

Wenchun Jiang

List of Publications by Year in descending order

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112
papers

2,298
citations

201674

27
h-index

289244

40
g-index

112
all docs

112
docs citations

112
times ranked

1218
citing authors

#	ARTICLE	IF	CITATIONS
1	Effects of low-temperature transformation and transformation-induced plasticity on weld residual stresses: Numerical study and neutron diffraction measurement. <i>Materials and Design</i> , 2018, 147, 65-79.	7.0	122
2	Comparison of hydrogen embrittlement susceptibility of three cathodic protected subsea pipeline steels from a point of view of hydrogen permeation. <i>Corrosion Science</i> , 2018, 131, 104-115.	6.6	96
3	Cyclic hardening/softening behavior of 316L stainless steel at elevated temperature including strain-rate and strain-range dependence: Experimental and damage-coupled constitutive modeling. <i>International Journal of Plasticity</i> , 2019, 114, 196-214.	8.8	77
4	Fatigue life of a dissimilar welded joint considering the weld residual stress: Experimental and finite element simulation. <i>International Journal of Fatigue</i> , 2018, 109, 182-190.	5.7	69
5	Using heat sink technology to decrease residual stress in 316L stainless steel welding joint: Finite element simulation. <i>International Journal of Pressure Vessels and Piping</i> , 2012, 92, 56-62.	2.6	68
6	A model to predict the relaxation of weld residual stress by cyclic load: Experimental and finite element modeling. <i>International Journal of Fatigue</i> , 2017, 95, 293-301.	5.7	60
7	Numerical simulation to study the effect of repair width on residual stresses of a stainless steel clad plate. <i>International Journal of Pressure Vessels and Piping</i> , 2010, 87, 457-463.	2.6	55
8	Weld residual stresses in a thick plate considering back chipping: Neutron diffraction, contour method and finite element simulation study. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2017, 699, 62-70.	5.6	53
9	Experimental to study the effect of multiple weld-repairs on microstructure, hardness and residual stress for a stainless steel clad plate. <i>Materials & Design</i> , 2013, 51, 1052-1059.	5.1	51
10	The effect of filler metal thickness on residual stress and creep for stainless-steel plate-fin structure. <i>International Journal of Pressure Vessels and Piping</i> , 2008, 85, 569-574.	2.6	46
11	Effect of brazing temperature on tensile strength and microstructure for a stainless steel plate-fin structure. <i>Materials & Design</i> , 2011, 32, 736-742.	5.1	44
12	Influence of repair length on residual stress in the repair weld of a clad plate. <i>Nuclear Engineering and Design</i> , 2012, 246, 211-219.	1.7	42
13	Neutron diffraction and finite element modeling to study the weld residual stress relaxation induced by cutting. <i>Materials & Design</i> , 2013, 51, 415-420.	5.1	42
14	A comparison of brazed residual stress in plate-fin structure made of different stainless steel. <i>Materials & Design</i> , 2009, 30, 23-27.	5.1	41
15	A study of the effect of filler metal thickness on tensile strength for a stainless steel plate-fin structure by experiment and finite element method. <i>Materials & Design</i> , 2010, 31, 2387-2396.	5.1	41
16	Effect of holding time on vacuum brazing for a stainless steel plate-fin structure. <i>Materials & Design</i> , 2010, 31, 2157-2162.	5.1	39
17	A new cooling method for vacuum brazing of a stainless steel plate-fin structure. <i>Materials & Design</i> , 2010, 31, 648-653.	5.1	37
18	Evaluation of Through-Thickness Residual Stresses by Neutron Diffraction and Finite-Element Method in Thick Weld Plates. <i>Journal of Pressure Vessel Technology, Transactions of the ASME</i> , 2017, 139, .	0.6	36

