

Hongwei Liu

List of Publications by Year in descending order

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116
papers

5,667
citations

87843

38
h-index

82499

72
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117
all docs

117
docs citations

117
times ranked

9936
citing authors

#	ARTICLE	IF	CITATIONS
1	Coordination of Atomic Coâ€“Pt Coupling Species at Carbon Defects as Active Sites for Oxygen Reduction Reaction. <i>Journal of the American Chemical Society</i> , 2018, 140, 10757-10763.	6.6	464
2	A Defect-Driven Metal-free Electrocatalyst for Oxygen Reduction in Acidic Electrolyte. <i>CheM</i> , 2018, 4, 2345-2356.	5.8	292
3	Observation of hydrogen trapping at dislocations, grain boundaries, and precipitates. <i>Science</i> , 2020, 367, 171-175.	6.0	275
4	Amorphous Bimetallic Oxideâ€“Graphene Hybrids as Bifunctional Oxygen Electrocatalysts for Rechargeable Znâ€“Air Batteries. <i>Advanced Materials</i> , 2017, 29, 1701410.	11.1	243
5	Heterojunctions in g-C ₃ N ₄ /TiO ₂ (B) nanofibres with exposed (001) plane and enhanced visible-light photoactivity. <i>Journal of Materials Chemistry A</i> , 2014, 2, 2071-2078.	5.2	241
6	Efficient photocatalytic Suzuki cross-coupling reactions on Auâ€“Pd alloy nanoparticles under visible light irradiation. <i>Green Chemistry</i> , 2014, 16, 4272.	4.6	213
7	Atomic Healing of Defects in Transition Metal Dichalcogenides. <i>Nano Letters</i> , 2015, 15, 3524-3532.	4.5	194
8	High rate capability caused by surface cubic spinels in Li-rich layer-structured cathodes for Li-ion batteries. <i>Scientific Reports</i> , 2013, 3, 3094.	1.6	192
9	Visible Light-Driven Cross-Coupling Reactions at Lower Temperatures Using a Photocatalyst of Palladium and Gold Alloy Nanoparticles. <i>ACS Catalysis</i> , 2014, 4, 1725-1734.	5.5	181
10	Defectâ€“Induced Ptâ€“Coâ€“Se Coordinated Sites with Highly Asymmetrical Electronic Distribution for Boosting Oxygenâ€“Involving Electrocatalysis. <i>Advanced Materials</i> , 2019, 31, e1805581.	11.1	168
11	Evidence for the plant recruitment ofâ€“beneficial microbes toâ€“suppress soilâ€“borne pathogens. <i>New Phytologist</i> , 2021, 229, 2873-2885.	3.5	168
12	Hydrogenation Synthesis of Blue TiO ₂ for High-Performance Lithium-Ion Batteries. <i>Journal of Physical Chemistry C</i> , 2014, 118, 8824-8830.	1.5	167
13	Graphene-based surface modification on layered Li-rich cathode for high-performance Li-ion batteries. <i>Journal of Materials Chemistry A</i> , 2013, 1, 9954.	5.2	163
14	Bandgap Engineering of Phosphorene by Laser Oxidation toward Functional 2D Materials. <i>ACS Nano</i> , 2015, 9, 10411-10421.	7.3	126
15	Microlandscaping of Au Nanoparticles on Few-Layer MoS ₂ Films for Chemical Sensing. <i>Small</i> , 2015, 11, 1792-1800.	5.2	113
16	Improved Photoelectrical Properties of MoS ₂ Films after Laser Micromachining. <i>ACS Nano</i> , 2014, 8, 6334-6343.	7.3	112
17	Lightâ€“Matter Interactions in Phosphorene. <i>Accounts of Chemical Research</i> , 2016, 49, 1806-1815.	7.6	97
18	Laser cladding Al-based amorphous-nanocrystalline composite coatings on AZ80 magnesium alloy under water cooling condition. <i>Journal of Alloys and Compounds</i> , 2017, 690, 108-115.	2.8	94

