

# Xingjun Liu

## List of Publications by Year in descending order

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116  
papers

4,605  
citations

101384

36  
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133063

59  
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116  
all docs

116  
docs citations

116  
times ranked

3657  
citing authors

#	ARTICLE	IF	CITATIONS
1	Review on Polymer-Based Composite Electrolytes for Lithium Batteries. <i>Frontiers in Chemistry</i> , 2019, 7, 522.	1.8	302
2	Nanoporous Al <sub>0.5</sub> Ni <sub>0.5</sub> Co <sub>0.5</sub> Cr <sub>0.5</sub> Mo High-Entropy Alloy for Record-High Water Splitting Activity in Acidic Environments. <i>Small</i> , 2019, 15, e1904180.	5.2	230
3	Noble Metal-Free Nanoporous High-Entropy Alloys as Highly Efficient Electrocatalysts for Oxygen Evolution Reaction. , 2019, 1, 526-533.		229
4	Nanoporous high-entropy alloys for highly stable and efficient catalysts. <i>Journal of Materials Chemistry A</i> , 2019, 7, 6499-6506.	5.2	215
5	Phase equilibria and the related properties of Sn-Ag-Cu based Pb-free solder alloys. <i>Journal of Electronic Materials</i> , 2000, 29, 1137-1144.	1.0	130
6	Nanoporous high-entropy alloys with low Pt loadings for high-performance electrochemical oxygen reduction. <i>Journal of Catalysis</i> , 2020, 383, 164-171.	3.1	125
7	Rugged High-Entropy Alloy Nanowires with in Situ Formed Surface Spinel Oxide As Highly Stable Electrocatalyst in Zn-Air Batteries. , 2020, 2, 1698-1706.		114
8	Zintl-phase Eu <sub>2</sub> ZnSb <sub>2</sub> : A promising thermoelectric material with ultralow thermal conductivity. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 2831-2836.	3.3	103
9	Thermodynamic database for phase diagrams in micro-soldering alloys. <i>Journal of Electronic Materials</i> , 1999, 28, 1164-1171.	1.0	96
10	Multi-component nanoporous alloy/(oxy)hydroxide for bifunctional oxygen electrocatalysis and rechargeable Zn-air batteries. <i>Applied Catalysis B: Environmental</i> , 2020, 268, 118431.	10.8	96
11	Formation of core-type macroscopic morphologies in Cu-Fe base alloys with liquid miscibility gap. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2004, 35, 1243-1253.	1.1	95
12	MOF Structure Engineering to Synthesize Co <sub>1-x</sub> Ni <sub>x</sub> C Catalyst with Richer Accessible Active Sites for Enhanced Oxygen Reduction. <i>Small</i> , 2021, 17, e2104684.	5.2	94
13	Top-Down Synthesis of Noble Metal Particles on High-Entropy Oxide Supports for Electrocatalysis. <i>Chemistry of Materials</i> , 2021, 33, 1771-1780.	3.2	92
14	Studies of the Ag-In phase diagram and surface tension measurements. <i>Journal of Electronic Materials</i> , 2001, 30, 1120-1128.	1.0	88
15	Thermodynamic assessment of the Aluminum-Manganese (Al-Mn) binary phase diagram. <i>Journal of Phase Equilibria and Diffusion</i> , 1999, 20, 45-56.	0.3	87
16	Thermodynamic assessment of the phase diagrams of the Cu-Sb and Sb-Zn systems. <i>Journal of Phase Equilibria and Diffusion</i> , 2000, 21, 432-442.	0.3	85
17	Recent Progress on Topological Structures in Ferroic Thin Films and Heterostructures. <i>Advanced Materials</i> , 2021, 33, e2000857.	11.1	84
18	High-strength Co-Al-V-base superalloys strengthened by $\gamma_3$ -Co <sub>3</sub> (Al,V) with high solvus temperature. <i>Acta Materialia</i> , 2019, 170, 62-74.	3.8	83