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19	Effect of geometric conditions on residual stress of brazed stainless steel plate-fin structure. Nuclear Engineering and Design, 2008, 238, 1497-1502.	1.7	35
20	Evolution of thermal stress and failure probability during reduction and re-oxidation of solid oxide fuel cell. Journal of Power Sources, 2017, 371, 65-76.	7.8	34
21	Distribution and formation mechanism of residual stress in duplex stainless steel weld joint by neutron diffraction and electron backscatter diffraction. Materials and Design, 2019, 181, 108086.	7.0	33
22	Fatigue life prediction of 316L stainless steel weld joint including the role of residual stress and its evolution: Experimental and modelling. International Journal of Fatigue, 2021, 143, 105997.	5.7	33
23	Numerical modelling and nanoindentation experiment to study the brazed residual stresses in an X-type lattice truss sandwich structure. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2011, 528, 4715-4722.	5.6	32
24	Experimental investigation and numerical prediction on creep crack growth behavior of the solution treated Inconel 625 superalloy. Engineering Fracture Mechanics, 2018, 199, 327-342.	4.3	31
25	Biaxial residual stress measurement by indentation energy difference method: Theoretical and experimental study. International Journal of Pressure Vessels and Piping, 2022, 195, 104573.	2.6	30
26	Study on hydrogen enrichment in X80 steel spiral welded pipe. Corrosion Science, 2018, 133, 251-260.	6.6	29
27	Modelling of temperature field and residual stress of vacuum brazing for stainless steel plate-fin structure. Journal of Materials Processing Technology, 2009, 209, 1105-1110.	6.3	27
28	Finite element modelling of brazed residual stress and its influence factor analysis for stainless steel plate-fin structure. Journal of Materials Processing Technology, 2009, 209, 1635-1643.	6.3	27
29	Neutron Diffraction Measurement and Numerical Simulation to Study the Effect of Repair Depth on Residual Stress in 316L Stainless Steel Repair Weld. Journal of Pressure Vessel Technology, Transactions of the ASME, 2015, 137, .	0.6	27
30	Creep crack growth behavior analysis of the 9Cr-1Mo steel by a modified creep-damage model. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 708, 68-76.	5.6	27
31	Notch effect on creep damage for Hastelloy C276-BNi2 brazing joint. Materials and Design, 2015, 84, 212-222.	7.0	26
32	The microstructure, mechanical properties and fracture behavior of hastelloy C276-BNi2 brazed joint. Materials and Design, 2017, 115, 458-466.	7.0	26
33	Nonhomogeneous microstructure formation and its role on tensile and fatigue performance of duplex stainless steel 2205 multi-pass weld joints. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 786, 139426.	5.6	25
34	Residual stress reduction in the penetration nozzle weld joint by overlay welding. Materials & Design, 2014, 60, 443-450.	5.1	24
35	A primary plus secondary local PWHT method for mitigating weld residual stresses in pressure vessels. International Journal of Pressure Vessels and Piping, 2021, 192, 104431.	2.6	24
36	Effect of Impact Pressure on Reducing the Weld Residual Stress by Water Jet Peening in Repair Weld to 304 Stainless Steel Clad Plate. Journal of Pressure Vessel Technology, Transactions of the ASME, 2015, 137, .	0.6	23

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37	Effects of anode porosity on thermal stress and failure probability of planar solid oxide fuel cell with bonded compliant seal. <i>International Journal of Hydrogen Energy</i> , 2016, 41, 7464-7474.	7.1	23
38	Effect of helix angle on residual stress in the spiral welded oil pipelines: Experimental and finite element modeling. <i>International Journal of Pressure Vessels and Piping</i> , 2018, 168, 233-245.	2.6	22
39	Residual stress and plastic strain analysis in the brazed joint of bonded compliant seal design in planar solid oxide fuel cell. <i>Journal of Power Sources</i> , 2010, 195, 3513-3522.	7.8	20
40	Effect of Temperature Fluctuation on Creep and Failure Probability for Planar Solid Oxide Fuel Cell. <i>Journal of Fuel Cell Science and Technology</i> , 2015, 12, .	0.8	20
41	Residual Stress Distribution in a Dissimilar Weld Joint by Experimental and Simulation Study. <i>Journal of Pressure Vessel Technology, Transactions of the ASME</i> , 2017, 139, .	0.6	20
42	Elastic modulus and hardness characterization for microregion of Inconel 625/BNi-2 vacuum brazed joint by high temperature nanoindentation. <i>Vacuum</i> , 2020, 181, 109582.	3.5	20
43	Effect of tensile overload on fatigue crack behavior of 2205 duplex stainless steel: Experiment and finite element simulation. <i>International Journal of Fatigue</i> , 2019, 128, 105199.	5.7	19
44	Creep analysis of solid oxide fuel cell with bonded compliant seal design. <i>Journal of Power Sources</i> , 2013, 243, 913-918.	7.8	18
45	A new damage evolution model to estimate the creep fracture behavior of brazed joint under multiaxial stress. <i>International Journal of Mechanical Sciences</i> , 2018, 149, 178-189.	6.7	18
46	Effect of the geometrical size on time dependent failure probability of the solid oxide fuel cell. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 11033-11046.	7.1	18
47	Residual stresses evolution during strip clad welding, post welding heat treatment and repair welding for a large pressure vessel. <i>International Journal of Pressure Vessels and Piping</i> , 2021, 189, 104259.	2.6	18
48	Creep damage and crack initiation in P92/BNi2 brazed joint. <i>Materials & Design</i> , 2015, 72, 63-71.	5.1	17
49	Time dependent failure probability estimation of the solid oxide fuel cell by a creep-damage related Weibull distribution model. <i>International Journal of Hydrogen Energy</i> , 2018, 43, 13532-13542.	7.1	17
50	Flexural behavior and damage evolution of pultruded fibre-reinforced composite by acoustic emission test and a new progressive damage model. <i>International Journal of Mechanical Sciences</i> , 2020, 188, 105955.	6.7	17
51	Experimental and Numerical Simulation to Study the Reduction of Welding Residual Stress by Ultrasonic Impact Treatment. <i>Materials</i> , 2020, 13, 837.	2.9	17
52	Effect of notch position on creep damage for brazed joint. <i>Advances in Engineering Software</i> , 2016, 100, 72-81.	3.8	16
53	Effect of operating temperature on creep and damage in the bonded compliant seal of planar solid oxide fuel cell. <i>International Journal of Hydrogen Energy</i> , 2018, 43, 4492-4504.	7.1	16
54	Effect of frame material on the creep of solid oxide fuel cell. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 20323-20335.	7.1	16