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19	Metamaterials based on the phase transition of VO ₂ . Nanotechnology, 2018, 29, 024002.	1.3	90
20	Highly Ordered Single Crystalline Nanowire Array Assembled Three-Dimensional Nb ₃ O ₇ (OH) and Nb ₂ O ₅ Superstructures for Energy Storage and Conversion Applications. ACS Nano, 2016, 10, 507-514.	7.3	81
21	Advances in Sustain Stable Voltage of Cr-Doped Li-Rich Layered Cathodes for Lithium Ion Batteries. Journal of the Electrochemical Society, 2014, 161, A1723-A1730.	1.3	79
22	Fluorescence Concentric Triangles: A Case of Chemical Heterogeneity in WS ₂ Atomic Monolayer. Nano Letters, 2016, 16, 5559-5567.	4.5	76
23	Direct Optical Tuning of the Terahertz Plasmonic Response of InSb Subwavelength Gratings. Advanced Optical Materials, 2013, 1, 128-132.	3.6	71
24	Coherent-Interface-Assembled Ag ₂ O-Anchored Nanofibrillated Cellulose Porous Aerogels for Radioactive Iodine Capture. ACS Applied Materials & Interfaces, 2016, 8, 29179-29185.	4.0	68
25	Enhanced photodynamic therapy of mixed phase TiO ₂ (B)/anatase nanofibers for killing of HeLa cells. Nano Research, 2014, 7, 1659-1669.	5.8	65
26	Separate or Simultaneous Removal of Radioactive Cations and Anions from Water by Layered Sodium Vanadate-Based Sorbents. Chemistry of Materials, 2014, 26, 4788-4795.	3.2	65
27	Silver oxide nanocrystals anchored on titanate nanotubes and nanofibers: promising candidates for entrapment of radioactive iodine anions. Nanoscale, 2013, 5, 11011.	2.8	64
28	Interactions between lasers and two-dimensional transition metal dichalcogenides. Chemical Society Reviews, 2016, 45, 2494-2515.	18.7	61
29	ZnO Nanocones with High-Index {101̄...1} Facets for Enhanced Energy Conversion Efficiency of Dye-Sensitized Solar Cells. Journal of Physical Chemistry C, 2013, 117, 13836-13844.	1.5	55
30	New Constructions of MDS Codes With Complementary Duals. IEEE Transactions on Information Theory, 2018, 64, 5776-5782.	1.5	54
31	In-situ high-resolution transmission electron microscopy investigation of grain boundary dislocation activities in a nanocrystalline CrMnFeCoNi high-entropy alloy. Journal of Alloys and Compounds, 2017, 709, 802-807.	2.8	53
32	Preparation of Nitrogen-Doped TiO ₂ /Graphene Nanohybrids and Application as Counter Electrode for Dye-Sensitized Solar Cells. ACS Applied Materials & Interfaces, 2014, 6, 2118-2124.	4.0	44
33	Constacyclic Symbol-Pair Codes: Lower Bounds and Optimal Constructions. IEEE Transactions on Information Theory, 2017, 63, 7661-7666.	1.5	44
34	Microsteganography on WS ₂ Monolayers Tailored by Direct Laser Painting. ACS Nano, 2017, 11, 713-720.	7.3	43
35	Full Electric Control of Exchange Bias at Room Temperature by Resistive Switching. Advanced Materials, 2018, 30, e1801885.	11.1	43
36	Highly sensitive and multispectral responsive phototransistor using tungsten-doped VO ₂ nanowires. Nanoscale, 2014, 6, 7619-7627.	2.8	42

