

Haihui Ruan

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/6813852/publications.pdf>

Version: 2024-02-01

87
papers

3,708
citations

331259

21
h-index

128067

60
g-index

89
all docs

89
docs citations

89
times ranked

2843
citing authors

#	ARTICLE	IF	CITATIONS
1	A Promising New Class of High-Temperature Alloys: Eutectic High-Entropy Alloys. <i>Scientific Reports</i> , 2014, 4, 6200.	1.6	998
2	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.	3.8	747
3	The influence of strain rate on the microstructure transition of 304 stainless steel. <i>Acta Materialia</i> , 2011, 59, 3697-3709.	3.8	252
4	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.	3.8	193
5	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.	3.8	144
6	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.	1.3	100
7	Microstructures-based constitutive analysis for mechanical properties of gradient-nanostructured 304 stainless steels. <i>Acta Materialia</i> , 2017, 128, 375-390.	3.8	86
8	High thermal stability and sluggish crystallization kinetics of high-entropy bulk metallic glasses. <i>Journal of Applied Physics</i> , 2016, 119, .	1.1	82
9	Shear and shuffling accomplishing polymorphic fcc \rightarrow hcp \rightarrow bcc \rightarrow martensitic phase transformation. <i>Acta Materialia</i> , 2017, 136, 347-354.	3.8	81
10	Superior Tensile Ductility in Bulk Metallic Glass with Gradient Amorphous Structure. <i>Scientific Reports</i> , 2014, 4, 4757.	1.6	77
11	A new method for characterizing the interphase regions of carbon nanotube composites. <i>International Journal of Solids and Structures</i> , 2014, 51, 1781-1791.	1.3	73
12	Crushing of thin-walled spheres and sphere arrays. <i>International Journal of Mechanical Sciences</i> , 2006, 48, 117-133.	3.6	53
13	Understanding the friction and wear mechanisms of bulk metallic glass under contact sliding. <i>Wear</i> , 2013, 304, 43-48.	1.5	48
14	A new constitutive model for shear banding instability in metallic glass. <i>International Journal of Solids and Structures</i> , 2011, 48, 3112-3127.	1.3	35
15	Phase field study of mechanico-electrochemical corrosion. <i>Electrochimica Acta</i> , 2019, 310, 240-255.	2.6	30
16	Investigation of non-local cracking in layered stainless steel with nanostructured interface. <i>Scripta Materialia</i> , 2010, 63, 403-406.	2.6	29
17	Effects of environmental temperature and sliding speed on the tribological behaviour of a Ti-based metallic glass. <i>Intermetallics</i> , 2014, 52, 36-48.	1.8	29
18	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.	2.6	29

#	ARTICLE	IF	CITATIONS
19	Multi-temperature indentation creep tests on nanotwinned copper. <i>International Journal of Plasticity</i> , 2018, 104, 68-79.	4.1	28
20	Pore-size tuning and optical performances of nanoporous gold films. <i>Microporous and Mesoporous Materials</i> , 2015, 202, 50-56.	2.2	25
21	Introducing a hierarchical structure for fabrication of a high performance steel. <i>Materials Chemistry and Physics</i> , 2011, 129, 1096-1103.	2.0	23
22	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.	1.7	21
23	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.	1.9	21
24	Size-dependent formation and thermal stability of high-order twins in hierarchical nanotwinned metals. <i>International Journal of Plasticity</i> , 2020, 128, 102685.	4.1	21
25	Prediction of mechanical properties in bimodal nanotwinned metals with a composite structure. <i>Composites Science and Technology</i> , 2016, 123, 222-231.	3.8	19
26	Multi-phase-field modeling of localized corrosion involving galvanic pitting and mechano-electrochemical coupling. <i>Corrosion Science</i> , 2020, 177, 108900.	3.0	19
27	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.	3.0	18
28	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.	2.5	17
29	Local deformation models in analyzing beam-on-beam collisions. <i>International Journal of Mechanical Sciences</i> , 2003, 45, 397-423.	3.6	16
30	Characterization of plastically graded nanostructured material: Part II. The experimental validation in surface nanostructured material. <i>Mechanics of Materials</i> , 2010, 42, 698-708.	1.7	16
31	Influence of Prestress Fields on the Phonon Thermal Conductivity of GaN Nanostructures. <i>Journal of Heat Transfer</i> , 2014, 136, .	1.2	16
32	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.	2.6	15
33	Microstructure Evolution and Mechanical Properties of Austenite Stainless Steel with Gradient Twinned Structure by Surface Mechanical Attrition Treatment. <i>Nanomaterials</i> , 2021, 11, 1624.	1.9	15
34	Surface defect analysis on formed chalcogenide glass Ge ₂₂ Se ₅₈ As ₂₀ lenses after the molding process. <i>Applied Optics</i> , 2017, 56, 8394.	0.9	14
35	Phase-field modeling of mechano-chemical-coupled stress-corrosion cracking. <i>Electrochimica Acta</i> , 2021, 395, 139196.	2.6	14
36	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.	1.2	13

