hongxin Yang

List of Publications by Year
in descending order

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87	5,401	147726 31	82499 72
papers	citations	h-index	g-index

89	89	89	5110
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	NÃ©el-type antiferromagnetic skyrmionic crystals on two-dimensional square lattices investigated with optimized quantum Monte Carlo method. Physica E: Low-Dimensional Systems and Nanostructures, 2022, 135, 114978.	1.3	1
2	Exchange Coupling in Synthetic Anionâ€Engineered Chromia Heterostructures. Advanced Functional Materials, 2022, 32, 2109828.	7.8	3
3	Room-Temperature Ferromagnetism at an Oxide-Nitride Interface. Physical Review Letters, 2022, 128, 017202.	2.9	11
4	Controllable Generation of Antiferromagnetic Skyrmions in Synthetic Antiferromagnets with Thermal Effect. Advanced Functional Materials, 2022, 32, .	7.8	16
5	Non-equilibrium epitaxy of metastable polymorphs of ultrawide-bandgap gallium oxide. Applied Physics Letters, 2022, 120, .	1.5	8
6	Skyrmions-based logic gates in one single nanotrack completely reconstructed via chirality barrier. National Science Review, 2022, 9, .	4.6	18
7	Anisotropic Dzyaloshinskiiâ€“Moriya Interaction and Topological Magnetism in Two-Dimensional Magnets Protected by P4ì…m2 Crystal Symmetry. Nano Letters, 2022, 22, 2334-2341.	4.5	26
8	Anomalous valley Hall effect in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>A</mml:mi></mml:math>-type antiferromagnetic van der Waals heterostructures. Physical Review B, 2022, 105, .	1.1	11
9	Quantifying the Dzyaloshinskii-Moriya Interaction Induced by the Bulk Magnetic Asymmetry. Physical Review Letters, 2022, 128, 167202.	2.9	25
10	Effect of interlayer Dzyaloshinskii-Moriya interaction on spin structure in synthetic antiferromagnetic multilayers. Physical Review B, 2022, 105, .	1.1	9
11	Multiferroic materials based on transition-metal dichalcogenides: Potential platform for reversible control of Dzyaloshinskii-Moriya interaction and skyrmion via electric field. Physical Review B, 2022, 105, .	1.1	17
12	Anisotropic Dzyaloshinskii-Moriya interaction protected by D2d crystal symmetry in two-dimensional ternary compounds. Npj Computational Materials, 2022, 8, .	3.5	17
13	Precise Tuning of Skyrmion Density in a Controllable Manner by Ion Irradiation. ACS Applied Materials & Interfaces, 2022, 14, 34011-34019.	4.0	8
14	Rashbaâ€“Edelstein Effect in the hâ€BN Van Der Waals Interface for Magnetization Switching. Advanced Materials, 2022, 34, .	11.1	9
15	Strainâ€Mediated High Conductivity in Ultrathin Antiferromagnetic Metallic Nitrides. Advanced Materials, 2021, 33, 2005920.	11.1	25
16	Structural twinning-induced insulating phase in CrN (111) films. Physical Review Materials, 2021, 5, .	0.9	12
17	NÃ©elâ€Type Elliptical Skyrmions in a Laterally Asymmetric Magnetic Multilayer. Advanced Materials, 2021, 33, e2006924.	11.1	32
18	Magnetic Exchange Field Modulation of Quantum Hall Ferromagnetism in 2D van der Waals CrCl₃/Graphene Heterostructures. ACS Applied Materials & Interfaces, 2021, 13, 10656-10663.	4.0	17