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37	Efficient Removal of Cationic and Anionic Radioactive Pollutants from Water Using Hydrotalcite-Based Getters. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 16503-16510.	4.0	40
38	In situ analysis of Refractory Metal Nuggets in carbonaceous chondrites. <i>Geochimica Et Cosmochimica Acta</i> , 2017, 216, 61-81.	1.6	40
39	Mechanical characteristics of individual multi-layer graphene-oxide sheets under direct tensile loading. <i>Carbon</i> , 2014, 80, 279-289.	5.4	39
40	Enhanced Photoresponse from Phosphorene-Suboxide Junction Fashioned by Focused Laser Micromachining. <i>Advanced Materials</i> , 2016, 28, 4090-4096.	11.1	38
41	Tuning and understanding the phase interface of TiO ₂ nanoparticles for more efficient lithium ion storage. <i>Nanoscale</i> , 2015, 7, 12833-12838.	2.8	36
42	A quadrafunctional electrocatalyst of nickel/nickel oxide embedded N-graphene for oxygen reduction, oxygen evolution, hydrogen evolution and hydrogen peroxide oxidation reactions. <i>Sustainable Energy and Fuels</i> , 2018, 2, 2081-2089.	2.5	34
43	TiO ₂ nanofibers of different crystal phases for transesterification of alcohols with dimethyl carbonate. <i>Applied Catalysis B: Environmental</i> , 2014, 150-151, 330-337.	10.8	32
44	Nucleation driving force for γ -assisted formation of β and associated γ morphology in β -Ti alloys. <i>Scripta Materialia</i> , 2018, 155, 149-154.	2.6	31
45	Quantitative dopant distributions in GaAs nanowires using atom probe tomography. <i>Ultramicroscopy</i> , 2013, 132, 186-192.	0.8	29
46	Grazing Regulates the Spatial Heterogeneity of Soil Microbial Communities Within Ecological Networks. <i>Ecosystems</i> , 2020, 23, 932-942.	1.6	29
47	Optical and electrical applications of ZnS _x Se _{1-x} nanowires-network with uniform and controllable stoichiometry. <i>Nanoscale</i> , 2012, 4, 976.	2.8	28
48	Atomic-scale observation of parallel development of super elasticity and reversible plasticity in GaAs nanowires. <i>Applied Physics Letters</i> , 2014, 104, .	1.5	26
49	Control of Exposed Facet and Morphology of Anatase Crystals through TiO _x F _y Precursor Synthesis and Impact of the Facet on Crystal Phase Transition. <i>Chemistry of Materials</i> , 2014, 26, 1014-1018.	3.2	25
50	Defect Engineering in CdS _x Se _{1-x} Nanobelts: An Insight into Carrier Relaxation Dynamics via Optical Pump-Terahertz Probe Spectroscopy. <i>Journal of Physical Chemistry C</i> , 2012, 116, 26036-26042.	1.5	23
51	Composition-dependent ultra-high photoconductivity in ternary CdS _x Se _{1-x} nanobelts as measured by optical pump-terahertz probe spectroscopy. <i>Nano Research</i> , 2013, 6, 808-821.	5.8	23
52	Atomic-scale investigation of a new phase transformation process in TiO ₂ nanofibers. <i>Nanoscale</i> , 2017, 9, 4601-4609.	2.8	22
53	A critical review on the carrier dynamics in 2D layered materials investigated using THz spectroscopy. <i>Optics Communications</i> , 2018, 406, 24-35.	1.0	22
54	Complete genome sequence of <i>Bacillus subtilis</i> BSD-2, a microbial germicide isolated from cultivated cotton. <i>Journal of Biotechnology</i> , 2016, 230, 26-27.	1.9	21

