Ke Jin

List of Publications by Year
in descending order

94 papers	5,454 citations	76326 40 h-index	82547 72 g-index
94 all docs	94 docs citations	94 times ranked	3232 citing authors

#	Article	IF	Citations
1	Enhancing radiation tolerance by controlling defect mobility and migration pathways in multicomponent single-phase alloys. Nature Communications, 2016, 7, 13564.	12.8	533
2	Influence of chemical disorder on energy dissipation and defect evolution in concentrated solid solution alloys. Nature Communications, 2015, 6, 8736.	12.8	477
3	Mechanism of Radiation Damage Reduction in Equiatomic Multicomponent Single Phase Alloys. Physical Review Letters, 2016, 116, 135504.	7.8	359
4	Local Structure and Short-Range Order in a NiCoCr Solid Solution Alloy. Physical Review Letters, 2017, 118, 205501.	7.8	283
5	Effects of compositional complexity on the ion-irradiation induced swelling and hardening in Ni-containing equiatomic alloys. Scripta Materialia, 2016, 119, 65-70.	5.2	244
6	Radiation-induced segregation on defect clusters in single-phase concentrated solid-solution alloys. Acta Materialia, 2017, 127, 98-107.	7.9	212
7	Tailoring the physical properties of Ni-based single-phase equiatomic alloys by modifying the chemical complexity. Scientific Reports, 2016, 6, 20159.	3.3	166
8	Mechanisms of radiation-induced segregation in CrFeCoNi-based single-phase concentrated solid solution alloys. Acta Materialia, 2017, 126, 182-193.	7.9	133
9	Direct Observation of Defect Range and Evolution in Ion-Irradiated Single Crystalline Ni and Ni Binary Alloys. Scientific Reports, 2016, 6, 19994.	3.3	131
10	Point defect evolution in Ni, NiFe and NiCr alloys from atomistic simulations and irradiation experiments. Acta Materialia, 2015, 99, 69-76.	7.9	120
11	New ion beam materials laboratory for materials modification and irradiation effects research. Nuclear Instruments & Methods in Physics Research B, 2014, 338, 19-30.	1.4	118
12	Electric energy generation in single track-etched nanopores. Applied Physics Letters, 2008, 93, .	3.3	111
13	Influence of chemical disorder on energy dissipation and defect evolution in advanced alloys. Journal of Materials Research, 2016, 31, 2363-2375.	2.6	110
14	Synergy of elastic and inelastic energy loss on ion track formation in SrTiO3. Scientific Reports, 2015, 5, 7726.	3.3	98
15	Thermophysical properties of Ni-containing single-phase concentrated solid solution alloys. Materials and Design, 2017, 117, 185-192.	7.0	96
16	Local lattice distortion in NiCoCr, FeCoNiCr and FeCoNiCrMn concentrated alloys investigated by synchrotron X-ray diffraction. Materials and Design, 2018, 155, 1-7.	7.0	96
17	Influence of irradiation temperature on void swelling in NiCoFeCrMn and NiCoFeCrPd. Scripta Materialia, 2019, 158, 57-61.	5.2	74
18	Evolution of local lattice distortion under irradiation in medium- and high-entropy alloys. Materialia, 2018, 2, 73-81.	2.7	67

