

# Jiabin Liu

## List of Publications by Year in descending order

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123  
papers

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87723

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126  
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times ranked

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#	ARTICLE	IF	CITATIONS
1	Enhanced plastic deformation capacity in hexagonal-close-packed medium entropy alloys via facilitating cross slip. <i>Journal of Materials Science and Technology</i> , 2023, 134, 1-10.	5.6	8
2	He-enhanced heterogeneity of radiation-induced segregation in FeNiCoCr high-entropy alloy. <i>Journal of Materials Science and Technology</i> , 2022, 101, 226-233.	5.6	14
3	Enhancing Strength and Plasticity Synergy in Transformation-Induced Plasticity-Aided Lean Duplex Stainless Steel Based on the Ultrafine-Grained Austenite. <i>Journal of Materials Engineering and Performance</i> , 2022, 31, 2487-2495.	1.2	1
4	Extreme dislocation-mediated plasticity of yttria-stabilized zirconia. <i>Materials Today Physics</i> , 2022, 22, 100588.	2.9	1
5	Predicting the property contour-map and optimum composition of Cu-Co-Si alloys via machine learning. <i>Materials Today Communications</i> , 2022, 30, 103138.	0.9	5
6	Wâ€Cu/Cu composite electrodes fabricated via laser surface alloying. <i>Materials Characterization</i> , 2022, 185, 111715.	1.9	14
7	Nanocompound-induced anti-softening mechanisms: Application to CuCr alloys. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2022, 841, 143038.	2.6	11
8	Improvement of performance stability of electrolytic copper foils by bi-component additives. <i>Journal of Applied Electrochemistry</i> , 2022, 52, 1219-1230.	1.5	8
9	Excellent thermal shock resistance of NiCrAlY coatings on copper substrate via laser cladding. <i>Journal of Materials Science and Technology</i> , 2022, 130, 93-102.	5.6	21
10	Layer-by-layer laser cladding of crack-free Zr/Nb/Cu composite cathode with excellent arc discharge homogeneity. <i>Surface and Coatings Technology</i> , 2022, 444, 128653.	2.2	1
11	Machine learning-assisted discovery of strong and conductive Cu alloys: Data mining from discarded experiments and physical features. <i>Materials and Design</i> , 2021, 197, 109248.	3.3	41
12	Trace bis-(3-sulfopropyl)-disulfide enhanced electrodeposited copper foils. <i>Journal of Materials Science and Technology</i> , 2021, 74, 237-245.	5.6	14
13	Influence of load orientations with respect to twin boundaries on the deformation behaviors of high-entropy alloy nanocrystals. <i>MRS Bulletin</i> , 2021, 46, 205-216.	1.7	8
14	Sustainable and homogeneous arc ablation behavior of zirconium cathodes improved by in situ formation of zirconium oxides. <i>Journal Physics D: Applied Physics</i> , 2021, 54, 245205.	1.3	3
15	Nanoprecipitates induced dislocation pinning and multiplication strategy for designing high strength, plasticity and conductivity Cu alloys. <i>Scripta Materialia</i> , 2021, 195, 113741.	2.6	103
16	The Effect of Heat Treatments on the Microstructural Evolution of Twin-Roll-Cast Al-Fe-Si Alloys. <i>Journal of Materials Engineering and Performance</i> , 2021, 30, 4401-4410.	1.2	3
17	CoTi precipitates: The key to high strength, high conductivity and good softening resistance in Cu-Co-Ti alloy. <i>Materials Characterization</i> , 2021, 176, 111099.	1.9	21
18	Effect of Co addition on hardness and electrical conductivity of Cuâ€Si alloys. <i>Journal of Materials Science</i> , 2021, 56, 14821-14831.	1.7	8

