

# Duo-Qi Shi

## List of Publications by Year in descending order

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80  
papers

1,242  
citations

331670

21  
h-index

434195

31  
g-index

80  
all docs

80  
docs citations

80  
times ranked

716  
citing authors

#	ARTICLE	IF	CITATIONS
1	An orientation-dependent creep life evaluation method for nickel-based single crystal superalloys. Chinese Journal of Aeronautics, 2022, 35, 238-249.	5.3	14
2	Mechanical modeling of a stitched sandwich thermal protection structure with ceramic-fiber-reinforced SiO <sub>2</sub> aerogel as core layer. Journal of Sandwich Structures and Materials, 2022, 24, 1028-1048.	3.5	4
3	Multiscale investigation on fatigue properties and damage of a 3D braided SiC/SiC + PyC/SiC composites in the full stress range at 1300 Å°C. Journal of the European Ceramic Society, 2022, 42, 1208-1218.	5.7	14
4	Creep-fatigue behavior of thin-walled plate with holes: Stress state characterization and life estimation. Fatigue and Fracture of Engineering Materials and Structures, 2022, 45, 3053-3066.	3.4	4
5	An energy-based low-cycle fatigue life evaluation method considering anisotropy of single crystal superalloys. Propulsion and Power Research, 2022, 11, 253-264.	4.3	4
6	Microstructural evolution and restoration of creep property for a damaged K403 alloy after rejuvenation heat treatments. Rare Metals, 2021, 40, 1865-1871.	7.1	4
7	A fatigue life estimation approach considering the effect of geometry and stress sensitivity. Theoretical and Applied Fracture Mechanics, 2021, 112, 102915.	4.7	6
8	Stress analysis and lifetime prediction for Ti-6Al-4V welding joint under fatigue loading. Materials Science and Technology, 2021, 37, 969-978.	1.6	0
9	In situ investigation of failure in 3D braided SiCf/SiC composites under flexural loading. Composite Structures, 2021, 270, 114067.	5.8	19
10	Effects of tensile load hold time on the fatigue and corrosion-fatigue behavior of turbine blade materials. International Journal of Fatigue, 2021, 152, 106448.	5.7	13
11	Low-cycle fatigue of MCrAlY-coated superalloys: A fracture mechanics-based analysis. Materials Science and Technology, 2021, 37, 151-161.	1.6	5
12	Microstructure-sensitive modeling of competing failure mode between surface and internal nucleation in high cycle fatigue. International Journal of Plasticity, 2020, 126, 102622.	8.8	18
13	The effect of inclusion factors on fatigue life and fracture-mechanics-based life method for a P/M superalloy at elevated temperature. International Journal of Fatigue, 2020, 131, 105365.	5.7	21
14	Experimental investigation on creep-fatigue behaviours of as-received and service-exposed turbine blades: Mechanism and life evaluation. Fatigue and Fracture of Engineering Materials and Structures, 2020, 43, 2892-2906.	3.4	7
15	Viscoplastic constitutive model for Ni-based directionally solidified superalloy: Experimental validation on notched specimen. Engineering Failure Analysis, 2020, 118, 104930.	4.0	7
16	Effect of interface diffusion on low-cycle fatigue behaviors of MCrAlY coated single crystal superalloys. International Journal of Fatigue, 2020, 137, 105660.	5.7	16
17	A novel fatigue life model considering surface-damage induced performance degradation. Engineering Fracture Mechanics, 2020, 228, 106899.	4.3	3
18	Evaluation of the influence of surface crack-like defects on fatigue life for a P/M nickel-based superalloy FGH96. International Journal of Fatigue, 2020, 137, 105639.	5.7	26

