

Liang He

List of Publications by Year in descending order

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92
papers

4,110
citations

218381

26
h-index

114278

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92
all docs

92
docs citations

92
times ranked

5219
citing authors

#	ARTICLE	IF	CITATIONS
1	Magnetization switching through giant spin-orbit torque in a magnetically doped topological insulator heterostructure. <i>Nature Materials</i> , 2014, 13, 699-704.	13.3	773
2	Scale-Invariant Quantum Anomalous Hall Effect in Magnetic Topological Insulators beyond the Two-Dimensional Limit. <i>Physical Review Letters</i> , 2014, 113, 137201.	2.9	453
3	Manipulating surface states in topological insulator nanoribbons. <i>Nature Nanotechnology</i> , 2011, 6, 216-221.	15.6	382
4	Room-temperature intrinsic ferromagnetism in epitaxial CrTe ₂ ultrathin films. <i>Nature Communications</i> , 2021, 12, 2492.	5.8	179
5	A robust and tuneable mid-infrared optical switch enabled by bulk Dirac fermions. <i>Nature Communications</i> , 2017, 8, 14111.	5.8	174
6	Surface-Dominated Conduction in a 6 nm thick Bi ₂ Se ₃ Thin Film. <i>Nano Letters</i> , 2012, 12, 1486-1490.	4.5	162
7	Electrical Detection of Spin-Polarized Surface States Conduction in (Bi _{0.53} Sb _{0.47}) ₂ Te ₃ Topological Insulator. <i>Nano Letters</i> , 2014, 14, 5423-5429.	4.5	150
8	Review of 3D topological insulator thin-film growth by molecular beam epitaxy and potential applications. <i>Physica Status Solidi - Rapid Research Letters</i> , 2013, 7, 50-63.	1.2	145
9	Competing Weak Localization and Weak Antilocalization in Ultrathin Topological Insulators. <i>Nano Letters</i> , 2013, 13, 48-53.	4.5	128
10	Epitaxial growth of Bi ₂ Se ₃ topological insulator thin films on Si (111). <i>Journal of Applied Physics</i> , 2011, 109, .	1.1	126
11	Interplay between Different Magnetisms in Cr-Doped Topological Insulators. <i>ACS Nano</i> , 2013, 7, 9205-9212.	7.3	114
12	Revelation of Topological Surface States in Bi ₂ Se ₃ Thin Films by <i>In Situ</i> Al Passivation. <i>ACS Nano</i> , 2012, 6, 295-302.	7.3	102
13	Enhancing Magnetic Ordering in Cr-Doped Bi ₂ Se ₃ Using High-T _C Ferrimagnetic Insulator. <i>Nano Letters</i> , 2015, 15, 764-769.	4.5	80
14	Gate-tunable quantum oscillations in ambipolar Cd ₃ As ₂ thin films. <i>NPG Asia Materials</i> , 2015, 7, e221-e221.	3.8	68
15	Three-Dimensional Topological Insulator Bi ₂ Te ₃ /Organic Thin Film Heterojunction Photodetector with Fast and Wideband Response from 450 to 3500 Nanometers. <i>ACS Nano</i> , 2019, 13, 755-763.	7.3	68
16	Light-Tunable Ferromagnetism in Atomically Thin Fe_3Sn_2 Driven by Femtosecond Laser Pulse. <i>Physical Review Letters</i> , 2020, 125, 267205.	2.9	57
17	Atomic-Scale Magnetism of Cr-Doped Bi ₂ Se ₃ Thin Film Topological Insulators. <i>ACS Nano</i> , 2015, 9, 10237-10243.	7.3	54
18	Ultra-high Stability 3D TI Bi ₂ Se ₃ /MoO ₃ Thin Film Heterojunction Infrared Photodetector at Optical Communication Waveband. <i>Advanced Functional Materials</i> , 2020, 30, 1909659.	7.8	50