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19	Local chemical fluctuation mediated ductility in body-centered-cubic high-entropy alloys. <i>Materials Today</i> , 2021, 46, 28-34.	8.3	98
20	Surface hardening of CrCoFeNi high-entropy alloys via Al laser alloying. <i>Materials Research Letters</i> , 2021, 9, 437-444.	4.1	12
21	Homogeneous arc ablation behaviors of CuCr cathodes improved by chromic oxide. <i>Journal of Materials Science and Technology</i> , 2021, 81, 1-12.	5.6	31
22	Laser cladding of layered Zr/Cu composite cathode with excellent arc discharge homogeneity. <i>Surface and Coatings Technology</i> , 2021, 421, 127454.	2.2	11
23	Chromium, a promising cathode candidate for homogeneous arc erosion in air. <i>Journal Physics D: Applied Physics</i> , 2021, 54, 025304.	1.3	4
24	High strength and high conductivity Cu alloys: A review. <i>Science China Technological Sciences</i> , 2020, 63, 2505-2517.	2.0	60
25	Inhomogeneous ablation behaviors and failure mechanism of copper cathode in air. <i>Science China Technological Sciences</i> , 2020, 63, 2384-2394.	2.0	9
26	A highly stable Cu(OH) <sub>2</sub> -Poly(vinyl alcohol) nanocomposite membrane for dramatically enhanced direct borohydride fuel cell performance. <i>Journal of Power Sources</i> , 2020, 467, 228312.	4.0	8
27	Direct Observation of Room-Temperature Dislocation Plasticity in Diamond. <i>Matter</i> , 2020, 2, 1222-1232.	5.0	48
28	Atomic deformation mechanism and interface toughening in metastable high entropy alloy. <i>Materials Today</i> , 2020, 37, 64-73.	8.3	48
29	Effects of Cu addition on the microstructure and properties of the Al-Mn-Fe-Si alloy. <i>Journal of Alloys and Compounds</i> , 2020, 834, 155175.	2.8	13
30	Bilayer Anion-Exchange Membrane with Low Borohydride Crossover and Improved Fuel Efficiency for Direct Borohydride Fuel Cell. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 27184-27189.	4.0	4
31	Cold welding assisted self-healing of fractured ultrathin Au nanowires. <i>Nano Express</i> , 2020, 1, 020014.	1.2	6
32	Improved strength and enhanced pitting corrosion resistance of Al-Mn alloy with Zr addition. <i>Materials Letters</i> , 2019, 255, 126535.	1.3	22
33	Hexagonal Closed-Packed Precipitation Enhancement in a NbTiHfZr Refractory High-Entropy Alloy. <i>Metals</i> , 2019, 9, 485.	1.0	22
34	Alter martensitic phase transformation kinetics by forming Ni-rich nanolayer in metastable austenitic steels. <i>Science China Technological Sciences</i> , 2019, 62, 546-550.	2.0	13
35	Transformation-reinforced high-entropy alloys with superior mechanical properties via tailoring stacking fault energy. <i>Journal of Alloys and Compounds</i> , 2019, 792, 444-455.	2.8	90
36	Nonbasal Slip Systems Enable a Strong and Ductile Hexagonal-Close-Packed High-Entropy Phase. <i>Physical Review Letters</i> , 2019, 122, 075502.	2.9	83

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37	Approaching diamond's theoretical elasticity and strength limits. <i>Nature Communications</i> , 2019, 10, 5533.	5.8	73
38	Enhancement of strength-ductility trade-off in a high-entropy alloy through a heterogeneous structure. <i>Acta Materialia</i> , 2019, 165, 444-458.	3.8	336
39	Solving the strength-ductility tradeoff in the medium-entropy NiCoCr alloy via interstitial strengthening of carbon. <i>Intermetallics</i> , 2019, 106, 77-87.	1.8	77
40	In-situ high throughput synthesis of high-entropy alloys. <i>Scripta Materialia</i> , 2019, 160, 44-47.	2.6	20
41	Ultralarge elastic deformation of nanoscale diamond. <i>Science</i> , 2018, 360, 300-302.	6.0	208
42	Fuel permeability of anion exchange membranes under electric field. <i>Electrochimica Acta</i> , 2018, 266, 357-363.	2.6	3
43	High-order hierarchical nanotwins with superior strength and ductility. <i>Acta Materialia</i> , 2018, 149, 397-406.	3.8	85
44	Structural Directed Growth of Ultrathin Parallel Birnessite on $\beta$ -MnO <sub>2</sub> for High-Performance Asymmetric Supercapacitors. <i>ACS Nano</i> , 2018, 12, 1033-1042.	7.3	436
45	Construction of rGO wrapping octahedral Ag-Cu <sub>2</sub> O heterostructure for enhanced visible light photocatalytic activity. <i>Applied Catalysis B: Environmental</i> , 2018, 227, 132-144.	10.8	131
46	Nature-Inspired Hierarchical Steels. <i>Scientific Reports</i> , 2018, 8, 5088.	1.6	47
47	Stacking fault energy of face-centered-cubic high entropy alloys. <i>Intermetallics</i> , 2018, 93, 269-273.	1.8	312
48	Improvement of mechanical behaviors of a superlight Mg-Li base alloy by duplex phases and fine precipitates. <i>Journal of Alloys and Compounds</i> , 2018, 735, 2625-2633.	2.8	80
49	Introducing catalyst in alkaline membrane for improved performance direct borohydride fuel cells. <i>Journal of Power Sources</i> , 2018, 374, 113-120.	4.0	17
50	Enhanced strength and ductility in a high-entropy alloy via ordered oxygen complexes. <i>Nature</i> , 2018, 563, 546-550.	13.7	988
51	Unconventional Deformation Behaviours of Nanoscaled High-Entropy Alloys. <i>Entropy</i> , 2018, 20, 778.	1.1	6
52	In-situ TEM study of the dynamic interactions between dislocations and precipitates in a Cu-Cr-Zr alloy. <i>Journal of Alloys and Compounds</i> , 2018, 765, 560-568.	2.8	48
53	FeS as a promising cathode catalyst for direct borohydride fuel cells. <i>Journal of Alloys and Compounds</i> , 2018, 769, 136-140.	2.8	11
54	Light-weight isometric-phase steels with superior strength-hardness-ductility combination. <i>Scripta Materialia</i> , 2018, 154, 230-235.	2.6	11

