

Haihui Ruan

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

81
papers

2,527
citations

20
h-index

49
g-index

89
ext. papers

3,084
ext. citations

4.3
avg, IF

5.15
L-index

| # | Paper | IF | Citations |
|----|--|-----|-----------|
| 81 | A promising new class of high-temperature alloys: eutectic high-entropy alloys. <i>Scientific Reports</i> , 2014 , 4, 6200 | 4.9 | 604 |
| 80 | Directly cast bulk eutectic and near-eutectic high entropy alloys with balanced strength and ductility in a wide temperature range. <i>Acta Materialia</i> , 2017 , 124, 143-150 | 8.4 | 483 |
| 79 | The influence of strain rate on the microstructure transition of 304 stainless steel. <i>Acta Materialia</i> , 2011 , 59, 3697-3709 | 8.4 | 197 |
| 78 | Modeling grain size dependent optimal twin spacing for achieving ultimate high strength and related high ductility in nanotwinned metals. <i>Acta Materialia</i> , 2011 , 59, 5544-5557 | 8.4 | 159 |
| 77 | Optimization of the strain rate to achieve exceptional mechanical properties of 304 stainless steel using high speed ultrasonic surface mechanical attrition treatment. <i>Acta Materialia</i> , 2010 , 58, 5086-5096 | 8.4 | 117 |
| 76 | Residual stresses in thin film systems: Effects of lattice mismatch, thermal mismatch and interface dislocations. <i>International Journal of Solids and Structures</i> , 2013 , 50, 3562-3569 | 3.1 | 65 |
| 75 | Microstructures-based constitutive analysis for mechanical properties of gradient-nanostructured 304 stainless steels. <i>Acta Materialia</i> , 2017 , 128, 375-390 | 8.4 | 60 |
| 74 | Superior tensile ductility in bulk metallic glass with gradient amorphous structure. <i>Scientific Reports</i> , 2014 , 4, 4757 | 4.9 | 59 |
| 73 | A new method for characterizing the interphase regions of carbon nanotube composites. <i>International Journal of Solids and Structures</i> , 2014 , 51, 1781-1791 | 3.1 | 57 |
| 72 | High thermal stability and sluggish crystallization kinetics of high-entropy bulk metallic glasses. <i>Journal of Applied Physics</i> , 2016 , 119, 245112 | 2.5 | 53 |
| 71 | Shear and shuffling accomplishing polymorphic fcc \rightarrow hcp \rightarrow bct \rightarrow martensitic phase transformation. <i>Acta Materialia</i> , 2017 , 136, 347-354 | 8.4 | 50 |
| 70 | Crushing of thin-walled spheres and sphere arrays. <i>International Journal of Mechanical Sciences</i> , 2006 , 48, 117-133 | 5.5 | 45 |
| 69 | Understanding the friction and wear mechanisms of bulk metallic glass under contact sliding. <i>Wear</i> , 2013 , 304, 43-48 | 3.5 | 39 |
| 68 | A new constitutive model for shear banding instability in metallic glass. <i>International Journal of Solids and Structures</i> , 2011 , 48, 3112-3127 | 3.1 | 32 |
| 67 | Investigation of non-local cracking in layered stainless steel with nanostructured interface. <i>Scripta Materialia</i> , 2010 , 63, 403-406 | 5.6 | 27 |
| 66 | Pore-size tuning and optical performances of nanoporous gold films. <i>Microporous and Mesoporous Materials</i> , 2015 , 202, 50-56 | 5.3 | 24 |
| 65 | Effects of environmental temperature and sliding speed on the tribological behaviour of a Ti-based metallic glass. <i>Intermetallics</i> , 2014 , 52, 36-48 | 3.5 | 24 |

