

Hongwei Zhao

List of Publications by Year in descending order

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Version: 2024-02-01

108
papers

1,838
citations

257450

24
h-index

315739

38
g-index

109
all docs

109
docs citations

109
times ranked

1144
citing authors

#	ARTICLE	IF	CITATIONS
1	A stick-slip actuator for suppressing the backward motion by introducing a flexible beam. Journal of Intelligent Material Systems and Structures, 2023, 34, 364-376.	2.5	1
2	Influence of pia-arachnoid complex on the indentation response of porcine brain at different length scales. Journal of the Mechanical Behavior of Biomedical Materials, 2022, 127, 104925.	3.1	1
3	Angle-dependent failure behaviors of carbon fiber reinforced polymer laminates. Journal of Applied Polymer Science, 2022, 139, .	2.6	1
4	The effects of electric fields on the mechanical properties and microstructure of <i>ex vivo</i> porcine brain tissues. Soft Matter, 2022, 18, 1498-1509.	2.7	6
5	Mechanical properties of brain tissue based on microstructure. Journal of the Mechanical Behavior of Biomedical Materials, 2022, 126, 104924.	3.1	9
6	Enhanced Relaxor Behavior and Energy Storage Properties in Na _{0.5} Bi _{0.5} TiO ₃ -Based Ceramics by Doping the Complex Ions (Al _{0.5} Nb _{0.5}) ⁴⁺ . Physica Status Solidi (A) Applications and Materials Science, 2022, 219, .	1.8	2
7	Enhanced energy storage and photoluminescence properties in ErBiO ₃ -doped (Na _{0.5} Bi _{0.5})TiO ₃ -SrTiO ₃ ceramics. Journal of Materials Science, 2022, 57, 229-240.	3.7	4
8	Study on Pre-torsional Loading Influence on Tensile Failure Mechanism of 20 Steel and QT400 under Combined Torsion-Tension Loading. Journal of Materials Engineering and Performance, 2022, 31, 5790-5800.	2.5	1
9	Wear Properties of Self-Fluxing Ni ₆₀ AlMgB ₁₄ Composite Coating Fabricated by Plasma Spraying. Materials Transactions, 2022, 63, 63-68.	1.2	0
10	Enhanced surface properties of a graphene oxide reinforced high-entropy alloy composite prepared by spark plasma sintering. Nanoscale, 2022, 14, 6777-6788.	5.6	8
11	Piezoelectric-Thermal Coupling Driven Biomimetic Stick-Slip Bidirectional Rotary Actuator for Nanomanipulation. Nano Letters, 2022, 22, 453-460.	9.1	7
12	A Novel Composite Deformation Measurement Method of Materials Under Coupling of High-Temperature and Hybrid Tensile-Flexural Loads. IEEE Transactions on Instrumentation and Measurement, 2022, 71, 1-11.	4.7	1
13	Atomic perspective of contact protection in graphene-coated high-entropy films. Tribology International, 2022, 174, 107748.	5.9	12
14	Breakthrough the strength-ductility trade-off in a high-entropy alloy at room temperature via cold rolling and annealing. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 800, 140264.	5.6	39
15	Fast and High-Throughput Synthesis of Medium- and High-Entropy Alloys Using Radio Frequency Inductively Coupled Plasma. Advanced Engineering Materials, 2021, 23, 2001116.	3.5	11
16	Measurement Method of Fracture Surface Orientations of Cortical Bones Under Multidirectional External Loads. IEEE Transactions on Instrumentation and Measurement, 2021, 70, 1-9.	4.7	2
17	A Calibration Method of Micropillar Compression Testing for Taper and Eccentricity Induced Errors. IEEE Transactions on Instrumentation and Measurement, 2021, 70, 1-6.	4.7	6
18	Improved Dielectric and Energy Storage Properties of Ba _{0.8} Ca _{0.2} TiO ₃ Ceramics by Doping Ba(Mg ^{1/3}) _{2/3} TiO ₃ . Journal of Applied Polymer Science, 2021, 164, 48107.	1.8	1