#	ARTICLE	IF	CITATIONS
37	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.	1.5	13
38	Modeling of an acoustically actuated artificial micro-swimmer. <i>Bioinspiration and Biomimetics</i> , 2020, 15, 036002.	1.5	13
39	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.	2.6	12
40	Mechanical-chemical coupling phase-field modeling for inhomogeneous oxidation of zirconium induced by stress-oxidation interaction. <i>Npj Materials Degradation</i> , 2020, 4, .	2.6	12
41	On the plasticity event in metallic glass. <i>Philosophical Magazine Letters</i> , 2013, 93, 158-165.	0.5	11
42	Simulating Size and Volume Fraction-Dependent Strength and Ductility of Nanotwinned Composite Copper. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2016, 83, .	1.1	11
43	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.	2.4	11
44	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.	2.6	11
45	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.	1.0	11
46	Phase field modeling of Widmanstatten ferrite formation in steel. <i>Journal of Alloys and Compounds</i> , 2018, 769, 620-630.	2.8	11
47	Collision between mass-spring systems. <i>International Journal of Impact Engineering</i> , 2005, 31, 267-288.	2.4	10
48	Microstructure and electrocatalytic performance of nanoporous gold foils decorated by TiO ₂ coatings. <i>Surface and Coatings Technology</i> , 2016, 286, 113-118.	2.2	10
49	Constitutive modeling of size-dependent deformation behavior in nano-dual-phase glass-crystal alloys. <i>International Journal of Plasticity</i> , 2021, 137, 102918.	4.1	10
50	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.	3.3	10
51	Review on thin film coatings for precision glass molding. <i>Surfaces and Interfaces</i> , 2022, 30, 101903.	1.5	9
52	Atomic rearrangements in metallic glass: Their nucleation and self-organization. <i>Acta Materialia</i> , 2013, 61, 6050-6060.	3.8	8
53	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.	1.1	8
54	Collision between a ring and a beam. <i>International Journal of Mechanical Sciences</i> , 2003, 45, 1751-1780.	3.6	7

#	ARTICLE	IF	CITATIONS
55	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.	2.4	7
56	A Monte Carlo Approach for Modeling Glass Transition. <i>Journal of the American Ceramic Society</i> , 2011, 94, 3350-3358.	1.9	7
57	Anomalous sudden drop of temperature-dependent Young's modulus of a plastically deformed duplex stainless steel. <i>Materials and Design</i> , 2019, 181, 108071.	3.3	7
58	Microstructural evaluation of sputtered Ru-Pt multilayer anti-stick coatings for glass molding. <i>Materials and Design</i> , 2022, 220, 110898.	3.3	7
59	Plastic modal approximations in analyzing beam-on-beam collisions. <i>International Journal of Solids and Structures</i> , 2003, 40, 2937-2956.	1.3	6
60	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.	1.1	6
61	Phase-field modeling of scale roughening induced by outward growing oxide. <i>Materialia</i> , 2019, 5, 100255.	1.3	6
62	Elastic modulus change and its relation with glass-forming ability and plasticity in bulk metallic glasses. <i>Scripta Materialia</i> , 2019, 161, 62-65.	2.6	6
63	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.	1.1	5
64	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.	1.2	5
65	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.	0.8	5
66	Non-Contact and Real-Time Measurement of Kolsky Bar with Temporal Speckle Interferometry. <i>Applied Sciences (Switzerland)</i> , 2018, 8, 808.	1.3	5
67	Modeling of Random Relaxation Paths of Amorphous Material. <i>Journal of the American Ceramic Society</i> , 2013, 96, 1772-1778.	1.9	4
68	On the mechanical $\hat{\Gamma}^2$ 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.	1.5	4
69	Theoretical Perspectives on Natural and Artificial Micro-swimmers. <i>Acta Mechanica Solida Sinica</i> , 2021, 34, 783-809.	1.0	4
70	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.	2.4	3
71	Temperature-dependent residual stresses in a hetero-epitaxial thin film system. <i>Thin Solid Films</i> , 2015, 584, 186-191.	0.8	3
72	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.	3.3	3

#	ARTICLE	IF	CITATIONS
73	Understanding the brittleness of metallic glasses through dynamic clusters. <i>Journal of Materials Research</i> , 2014, 29, 561-568.	1.2	2
74	On the dependence of surface undulation on film thickness. <i>Journal of Physics and Chemistry of Solids</i> , 2014, 75, 500-504.	1.9	2
75	Constitutive modeling of mechanical behaviors in gradient nanostructured alloys with hierarchical dual-phased microstructures. <i>Acta Mechanica</i> , 2022, 233, 3197-3212.	1.1	2
76	Implementation of Glass Transition Physics in Glass Molding Simulation. <i>Advanced Materials Research</i> , 0, 325, 707-712.	0.3	1
77	Plastic Deformation Clusters with High Kinetic Energy in Metallic Glass. <i>Key Engineering Materials</i> , 0, 535-536, 152-155.	0.4	1
78	Viscosity of Amorphous Materials during Glass-Forming: More from the Adam-Gibbs Law. <i>Key Engineering Materials</i> , 0, 535-536, 223-226.	0.4	1
79	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.	1.0	1
80	Damage Analysis of Tensile Deformation of Co-rolled SMATed 304SS. , 2010, , .		0
81	Characterization of plastically graded nanostructured material. , 2010, , .		0
82	A New Method for Measuring the Residual Stresses in Multi-Layered Thin Film Systems. <i>Advanced Materials Research</i> , 0, 591-593, 884-890.	0.3	0
83	Methodologies for measuring residual stress distributions in epitaxial thin films. , 2013, , .		0
84	Micro/Nanoscale Manufacture of Advanced Materials and an Exploration of Their Properties. <i>Journal of Nanomaterials</i> , 2018, 2018, 1-2.	1.5	0
85	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.	0.9	0
86	Electromagneticâ€“Thermoâ€“Mechanical Coupling Behavior of Cu/Si Layered Thin Plate Under Pulsed Magnetic Field. <i>Acta Mechanica Solida Sinica</i> , 0, , 1.	1.0	0
87	Modeling of ion exchange in glass considering large viscoelastic deformation and mechanoâ€“electrochemical coupling. <i>Journal of the American Ceramic Society</i> , 0, , .	1.9	0