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19	Tension and compression moduli characterization of a bimodular ceramic-fiber reinforced SiO <sub>2</sub> aerogel composite. <i>Materialprüfung/Materials Testing</i> , 2020, 62, 1003-1009.	2.2	3
20	Deformation and rupture behaviors of SiC/SiC under creep, fatigue and dwell-fatigue load at 1300°C. <i>Ceramics International</i> , 2019, 45, 21440-21447.	4.8	7
21	The $\gamma'$ Phase Precipitation of an Inconel 718 Superalloy Fabricated by Electromagnetic Stirring Assisted Laser Solid Forming. <i>Materials</i> , 2019, 12, 2604.	2.9	15
22	Mechanical properties deterioration and its relationship with microstructural variation using small coupons sampled from serviced turbine blades. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2019, 757, 134-145.	5.6	11
23	Experimental investigation and simulation on stress rupture behavior of a Ni-based DS superalloy affected by initial elastic-plastic multi-axial stress state. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2019, 757, 124-133.	5.6	5
24	The role of coarsening on LCF behaviour using small coupons of a DS Ni-based superalloy. <i>International Journal of Fatigue</i> , 2019, 125, 418-431.	5.7	16
25	The influence of temperature and orientation on fatigue crack growth behavior of a directional solidification nickel-based superalloy: Experimental investigation and modelling. <i>International Journal of Fatigue</i> , 2019, 125, 505-519.	5.7	10
26	A systematical weight function modified critical distance method to estimate the creep-fatigue life of geometrically different structures. <i>International Journal of Fatigue</i> , 2019, 126, 6-19.	5.7	24
27	A reduced-order method for parameter identification of a crystal plasticity model considering crystal symmetry. <i>Science China Technological Sciences</i> , 2019, 62, 373-387.	4.0	1
28	Constitutive modeling of a directionally solidified nickel-based superalloy DZ125 subjected to thermal mechanical creep fatigue loadings. <i>Rare Metals</i> , 2019, 38, 922-936.	7.1	14
29	Isothermal Fatigue and Creep-Fatigue Interaction Behavior of Nickel-Base Directionally Solidified Superalloy. <i>Strength of Materials</i> , 2018, 50, 98-106.	0.5	2
30	Accelerated LCF-creep experimental methodology for durability life evaluation of turbine blade. <i>Fatigue and Fracture of Engineering Materials and Structures</i> , 2018, 41, 1196-1207.	3.4	15
31	Influence of orientation and temperature on the fatigue crack growth of directionally solidification superalloys DZ125. <i>MATEC Web of Conferences</i> , 2018, 165, 13014.	0.2	2
32	The study of the relationship between life limiting factor and stress level for FG96. <i>MATEC Web of Conferences</i> , 2018, 165, 22031.	0.2	2
33	The setup and application of the multi-scale in-situ test system for fatigue damage analysis. <i>MATEC Web of Conferences</i> , 2018, 165, 04005.	0.2	0
34	Experimental study and numerical modeling of the damage evolution of thermal barrier coating systems under tension. <i>Science China Technological Sciences</i> , 2018, 61, 1882-1888.	4.0	6
35	Finite element analysis and life modeling of a notched superalloy under thermal mechanical fatigue loading. <i>International Journal of Pressure Vessels and Piping</i> , 2018, 165, 51-58.	2.6	6
36	Low-temperature hot corrosion effects on the low-cycle fatigue lifetime and cracking behaviors of a powder metallurgy Ni-based superalloy. <i>International Journal of Fatigue</i> , 2018, 116, 334-343.	5.7	13