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19	Thickness-dependent bulk electronic properties in Bi ₂ Se ₃ thin films revealed by infrared spectroscopy. Physical Review B, 2013, 88, .	1.1	45
20	Separation of top and bottom surface conduction in Bi ₂ Te ₃ thin films. Nanotechnology, 2013, 24, 015705.	1.3	44
21	Evidence of the two surface states of (Bi _{0.53} Sb _{0.47}) ₂ Te ₃ films grown by van der Waals epitaxy. Scientific Reports, 2013, 3, 3406.	1.6	36
22	First-principles study of nonmetal doped monolayer MoSe ₂ for tunable electronic and photocatalytic properties. Scientific Reports, 2017, 7, 17088.	1.6	36
23	Epitaxial Topological Insulator Bi ₂ Te ₃ for Fast Visible to Mid-Infrared Heterojunction Photodetector by Graphene As Charge Collection Medium. ACS Nano, 2022, 16, 4851-4860.	7.3	35
24	Giant Topological Hall Effect in van der Waals Heterostructures of CrTe ₂ /Bi ₂ Te ₃ . ACS Nano, 2021, 15, 15710-15719.	7.3	34
25	Enhanced Photocatalytic Activity of 2H-MoSe ₂ by 3d Transition-Metal Doping. Journal of Physical Chemistry C, 2018, 122, 26570-26575.	1.5	28
26	Transient enhancement of magnetization damping in CoFeB film via pulsed laser excitation. Applied Physics Letters, 2016, 109, .	1.5	26
27	Signature of quantum Griffiths singularity state in a layered quasi-one-dimensional superconductor. Nature Communications, 2018, 9, 4656.	5.8	21
28	Direct observation of high spin polarization in Co ₂ FeAl thin films. Scientific Reports, 2018, 8, 8074.	1.6	20
29	Enhanced photocatalytic activity of nonmetal doped monolayer MoSe ₂ by hydrogen passivation: First-principles study. Applied Surface Science, 2018, 456, 133-139.	3.1	20
30	Polarimetric Three-Dimensional Topological Insulators/Organics Thin Film Heterojunction Photodetectors. ACS Nano, 2019, 13, 10810-10817.	7.3	20
31	Tuning the magnetic properties of the monolayer MoSe ₂ by nonmetal doping: First-principles study. Solid State Communications, 2018, 281, 6-11.	0.9	19
32	Ferromagnetism in two-dimensional CrTe ₂ epitaxial films down to a few atomic layers. AIP Advances, 2021, 11, .	0.6	19
33	Improved photocatalytic property of monolayer MoS ₂ by B and F co-doping: First principles study. Journal of Catalysis, 2020, 382, 280-285.	3.1	19
34	Experimental observation of dual magnetic states in topological insulators. Science Advances, 2019, 5, eaav2088.	4.7	18
35	Observation of Shubnikov-de Haas Oscillations in Large-Scale Weyl Semimetal WTe ₂ Films. Chinese Physics Letters, 2020, 37, 017104.	1.3	18
36	Nanoscale ¹²⁵ I-nuclear magnetic resonance depth imaging of topological insulators. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, E3645-50.	3.3	16

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37	Antisymmetric magnetoresistance in Fe_3GeTe_2 nanodevices of inhomogeneous thickness. <i>Physical Review B</i> , 2021, 104, .	1.1	16
38	Evidence for Layered Quantized Transport in Dirac Semimetal ZrTe_5 . <i>Scientific Reports</i> , 2018, 8, 5125.	1.6	15
39	Crystal structure and optical performance in bulk In_2Se_3 single crystals. <i>AIP Advances</i> , 2019, 9, .	0.6	15
40	Photoresponsivity of an all-semimetal heterostructure based on graphene and WTe_2 . <i>Scientific Reports</i> , 2018, 8, 12840.	1.6	14
41	Ultrafast Orbital-Oriented Control of Magnetization in Half-Metallic $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3$ Films. <i>Advanced Materials</i> , 2019, 31, e1806443.	11.1	13
42	Adjustable electronic, optical and photocatalytic properties of black phosphorene by nonmetal doping. <i>Applied Surface Science</i> , 2020, 505, 144488.	3.1	13
43	Observation of Quantum Hall effect in an ultra-thin $(\text{Bi}_{0.53}\text{Sb}_{0.47})_2\text{Te}_3$ film. <i>Applied Physics Letters</i> , 2017, 110, .	1.5	12
44	Spin-ARPES EUV Beamline for Ultrafast Materials Research and Development. <i>Applied Sciences (Switzerland)</i> , 2019, 9, 370.	1.3	12
45	Two stage magnetization in van der Waals layered CrXTe_3 ($\text{X} = \text{Si, Ge}$) single crystals. <i>Materials Letters</i> , 2019, 246, 60-62.	1.3	12
46	Enhancing photocatalytic activity in monolayer MoS_2 by charge compensated co-doping with P and Cl: First principles study. <i>Molecular Catalysis</i> , 2019, 468, 94-99.	1.0	12
47	Strong interface-induced spin-charge conversion in YIG/Cr heterostructures. <i>Applied Physics Letters</i> , 2020, 117, .	1.5	12
48	Probing the atomic-scale ferromagnetism in van der Waals magnet CrSiTe_3 . <i>Applied Physics Letters</i> , 2021, 119, .	1.5	12
49	Large Linear Magnetoresistance of High-Mobility 2D Electron System at Nonisostructural $\text{Al}_2\text{O}_3/\text{SrTiO}_3$ Heterointerfaces. <i>Advanced Materials Interfaces</i> , 2021, 8, 2101235.	1.9	12
50	The effect of growth sequence on magnetization damping in Ta/CoFeB/MgO structures. <i>Journal of Magnetism and Magnetic Materials</i> , 2018, 450, 65-69.	1.0	10
51	Self-Intercalation Tunable Interlayer Exchange Coupling in a Synthetic van der Waals Antiferromagnet. <i>Advanced Functional Materials</i> , 2022, 32, .	7.8	10
52	Intrinsic Topological Insulator $\text{Bi}_{1.5}\text{Sb}_{0.5}\text{Te}_3$ - $x\text{S}_x$ Thin Crystals. <i>Scientific Reports</i> , 2015, 5, 7931.	1.6	9
53	Quantum Oscillations from Nontrivial States in Quasi-Two-Dimensional Dirac Semimetal ZrTe_5 Nanowires. <i>Scientific Reports</i> , 2019, 9, 3558.	1.6	9
54	Modulation of the electronic properties and photocatalytic performance of black phase monolayer GeSe by noble metal doping. <i>New Journal of Chemistry</i> , 2021, 45, 15378-15385.	1.4	9

