

Xiaohu Yao

List of Publications by Year in descending order

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96
papers

2,008
citations

236912

25
h-index

289230

40
g-index

96
all docs

96
docs citations

96
times ranked

1364
citing authors

#	ARTICLE	IF	CITATIONS
1	Effects of lattice distortion and chemical short-range order on the mechanisms of deformation in medium entropy alloy CoCrNi. <i>Acta Materialia</i> , 2020, 199, 352-369.	7.9	213
2	Delamination prediction in composite laminates under low-velocity impact. <i>Composite Structures</i> , 2015, 132, 290-298.	5.8	119
3	Buckling Analysis of Multiwalled Carbon Nanotubes Under Torsional Load Coupling With Temperature Change. <i>Journal of Engineering Materials and Technology, Transactions of the ASME</i> , 2006, 128, 419-427.	1.4	73
4	On thermo-viscoelastic experimental characterization and numerical modelling of VHB polymer. <i>International Journal of Non-Linear Mechanics</i> , 2020, 118, 103263.	2.6	65
5	Role of local chemical fluctuations in the shock dynamics of medium entropy alloy CoCrNi. <i>Acta Materialia</i> , 2021, 221, 117380.	7.9	63
6	A comprehensive thermo-viscoelastic experimental investigation of Ecoflex polymer. <i>Polymer Testing</i> , 2020, 86, 106478.	4.8	59
7	A visco-elastoplastic constitutive model for large deformation response of polycarbonate over a wide range of strain rates and temperatures. <i>Polymer</i> , 2014, 55, 6577-6593.	3.8	55
8	Shock-induced spall in single and nanocrystalline SiC. <i>Acta Materialia</i> , 2017, 140, 274-289.	7.9	54
9	Ecoflex polymer of different Shore hardnesses: Experimental investigations and constitutive modelling. <i>Mechanics of Materials</i> , 2020, 144, 103366.	3.2	49
10	Shock induced damage and fracture in SiC at elevated temperature and high strain rate. <i>Acta Materialia</i> , 2019, 167, 51-70.	7.9	48
11	Temperature and strain rate dependent tensile behavior of a transparent polyurethane interlayer. <i>Materials & Design</i> , 2015, 65, 1181-1188.	5.1	46
12	Failure analysis and modeling of foam sandwich laminates under impact loading. <i>Composite Structures</i> , 2018, 197, 10-20.	5.8	46
13	Temperature and strain rate dependent large tensile deformation and tensile failure behavior of transparent polyurethane at intermediate strain rates. <i>International Journal of Impact Engineering</i> , 2019, 129, 152-167.	5.0	45
14	First principle investigation of phase transition and thermodynamic properties of SiC. <i>Computational Materials Science</i> , 2015, 106, 76-82.	3.0	38
15	On the stress recovery behaviour of Ecoflex silicone rubbers. <i>International Journal of Mechanical Sciences</i> , 2021, 206, 106624.	6.7	36
16	Shock-induced amorphization in medium entropy alloy CoCrNi. <i>Scripta Materialia</i> , 2022, 209, 114379.	5.2	33
17	On the grain size dependence of shock responses in nanocrystalline sic ceramics at high strain rates. <i>Acta Materialia</i> , 2020, 200, 632-651.	7.9	32
18	Shock compression and spallation damage of high-entropy alloy Al _{0.1} CoCrFeNi. <i>Journal of Materials Science and Technology</i> , 2022, 128, 1-9.	10.7	31