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19	Experimental determination and thermodynamic calculation of the phase equilibria in the Cu-In-Sn system. <i>Journal of Electronic Materials</i> , 2001, 30, 1093-1103.	1.0	81
20	High-performance n-type $\text{Mg}_3\text{Sb}_2$ towards Thermoelectric Application near Room Temperature. <i>Advanced Functional Materials</i> , 2020, 30, 1906143.	7.8	78
21	Experimental determination and thermodynamic calculation of the phase equilibria and surface tension in the Sn-Ag-In system. <i>Journal of Electronic Materials</i> , 2002, 31, 1139-1151.	1.0	75
22	Experimental investigation and thermodynamic calculation of the phase equilibria in the Cu-Sn and Cu-Sn-Mn systems. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2004, 35, 1641-1654.	1.1	68
23	Reliable n-type $\text{Mg}_3.2\text{Sb}_{1.5}\text{Bi}_{0.49}\text{Te}_{0.01}/304$ stainless steel junction for thermoelectric applications. <i>Acta Materialia</i> , 2020, 198, 25-34.	3.8	62
24	Ultrathin carbon nanosheets for highly efficient capacitive K-ion and Zn-ion storage. <i>Journal of Materials Chemistry A</i> , 2020, 8, 22874-22885.	5.2	58
25	Heavy Doping by Bromine to Improve the Thermoelectric Properties of n-type Polycrystalline SnSe. <i>Advanced Science</i> , 2018, 5, 1800598.	5.6	57
26	Twelve-Component Free-Standing Nanoporous High-Entropy Alloys for Multifunctional Electrocatalysis. , 2022, 4, 181-189.		50
27	Thermodynamic assessment of the Cu-In binary system. <i>Journal of Phase Equilibria and Diffusion</i> , 2002, 23, 409-415.	0.3	47
28	Flexible Solid-State Direct Ethanol Fuel Cell Catalyzed by Nanoporous High-Entropy $\text{AlPdNiCuMo}$ Anode and Spinel $(\text{AlMnCo})_3\text{O}_4$ Cathode. <i>Advanced Functional Materials</i> , 2021, 31, 2007129.	7.8	47
29	Microsphere Pattern Prepared by a "Reverse" Breath Figure Method. <i>Macromolecules</i> , 2009, 42, 9351-9356.	2.2	46
30	Modulating the Surface Ligand Orientation for Stabilized Anionic Redox in Li-Rich Oxide Cathodes. <i>Advanced Energy Materials</i> , 2021, 11, 2003479.	10.2	45
31	n-Type TaCoSn-Based Half-Heuslers as Promising Thermoelectric Materials. <i>ACS Applied Materials &amp; Interfaces</i> , 2019, 11, 41321-41329.	4.0	44
32	A Dual Role by Incorporation of Magnesium in $\text{YbZn}_2\text{Sb}_2$ Zintl Phase for Enhanced Thermoelectric Performance. <i>Advanced Energy Materials</i> , 2020, 10, 2001229.	10.2	44
33	Mechanical-force-induced non-local collective ferroelastic switching in epitaxial lead-titanate thin films. <i>Nature Communications</i> , 2019, 10, 3951.	5.8	43
34	Enhanced thermoelectric performance of n-type TiCoSb half-Heusler by Ta doping and Hf alloying. <i>Rare Metals</i> , 2021, 40, 40-47.	3.6	43
35	Enhanced Thermoelectric Performance in High Entropy Alloys $\text{Sn}_{0.25}\text{Pb}_{0.25}\text{Mn}_{0.25}\text{Ge}_{0.25}\text{Te}$ . <i>ACS Applied Materials &amp; Interfaces</i> , 2021, 13, 18638-18647.	4.0	43
36	Phase equilibria of Sn-In based micro-soldering alloys. <i>Journal of Electronic Materials</i> , 2000, 29, 1113-1121.	1.0	41