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55	Negative terahertz photoconductivity in 2D layered materials. <i>Nanotechnology</i> , 2017, 28, 464001.	1.3	21
56	Direct numerical simulation of a supersonic turbulent boundary layer over a compression–decompression corner. <i>Physics of Fluids</i> , 2021, 33, .	1.6	21
57	One-dimensional nanostructures of II–VI ternary alloys: synthesis, optical properties, and applications. <i>Nanoscale</i> , 2018, 10, 17456-17476.	2.8	20
58	Transient Photoconductivity of Ternary CdSSe Nanobelts As Measured by Time-Resolved Terahertz Spectroscopy. <i>Journal of Physical Chemistry C</i> , 2013, 117, 12379-12384.	1.5	18
59	Preparation of Coating on the Titanium Surface by Micro-Arc Oxidation to Improve Corrosion Resistance. <i>Coatings</i> , 2021, 11, 230.	1.2	18
60	Characterizations of the biomineralization film caused by marine <i>Pseudomonas stutzeri</i> and its mechanistic effects on X80 pipeline steel corrosion. <i>Journal of Materials Science and Technology</i> , 2022, 125, 15-28.	5.6	18
61	Predictable and controllable dual-phase interfaces in TiO ₂ (B)/anatase nanofibers. <i>Nanoscale</i> , 2014, 6, 14237-14243.	2.8	17
62	Atomic Mechanism of Predictable Phase Transition in Dual-Phase H ₂ Ti ₃ O ₇ /TiO ₂ (B) Nanofiber: An In Situ Heating TEM Investigation. <i>Chemistry - A European Journal</i> , 2014, 20, 11313-11317.	1.7	16
63	In-situ synthesis of Ag nanoparticles by electron beam irradiation. <i>Materials Characterization</i> , 2015, 110, 1-4.	1.9	15
64	Ultrahigh photoconductivity of bandgap-graded CdSxSe1-x nanowires probed by terahertz spectroscopy. <i>Scientific Reports</i> , 2016, 6, 27387.	1.6	15
65	Exciton dynamics in tungsten dichalcogenide monolayers. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 17877-17882.	1.3	14
66	Two or Few-Weight Trace Codes over $\mathbb{F}_q + u\mathbb{F}_q$. <i>IEEE Transactions on Information Theory</i> , 2019, 65, 2696-2703.	1.5	14
67	Defect-related dynamics of photoexcited carriers in 2D transition metal dichalcogenides. <i>Physical Chemistry Chemical Physics</i> , 2021, 23, 8222-8235.	1.3	13
68	Constructions of Optimal Codes With Hierarchical Locality. <i>IEEE Transactions on Information Theory</i> , 2020, 66, 7333-7340.	1.5	12
69	Corrosion of aluminum alloy 7075 induced by marine <i>Aspergillus terreus</i> with continued organic carbon starvation. <i>Npj Materials Degradation</i> , 2022, 6, .	2.6	12
70	Role of interface structure and chemistry in resistive switching of NiO nanocrystals on SrTiO ₃ . <i>APL Materials</i> , 2014, 2, .	2.2	11
71	Surface-mediated selective photocatalytic aerobic oxidation reactions on TiO ₂ nanofibres. <i>RSC Advances</i> , 2015, 5, 56820-56831.	1.7	11
72	The crystallography of C-centred monoclinic to body-centred tetragonal polymorphic phase transformation in mixed-phase TiO ₂ (B) and anatase nanocomposite. <i>Scripta Materialia</i> , 2016, 119, 27-32.	2.6	11

