

Zhijun Zheng

List of Publications by Year in descending order

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59
papers

2,689
citations

304743

22
h-index

197818

49
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59
all docs

59
docs citations

59
times ranked

3045
citing authors

#	ARTICLE	IF	CITATIONS
1	A Flexible and Highly Pressure-sensitive Graphene-Polyurethane Sponge Based on Fractured Microstructure Design. <i>Advanced Materials</i> , 2013, 25, 6692-6698.	21.0	985
2	Dynamic crushing of 2D cellular structures: A finite element study. <i>International Journal of Impact Engineering</i> , 2005, 32, 650-664.	5.0	208
3	Dynamic stress-strain states for metal foams using a 3D cellular model. <i>Journal of the Mechanics and Physics of Solids</i> , 2014, 72, 93-114.	4.8	165
4	Static and low-velocity impact behavior of sandwich beams with closed-cell aluminum-foam core in three-point bending. <i>International Journal of Impact Engineering</i> , 2008, 35, 885-894.	5.0	138
5	A numerical study on the rate sensitivity of cellular metals. <i>International Journal of Solids and Structures</i> , 2009, 46, 3988-3998.	2.7	117
6	Dynamic crushing of cellular materials: Continuum-based wave models for the transitional and shock modes. <i>International Journal of Impact Engineering</i> , 2012, 42, 66-79.	5.0	110
7	Crashworthiness of foam-filled thin-walled circular tubes under dynamic bending. <i>Materials & Design</i> , 2013, 52, 1058-1064.	5.1	76
8	Dynamic crushing of cellular materials: A unified framework of plastic shock wave models. <i>International Journal of Impact Engineering</i> , 2013, 53, 29-43.	5.0	73
9	Deformation and failure mechanisms of sandwich beams under three-point bending at elevated temperatures. <i>Composite Structures</i> , 2014, 111, 285-290.	5.8	57
10	Crashworthiness design of density-graded cellular metals. <i>Theoretical and Applied Mechanics Letters</i> , 2013, 3, 031001.	2.8	46
11	Crashworthiness of graded cellular materials: A design strategy based on a nonlinear plastic shock model. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2017, 680, 411-420.	5.6	44
12	Dynamic crushing of 2D cellular structures: Local strain field and shock wave velocity. <i>International Journal of Impact Engineering</i> , 2013, 57, 7-16.	5.0	43
13	Interfacial strength-controlled energy dissipation mechanism and optimization in impact-resistant nacreous structure. <i>Materials and Design</i> , 2019, 163, 107532.	7.0	43
14	Using the Dugdale approximation to match a specific interaction in the adhesive contact of elastic objects. <i>Journal of Colloid and Interface Science</i> , 2007, 310, 27-34.	9.4	42
15	Crushing and densification of rapid prototyping polylactide foam: Meso-structural effect and a statistical constitutive model. <i>Mechanics of Materials</i> , 2018, 127, 65-76.	3.2	42
16	Dynamic material parameters of closed-cell foams under high-velocity impact. <i>International Journal of Impact Engineering</i> , 2017, 99, 111-121.	5.0	41
17	Localized indentation of sandwich panels with metallic foam core: Analytical models for two types of indenters. <i>Composites Part B: Engineering</i> , 2013, 44, 212-217.	12.0	36
18	Low-velocity perforation behavior of composite sandwich panels with aluminum foam core. <i>Journal of Sandwich Structures and Materials</i> , 2013, 15, 92-109.	3.5	34

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19	Impact Resistance and Energy Absorption of Functionally Graded Cellular Structures. <i>Applied Mechanics and Materials</i> , 0, 69, 73-78.	0.2	29
20	Crashworthiness design of graded cellular materials: An asymptotic solution considering loading rate sensitivity. <i>International Journal of Impact Engineering</i> , 2020, 143, 103611.	5.0	28
21	Effect of temperature on the indentation behavior of closed-cell aluminum foam. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2012, 550, 222-226.	5.6	27
22	Modification and verification of the Deshpande's Fleck foam model: A variable ellipticity. <i>International Journal of Mechanical Sciences</i> , 2019, 151, 331-342.	6.7	27
23	On the local nature of the strain field calculation method for measuring heterogeneous deformation of cellular materials. <i>International Journal of Solids and Structures</i> , 2014, 51, 478-490.	2.7	23
24	Dynamic crushing of cellular materials: A unique dynamic stress-strain state curve. <i>Mechanics of Materials</i> , 2016, 100, 219-231.	3.2	21
25	Localized indentation of sandwich beam with metallic foam core. <i>Journal of Sandwich Structures and Materials</i> , 2012, 14, 197-210.	3.5	20
26	Blast Alleviation of Cellular Sacrificial Cladding: A Nonlinear Plastic Shock Model. <i>International Journal of Applied Mechanics</i> , 2016, 08, 1650057.	2.2	20
27	Static analysis of ultra-thin beams based on a semi-continuum model. <i>Acta Mechanica Sinica/Lixue Xuebao</i> , 2011, 27, 713-719.	3.4	16
28	A Prestressing Strategy Enabled Synergistic Energy Dissipation in Impact-Resistant Nacre-Like Structures. <i>Advanced Science</i> , 2022, 9, e2104867.	11.2	16
29	A Thin Liquid Film and Its Effects in an Atomic Force Microscopy Measurement. <i>Chinese Physics Letters</i> , 2009, 26, 086802.	3.3	14
30	A plastic indentation model for sandwich beams with metallic foam cores. <i>Acta Mechanica Sinica/Lixue Xuebao</i> , 2011, 27, 963-966.	3.4	11
31	Strain-rate effect on initial crush stress of irregular honeycomb under dynamic loading and its deformation mechanism. <i>Acta Mechanica Sinica/Lixue Xuebao</i> , 2018, 34, 117-129.	3.4	11
32	Impact Resistance and Design of Graded Cellular Cladding. <i>International Journal of Applied Mechanics</i> , 2018, 10, 1850107.	2.2	11
33	Crushing behavior and deformation mechanism of additively manufactured Voronoi-based random open-cell polymer foams. <i>Materials Today Communications</i> , 2020, 25, 101406.	1.9	11
34	Indentation of composite sandwich panels with aluminum foam core: An experimental parametric study. <i>Journal of Reinforced Plastics and Composites</i> , 2014, 33, 1671-1681.	3.1	10
35	Compaction behavior and densification mechanisms of Cu W composite powders. <i>Powder Technology</i> , 2021, 382, 478-490.	4.2	10
36	Crashworthiness design of car threshold based on aluminium foam sandwich structure. <i>International Journal of Crashworthiness</i> , 2022, 27, 1167-1178.	1.9	10