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37	Tensile creep behavior of three-dimensional four-step braided SiC/SiC composite at elevated temperature. <i>Ceramics International</i> , 2017, 43, 6721-6729.	4.8	23
38	Failure assessment of the first stage high-pressure turbine blades in an aero-engine turbine. <i>Fatigue and Fracture of Engineering Materials and Structures</i> , 2017, 40, 2092-2106.	3.4	5
39	Low-cycle fatigue behavior of DZ125 superalloy under prior exposure conditions. <i>Rare Metals</i> , 2017, , 1.	7.1	0
40	Effect of high temperature on compression property and deformation recovery of ceramic fiber reinforced silica aerogel composites. <i>Science China Technological Sciences</i> , 2017, 60, 1681-1691.	4.0	14
41	An improved viscoplastic constitutive model and its application to creep behavior of turbine blade. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2017, 707, 344-355.	5.6	19
42	Assessment of microstructure and property of a service exposed turbine blade made of K417 superalloy. <i>IOP Conference Series: Materials Science and Engineering</i> , 2017, 231, 012084.	0.6	3
43	Out of phase thermal mechanical fatigue investigation of a directionally solidified superalloy DZ125. <i>Chinese Journal of Aeronautics</i> , 2016, 29, 257-267.	5.3	16
44	Fatigue response, fracture characteristic and life modeling of a near-alpha titanium alloy under typical cyclic loadings in service. <i>Rare Metals</i> , 2016, 35, 676-685.	7.1	1
45	Thermomechanical fatigue experimental study on a notched directionally solidified Ni-base superalloy. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2016, 674, 451-458.	5.6	18
46	Influence of MCrAlY coating on low-cycle fatigue behavior of a directionally solidified nickel-based superalloy in hot corrosive environment. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2016, 678, 57-64.	5.6	15
47	Competing fatigue failure behaviors of Ni-based superalloy FGH96 at elevated temperature. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2016, 668, 66-72.	5.6	47
48	Influence of the different salt deposits on the fatigue behavior of a directionally solidified nickel-based superalloy. <i>International Journal of Fatigue</i> , 2016, 84, 91-96.	5.7	14
49	A physically based methodology for predicting anisotropic creep properties of Ni-based superalloys. <i>Rare Metals</i> , 2016, 35, 606-614.	7.1	9
50	Constitutive modelling and creep life prediction of a directionally solidified turbine blade under service loadings. <i>Materials at High Temperatures</i> , 2015, 32, 455-460.	1.0	6
51	Experimental investigation and life prediction of hot corrosion pre-exposure on low-cycle fatigue of a directionally solidified nickel-base superalloy. <i>Fatigue and Fracture of Engineering Materials and Structures</i> , 2015, 38, 1155-1166.	3.4	14
52	Unified modeling of high temperature deformations of a Ni-based polycrystalline wrought superalloy under tension-compression, cyclic, creep and creep-fatigue loadings. <i>Science China Technological Sciences</i> , 2015, 58, 248-257.	4.0	5
53	Low cycle fatigue behavior of a 3D braided KD-I fiber reinforced ceramic matrix composite for coated and uncoated specimens at 1100Å°C and 1300Å°C. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2015, 631, 38-44.	5.6	32
54	Fiber strength measurement for KD-I(f)/SiC composites and correlation to tensile mechanical behavior at room and elevated temperatures. <i>Ceramics International</i> , 2015, 41, 299-307.	4.8	23

