

# Haifeng Du

## List of Publications by Year in descending order

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95  
papers

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citations

126907

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97  
docs citations

97  
times ranked

4109  
citing authors

#	ARTICLE	IF	CITATIONS
1	Experimental observation of chiral magnetic bobbars in B20-type FeGe. Nature Nanotechnology, 2018, 13, 451-455.	31.5	243
2	Edge-mediated skyrmion chain and its collective dynamics in a confined geometry. Nature Communications, 2015, 6, 8504.	12.8	199
3	Direct Imaging of a Zero-Field Target Skyrmion and Its Polarity Switch in a Chiral Magnetic Nanodisk. Physical Review Letters, 2017, 119, 197205.	7.8	156
4	Very large Dzyaloshinskii-Moriya interaction in two-dimensional Janus manganese dichalcogenides and its application to realize skyrmion states. Physical Review B, 2020, 101, .	3.2	156
5	Transport evidence for the three-dimensional Dirac semimetal phase in $ZrTe_5$ . Physical Review B, 2016, 93, .	3.2	144
6	Direct imaging of magnetic field-driven transitions of skyrmion cluster states in FeGe nanodisks. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 4918-4923.	7.1	125
7	High Spin Hall Conductivity in Large Area Type-II Dirac Semimetal PtTe <sub>2</sub> . Advanced Materials, 2020, 32, e2000513.	21.0	117
8	Extremely Large Magnetoresistance in a Topological Semimetal Candidate Pyrite $PtBi_2$ . Physical Review Letters, 2017, 118, 256601.	7.8	114
9	Magnetic skyrmion bundles and their current-driven dynamics. Nature Nanotechnology, 2021, 16, 1086-1091.	31.5	110
10	Control of morphology and formation of highly geometrically confined magnetic skyrmions. Nature Communications, 2017, 8, 15569.	12.8	103
11	Broken-Gap PtS <sub>2</sub> /WSe <sub>2</sub> van der Waals Heterojunction with Ultrahigh Reverse Rectification and Fast Photoresponse. ACS Nano, 2021, 15, 8328-8337.	14.6	102
12	Highly Stable Skyrmion State in Helimagnetic MnSi Nanowires. Nano Letters, 2014, 14, 2026-2032.	9.1	94
13	Interaction of Individual Skyrmions in a Nanostructured Cubic Chiral Magnet. Physical Review Letters, 2018, 120, 197203.	7.8	88
14	Thickness dependence of the charge-density-wave transition temperature in VSe <sub>2</sub> . Applied Physics Letters, 2014, 105, .	3.3	86
15	Electrical probing of field-driven cascading quantized transitions of skyrmion cluster states in MnSi nanowires. Nature Communications, 2015, 6, 7637.	12.8	83
16	A FinFET with one atomic layer channel. Nature Communications, 2020, 11, 1205.	12.8	83
17	Electric-field control of skyrmions in multiferroic heterostructure via magnetoelectric coupling. Nature Communications, 2021, 12, 322.	12.8	83
18	Dual evidence of surface Dirac states in thin cylindrical topological insulator Bi <sub>2</sub> Te <sub>3</sub> nanowires. Scientific Reports, 2013, 3, 1212.	3.3	75

