

Kirsten von Bergmann

List of Publications by Year in descending order

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78
papers

7,896
citations

109137

35
h-index

62479

80
g-index

83
all docs

83
docs citations

83
times ranked

5228
citing authors

#	ARTICLE	IF	CITATIONS
1	Spontaneous atomic-scale magnetic skyrmion lattice in two dimensions. <i>Nature Physics</i> , 2011, 7, 713-718.	6.5	1,521
2	Writing and Deleting Single Magnetic Skyrmions. <i>Science</i> , 2013, 341, 636-639.	6.0	1,217
3	Chiral magnetic order at surfaces driven by inversion asymmetry. <i>Nature</i> , 2007, 447, 190-193.	13.7	823
4	Field-Dependent Size and Shape of Single Magnetic Skyrmions. <i>Physical Review Letters</i> , 2015, 114, 177203.	2.9	423
5	The role of magnetic anisotropy in the Kondo effect. <i>Nature Physics</i> , 2008, 4, 847-850.	6.5	309
6	Electric-field-driven switching of individual magnetic skyrmions. <i>Nature Nanotechnology</i> , 2017, 12, 123-126.	15.6	297
7	Controlling the state of quantum spins with electric currents. <i>Nature Physics</i> , 2010, 6, 340-344.	6.5	277
8	The 2020 skyrmionics roadmap. <i>Journal Physics D: Applied Physics</i> , 2020, 53, 363001.	1.3	245
9	Atomic-Scale Spin Spiral with a Unique Rotational Sense: Mn Monolayer on W(001). <i>Physical Review Letters</i> , 2008, 101, 027201.	2.9	238
10	Electrical detection of magnetic skyrmions by tunnelling non-collinear magnetoresistance. <i>Nature Nanotechnology</i> , 2015, 10, 1039-1042.	15.6	179
11	Information Transfer by Vector Spin Chirality in Finite Magnetic Chains. <i>Physical Review Letters</i> , 2012, 108, 197204.	2.9	151
12	Atomic spin structure of antiferromagnetic domain walls. <i>Nature Materials</i> , 2006, 5, 477-481.	13.3	134
13	Revealing Antiferromagnetic Order of the Fe Monolayer on W(001): Spin-Polarized Scanning Tunneling Microscopy and First-Principles Calculations. <i>Physical Review Letters</i> , 2005, 94, 087204.	2.9	133
14	Stability of single skyrmionic bits. <i>Nature Communications</i> , 2015, 6, 8455.	5.8	130
15	Imaging and manipulating the spin direction of individual atoms. <i>Nature Nanotechnology</i> , 2010, 5, 350-353.	15.6	126
16	Observation of a Complex Nanoscale Magnetic Structure in a Hexagonal Fe Monolayer. <i>Physical Review Letters</i> , 2006, 96, 167203.	2.9	100
17	Pinning and movement of individual nanoscale magnetic skyrmions via defects. <i>New Journal of Physics</i> , 2016, 18, 055009.	1.2	94
18	<i>Colloquium</i>: Atomic spin chains on surfaces. <i>Reviews of Modern Physics</i> , 2019, 91, .	16.4	90