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55	Experimental investigation on HCF strength affected by predamage from LCF of a near alpha titanium alloy. <i>Journal of Materials Research</i> , 2014, 29, 2748-2755.	2.6	1
56	Effect of multi-axial stress state on creep behavior and stress rupture life of a Ni-based DS superalloy. <i>Computational Materials Science</i> , 2014, 85, 20-31.	3.0	13
57	Comparative investigation of creep behavior of ceramic fiber-reinforced alumina and silica aerogel. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2014, 609, 125-130.	5.6	23
58	Life modeling of anisotropic fatigue behavior for a single crystal nickel-base superalloy. <i>International Journal of Fatigue</i> , 2014, 61, 21-27.	5.7	27
59	Environmental impacts of large-scale CSP plants in northwestern China. <i>Environmental Sciences: Processes and Impacts</i> , 2014, 16, 2432-2441.	3.5	29
60	A modern and robust methodology for modeling anisotropic creep characteristics of Ni-based DS and SC superalloys. <i>Science China Technological Sciences</i> , 2014, 57, 1802-1815.	4.0	7
61	A simple unified critical plane damage parameter for high-temperature LCF life prediction of a Ni-based DS superalloy. <i>Journal of Materials Science</i> , 2014, 49, 7625-7638.	3.7	7
62	Experimental investigation and numerical modeling for elasto-plastic notch-root stress/strain analysis under monotonic loadings. <i>Science China Technological Sciences</i> , 2014, 57, 1411-1424.	4.0	4
63	Modeling of anisotropic tensile and cyclic viscoplastic behavior of a nickel-base directionally solidified superalloy. <i>Materials &amp; Design</i> , 2014, 55, 966-978.	5.1	23
64	Systematic methodology for high temperature LCF life prediction of smooth and notched Ni-based superalloy with and without dwells. <i>Computational Materials Science</i> , 2014, 89, 65-74.	3.0	24
65	Design of Iosipescu Shear Test for Applying to a Bi-Modulus Ceramic-Fiber-Reinforced SiO <sub>2</sub> Aerogel. <i>Journal of Testing and Evaluation</i> , 2014, 42, 1288-1295.	0.7	4
66	Constitutive modeling and failure mechanisms of anisotropic tensile and creep behaviors of nickel-base directionally solidified superalloy. <i>Materials &amp; Design</i> , 2013, 45, 663-673.	5.1	40
67	Design and Analysis of Specimen and Device for Biaxial CCF Experiment. <i>Procedia Engineering</i> , 2013, 67, 506-516.	1.2	1
68	Stress State Analysis of Iosipescu Shear Specimens for Aerogel Composite with Different Properties in Tension and Compression. <i>Procedia Engineering</i> , 2013, 67, 517-524.	1.2	8
69	Experimental investigation on high temperature anisotropic compression properties of ceramic-fiber-reinforced SiO <sub>2</sub> aerogel. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2013, 585, 25-31.	5.6	54
70	Effects of crystallographic orientations and dwell types on low cycle fatigue and life modeling of a SC superalloy. <i>International Journal of Fatigue</i> , 2013, 49, 31-39.	5.7	46
71	Creep and fatigue lifetime analysis of directionally solidified superalloy and its brazed joints based on continuum damage mechanics at elevated temperature. <i>Materials &amp; Design</i> , 2013, 45, 643-652.	5.1	43
72	Continuum damage mechanism-based life prediction for Ni-based superalloy under complex loadings. <i>Materials at High Temperatures</i> , 2013, 30, 287-294.	1.0	2

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73	Effect of notch on fatigue behaviour of a directionally solidified superalloy at high temperature. Fatigue and Fracture of Engineering Materials and Structures, 2013, 36, 1288-1297.	3.4	28
74	A simple method to analyse the notch sensitivity of specimens in fatigue tests. Fatigue and Fracture of Engineering Materials and Structures, 2013, 36, 1009-1016.	3.4	2
75	Experimental investigation and modeling of the creep behavior of ceramic fiber-reinforced SiO <sub>2</sub> aerogel. Journal of Non-Crystalline Solids, 2012, 358, 519-524.	3.1	29
76	Experimental investigations on creep rupture strength and failure mechanism of vacuum brazed joints of a DS superalloy at elevated temperature. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2012, 545, 162-167.	5.6	25
77	Experimental investigation on both low cycle fatigue and fracture behavior of DZ125 base metal and the brazed joint at elevated temperature. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2011, 528, 7005-7011.	5.6	37
78	Experimental investigation on mechanical properties of a fiber-reinforced silica aerogel composite. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2011, 528, 4830-4836.	5.6	123
79	Experimental investigation on low cycle fatigue and creep-fatigue interaction of DZ125 in different dwell time at elevated temperatures. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2010, 528, 233-238.	5.6	40
80	Thermal Fatigue of Thermal Barrier Coatings by Atmospheric Plasma Spraying. Key Engineering Materials, 0, 385-387, 405-408.	0.4	1