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37	Thermodynamic database on microsolders and copper-based alloy systems. <i>Journal of Electronic Materials</i> , 2003, 32, 1265-1272.	1.0	40
38	Experimental studies and thermodynamic optimization of the Ni-Bi system. <i>Journal of Phase Equilibria and Diffusion</i> , 2005, 26, 161-168.	0.5	40
39	Eight-Component Nanoporous High-Entropy Oxides with Low Ru Contents as High-Performance Bifunctional Catalysts in Zn-Air Batteries. <i>Small</i> , 2022, 18, e2107207.	5.2	40
40	Enhanced thermoelectric performance of p-type Mg <sub>3</sub> Sb <sub>2</sub> by lithium doping and its tunability in an anionic framework. <i>Journal of Materials Science</i> , 2018, 53, 16001-16009.	1.7	37
41	Oriented Formation of a Prussian Blue Nanoflower as a High Performance Cathode for Sodium Ion Batteries. <i>ACS Sustainable Chemistry and Engineering</i> , 2020, 8, 16229-16240.	3.2	37
42	Thermodynamic database of the phase diagrams in Cu-Fe base ternary systems. <i>Journal of Phase Equilibria and Diffusion</i> , 2004, 25, 320-328.	0.5	36
43	Promising Zintl-Phase Thermoelectric Compound SrAgSb. <i>Chemistry of Materials</i> , 2020, 32, 6983-6989.	3.2	36
44	Fast and stable K-ion storage enabled by synergistic interlayer and pore-structure engineering. <i>Nano Research</i> , 2021, 14, 4502-4511.	5.8	36
45	A four-state memory cell based on magnetoelectric composite. <i>Science Bulletin</i> , 2008, 53, 2135-2138.	4.3	33
46	Passive Radiative Cooling Enables Improved Performance in Wearable Thermoelectric Generators. <i>Small</i> , 2022, 18, e2106875.	5.2	33
47	A Novel Self-Assembling Al-based Composite Powder with High Hydrogen Generation Efficiency. <i>Scientific Reports</i> , 2015, 5, 17428.	1.6	30
48	Experimental investigation and thermodynamic calculation of phase equilibria in the Sn-Au-Ni system. <i>Journal of Electronic Materials</i> , 2005, 34, 670-679.	1.0	28
49	N-type Bi-doped SnSe Thermoelectric Nanomaterials Synthesized by a Facile Solution Method. <i>Inorganic Chemistry</i> , 2018, 57, 13800-13808.	1.9	28
50	Manipulating the intrinsic vacancies for enhanced thermoelectric performance in Eu <sub>2</sub> ZnSb <sub>2</sub> Zintl phase. <i>Nano Energy</i> , 2020, 73, 104771.	8.2	28
51	Accelerated discovery of high-performance Cu-Ni-Co-Si alloys through machine learning. <i>Materials and Design</i> , 2021, 209, 109929.	3.3	25
52	The use of phase diagrams and thermodynamic databases for electronic materials. <i>Jom</i> , 2003, 55, 53-59.	0.9	24
53	Unsupervised machine learning for discovery of promising half-Heusler thermoelectric materials. <i>Npj Computational Materials</i> , 2022, 8, .	3.5	24
54	A jumping shape memory alloy under heat. <i>Scientific Reports</i> , 2016, 6, 21754.	1.6	23