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19	Isolated zero field sub-10nm skyrmions in ultrathin Co films. Nature Communications, 2019, 10, 3823.	5.8	84
20	Al ₂ O ₃ -films on Ni ₃ Al(111): a template for nanostructured cluster growth. New Journal of Physics, 2002, 4, 75-75.	1.2	78
21	Interface-induced chiral domain walls, spin spirals and skyrmions revealed by spin-polarized scanning tunneling microscopy. Journal of Physics Condensed Matter, 2014, 26, 394002.	0.7	77
22	Domain Wall Orientation in Magnetic Nanowires. Physical Review Letters, 2004, 92, 077207.	2.9	68
23	Conical Spin-Spiral State in an Ultrathin Film Driven by Higher-Order Spin Interactions. Physical Review Letters, 2012, 108, 087205.	2.9	64
24	Spin-dependent electronic and magnetic properties of Co nanostructures on Pt(111) studied by spin-resolved scanning tunneling spectroscopy. Physical Review B, 2006, 74, .	1.1	48
25	Multiscale magnetic study of Ni(111) and graphene on Ni(111). Physical Review B, 2011, 84, .	1.1	48
26	Impact of the skyrmion spin texture on magnetoresistance. Physical Review B, 2017, 95, .	1.1	45
27	Spin Polarization of the Split Kondo State. Physical Review Letters, 2015, 114, 076601.	2.9	44
28	Competition of Dzyaloshinskii-Moriya and Higher-Order Exchange Interactions in $RhFe$ Atomic Bilayers on Ir(111). Physical Review Letters, 2018, 120, 207201.	2.9	44
29	Nanoscale magnetic skyrmions and target states in confined geometries. Physical Review B, 2019, 99, .	1.1	44
30	Spin Friction Observed on the Atomic Scale. Physical Review Letters, 2012, 109, 116102.	2.9	42
31	Inducing skyrmions in ultrathin Fe films by hydrogen exposure. Nature Communications, 2018, 9, 1571.	5.8	40
32	Tunneling anisotropic magnetoresistance on the atomic scale. Physical Review B, 2012, 86, .	1.1	39
33	Preferential cluster nucleation on long-range superstructures on Al ₂ O ₃ /Ni ₃ Al(111). Surface Science, 2001, 486, L443-L448.	0.8	37
34	Influence of the Local Atom Configuration on a Hexagonal Skyrmion Lattice. Nano Letters, 2015, 15, 3280-3285.	4.5	36
35	Guiding Spin Spirals by Local Uniaxial Strain Relief. Physical Review Letters, 2016, 116, 017201.	2.9	35
36	Discovery of Magnetic Single- and Triple- q States in $MnRe$ Tj ETQ0 0 0 rgBT /Overlock 10 Tf 50 37 Td (stretchy="false")	2.9	35

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37	Complex magnetism of the Fe monolayer on Ir(111). <i>New Journal of Physics</i> , 2007, 9, 396-396.	1.2	33
38	Domain walls and Dzyaloshinskii-Moriya interaction in epitaxial Co/Ir(111) and Pt/Co/Ir(111). <i>Physical Review B</i> , 2018, 97, .	1.1	26
39	Plumbene on a Magnetic Substrate: A Combined Scanning Tunneling Microscopy and Density Functional Theory Study. <i>Physical Review Letters</i> , 2020, 124, 126401.	2.9	26
40	Structure and magnetism of ultra-thin chromium layers on W(110). <i>New Journal of Physics</i> , 2008, 10, 013005.	1.2	24
41	Magnetism of iron on tungsten (001) studied by spin-resolved scanning tunneling microscopy and spectroscopy. <i>Physical Review B</i> , 2004, 70, .	1.1	23
42	Skyrmions at the Edge: Confinement Effects in $\langle \text{mml:math} \text{xmlns:mml="http://www.w3.org/1998/Math/MathML"} \text{display="inline"} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mi} \rangle \text{Fe} \langle \text{mml:mi} \rangle \langle \text{mml:mo} \rangle / \langle \text{mml:mo} \rangle \langle \text{mml:mi} \rangle \text{Ir} \langle \text{mml:mi} \rangle \langle \text{mml:mo} \rangle \text{stretchy="false"} \rangle \langle \text{mml:mo} \rangle \langle \text{mml:mn} \rangle 111 \langle \text{mml:mn} \rangle \langle \text{mml:mo} \rangle \text{Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 527 Td (stretchy="false"} \rangle \langle \text{mml:mo} \rangle \langle \text{mml:mn} \rangle 111 \langle \text{mml:mn} \rangle \langle \text{mml:mo} \rangle$	2.9	23
43	Spin-Polarized Electron Scattering at Single Oxygen Adsorbates on a Magnetic Surface. <i>Physical Review Letters</i> , 2004, 92, 046801.	2.9	22
44	Scanning tunneling microscopy study of Fe, Co and Cr growth on Re(0001). <i>Surface Science</i> , 2014, 630, 280-285.	0.8	20
45	Magnetic properties of monolayer Co islands on Ir(111) probed by spin-resolved scanning tunneling microscopy. <i>Physical Review B</i> , 2011, 84, .	1.1	19
46	Enhanced Atomic-Scale Spin Contrast due to Spin Friction. <i>Physical Review Letters</i> , 2014, 112, 076102.	2.9	19
47	Giant magnetization canting due to symmetry breaking in zigzag Co chains on Ir(001). <i>New Journal of Physics</i> , 2015, 17, 023014.	1.2	19
48	Symmetry breaking in spin spirals and skyrmions by in-plane and canted magnetic fields. <i>New Journal of Physics</i> , 2016, 18, 075007.	1.2	16
49	Electrical Detection of Domain Walls and Skyrmions in Co Films Using Noncollinear Magnetoresistance. <i>Physical Review Letters</i> , 2019, 123, 237205.	2.9	16
50	Spin-polarized scanning tunneling spectroscopy of dislocation lines in Fe films on W(110). <i>Journal of Magnetism and Magnetic Materials</i> , 2006, 304, 1-5.	1.0	15
51	Towards skyrmion-superconductor hybrid systems. <i>Physical Review Materials</i> , 2020, 4, .	0.9	14
52	Coverage-dependent spin reorientation transition temperature of the Fe double-layer on W(110) observed by scanning tunneling microscopy. <i>Journal of Magnetism and Magnetic Materials</i> , 2006, 305, 279-283.	1.0	13
53	Parity Effects in 120° Spin Spirals. <i>Physical Review Letters</i> , 2014, 112, 047204.	2.9	12
54	Coupling of Coexisting Noncollinear Spin States in the Fe Monolayer on Re(0001). <i>Nano Letters</i> , 2016, 16, 6252-6256.	4.5	12