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19	Spin-valley coupling in a two-dimensional <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi mathvariant="normal">V</mml:mi><mml:msub><mml:mi>Si</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:msub><mml:mi mathvariant="normal">N</mml:mi><mml:mn>4</mml:mn></mml:msub></mml:mrow></mml:math> monolayer. Physical Review B, 2021, 103, .	1.1	114
20	NÃ©el-type skyrmions and their current-induced motion in van der Waals ferromagnet-based heterostructures. Physical Review B, 2021, 103, .	1.1	110
21	Reducing Dzyaloshinskii-Moriya interaction and field-free spin-orbit torque switching in synthetic antiferromagnets. Nature Communications, 2021, 12, 3113.	5.8	47
22	Interfacial Dzyaloshinskii-Moriya interaction and perpendicular magnetic anisotropy at cobalt/diamond interfaces. Journal of Magnetism and Magnetic Materials, 2021, 529, 167852.	1.0	4
23	Electrically Controllable Van Der Waals Antiferromagnetic Spin Valve. Physical Review Applied, 2021, 16, .	1.5	9
24	Robust and High Photoluminescence in WS₂ Monolayer through In Situ Defect Engineering. Advanced Functional Materials, 2021, 31, 2105339.	7.8	47
25	Rashba-Type Dzyaloshinskiiâ€“Moriya Interaction, Perpendicular Magnetic Anisotropy, and Skyrmion States at 2D Materials/Co Interfaces. Nano Letters, 2021, 21, 7138-7144.	4.5	22
26	Near-room temperature ferromagnetic behavior of single-atom-thick 2D iron in nanolaminated ternary MAX phases. Applied Physics Reviews, 2021, 8, .	5.5	14
27	Large magnetic anisotropy in Tetraoxa[8]circulene-based organometallic nanosheet. Journal of Magnetism and Magnetic Materials, 2021, 535, 168068.	1.0	1
28	Ferroelectrically controlled topological magnetic phase in a Janus-magnet-based multiferroic heterostructure. Physical Review Research, 2021, 3, .	1.3	30
29	Large Dzyaloshinskii-Moriya interaction and room-temperature nanoscale skyrmions in CoFeB/MgO heterostructures. Cell Reports Physical Science, 2021, 2, 100618.	2.8	14
30	Linear-superelastic Ti-Nb nanocomposite alloys with ultralow modulus via high-throughput phase-field design and machine learning. Npj Computational Materials, 2021, 7, .	3.5	13
31	Current-induced out-of-plane effective magnetic field in antiferromagnet/heavy metal/ferromagnet/heavy metal multilayer. Applied Physics Letters, 2020, 117, 092404.	1.5	9
32	Voltage Control of Skyrmion Bubbles for Topological Flexible Spintronic Devices. Advanced Electronic Materials, 2020, 6, 2000246.	2.6	12
33	MnPS3 spin-flop transition-induced anomalous Hall effect in graphite flake via van der Waals proximity coupling. Nanoscale, 2020, 12, 23266-23273.	2.8	10
34	Synthesis and Properties of Monolayer Graphene (MLG)-Covered Fe(111). Chemistry of Materials, 2020, 32, 10463-10468.	3.2	1
35	Strain-tunable ferromagnetism and chiral spin textures in two-dimensional Janus chromium dichalcogenides. Physical Review B, 2020, 102, .	1.1	86
36	Role of Interfacial Orbital Hybridization in Spin-Orbit-Torque Generation in Pt -Based Heterostructures. Physical Review Applied, 2020, 14, .	1.5	8