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55	Evidence for ferromagnetic coupling at the doped topological insulator/ferrimagnetic insulator interface. <i>AIP Advances</i> , 2016, 6, 055813.	0.6	8
56	Ultra-sensitive anomalous Hall effect sensors based on Cr-doped Bi ₂ Te ₃ topological insulator thin films. <i>Journal Physics D: Applied Physics</i> , 2020, 53, 505001.	1.3	8
57	Mapping the domain wall pinning profile by stochastic imaging reconstruction. <i>Physical Review B</i> , 2013, 87, .	1.1	7
58	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
59	Electronic and photocatalytic properties of N/F co-doped anatase TiO ₂ . <i>RSC Advances</i> , 2017, 7, 55282-55287.	1.7	7
60	The atomic-scale magnetism of Co ₂ FeAl Heusler alloy epitaxial thin films. <i>Applied Physics Letters</i> , 2018, 113, .	1.5	7
61	Multiple magnetic phase transition and short-range ferromagnetic behavior influence on magnetocaloric effect of Sm ₂ NiMnO ₆ nanoparticles. <i>Journal of Nanoparticle Research</i> , 2020, 22, 1.	0.8	7
62	Manipulation of Gilbert damping in ultrathin half-metallic Co ₂ FeAl _{1+x} by composition-deficiency-compensation. <i>Applied Physics Letters</i> , 2020, 116, .	1.5	7
63	Large-Area Freestanding Weyl Semimetal WTe ₂ Membranes. <i>Chinese Physics Letters</i> , 2021, 38, 017101.	1.3	7
64	Directional Spin Wave in Spin-Torque Oscillators Induced by Interfacial Dzyaloshinskii-Moriya Interaction. <i>IEEE Magnetics Letters</i> , 2017, 8, 1-4.	0.6	6
65	Enhancement of the spin-orbit torque efficiency in W/Cu/CoFeB heterostructures via interface engineering. <i>Applied Physics Letters</i> , 2020, 117, 082409.	1.5	6
66	Tuning magnetic and optical properties of monolayer WSe ₂ by doping C, N, P, O, S, F, and Cl: First principles study. <i>Solid State Communications</i> , 2021, 327, 114233.	0.9	6
67	Sub-100 femtosecond time scale spin dynamics in epitaxial Fe ₃ O ₄ thin film. <i>Applied Surface Science</i> , 2022, 572, 151456.	3.1	6
68	Temperature-induced band shift in bulk $\hat{\Gamma}$ -InSe by angle-resolved photoemission spectroscopy. <i>AIP Advances</i> , 2018, 8, 055123.	0.6	5
69	Component manipulated magnetic anisotropy and damping in Heusler-like compound Co _{2+x} Fe _{1-x} Al. <i>Journal of Physics Condensed Matter</i> , 2019, 31, 075802.	0.7	5
70	Increasing the photocatalytic properties of monolayer black phase GeSe by 3d transition metal doping: From ultraviolet to infrared absorption. <i>Molecular Catalysis</i> , 2020, 496, 111195.	1.0	5
71	The metal-insulator transition in ZrTe ₅ induced by temperature. <i>AIP Advances</i> , 2018, 8, .	0.6	4
72	Femtosecond laser-heating effect on the magnetization dynamics in perpendicularly magnetized Ta/CoFeB/MgO film. <i>New Journal of Physics</i> , 2019, 21, 053032.	1.2	4