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19	Understanding of the Elemental Diffusion Behavior in Concentrated Solid Solution Alloys. Journal of Phase Equilibria and Diffusion, 2017, 38, 434-444.	1.4	65
20	Effects of Fe concentration on the ion-irradiation induced defect evolution and hardening in Ni-Fe solid solution alloys. Acta Materialia, 2016, 121, 365-373.	7.9	64
21	The effect of electronic energy loss on irradiation-induced grain growth in nanocrystalline oxides. Physical Chemistry Chemical Physics, 2014, 16, 8051-8059.	2.8	62
22	Enhanced damage resistance and novel defect structure of CrFeCoNi under in situ electron irradiation. Scripta Materialia, 2016, 125, 5-9.	5.2	62
23	Pressure-induced fcc to hcp phase transition in Ni-based high entropy solid solution alloys. Applied Physics Letters, 2017, 110, .	3.3	62
24	Ion irradiation induced defect evolution in Ni and Ni-based FCC equiatomic binary alloys. Journal of Nuclear Materials, 2016, 471, 193-199.	2.7	55
25	Effect of alloying elements on defect evolution in Ni-20X binary alloys. Acta Materialia, 2018, 151, 159-168.	7.9	55
26	Chemical complexity induced local structural distortion in NiCoFeMnCr high-entropy alloy. Materials Research Letters, 2018, 6, 450-455.	8.7	54
27	Influence of compositional complexity on interdiffusion in Ni-containing concentrated solid-solution alloys. Materials Research Letters, 2018, 6, 293-299.	8.7	52
28	Enhanced strength and ductility of a tungsten-doped CoCrNi medium-entropy alloy. Journal of Materials Research, 2018, 33, 3301-3309.	2.6	51
29	Quantum Critical Behavior in a Concentrated Ternary Solid Solution. Scientific Reports, 2016, 6, 26179.	3.3	50
30	Fabrication of highly dense isotropic Nd-Fe-B nylon bonded magnets via extrusion-based additive manufacturing. Additive Manufacturing, 2018, 21, 495-500.	3.0	48
31	Intrinsic properties and strengthening mechanism of monocrystalline Ni-containing ternary concentrated solid solutions. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 695, 74-79.	5.6	47
32	Irradiation-induced damage evolution in concentrated Ni-based alloys. Acta Materialia, 2017, 135, 54-60.	7.9	46
33	Enhanced void swelling in NiCoFeCrPd high-entropy alloy by indentation-induced dislocations. Materials Research Letters, 2018, 6, 584-591.	8.7	46
34	Single-Phase Concentrated Solid-Solution Alloys: Bridging Intrinsic Transport Properties and Irradiation Resistance. Frontiers in Materials, 2018, 5, .	2.4	45
35	A comparison study of local lattice distortion in Ni80Pd20 binary alloy and FeCoNiCrPd high-entropy alloy. Scripta Materialia, 2018, 156, 14-18.	5.2	45
36	Helium irradiated cavity formation and defect energetics in Ni-based binary single-phase concentrated solid solution alloys. Acta Materialia, 2019, 164, 283-292.	7.9	44

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37	A coupled effect of nuclear and electronic energy loss on ion irradiation damage in lithium niobate. Acta Materialia, 2016, 105, 429-437.	7.9	43
38	The effect of injected interstitials on void formation in self-ion irradiated nickel containing concentrated solid solution alloys. Journal of Nuclear Materials, 2017, 488, 328-337.	2.7	43
39	Formation and growth of stacking fault tetrahedra in Ni via vacancy aggregation mechanism. Scripta Materialia, 2016, 114, 137-141.	5.2	42
40	Phase stability of single phase Al0.12CrNiFeCo high entropy alloy upon irradiation. Materials and Design, 2018, 160, 1208-1216.	7.0	41
41	Delayed damage accumulation by athermal suppression of defect production in concentrated solid solution alloys. Materials Research Letters, 2018, 6, 136-141.	8.7	39
42	Electronic stopping powers for heavy ions in SiC and SiO2. Journal of Applied Physics, 2014, 115, 044903.	2.5	36
43	Surface Modification of Single Track-Etched Nanopores with Surfactant CTAB. Langmuir, 2009, 25, 8870-8874.	3.5	35
44	Interstitial migration behavior and defect evolution in ion irradiated pure nickel and Ni-xFe binary alloys. Journal of Nuclear Materials, 2018, 509, 237-244.	2.7	34
45	Effects of chemical alternation on damage accumulation in concentrated solid-solution alloys. Scientific Reports, 2017, 7, 4146.	3.3	32
46	Thermal Stability and Mechanical Properties of Low-Activation Single-Phase Ti-V-Ta Medium Entropy Alloys. Jom, 2019, 71, 3490-3498.	1.9	32
47	Evolution of ion damage at 773K in Ni- containing concentrated solid-solution alloys. Journal of Nuclear Materials, 2018, 501, 132-142.	2.7	30
48	Amorphization due to electronic energy deposition in defective strontium titanate. Acta Materialia, 2017, 127, 400-406.	7.9	29
49	Lattice Distortion and Phase Stability of Pd-Doped NiCoFeCr Solid-Solution Alloys. Entropy, 2018, 20, 900.	2.2	27
50	Ferromagnetism and Nonmetallic Transport of Thin-Film<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>Î±</mml:mi><mml:mtext>â^'</mml:mtext><mml:msub><mml:mrow><mml:mi>FeSi</mml:mi><mml:mi> A Stabilized Metastable Material. Physical Review Letters, 2015, 114, 147202.	7.8	26
51	Investigation of defect clusters in ion-irradiated Ni and NiCo using diffuse X-ray scattering and electron microscopy. Journal of Nuclear Materials, 2016, 469, 153-161.	2.7	26
52	Irradiation effects of medium-entropy alloy NiCoCr with and without pre-indentation. Journal of Nuclear Materials, 2019, 524, 60-66.	2.7	25
53	Argon Cluster Sputtering Source for ToF-SIMS Depth Profiling of Insulating Materials: High Sputter Rate and Accurate Interfacial Information. Journal of the American Society for Mass Spectrometry, 2015, 26, 1283-1290.	2.8	24
54	Quantifying early stage irradiation damage from nanoindentation pop-in tests. Scripta Materialia, 2018, 157, 49-53.	5.2	24

