

Lifeng Wang

List of Publications by Year in descending order

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59
papers

4,317
citations

101543

36
h-index

138484

58
g-index

59
all docs

59
docs citations

59
times ranked

3828
citing authors

#	ARTICLE	IF	CITATIONS
1	Bending behavior of sandwich composite structures with tunable 3D-printed core materials. <i>Composite Structures</i> , 2017, 175, 46-57.	5.8	272
2	Lattice Metamaterials with Mechanically Tunable Poisson's Ratio for Vibration Control. <i>Physical Review Applied</i> , 2017, 7, .	3.8	250
3	Exploiting negative Poisson's ratio to design 3D-printed composites with enhanced mechanical properties. <i>Materials and Design</i> , 2018, 142, 247-258.	7.0	234
4	Co-Continuous Composite Materials for Stiffness, Strength, and Energy Dissipation. <i>Advanced Materials</i> , 2011, 23, 1524-1529.	21.0	218
5	3D printed hierarchical honeycombs with shape integrity under large compressive deformations. <i>Materials and Design</i> , 2018, 137, 226-234.	7.0	189
6	Topology optimization of multi-material negative Poisson's ratio metamaterials using a reconciled level set method. <i>CAD Computer Aided Design</i> , 2017, 83, 15-32.	2.7	177
7	Size Dependence of the Thin-Shell Model for Carbon Nanotubes. <i>Physical Review Letters</i> , 2005, 95, 105501.	7.8	157
8	Mechanical properties of sandwich composites with 3d-printed auxetic and non-auxetic lattice cores under low velocity impact. <i>Materials and Design</i> , 2018, 160, 1305-1321.	7.0	145
9	Thermally Tunable, Self-Healing Composites for Soft Robotic Applications. <i>Macromolecular Materials and Engineering</i> , 2014, 299, 1279-1284.	3.6	135
10	Enhancing indentation and impact resistance in auxetic composite materials. <i>Composites Part B: Engineering</i> , 2020, 198, 108229.	12.0	135
11	An experimental investigation of the temperature effect on the mechanics of carbon fiber reinforced polymer composites. <i>Composites Science and Technology</i> , 2018, 154, 53-63.	7.8	133
12	Hierarchical honeycomb lattice metamaterials with improved thermal resistance and mechanical properties. <i>Composite Structures</i> , 2016, 152, 395-402.	5.8	131
13	Elucidation of the Reinforcing Mechanism in Carbon Nanotube/Rubber Nanocomposites. <i>ACS Nano</i> , 2011, 5, 3858-3866.	14.6	117
14	3D printing of biomimetic composites with improved fracture toughness. <i>Acta Materialia</i> , 2019, 173, 61-73.	7.9	113
15	Biomimetic architected materials with improved dynamic performance. <i>Journal of the Mechanics and Physics of Solids</i> , 2019, 125, 178-197.	4.8	108
16	Periodic Bicontinuous Composites for High Specific Energy Absorption. <i>Nano Letters</i> , 2012, 12, 4392-4396.	9.1	95
17	Periodic co-continuous acoustic metamaterials with overlapping locally resonant and Bragg band gaps. <i>Applied Physics Letters</i> , 2014, 105, .	3.3	88
18	Hoberman-sphere-inspired lattice metamaterials with tunable negative thermal expansion. <i>Composite Structures</i> , 2018, 189, 586-597.	5.8	88

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19	Wrinkled surface topographies of electrospun polymer fibers. <i>Applied Physics Letters</i> , 2009, 94, .	3.3	87
20	Mechanically tunable phononic band gaps in three-dimensional periodic elastomeric structures. <i>International Journal of Solids and Structures</i> , 2012, 49, 2881-2885.	2.7	85
21	Broadband and multiband vibration mitigation in lattice metamaterials with sinusoidally-shaped ligaments. <i>Extreme Mechanics Letters</i> , 2017, 17, 24-32.	4.1	77
22	Engineering lattice metamaterials for extreme property, programmability, and multifunctionality. <i>Journal of Applied Physics</i> , 2020, 127, .	2.5	77
23	Enhanced Energy Dissipation in Periodic Epoxy Nanoframes. <i>Nano Letters</i> , 2010, 10, 2592-2597.	9.1	68
24	Enhanced fracture toughness in architected interpenetrating phase composites by 3D printing. <i>Composites Science and Technology</i> , 2018, 167, 251-259.	7.8	67
25	Designing Phononic Crystals with Wide and Robust Band Gaps. <i>Physical Review Applied</i> , 2018, 9, .	3.8	66
26	Bio-inspired heterogeneous composites for broadband vibration mitigation. <i>Scientific Reports</i> , 2016, 5, 17865.	3.3	59
27	Multiband wave filtering and waveguiding in bio-inspired hierarchical composites. <i>Extreme Mechanics Letters</i> , 2015, 5, 18-24.	4.1	57
28	Learning from nature: Use material architecture to break the performance tradeoffs. <i>Materials and Design</i> , 2019, 168, 107650.	7.0	55
29	Harnessing out-of-plane deformation to design 3D architected lattice metamaterials with tunable Poisson's ratio. <i>Scientific Reports</i> , 2017, 7, 8949.	3.3	50
30	Combination of stiffness, strength, and toughness in 3D printed interlocking nacre-like composites. <i>Extreme Mechanics Letters</i> , 2020, 35, 100621.	4.1	50
31	Direct Quantification of the Mechanical Anisotropy and Fracture of an Individual Exoskeleton Layer via Uniaxial Compression of Micropillars. <i>Nano Letters</i> , 2011, 11, 3868-3874.	9.1	49
32	Anisotropic design of a multilayered biological exoskeleton. <i>Journal of Materials Research</i> , 2009, 24, 3477-3494.	2.6	48
33	Bioinspired Structural Material Exhibiting Post-yield Lateral Expansion and Volumetric Energy Dissipation During Tension. <i>Advanced Functional Materials</i> , 2010, 20, 3025-3030.	14.9	46
34	Harnessing structural hierarchy to design stiff and lightweight phononic crystals. <i>Extreme Mechanics Letters</i> , 2016, 9, 91-96.	4.1	45
35	Prediction of the Effective Thermal Conductivity of Hollow Sphere Foams. <i>ACS Applied Energy Materials</i> , 2018, 1, 1146-1157.	5.1	45
36	Enhanced mechanical properties of carbon nanotube networks by mobile and discrete binders. <i>Carbon</i> , 2013, 64, 237-244.	10.3	44

