

Li Huang

List of Publications by Year in descending order

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143
papers

6,791
citations

57631

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all docs

145
docs citations

145
times ranked

8693
citing authors

#	ARTICLE	IF	CITATIONS
1	3D charge and 2D phonon transports leading to high out-of-plane ZT in n-type SnSe crystals. <i>Science</i> , 2018, 360, 778-783.	6.0	859
2	Molecule-Doped Nickel Oxide: Verified Charge Transfer and Planar Inverted Mixed Cation Perovskite Solar Cell. <i>Advanced Materials</i> , 2018, 30, e1800515.	11.1	287
3	Alkali Chlorides for the Suppression of the Interfacial Recombination in Inverted Planar Perovskite Solar Cells. <i>Advanced Energy Materials</i> , 2019, 9, 1803872.	10.2	236
4	Remarkable Roles of Cu To Synergistically Optimize Phonon and Carrier Transport in n-Type PbTe-Cu ₂ Te. <i>Journal of the American Chemical Society</i> , 2017, 139, 18732-18738.	6.6	230
5	Large enhancement of thermoelectric properties in n-type PbTe via dual-site point defects. <i>Energy and Environmental Science</i> , 2017, 10, 2030-2040.	15.6	194
6	Superior thermoelectric performance in PbTe-PbS pseudo-binary: extremely low thermal conductivity and modulated carrier concentration. <i>Energy and Environmental Science</i> , 2015, 8, 2056-2068.	15.6	185
7	Co single-atom anchored on Co ₃ O ₄ and nitrogen-doped active carbon toward bifunctional catalyst for zinc-air batteries. <i>Applied Catalysis B: Environmental</i> , 2020, 260, 118188.	10.8	163
8	Multiple Converged Conduction Bands in K ₂ Bi ₈ Se ₁₃ : A Promising Thermoelectric Material with Extremely Low Thermal Conductivity. <i>Journal of the American Chemical Society</i> , 2016, 138, 16364-16371.	6.6	130
9	Room-Temperature Spin-Orbit Torque from Topological Surface States. <i>Physical Review Letters</i> , 2019, 123, 207205.	2.9	129
10	Approaching the lithium-manganese oxides' energy storage limit with Li ₂ MnO ₃ nanorods for high-performance supercapacitor. <i>Nano Energy</i> , 2018, 43, 168-176.	8.2	128
11	Growth morphology and properties of metals on graphene. <i>Progress in Surface Science</i> , 2015, 90, 397-443.	3.8	123
12	Highly In-Plane Optical and Electrical Anisotropy of 2D Germanium Arsenide. <i>Advanced Functional Materials</i> , 2018, 28, 1707379.	7.8	121
13	Directed self-assembly of monodispersed platinum nanoclusters on graphene Moiré template. <i>Applied Physics Letters</i> , 2009, 95, .	1.5	119
14	Simultaneously enhancing the power factor and reducing the thermal conductivity of SnTe via introducing its analogues. <i>Energy and Environmental Science</i> , 2017, 10, 2420-2431.	15.6	116
15	Highly-anisotropic optical and electrical properties in layered SnSe. <i>Nano Research</i> , 2018, 11, 554-564.	5.8	114
16	Silicon layer intercalation of centimeter-scale, epitaxially grown monolayer graphene on Ru(0001). <i>Applied Physics Letters</i> , 2012, 100, .	1.5	101
17	Direct observation of vast off-stoichiometric defects in single crystalline SnSe. <i>Nano Energy</i> , 2017, 35, 321-330.	8.2	101
18	Mg ₃₊ $\hat{\Gamma}$ Sb _x Bi _{2$\hat{\Gamma}$} $\hat{\Gamma}$ Family: A Promising Substitute for the State-of-the-Art n-Type Thermoelectric Materials near Room Temperature. <i>Advanced Functional Materials</i> , 2019, 29, 1807235.	7.8	98