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55	A novel stress-induced martensitic transformation in a single-phase refractory high-entropy alloy. Scripta Materialia, 2020, 189, 129-134.	5.2	23
56	Interpreting nanovoids in atom probe tomography data for accurate local compositional measurements. Nature Communications, 2020, 11, 1022.	12.8	23
57	Helium bubble formation in refractory single-phase concentrated solid solution alloys under MeV He ion irradiation. Journal of Nuclear Materials, 2021, 550, 152937.	2.7	23
58	Ion distribution and electronic stopping power for Au ions in silicon carbide. Nuclear Instruments & Methods in Physics Research B, 2013, 307, 65-70.	1.4	22
59	Synergistic effects of nuclear and electronic energy deposition on damage production in KTaO₃. Materials Research Letters, 2018, 6, 531-536.	8.7	22
60	From suppressed void growth to significant void swelling in NiCoFeCr complex concentrated solid-solution alloy. Materialia, 2020, 9, 100603.	2.7	22
61	Unfolding the complexity of phonon quasi-particle physics in disordered materials. Npj Computational Materials, 2020, 6, .	8.7	22
62	An as-cast Ti-V-Cr-Al light-weight medium entropy alloy with outstanding tensile properties. Journal of Alloys and Compounds, 2021, 877, 160199.	5.5	22
63	Synergistic effects of nuclear and electronic energy loss in KTaO3 under ion irradiation. AIP Advances, 2017, 7, .	1.3	21
64	Effects of Fe concentration on helium bubble formation in NiFex single-phase concentrated solid solution alloys. Materialia, 2019, 5, 100183.	2.7	21
65	Channeling analysis in studying ion irradiation damage in materials containing various types of defects. Journal of Nuclear Materials, 2019, 517, 9-16.	2.7	20
66	Microstructures and mechanical properties of Taâ€“Nbâ€“Zrâ€“Tiâ€“Al refractory high entropy alloys with varying Ta/Ti ratios. Tungsten, 2021, 3, 406-414.	4.8	20
67	Quantum critical behavior in the asymptotic limit of high disorder in the medium entropy alloy NiCoCr0.8. Npj Quantum Materials, 2017, 2, .	5.2	18
68	Temperature-dependent defect accumulation and evolution in Ni-irradiated NiFe concentrated solid-solution alloy. Journal of Nuclear Materials, 2019, 519, 1-9.	2.7	16
69	Phase stability of an high-entropy Al-Cr-Fe-Ni-V alloy with exceptional mechanical properties: First-principles and APT investigations. Computational Materials Science, 2019, 170, 109161.	3.0	15
70	Defect evolution in Ni and NiCoCr by in situ 2.8â€¯MeV Au irradiation. Journal of Nuclear Materials, 2019, 523, 502-509.	2.7	15
71	Diffusion-mediated chemical concentration variation and void evolution in ion-irradiated NiCoFeCr high-entropy alloy. Journal of Materials Research, 2021, 36, 298-310.	2.6	15
72	Ab initio molecular dynamics investigations of low-energy recoil events in Ni and NiCo. Journal of Physics Condensed Matter, 2015, 27, 435006.	1.8	14

