Kai Wei

List of Publications by Year
in descending order

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78 papers	2,562 citations	172457 29 h-index	214800 47 g-index
78 all docs	78 docs citations	78 times ranked	1660 citing authors

#	Article	IF	Citations
1	Interlaminar shear behaviour and meso damage suppression mechanism of stitched composite under short beam shear using X-ray CT. Composites Science and Technology, 2022, 218, 109189.	7.8	20
2	Mechanical performances and coupling design for the mechanical metamaterials with tailorable thermal expansion. Mechanics of Materials, 2022, 165, 104176.	3.2	22
3	On direct weight inverse approach for identifying composite parameters based on two-way TrumpetNets. Composite Structures, 2022, 286, 115251.	5.8	1
4	Program multi-directional thermal expansion in a series of bending dominated mechanical metamaterials. Thin-Walled Structures, 2022, 174, 109147.	5.3	14
5	Multi-material topology optimization and additive manufacturing for metamaterials incorporating double negative indexes of Poissonâ€™s ratio and thermal expansion. Additive Manufacturing, 2022, 54, 102742.	3.0	15
6	Simultaneously program thermal expansion and Poissonâ€™s ratio in three dimensional mechanical metamaterial. Composite Structures, 2021, 262, 113365.	5.8	26
7	Stereolithography additive manufacturing of multi-ceramic triangle structures with tunable thermal expansion. Journal of the European Ceramic Society, 2021, 41, 2796-2806.	5.7	34
8	Additively manufactured bi-material metamaterial to program a wide range of thermal expansion. Materials and Design, 2021, 198, 109343.	7.0	51
9	Design and analysis for large magnitudes of programmable Poisson's ratio in a series of lightweight cylindrical metastructures. International Journal of Mechanical Sciences, 2021, 195, 106220.	6.7	30
10	Preforming characteristics in compaction process for fabric with binder under elevated temperature. Composites Communications, 2021, 23, 100545.	6.3	14
11	Multi-functional cylindrical metastructures to simultaneously program both thermal expansion and Poissonâ€™s ratio. Extreme Mechanics Letters, 2021, 43, 101177.	4.1	15
12	Modeling the temperatureâ€dependent viscoelastic behavior of glass fabric with binder in the compaction process. Polymer Composites, 2021, 42, 3038-3050.	4.6	6
13	Large programmable coefficient of thermal expansion in additively manufactured bi-material mechanical metamaterial. Virtual and Physical Prototyping, 2021, 16, S53-S65.	10.4	23
14	Stiffness characteristics for a series of lightweight mechanical metamaterials with programmable thermal expansion. International Journal of Mechanical Sciences, 2021, 202-203, 106527.	6.7	22
15	Design and additive manufacturing of 3D-architected ceramic metamaterials with programmable thermal expansion. Additive Manufacturing, 2021, 47, 102338.	3.0	8
16	Three-dimensional hierarchical metamaterials incorporating multi-directional programmable thermal expansion. Mechanics of Materials, 2021, 163, 104095.	3.2	15
17	Mechanical analysis and modeling of metallic lattice sandwich additively fabricated by selective laser melting. Thin-Walled Structures, 2020, 146, 106189.	5.3	45
18	Effects of pre-strain and annealing on the fatigue properties of complex phase steel CP800. International Journal of Fatigue, 2020, 131, 105364.	5.7	13