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73	Solution Combustion Synthesis of Rare Earth Orthoferrite Nanoparticles: a Comparative Study on Multiferroic Properties of Er ³⁺ FeO ₃ vs (La,Yb)FeO ₃ . Journal of Superconductivity and Novel Magnetism, 2020, 33, 3621-3629.	0.8	4
74	Manipulating the electronic and photocatalytic properties of anatase TiO ₂ by metalloid doping. Chemical Physics Letters, 2021, 780, 138907.	1.2	4
75	Isotropic spin polarization in Heusler Co ₂ FeAl thin films. AIP Advances, 2022, 12, 025005.	0.6	4
76	Direct observation of spin polarization in epitaxial Fe ₃ O ₄ (001)/MgO thin films grown by magnetron sputtering. Applied Physics Letters, 2022, 120, .	1.5	4
77	Structural and magnetic properties in the Heusler compounds Co _{3-x} Fe _x Al thin films. Journal Physics D: Applied Physics, 2022, 55, 395002.	1.3	4
78	Site Preference of Se and Te in Bi _{2-x} Se _{3-\hat{x}} Te _x Thin Films. Chinese Physics Letters, 2020, 37, 077501.	1.3	3
79	Impurity band assisted carrier relaxation in Cr doped topological insulator Bi ₂ Se ₃ . Applied Physics Letters, 2021, 118, .	1.5	3
80	Surface doping of nonmetal atoms enhances photocatalytic performance of monolayer GeSe for degradation of organic pollution. Chemical Physics Letters, 2021, 785, 139156.	1.2	3
81	Magnetic anisotropy of half-metallic Co ₂ FeAl ultra-thin films epitaxially grown on GaAs(001). AIP Advances, 2019, 9, 065002.	0.6	2
82	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
83	Thermal induced spin-polarized current protected by spin-momentum locking in $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"} \rangle \langle \text{mml:msub} \rangle \langle \text{mml:mi} \rangle \text{ZrTe} \langle \text{mml:mi} \rangle \langle \text{mml:mn} \rangle 5 \langle \text{mml:msub} \rangle \langle \text{mml:m} \rangle \langle \text{mml:msub} \rangle \langle \text{mml:m} \rangle$ nanowires. Physical Review B, 2021, 104, .		
84	Sub-Femtosecond Timing Jitter From a SESAM Mode-Locked Yb-Fiber Laser. IEEE Photonics Technology Letters, 2021, 33, 1309-1312.	1.3	2
85	Enhanced magnetoresistance in NiFe/GaAs/Fe hybrid magnon valve. Applied Physics Letters, 2019, 115, .	1.5	1
86	Photodetectors: Ultrahigh Stability 3D TI Bi ₂ Se ₃ /MoO ₃ Thin Film Heterojunction Infrared Photodetector at Optical Communication Waveband (Adv. Funct. Mater.) Tj ETQq0 0 0 rgB7.4 Overlook 10 Tf 00		
87	Magnetic topological insulators: growth, structure, and properties. , 2020, , 191-226.		1
88	Tuning interfacial spin pump in Ta/CoFeB/MgO films by ultrafast laser pulse. Applied Physics Letters, 2021, 119, 092404.	1.5	1
89	Charge compensation co-doping enhances the photocatalytic activity of black phosphorus. Molecular Catalysis, 2021, 516, 112008.	1.0	1
90	Interface Magnetic and Electrical Properties of CoFeB/InAs Heterostructures. IEEE Transactions on Magnetics, 2017, 53, 1-4.	1.2	0

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91	Current-Direction-Dependent Depinning of Vortex Domain Walls in Permalloy Zigzag Nanowires. IEEE Transactions on Magnetism, 2021, 57, 1-5.	1.2	0
92	Observation of an anisotropic ultrafast spin relaxation process in large-area WTe ₂ films. Journal of Applied Physics, 2022, 131, 163903.	1.1	0