# Xianghai An

List of Publications by Year
in descending order

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| 63 | 3,661 | 136740 | 133063 |
|---|---|---|---|
| papers | citations | 32 h-index | 59 g-index |

| 63 | 63 | 63 | 2516 |
|---|---|---|---|
| all docs | docs citations | times ranked | citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Hierarchical microstructure and strengthening mechanisms of a CoCrFeNiMn high entropy alloy additively manufactured by selective laser melting. Scripta Materialia, 2018, 154, 20-24. | 2.6 | 412 |
| 2 | Microstructural evolution and mechanical properties of Cuâ€“Al alloys subjected to equal channel angular pressing. Acta Materialia, 2009, 57, 1586-1601. | 3.8 | 328 |
| 3 | Significance of stacking fault energy in bulk nanostructured materials: Insights from Cu and its binary alloys as model systems. Progress in Materials Science, 2019, 101, 1-45. | 16.0 | 208 |
| 4 | Simultaneously enhancing strength and ductility of a high-entropy alloy via gradient hierarchical microstructures. International Journal of Plasticity, 2019, 123, 178-195. | 4.1 | 201 |
| 5 | Cryogenic-deformation-induced phase transformation in an FeCoCrNi high-entropy alloy. Materials Research Letters, 2018, 6, 236-243. | 4.1 | 164 |
| 6 | Ultrahigh cryogenic strength and exceptional ductility in ultrafine-grained CoCrFeMnNi high-entropy alloy with fully recrystallized structure. Materials Today Nano, 2018, 4, 46-53. | 2.3 | 136 |
| 7 | Selective laser melting enabling the hierarchically heterogeneous microstructure and excellent mechanical properties in an interstitial solute strengthened high entropy alloy. Materials Research Letters, 2019, 7, 453-459. | 4.1 | 129 |
| 8 | Excellent ductility and serration feature of metastable CoCrFeNi high-entropy alloy at extremely low temperatures. Science China Materials, 2019, 62, 853-863. | 3.5 | 129 |
| 9 | Enhanced cyclic deformation responses of ultrafine-grained Cu and nanocrystalline Cuâ€“Al alloys. Acta Materialia, 2014, 74, 200-214. | 3.8 | 111 |
| 10 | Concurrent microstructural evolution of ferrite and austenite in a duplex stainless steel processed by high-pressure torsion. Acta Materialia, 2014, 63, 16-29. | 3.8 | 90 |
| 11 | Deformation-induced crystalline-to-amorphous phase transformation in a CrMnFeCoNi high-entropy alloy. Science Advances, 2021, 7, . | 4.7 | 89 |
| 12 | Microstructure and mechanical properties of Cu and Cuâ€“Zn alloys produced by equal channel angular pressing. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2011, 528, 4259-4267. | 2.6 | 87 |
| 13 | Influence of Al content on the strain-hardening behavior of aged low density Feâ€“Mnâ€“Alâ€“C steels with high Al content. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 639, 187-191. | 2.6 | 82 |
| 14 | High strength and utilizable ductility of bulk ultrafine-grained Cuâ€“Al alloys. Applied Physics Letters, 2008, 92, . | 1.5 | 81 |
| 15 | Exploring the fatigue strength improvement of Cu-Al alloys. Acta Materialia, 2018, 144, 613-626. | 3.8 | 66 |
| 16 | Influence of stacking-fault energy on the accommodation of severe shear strain in Cu-Al alloys during equal-channel angular pressing. Journal of Materials Research, 2009, 24, 3636-3646. | 1.2 | 63 |
| 17 | Effect of a High Density of Stacking Faults on the Youngâ€™s Modulus of GaAs Nanowires. Nano Letters, 2016, 16, 1911-1916. | 4.5 | 61 |
| 18 | Microstructural evolution and phase transformation in twinning-induced plasticity steel induced by high-pressure torsion. Acta Materialia, 2016, 109, 300-313. | 3.8 | 58 |