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55	Determination of the through-thickness residual stress in thick duplex stainless steel welded plate by wavelength-dependent neutron diffraction method. <i>International Journal of Pressure Vessels and Piping</i> , 2022, 196, 104603.	2.6	16
56	Effects of Clad and Base Metal Thickness on Residual Stress in the Repair Weld of a Stainless Steel Clad Plate. <i>Journal of Pressure Vessel Technology, Transactions of the ASME</i> , 2011, 133, .	0.6	14
57	Simulation of creep and damage in the bonded compliant seal of planar solid oxide fuel cell. <i>International Journal of Hydrogen Energy</i> , 2014, 39, 17941-17951.	7.1	14
58	A study of the effective elastic modulus of a lattice truss panel structure by experimental and theoretical analysis. <i>Composite Structures</i> , 2017, 165, 130-137.	5.8	14
59	Characterization of inhomogeneous microstructure and mechanical property in an ultra-thick duplex stainless steel welding joint. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2021, 822, 141640.	5.6	14
60	Using short-time creep relaxation effect to decrease the residual stress in the bonded compliant seal of planar solid oxide fuel cell – A finite element simulation. <i>Journal of Power Sources</i> , 2014, 255, 108-115.	7.8	13
61	Growth and residual stresses in the bonded compliant seal of planar solid oxide fuel cell: Thickness design of window frame. <i>Materials and Design</i> , 2016, 93, 53-62.	7.0	13
62	Effective elastic constants of wire mesh material studied by theoretical and finite element methods. <i>Composite Structures</i> , 2018, 184, 474-483.	5.8	12
63	Creep rupture behavior of Hastelloy C276-BNi2 brazed joint. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2018, 711, 223-232.	5.6	12
64	Reduction of welding residual stress in the head-cylinder joint of a large rectifying tower by finite element method and experimental study. <i>International Journal of Pressure Vessels and Piping</i> , 2021, 191, 104311.	2.6	12
65	Fracture toughness assessment of the X80 steel by nanoindentation technique and a modified constitutive model. <i>Theoretical and Applied Fracture Mechanics</i> , 2022, 117, 103195.	4.7	12
66	Analytical evaluation of the homogenized elastic constants of plate-fin structures. <i>International Journal of Mechanical Sciences</i> , 2017, 134, 51-62.	6.7	11
67	Effect of tube radius on creep for an anode supported tubular solid oxide fuel cell: Experimental and finite element simulation. <i>International Journal of Hydrogen Energy</i> , 2017, 42, 23198-23206.	7.1	11
68	Life prediction model of creep-rupture and creep-buckling of a pyramidal lattice truss panel structure by analytical and finite element study. <i>International Journal of Mechanical Sciences</i> , 2018, 141, 502-511.	6.7	11
69	A more appropriate FE model to predict the creep crack initiation and growth behavior of brazed joint. <i>Engineering Fracture Mechanics</i> , 2018, 204, 72-86.	4.3	11
70	Effect of Al ₂ O ₃ film on thermal stress in the bonded compliant seal design of planar solid oxide fuel cell. <i>Journal of Power Sources</i> , 2011, 196, 10616-10624.	7.8	10
71	Fatigue life prediction of a stainless steel plate-fin structure using equivalent-homogeneous-solid method. <i>Materials & Design</i> , 2011, 32, 4936-4942.	5.1	10
72	Creep failure prediction of brazing joints with double notches. <i>Materials and Design</i> , 2016, 100, 271-279.	7.0	10

