a type-I superconductor as a practical demonstration experiment for students. European Journal of Physics, 2012, 33, 1383-1395.	0.6	2
113	Observation of unreconstructed square atomic square lattice in $\text{Ca}(\text{Fe}_{0.965}\text{Co}_{0.035})_2$ cleaved at very low temperatures. Journal of Physics: Conference Series, 2014, 568, 022046.	0.4	2
114	Low-Frequency Imaginary Impedance at the Superconducting Transition of H_2 . Physical Review Applied, 2020, 13, .	3.8	2
115	Anisotropic superconductivity in the spin-vortex antiferromagnetic superconductor NbSe_2 . Physical Review B, 2021, 103, .		
116	Charge and spin gaps in Kondo-insulator CeNiSn. European Physical Journal D, 1996, 46, 1999-2000.	0.4	1
117	Very low-temperature thermal conductivity of UPt3. Physica B: Condensed Matter, 1997, 230-232, 342-344.	2.7	1
118	Metastable inhomogeneous vortex configuration with non-uniform filling fraction inside a blind hole array patterned in a BSCCO single crystal and concentrating magnetic flux inside it. Superconductor Science and Technology, 2016, 29, 065021.	3.5	1
119	Large magnetoresistance in the iron-free pnictide superconductor LaRu2P2. Journal of Physics Condensed Matter, 2021, 33, 145501.	1.8	1
120	1D charge density wave in the hidden order state of URu2Si2. Communications Physics, 2021, 4, .	5.3	1
121	Scaling of the thermal conductivity in the mixed phase of UPt3. Physica B: Condensed Matter, 1999, 259-261, 664-665.	2.7	0
122	The evanescence of ferromagnetic order in the $\text{Ce}_{1-x}\text{Y}_x\text{Ni}_{0.8}\text{Pt}_{0.2}$ dense Kondo system. European Physical Journal B, 2002, 28, 103-109.	1.5	0
123	Scanning tunneling microscopy and spectroscopy at very low temperatures. Journal of Physics: Conference Series, 2014, 568, 022045.	0.4	0
124	Commensurate - Incommensurate vortex phase in a nanopatterned superconductor. Journal of Physics: Conference Series, 2015, 638, 012009.	0.4	0
125	1. Imaging vortices in superconductors: from the atomic scale to macroscopic distances. , 2017, , 29-60.		0
126	Scanning Tunnelling Spectroscopy of Vortices with Normal and Superconducting tips. Nanoscience and Technology, 2010, , 257-280.	1.5	0

#	ARTICLE	IF	CITATIONS
127	Penetration Depth and Coherence Length in the Superconductor PdBi_2 . Journal of the Physical Society of Japan, 2022, 91, .	1.6	0