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19	Improved ductility of Cu ₆₄ Zr ₃₆ metallic glass/Cu nanocomposites via phase and grain boundaries. <i>Nanotechnology</i> , 2016, 27, 175701.	2.6	29
20	Spall damage of a Ta particle-reinforced metallic glass matrix composite under high strain rate loading. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2018, 711, 284-292.	5.6	28
21	Strengthening effects of encapsulating graphene in SiC particle-reinforced Al-matrix composites. <i>Computational Materials Science</i> , 2018, 153, 275-281.	3.0	28
22	Tensile and nanoindentation deformation of amorphous/crystalline nanolaminates: Effects of layer thickness and interface type. <i>Computational Materials Science</i> , 2018, 154, 225-233.	3.0	28
23	Cracking process and energy dissipation of sandstone under repetitive impact loading with different loading rates: From micro to macro scale. <i>Construction and Building Materials</i> , 2021, 302, 124123.	7.2	28
24	High-velocity shock compression of SiC via molecular dynamics simulation. <i>Computational Materials Science</i> , 2015, 98, 297-303.	3.0	27
25	Short- and medium-range orders in Cu ₄₆ Zr ₅₄ metallic glasses under shock compression. <i>Journal of Applied Physics</i> , 2015, 118, 015901.	2.5	26
26	Cup-cone structure in spallation of bulk metallic glasses. <i>Acta Materialia</i> , 2019, 178, 219-227.	7.9	25
27	A dynamic constitutive model for fiber-reinforced composite under impact loading. <i>International Journal of Mechanical Sciences</i> , 2020, 166, 105226.	6.7	23
28	Tensile mechanical properties study of SiC/graphene composites based on molecular dynamics. <i>Computational Materials Science</i> , 2017, 131, 266-274.	3.0	22
29	An approach of peridynamic modeling associated with molecular dynamics for fracture simulation of particle reinforced metal matrix composites. <i>Composite Structures</i> , 2020, 250, 112613.	5.8	22
30	Failure modeling of composite wing leading edge under bird strike. <i>Composite Structures</i> , 2021, 255, 113005.	5.8	22
31	Temperature- and strain rate-dependent constitutive modeling of the large deformation behavior of a transparent polyurethane interlayer. <i>Polymer Engineering and Science</i> , 2015, 55, 1864-1872.	3.1	21
32	Deformation and spallation of shock-loaded graphene: Effects of orientation and grain boundary. <i>Carbon</i> , 2018, 132, 520-528.	10.3	21
33	A cavitation and dynamic void growth model for a general class of strain-softening amorphous materials. <i>Journal of the Mechanics and Physics of Solids</i> , 2020, 141, 104023.	4.8	21
34	Tensile deformation of nanocrystalline Al-matrix composites: Effects of the SiC particle and graphene. <i>Computational Materials Science</i> , 2019, 156, 187-194.	3.0	20
35	The effect of tensile stress on oxidation behavior of nickel-base single crystal superalloy. <i>Corrosion Science</i> , 2021, 191, 109737.	6.6	20
36	Effects of shock-induced phase transition on spallation of a mild carbon steel. <i>International Journal of Mechanical Sciences</i> , 2022, 213, 106858.	6.7	20

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37	Experimental and modeling study of the viscoelastic-viscoplastic deformation behavior of amorphous polymers over a wide temperature range. <i>Mechanics of Materials</i> , 2022, 167, 104246.	3.2	20
38	Balancing strength, hardness and ductility of Cu ₆₄ Zr ₃₆ nanoglasses via embedded nanocrystals. <i>Nanotechnology</i> , 2018, 29, 025701.	2.6	19
39	Layer thickness effects on the strengthening and toughening mechanisms in metallic glass-graphene nanolaminates. <i>Computational Materials Science</i> , 2020, 177, 109536.	3.0	18
40	A rate-dependent peridynamic model for predicting the dynamic response of particle reinforced metal matrix composites. <i>Composite Structures</i> , 2021, 263, 113673.	5.8	18
41	Thermodynamic formulation of a unified multi-mechanism continuum viscoplastic damage model with application to high-Cr steels. <i>International Journal of Plasticity</i> , 2019, 114, 15-39.	8.8	17
42	Oxidation behavior of recast layer of air-film hole machined by EDM technology of Ni-based single crystal blade and its effect on creep strength. <i>Surface and Coatings Technology</i> , 2021, 419, 127285.	4.8	17
43	Static and dynamic strength of soda-lime glass under combined compression-shear loading. <i>Journal of Non-Crystalline Solids</i> , 2019, 516, 14-25.	3.1	16
44	The spallation of single crystal SiC: The effects of shock pulse duration. <i>Computational Materials Science</i> , 2016, 124, 151-159.	3.0	15
45	Planar impacts on nanocrystalline SiC: a comparison of different potentials. <i>Journal of Materials Science</i> , 2018, 53, 6637-6651.	3.7	15
46	Non-convex shape effects on the dense random packing properties of assembled rods. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2018, 490, 212-221.	2.6	15
47	Rate dependence and anisotropy of SiC response to ramp and wave-free quasi-isentropic compression. <i>International Journal of Plasticity</i> , 2021, 138, 102923.	8.8	15
48	Understanding the mechanical and viscoelastic properties of graphene reinforced polycarbonate nanocomposites using coarse-grained molecular dynamics simulations. <i>Computational Materials Science</i> , 2021, 191, 110339.	3.0	15
49	Shock response of metal-ceramic nanolayered composites. <i>Composites Part B: Engineering</i> , 2020, 199, 108272.	12.0	13
50	A weak form quadrature element formulation of geometrically exact shells incorporating drilling degrees of freedom. <i>Computational Mechanics</i> , 2019, 63, 663-679.	4.0	12
51	Spallation of polycarbonate under plate impact loading. <i>Journal of Applied Physics</i> , 2019, 126, .	2.5	12
52	Analytical study on the low-velocity impact penetration of the fully-clamped foam-core composite sandwich panels. <i>Composites Part B: Engineering</i> , 2021, 224, 109214.	12.0	12
53	Investigation of molecular mechanisms of polyvinylidene fluoride under the effects of temperature, electric poling, and mechanical stretching using molecular dynamics simulations. <i>Polymer</i> , 2022, 245, 124691.	3.8	12
54	A micromechanics-based framework to predict transitions between dimple and cup-cone fracture modes in shocked metallic glasses. <i>International Journal of Plasticity</i> , 2021, 137, 102884.	8.8	11

