

Sichuang Xue

List of Publications by Year in descending order

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59
papers

2,011
citations

201674

27
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254184

43
g-index

60
all docs

60
docs citations

60
times ranked

1744
citing authors

#	ARTICLE	IF	CITATIONS
1	Particle-based hematite crystallization is invariant to initial particle morphology. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, e2112679119.	7.1	9
2	Tailoring the formation of twins in Al by introducing epitaxial layer interfaces. Scripta Materialia, 2021, 192, 1-6.	5.2	10
3	High-strength and tunable plasticity in sputtered Al-Cr alloys with multistage phase transformations. International Journal of Plasticity, 2021, 137, 102915.	8.8	9
4	Ultra-high strength and plasticity mediated by partial dislocations and defect networks: Part II: Layer thickness effect. Acta Materialia, 2021, 204, 116494.	7.9	7
5	Microstructural evolution of nanotwinned Al-Zr alloy with significant 9R phase. Materials Research Letters, 2021, 9, 91-98.	8.7	16
6	Making g-C ₃ N ₄ ultra-thin nanosheets active for photocatalytic overall water splitting. Applied Catalysis B: Environmental, 2021, 282, 119557.	20.2	121
7	First-principles calculations for understanding microstructures and mechanical properties of co-sputtered Al alloys. Nanoscale, 2021, 13, 14987-15001.	5.6	11
8	Thermal Stability of Nanocrystalline Gradient Inconel 718 Alloy. Crystals, 2021, 11, 53.	2.2	5
9	Characterization of precipitation in gradient Inconel 718 superalloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 804, 140718.	5.6	30
10	Heavy ion irradiation response of an additively manufactured 316LN stainless steel. Journal of Nuclear Materials, 2021, 546, 152745.	2.7	16
11	High-strength nanocrystalline intermetallics with room temperature deformability enabled by nanometer thick grain boundaries. Science Advances, 2021, 7, .	10.3	13
12	Epitaxial nanotwinned metals and alloys: synthesis-twin structure-property relations. CrystEngComm, 2021, 23, 6637-6649.	2.6	5
13	Hierarchical nanotwins in single-crystal-like nickel with high strength and corrosion resistance produced via a hybrid technique. Nanoscale, 2020, 12, 1356-1365.	5.6	27
14	Ultra-high strength and plasticity mediated by partial dislocations and defect networks: Part I: Texture effect. Acta Materialia, 2020, 185, 181-192.	7.9	24
15	In-situ studies on the mechanical properties of He ion irradiated nanotwinned Ag. Journal of Nuclear Materials, 2020, 540, 152392.	2.7	14
16	Coupled solute effects enable anomalous high-temperature strength and stability in nanotwinned Al alloys. Acta Materialia, 2020, 200, 378-388.	7.9	19
17	Design of super-strong and thermally stable nanotwinned Al alloys via solute synergy. Nanoscale, 2020, 12, 20491-20505.	5.6	12
18	Deformation behavior and phase transformation of nanotwinned Al/Ti multilayers. Applied Surface Science, 2020, 527, 146776.	6.1	25

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19	Plastic anisotropy and tension-compression asymmetry in nanotwinned Al-Fe alloys: An in-situ micromechanical investigation. <i>International Journal of Plasticity</i> , 2020, 132, 102760.	8.8	21
20	Thermal stability and deformability of annealed nanotwinned Al/Ti multilayers. <i>Scripta Materialia</i> , 2020, 186, 219-224.	5.2	24
21	Achieving ferromagnetic insulating properties in La _{0.9} Ba _{0.1} MnO ₃ thin films through nanoengineering. <i>Nanoscale</i> , 2020, 12, 9255-9265.	5.6	12
22	High strength, deformable nanotwinned Al-Co alloys. <i>Materials Research Letters</i> , 2019, 7, 33-39.	8.7	32
23	Surface Functionalization of Layered Molybdenum Disulfide for the Selective Detection of Volatile Organic Compounds at Room Temperature. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 34135-34143.	8.0	79
24	Nanoscale stacking fault-assisted room temperature plasticity in flash-sintered TiO ₂ . <i>Science Advances</i> , 2019, 5, eaaw5519.	10.3	82
25	9R phase enabled superior radiation stability of nanotwinned Cu alloys via in situ radiation at elevated temperature. <i>Acta Materialia</i> , 2019, 167, 248-256.	7.9	27
26	Size dependent strengthening in high strength nanotwinned Al/Ti multilayers. <i>Acta Materialia</i> , 2019, 175, 466-476.	7.9	56
27	Comparison of temperature dependent deformation mechanisms of 8YSZ thermal barrier coatings prepared by air-plasma-spray and D-gun thermal spray: An in situ study. <i>Journal of the European Ceramic Society</i> , 2019, 39, 3120-3128.	5.7	18
28	Response of solidification cellular structures in additively manufactured 316 stainless steel to heavy ion irradiation: an in situ study. <i>Materials Research Letters</i> , 2019, 7, 290-297.	8.7	26
29	Tailoring the strength and ductility of T91 steel by partial tempering treatment. <i>Acta Materialia</i> , 2019, 169, 209-224.	7.9	59
30	An in situ study on Kr ion-irradiated crystalline Cu/amorphous-CuNb nanolaminates. <i>Journal of Materials Research</i> , 2019, 34, 2218-2228.	2.6	14
31	Thick grain boundary induced strengthening in nanocrystalline Ni alloy. <i>Nanoscale</i> , 2019, 11, 23449-23458.	5.6	34
32	High temperature thermal and mechanical stability of high-strength nanotwinned Al alloys. <i>Acta Materialia</i> , 2019, 165, 142-152.	7.9	45
33	Superior twin stability and radiation resistance of nanotwinned Ag solid solution alloy. <i>Acta Materialia</i> , 2018, 151, 395-405.	7.9	27
34	Mechanical behavior of structurally gradient nickel alloy. <i>Acta Materialia</i> , 2018, 149, 57-67.	7.9	70
35	Microstructure and mechanical behavior of nanotwinned AlTi alloys with 9R phase. <i>Scripta Materialia</i> , 2018, 148, 5-9.	5.2	48
36	High-strength Nanotwinned Al Alloys with 9R Phase. <i>Advanced Materials</i> , 2018, 30, 1704629.	21.0	93