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19	Magnetism and Optical Anisotropy in van der Waals Antiferromagnetic Insulator CrOCl. ACS Nano, 2019, 13, 11353-11362.	7.3	97
20	Structure Distortion Induced Monoclinic Nickel Hexacyanoferrate as High-Performance Cathode for Na-Ion Batteries. Advanced Energy Materials, 2019, 9, 1803158.	10.2	93
21	Significantly Enhanced Thermoelectric Performance in n-type Heterogeneous BiAgSeS Composites. Advanced Functional Materials, 2014, 24, 7763-7771.	7.8	91
22	Field-Free Programmable Spin Logics via Chirality-Reversible Spin-Orbit Torque Switching. Advanced Materials, 2018, 30, e1801318.	11.1	91
23	Atomic-Level Fe-N Coupled with Fe ₃ C@Fe Nanocomposites in Carbon Matrixes as High-Efficiency Bifunctional Oxygen Catalysts. Small, 2020, 16, e1906057.	5.2	90
24	Sequence of Silicon Monolayer Structures Grown on a Ru Surface: from a Herringbone Structure to Silicene. Nano Letters, 2017, 17, 1161-1166.	4.5	86
25	A wafer-scale van der Waals dielectric made from an inorganic molecular crystal film. Nature Electronics, 2021, 4, 906-913.	13.1	86
26	From a normal insulator to a topological insulator in plumbene. Physical Review B, 2017, 95, .	1.1	85
27	Intercalation of metal islands and films at the interface of epitaxially grown graphene and Ru(0001) surfaces. Applied Physics Letters, 2011, 99, .	1.5	83
28	Spin-Orbit Torque Switching of a Nearly Compensated Ferrimagnet by Topological Surface States. Advanced Materials, 2019, 31, e1901681.	11.1	81
29	Enhanced current rectification and self-powered photoresponse in multilayer p-MoTe ₂ /n-MoS ₂ van der Waals heterojunctions. Nanoscale, 2017, 9, 10733-10740.	2.8	75
30	Sulphur modulated Ni ₃ FeN supported on N/S co-doped graphene boosts rechargeable/flexible Zn-air battery performance. Applied Catalysis B: Environmental, 2020, 274, 119086.	10.8	73
31	In-Plane Optical Anisotropy and Linear Dichroism in Low-Symmetry Layered TlSe. ACS Nano, 2018, 12, 8798-8807.	7.3	64
32	Theoretical Prediction of Chiral 3D Hybrid Organic-Inorganic Perovskites. Advanced Materials, 2019, 31, e1807628.	11.1	64
33	On-Surface Synthesis of N-Doped Zigzag-Edged Graphene Nanoribbons. Angewandte Chemie - International Edition, 2020, 59, 8873-8879.	7.2	61
34	Synergistically optimizing thermoelectric transport properties of n-type PbTe via Se and Sn co-alloying. Journal of Alloys and Compounds, 2017, 724, 208-221.	2.8	59
35	Atomic size and chemical effects on the local order of Zr	1.1	55
36	Surface Mobility Difference between Si and Ge and Its Effect on Growth of SiGe Alloy Films and Islands. Physical Review Letters, 2006, 96, 016103.	2.9	54