#	ARTICLE	IF	CITATIONS
19	Critical behavior of the single-crystal helimagnet MnSi. Physical Review B, 2015, 91, .	3.2	63
20	Two-dimensional SnO/SnO <sub>2</sub> heterojunctions for electromagnetic wave absorption. Chemical Engineering Journal, 2021, 411, 128445.	12.7	62
21	Field-driven evolution of chiral spin textures in a thin helimagnet nanodisk. Physical Review B, 2013, 87, .	3.2	59
22	One-dimensional weak antilocalization in single-crystal Bi <sub>2</sub> Te <sub>3</sub> nanowires. Scientific Reports, 2013, 3, 1564.	3.3	58
23	Switching of a target skyrmion by a spin-polarized current. Physical Review B, 2015, 91, .	3.2	52
24	Tricritical point and phase diagram based on critical scaling in the monoaxial chiral helimagnet Cr <sub>1-x</sub> Mn <sub>x</sub> Mo <sub>3</sub> . Physical Review B, 2019, 100, .	3.2	52
25	Electrical manipulation of skyrmions in a chiral magnet. Nature Communications, 2022, 13, 1593.	12.8	51
26	Magnetic vortex with skyrmionic core in a thin nanodisk of chiral magnets. Europhysics Letters, 2013, 101, 37001.	2.0	49
27	Magnetic anisotropy and topological Hall effect in the trigonal chromium tellurides Cr <sub>2-x</sub> Te <sub>3</sub> . Physical Review B, 2019, 100, .	3.2	48
28	Superconductivity and Charge Density Wave in ZrTe <sub>3</sub> . Scientific Reports, 2016, 6, 26974.	3.3	47
29	Emergence of skyrmions from rich parent phases in the molybdenum nitrides. Physical Review B, 2016, 93, .	3.2	43
30	Critical phenomenon of the near room temperature skyrmion material FeGe. Scientific Reports, 2016, 6, 22397.	3.3	43
31	Enhanced Stability of the Magnetic Skyrmion Lattice Phase under a Tilted Magnetic Field in a Two-Dimensional Chiral Magnet. Nano Letters, 2017, 17, 2921-2927.	9.1	39
32	Anisotropy engineering of metal organic framework derivatives for effective electromagnetic wave absorption. Carbon, 2021, 181, 48-57.	10.3	37
33	Two-dimensional characterization of three-dimensional magnetic bubbles in Fe <sub>3</sub> Sn <sub>2</sub> nanostructures. National Science Review, 2021, 8, nwaa200.	9.5	35
34	Possible Topological Hall Effect above Room Temperature in Layered Cr <sub>1.2</sub> Te <sub>2</sub> Ferromagnet. Nano Letters, 2021, 21, 4280-4286.	9.1	35
35	Lorentz transmission electron microscopy for magnetic skyrmions imaging*. Chinese Physics B, 2019, 28, 087503.	1.4	34
36	Magnetic Skyrmion Formation at Lattice Defects and Grain Boundaries Studied by Quantitative Off-Axis Electron Holography. Nano Letters, 2017, 17, 1395-1401.	9.1	33

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37	Field-induced topological phase transition from a three-dimensional Weyl semimetal to a two-dimensional massive Dirac metal in $ZrTe_5$ . <i>Physical Review B</i> , 2017, 96, .		33
38	Quantification of Magnetic Surface and Edge States in an FeGe Nanostripe by Off-Axis Electron Holography. <i>Physical Review Letters</i> , 2018, 120, 167204.	7.8	33
39	N $\alpha$ -Type Elliptical Skyrmions in a Laterally Asymmetric Magnetic Multilayer. <i>Advanced Materials</i> , 2021, 33, e2006924.	21.0	32
40	Target Bubbles in $Fe_3Sn_2$ Nanodisks at Zero Magnetic Field. <i>ACS Nano</i> , 2020, 14, 10986-10992.	14.6	31
41	Evidence of Topological Two-Dimensional Metallic Surface States in Thin Bismuth Nanoribbons. <i>ACS Nano</i> , 2014, 8, 7506-7512.	14.6	30
42	Superconductor-Insulator Transition in Quasi-One-Dimensional Single-Crystal $Nb_2Pd_5$ Nanowires. <i>Nano Letters</i> , 2015, 15, 869-875.	9.1	29
43	Robust surface state transport in thin bismuth nanoribbons. <i>Scientific Reports</i> , 2014, 4, 7086.	3.3	27
44	Exchange bias and spin-orbit torque in the $Fe_3GeTe_2$ -based heterostructures prepared by vacuum exfoliation approach. <i>Applied Physics Letters</i> , 2021, 118, .	3.3	27
45	Recognition of Fermi-arc states through the magnetoresistance/quantum oscillations in Dirac semimetal $Cd_3As_2$ . <i>Physical Review B</i> , 2017, 95, .	3.2	26
46	Observation of Fermi-arc states through the magnetoresistance/quantum oscillations in Dirac semimetal $Cd_3As_2$ . <i>Physical Review B</i> , 2017, 95, .	3.2	25
47	Magnetic entropy change and accurate determination of Curie temperature in single-crystalline helimagnet $FeGe$ . <i>Europhysics Letters</i> , 2017, 117, 47004.	2.0	24
48	Preparation, optical and electrical properties of PTCDA nanostructures. <i>Nanoscale</i> , 2015, 7, 17116-17121.	5.6	23
49	Thickness-tuned transition of band topology in $ZrTe_5$ nanosheets. <i>Physical Review B</i> , 2017, 95, .	3.2	23
50	Electrical Detection of Magnetic Skyrmions. <i>Journal of Low Temperature Physics</i> , 2019, 197, 321-336.	1.4	22
51	Magnetic skyrmion braids. <i>Nature Communications</i> , 2021, 12, 5316.	12.8	22
52	Cooperative control of perpendicular magnetic anisotropy via crystal structure and orientation in freestanding $SrRuO_3$ membranes. <i>Npj Flexible Electronics</i> , 2022, 6, .	10.7	21
53	Creation of a Chiral Bobber Lattice in Helimagnet-Multilayer Heterostructures. <i>Physical Review Letters</i> , 2021, 126, 017204.	7.8	20
54	Current-Controlled Topological Magnetic Transformations in a Nanostructured Kagome Magnet. <i>Advanced Materials</i> , 2021, 33, e2101610.	21.0	20