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55	A general and scalable approach to produce nanoporous alloy nanowires with rugged ligaments for enhanced electrocatalysis. <i>Journal of Materials Chemistry A</i> , 2018, 6, 12541-12550.	5.2	23
56	Precipitation behavior in G-phase strengthened ferritic stainless steels. <i>Acta Materialia</i> , 2021, 205, 116542.	3.8	23
57	High-Performance Spectrally Selective Absorber Using the ZrB <sub>2</sub> -Based All-Ceramic Coatings. <i>ACS Applied Materials &amp; Interfaces</i> , 2021, 13, 40522-40530.	4.0	23
58	Multicomponent Spinel Metal Oxide Nanocomposites as High-Performance Bifunctional Catalysts in Zn-Air Batteries. <i>ACS Applied Energy Materials</i> , 2020, 3, 7710-7718.	2.5	22
59	Enhanced Thermoelectric Properties in p-Type Double Half-Heusler Ti <sub>2</sub> HfFeNiSb <sub>2</sub> Sn Compounds. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2020, 217, 2000096.	0.8	22
60	Phase Boundary Mapping in ZrNiSn Half-Heusler for Enhanced Thermoelectric Performance. <i>Research</i> , 2020, 2020, 4630948.	2.8	22
61	Vacancy ordering induced topological electronic transition in bulk Eu <sub>2</sub> ZnSb <sub>2</sub> . <i>Science Advances</i> , 2021, 7, .	4.7	21
62	Point defect approach to enhance the thermoelectric performance of Zintl-phase BaAgSb. <i>Science China Materials</i> , 2021, 64, 2541-2550.	3.5	19
63	Inhibiting Surface Diffusion to Synthesize 3D Bicontinuous Nanoporous N-Doped Carbon for Boosting Oxygen Reduction Reaction in Flexible All-Solid-State Al-Air Batteries. <i>Advanced Functional Materials</i> , 2021, 31, 2103632.	7.8	19
64	Phase stability among the $\hat{1}$ (A1), $\hat{2}$ (A2), and $\hat{3}$ (D83) phases in the Cu-Al-X system. <i>Journal of Phase Equilibria and Diffusion</i> , 2001, 22, 431-438.	0.3	18
65	Influence of microstructural features on thermal expansion coefficient in graphene/epoxy composites. <i>Heliyon</i> , 2016, 2, e00094.	1.4	18
66	In situ coupling of Ag nanoparticles with high-entropy oxides as highly stable bifunctional catalysts for wearable Zn-Ag/Zn-air hybrid batteries. <i>Nanoscale</i> , 2021, 13, 16164-16171.	2.8	18
67	Enhanced Thermoelectric Performance of Zintl Phase Ca <sub>9</sub> Zn <sub>4</sub> Sb <sub>9</sub> by Beneficial Disorder on the Selective Cationic Site. <i>ACS Applied Materials &amp; Interfaces</i> , 2019, 11, 37741-37747.	4.0	17
68	Novel core/void/shell composite phase change materials for high temperature thermal energy storage. <i>Chemical Engineering Journal</i> , 2020, 391, 123539.	6.6	17
69	Defect Engineering for Realizing p-Type AgBiSe <sub>2</sub> with a Promising Thermoelectric Performance. <i>Chemistry of Materials</i> , 2020, 32, 3528-3536.	3.2	17
70	CALPHAD as a powerful technique for design and fabrication of thermoelectric materials. <i>Journal of Materials Chemistry A</i> , 2021, 9, 6634-6649.	5.2	16
71	Stabilizing the Optimal Carrier Concentration in Al/Sb-Codoped GeTe for High Thermoelectric Performance. <i>ACS Applied Materials &amp; Interfaces</i> , 2021, 13, 45717-45725.	4.0	16
72	Novel and durable composite phase change thermal energy storage materials with controllable melting temperature. <i>Journal of Materials Science and Technology</i> , 2021, 86, 11-19.	5.6	16

