

Yongbing Xu

List of Publications by Year in descending order

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125
papers

2,835
citations

185998

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125
all docs

125
docs citations

125
times ranked

4274
citing authors

#	ARTICLE	IF	CITATIONS
1	Planar carbon nanotube-graphene hybrid films for high-performance broadband photodetectors. Nature Communications, 2015, 6, 8589.	5.8	258
2	Room-temperature intrinsic ferromagnetism in epitaxial CrTe ₂ ultrathin films. Nature Communications, 2021, 12, 2492.	5.8	179
3	A robust and tuneable mid-infrared optical switch enabled by bulk Dirac fermions. Nature Communications, 2017, 8, 14111.	5.8	174
4	Evidence of Both Surface and Bulk Dirac Bands and Anisotropic Nonsaturating Magnetoresistance in ZrSiS. Advanced Electronic Materials, 2016, 2, 1600228.	2.6	115
5	Sensitive and Ultrabroadband Phototransistor Based on Two-Dimensional Bi ₂ O ₂ Se Nanosheets. Advanced Functional Materials, 2019, 29, 1905806.	7.8	106
6	Carbon Nanotube Mode-Locked Thulium Fiber Laser With 200 nm Tuning Range. Scientific Reports, 2017, 7, 45109.	1.6	83
7	Enhancing Magnetic Ordering in Cr-Doped Bi ₂ Se ₃ Using High-T _C Ferrimagnetic Insulator. Nano Letters, 2015, 15, 764-769.	4.5	80
8	Broadband Bi ₂ O ₂ Se Photodetectors from Infrared to Terahertz. Advanced Functional Materials, 2021, 31, 2009554.	7.8	65
9	Graphene-carbon nanotube hybrid films for high-performance flexible photodetectors. Nano Research, 2017, 10, 1880-1887.	5.8	64
10	Evidence of weak localization in quantum interference effects observed in epitaxial La _{0.7} Sr _{0.3} MnO ₃ ultrathin films. Scientific Reports, 2016, 6, 26081.	1.6	61
11	Light-Tunable Ferromagnetism in Atomically Thin FeMn_3 Driven by Femtosecond Laser Pulse. Physical Review Letters, 2020, 125, 267205.	2.9	57
12	Atomic-Scale Magnetism of Cr-Doped Bi ₂ Se ₃ Thin Film Topological Insulators. ACS Nano, 2015, 9, 10237-10243.	7.3	54
13	Effect of oxygen deficiency on room temperature ferromagnetism in Co doped ZnO. Applied Physics Letters, 2012, 100, 202401.	1.5	53
14	Origin of room temperature ferromagnetism in MgO films. Applied Physics Letters, 2013, 102, .	1.5	53
15	Three-dimensional Dirac semimetal thin-film absorber for broadband pulse generation in the near-infrared. Optics Letters, 2018, 43, 1503.	1.7	52
16	Giant Tunability of the Two-Dimensional Electron Gas at the Interface of $\text{Al}_2\text{O}_3/\text{SrTiO}_3$. Nano Letters, 2017, 17, 6878-6885.	4.5	44
17	Evidence of the defect-induced ferromagnetism in Na and Co codoped ZnO. Applied Physics Letters, 2011, 98, 012502.	1.5	43
18	Broadband hot-carrier dynamics in three-dimensional Dirac semimetal Cd ₃ As ₂ . Applied Physics Letters, 2017, 111, 091101.	1.5	42