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|---|---|---|---|
| 19 | Improved Fatigue Strengths of Nanocrystalline Cu and Cuâ€“Al Alloys. Materials Research Letters, 2015, 3, 135-141. | 4.1 | 57 |
| 20 | Mechanical behaviors of nanowires. Applied Physics Reviews, 2017, 4, 031104. | 5.5 | 54 |
| 21 | 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 |
| 22 | Metallic nanocrystals with low angle grain boundary for controllable plastic reversibility. Nature Communications, 2020, 11, 3100. | 5.8 | 53 |
| 23 | Can experiment determine the stacking fault energy of metastable alloys?. Materials and Design, 2021, 199, 109396. | 3.3 | 51 |
| 24 | Microstructural evolution and shear fracture of Cuâ€“16at.% Al alloy induced by equal channel angular pressing. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2010, 527, 4510-4514. | 2.6 | 49 |
| 25 | In situ atomistic observation of grain boundary migration subjected to defect interaction. Acta Materialia, 2020, 199, 42-52. | 3.8 | 46 |
| 26 | Effects of stacking fault energy on the thermal stability and mechanical properties of nanostructured Cuâ€“Al alloys during thermal annealing. Journal of Materials Research, 2011, 26, 407-415. | 1.2 | 45 |
| 27 | Effect of grain size on fatigue cracking at twin boundaries in a CoCrFeMnNi high-entropy alloy. Journal of Materials Science and Technology, 2020, 39, 1-6. | 5.6 | 45 |
| 28 | Determination of Youngâ€™s Modulus of Ultrathin Nanomaterials. Nano Letters, 2015, 15, 5279-5283. | 4.5 | 44 |
| 29 | Unique defect evolution during the plastic deformation of a metal matrix composite. Scripta Materialia, 2019, 162, 316-320. | 2.6 | 44 |
| 30 | Unraveling dual phase transformations in a CrCoNi medium-entropy alloy. Acta Materialia, 2021, 215, 117112. | 3.8 | 43 |
| 31 | Opposite grain size dependence of strain rate sensitivity of copper at low vs high strain rates. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 738, 430-438. | 2.6 | 39 |
| 32 | Structural hierarchy defeats alloy cracking. Science, 2021, 373, 857-858. | 6.0 | 35 |
| 33 | Hierarchical twinning governed by defective twin boundary in metallic materials. Science Advances, 2022, 8, . | 4.7 | 33 |
| 34 | Evolution of initial grain boundaries and shear bands in Cu bicrystals during one-pass equal-channel angular pressing. Acta Materialia, 2009, 57, 1132-1146. | 3.8 | 31 |
| 35 | Enhancing strength and ductility of Mgâ€“12Gdâ€“3Yâ€“0.5Zr alloy by forming a bi-ultrafine microstructure. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2011, 528, 4300-4311. | 2.6 | 30 |
| 36 | Effects of elemental segregation on microstructural evolution and local mechanical properties in a dynamically deformed CrMnFeCoNi high entropy alloy. Scripta Materialia, 2021, 190, 80-85. | 2.6 | 28 |