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73	Effects of element diffusion on microstructure evolution and residual stresses in a brazed joint: Experimental and numerical modeling. <i>Materialia</i> , 2018, 4, 540-548.	2.7	10
74	Creep-fatigue strength design of plate-fin heat exchanger by a homogeneous method. <i>International Journal of Mechanical Sciences</i> , 2018, 146-147, 221-233.	6.7	10
75	Residual stress and stress fields change around fatigue crack tip: Neutron diffraction measurement and finite element modeling. <i>International Journal of Pressure Vessels and Piping</i> , 2020, 179, 104024.	2.6	10
76	Crystal- α -amorphous NiO/MoO ₂ with a high-density interface for hydrogen evolution. <i>Inorganic Chemistry Frontiers</i> , 2022, 9, 2087-2096.	6.0	10
77	Using X-Ray Diffraction and Finite Element Method to Analyze Residual Stress of Tube-to-Tubesheet Welded Joints in a Shell and Tube Heat Exchanger. <i>Journal of Pressure Vessel Technology, Transactions of the ASME</i> , 2017, 139, .	0.6	9
78	On Residual Stress and Relief for an Ultra-Thick Cylinder Weld Joint Based on Mixed Hardening Model: Numerical and Experimental Studies. <i>Journal of Pressure Vessel Technology, Transactions of the ASME</i> , 2018, 140, .	0.6	8
79	A Comprehensive Numerical Approach for Analyzing the Residual Stresses in AISI 301LN Stainless Steel Induced by Shot Peening. <i>Materials</i> , 2019, 12, 3338.	2.9	8
80	Peridynamic analysis of drill-induced borehole damage. <i>Engineering Failure Analysis</i> , 2019, 104, 47-66.	4.0	8
81	Solid expandable tubular forming behavior based on twin shear stress yield criterion: Analytical, numerical simulation and experiment. <i>Thin-Walled Structures</i> , 2020, 155, 106922.	5.3	8
82	Characterization of creep constraint effect for brazed joint specimens at crack tip by new constraint parameter A. <i>Theoretical and Applied Fracture Mechanics</i> , 2020, 109, 102707.	4.7	8
83	Influence of borides dissolution during the homogenization treatment on the mechanical properties and fracture behavior of austenitic stainless steel brazed joints. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2020, 782, 139200.	5.6	8
84	Effect of localized defects on mechanical and creep properties for pyramidal lattice truss panel structure by analytical, experimental and finite element methods. <i>Thin-Walled Structures</i> , 2022, 170, 108531.	5.3	8
85	An analytical model to predict the equivalent creep strain rate of a lattice truss panel structure. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2016, 661, 152-159.	5.6	7
86	Influence of the ultrasonic surface rolling process on stress corrosion cracking susceptibility of high strength pipeline steel in neutral pH environment. <i>RSC Advances</i> , 2017, 7, 36876-36885.	3.6	7
87	Compression, Shear and Bending Performance of X-type Lattice Truss Panel Structure by Theoretical Method and Simulation. <i>International Journal of Steel Structures</i> , 2020, 20, 259-271.	1.3	7
88	Experimental and Numerical Study on the Reduction of Residual Stress in the Fillet Weld by Overlay Welding and Cutting Method. <i>Journal of Pressure Vessel Technology, Transactions of the ASME</i> , 2016, 138, .	0.6	6
89	Cold bending effect on residual stress, microstructure and mechanical properties of Type 316L stainless steel welded joint. <i>Engineering Failure Analysis</i> , 2020, 117, 104825.	4.0	6
90	Effect of inhomogeneous oxidation on the mechanical degradation of anode supported solid oxide fuel cell. <i>Journal of Power Sources</i> , 2020, 450, 227663.	7.8	6