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|----|--|-----|----|
| 64 | Introducing a hierarchical structure for fabrication of a high performance steel. <i>Materials Chemistry and Physics</i> , 2011 , 129, 1096-1103 | 4.4 | 21 |
| 63 | Characterization of plastically graded nanostructured material: Part I. The theories and the inverse algorithm of nanoindentation. <i>Mechanics of Materials</i> , 2010 , 42, 559-569 | 3.3 | 20 |
| 62 | The Kinetic diagram of sigma phase and its precipitation hardening effect on 15Cr-2Ni duplex stainless steel. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2018 , 711, 571-578 | 5.3 | 20 |
| 61 | Phase field study of mechanico-electrochemical corrosion. <i>Electrochimica Acta</i> , 2019 , 310, 240-255 | 6.7 | 17 |
| 60 | Multi-temperature indentation creep tests on nanotwinned copper. <i>International Journal of Plasticity</i> , 2018 , 104, 68-79 | 7.6 | 17 |
| 59 | Revealing Structural Relaxation of Optical Glass Through the Temperature Dependence of Young's Modulus. <i>Journal of the American Ceramic Society</i> , 2014 , 97, 3475-3482 | 3.8 | 15 |
| 58 | Prediction of mechanical properties in bimodal nanotwinned metals with a composite structure. <i>Composites Science and Technology</i> , 2016 , 123, 222-231 | 8.6 | 15 |
| 57 | Characterization of plastically graded nanostructured material: Part II. The experimental validation in surface nanostructured material. <i>Mechanics of Materials</i> , 2010 , 42, 698-708 | 3.3 | 14 |
| 56 | Local deformation models in analyzing beam-on-beam collisions. <i>International Journal of Mechanical Sciences</i> , 2003 , 45, 397-423 | 5.5 | 14 |
| 55 | Effect of warm deformation on microstructure and mechanical properties of a layered and nanostructured 304 stainless steel. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2014 , 595, 34-42 | 5.3 | 13 |
| 54 | Effects of misfit dislocation and film-thickness on the residual stresses in epitaxial thin film systems: Experimental analysis and modeling. <i>Journal of Materials Research</i> , 2012 , 27, 2737-2745 | 2.5 | 13 |
| 53 | Influence of Prestress Fields on the Phonon Thermal Conductivity of GaN Nanostructures. <i>Journal of Heat Transfer</i> , 2014 , 136, | 1.8 | 12 |
| 52 | Size-dependent formation and thermal stability of high-order twins in hierarchical nanotwinned metals. <i>International Journal of Plasticity</i> , 2020 , 128, 102685 | 7.6 | 12 |
| 51 | The partition coefficient of alloying elements and its influence on the pitting corrosion resistance of 15Cr-2Ni duplex stainless steel. <i>Corrosion Science</i> , 2018 , 139, 13-20 | 6.8 | 11 |
| 50 | Multi-phase-field modeling of localized corrosion involving galvanic pitting and mechano-electrochemical coupling. <i>Corrosion Science</i> , 2020 , 177, 108900 | 6.8 | 11 |
| 49 | Excellent combination of strength and ductility in 15Cr-2Ni duplex stainless steel based on ultrafine-grained austenite phase. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2017 , 690, 96-103 | 5.3 | 10 |
| 48 | The unexpectedly small coefficient of restitution of a two-degree-of-freedom mass-spring system and its implications. <i>International Journal of Impact Engineering</i> , 2016 , 88, 1-11 | 4 | 9 |
| 47 | Micromechanical modeling for mechanical properties of gradient-nanotwinned metals with a composite microstructure. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2017 , 703, 180-186 | 5.3 | 9 |