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73	Single crystal forms induced diverse interface structures in TiO ₂ (B)/anatase dual-phase nanocomposites. CrystEngComm, 2016, 18, 2089-2097.	1.3	11
74	<i>EDP2XRD</i> : a computer program for converting electron diffraction patterns into X-ray diffraction patterns. Journal of Applied Crystallography, 2016, 49, 636-641.	1.9	10
75	Some Repeated-Root Constacyclic Codes Over Galois Rings. IEEE Transactions on Information Theory, 2017, 63, 6247-6255.	1.5	10
76	Synergistic Inhibition Effect of Magnetic Field and Inhibitors against Carbon Steel Corrosion in CO ₂ -Saturated Oilfield-Produced Water. Industrial & Engineering Chemistry Research, 2019, 58, 17668-17674.	1.8	10
77	Painting Anatase (TiO ₂) Nanocrystals on Long Nanofibers to Prepare Photocatalysts with Large Active Surface for Dye Degradation and Organic Synthesis. ChemCatChem, 2013, 5, 2382-2388.	1.8	9
78	Vapor-Phase Hydrothermal Growth of Novel Segmentally Configured Nanotubular Crystal Structure. Small, 2013, 9, 3043-3050.	5.2	9
79	Efficient catalysts of zeolite nanocrystals grown with a preferred orientation on nanofibers. Chemical Communications, 2013, 49, 9866.	2.2	8
80	Composition-dependent electron transport in CdS _x Se _{1-x} nanobelts: a THz spectroscopy study. Optics Letters, 2014, 39, 567.	1.7	8
81	On the morphology and crystallography of Hg ₅ In ₂ Te ₈ precipitation in Hg ₃ In ₂ Te ₆ . Journal of Alloys and Compounds, 2014, 601, 298-306.	2.8	8
82	Laser Modified ZnO/CdSSe Core-Shell Nanowire Arrays for Micro-Steganography and Improved Photoconduction. Scientific Reports, 2015, 4, 6350.	1.6	8
83	Interpretation of the vacancy-ordering controlled growth morphology of Hg ₅ In ₂ Te ₈ precipitates in Hg ₃ In ₂ Te ₆ single crystals by TEM observation and crystallographic calculation. Journal of Alloys and Compounds, 2015, 622, 206-212.	2.8	8
84	Comparing the Contribution of Visible-Light Irradiation, Gold Nanoparticles, and Titania Supports in Photocatalytic Nitroaromatic Coupling and Aromatic Alcohol Oxidation. Particle and Particle Systems Characterization, 2016, 33, 628-634.	1.2	8
85	Degradation analysis of Alq ₃ -based OLED from noise fluctuations with different driving modes. Chemical Physics Letters, 2015, 623, 68-71.	1.2	7
86	Enriched Fluorescence Emission from WS ₂ Monoflake Empowered by Au Nanoexplorers. Advanced Optical Materials, 2017, 5, 1700156.	3.6	7
87	Crystallography of refractory metal nuggets in carbonaceous chondrites: A transmission Kikuchi diffraction approach. Geochimica Et Cosmochimica Acta, 2017, 216, 42-60.	1.6	7
88	The Thinnest Light Disk: Rewritable Data Storage and Encryption on WS ₂ Monolayers. Advanced Functional Materials, 2021, 31, 2103140.	7.8	7
89	Spectroscopic Perception of Trap States on the Performance of Methylammonium and Formamidinium Lead Iodide Perovskite Solar Cells. Advanced Materials, 2021, 33, 2102241.	11.1	7
90	Genomics and LC-MS Reveal Diverse Active Secondary Metabolites in Bacillus amyloliquefaciens WS-8. Journal of Microbiology and Biotechnology, 2020, 30, 417-426.	0.9	7