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37	Deformation and perforation of sandwich panels with aluminum-foam core at elevated temperatures. <i>International Journal of Impact Engineering</i> , 2017, 109, 366-377.	5.0	9
38	Stress Distribution in Graded Cellular Materials Under Dynamic Compression. <i>Latin American Journal of Solids and Structures</i> , 2017, 14, 1251-1272.	1.0	8
39	Adhesion of elastic wavy surfaces: Interface strengthening/weakening and mode transition mechanisms. <i>Journal of the Mechanics and Physics of Solids</i> , 2021, 151, 104402.	4.8	8
40	Dynamic simulation and safety evaluation of high-speed trains meeting in open air. <i>Acta Mechanica Sinica/Lixue Xuebao</i> , 2016, 32, 206-214.	3.4	7
41	Spherical indentation of closed-cell aluminum foams: An empirical force–depth relation. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2014, 618, 433-437.	5.6	6
42	A wave propagation model of distributed energy absorption system for trains. <i>International Journal of Crashworthiness</i> , 2019, 24, 508-522.	1.9	6
43	Mechanisms underlying two kinds of surface effects on elastic constants. <i>Acta Mechanica Sinica</i> , 2009, 22, 605-622.	1.9	4
44	Dynamic Response of Side Windows of High-speed Trains Subjected to Crossing Air Pressure Pulse. <i>Jixie Gongcheng Xuebao/Chinese Journal of Mechanical Engineering</i> , 2013, 49, 30.	0.5	4
45	Effect of Random Defects on Dynamic Response of Honeycomb Structures. <i>Materials Science Forum</i> , 0, 706-709, 805-810.	0.3	3
46	On the stress–strain states of cellular materials under high loading rates. <i>Theoretical and Applied Mechanics Letters</i> , 2016, 6, 122-125.	2.8	3
47	Dynamic crushing of cellular materials: a particle velocity-based analytical method and its application. <i>Acta Mechanica Sinica/Lixue Xuebao</i> , 2019, 35, 839-851.	3.4	3
48	Blast Alleviation of Sacrificial Cladding with Graded and Uniform Cellular Materials. <i>Materials</i> , 2020, 13, 5616.	2.9	3
49	Wide-range control of impulse transmission by cylindrical shell chains with varying aspect ratios. <i>International Journal of Impact Engineering</i> , 2021, 158, 104017.	5.0	3
50	A Unified Guide to Two Opposite Size Effects in Nano Elastic Materials. <i>Chinese Physics Letters</i> , 2009, 26, 126201.	3.3	2
51	Impact damping performance and mechanisms of 3D-printed density gradient cylindrical shell chains. <i>International Journal of Impact Engineering</i> , 2022, 169, 104319.	5.0	2
52	Splitting the Fast and Slow Motions in Molecular Dynamics Simulations Based on the Change of Cold Potential Well Bottom. , 2010, , .		1
53	Indentation Behavior of a Closed-Cell Aluminum Foam at Elevated Temperatures. <i>Key Engineering Materials</i> , 0, 535-536, 219-222.	0.4	1
54	Local Strain and Stress Calculation Methods of Irregular Honeycombs Under Dynamic Compression. , 2016, , .		1

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55	Effect of Relative Density on the Dynamic Impact Behaviors of Closed-Cell Foam. , 2016, , .		0
56	Effect of Wave Propagation in a Distributed Energy Absorption System for Trains. MATEC Web of Conferences, 2017, 136, 02008.	0.2	0
57	Shock wave speed and stress-strain relation of aluminium honeycombs under dynamic compression. EPJ Web of Conferences, 2018, 183, 01047.	0.3	0
58	Influences of Inertia and Material Property on the Dynamic Behavior of Cellular Metals. IUTAM Symposium on Cellular, Molecular and Tissue Mechanics, 2009, , 149-157.	0.2	0
59	Quasi-static and dynamic compaction of granular materials: A strain-activated statistical compaction model and its evaluation. Mechanics of Materials, 2022, , 104250.	3.2	0