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73	Tuning the Carrier Scattering Mechanism by Rare-Earth Element Doping for High Average $\langle i \rangle z T \langle /i \rangle$ in $\text{Mg}_{3-x}\text{Sb}_{2+x}$ -Based Compounds. <i>ACS Applied Materials &amp; Interfaces</i> , 2022, 14, 7022-7029.	4.0	16
74	Highly Strengthened and Toughened Zn-Li-Mn Alloys as Long-Cycling Life and Dendrite-Free Zn Anode for Aqueous Zinc-Ion Batteries. <i>Small</i> , 2022, 18, e2200787.	5.2	16
75	Effects of Nb and W Additions on the Microstructures and Mechanical Properties of Novel $\text{Ti}_3\text{Al}$ Co-V-Ti-Based Superalloys. <i>Metals</i> , 2018, 8, 563.	1.0	15
76	Titanium Doping to Enhance Thermoelectric Performance of $19\text{-electron VCoSb}$ Half-Heusler Compounds with Vanadium Vacancies. <i>Annalen Der Physik</i> , 2020, 532, 1900440.	0.9	15
77	Enhanced Thermoelectric Performance in $\text{N-type Mg}_{3.2}\text{Sb}_{1.5}\text{Bi}_{0.5}$ by La or Ce Doping into Mg. <i>Advanced Electronic Materials</i> , 2020, 6, 1901391.	2.6	15
78	Experimental Investigation of Phase Equilibria in the Ni-Cr-Si Ternary System. <i>Journal of Phase Equilibria and Diffusion</i> , 2014, 35, 334-342.	0.5	14
79	A comprehensive study of the high-pressure-temperature phase diagram of silicon. <i>Journal of Materials Science</i> , 2018, 53, 7475-7485.	1.7	14
80	Inhibited Surface Diffusion of High-Entropy Nano-Alloys for the Preparation of 3D Nanoporous Graphene with High Amounts of Single Atom Dopants. , 2022, 4, 978-986.		14
81	Thermodynamic Description of the Cu-Ni-Si System. <i>Journal of Phase Equilibria and Diffusion</i> , 2014, 35, 93-104.	0.5	13
82	Corrosion Engineering To Synthesize Ultrasmall and Monodisperse Alloy Nanoparticles Stabilized in Ultrathin Cobalt (Oxy)hydroxide for Enhanced Electrocatalysis. <i>ACS Applied Materials &amp; Interfaces</i> , 2019, 11, 14745-14752.	4.0	13
83	Organic/Inorganic Hybrid Design as a Route for Promoting the $\text{Bi}_{0.5}\text{Sb}_{1.5}\text{Te}_3$ for High-Performance Thermoelectric Power Generation. <i>Advanced Functional Materials</i> , 2022, 32, .	7.8	13
84	Band Modulation and Strain Fluctuation for Realizing High Average $\langle i \rangle z T \langle /i \rangle$ in GeTe. <i>Advanced Energy Materials</i> , 2022, 12, .	10.2	13
85	Thermodynamics and liquid phase separation in the Cu-Co-Nb ternary alloys. <i>Journal of Materials Research</i> , 2010, 25, 1706-1717.	1.2	12
86	Atomic-Level Mechanisms of Nucleation of Pure Liquid Metals during Rapid Cooling. <i>ChemPhysChem</i> , 2015, 16, 3916-3927.	1.0	12
87	Portable water-using $\text{H}_2$ production materials converted from waste aluminum. <i>Energy Sources, Part A: Recovery, Utilization and Environmental Effects</i> , 2018, 40, 1991-1997.	1.2	12
88	Dominant role of M element on the stability and properties of Prussian blue analogues $\text{Na}_x\text{MFe}(\text{CN})_6$ (M=3d transition metal) as cathode material for the sodium-ion batteries. <i>Journal of Alloys and Compounds</i> , 2021, 870, 159533.	2.8	12
89	Effects of jet milling on W-10 wt.%Cu composite powder for injection molding. <i>Journal of Materials Research and Technology</i> , 2020, 9, 8535-8543.	2.6	11
90	Integrate multifunctional ionic sieve lithiated X zeolite-ionic liquid electrolyte for solid-state lithium metal batteries with ultralong lifespan. <i>Chemical Engineering Journal</i> , 2022, 433, 133522.	6.6	11