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55	Weak localization effect in topological insulator micro flakes grown on insulating ferrimagnet BaFe <sub>2</sub> O <sub>19</sub> . Scientific Reports, 2016, 6, 21334.	3.3	19
56	Scaling of the magnetic entropy change in skyrmion material Fe <sub>0.5</sub> Co <sub>0.5</sub> Si. Materials Research Bulletin, 2017, 94, 500-505.	5.2	19
57	Current-driven transformations of a skyrmion tube and a bobber in stepped nanostructures of chiral magnets. Science China: Physics, Mechanics and Astronomy, 2021, 64, 1.	5.1	17
58	Field-driven oscillation and rotation of a multiskyrmion cluster in a nanodisk. Physical Review B, 2017, 95, .	3.2	16
59	Critical behavior of the magnetic Weyl semimetal PrAlGe. Physical Review B, 2021, 103, .	3.2	16
60	Field and temperature dependence of the skyrmion lattice phase in chiral magnet membranes. Physical Review B, 2020, 101, .	3.2	13
61	Effects of tilted magnetocrystalline anisotropy on magnetic domains in $\text{Fe}_{1-x}\text{Co}_x/\text{MnO}$ thin plates. Physical Review B, 2021, 103, .		
62	In-plane Magnetic Field-Driven Creation and Annihilation of Magnetic Skyrmion Strings in Nanostructures. Advanced Functional Materials, 2021, 31, 2008521.	14.9	13
63	Topological analysis of spin-torque driven magnetic skyrmion formation. Applied Physics Letters, 2016, 109, .	3.3	12
64	Evidence of in-plane ferromagnetic order probed by planar Hall effect in the geometry-confined ruthenate $\text{Sr}_{1-x}\text{Ru}_x\text{O}_3$ . Physical Review B, 2021, 103, .	3.2	12
65	Manipulating density of magnetic skyrmions via multilayer repetition and thermal annealing. Physical Review B, 2021, 104, .	3.2	12
66	Thermal conductivity of a single Bi <sub>0.5</sub> Sb <sub>1.5</sub> Te <sub>3</sub> single-crystalline nanowire. Nanotechnology, 2014, 25, 415704.	2.6	11
67	Magnetic reversal in Sr <sub>4</sub> Ru <sub>3</sub> O <sub>10</sub> nanosheets probed by anisotropic magnetoresistance. Physical Review B, 2018, 98, .	3.2	11
68	Large linear magnetoresistance in a bismuth nanoribbon. Applied Physics Letters, 2017, 110, .	3.3	10
69	Size effect on the magnetic phase in Sr <sub>4</sub> Ru <sub>3</sub> O <sub>10</sub> . New Journal of Physics, 2016, 18, 053019.	2.9	9
70	Spin-dimensionality change induced by Co-doping in the chiral magnet Fe <sub>1-x</sub> Co <sub>x</sub> Si. Europhysics Letters, 2016, 115, 67006.	2.0	8
71	Anisotropic magnetic coupling with a two-dimensional characteristic in noncentrosymmetric Cr <sub>11</sub> Ge <sub>19</sub> . Scientific Reports, 2016, 6, 39338.	3.3	8
72	Robust nature of the chiral spin helix in $\text{Cr}_6\text{Nb}_8$ nanostructures studied by off-axis electron holography. Physical Review B, 2020, 102, .	3.2	8