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37	Texture-directed twin formation propensity in Al with high stacking fault energy. <i>Acta Materialia</i> , 2018, 144, 226-234.	7.9	36
38	Ultra-strong nanotwinned Al–Ni solid solution alloys with significant plasticity. <i>Nanoscale</i> , 2018, 10, 22025-22034.	5.6	30
39	Strengthening mechanisms and deformability of nanotwinned AlMg alloys. <i>Journal of Materials Research</i> , 2018, 33, 3739-3749.	2.6	15
40	High temperature deformability of ductile flash-sintered ceramics via in-situ compression. <i>Nature Communications</i> , 2018, 9, 2063.	12.8	87
41	Self-assembled vertically aligned Ni nanopillars in CeO ₂ with anisotropic magnetic and transport properties for energy applications. <i>Nanoscale</i> , 2018, 10, 17182-17188.	5.6	34
42	Strain-induced suppression of the miscibility gap in nanostructured Mg ₂ Si–Mg ₂ Sn solid solutions. <i>Journal of Materials Chemistry A</i> , 2018, 6, 17559-17570.	10.3	30
43	Deformation mechanisms in FCC Co dominated by high-density stacking faults. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2018, 736, 12-21.	5.6	27
44	In-situ high temperature micromechanical testing of ultrafine grained yttria-stabilized zirconia processed by spark plasma sintering. <i>Acta Materialia</i> , 2018, 155, 128-137.	7.9	14
45	Layer thickness dependent strain rate sensitivity of Cu/amorphous CuNb multilayer. <i>Applied Physics Letters</i> , 2017, 110, .	3.3	25
46	Tailoring plasticity of metallic glasses via interfaces in Cu/amorphous CuNb laminates. <i>Journal of Materials Research</i> , 2017, 32, 2680-2689.	2.6	17
47	“Ductile” Fracture of Metallic Glass Nanolaminates. <i>Advanced Materials Interfaces</i> , 2017, 4, 1700510.	3.7	24
48	High-velocity projectile impact induced 9R phase in ultrafine-grained aluminium. <i>Nature Communications</i> , 2017, 8, 1653.	12.8	66
49	In situ heavy ion irradiation studies of nanopore shrinkage and enhanced radiation tolerance of nanoporous Au. <i>Scientific Reports</i> , 2017, 7, 39484.	3.3	37
50	Comparison of size dependent strengthening mechanisms in Ag/Fe and Ag/Ni multilayers. <i>Acta Materialia</i> , 2016, 114, 154-163.	7.9	56
51	Unusual size dependent strengthening mechanisms of Cu/amorphous CuNb multilayers. <i>Acta Materialia</i> , 2016, 120, 327-336.	7.9	61
52	The formation mechanisms of growth twins in polycrystalline Al with high stacking fault energy. <i>Acta Materialia</i> , 2015, 101, 62-70.	7.9	48
53	Athermal nature of the martensitic transformation in Heusler alloy Ni–Mn–Sn. <i>Intermetallics</i> , 2013, 36, 90-95.	3.9	17
54	Effect of deformation on the martensitic transformation of TiNi melt-spun ribbons. <i>Journal of Alloys and Compounds</i> , 2013, 561, 180-183.	5.5	4

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55	Composition-dependent crystal structure and martensitic transformation in Heusler Ni ₄₉ Mn ₃₇ Sn ₁₃ alloys. <i>Acta Materialia</i> , 2013, 61, 4648-4656.	7.9	102
56	On the explanation for the time-dependence of B2 to R martensitic transformation in Ti ₅₀ Ni ₄₇ Fe ₃ shape memory alloy. <i>Materials Letters</i> , 2012, 72, 119-121.	2.6	15
57	Atomic ordering effect in Ni ₅₀ Mn ₃₇ Sn ₁₃ magnetocaloric ribbons. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2012, 534, 568-572.	5.6	59
58	Rapidly directional solidification of highly undercooled Ni ₄₉ Fe ₃ Ga shape memory alloy melts. <i>Journal of Alloys and Compounds</i> , 2011, 509, 8333-8336.	5.5	4
59	Martensitic transformation in rapidly solidified Heusler Ni ₄₉ Mn ₃₉ Sn ₁₂ ribbons. <i>Acta Materialia</i> , 2011, 59, 5692-5699.	7.9	63