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19	Ultrafast nonlinear photoresponse of single-wall carbon nanotubes: a broadband degenerate investigation. <i>Nanoscale</i> , 2016, 8, 9304-9309.	2.8	39
20	Two-dimensional ferromagnetic superlattices. <i>National Science Review</i> , 2020, 7, 745-754.	4.6	39
21	Ultrafast free carrier dynamics in black phosphorus/molybdenum disulfide (BP/MoS ₂) heterostructures. <i>Nanoscale Horizons</i> , 2019, 4, 1099-1105.	4.1	36
22	Electronic and magnetic structure of C60/Fe3O4(001): a hybrid interface for organic spintronics. <i>Journal of Materials Chemistry C</i> , 2013, 1, 1197-1202.	2.7	34
23	Tuning the transport behavior of centimeter-scale WTe ₂ ultrathin films fabricated by pulsed laser deposition. <i>Applied Physics Letters</i> , 2017, 111, .	1.5	34
24	Giant Topological Hall Effect in van der Waals Heterostructures of CrTe ₂ /Bi ₂ Te ₃ . <i>ACS Nano</i> , 2021, 15, 15710-15719.	7.3	34
25	Robust Interfacial Exchange Bias and Metal-Insulator Transition Influenced by the LaNiO ₃ Layer Thickness in La _{0.7} Sr _{0.3} MnO ₃ /LaNiO ₃ Superlattices. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 3156-3160.	4.0	31
26	Broadband photocarrier dynamics and nonlinear absorption of PLD-grown WTe ₂ semimetal films. <i>Applied Physics Letters</i> , 2018, 112, .	1.5	31
27	Transport evidence of 3D topological nodal-line semimetal phase in ZrSiS. <i>Frontiers of Physics</i> , 2018, 13, 1.	2.4	30
28	Magnetic skyrmionium diode with a magnetic anisotropy voltage gating. <i>Applied Physics Letters</i> , 2020, 117, .	1.5	30
29	Enhanced Photocatalytic Activity of 2H-MoSe ₂ by 3d Transition-Metal Doping. <i>Journal of Physical Chemistry C</i> , 2018, 122, 26570-26575.	1.5	28
30	Selective and efficient sequestration of phosphate from waters using reusable nano-Zr(IV) oxide impregnated agricultural residue anion exchanger. <i>Science of the Total Environment</i> , 2020, 700, 134999.	3.9	28
31	Direct Demonstration of the Emergent Magnetism Resulting from the Multivalence Mn in a LaMnO ₃ Epitaxial Thin Film System. <i>Advanced Electronic Materials</i> , 2018, 4, 1800055.	2.6	27
32	Ultrahigh Hall mobility and suppressed backward scattering in layered semiconductor Bi ₂ O ₂ Se. <i>Applied Physics Letters</i> , 2018, 113, .	1.5	27
33	Tailoring exciton dynamics of monolayer transition metal dichalcogenides by interfacial electron-phonon coupling. <i>Communications Physics</i> , 2019, 2, .	2.0	27
34	Transient enhancement of magnetization damping in CoFeB film via pulsed laser excitation. <i>Applied Physics Letters</i> , 2016, 109, .	1.5	26
35	Broadband nonlinear optical response of monolayer MoSe ₂ under ultrafast excitation. <i>Applied Physics Letters</i> , 2018, 112, .	1.5	25
36	Roles of heating and helicity in ultrafast all-optical magnetization switching in TbFeCo. <i>Applied Physics Letters</i> , 2018, 113, .	1.5	24