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19	Meso/macro scale response of the comingled glass polypropylene 2-2 twill woven fabric under shear pre-tension coupling. Composite Structures, 2020, 236, 111854.	5.8	10
20	Theoretical study and physical tests of circular hole-edge stress concentration in long glass fiber reinforced polypropylene composite. Composite Structures, 2020, 236, 111884.	5.8	21
21	Mechanical properties of Invar 36 alloy additively manufactured by selective laser melting. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 772, 138799.	5.6	59
22	Mechanical behavior of anti-oxidation coatings on C/C composites at elevated temperature: An in-situ indentation study. Ceramics International, 2020, 46, 6628-6633.	4.8	3
23	Modelling the viscoelastic compaction behavior of 3D stitched carbon fabric with different stitching parameters. Composites Communications, 2020, 21, 100410.	6.3	3
24	Microstructures and unique low thermal expansion of Invar 36 alloy fabricated by selective laser melting. Materials Characterization, 2020, 166, 110409.	4.4	25
25	Effective thermal conductivity and heat transfer characteristics for a series of lightweight lattice core sandwich panels. Applied Thermal Engineering, 2020, 173, 115205.	6.0	22
26	Shear deformation characteristics and defect evolution of the biaxial Â±45Â° and 0/90Â° glass non-crimp fabrics. Composites Science and Technology, 2020, 193, 108137.	7.8	22
27	Experimental characterization of the compaction behavior in preforming process for 3D stitched carbon fabric. Composites Communications, 2020, 19, 203-209.	6.3	16
28	Experimentally program large magnitude of Poisson's ratio in additively manufactured mechanical metamaterials. International Journal of Mechanical Sciences, 2020, 173, 105466.	6.7	68
29	Mechanical properties and energy absorption of 3D printed square hierarchical honeycombs under in-plane axial compression. Composites Part B: Engineering, 2019, 176, 107219.	12.0	88
30	Non-isothermal crystallization kinetics of continuous glass fiber-reinforced poly(ether ether ketone) composites. Journal of Thermal Analysis and Calorimetry, 2019, 138, 369-378.	3.6	19
31	Mechanical behavior and progressive failure analysis of riveted, bonded and hybrid joints with CFRP-aluminum dissimilar materials. Thin-Walled Structures, 2019, 139, 271-280.	5.3	56
32	Heat transfer mechanism and characteristics of lightweight high temperature ceramic cellular sandwich. Applied Thermal Engineering, 2019, 154, 562-572.	6.0	14
33	Thermal protection system integrating graded insulation materials and multilayer ceramic matrix composite cellular sandwich panels. Composite Structures, 2019, 209, 523-534.	5.8	62
34	Preforming behaviors of carbon fiber fabrics with different contents of binder and under various process parameters. Composites Part B: Engineering, 2019, 166, 221-232.	12.0	27
35	A viscoelastic model of compression and relaxation behaviors in preforming process for carbon fiber fabrics with binder. Composites Part B: Engineering, 2019, 158, 1-9.	12.0	32
36	Viscoelastic Modeling of Responses in the Whole Compaction Process for Woven Fiber Reinforcements. International Journal of Applied Mechanics, 2018, 10, 1850019.	2.2	2

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37	Investigation of Occupant Lower Extremity Injures under Various Overlap Frontal Crashes. International Journal of Automotive Technology, 2018, 19, 301-312.	1.4	10
38	A quadratic b-spline based isogeometric analysis of transient wave propagation problems with implicit time integration method. Applied Mathematical Modelling, 2018, 59, 115-131.	4.2	12
39	Lightweight composite lattice cylindrical shells with novel character of tailorable thermal expansion. International Journal of Mechanical Sciences, 2018, 137, 77-85.	6.7	38
40	High temperature fracture toughness and residual stress in thermal barrier coatings evaluated by an in-situ indentation method. Ceramics International, 2018, 44, 7926-7929.	4.8	41
41	Design and analysis of lattice cylindrical shells with tailorable axial and radial thermal expansion. Extreme Mechanics Letters, 2018, 20, 51-58.	4.1	28
42	Structural and thermal analysis of integrated thermal protection systems with C/SiC composite cellular core sandwich panels. Applied Thermal Engineering, 2018, 131, 209-220.	6.0	47
43	Three dimensional lightweight lattice structures with large positive, zero and negative thermal expansion. Composite Structures, 2018, 188, 287-296.	5.8	90
44	Non-Isothermal Crystallization Kinetics of Short Glass Fiber Reinforced Poly (Ether Ether Ketone) Composites. Materials, 2018, 11, 2094.	2.9	22
45	A Viscoelastic Model of Recovery Behaviors in Preforming Process for Carbon Fiber Fabrics with Binder. International Journal of Applied Mechanics, 2018, 10, 1850111.	2.2	1
46	Integrated Lightweight Composites and Structures with Multifunctional Properties for Engineering Application. Advances in Materials Science and Engineering, 2018, 2018, 1-2.	1.8	0
47	Joining of C_f/SiC Ceramic Matrix Composites: A Review. Advances in Materials Science and Engineering, 2018, 2018, 1-15.	1.8	10
48	Experimental study on hole quality and its impact on tensile behavior following pure and abrasive waterjet cutting of plain woven CFRP laminates. International Journal of Advanced Manufacturing Technology, 2018, 99, 2481-2490.	3.0	29
49	A cellular metastructure incorporating coupled negative thermal expansion and negative Poisson's ratio. International Journal of Solids and Structures, 2018, 150, 255-267.	2.7	119
50	Strength and Failure Mechanism of Composite-Steel Adhesive Bond Single Lap Joints. Advances in Materials Science and Engineering, 2018, 2018, 1-10.	1.8	11
51	Mechanical responses of titanium 3D kagome lattice structure manufactured by selective laser melting. Extreme Mechanics Letters, 2018, 23, 41-48.	4.1	51
52	An improved time integration scheme based on uniform cubic B-splines and its application in structural dynamics. Applied Mathematics and Mechanics (English Edition), 2017, 38, 889-908.	3.6	6
53	Characterization of nesting effects on compression processes for plain woven fabrics in composites manufacturing. Journal of Reinforced Plastics and Composites, 2017, 36, 1503-1513.	3.1	2
54	A comparative study of three composite implicit schemes on structural dynamic and wave propagation analysis. Computers and Structures, 2017, 190, 126-149.	4.4	33