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55	Direct atomic scale characterization of the surface structure and planar defects in the organic-inorganic hybrid CH ₃ NH ₃ PbI ₃ by Cryo-TEM. <i>Nano Energy</i> , 2020, 73, 104820.	8.2	35
56	Synergistic Effects of C ₆₀ -MoC and Ag for Efficient Oxygen Reduction Reaction. <i>Journal of Physical Chemistry Letters</i> , 2018, 9, 779-784.	2.1	33
57	Probing the Ferromagnetism and Spin Wave Gap in V ₂ O ₃ by Helicity-Resolved Raman Spectroscopy. <i>Nano Letters</i> , 2020, 20, 6024-6031.	4.5	32
58	Hybrid phosphorene/graphene nanocomposite as an anode material for Na-ion batteries: a first-principles study. <i>Journal Physics D: Applied Physics</i> , 2017, 50, 165501.	1.3	31
59	NB-doped Bis-Tetracene and Peri-Tetracene: Synthesis and Characterization. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 26115-26121.	7.2	29
60	The Electronic Transport Channel Protection and Tuning in Real Space to Boost the Thermoelectric Performance of Mg ₃ Te ₂ Bi near Room Temperature. <i>Research</i> , 2020, 2020, 1672051.	2.8	29
61	Pressure-driven orbital selective insulator-to-metal transition and spin-state crossover in cubic CoO. <i>Physical Review B</i> , 2012, 85, .	1.1	28
62	Perovskite Solar Cells: Alkali Chlorides for the Suppression of the Interfacial Recombination in Inverted Planar Perovskite Solar Cells (Adv. Energy Mater. 19/2019). <i>Advanced Energy Materials</i> , 2019, 9, 1970068.	10.2	28
63	Epitaxial growth of large-area bilayer graphene on Ru(0001). <i>Applied Physics Letters</i> , 2014, 104, .	1.5	27
64	Size- and Strain-Dependent Electronic Structures in H-Passivated Si [112] Nanowires. <i>Journal of Physical Chemistry C</i> , 2008, 112, 15680-15683.	1.5	25
65	Collective Spin Manipulation in Antiferroelastic Spin-Crossover Metallo-Supramolecular Chains. <i>ACS Nano</i> , 2020, 14, 11283-11293.	7.3	24
66	Two-Dimensional CoS ₂ monolayer with robust ferromagnetism. <i>Scientific Reports</i> , 2017, 7, 15993.	1.6	23
67	Sizable Band Gap in Epitaxial Bilayer Graphene Induced by Silicene Intercalation. <i>Nano Letters</i> , 2020, 20, 2674-2680.	4.5	23
68	Ultrathin ternary semiconductor TlGaSe ₂ phototransistors with broad-spectral response. <i>2D Materials</i> , 2017, 4, 035021.	2.0	22
69	Growth of a predicted two-dimensional topological insulator based on InBi-Si(111)- Physical Review B, 2018, 98, .	1.2	22
70	Design and Synthesis of a Single-Layer Ferromagnetic Metal-Organic Framework with Topological Nontrivial Gaps. <i>Journal of Physical Chemistry C</i> , 2020, 124, 27017-27023.	1.5	22
71	Thermodynamic Preference for Atom Adsorption on versus Intercalation into Multilayer Graphene. <i>Journal of Physical Chemistry Letters</i> , 2020, 11, 9725-9730.	2.1	21
72	Tuning the morphology of chevron-type graphene nanoribbons by choice of annealing temperature. <i>Nano Research</i> , 2018, 11, 6190-6196.	5.8	20