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| 46 | On the plasticity event in metallic glass. <i>Philosophical Magazine Letters</i> , 2013 , 93, 158-165 | 1 | 9 |
| 45 | Simulating Size and Volume Fraction-Dependent Strength and Ductility of Nanotwinned Composite Copper. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2016 , 83, | 2.7 | 9 |
| 44 | Modeling of an acoustically actuated artificial micro-swimmer. <i>Bioinspiration and Biomimetics</i> , 2020 , 15, 036002 | 2.6 | 8 |
| 43 | Microstructure and electrocatalytic performance of nanoporous gold foils decorated by TiO ₂ coatings. <i>Surface and Coatings Technology</i> , 2016 , 286, 113-118 | 4.4 | 8 |
| 42 | Investigating relaxation of glassy materials based on natural vibration of beam: A comparative study of borosilicate and chalcogenide glasses. <i>Journal of Non-Crystalline Solids</i> , 2018 , 500, 181-190 | 3.9 | 8 |
| 41 | Atomic rearrangements in metallic glass: Their nucleation and self-organization. <i>Acta Materialia</i> , 2013 , 61, 6050-6060 | 8.4 | 8 |
| 40 | Surface defect analysis on formed chalcogenide glass GeSeAs lenses after the molding process. <i>Applied Optics</i> , 2017 , 56, 8394-8402 | 1.7 | 8 |
| 39 | Collision between mass-spring systems. <i>International Journal of Impact Engineering</i> , 2005 , 31, 267-288 | 4 | 8 |
| 38 | Micro-mechanical model for the effective thermal conductivity of the multi-oriented inclusions reinforced composites with imperfect interfaces. <i>International Journal of Heat and Mass Transfer</i> , 2020 , 148, 119167 | 4.9 | 8 |
| 37 | Phase field modeling of Widmanstätten ferrite formation in steel. <i>Journal of Alloys and Compounds</i> , 2018 , 769, 620-630 | 5.7 | 7 |
| 36 | A Monte-Carlo Approach for Modeling Glass Transition. <i>Journal of the American Ceramic Society</i> , 2011 , 94, 3350-3358 | 3.8 | 7 |
| 35 | Collision between a ring and a beam. <i>International Journal of Mechanical Sciences</i> , 2003 , 45, 1751-1780 | 5.5 | 7 |
| 34 | Deformation mechanism and defect sensitivity of notched free-free beam and cantilever beam under impact. <i>International Journal of Impact Engineering</i> , 2003 , 28, 33-63 | 4 | 7 |
| 33 | Effects of surface/interface stress on phonon properties and thermal conductivity in AlN/GaN/AlN heterostructural nanofilms. <i>Applied Physics A: Materials Science and Processing</i> , 2019 , 125, 1 | 2.6 | 6 |
| 32 | Effects of pre-stress and surface stress on phonon thermal conductivity of rectangular Si nanowires. <i>Applied Physics A: Materials Science and Processing</i> , 2015 , 119, 253-263 | 2.6 | 6 |
| 31 | Elastic-viscoplasticity modeling of the thermo-mechanical behavior of chalcogenide glass for aspheric lens molding. <i>International Journal of Applied Glass Science</i> , 2018 , 9, 252-262 | 1.8 | 6 |
| 30 | Variation of crystal quality and residual stresses in epitaxially grown thin film systems induced by ion implantation and annealing. <i>Journal of Materials Research</i> , 2013 , 28, 1413-1419 | 2.5 | 5 |
| 29 | Development of a Micro-beam Method to Investigate the Fatigue Crack Growth Mechanisms of Submicron-scale Cracks. <i>Experimental Mechanics</i> , 2009 , 49, 731-742 | 2.6 | 5 |