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19	Prediction of cross section fracture path of cortical bone through nanoindentation array. Journal of the Mechanical Behavior of Biomedical Materials, 2021, 116, 104303.	3.1	5
20	Enhanced energy storage properties at phase boundary in Fe-doped Ba(Zr _{0.04} Ti _{0.96})O ₃ ceramics with a slush polar state. Journal of Materials Science: Materials in Electronics, 2021, 32, 13972-13984.	2.2	3
21	Microstructure evolution and mechanical responses of Al-Zn-Mg-Cu alloys during hot deformation process. Journal of Materials Science, 2021, 56, 13429-13478.	3.7	22
22	Elucidation of Regional Mechanical Properties of Brain Tissues Based on Cell Density. Journal of Bionic Engineering, 2021, 18, 611-622.	5.0	4
23	MOF-5-derived ZnO nanochains: synthesis and ultrafast triethylamine sensing performance. Journal of Materials Science: Materials in Electronics, 2021, 32, 19284-19296.	2.2	1
24	Fe-doping as a universal phase boundary shifter for BCZT ceramics across the morphotropic phase boundary. Journal of Electroceramics, 2021, 47, 67-78.	2.0	1
25	Aggravated stress fluctuation and mechanical size effects of nanoscale lamellar bone pillars. NPC Asia Materials, 2021, 13, .	7.9	6
26	A Novel Bionic Piezoelectric Actuator Based on the Walrus Motion. Journal of Bionic Engineering, 2021, 18, 1117-1125.	5.0	5
27	In Situ Bending Reveals Simultaneous Enhancements of Strength and Ductility of Cortical and Cancellous Layers Induced by the Cartilage Layer. ACS Omega, 2021, 6, 31177-31183.	3.5	3
28	Achieving smooth motion and high-speed for piezoelectric stick-slip actuator based on the two-stage lever principle. Review of Scientific Instruments, 2021, 92, 125001.	1.3	7
29	On the Suppression of the Backward Motion of a Piezo-Driven Precision Positioning Platform Designed by the Parasitic Motion Principle. IEEE Transactions on Industrial Electronics, 2020, 67, 3870-3878.	7.9	66
30	Enhanced strength and slightly reduced ductility in a high entropy alloy via cold rolling and annealing. Journal of Alloys and Compounds, 2020, 817, 152709.	5.5	27
31	Design, modeling, and performance of a bidirectional stick-slip piezoelectric actuator with coupled asymmetrical flexure hinge mechanisms. Journal of Intelligent Material Systems and Structures, 2020, 31, 1961-1972.	2.5	13
32	A Self-Adaptive Selection of Subset Size Method in Digital Image Correlation Based on Shannon Entropy. IEEE Access, 2020, 8, 184822-184833.	4.2	5
33	Coral-like ZnFe ₂ O ₄ -ZnO mesoporous heterojunction architectures: synthesis and enhanced sensing properties for triethylamine. Inorganic Chemistry Frontiers, 2020, 7, 1918-1926.	6.0	35
34	Enhanced Dielectric and Energy Storage Properties in Fe-Doped BCZT Ferroelectric Ceramics. Physica Status Solidi (A) Applications and Materials Science, 2020, 217, 2000253.	1.8	10
35	Cylindrical Direct-Current Triboelectric Nanogenerator with Constant Output Current. Advanced Energy Materials, 2020, 10, 1904227.	19.5	52
36	A linear piezoelectric actuator with high flexibility flexible mechanism designed by the bidirectional parasitic motion principle. Review of Scientific Instruments, 2020, 91, 045005.	1.3	9