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73	Origin of increased helium density inside bubbles in Ni<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si1.svg"><mml:msub><mml:mrow /><mml:mrow><mml:mo>(</mml:mo><mml:mn>1</mml:mn><mml:mo>â^’</mml:mo><mml:mi>x</mml:mi><mml:mo>)</mml:mo><mml:mo><mml:mn alloys. Scripta Materialia, 2021, 191, 1-6.	5.2	14
74	Helium ion irradiation enhanced precipitation and the impact on cavity formation in a HfNbZrTi refractory high entropy alloy. Journal of Nuclear Materials, 2021, 552, 153023.	2.7	14
75	ToF-SIMS depth profiling of insulating samples, interlaced mode or non-interlaced mode?. Surface and Interface Analysis, 2014, 46, 257-260.	1.8	11
76	Local structure of NiPd solid solution alloys and its response to ion irradiation. Journal of Alloys and Compounds, 2018, 755, 242-250.	5.5	10
77	Mechanical behavior of the HfNbZrTi high entropy alloy after ion irradiation based on micro-pillar compression tests. Journal of Alloys and Compounds, 2022, 892, 162043.	5.5	10
78	Multi-axial and multi-energy channeling study of disorder evolution in ion-irradiated nickel. Journal of Nuclear Materials, 2019, 525, 92-101.	2.7	8
79	Thermal stability of (CoCrFeNi)94Ti2Al4 alloy containing coherent nanoprecipitates at intermediate temperatures. Materialia, 2020, 12, 100775.	2.7	8
80	Optimization of heat treatment process of Alâ€“Mgâ€“Si cast alloys with Zn additions by simulation and experimental investigations. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 2019, 67, 101684.	1.6	7
81	Investigating Effects of Alloy Chemical Complexity on Helium Bubble Formation by Accurate Segregation Measurements Using Atom Probe Tomography. Microscopy and Microanalysis, 2019, 25, 1558-1559.	0.4	6
82	Determining dendrite arm spacing in directional solidification using a fast Fourier transform method. Computational Materials Science, 2020, 173, 109463.	3.0	6
83	Indirectly probing the structural change in ion-irradiated Zr-Based metallic glasses from small scale mechanical tests. Intermetallics, 2020, 121, 106794.	3.9	6
84	Effects of boron-nitride substrates on Stone-Wales defect formation in graphene: An ab initio molecular dynamics study. Applied Physics Letters, 2014, 104, 203106.	3.3	5
85	Optical conductivity of metal alloys with residual resistivities near or above the Mott-Ioffe-Regel limit. Physical Review B, 2019, 100, .	3.2	5
86	A comparative characterization of defect structure in NiCo and NiFe equimolar solid solution alloys under in situ electron irradiation. Scripta Materialia, 2019, 166, 96-101.	5.2	5
87	X-ray absorption investigation of local structural disorder in Ni1-xFex (xâ€‰=â€‰0.10, 0.20, 0.35, and 0.50) alloys. Journal of Applied Physics, 2017, 121, 165105.	2.5	4
88	Understanding effects of chemical complexity on helium bubble formation in Ni-based concentrated solid solution alloys based on elemental segregation measurements. Journal of Nuclear Materials, 2022, 569, 153902.	2.7	4
89	Self-ion irradiation response of (CoCrFeNi)94Ti2Al4 alloy containing coherent nanoprecipitates. Journal of Nuclear Materials, 2021, 549, 152889.	2.7	3
90	Diffusion-mediated chemical concentration variation and void evolution in ion-irradiated NiCoFeCr high-entropy alloy. Journal of Materials Research, 2021, 36, 1-13.	2.6	3

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91	Optimizing process windows for minimizing the pore size of Ni-based single crystal superalloys. Materialia, 2019, 8, 100508.	2.7	2
92	Angular distribution and recoil effect for 1MeV Au+ ions through a Si3N4 thin foil. Nuclear Instruments & Methods in Physics Research B, 2014, 332, 346-350.	1.4	0
93	Interpreting Voids in Atom Probe Tomography Data via Experiment and Theory. Microscopy and Microanalysis, 2019, 25, 290-291.	0.4	0
94	Physical Properties of High Entropy Alloys. , 2022, , 474-483.		0