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55	Dynamic mechanical behavior of foam-core composite sandwich structures subjected to low-velocity impact. <i>Archive of Applied Mechanics</i> , 2016, 86, 1605-1619.	2.2	10
56	Nonlinear dynamic response analysis of cylindrical composite stiffened laminates based on the weak form quadrature element method. <i>Composite Structures</i> , 2018, 203, 446-457.	5.8	10
57	Maximally dense random packings of intersecting spherocylinders with central symmetry. <i>Powder Technology</i> , 2017, 314, 49-58.	4.2	9
58	The toughening mechanism and spatial-temporal evolution of shear bands at different strain rates in Vit-1 metallic glass. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2020, 773, 138855.	5.6	9
59	High-speed penetration dynamics of polycarbonate. <i>International Journal of Mechanical Sciences</i> , 2022, 223, 107250.	6.7	9
60	Numerical studies of penetration problems by an improved particle method. <i>Science China: Physics, Mechanics and Astronomy</i> , 2012, 55, 2273-2283.	5.1	8
61	A Macro-Damaged Viscoelastoplastic Model for Thermomechanical and Rate-Dependent Behavior of Glassy Polymers. <i>Macromolecular Materials and Engineering</i> , 2016, 301, 469-485.	3.6	8
62	Spatial-temporal evolution of shear banding in bulk metallic glasses. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2021, 800, 140286.	5.6	8
63	Shock compression of nanoporous silicon carbide at high strain rate. <i>International Journal of Mechanical Sciences</i> , 2022, 224, 107320.	6.7	8
64	Study on predicting the mechanical properties and fracturing behaviors of particle reinforced metal matrix composites by non-local approach. <i>Mechanics of Materials</i> , 2021, 155, 103790.	3.2	7
65	Structural phase transition and amorphization in hexagonal SiC subjected to dynamic loading. <i>Mechanics of Materials</i> , 2022, 164, 104139.	3.2	7
66	Penetration dynamics of steel spheres into a ballistic gelatin: Experiments, nondimensional analysis, and finite element modeling. <i>International Journal of Impact Engineering</i> , 2022, 162, 104144.	5.0	7
67	The formation and propagation mechanism of shear band in bulk metallic glasses under dynamic compression. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2022, 844, 143165.	5.6	7
68	Combined bending stability of carbon nanotubes subjected to thermo-electro-mechanical loadings. <i>Computational Materials Science</i> , 2012, 54, 135-144.	3.0	6
69	Strengthening and toughening mechanisms of metallic glass nanocomposites via graphene nanoplatelets. <i>Journal of Non-Crystalline Solids</i> , 2020, 546, 120284.	3.1	6
70	A quadrature element formulation of geometrically nonlinear laminated composite shells incorporating thickness stretch and drilling rotation. <i>Acta Mechanica</i> , 2020, 231, 1685-1709.	2.1	6
71	An energy-momentum conserving scheme for geometrically exact shells with drilling DOFs. <i>Computational Mechanics</i> , 2021, 67, 341-364.	4.0	6
72	Rate-dependent strength and deformation heterogeneity of B4C-reinforced Al composite: Time-resolved imaging with synchrotron X-rays. <i>Ceramics International</i> , 2021, 47, 16141-16151.	4.8	6