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73	Dopant-Free Hole Transporting Molecules for Highly Efficient Perovskite Photovoltaic with Strong Interfacial Interaction. <i>Solar Rrl</i> , 2019, 3, 1900319.	3.1	20
74	On-Surface Synthesis of NBDoped Zigzag-Edged Graphene Nanoribbons. <i>Angewandte Chemie</i> , 2020, 132, 8958-8964.	1.6	20
75	Polarization-Mediated Thermal Stability of Metal/Oxide Heterointerface. <i>Advanced Materials</i> , 2015, 27, 6934-6938.	11.1	19
76	Origin of polymorphism of the two-dimensional group-IV monochalcogenides. <i>Physical Review B</i> , 2017, 96, .	1.1	19
77	Local Structural Changes and Inductive Effects on Ion Conduction in Antiperovskite Solid Electrolytes. <i>Chemistry of Materials</i> , 2020, 32, 8827-8835.	3.2	19
78	Insulating SiO ₂ under Centimeter-Scale, Single-Crystal Graphene Enables Electronic-Device Fabrication. <i>Nano Letters</i> , 2020, 20, 8584-8591.	4.5	19
79	Effects of Oxygen Impurities on Glass-Formation Ability in Zr ₂ Cu Alloy. <i>Journal of Physical Chemistry B</i> , 2016, 120, 9223-9229.	1.2	18
80	First-principles study of intercalation of alkali ions in FeSe for solid-state batteries. <i>Chemical Physics Letters</i> , 2016, 659, 230-233.	1.2	18
81	Quantum anomalous Hall insulator phase in asymmetrically functionalized germanene. <i>Physical Review B</i> , 2017, 96, .	1.1	18
82	Scalable Van der Waals Encapsulation by Inorganic Molecular Crystals. <i>Advanced Materials</i> , 2022, 34, e2106041.	11.1	18
83	Transition metals doped CuAlSe ₂ for promising intermediate band materials. <i>Materials Research Express</i> , 2016, 3, 045905.	0.8	16
84	Unusual lattice thermal conductivity in the simple crystalline compounds $TlXTe_2$. <i>Physical Review B</i> , 2019, 100, .	4.1	16
85	Low-index surface energies, cleavage energies, and surface relaxations for crystalline NiAl from first-principles calculations. <i>Surface Science</i> , 2020, 695, 121532.	0.8	16
86	Force-Activated Isomerization of a Single Molecule. <i>Journal of the American Chemical Society</i> , 2020, 142, 10673-10680.	6.6	16
87	Two distinct superconducting states controlled by orientations of local wrinkles in LiFeAs. <i>Nature Communications</i> , 2021, 12, 6312.	5.8	16
88	Electronic localization of quantum-well states in Ag/Au(111) metallic heterostructures. <i>Physical Review B</i> , 2011, 84, .	1.1	15
89	Coverage-Dependent Collective Diffusion of a Dense Pb Wetting Layer on Si(111). <i>Physical Review Letters</i> , 2012, 108, 026101.	2.9	15
90	Polymer-Assisted Single Crystal Engineering of Organic Semiconductors To Alter Electron Transport. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 11837-11842.	4.0	15

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91	Raman spectra and dimensional effect on the charge density wave transition in GdTe ₃ . Applied Physics Letters, 2019, 115, .	1.5	15
92	Magnetism of elemental two-dimensional metals. Journal of Materials Chemistry C, 2021, 9, 4554-4561.	2.7	15
93	Two-dimensional M_4SiN monolayers and van der Waals heterostructures: Promising spintronic properties and band alignments. Physical Review Materials, 2022, 6, .	0.9	15
94	Evolution of a symmetry gap and synergetic quantum well states in ultrathin Ag films on Au(111) substrates. Europhysics Letters, 2007, 78, 57003.	0.7	14
95	Ab initio molecular dynamics simulations of short-range order in Zr ₅₀ Cu ₄₅ Al ₅ and Cu ₅₀ Zr ₄₅ Al ₅ metallic glasses. Journal of Physics Condensed Matter, 2016, 28, 085102.	0.7	14
96	Medium-range icosahedral order in quasicrystal-forming Zr ₂ Pd binary metallic glass. Applied Physics Letters, 2011, 98, .	1.5	13
97	Thickness-dependent energetics for Pb adatoms on low-index Pb nanofilm surfaces: First-principles calculations. Physical Review B, 2017, 96, .	1.1	13
98	Pressure-controlled Structural Symmetry Transition in Layered InSe. Laser and Photonics Reviews, 2019, 13, 1900012.	4.4	13
99	Graphene-silicon Layered Structures on Single-crystalline Ir(111) Thin Films. Advanced Materials Interfaces, 2015, 2, 1400543.	1.9	12
100	Prediction of two-dimensional organic topological insulator in metal-DCB lattices. Applied Physics Letters, 2018, 113, .	1.5	12
101	Enhanced Electrochemical Performance in Aluminium Doped γ -MnO ₂ Supercapacitor Cathode: Experimental and Theoretical Investigations. Chemical Communications, 2021, , .	2.2	12
102	Comparative study of local atomic structures in Zr ₂ Cu _x Ni _{1-x} ($x=0, 0.5, 1$) metallic glasses. Journal of Applied Physics, 2015, 118, .	1.1	11
103	Structure engineering: extending the length of azaacene derivatives through quinone bridges. Journal of Materials Chemistry C, 2018, 6, 3628-3633.	2.7	10
104	Probing Mechanistic Insights into Highly Efficient Lithium Storage of C ₆₀ Fullerene Enabled via Three-electron Redox Chemistry. Advanced Science, 2021, 8, e2101759.	5.6	10
105	Facile approach to prepare Fe ₂ P/C nanofiber heterostructure via electrospinning as highly performance self-supporting anode for Li/Na ion batteries. Electrochimica Acta, 2022, 403, 139682.	2.6	10
106	Interlayer Quasi-Bonding Interactions in 2D Layered Materials: A Classification According to the Occupancy of Involved Energy Bands. Journal of Physical Chemistry Letters, 2021, 12, 11998-12004.	2.1	10
107	First-principles study of adsorption and diffusion on Ge/Si(001)-(2 \times 8) and Ge/Si(105)-(1 \times 2) surfaces. Surface Science, 2007, 601, 3067-3072.	0.8	9
108	Synthesis of low-symmetry 2D Ge _(1\timesx) Sn _x Se ₂ alloy flakes with anisotropic optical response and birefringence. Nanoscale, 2019, 11, 23116-23125.	2.8	9