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37	In situ nanoindentation method for characterizing tensile properties of AISI 1045 steel based on mesomechanical analysis. <i>Advances in Mechanical Engineering</i> , 2019, 11, 168781401986291.	1.6	4
38	Indentation response in porcine brain under electric fields. <i>Soft Matter</i> , 2019, 15, 623-632.	2.7	10
39	Effects of T6 Treatment, Tensile Temperature, and Mass Fraction of SiC on the Mechanical Properties of SiCp/6061Al Composites. <i>Materials</i> , 2019, 12, 1602.	2.9	12
40	Mechanical Behavior of Undoped n-Type GaAs under the Indentation of Berkovich and Flat-Tip Indenters. <i>Materials</i> , 2019, 12, 1192.	2.9	9
41	Design and performance evaluation of a novel stick-slip piezoelectric linear actuator with a centrosymmetric-type flexure hinge mechanism. <i>Microsystem Technologies</i> , 2019, 25, 3891-3898.	2.0	7
42	Design and testing of a cryogenic indentation apparatus. <i>Review of Scientific Instruments</i> , 2019, 90, 015117.	1.3	12
43	The indentation and wear performance of hardfacing layers on H13 steel for use in high temperature application. <i>AIP Advances</i> , 2019, 9, 095304.	1.3	2
44	Static and cyclic mechanical behaviours and fracture mechanisms of Zr-based metallic glass at elevated temperatures. <i>Philosophical Magazine</i> , 2019, 99, 835-852.	1.6	11
45	Study on the deformation mechanism of spherical diamond indenter and its influence on 3C-SiC sample during nanoindentation process via molecular dynamics simulation. <i>Materials Science in Semiconductor Processing</i> , 2019, 90, 143-150.	4.0	29
46	Influences of organic component on mechanical property of cortical bone with different water content by nanoindentation. <i>AIP Advances</i> , 2018, 8, .	1.3	3
47	Novel instrument for characterizing comprehensive physical properties under multi-mechanical loads and multi-physical field coupling conditions. <i>Review of Scientific Instruments</i> , 2018, 89, 025112.	1.3	10
48	Influence of strain rate on indentation response of porcine brain. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2018, 82, 210-217.	3.1	31
49	The Preparation of H13 Steel for TBM Cutter and the Performance Test Close to Working Condition. <i>Applied Sciences (Switzerland)</i> , 2018, 8, 1877.	2.5	12
50	Nanoindentation of Soft Biological Materials. <i>Micromachines</i> , 2018, 9, 654.	2.9	95
51	Nanoindentation response of monocrystalline copper under various tensile pre-deformations via molecular dynamic simulations. <i>Advances in Mechanical Engineering</i> , 2018, 10, 168781401881687.	1.6	8
52	Investigation on the Material Removal and Surface Generation of a Single Crystal SiC Wafer by Ultrasonic Chemical Mechanical Polishing Combined with Ultrasonic Lapping. <i>Materials</i> , 2018, 11, 2022.	2.9	30
53	Note: Lever-type bidirectional stick-slip piezoelectric actuator with flexible hinge. <i>Review of Scientific Instruments</i> , 2018, 89, 086101.	1.3	31
54	Effects of Temperature and Strain Rate on the Fracture Behaviors of an Al-Zn-Mg-Cu Alloy. <i>Materials</i> , 2018, 11, 1233.	2.9	10