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| 28 | Effect of Chain Morphology and Carbon-Nanotube Additives on the Glass Transition Temperature of Polyethylene. <i>Journal of Nano Research</i> , 2013 , 23, 16-23 | 1 | 4 |
| 27 | Plastic modal approximations in analyzing beam-on-beam collisions. <i>International Journal of Solids and Structures</i> , 2003 , 40, 2937-2956 | 3.1 | 4 |
| 26 | Phase-field modeling of scale roughening induced by outward growing oxide. <i>Materialia</i> , 2019 , 5, 100255.2 | 5.2 | 4 |
| 25 | Temperature-dependent residual stresses in a hetero-epitaxial thin film system. <i>Thin Solid Films</i> , 2015 , 584, 186-191 | 2.2 | 3 |
| 24 | Non-Contact and Real-Time Measurement of Kolsky Bar with Temporal Speckle Interferometry. <i>Applied Sciences (Switzerland)</i> , 2018 , 8, 808 | 2.6 | 3 |
| 23 | Anomalous sudden drop of temperature-dependent Young's modulus of a plastically deformed duplex stainless steel. <i>Materials and Design</i> , 2019 , 181, 108071 | 8.1 | 3 |
| 22 | Modeling of Random Relaxation Paths of Amorphous Material. <i>Journal of the American Ceramic Society</i> , 2013 , 96, 1772-1778 | 3.8 | 3 |
| 21 | Experimental study of collision between a free-free beam and a simply supported beam. <i>International Journal of Impact Engineering</i> , 2005 , 32, 416-443 | 4 | 3 |
| 20 | Mechanical-chemical coupling phase-field modeling for inhomogeneous oxidation of zirconium induced by stress-oxidation interaction. <i>Npj Materials Degradation</i> , 2020 , 4, | 5.7 | 3 |
| 19 | Constitutive modeling of size-dependent deformation behavior in nano-dual-phase glass-crystal alloys. <i>International Journal of Plasticity</i> , 2021 , 137, 102918 | 7.6 | 3 |
| 18 | Exploiting the non-equilibrium phase transformation in a 15Cr-2Ni-2Al-11Mn resource-saving duplex stainless steel. <i>Materials and Design</i> , 2017 , 114, 433-440 | 8.1 | 2 |
| 17 | Understanding the brittleness of metallic glasses through dynamic clusters. <i>Journal of Materials Research</i> , 2014 , 29, 561-568 | 2.5 | 2 |
| 16 | On the dependence of surface undulation on film thickness. <i>Journal of Physics and Chemistry of Solids</i> , 2014 , 75, 500-504 | 3.9 | 2 |
| 15 | Microstructure Evolution and Mechanical Properties of Austenite Stainless Steel with Gradient Twinned Structure by Surface Mechanical Attrition Treatment. <i>Nanomaterials</i> , 2021 , 11, | 5.4 | 2 |
| 14 | Elastic modulus change and its relation with glass-forming ability and plasticity in bulk metallic glasses. <i>Scripta Materialia</i> , 2019 , 161, 62-65 | 5.6 | 2 |
| 13 | Phase-field modeling of mechano-chemical-coupled stress-corrosion cracking. <i>Electrochimica Acta</i> , 2021 , 395, 139196 | 6.7 | 2 |
| 12 | Plastic Deformation Clusters with High Kinetic Energy in Metallic Glass. <i>Key Engineering Materials</i> , 2013 , 535-536, 152-155 | 0.4 | 1 |
| 11 | Viscosity of Amorphous Materials during Glass-Forming: More from the Adam-Gibbs Law. <i>Key Engineering Materials</i> , 2013 , 535-536, 223-226 | 0.4 | 1 |

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|----|--|-----|---|
| 10 | Implementation of Glass Transition Physics in Glass Molding Simulation. <i>Advanced Materials Research</i> , 2011 , 325, 707-712 | 0.5 | 1 |
| 9 | Theoretical Perspectives on Natural and Artificial Micro-swimmers. <i>Acta Mechanica Solida Sinica</i> , 1 | 2 | 1 |
| 8 | On the mechanical relaxation in glass and its relation to the double-peak phenomenon in impulse excited vibration at high temperatures. <i>Journal of Non-Crystalline Solids</i> , 2020 , 533, 119939 | 3.9 | 0 |
| 7 | Mechano-electrochemical phase field modeling for formation and modulation of dendritic Pattern: Application to uranium recovery from spent nuclear fuel. <i>Materials and Design</i> , 2022 , 213, 110322 | 8.1 | 0 |
| 6 | Effect of Stress-Dependent Thermal Conductivity on Thermo-Mechanical Coupling Behavior in GaN-Based Nanofilm Under Pulse Heat Source. <i>Acta Mechanica Solida Sinica</i> , 2021 , 34, 27-39 | 2 | 0 |
| 5 | Review on thin film coatings for precision glass molding. <i>Surfaces and Interfaces</i> , 2022 , 30, 101903 | 4.1 | 0 |
| 4 | A New Method for Measuring the Residual Stresses in Multi-Layered Thin Film Systems. <i>Advanced Materials Research</i> , 2012 , 591-593, 884-890 | 0.5 | |
| 3 | Modeling the strain rate-dependent constitutive behavior in nanotwinned polycrystalline metals. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2020 , 384, 126206 | 2.3 | |
| 2 | Electromagnetic-Thermo-Mechanical Coupling Behavior of Cu/Si Layered Thin Plate Under Pulsed Magnetic Field. <i>Acta Mechanica Solida Sinica</i> , 1 | 2 | |
| 1 | Micro/Nanoscale Manufacture of Advanced Materials and an Exploration of Their Properties. <i>Journal of Nanomaterials</i> , 2018 , 2018, 1-2 | 3.2 | |