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37	Enhancement of ferroelectric performance in PVDF:Fe3O4 nanocomposite based organic multiferroic tunnel junctions. Applied Physics Letters, 2020, 116, .	1.5	19
38	Perpendicular Magnetic Anisotropy and Dzyaloshinskii-Moriya Interaction at an Oxide/Ferromagnetic Metal Interface. Physical Review Letters, 2020, 124, 217202.	2.9	27
39	Direct Evidence of Spin Transfer Torque on Two-Dimensional Cobalt-Doped MoS₂ Ferromagnetic Material. ACS Applied Electronic Materials, 2020, 2, 1497-1504.	2.0	7
40	Giant enhancement of perpendicular magnetic anisotropy and induced quantum anomalous Hall effect in graphene/ <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>NiI</mml:mi><mml:mn>2</mml:mn></mml:msub></mml: heterostructures via tuning the van der Waals interlayer distance. Physical Review B, 2020, 101, .	1.1	37
41	Reversible control of Dzyaloshinskii-Moriya interaction at the graphene/Co interface via hydrogen absorption. Physical Review B, 2020, 101, .	1.1	19
42	Very large Dzyaloshinskii-Moriya interaction in two-dimensional Janus manganese dichalcogenides and its application to realize skyrmion states. Physical Review B, 2020, 101, .	1.1	156
43	Large anomalous Hall effect in a hexagonal ferromagnetic <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi mathvariant="normal">F</mml:mi><mml:msub><mml:mi mathvariant="normal">e</mml:mi><mml:mn>5</mml:mn></mml:msub><mml:mi mathvariant="normal">S</mml:mi><mml:msub><mml:mi mathvariant="normal">n</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:mrow></mml:math> single	1.1	18
44	Interfacial Dzyaloshinskii-Moriya interaction between ferromagnetic insulator and heavy metal. Applied Physics Letters, 2020, 116, .	1.5	26
45	Electrically switchable Rashba-type Dzyaloshinskii-Moriya interaction and skyrmion in two-dimensional magnetoelectric multiferroics. Physical Review B, 2020, 102, .	1.1	52
46	Precisely Tuning the Contrast Properties of Zn_xFe_{3â€“x}O₄ Nanoparticles in Magnetic Resonance Imaging by Controlling Their Doping Content and Size. Chemistry of Materials, 2019, 31, 7255-7264.	3.2	25
47	Intrinsic Controllable Magnetism of Graphene Grown on Fe. Journal of Physical Chemistry C, 2019, 123, 26870-26876.	1.5	10
48	Strain controlling transport properties of heterostructure composed of monolayer CrI3. Applied Physics Letters, 2019, 114, .	1.5	31
49	Giant Enhancements of Perpendicular Magnetic Anisotropy and Spinâ€Orbit Torque by a MoS₂ Layer. Advanced Materials, 2019, 31, e1900776.	11.1	65
50	Broken cubic symmetry driven co-emergence of type-I and type-II Dirac points in topological crystalline insulator ThTaN₃. Journal of Physics Condensed Matter, 2019, 31, 295501.	0.7	3
51	Coherent Resonant Tunneling through Double Metallic Quantum Well States. Nano Letters, 2019, 19, 3019-3026.	4.5	22
52	Evidence of a strong perpendicular magnetic anisotropy in Au/Co/MgO/GaN heterostructures. Nanoscale Advances, 2019, 1, 4466-4475.	2.2	5
53	Andreev reflection in a patterned graphene nanoribbon superconducting heterojunction. Physics Letters, Section A: General, Atomic and Solid State Physics, 2019, 383, 1174-1181.	0.9	1
54	Nonmetallic Atoms Induced Magnetic Anisotropy in Monolayer Chromium Trihalides. Journal of Physical Chemistry C, 2019, 123, 691-697.	1.5	33

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55	First-principles investigation of magnetocrystalline anisotropy oscillations in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>Co</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:mrow></mml:math> heterostructures. Physical Review B, 2018, 97, .	1.1	10
56	Counterpropagating topological interface states in graphene patchwork structures with regular arrays of nanoholes. Physical Review B, 2018, 98, .	1.1	11
57	Significant Dzyaloshinskiiâ€“Moriya interaction at grapheneâ€“ferromagnet interfaces due to the Rashba effect. Nature Materials, 2018, 17, 605-609.	13.3	188
58	Tuning the Dzyaloshinskiiâ€“Moriya interaction in Pt/Co/MgO heterostructures through the MgO thickness. Nanoscale, 2018, 10, 12062-12067.	2.8	66
59	Controlling Dzyaloshinskii-Moriya Interaction via Chirality Dependent Atomic-Layer Stacking, Insulator Capping and Electric Field. Scientific Reports, 2018, 8, 12356.	1.6	153
60	Quenching of Spin Polarization Switching in Organic Multiferroic Tunnel Junctions by Ferroelectric â€œAiling-Channelâ€•in Organic Barrier. ACS Applied Materials & Interfaces, 2018, 10, 30614-30622.	4.0	14
61	Spontaneous formation of graphene on diamond (111) driven by B-doping induced surface reconstruction. Carbon, 2017, 115, 388-393.	5.4	18
62	Giant interfacial perpendicular magnetic anisotropy in MgO/CoFe/capping layer structures. Applied Physics Letters, 2017, 110, .	1.5	73
63	Tailoring magnetic insulator proximity effects in graphene: first-principles calculations. 2D Materials, 2017, 4, 025074.	2.0	121
64	Large voltage-controlled magnetic anisotropy in the SrTiO3/Fe/Cu structure. Applied Physics Letters, 2017, 111, 152403.	1.5	16
65	Ferroelectric Control of Organic/Ferromagnetic Spinterface. Advanced Materials, 2016, 28, 10204-10210.	11.1	55
66	First-principles investigation of magnetocrystalline anisotropy at theL21fullHeusler|MgOinterfaces and tunnel junctions. Physical Review B, 2016, 94, .	1.1	29
67	Anatomy of electric field control of perpendicular magnetic anisotropy at Fe/MgO interfaces. Physical Review B, 2016, 93, .	1.1	59
68	Room-temperature chiral magnetic skyrmions in ultrathin magnetic nanostructures. Nature Nanotechnology, 2016, 11, 449-454.	15.6	829
69	Anatomy and Giant Enhancement of the Perpendicular Magnetic Anisotropy of Cobaltâ€“Graphene Heterostructures. Nano Letters, 2016, 16, 145-151.	4.5	120
70	Anatomy of Dzyaloshinskii-Moriya Interaction at<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>Co</mml:mi><mml:mo>/</mml:mo><mml:mi>Pt</mml:mi></mml:mrow></mml:math>Interface Physical Review Letters, 2015, 115, 267210.	2.9	507
71	Long-Range Phase Coherence in Double-Barrier Magnetic Tunnel Junctions with a Large Thick Metallic Quantum Well. Physical Review Letters, 2015, 115, 157204.	2.9	37
72	Origin of interfacial perpendicular magnetic anisotropy in MgO/CoFe/metallic capping layer structures. Scientific Reports, 2015, 5, 18173.	1.6	120