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91	Development of phase change materials using hydrolyzed Al-Bi composite powder for solar energy storage. <i>Chemical Engineering Journal</i> , 2021, 421, 127836.	6.6	10
92	Experimental Investigation of Phase Equilibria in the Co-Cr-Nb System at 1000, 1100, and 1200°C. <i>Journal of Phase Equilibria and Diffusion</i> , 2013, 34, 313-321.	0.5	9
93	The Influence of Flexural Deformation on the Static Magnetoelectric Coefficient of a Bilayered Magnetoelectric Composite. <i>Materials Research Letters</i> , 2013, 1, 45-50.	4.1	9
94	Experimental investigation of phase equilibria in the Co-Cr-W ternary system. <i>International Journal of Materials Research</i> , 2013, 104, 836-842.	0.1	8
95	Microstructure, martensitic transformation and shape memory effect of polycrystalline Cu-Al-Mn-Fe alloys. <i>Science China Technological Sciences</i> , 2021, 64, 400-406.	2.0	8
96	Experimental Investigation of Phase Equilibria in the Fe-Si-Ti Ternary System. <i>Journal of Phase Equilibria and Diffusion</i> , 2017, 38, 865-873.	0.5	7
97	Experimental Investigation and Thermodynamic Calculation of the Phase Equilibria in the Cu-Fe-Ta System. <i>Journal of Phase Equilibria and Diffusion</i> , 2015, 36, 28-38.	0.5	6
98	Experimental Determination of Phase Equilibria in the Sn-Zn-Sb System. <i>Journal of Phase Equilibria and Diffusion</i> , 2015, 36, 350-356.	0.5	6
99	Development of Cu-Mn-Ga-based ferromagnetic shape memory single crystals. <i>Materialia</i> , 2020, 12, 100789.	1.3	6
100	Multicomponent Co-Ti-based superalloy with high solvus temperature and low lattice misfit. <i>Materials Letters</i> , 2021, 284, 128910.	1.3	6
101	Enhanced Piezoelectricity and Excellent Thermal Stability in Sm <sup>3+</sup> -Doped BiFeO <sub>3</sub> -PbTiO <sub>3</sub> Ceramics. <i>ACS Applied Electronic Materials</i> , 2022, 4, 807-813.	2.0	6
102	Thermodynamic assessment of phase equilibria in the Sn-Au-Bi system with key experimental verification. <i>Journal of Materials Research</i> , 2010, 25, 576-586.	1.2	5
103	Experimental investigation of phase equilibria in the Ni-Fe-Zr ternary system. <i>Journal of Materials Research</i> , 2016, 31, 2407-2414.	1.2	5
104	Effects of Bonding Treatment and Ball Milling on W-20 wt.% Cu Composite Powder for Injection Molding. <i>Materials</i> , 2021, 14, 1897.	1.3	5
105	Experimental determination and thermodynamic calculation of the phase equilibria in the Co-Mn-Ta system. <i>International Journal of Materials Research</i> , 2014, 105, 1179-1190.	0.1	4
106	Experimental Investigation and Thermodynamic Calculation of the Phase Equilibria in the Bi-Cu-Zn Ternary System. <i>Journal of Phase Equilibria and Diffusion</i> , 2014, 35, 530-543.	0.5	3
107	Experimental investigation of phase equilibria in the Nb-Si-Ta ternary system. <i>International Journal of Materials Research</i> , 2016, 107, 1112-1120.	0.1	3
108	Experimental investigation of phase equilibria in the Ni-Nb-V ternary system. <i>International Journal of Materials Research</i> , 2017, 108, 767-775.	0.1	3

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109	Boosting Total Conversion Efficiency of Hybrid PVT <i>via</i> a Spectral Splitter/Absorber Based on Lossy Periodic Structured Media. <i>Solar Rrl</i> , 0, , .	3.1	3
110	Thermodynamic Assessment of the Ti-Ir System. <i>Journal of Phase Equilibria and Diffusion</i> , 2014, 35, 269-275.	0.5	2
111	The pressure-temperature phase diagram of pure Co based on first-principles calculations. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 22061-22068.	1.3	2
112	Development of materials design tool and its application in Pb-free micro-solders in electronic package. <i>Science China Technological Sciences</i> , 2010, 53, 1495-1500.	2.0	1
113	The Effect of Temperature and Misfit on $\text{Ni}_3\text{Al}$ Precipitation in Co-Ti Alloys: Phase-Field Modeling and Experiments. <i>Journal of Phase Equilibria and Diffusion</i> , 2020, 41, 15-26.	0.5	1
114	Inhibiting Surface Diffusion to Synthesize 3D Bicontinuous Nanoporous N-Doped Carbon for Boosting Oxygen Reduction Reaction in Flexible All-Solid-State Air Batteries ( <i>Adv. Funct. Mater.</i> 38/2021). <i>Advanced Functional Materials</i> , 2021, 31, 2170284.	7.8	1
115	Experimental Investigation and Thermodynamic Calculation of Phase Equilibria in the Mg-Pb-Sn Ternary System. <i>Journal of Phase Equilibria and Diffusion</i> , 2018, 39, 324-343.	0.5	0
116	Abnormal orderly transformation in supercooled state of an Al-based alloy. <i>Physical Review Materials</i> , 2020, 4, .	0.9	0