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73	An improved material model for loading-path and strain-rate dependent strength of impacted soda-lime glass plate. <i>Journal of Materials Research and Technology</i> , 2021, 15, 1905-1919.	5.8	6
74	Compression and spallation properties of polyethylene terephthalate under plate impact loading. <i>International Journal of Mechanical Sciences</i> , 2021, 211, 106736.	6.7	6
75	An RHT-Model-Based Equivalent Parameter Scheme for Blast Response Simulation of RC Frames. <i>International Journal of Structural Stability and Dynamics</i> , 2022, 22, .	2.4	6
76	Defect reversibility regulates dynamic tensile strength in silicon carbide at high strain rates. <i>Scripta Materialia</i> , 2022, 213, 114593.	5.2	6
77	Combined torsional buckling of double-walled carbon nanotubes with axial load in the multi-field coupled condition. <i>Science China: Physics, Mechanics and Astronomy</i> , 2011, 54, 1659-1665.	5.1	5
78	Crack propagation in graphene monolayer under tear loading. <i>Physical Chemistry Chemical Physics</i> , 2019, 21, 2659-2664.	2.8	5
79	Creep behavior of sandstone containing impact-induced microcracks. <i>Mechanics of Time-Dependent Materials</i> , 2022, 26, 741-760.	4.4	5
80	Experimental investigation on the tensile behavior of a transparent polyurethane interlayer. <i>International Journal of Materials Research</i> , 2015, 106, 996-1001.	0.3	4
81	Microstructural evolution of shear bands formation of metallic glasses under different loading conditions and strain rates. <i>Journal of Non-Crystalline Solids</i> , 2022, 584, 121525.	3.1	4
82	Spin transition of ferroperricline under shock compression. <i>AIP Advances</i> , 2018, 8, 075028.	1.3	3
83	The dynamic response and failure of Polycarbonate plate by soft body impact. <i>Polymer Engineering and Science</i> , 2016, 56, 1160-1168.	3.1	2
84	Buckling of a stiff thin film on a compliant substrate under anisotropic biaxial prestrain. <i>Science China: Physics, Mechanics and Astronomy</i> , 2016, 59, 1.	5.1	2
85	Dynamic Stability of a Thin Film Bonded to a Compliant Substrate Subjected to a Step Load with Damping. <i>International Journal of Nonlinear Sciences and Numerical Simulation</i> , 2017, 18, 221-232.	1.0	2
86	Two-dimensional densely ordered packings of non-convex bending and assembled rods. <i>Particuology</i> , 2020, 50, 35-42.	3.6	2
87	A numerical method on thermal-humidity behavior of electronic packaging. , 2011, , .		1
88	Size-dependent vibration analysis of carbon nanotubes. <i>Journal of Materials Research</i> , 2019, 34, 2148-2160.	2.6	1
89	Effects of central symmetry and elongation on the dense disordered packings of entangled particles. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2019, 523, 120-128.	2.6	1
90	The plastic strengthening effect after long-term endurance and fatigue verification of aero-engine turbine blade single crystal superalloy. <i>Mechanics of Time-Dependent Materials</i> , 0, , 1.	4.4	1

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91	Experimental study of the dynamic characteristics of sandstone with preexisting creep damage. Mechanics of Time-Dependent Materials, 0, , 1.	4.4	1
92	THE BUCKLING OF THE STRETCHABLE ELECTRONIC STRUCTURE. , 2011, , .		0
93	Torsional buckling analysis of multiwalled carbon nanotubes subjected to thermoelectromechanical loadings. Materials Research Innovations, 2011, 15, s135-s139.	2.3	0
94	Investigation for the response of PCB assembly with five POP packages during dropping. , 2012, , .		0
95	Damage behavior of honeycomb sandwich structure under low-energy impact. MATEC Web of Conferences, 2017, 130, 05002.	0.2	0
96	The atomistic mechanism of notch sensitivity on the deformation mode in metallic glasses. Journal of Applied Physics, 2022, 131, 225108.	2.5	0