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|---|---|---|---|
| 37 | Effect of sample orientation and initial microstructures on the dynamic recrystallization of a Magnesium alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 691, 150-154. | 2.6 | 27 |
| 38 | Improving the strength and retaining the ductility of microstructural graded coarse-grained materials with low stacking fault energy. Materials and Design, 2018, 160, 21-33. | 3.3 | 26 |
| 39 | Exceptional high fatigue strength in Cu-15at.%Al alloy with moderate grain size. Scientific Reports, 2016, 6, 27433. | 1.6 | 25 |
| 40 | Key roles of particles in grain refinement and material strengthening for an aluminum matrix composite. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 801, 140414. | 2.6 | 23 |
| 41 | Enhanced strengthâ€“ductility synergy and transformation-induced plasticity of the selective laser melting fabricated 304L stainless steel. Additive Manufacturing, 2020, 35, 101300. | 1.7 | 22 |
| 42 | Mechanical properties and deformation behaviours of submicron-sized Cuâ€“Al single crystals. Acta Materialia, 2022, 223, 117460. | 3.8 | 21 |
| 43 | Length-scale-dependent nanoindentation creep behaviour of Ti/Al multilayers by magnetron sputtering. Materials Characterization, 2018, 139, 165-175. | 1.9 | 20 |
| 44 | Size-dependent deformation behavior of dual-phase, nanostructured CrCoNi medium-entropy alloy. Science China Materials, 2021, 64, 209-222. | 3.5 | 20 |
| 45 | Improved cyclic softening behavior of ultrafine-grained Cu with high microstructural stability. Scripta Materialia, 2019, 166, 10-14. | 2.6 | 19 |
| 46 | In situ atomistic observation of the deformation mechanism of Au nanowires with twinâ€“twin intersection. Journal of Materials Science and Technology, 2020, 53, 118-125. | 5.6 | 19 |
| 47 | Achieving equal strength joint to parent metal in a friction stir welded ultra-high strength quenching and partitioning steel. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 793, 139979. | 2.6 | 17 |
| 48 | Influence of deformation microstructure on the precipitation behaviors of an Al-4Mg-0.3Cu alloy. Journal of Alloys and Compounds, 2017, 695, 2238-2245. | 2.8 | 16 |
| 49 | Composition-dependent dynamic precipitation and grain refinement in Al-Si system under high-pressure torsion. Journal of Materials Science and Technology, 2021, 68, 199-208. | 5.6 | 16 |
| 50 | Understanding formation of Mg-depletion zones in Al-Mg alloys under high pressure torsion. Journal of Materials Science and Technology, 2019, 35, 858-864. | 5.6 | 14 |
| 51 | Effect of titanium and titania on chemical characteristics of hydroxyapatite plasma-sprayed into water. Materials Science and Engineering C, 2006, 26, 28-33. | 3.8 | 13 |
| 52 | Kinetics of Domain Switching by Mechanical and Electrical Stimulation in Relaxor-Based Ferroelectrics. Physical Review Applied, 2017, 8, . | 1.5 | 11 |
| 53 | Fracture mechanism of an Al/AlN/CrAlN gradient coating on nitrogen implanted magnesium alloy. Surface and Coatings Technology, 2016, 302, 126-130. | 2.2 | 10 |
| 54 | Influence of solid solution strengthening on the local mechanical properties of single crystal and ultrafine-grained binary Cuâ€“Al<sub>X</sub> solid solutions. Journal of Materials Research, 2017, 32, 4583-4591. | 1.2 | 10 |

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|---|---|---|---|
| 55 | Remarkable toughness of a nanostructured medium-entropy nitride compound. Nanoscale, 2021, 13, 15074-15084. | 2.8 | 10 |
| 56 | Cr depletion of the second phase particles in a Zr-Sn-Nb-Fe-Cr alloy: A TEM and SIMS study. Journal of Nuclear Materials, 2017, 491, 1-8. | 1.3 | 9 |
| 57 | Ultra-high specific strength and deformation behavior of nanostructured Ti/Al multilayers. Journal Physics D: Applied Physics, 2017, 50, 365302. | 1.3 | 8 |
| 58 | Comparative study on plasticity and fracture behaviour of Ti/Al multilayers. Tribology International, 2018, 126, 344-351. | 3.0 | 8 |
| 59 | Mechanical size effect of eutectic high entropy alloy: Effect of lamellar orientation. Journal of Materials Science and Technology, 2021, 82, 10-20. | 5.6 | 8 |
| 60 | Effects of loading misalignment and tapering angle on the measured mechanical properties of nanowires. Nanotechnology, 2015, 26, 435704. | 1.3 | 6 |
| 61 | MICROSTRUCTURE EVOLUTION AND MECHANICAL PROPERTIES OF FCC METALLIC MATERIALS SUBJECTED TO EQUAL CHANNEL ANGULAR PRESSING. Jinshu Xuebao/Acta Metallurgica Sinica, 2010, 46, 257-276. | 0.3 | 5 |
| 62 | Enhanced Highâ€Temperature Strength of a Lowâ€Density Dispersionâ€Strengthened Feâ€“Mnâ€“Alâ€“C Steel. Advanced Engineering Materials, 2022, 24, . | 1.6 | 3 |
| 63 | Can Experiment Determine the Stacking Fault Energy of Metastable Alloys?. SSRN Electronic Journal, 0, , . | 0.4 | 0 |