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37	Epitaxial Growth and Magnetic Properties of Half-Metallic Fe ₃ O ₄ on Si(100) Using MgO Buffer Layer. IEEE Transactions on Magnetics, 2009, 45, 4357-4359.	1.2	21
38	Enhancing the Spin-Orbit Coupling in Fe ₃ O ₄ Epitaxial Thin Films by Interface Engineering. ACS Applied Materials & Interfaces, 2016, 8, 27353-27359.	4.0	20
39	Direct observation of high spin polarization in Co ₂ FeAl thin films. Scientific Reports, 2018, 8, 8074.	1.6	20
40	High-resolution patterning of solution-processable materials via externally engineered pinning of capillary bridges. Nature Communications, 2018, 9, 393.	5.8	19
41	Depinning of vortex domain walls from an asymmetric notch in a permalloy nanowire. Applied Physics Letters, 2012, 101, 082402.	1.5	18
42	Suppressed carrier density for the patterned high mobility two-dimensional electron gas at β -Al ₂ O ₃ /SrTiO ₃ heterointerfaces. Applied Physics Letters, 2017, 111, 021602.	1.5	18
43	Experimental observation of dual magnetic states in topological insulators. Science Advances, 2019, 5, eaav2088.	4.7	18
44	Stable Gain-Switched Thulium Fiber Laser With 140-nm Tuning Range. IEEE Photonics Technology Letters, 2016, 28, 1340-1343.	1.3	17
45	Enhancement of intrinsic magnetic damping in defect-free epitaxial Fe ₃ O ₄ thin films. Applied Physics Letters, 2019, 114, .	1.5	17
46	Controlled skyrmion nucleation in extended magnetic layers using a nanocontact geometry. Physical Review B, 2017, 96, .	1.1	16
47	Magnetic domain wall engineering in a nanoscale permalloy junction. Applied Physics Letters, 2017, 111, .	1.5	16
48	Antisymmetric magnetoresistance in $\text{Fe}_{3-x}\text{GeTe}_2$ nanodevices of inhomogeneous thickness. Physical Review B, 2021, 104, .	1.1	16
49	Evidence for Layered Quantized Transport in Dirac Semimetal ZrTe ₅ . Scientific Reports, 2018, 8, 5125.	1.6	15
50	Paradigm of Magnetic Domain Wall-Based In-Memory Computing. ACS Applied Electronic Materials, 2020, 2, 2375-2382.	2.0	15
51	XPS and XMCD study of Fe ₃ O ₄ /GaAs interface. IEEE Transactions on Magnetics, 2005, 41, 2808-2810.	1.2	14
52	Influence of Rare Earth Ho ³⁺ Doping on Structural, Microstructure and Magnetic Properties of ZnO Bulk and Thin Film Systems. Chinese Journal of Chemical Physics, 2011, 24, 353-357.	0.6	14
53	Photoresponsivity of an all-semimetal heterostructure based on graphene and WTe ₂ . Scientific Reports, 2018, 8, 12840.	1.6	14
54	Electrolyte gate controlled metal-insulator transitions of the CaZrO ₃ /SrTiO ₃ heterointerface. Applied Physics Letters, 2019, 115, 061601.	1.5	14