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55	High temperature mechanical behaviors of lightweight ceramic corrugated core sandwich panel. Composite Structures, 2017, 176, 379-387.	5.8	31
56	Experimental and numerical investigation of Long Glass Fiber Reinforced Polypropylene composite and application in automobile components. Transport, 2017, , 1-9.	1.2	6
57	A novel sub-step composite implicit time integration scheme for structural dynamics. Computers and Structures, 2017, 182, 176-186.	4.4	76
58	High temperature mechanical properties of lightweight C/SiC composite pyramidal lattice core sandwich panel. Composite Structures, 2017, 178, 467-475.	5.8	30
59	Tailorable Thermal Expansion of Lightweight and Robust Dual-Constituent Triangular Lattice Material. Journal of Applied Mechanics, Transactions ASME, 2017, 84, .	2.2	51
60	A Study on the Compressive Performance of C/SiC Lattice Sandwich Panel at High Temperature. International Journal of Applied Mechanics, 2017, 09, 1750120.	2.2	8
61	A quartic B-spline based explicit time integration scheme for structural dynamics with controllable numerical dissipation. Computational Mechanics, 2017, 59, 403-418.	4.0	24
62	Development of designing lightweight composites and structures for tailorable thermal expansion. Chinese Science Bulletin, 2017, 62, 47-60.	0.7	11
63	Design and analysis of integrated thermal protection system based on lightweight C/SiC pyramidal lattice core sandwich panel. Materials and Design, 2016, 111, 435-444.	7.0	57
64	Inactivation of Ricin Toxin by Nanosecond Pulsed Electric Fields Including Evidences from Cell and Animal Toxicity. Scientific Reports, 2016, 6, 18781.	3.3	7
65	Ambient bioaerosol particle dynamics observed during haze and sunny days in Beijing. Science of the Total Environment, 2016, 550, 751-759.	8.0	123
66	Planar lattices with tailorable coefficient of thermal expansion and high stiffness based on dual-material triangle unit. Journal of the Mechanics and Physics of Solids, 2016, 86, 173-191.	4.8	196
67	The equivalent thermal conductivity of lattice core sandwich structure: A predictive model. Applied Thermal Engineering, 2016, 93, 236-243.	6.0	44
68	Fabrication and heat transfer characteristics of C/SiC pyramidal core lattice sandwich panel. Applied Thermal Engineering, 2015, 81, 10-17.	6.0	66
69	Effects of ZrB2 contents on the mechanical properties and thermal shock resistance of B4Câ€“ZrB2 ceramics. Materials & Design, 2015, 71, 56-61.	5.1	23
70	Pre-oxidation temperature optimization of ultra-high temperature ceramic components: Flexural strength testing and residual stress analysis. Ceramics International, 2015, 41, 5085-5092.	4.8	18
71	MS2 Virus Inactivation by Atmospheric-Pressure Cold Plasma Using Different Gas Carriers and Power Levels. Applied and Environmental Microbiology, 2015, 81, 996-1002.	3.1	106
72	A lightweight, high compression strength ultra high temperature ceramic corrugated panel with potential for thermal protection system applications. Materials & Design, 2015, 66, 552-556.	5.1	67

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73	Improved Green Strength and Green Machinability of ZrB₂â€“SiC Through Gelcasting Based on a Double Gel Network. Journal of the American Ceramic Society, 2014, 97, 2401-2404.	3.8	29
74	Surface preoxidation to improve dispersibility of zirconium diboride in aqueous medium. Advances in Applied Ceramics, 2014, 113, 311-314.	1.1	1
75	Heat transfer mechanism of the C/SiC ceramics pyramidal lattice composites. Composites Part B: Engineering, 2014, 63, 8-14.	12.0	47
76	Fabrication and mechanical properties of lightweight ZrO2 ceramic corrugated core sandwich panels. Materials & Design, 2014, 64, 91-95.	5.1	60
77	Rapid allergen inactivation using atmospheric pressure cold plasma. , 2014, , .		0
78	Negatively and positively charged bacterial aerosol concentration and diversity in natural environments. Science Bulletin, 2013, 58, 3169-3176.	1.7	8