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37	Tunable band gaps in bio-inspired periodic composites with nacre-like microstructure. <i>Journal of Applied Physics</i> , 2014, 116, .	2.5	37
38	Plastic Dissipation Mechanisms in Periodic Microframe-Structured Polymers. <i>Advanced Functional Materials</i> , 2009, 19, 1343-1350.	14.9	36
39	Enhanced stiffness, strength and energy absorption for co-continuous composites with liquid filler. <i>Composite Structures</i> , 2015, 128, 274-283.	5.8	35
40	Enhanced Mechanical Properties of Prestressed Multi-Walled Carbon Nanotubes. <i>Small</i> , 2008, 4, 733-737.	10.0	30
41	Growth strain-induced wrinkled membrane morphology of white blood cells. <i>Soft Matter</i> , 2011, 7, 11319.	2.7	30
42	3D printed architected hollow sphere foams with low-frequency phononic band gaps. <i>Additive Manufacturing</i> , 2019, 30, 100842.	3.0	29
43	Acoustic band gaps of three-dimensional periodic polymer cellular solids with cubic symmetry. <i>Journal of Applied Physics</i> , 2013, 114, .	2.5	28
44	Ultrawide coupled bandgap in hybrid periodic system with multiple resonators. <i>Journal of Applied Physics</i> , 2020, 127, .	2.5	25
45	Mechanics of Indentation into Micro- and Nanoscale Forests of Tubes, Rods, or Pillars. <i>Journal of Engineering Materials and Technology, Transactions of the ASME</i> , 2011, 133, .	1.4	24
46	Anomalous elastic buckling of layered crystalline materials in the absence of structure slenderness. <i>Journal of the Mechanics and Physics of Solids</i> , 2016, 88, 83-99.	4.8	24
47	Modeling the Large Deformation and Microstructure Evolution of Nonwoven Polymer Fiber Networks. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2019, 86, .	2.2	21
48	Tunable stimulus-responsive friction mechanisms of polyelectrolyte films and tube forests. <i>Soft Matter</i> , 2012, 8, 8642.	2.7	19
49	Instability-Triggered Triply Negative Mechanical Metamaterial. <i>Physical Review Applied</i> , 2019, 12, .	3.8	19
50	Ultrawide bandgap in metamaterials via coupling of locally resonant and Bragg bandgaps. <i>Acta Mechanica</i> , 2022, 233, 477-493.	2.1	17
51	Mechanics of network materials with responsive crosslinks. <i>Comptes Rendus - Mecanique</i> , 2014, 342, 264-272.	2.1	16
52	Geometrically Controlled Mechanically Responsive Polyelectrolyte Tube Arrays. <i>Advanced Materials</i> , 2011, 23, 4667-4673.	21.0	14
53	The effect of material mixing on interfacial stiffness and strength of multi-material additive manufacturing. <i>Additive Manufacturing</i> , 2020, 36, 101502.	3.0	13
54	Harnessing 3D printed residual stress to design heat-shrinkable metamaterials. <i>Results in Physics</i> , 2018, 11, 85-95.	4.1	12

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55	Theoretical prediction of effective stiffness of nonwoven fibrous networks with straight and curved nanofibers. Composites Part A: Applied Science and Manufacturing, 2021, 143, 106311.	7.6	10
56	Reversible high-pressure carbon nanotube vessel. Physical Review B, 2010, 81, .	3.2	7
57	Effect of Nanosecond Laser Beam Shaping on Cu(In,Ga)Se ₂ Thin Film Solar Cell Scribing. ACS Applied Energy Materials, 2019, 2, 5057-5065.	5.1	6
58	3D Printing of Biomimetic Composites with Improved Fracture Toughness. SSRN Electronic Journal, 0, , .	0.4	3
59	Elastic anisotropy and wave propagation properties of multifunctional hollow sphere foams. Composite Structures, 2022, , 115540.	5.8	2