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55	Topological Phase Transition-Induced Triaxial Vector Magnetoresistance in $(\text{Bi}_{1-x}\text{In}_x)_2\text{Se}_3$ Nanodevices. ACS Nano, 2018, 12, 1537-1543.	7.3	13
56	Ultrafast Orbital-Oriented Control of Magnetization in Half-Metallic $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3$ Films. Advanced Materials, 2019, 31, e1806443.	11.1	13
57	Magnetic and Structural Properties of Fully Epitaxial $\text{Fe}_3\text{O}_4/\text{MgO}/\text{GaAs}(100)$ for Spin Injection. IEEE Transactions on Magnetics, 2008, 44, 2640-2642.	1.2	12
58	Spin-Dependent Transport in $\text{Fe}/\text{GaAs}(100)/\text{Fe}$ Vertical Spin-Valves. Scientific Reports, 2016, 6, 29845.	1.6	12
59	Dual-pump manipulation of ultrafast demagnetization in TbFeCo . Physical Review B, 2016, 93, .	1.1	12
60	Observation of Quantum Hall effect in an ultra-thin $(\text{Bi}_{0.53}\text{Sb}_{0.47})_2\text{Te}_3$ film. Applied Physics Letters, 2017, 110, .	1.5	12
61	Spin-ARPES EUV Beamline for Ultrafast Materials Research and Development. Applied Sciences (Switzerland), 2019, 9, 370.	1.3	12
62	Strong interface-induced spin-charge conversion in YIG/Cr heterostructures. Applied Physics Letters, 2020, 117, .	1.5	12
63	Probing the atomic-scale ferromagnetism in van der Waals magnet CrSiTe_3 . Applied Physics Letters, 2021, 119, .	1.5	12
64	Large Linear Magnetoresistance of High-Mobility 2D Electron System at Nonisostructural $\text{Al}_2\text{O}_3/\text{SrTiO}_3$ Heterointerfaces. Advanced Materials Interfaces, 2021, 8, 2101235.	1.9	12
65	Interfacial structure and magnetic properties of $\text{Co}_2\text{FeAl}_{0.5}\text{Si}_{0.5}/\text{MgO}$ heterostructures. Journal of Applied Physics, 2010, 107, 103919.	1.1	11
66	Effect of defects on room-temperature ferromagnetism in Co and Na co-doped ZnO. Applied Physics A: Materials Science and Processing, 2012, 107, 919-923.	1.1	11
67	Recent Advances on Spin-Polarized Two-Dimensional Electron Gases at Oxide Interfaces. ACS Applied Electronic Materials, 2021, 3, 128-144.	2.0	11
68	Bandgap renormalization in single-wall carbon nanotubes. Scientific Reports, 2017, 7, 11221.	1.6	10
69	The effect of growth sequence on magnetization damping in $\text{Ta}/\text{CoFeB}/\text{MgO}$ structures. Journal of Magnetism and Magnetic Materials, 2018, 450, 65-69.	1.0	10
70	Observation of bimolecular recombination in high mobility semiconductor $\text{Bi}_2\text{O}_2\text{Se}$ using ultrafast spectroscopy. Applied Physics Letters, 2018, 113, 061104.	1.5	10
71	Strain-Controlled Spin Wave Excitation and Gilbert Damping in Flexible Co_2FeSi Films Activated by Femtosecond Laser Pulse. Advanced Functional Materials, 2021, 31, 2007211.	7.8	10
72	Self-Intercalation Tunable Interlayer Exchange Coupling in a Synthetic van der Waals Antiferromagnet. Advanced Functional Materials, 2022, 32, .	7.8	10

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73	Quantum Oscillations from Nontrivial States in Quasi-Two-Dimensional Dirac Semimetal ZrTe5 Nanowires. <i>Scientific Reports</i> , 2019, 9, 3558.	1.6	9
74	Fully Optical Modulation of the Two-Dimensional Electron Gas at the $\text{In}_2\text{O}_3/\text{SrTiO}_3$ Interface. <i>Journal of Physical Chemistry Letters</i> , 2022, 13, 2976-2985.	2.1	9
75	Evidence for ferromagnetic coupling at the doped topological insulator/ferrimagnetic insulator interface. <i>AIP Advances</i> , 2016, 6, 055813.	0.6	8
76	Probing the Buried Magnetic Interfaces. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 5752-5757.	4.0	8
77	Spontaneous creation and annihilation dynamics of magnetic skyrmions at elevated temperature. <i>Physical Review B</i> , 2021, 104, .	1.1	8
78	Growth and magnetic properties of ultrathin single crystal Fe_3O_4 film on $\text{InAs}(100)$. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2011, 208, 2377-2379.	0.8	7
79	The Unique Current-Direction Dependent On-Off Switching in BiSbTeSe_2 Topological Insulator Based Spin Valve Transistors. <i>IEEE Electron Device Letters</i> , 2016, , 1-1.	2.2	7
80	Unsaturated magnetoconductance of epitaxial $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3$ thin films in pulsed magnetic fields up to 60 T. <i>AIP Advances</i> , 2017, 7, 056404.	0.6	7
81	The atomic-scale magnetism of Co_2FeAl Heusler alloy epitaxial thin films. <i>Applied Physics Letters</i> , 2018, 113, .	1.5	7
82	Manipulation of Gilbert damping in ultrathin half-metallic $\text{Co}_2\text{FeAl}_{1+x}$ by composition-deficiency-compensation. <i>Applied Physics Letters</i> , 2020, 116, .	1.5	7
83	Tuning 2D magnetism in $\text{Fe}_{3+x}\text{GeTe}_2$ films by element doping. <i>National Science Review</i> , 2022, 9, .	4.6	7
84	All-carbon hybrids for high-performance electronics, optoelectronics and energy storage. <i>Science China Information Sciences</i> , 2019, 62, 1.	2.7	6
85	Enhancement of the spin-orbit torque efficiency in $\text{W}/\text{Cu}/\text{CoFeB}$ heterostructures via interface engineering. <i>Applied Physics Letters</i> , 2020, 117, 082409.	1.5	6
86	Sub-100 femtosecond time scale spin dynamics in epitaxial Fe_3O_4 thin film. <i>Applied Surface Science</i> , 2022, 572, 151456.	3.1	6
87	Growth evolution and superparamagnetism of ultrathin Fe films grown on $\text{GaN}(0001)$ surfaces. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2011, 208, 2348-2351.	0.8	5
88	Local magnetic switching in patterned permalloy elements by focussed-MOKE measurements. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2012, 9, 66-69.	0.8	5
89	Element specific spin and orbital moments of nanoscale CoFeB amorphous thin films on $\text{GaAs}(100)$. <i>AIP Advances</i> , 2016, 6, 095011.	0.6	5
90	Temperature-induced band shift in bulk In_2Se_3 by angle-resolved photoemission spectroscopy. <i>AIP Advances</i> , 2018, 8, 055123.	0.6	5

