

# Yakai Zhao

## List of Publications by Year in descending order

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36  
papers

1,333  
citations

361045  
20  
h-index

344852  
36  
g-index

36  
all docs

36  
docs citations

36  
times ranked

1163  
citing authors

| #  | ARTICLE   | IF  | CITATIONS |
|----|---|-----|-----------|
| 1  | Resistance of CoCrFeMnNi high-entropy alloy to gaseous hydrogen embrittlement. Scripta Materialia, 2017, 135, 54-58.  | 2.6 | 166       |
| 2  | Spherical nanoindentation creep behavior of nanocrystalline and coarse-grained CoCrFeMnNi high-entropy alloys. Acta Materialia, 2016, 109, 314-322.   | 3.8 | 156       |
| 3  | Indentation size effect and shear transformation zone size in a bulk metallic glass in two different structural states. Acta Materialia, 2012, 60, 6862-6868.   | 3.8 | 130       |
| 4  | The role of hydrogen in hardening/softening steel: Influence of the charging process. Scripta Materialia, 2015, 107, 46-49.   | 2.6 | 99        |
| 5  | Estimation of the shear transformation zone size in a bulk metallic glass through statistical analysis of the first pop-in stresses during spherical nanoindentation. Scripta Materialia, 2012, 66, 923-926.            | 2.6 | 92        |
| 6  | Annealing effect on plastic flow in nanocrystalline CoCrFeMnNi high-entropy alloy: A nanomechanical analysis. Acta Materialia, 2017, 140, 443-451.  | 3.8 | 61        |
| 7  | Influence of severe plastic deformation on the microstructure and hardness of a CoCrFeNi high-entropy alloy: A comparison with CoCrFeNiMn. Materials Characterization, 2019, 154, 304-314.                              | 1.9 | 53        |
| 8  | Predicting flow curves of two-phase steels from spherical nanoindentation data of constituent phases: Isostrain method vs. non-isostrain method. International Journal of Plasticity, 2014, 59, 108-118.                | 4.1 | 47        |
| 9  | Influence of pre-strain on the gaseous hydrogen embrittlement resistance of a high-entropy alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 718, 43-47. | 2.6 | 41        |
| 10 | Influences of hydrogen charging method on the hydrogen distribution and nanomechanical properties of face-centered cubic high-entropy alloy: A comparative study. Scripta Materialia, 2019, 168, 76-80.                 | 2.6 | 39        |
| 11 | Evolution of microstructure and hardness in Hf <sub>25</sub> Nb <sub>25</sub> Ti <sub>25</sub> Zr <sub>25</sub> high-entropy alloy during high-pressure torsion. Journal of Alloys and Compounds, 2019, 788, 318-328.   | 2.8 | 37        |
| 12 | Effect of hydrogen on the yielding behavior and shear transformation zone volume in metallic glass ribbons. Acta Materialia, 2014, 78, 213-221.   | 3.8 | 36        |
| 13 | Bimodality of incipient plastic strength in face-centered cubic high-entropy alloys. Acta Materialia, 2021, 202, 124-134.   | 3.8 | 36        |
| 14 | Hydrogen-induced nanohardness variations in a CoCrFeMnNi high-entropy alloy. International Journal of Hydrogen Energy, 2017, 42, 12015-12021.   | 3.8 | 35        |
| 15 | Effect of grain size on the strain rate sensitivity of CoCrFeNi high-entropy alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 782, 139281.              | 2.6 | 32        |
| 16 | Hydrogen-induced hardening and softening of Ni <sub>40</sub> Nb <sub>40</sub> Zr <sub>20</sub> amorphous alloys: Dependence on the Zr content. Scripta Materialia, 2014, 93, 56-59.                                     | 2.6 | 30        |
| 17 | Influence of hydrogen on incipient plasticity in CoCrFeMnNi high-entropy alloy. Scripta Materialia, 2019, 161, 23-27.   | 2.6 | 30        |
| 18 | On the nanomechanical characteristics of thermally-treated alloy 690: Grain boundaries versus grain interior. Journal of Alloys and Compounds, 2014, 582, 141-145.  | 2.8 | 21        |