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109	Observation of an Incommensurate Charge Density Wave in Monolayer TiSe_2 . arXiv:2202.12802v1 [cond-mat.str-el] (2022, 128, 026401).	7.8	9
110	Line defects in monolayer TiSe_2 with adsorption of Pt atoms potentially enable excellent catalytic activity. <i>Nano Research</i> , 2022, 15, 4687-4692.	5.8	9
111	Coherent Transport Through a Quantum Dot Embedded in a Double-Slit-Like Aharonov-Bohm Ring. <i>Chinese Physics Letters</i> , 2002, 19, 1505-1508.	1.3	8
112	Structural and electronic properties of Al_7In ($n=1,2,3$). <i>Chemical Physics Letters</i> , 2006, 420, 125-129.	1.2	8
113	Giant magnetic anisotropy of a two-dimensional metal-organic framework. <i>Nanoscale</i> , 2018, 10, 17335-17340.	2.8	8
114	Ion storage mechanism of MnO_2 as supercapacitor cathode in multi-ion aqueous electrolyte: Experimental and theoretical analysis. <i>Applied Physics Letters</i> , 2021, 119, 163901.	1.5	7
115	Failure mechanism of solid-state electrolyte $\text{Li}_{10}\text{GeP}_2\text{S}_{12}$ in a moist atmosphere: a first-principles study. <i>Materials Advances</i> , 2022, 3, 3143-3150.	2.6	7
116	Structure of $\text{Cu}_{64.5}\text{Zr}_{35.5}$ metallic glass by reverse Monte Carlo simulations. <i>Journal of Applied Physics</i> , 2014, 115, 053522.	1.1	6
117	Controlling the Polarity of the Molecular Beam Epitaxy Grown In-Bi Atomic Film on the Si(111) Surface. <i>Scientific Reports</i> , 2019, 9, 756.	1.6	6
118	Thermally activated magnetization back-hopping based true random number generator in nano-ring magnetic tunnel junctions. <i>Applied Physics Letters</i> , 2019, 114, .	1.5	6
119	Orbital-fluctuation freezing and magnetic-nonmagnetic phase transition in TiBr_3 . <i>Applied Physics Letters</i> , 2020, 117, 133103.	1.5	6
120	Prediction of massless Dirac fermions in a carbon nitride covalent network. <i>Applied Physics Letters</i> , 2021, 118, .	1.5	6
121	Mo-edge reconstructions in MoSe_2 and MoS_2 . arXiv:2202.12802v1 [cond-mat.str-el] (2022, 128, 026401).	1.1	6
122	Synthesis of Single-Layer Two-Dimensional Metal-Organic Frameworks $\text{M}_3(\text{HAT})_2$ ($\text{M}=\text{Ni}, \text{Fe}, \text{Co}$, $\text{HAT}=1,4,5,8,9,12$ -hexaazatriphenylene) Using an On-Surface Reaction. <i>Angewandte Chemie - International Edition</i> , 2022, 61, .	7.2	6
123	Observation of Ultrastrong Coupling between Substrate and the Magnetic Topological Insulator MnBi_2Te_4 . <i>Nano Letters</i> , 2022, 22, 3856-3864.	4.5	6
124	Unveiling the medium-range order in glass models and its role in glass formation. <i>Physical Review B</i> , 2020, 101, .	1.1	5
125	Single-element amorphous palladium nanoparticles formed via phase separation. <i>Nano Research</i> , 2022, 15, 5575-5580.	5.8	5
126	Submonolayer Ag films on Fe(100): A first-principles analysis of energetics controlling adlayer thermodynamics and kinetics. <i>Physical Review B</i> , 2016, 93, .	1.1	4