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91	Universal Approach for Predicting Crystallography of Heterogeneous Epitaxial Nanocrystals with Multiple Orientation Relationships. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 34844-34853.	4.0	6
92	Dislocations and Te precipitates of Cd _{0.9} Mn _{0.1} Te: V crystal grown by Tellurium solution vertical Bridgman method. <i>Journal of Crystal Growth</i> , 2019, 513, 43-47.	0.7	6
93	Galvanic Corrosion Due to a Heterogeneous Sulfate Reducing Bacteria Biofilm. <i>Coatings</i> , 2020, 10, 1116.	1.2	6
94	Nickel Metaphosphate as a Conversion Positive Electrode for Lithium-Ion Batteries. <i>Batteries and Supercaps</i> , 2021, 4, 195-204.	2.4	6
95	Violence Recognition Based on Auditory-Visual Fusion of Autoencoder Mapping. <i>Electronics (Switzerland)</i> , 2021, 10, 2654.	1.8	6
96	Microstructure, crystallography of phase transformations and multiple precipitations in PH 15-7Mo stainless steel. <i>Journal of Alloys and Compounds</i> , 2016, 672, 386-392.	2.8	5
97	Competition between Oxygen Curing and Ion Migration in MAPbI ₃ Induced by Irradiation Exposure. <i>Journal of Physical Chemistry Letters</i> , 2020, 11, 8477-8482.	2.1	5
98	Tuning photoresponse of graphene-black phosphorus heterostructure by electrostatic gating and photo-induced doping. <i>Chinese Chemical Letters</i> , 2022, 33, 368-373.	4.8	5
99	Performance Improvement of DAG-Aware Task Scheduling Algorithms with Efficient Cache Management in Spark. <i>Electronics (Switzerland)</i> , 2021, 10, 1874.	1.8	5
100	Generalized Pair Weights of Linear Codes and Linear Isomorphisms Preserving Pair Weights. <i>IEEE Transactions on Information Theory</i> , 2022, 68, 105-117.	1.5	5
101	Galois self-orthogonal constacyclic codes over finite fields. <i>Designs, Codes, and Cryptography</i> , 2022, 90, 2703-2733.	1.0	5
102	Correlated Dynamics of Free and Self-Trapped Excitons and Broadband Photodetection in BEA ₂ PbBr ₄ Layered Crystals. <i>Advanced Optical Materials</i> , 2022, 10, .	3.6	5
103	Phosphorene: Enhanced Photoresponse from Phosphorene-Phosphorene Suboxide Junction Fashioned by Focused Laser Micromachining (<i>Adv. Mater.</i> 21/2016). <i>Advanced Materials</i> , 2016, 28, 4164-4164.	11.1	4
104	Non-destructive analysis on nano-textured surface of the vertical LED for light enhancement. <i>Ultramicroscopy</i> , 2019, 196, 1-9.	0.8	4
105	Understanding the link between solid/liquid interfaces and photoelectrochemical activity in novel thin-film photoanodes of preferentially oriented high-index rutile TiO ₂ facets – A work inspired by Michel Che TM 's research on surface chemistry. <i>Journal of Catalysis</i> , 2020, 392, 186-196.	3.1	4
106	Enhancement of the catalytic performance of a CNT supported Pt nanorod cluster catalyst by controlling their microstructure. <i>RSC Advances</i> , 2015, 5, 80176-80183.	1.7	3
107	Distortion reduction in strong terahertz signals using broadband attenuators with flat transmittance. <i>Journal Physics D: Applied Physics</i> , 2016, 49, 015501.	1.3	3
108	In situ observation and investigation on the formation mechanism of nanocavities in TiO ₂ nanofibers. <i>CrystEngComm</i> , 2016, 18, 7772-7779.	1.3	3

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109	Potassium Iodide Doping Strategy for High-Efficiency Perovskite Solar Cells Revealed by Ultrafast Spectroscopy. <i>Journal of Physical Chemistry Letters</i> , 2022, 13, 711-717.	2.1	3
110	Simultaneously Improve Transferability and Discriminability for Adversarial Domain Adaptation. <i>Entropy</i> , 2022, 24, 44.	1.1	3
111	Characterization of a gene regulating antibiotic production in <i>Bacillus subtilis</i> BSD-2. <i>Biotechnology and Biotechnological Equipment</i> , 2018, 32, 332-338.	0.5	2
112	Modulation of THz radiation via enhanced Dirac plasmon-dual phonon interaction. <i>Applied Physics Letters</i> , 2019, 115, .	1.5	2
113	A simplified relationship between the modified O-lattice and the rotation matrix for generating the coincidence site lattice of an arbitrary Bravais lattice system. <i>Acta Crystallographica Section A: Foundations and Advances</i> , 2022, 78, 139-148.	0.0	2
114	Utilization of marigold (<i>Tagetes erecta</i>) flower fermentation wastewater as a fertilizer and its effect on microbial community structure in maize rhizosphere and non-rhizosphere soil. <i>Biotechnology and Biotechnological Equipment</i> , 2020, 34, 522-531.	0.5	1
115	Predicting Epitaxial Nanocrystal Morphology Governed by Interfacial Strain—The Case for NiO on SrTiO ₃ . <i>Journal of Physical Chemistry C</i> , 2021, 125, 12827-12836.	1.5	1
116	The Thinnest Light Disk: Rewritable Data Storage and Encryption on WS ₂ Monolayers (Adv.) <i>Tj ETQq0,0,0 rgBT /Overlock 1</i>	7.8	1