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55	Functionalization of polyvinyl alcohol composite membrane by CoOOH for direct borohydride fuel cells. <i>Electrochemistry Communications</i> , 2017, 77, 1-4.	2.3	13
56	Deformation twinning behaviors of the low stacking fault energy high-entropy alloy: An in-situ TEM study. <i>Scripta Materialia</i> , 2017, 137, 9-12.	2.6	90
57	Synthesis of fluorine-doped $\text{Fe}_2\text{O}_3$ nanorods toward enhanced lithium storage capability. <i>Nanotechnology</i> , 2017, 28, 065401.	1.3	15
58	Vacancy-assisted oxygen reduction reaction on cobalt-based catalysts in direct borohydride fuel cell revealed by in-situ XAFS and XRD. <i>Electrochimica Acta</i> , 2017, 254, 72-78.	2.6	18
59	Impacts of atomic scale lattice distortion on dislocation activity in high-entropy alloys. <i>Extreme Mechanics Letters</i> , 2017, 17, 38-42.	2.0	52
60	Dislocation activities at the martensite phase transformation interface in metastable austenitic stainless steel: An in-situ TEM study. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2017, 703, 236-243.	2.6	78
61	In situ tem investigation on ultrafast reversible lithiation and delithiation cycling of Sn@C yolk-shell nanoparticles as anodes for lithium ion batteries. <i>Nano Energy</i> , 2017, 40, 187-194.	8.2	38
62	Synchrotron radiation <i>in situ</i> X-ray absorption fine structure and <i>in situ</i> X-ray diffraction analysis of a high-performance cobalt catalyst towards the oxygen reduction reaction. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 30749-30755.	1.3	7
63	Development of high-performance cathode catalyst of polypyrrole modified carbon supported CoOOH for direct borohydride fuel cell. <i>Journal of Power Sources</i> , 2017, 339, 13-19.	4.0	24
64	Atomistic simulation for deforming complex alloys with application toward TWIP steel and associated physical insights. <i>Journal of the Mechanics and Physics of Solids</i> , 2017, 98, 290-308.	2.3	46
65	Dislocation Strengthening without Ductility Trade-off in Metastable Austenitic Steels. <i>Scientific Reports</i> , 2016, 6, 35345.	1.6	27
66	Gradient twinned 304 stainless steels for high strength and high ductility. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2016, 667, 179-188.	2.6	87
67	Influence of heat-treatment on the dynamic behavior of 3D laser-deposited Ti-6Al-4V alloy. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2016, 677, 153-162.	2.6	50
68	Surface nanocrystallization of Mg-3 wt.% Li-6 wt.% Al alloy by surface mechanical attrition treatment. <i>Materials Characterization</i> , 2016, 120, 124-128.	1.9	28
69	Enhancing the ag precipitation by surface mechanical attrition treatment on Cu-Ag alloys. <i>Metals and Materials International</i> , 2016, 22, 831-835.	1.8	4
70	Strength gradient enhances fatigue resistance of steels. <i>Scientific Reports</i> , 2016, 6, 22156.	1.6	43
71	In-situ TEM study of the lithiation and delithiation of FeS nanosheets. <i>Journal of Alloys and Compounds</i> , 2016, 688, 946-952.	2.8	31
72	Adiabatic shear localization in nanostructured face centered cubic metals under uniaxial compression. <i>Materials and Design</i> , 2016, 105, 262-267.	3.3	20