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91	Using reinforce plate to control the residual stresses and deformation during local post-welding heat treatment for ultra-large pressure vessels. <i>International Journal of Pressure Vessels and Piping</i> , 2021, 191, 104332.	2.6	6
92	A rigid-flexible coordinated method to control weld residual stress and deformation during local PWHT for ultra-large pressure vessels. <i>International Journal of Pressure Vessels and Piping</i> , 2021, 191, 104323.	2.6	6
93	High temperature creep strength design and optimization of solid oxide fuel cell. <i>International Journal of Hydrogen Energy</i> , 2022, 47, 21450-21461.	7.1	6
94	Bending and twisting springback prediction in the punching of the core for a lattice truss sandwich structure. <i>Acta Metallurgica Sinica (English Letters)</i> , 2013, 26, 241-246.	2.9	5
95	Evaluation of the creep crack growth behavior in 9Cr-1Mo steel under different stress conditions. <i>International Journal of Pressure Vessels and Piping</i> , 2020, 188, 104174.	2.6	5
96	A New Connection Structure Between Hydrogen Nozzle and Sphere Head in a Hydrofining Reactor. <i>Journal of Pressure Vessel Technology</i> , <i>Transactions of the ASME</i> , 2011, 133, .	0.6	4
97	Creep Damage Analysis of a Lattice Truss Panel Structure. <i>High Temperature Materials and Processes</i> , 2017, 36, 89-96.	1.4	4
98	Welding Temperature Distribution and Residual Stresses in Thick Welded Plates of SA738Gr.B Through Experimental Measurements and Finite Element Analysis. <i>Materials</i> , 2019, 12, 2436.	2.9	4
99	Fatigue crack simulation of the 316L brazed joint using the virtual crack closure technique. <i>International Journal of Pressure Vessels and Piping</i> , 2019, 173, 20-25.	2.6	4
100	Crack Propagation of SS304/BNi-2 Brazed Joints: Experiments and Numerical Simulations. <i>Metals</i> , 2019, 9, 1031.	2.3	4
101	Comparison of Brazed Residual Stress and Thermal Deformation between X-Type and Pyramidal Lattice Truss Sandwich Structure: Neutron Diffraction Measurement and Simulation Study. <i>High Temperature Materials and Processes</i> , 2016, 35, 567-574.	1.4	3
102	Brazed residual stress in a hollow-tube stacking: Numerical simulation and experimental investigation. <i>Journal of Manufacturing Processes</i> , 2018, 31, 35-45.	5.9	3
103	Creep fracture behavior of the Crofer 22 APU for the interconnect of solid oxide fuel cell under different temperatures. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 4829-4840.	7.1	3
104	A Comparison of Amplitude-and Time-Dependent Cyclic Deformation Behavior for Fully-Austenite Stainless Steel 316L and Duplex Stainless Steel 2205. <i>Materials</i> , 2021, 14, 5594.	2.9	3
105	Fatigue Life Assessment of the Shell Structure of Purified Terephthalic Acid Filter Press. <i>Materials</i> , 2020, 13, 3276.	2.9	2
106	Reducing Full-Field Residual Stress of Girth Weld with Thick Wall by Combining Local PWHT and WJP. <i>Journal of Pressure Vessel Technology</i> , <i>Transactions of the ASME</i> , 2022, , .	0.6	2
107	Effect of Cooling Rate on Phase Transformation and Strain Response of SA508-3 Steel by Numerical and Experimental Study. <i>Journal of Pressure Vessel Technology</i> , <i>Transactions of the ASME</i> , 2022, 144, .	0.6	2
108	Effect of geometrical parameters on the effective elastic modulus for an X-type lattice truss panel structure. <i>Science and Engineering of Composite Materials</i> , 2018, 25, 1135-1144.	1.4	1

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109	Effects of Inner Defects on Creep Damage and Crack Initiation for a Brazed Joint. High Temperature Materials and Processes, 2018, 37, 863-872.	1.4	1
110	Effects of dual-cracks on the creep crack growth behaviour of HastelloyC276-BNi2 brazed joints. Materials at High Temperatures, 2020, 37, 230-242.	1.0	1
111	Experimental and Analytical Analysis of Mechanical Properties for Large-Size Lattice Truss Panel Structure Including Role of Connected Structure. Materials, 2021, 14, 5099.	2.9	1
112	Tensile fatigue behaviour and life distribution model of the pultruded fibre reinforced composites. Polymers and Polymer Composites, 2022, 30, 096739112210837.	1.9	0