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127	NBnDoped BisTetracene and PeriTetracene: Synthesis and Characterization. <i>Angewandte Chemie</i> , 0, , .	1.6	4
128	Spinvalley Hall phenomena driven by Van Hove singularities in blistered graphene. <i>Npj Computational Materials</i> , 2020, 6, .	3.5	4
129	Synthesis of SingleLayer TwoDimensional MetalOrganic Frameworks $M_3(HAT)_2$ (M=Ni, Fe, Co, HAT=1,4,5,8,9,12hexaazatriphenylene) Using an OnSurface Reaction. <i>Angewandte Chemie</i> , 2022, 134, .	1.6	4
130	Improper multiferroiclike transition in a metal. <i>Physical Review B</i> , 2022, 105, .	1.1	4
131	Spin Hall effect in two-dimensional InSe: Interplay between Rashba and Dresselhaus spin-orbit couplings. <i>Physical Review B</i> , 2022, 105, .	1.1	4
132	Quantitative Analysis of Cation Selectivity of the Electrodes in Multi-ion Electrolytes Based on 2H-Phase MoS ₂ . <i>Journal of Physical Chemistry C</i> , 2020, 124, 9665-9672.	1.5	3
133	Strain-induced light emission enhancement in CsPbBr ₃ microwires. <i>Journal of Materials Science</i> , 2022, 57, 5061-5071.	1.7	3
134	Construction and physical properties of low-dimensional structures for nanoscale electronic devices. <i>Physical Chemistry Chemical Physics</i> , 2022, 24, 9082-9117.	1.3	3
135	Intrinsically patterned corrals in monolayer Ag ₅ Se ₂ and selective molecular co-adsorption. <i>Nano Research</i> , 2022, 15, 6730-6735.	5.8	3
136	Thermoelectrics: $Mg_{3+x}Sb_xBi_{2-x}$ Family: A Promising Substitute for the State-of-the-Art n-Type Thermoelectric Materials near Room Temperature (<i>Adv. Funct. Mater.</i> 4/2019). <i>Advanced Functional Materials</i> , 2019, 29, 1970020.	7.8	2
137	Interaction of two symmetric monovacancy defects in graphene. <i>Chinese Physics B</i> , 2019, 28, 046801.	0.7	2
138	Surface Defect Modulation with Intercalation Ion Doping Vanadium Oxide to Enhance Zinc Storage Performance. <i>Energy & Fuels</i> , 2022, 36, 2872-2879.	2.5	2
139	Controlling magnetic interfaces using ordered surface alloys. <i>Physical Review B</i> , 2016, 94, .	1.1	1
140	Investigation of phosphorus surface segregation by X-ray scattering measurements. <i>Surface Science</i> , 2005, 580, 51-56.	0.8	0
141	The total ionizing dose effect of magnetometers system based on tunneling magnetoresistance sensor. , 2018, , .		0
142	Scalable Van der Waals Encapsulation by Inorganic Molecular Crystals (<i>Adv. Mater.</i> 7/2022). <i>Advanced Materials</i> , 2022, 34, .	11.1	0
143	Reversible motions and disordered structure of soft particles in amorphous solids. <i>Physical Review B</i> , 2022, 105, .	1.1	0