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91	Direct observation of ferrimagnetic ordering in inverse Heusler alloy Mn ₂ CoAl. Applied Physics Letters, 2020, 117, .	1.5	5
92	Bi ₂ O ₂ Se/Au-Based Schottky Phototransistor With Fast Response and Ultrahigh Responsivity. IEEE Electron Device Letters, 2020, 41, 1464-1467.	2.2	5
93	Interface electrical properties of Fe ₃ O ₄ /MgO/GaAs(100) epitaxial spin contacts. Physica Status Solidi (A) Applications and Materials Science, 2011, 208, 2344-2347.	0.8	4
94	The metal-insulator transition in ZrTe ₅ induced by temperature. AIP Advances, 2018, 8, .	0.6	4
95	Strain-driven lattice distortion and the resultant magnetic properties of La _{0.7} Sr _{0.3} MnO ₃ /BaTiO ₃ superlattices. Applied Physics Letters, 2019, 115, 201604.	1.5	4
96	Femtosecond laser-heating effect on the magnetization dynamics in perpendicularly magnetized Ta/CoFeB/MgO film. New Journal of Physics, 2019, 21, 053032.	1.2	4
97	Interlayer transmission of magnons in dynamic spin valve structures. Applied Physics Letters, 2020, 116, .	1.5	4
98	Time-Response-Histogram-Based Feature of Magnetic Barkhausen Noise for Material Characterization Considering Influences of Grain and Grain Boundary under In Situ Tensile Test. Sensors, 2021, 21, 2350.	2.1	4
99	Isotropic spin polarization in Heusler Co ₂ FeAl thin films. AIP Advances, 2022, 12, 025005.	0.6	4
100	Annealing-induced Fe oxide nanostructures on GaAs. IEEE Transactions on Magnetics, 2005, 41, 3328-3330.	1.2	3
101	The Properties and Structure Relationship of Half Metallic Magnetic Materials on GaAs. IEEE Transactions on Magnetics, 2009, 45, 4360-4363.	1.2	3
102	The effect of interelement dipole coupling in patterned ultrathin single crystal Fe square arrays. Journal of Applied Physics, 2011, 109, 033913.	1.1	3
103	Quantum Electronics: Evidence of Both Surface and Bulk Dirac Bands and Anisotropic Nonsaturating Magnetoresistance in ZrSiS (Adv. Electron. Mater. 10/2016). Advanced Electronic Materials, 2016, 2, .	2.6	3
104	Impurity band assisted carrier relaxation in Cr doped topological insulator Bi ₂ Se ₃ . Applied Physics Letters, 2021, 118, .	1.5	3
105	Broadband Photodetectors: Broadband Bi ₂ O ₂ Se Photodetectors from Infrared to Terahertz (Adv. Funct. Mater. 14/2021). Advanced Functional Materials, 2021, 31, 2170093.	7.8	3
106	Element-specific spin and orbital moments and perpendicular magnetic anisotropy in Ta/CoFeB/MgO structures. Journal of Applied Physics, 2020, 127, .	1.1	3
107	Magnetic anisotropy of half-metallic Co ₂ FeAl ultra-thin films epitaxially grown on GaAs(001). AIP Advances, 2019, 9, 065002.	0.6	2
108	Observation of Small Polaron and Acoustic Phonon Coupling in Ultrathin La _{0.7} Sr _{0.3} MnO ₃ /SrTiO ₃ Structures. Physica Status Solidi - Rapid Research Letters, 2019, 13, 1800657.	1.2	2