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55	A study on the surface quality and brittle→ductile transition during the elliptical vibration-assisted nanocutting process on monocrystalline silicon via molecular dynamic simulations. RSC Advances, 2017, 7, 4179-4189.	3.6	48
56	A Novel Trapezoid-Type Stick→Slip Piezoelectric Linear Actuator Using Right Circular Flexure Hinge Mechanism. IEEE Transactions on Industrial Electronics, 2017, 64, 5545-5552.	7.9	154
57	An elevated-temperature depth-sensing instrumented indentation apparatus for investigating thermo-mechanical behaviour of thermal barrier coatings. Review of Scientific Instruments, 2017, 88, 045102.	1.3	7
58	Influence of scratch type on tensile strength in in situ tensile test. Advances in Mechanical Engineering, 2017, 9, 168781401770713.	1.6	2
59	Investigations of Phase Transformation in Monocrystalline Silicon at Low Temperatures via Nanoindentation. Scientific Reports, 2017, 7, 8682.	3.3	25
60	A study on the effect of double-tip inclined angle on micro-scratching process using smooth particle hydrodynamic method. Advances in Mechanical Engineering, 2017, 9, 168781401772087.	1.6	1
61	A DAMAGE MECHANISM OF MICRO-PARTICLES ON ARTICULAR CARTILAGE OF KNEE BY NANOINDENTATION. Journal of Mechanics in Medicine and Biology, 2017, 17, 1750116.	0.7	5
62	A Symmetrical Hybrid Driving Waveform for a Linear Piezoelectric Stick-Slip Actuator. IEEE Access, 2017, 5, 16885-16894.	4.2	36
63	Development of a Novel Parasitic-Type Piezoelectric Actuator. IEEE/ASME Transactions on Mechatronics, 2017, 22, 541-550.	5.8	133
64	A Compact 2-DOF Piezoelectric-Driven Platform Based on →Z-Shaped→Flexure Hinges. Micromachines, 2017, 8, 245.	2.9	30
65	Research on Design and Simulation of Biaxial Tensile-Bending Complex Mechanical Performance Test Apparatus. Micromachines, 2017, 8, 286.	2.9	3
66	Design and Experimental Research of a Novel Stick-Slip Type Piezoelectric Actuator. Micromachines, 2017, 8, 150.	2.9	48
67	Method for determining the true stress of cross-shaped specimens subjected to biaxial tensile loads. Instruments and Experimental Techniques, 2016, 59, 287-293.	0.5	2
68	Geometry Effects in Four-Point Bending Test for Thin Sheet Studied by Finite Element Simulation. Materials Transactions, 2016, 57, 335-343.	1.2	6
69	Performance improvement of smooth impact drive mechanism at low voltage utilizing ultrasonic friction reduction. Review of Scientific Instruments, 2016, 87, 085007.	1.3	36
70	Effects of vibration frequency on vibration-assisted nano-scratch process of mono-crystalline copper via molecular dynamics simulation. AIP Advances, 2016, 6, .	1.3	24
71	Hydrostatic pressure driven spin, volume and band gap collapses in SmFeO ₃ : a GGA + U study. Philosophical Magazine, 2016, 96, 1613-1622.	1.6	6
72	A compact bending device for in-situ three-point bending tests under laser scanning confocal microscope. Instruments and Experimental Techniques, 2016, 59, 762-767.	0.5	5

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73	A novel nanoscratch device compatible with commercial microscope for in situ tests of materials's™ mechanics. <i>Advances in Mechanical Engineering</i> , 2016, 8, 168781401664693.	1.6	0
74	Fracture criterion on the basis of uniformity of plastic work of polycrystalline ductile materials under various stress states. <i>Acta Mechanica</i> , 2016, 227, 2053-2059.	2.1	4
75	Influence of punch radius on elastic modulus of three-point bending tests. <i>Advances in Mechanical Engineering</i> , 2016, 8, 168781401664911.	1.6	7
76	On the correlation between the structure and one stepping characteristic of a piezo-driven rotary actuator. <i>Microsystem Technologies</i> , 2016, 22, 2821-2827.	2.0	16
77	Failure Mechanism of Brass with Three V-notches Characterized by Acoustic Emission in In Situ Three-Point Bending Tests. <i>Advanced Engineering Materials</i> , 2016, 18, 2047-2056.	3.5	8
78	Deformation behavior of micro-indentation defects under uniaxial and biaxial loads. <i>Review of Scientific Instruments</i> , 2015, 86, 095112.	1.3	7
79	An In Situ Three-Point Bending Study on Pre-Notch 7075 Aluminium Alloy with Acoustic Emission. <i>Materials Transactions</i> , 2015, 56, 1977-1983.	1.2	0
80	Prediction Method of Low Cyclic Stress-Strain Curve of Structural Materials. <i>Materials Transactions</i> , 2015, 56, 1067-1071.	1.2	4
81	Molecular dynamics investigations of mechanical behaviours in monocrystalline silicon due to nanoindentation at cryogenic temperatures and room temperature. <i>Scientific Reports</i> , 2015, 5, 16275.	3.3	69
82	Design and experimental research of an improved stick-slip type piezo-driven linear actuator. <i>Advances in Mechanical Engineering</i> , 2015, 7, 168781401559501.	1.6	25
83	Critical Fracture Behavior of a Cu/Al Composite Laminate via the Observation of Scanning Electron Microscope. <i>Materials Transactions</i> , 2015, 56, 813-818.	1.2	1
84	Molecular dynamics simulation of deformation accumulation in repeated nanometric cutting on single-crystal copper. <i>RSC Advances</i> , 2015, 5, 12678-12685.	3.6	25
85	Design and driving characteristic researches of a novel bionic stepping piezoelectric actuator with large load capacity based on clamping blocks. <i>Microsystem Technologies</i> , 2015, 21, 1757-1765.	2.0	13
86	Research on the effect of the corrugated contact surface on an inchworm-type piezoelectric rotary actuator by finite element method. , 2015, , .		2
87	Research on influences of contact force in chemical mechanical polishing (CMP) process. <i>AIP Advances</i> , 2015, 5, .	1.3	14
88	Design and experimental tests of a dual-servo piezoelectric nanopositioning stage for rotary motion. <i>Review of Scientific Instruments</i> , 2015, 86, 045002.	1.3	43
89	Research on the Effects of Friction Coefficient on Three-Point Bending by Finite Element Analysis. <i>Journal of Computational and Theoretical Nanoscience</i> , 2015, 12, 5139-5143.	0.4	1
90	Pre-Crack 7075 Aluminium Alloy Characterize by Acoustic Emission Under Three-Point Bending. <i>Journal of Computational and Theoretical Nanoscience</i> , 2015, 12, 5184-5191.	0.4	0