| #  | ARTICLE  | IF  | CITATIONS |
|----|--|-----|-----------|
| 19 | Compositionally graded CoCrFeNiTi high-entropy alloys manufactured by laser powder bed fusion: A combinatorial assessment. <i>Journal of Alloys and Compounds</i> , 2021, 883, 160825.   | 2.8 | 21        |
| 20 | Effect of initial dislocation density on the plastic deformation response of 316L stainless steel manufactured by directed energy deposition. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2022, 851, 143591.     | 2.6 | 21        |
| 21 | Hydrogen uptake and its influence in selective laser melted austenitic stainless steel: A nanoindentation study. <i>Scripta Materialia</i> , 2021, 194, 113718.  | 2.6 | 20        |
| 22 | Hydrogen-assisted failure in Inconel 718 fabricated by laser powder bed fusion: The role of solidification substructure in the embrittlement. <i>Scripta Materialia</i> , 2022, 207, 114308.   | 2.6 | 20        |
| 23 | On the contributions of different micromechanisms for enhancement in the strength of Ti-6Al-4V alloy upon B addition: A nanomechanical analysis. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2016, 649, 123-127. | 2.6 | 13        |
| 24 | Exploring the hydrogen absorption and strengthening behavior in nanocrystalline face-centered cubic high-entropy alloys. <i>Scripta Materialia</i> , 2021, 203, 114069.  | 2.6 | 12        |
| 25 | Hydrogen-induced softening in nanocrystalline Ni investigated by nanoindentation. <i>Philosophical Magazine</i> , 2016, 96, 3442-3450.   | 0.7 | 11        |
| 26 | Statistical analysis of the size- and rate-dependence of yield and plastic flow in nanocrystalline copper pillars. <i>Acta Materialia</i> , 2017, 127, 332-340.  | 3.8 | 11        |
| 27 | A novel way to estimate the nanoindentation hardness of only-irradiated layer and its application to ion irradiated Fe-12Cr alloy. <i>Journal of Nuclear Materials</i> , 2017, 487, 343-347.   | 1.3 | 10        |
| 28 | Rate-dependent mechanical behavior of single-, bi-, twinned-, and poly-crystals of CoCrFeNi high-entropy alloy. <i>Journal of Materials Science and Technology</i> , 2022, 120, 253-264.   | 5.6 | 10        |
| 29 | Time-dependent nanoscale plasticity in nanocrystalline nickel rods and tubes. <i>Scripta Materialia</i> , 2016, 112, 79-82.  | 2.6 | 8         |
| 30 | Decoupling the roles of constituent phases in the strengthening of hydrogenated nanocrystalline dual-phase high-entropy alloys. <i>Scripta Materialia</i> , 2022, 210, 114472.   | 2.6 | 8         |
| 31 | Nanomechanical and microstructural characterization on the synergetic strengthening in selectively laser melted austenitic stainless steel. <i>Scripta Materialia</i> , 2022, 209, 114359.   | 2.6 | 7         |
| 32 | Long-whisker type TiB phase introduced by micron-sized precursors and its prominent strengthening effect in titanium matrix composites. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2022, 841, 143021.           | 2.6 | 6         |
| 33 | Strain-Dependent Plasticity Evolution of Window Glass. <i>Journal of the American Ceramic Society</i> , 2015, 98, 186-189.   | 1.9 | 4         |
| 34 | In-situ synchrotron X-ray diffraction study of dual-step strain variation in laser shock peened metallic glasses. <i>Scripta Materialia</i> , 2018, 149, 112-116.  | 2.6 | 4         |
| 35 | Effect of Solidification Rate on the Microstructure and Strain-Rate-Sensitive Mechanical Behavior of AlCoCrFeNi High-Entropy Alloy Prepared by Bridgman Solidification. <i>Materials Transactions</i> , 2019, 60, 929-934.   | 0.4 | 4         |
| 36 | Microalloying Effect on the Activation Energy of Hot Deformation. <i>Steel Research International</i> , 2015, 86, 817-820.   | 1.0 | 2         |