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73	Deformation of Fe and Ag precipitates in Cu matrix. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2016, 655, 86-91.	2.6	4
74	Pulsed laser deposited NiO@NiSe nanocomposite as a new anode material for lithium storage. <i>Journal of Alloys and Compounds</i> , 2016, 661, 190-195.	2.8	27
75	Carbon coating may expedite the fracture of carbon-coated silicon core-shell nanoparticles during lithiation. <i>Nanoscale</i> , 2016, 8, 5254-5259.	2.8	50
76	In-situ TEM on the coalescence of birnessite manganese dioxides nanosheets during lithiation process. <i>Materials Research Bulletin</i> , 2016, 79, 36-40.	2.7	5
77	Strengthening Effect of Ag Precipitates in Cu-Ag Alloys: A Quantitative Approach. <i>Materials Research Letters</i> , 2016, 4, 37-42.	4.1	25
78	Preparation of FeS <sub>2</sub> nanotube arrays based on layer-by-layer assembly and their photoelectrochemical properties. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2016, 204, 38-44.	1.7	18
79	Microstructure and properties of cold drawing Cu-2.5% Fe-0.2% Cr and Cu-6% Fe alloys. <i>Journal of Zhejiang University: Science A</i> , 2015, 16, 622-629.	1.3	5
80	Construction of FeS <sub>2</sub> -sensitized ZnO@ZnS Nanorod Arrays with Enhanced Optical and Photoresponse Performances. <i>Advanced Materials Interfaces</i> , 2015, 2, 1500163.	1.9	17
81	FeS <sub>2</sub> -sensitized ZnO/ZnS nanorod arrays for the photoanodes of quantum-dot-sensitized solar cells. <i>RSC Advances</i> , 2015, 5, 105324-105328.	1.7	9
82	In situ growth of FeS microsheets with enhanced electrochemical performance for lithium-ion batteries. <i>Journal of Materials Chemistry A</i> , 2015, 3, 8742-8749.	5.2	86
83	Atomic resolution observation of conversion-type anode RuO <sub>2</sub> during the first electrochemical lithiation. <i>Nanotechnology</i> , 2015, 26, 125404.	1.3	14
84	In situ study on stability of copper oxide nanomaterials by e-beam irradiation. <i>Materials Letters</i> , 2015, 156, 134-137.	1.3	3
85	Evolution of FCC/BCC interface and its effect on the strengthening of severe drawn Cu-3wt.% Cr. <i>Journal of Alloys and Compounds</i> , 2015, 640, 45-50.	2.8	16
86	Facile fabrication of a novel nanoporous Au/AgO composite for electrochemical double-layer capacitor. <i>RSC Advances</i> , 2015, 5, 38995-39002.	1.7	10
87	Spatially-confined lithiation-delithiation in highly dense nanocomposite anodes towards advanced lithium-ion batteries. <i>Energy and Environmental Science</i> , 2015, 8, 1471-1479.	15.6	69
88	High electrocatalytic activity for borohydride oxidation on palladium nanocubes enclosed by {200} facets. <i>Journal of Power Sources</i> , 2015, 299, 241-245.	4.0	18
89	<i>In Situ</i> Study of Thermal Stability of Copper Oxide Nanowires at Anaerobic Environment. <i>Journal of Nanomaterials</i> , 2014, 2014, 1-6.	1.5	7
90	Cracking in a Fe-25Mn-3Si-3Al Steel. <i>Materials Research Letters</i> , 2014, 2, 204-208.	4.1	7