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73	Nonlinear transport in quasi-one-dimensional Nb <sub>2</sub> PdS <sub>5</sub> nanowires. Applied Physics Letters, 2014, 105, 172603.	3.3	7
74	In-plane magnetic anisotropy of the Sr <sub>4</sub> Ru <sub>3</sub> O <sub>10</sub> nanosheet probed by planar Hall effect. Applied Physics Letters, 2017, 111, .	3.3	7
75	Critical phenomenon in the itinerant ferromagnet Cr <sub>11</sub> Ge <sub>19</sub> studied by scaling of the magnetic entropy change. Journal of Alloys and Compounds, 2017, 693, 389-393.	5.5	7
76	Unidirectional current-driven toron motion in a cylindrical nanowire. Applied Physics Letters, 2021, 118, .	3.3	7
77	A strain-induced new phase diagram and unusually high Curie temperature in manganites. Journal of Materials Chemistry C, 2017, 5, 7813-7819.	5.5	6
78	Asymmetric interfaces and high-TC ferromagnetic phase in La <sub>0.67</sub> Ca <sub>0.33</sub> MnO <sub>3</sub> /SrRuO <sub>3</sub> superlattices. Nano Research, 2021, 14, 3621-3628.	10.4	6
79	Stabilization and topological transformation of magnetic bubbles in disks of a kagome magnet. Applied Physics Letters, 2021, 119, 012402.	3.3	6
80	Visualizing Emergent Magnetic Flux of Antiskyrmions in Mn <sub>1.4</sub> PtSn Magnet. Advanced Functional Materials, 2022, 32, .	14.9	5
81	CO-doping effects on the transport and magnetic properties of FeTe. Journal of Magnetism and Magnetic Materials, 2016, 397, 1-5.	2.3	4
82	Aspect ratio tuned red-shift of photoluminescence emission of PbSe nanorods investigated by electron holography. Journal of Colloid and Interface Science, 2017, 493, 385-392.	9.4	4
83	3D-Heisenberg magnetic coupling in the skyrmion system Fe <sub>1.5</sub> CoRh <sub>0.5</sub> Mo <sub>3</sub> N. Journal of Alloys and Compounds, 2018, 739, 85-91.	5.5	4
84	Magnetic Domain Structure in Ferromagnetic Kagome Metal DyMn <sub>6</sub> Sn <sub>6</sub> . Frontiers in Physics, 2021, 9, .	2.1	4
85	Dynamics of interstitial skyrmions in the presence of temperature gradients. Physical Review B, 2021, 104, .	3.2	4
86	Superconducting properties of molybdenum ruthenium alloy Mo <sub>0.63</sub> Ru <sub>0.37</sub> . European Physical Journal B, 2018, 91, 1.	1.5	3
87	Magnetostriction of helimagnets in the skyrmion crystal phase. New Journal of Physics, 2019, 21, 123052.	2.9	3
88	Field-induced tricritical behavior in the Néel-type skyrmion host GaV <sub>4</sub> S <sub>8</sub> . Physical Review B, 2020, 102, .	3.2	3
89	Structural, Magnetic, and Low-Temperature Electrical Transport Properties of YIG Thin Films with Heavily Reduced Oxygen Contents. ACS Applied Electronic Materials, 2021, 3, 3313-3320.	4.3	3
90	Current-induced dynamics and tunable spectra of a magnetic chiral bobber. Physical Review B, 2021, 104, .	3.2	3

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91	Light induced suppression of the second magnetic transition in $Sr_{1-x}Ca_xFe_2O_{7-y}$	3.2	2
92	Layer-by-layer epitaxial growth of monoclinic SrIrO <sub>3</sub> thin films on (111)-oriented SrTiO <sub>3</sub> through interface engineering. Thin Solid Films, 2020, 709, 138119.	1.8	2
93	Direct visualization of magnetic domain wall motion in Nd-Fe-B magnets by alternating magnetic force microscopy using Co-GdO superparamagnetic tip. Ultramicroscopy, 2020, 212, 112980.	1.9	2
94	Magnetic domains in a uniaxial magnet Dy <sub>3</sub> Al <sub>2</sub> . Applied Physics Letters, 2021, 119, 032404.	3.3	2
95	Current-controlled Topological Magnetic Transformations in a Nanostructured Kagome Magnet (Adv.) Tj ETQq1 1,0784314 rgBT /Ove 21.0 1	10.784314	1