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73	Large and robust electrical spin injection into GaAs at zero magnetic field using an ultrathin CoFeB/MgO injector. Physical Review B, 2014, 90, .	1.1	56
74	Anatomy of perpendicular magnetic anisotropy in Fe/MgO magnetic tunnel junctions: First-principles insight. Physical Review B, 2013, 88, .	1.1	117
75	Proximity Effects Induced in Graphene by Magnetic Insulators: First-Principles Calculations on Spin Filtering and Exchange-Splitting Gaps. Physical Review Letters, 2013, 110, 046603.	2.9	287
76	Spin Hall effect induced by Bi impurities in Cu: Skew scattering and side-jump. Physical Review B, 2013, 88, .	1.1	17
77	Room temperature magnetoresistance in CoFeB/SrTiO3/CoFeB magnetic tunnel junctions deposited by ion beam sputtering. Journal of Applied Physics, 2012, 111, .	1.1	3
78	Giant Spin Hall Effect Induced by Skew Scattering from Bismuth Impurities inside Thin Film CuBi Alloys. Physical Review Letters, 2012, 109, 156602.	2.9	278
79	Spin-orbit coupling effect by minority interface resonance states in single-crystal magnetic tunnel junctions. Physical Review B, 2012, 86, .	1.1	20
80	Air-Protected Epitaxial Graphene/Ferromagnet Hybrids Prepared by Chemical Vapor Deposition and Intercalation. Journal of Physical Chemistry Letters, 2012, 3, 2059-2063.	2.1	54
81	Inducing and optimizing magnetism in graphene nanomeshes. Physical Review B, 2011, 84, .	1.1	69
82	First-principles investigation of the very large perpendicular magnetic anisotropy at Fe<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mo>|</mml:mo></mml:mrow></mml:math>MgO and Co<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mo>|</mml:mo></mml:mrow></mml:math>MgO interfaces. Physical Review B, 2011, 84, .	1.1	545
83	Effect of structural relaxation and oxidation conditions on interlayer exchange coupling in Fe|MgO|Fe tunnel junctions. Applied Physics Letters, 2010, 96, .	1.5	47
84	Ultrathin epitaxial cobalt films on graphene for spintronic investigations and applications. New Journal of Physics, 2010, 12, 103040.	1.2	74
85	Stable hydroxyl network on diamond (001) via first-principles and MD investigation. Surface Science, 2009, 603, 3035-3040.	0.8	1
86	First-principles study of oxygenated diamond (001) surfaces with and without hydrogen. Applied Surface Science, 2007, 253, 4260-4266.	3.1	11
87	Giant Dzyaloshinskii-Moriya Interaction and Room-Temperature Nanoscale Skyrmions in CoFeB/MgO Heterostructures. SSRN Electronic Journal, 0, , .	0.4	0