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91	A novel <i>in situ</i> device based on a bionic piezoelectric actuator to study tensile and fatigue properties of bulk materials. Review of Scientific Instruments, 2014, 85, 065103.	1.3	16
92	Molecular Dynamics Simulation of the Crystal Orientation and Temperature Influences in the Hardness on Monocrystalline Silicon. Journal of Nanomaterials, 2014, 2014, 1-8.	2.7	11
93	Design and experiment performances of an inchworm type rotary actuator. Review of Scientific Instruments, 2014, 85, 085004.	1.3	28
94	Evaluation of repeated single-point diamond turning on the deformation behavior of monocrystalline silicon via molecular dynamic simulations. Applied Physics A: Materials Science and Processing, 2014, 116, 141-150.	2.3	36
95	Influences of Residual Stress Induced by Cutting on Subsequent Scratch Using Smooth Particle Hydrodynamic (SPH). Materials Transactions, 2014, 55, 1440-1444.	1.2	6
96	Indenter Geometry Affecting Indentation Behaviors of the Zr-Based Bulk Metallic Glass. Materials Transactions, 2014, 55, 1400-1404.	1.2	9
97	A Study on Material Removal Caused by Phase Transformation of Monocrystalline Silicon During Nanocutting Process via Molecular Dynamics Simulation. Journal of Computational and Theoretical Nanoscience, 2014, 11, 291-296.	0.4	14
98	Analysis and experiments of a novel and compact 3-DOF precision positioning platform. Journal of Mechanical Science and Technology, 2013, 27, 3347-3356.	1.5	19
99	Randomness and Statistical Laws of Indentation-Induced Pop-Out in Single Crystal Silicon. Materials, 2013, 6, 1496-1505.	2.9	22
100	Design and experimental research of a novel inchworm type piezo-driven rotary actuator with the changeable clamping radius. Review of Scientific Instruments, 2013, 84, 015006.	1.3	29
101	Molecular dynamics simulation of self-rotation effects on ultra-precision polishing of single-crystal copper. AIP Advances, 2013, 3, .	1.3	23
102	Effects of Indenter Tilt on Nanoindentation Results of Fused Silica: an Investigation by Finite Element Analysis. Materials Transactions, 2013, 54, 958-963.	1.2	17
103	Research on the effects of machining-induced subsurface damages on mono-crystalline silicon via molecular dynamics simulation. Applied Surface Science, 2012, 259, 66-71.	6.1	59
104	Influences of Sample Preparation on Nanoindentation Behavior of a Zr-Based Bulk Metallic Glass. Materials, 2012, 5, 1033-1039.	2.9	21
105	Influences of fluid flow effects on mechanical properties of the blood fuel cell via finite element method. , 2009, , .		0
106	Performance analysis of piezoelectric bimorph generator. Frontiers of Mechanical Engineering in China, 2008, 3, 151-157.	0.4	2
107	Novel precision piezoelectric step rotary actuator. Frontiers of Mechanical Engineering in China, 2007, 2, 356-360.	0.4	2
108	Fast triethylamine gas sensing performance based on In ₂ O ₃ nanocuboids. Proceedings of the Institution of Mechanical Engineers, Part L: Journal of Materials: Design and Applications, 0, , 146442072110227.	1.1	2