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109	Thermal induced spin-polarized current protected by spin-momentum locking in ZrTe_5 nanowires. <i>Physical Review B</i> , 2021, 104, .		
110	Sub-Femtosecond Timing Jitter From a SESAM Mode-Locked Yb-Fiber Laser. <i>IEEE Photonics Technology Letters</i> , 2021, 33, 1309-1312.	1.3	2
111	MFM Observation of Twin Pinning Sites on NiFe Nanowires. <i>IEEE Transactions on Magnetics</i> , 2013, 49, 1334-1336.	1.2	1
112	Ultrafast nonlinear absorption in SWNTs: An ultra-broadband investigation. , 2015, , .		1
113	Emergent Ferromagnetism: Direct Demonstration of the Emergent Magnetism Resulting from the Multivalence Mn in a LaMnO_3 Epitaxial Thin Film System (<i>Adv. Electron. Mater.</i> 6/2018). <i>Advanced Electronic Materials</i> , 2018, 4, 1870030.	2.6	1
114	Enhanced magnetoresistance in NiFe/GaAs/Fe hybrid magnon valve. <i>Applied Physics Letters</i> , 2019, 115, .	1.5	1
115	Tuning of the Magnetic Damping Parameter by Varying Cr Composition in $\text{Fe}_{1-x}\text{Cr}_x$ Alloy. <i>Chinese Physics Letters</i> , 2020, 37, 107502.	1.3	1
116	Tuning interfacial spin pump in Ta/CoFeB/MgO films by ultrafast laser pulse. <i>Applied Physics Letters</i> , 2021, 119, 092404.	1.5	1
117	The second generation spintronic materials and devices. , 2010, , .		0
118	Ultrafast Mid-IR carrier dynamics in three-dimensional dirac semimetal Cd_3As_2 . , 2015, , .		0
119	Resolving the optical modulation mechanism of graphene-hybridized plasmonic metamaterials. , 2015, , .		0
120	Long-cavity nanosecond thulium fiber laser: A compact source of energetic mid-IR pulses. , 2015, , .		0
121	Effect of Superparamagnetic Fe_3O_4 Nanoparticles on Schottky Barriers of Graphene. <i>IEEE Transactions on Magnetics</i> , 2015, 51, 1-4.	1.2	0
122	Interface Magnetic and Electrical Properties of CoFeB /InAs Heterostructures. <i>IEEE Transactions on Magnetics</i> , 2017, 53, 1-4.	1.2	0
123	Bandwidth Tunable, Dispersion-managed Mode-locked Thulium/holmium Fiber Laser. , 2018, , .		0
124	Current-Direction-Dependent Depinning of Vortex Domain Walls in Permalloy Zigzag Nanowires. <i>IEEE Transactions on Magnetics</i> , 2021, 57, 1-5.	1.2	0
125	Observation of an anisotropic ultrafast spin relaxation process in large-area WTe_2 films. <i>Journal of Applied Physics</i> , 2022, 131, 163903.	1.1	0