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55	Coexistence of antiferromagnetism and superconductivity in Mn/Nb(110). Physical Review B, 2022, 105, .	1.1	12
56	Structural and magnetic properties of Ni/Fe nanostructures on Ir(111). Physical Review B, 2016, 93, .	1.1	11
57	Imaging the switching behavior of superparamagnetic nanoislands by spin-polarized scanning tunneling microscopy. Microscopy Research and Technique, 2005, 66, 117-125.	1.2	10
58	Magnetic bubbles with a twist. Science, 2015, 349, 234-235.	6.0	10
59	Spin-polarized scanning tunneling microscopy: Insight into magnetism from nanostructures to atomic scale spin structures. Microscopy Research and Technique, 2005, 66, 61-71.	1.2	9
60	Complex magnetic order on the atomic scale revealed by spin-polarized scanning tunnelling microscopy. Philosophical Magazine, 2008, 88, 2627-2642.	0.7	9
61	Temperature-Induced Increase of Spin Spiral Periods. Physical Review Letters, 2017, 119, 037202.	2.9	9
62	Stacking-Dependent Spin Interactions in Pd/Fe Bilayers on Re(0001). Physical Review Letters, 2020, 125, 227205.	2.9	9
63	Co double-layer nanostructures on Pt(111) studied by spin-polarized scanning tunnelling microscopy. Journal Physics D: Applied Physics, 2007, 40, 1306-1311.	1.3	7
64	Magnetic coupling of single Co adatoms to a Co underlayer through a Pd spacer of variable thickness. Physical Review B, 2012, 86, .	1.1	7
65	Tailoring noncollinear magnetism by misfit dislocation lines. Physical Review B, 2016, 94, .	1.1	7
66	Discovery and characterization of a new type of domain wall in a row-wise antiferromagnet. Nature Communications, 2021, 12, 3488.	5.8	7
67	Zero-field skyrmionic states and in-field edge-skyrmions induced by boundary tuning. Communications Physics, 2022, 5, .	2.0	7
68	Lattice-dependent anisotropy in the orientation of magnetic domain walls. Journal of Magnetism and Magnetic Materials, 2005, 290-291, 746-749.	1.0	4
69	Growth of Cr on Ir(111) studied by scanning tunneling microscopy. Surface Science, 2006, 600, 1034-1039.	0.8	4
70	Skyrmions: a twisted future. Physics World, 2017, 30, 25-28.	0.0	3
71	Pb-induced skyrmions in a double layer of Fe on Ir(111). Physical Review B, 2018, 98, .	1.1	3
72	Spin-spiral state of a Mn monolayer on W(110) studied by soft x-ray absorption spectroscopy at variable temperature. Physical Review B, 2021, 103, .	1.1	3

#	ARTICLE	IF	CITATIONS
73	Nanoscale skyrmions on a square atomic lattice. <i>Physical Review B</i> , 2022, 105, .	1.1	3
74	Tuning noncollinear magnetic states by hydrogenation. <i>Physical Review B</i> , 2019, 99, .	1.1	2
75	Magnetismus mit Dreh. Spinspiralen an Oberflächen. <i>Physik in Unserer Zeit</i> , 2008, 39, 93-97.	0.0	1
76	Gitter aus magnetischen Wirbeln. <i>Physik in Unserer Zeit</i> , 2012, 43, 6-7.	0.0	1
77	Magnetic domain walls in strain-patterned ultrathin films. <i>Physical Review B</i> , 2018, 98, .	1.1	1
78	Non-collinear Magnetism Studied with Spin-Polarized Scanning Tunneling Microscopy. <i>Nanoscience and Technology</i> , 2018, , 163-182.	1.5	0