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91	Evading the strengthâ€“ductility trade-off dilemma in steel through gradient hierarchical nanotwins. <i>Nature Communications</i> , 2014, 5, 3580.	5.8	739
92	Superior flexibility of a wrinkled carbon shell under electrochemical cycling. <i>Journal of Materials Chemistry A</i> , 2014, 2, 4192.	5.2	17
93	Thickness-dependent fracture of amorphous carbon coating on SnO <sub>2</sub> nanowire electrodes. <i>Carbon</i> , 2014, 80, 793-798.	5.4	34
94	Microstructure and hardness of Cu-12% Fe composite at different drawing strains. <i>Journal of Zhejiang University: Science A</i> , 2014, 15, 149-156.	1.3	14
95	Dislocation assisted face-centered-cubic/body-centered-cubic interface mixing during severe plastic deformation. <i>Journal of Alloys and Compounds</i> , 2014, 586, 16-21.	2.8	10
96	<i>In Situ</i> TEM on the Reversibility of Nanosized Sn Anodes during the Electrochemical Reaction. <i>Chemistry of Materials</i> , 2014, 26, 4102-4108.	3.2	79
97	Template-directed synthesis of pyrite (FeS <sub>2</sub> ) nanorod arrays with an enhanced photoresponse. <i>Journal of Materials Chemistry A</i> , 2014, 2, 9496-9505.	5.2	58
98	Alignment-controlled hydrothermal growth of well-aligned ZnO nanorod arrays. <i>Journal of Physics and Chemistry of Solids</i> , 2014, 75, 808-817.	1.9	44
99	In situ study of the catalytic mechanism for the oxygen reduction reaction on a polypyrrole modified carbon supported cobalt hydroxide cathode in direct borohydride fuel cells. <i>Physical Chemistry Chemical Physics</i> , 2013, 15, 9070-9074.	1.3	8
100	Carbon supported silver nanowires with enhanced catalytic activity and stability used as a cathode in a direct borohydride fuel cell. <i>Journal of Materials Chemistry A</i> , 2013, 1, 15323.	5.2	23
101	Atomic Structure of Polypyrrole-Modified Carbon-Supported Cobalt Catalyst. <i>Journal of Physical Chemistry C</i> , 2012, 116, 20225-20229.	1.5	17
102	Microstructure-Dependent Conformal Atomic Layer Deposition on 3D Nanotopography. <i>Langmuir</i> , 2012, 28, 15809-15815.	1.6	6
103	Epitaxial TiO <sub>2</sub> /SnO <sub>2</sub> coreâ€“shell heterostructure by atomic layer deposition. <i>Journal of Materials Chemistry</i> , 2012, 22, 10665.	6.7	34
104	Nanofingers pulled from bulk silver. <i>Scripta Materialia</i> , 2012, 66, 247-249.	2.6	1
105	Effects of Cr and Zr additions on the microstructure and properties of Cuâ€“6wt.% Ag alloys. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2012, 532, 331-338.	2.6	40
106	EFFECT OF HEAVILY DRAWING ON THE MICROSTRUCTURE AND PROPERTIES OF Cu-Cr ALLOYS. <i>Jinshu Xuebao/Acta Metallurgica Sinica</i> , 2012, 48, 1459.	0.3	2
107	Electrical failure behaviors of semiconductor oxide nanowires. <i>Nanotechnology</i> , 2011, 22, 405703.	1.3	19
108	Co-deformation in Cuâ€“6wt.% Ag nanocomposites. <i>Scripta Materialia</i> , 2011, 64, 665-668.	2.6	15

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109	In situ TEM study on crack propagation in nanoscale Au thin films. Scripta Materialia, 2011, 65, 377-379.	2.6	30
110	Grain boundary structure dependent fracture in nanocrystalline Au films. Materials Letters, 2011, 65, 2769-2771.	1.3	10
111	Microstructure evolution of Cu/Ag interface in the Cu-6 wt.% Ag filamentary nanocomposite. Acta Materialia, 2011, 59, 1191-1197.	3.8	41
112	Transmission electron microscopy observation of a deformation twin in TWIP steel by an ex situ tensile test. Philosophical Magazine, 2011, 91, 4033-4044.	0.7	9
113	Microstructure and hardness evolution during isothermal process at 700°C for Fe-24Mn-0.7Si-1.0Al TWIP steel. Materials Characterization, 2010, 61, 1356-1358.	1.9	17
114	Crystal structure and morphology of a rare-earth compound in Cu-12wt.% Ag. Journal of Alloys and Compounds, 2009, 468, 73-76.	2.8	21
115	Effects of rare-earth additions on the microstructure and strength of Cu-Ag composites. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2008, 498, 392-396.	2.6	24
116	Interface structure and energy in Cu-71.8wt.% Ag. Journal of Alloys and Compounds, 2008, 464, 168-173.	2.8	31
117	Relationships between mechanical strength and electrical conductivity for Cu-Ag filamentary microcomposites. Applied Physics A: Materials Science and Processing, 2007, 86, 529-532.	1.1	13
118	Rare earth microalloying in as-cast and homogenized alloys Cu-6wt.% Ag and Cu-24wt.% Ag. Journal of Alloys and Compounds, 2006, 425, 185-190.	2.8	24
119	The characteristics of Cu-12wt.% Ag filamentary microcomposite in different isothermal process. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2006, 418, 320-325.	2.6	12
120	Microstructure evolution and properties of Cu-Ag microcomposites with different Ag content. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2006, 435-436, 237-244.	2.6	78
121	Effects of Cr addition on the microstructural, mechanical and electrical characteristics of Cu-6wt.%Ag microcomposite. Scripta Materialia, 2005, 52, 587-592.	2.6	42
122	Influence of load orientations with respect to twin boundaries on the deformation behaviors of high-entropy alloy nanocrystals. MRS Bulletin, 0, , 1-12.	1.7	0
123	Laser Cladding Fe/FeCr Coatings on Continuous Casting Cu Mold. Advanced Engineering Materials, 0, , 2200653.	1.6	0