Xiao-Guang Yang

List of Publications by Year
in descending order

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Version: 2024-02-01

100 papers	1,589 citations	279798 23 h-index	395702 33 g-index
100 all docs	100 docs citations	100 times ranked	840 citing authors

#	Article	IF	Citations
1	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
2	High temperature LCF life prediction of notched DS Ni-based superalloy using critical distance concept. International Journal of Fatigue, 2011, 33, 1470-1476.	5.7	54
3	Experimental investigation on high temperature anisotropic compression properties of ceramic-fiber-reinforced SiO2 aerogel. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2013, 585, 25-31.	5.6	54
4	Effects of crystallographic orientations and dwell types on low cycle fatigue and life modeling of a SC superalloy. International Journal of Fatigue, 2013, 49, 31-39.	5.7	46
5	Creep and fatigue lifetime analysis of directionally solidified superalloy and its brazed joints based on continuum damage mechanics at elevated temperature. Materials & Design, 2013, 45, 643-652.	5.1	43
6	Effect of high-temperature hot corrosion on the low cycle fatigue behavior of a directionally solidified nickel-base superalloy. International Journal of Fatigue, 2015, 70, 106-113.	5.7	41
7	Experimental investigation on low cycle fatigue and creepâ€“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
8	Constitutive modeling and failure mechanisms of anisotropic tensile and creep behaviors of nickel-base directionally solidified superalloy. Materials & Design, 2013, 45, 663-673.	5.1	40
9	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
10	Numerical investigation on the cracking behaviors of thermal barrier coating system under different thermal cycle loading waveforms. Surface and Coatings Technology, 2018, 349, 166-176.	4.8	37
11	Uneven growth of thermally grown oxide and stress distribution in plasma-sprayed thermal barrier coatings. Surface and Coatings Technology, 2009, 203, 3088-3091.	4.8	32
12	Low cycle fatigue behavior of a 3D braided KD-I fiber reinforced ceramic matrix composite for coated and uncoated specimens at 1100Â°C and 1300Â°C. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 631, 38-44.	5.6	32
13	Tiâ€“6Alâ€“4V welded joints via electron beam welding: Microstructure, fatigue properties, and fracture behavior. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2014, 597, 225-231.	5.6	30
14	Experimental investigation and modelling of microstructure degradation in a DS Ni-based superalloy using a quantitative cross-correlation analysis method. Journal of Alloys and Compounds, 2018, 762, 488-499.	5.5	30
15	Experimental investigation and modeling of the creep behavior of ceramic fiber-reinforced SiO2 aerogel. Journal of Non-Crystalline Solids, 2012, 358, 519-524.	3.1	29
16	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
17	HCF strength estimation of notched Tiâ€“6Alâ€“4V specimens considering the critical distance size effect. International Journal of Fatigue, 2012, 40, 97-104.	5.7	27
18	Life modeling of anisotropic fatigue behavior for a single crystal nickel-base superalloy. International Journal of Fatigue, 2014, 61, 21-27.	5.7	27

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19	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
20	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
21	Effect of bond coat surface roughness on oxidation behaviour of air plasma sprayed thermal barrier coatings. Surface Engineering, 2008, 24, 276-279.	2.2	24
22	Systematic methodology for high temperature LCF life prediction of smooth and notched Ni-based superalloy with and without dwells. Computational Materials Science, 2014, 89, 65-74.	3.0	24
23	Evaluation of service-induced microstructural damage for directionally solidified turbine blade of aircraft engine. Rare Metals, 2019, 38, 157-164.	7.1	24
24	A systematical weight function modified critical distance method to estimate the creep-fatigue life of geometrically different structures. International Journal of Fatigue, 2019, 126, 6-19.	5.7	24
25	Initiation and Early-Stage Growth of Internal Fatigue Cracking Under Very-High-Cycle Fatigue Regime at High Temperature. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2020, 51, 1575-1592.	2.2	24
26	Comparative investigation of creep behavior of ceramic fiber-reinforced alumina and silica aerogel. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2014, 609, 125-130.	5.6	23
27	Modeling of anisotropic tensile and cyclic viscoplastic behavior of a nickel-base directionally solidified superalloy. Materials & Design, 2014, 55, 966-978.	5.1	23
28	Effect of MCrAlY coating on the low-cycle fatigue behavior of a directionally solidified nickel-base superalloy at different temperatures. International Journal of Fatigue, 2015, 75, 126-134.	5.7	23
29	Analysis of failure behaviors of dovetail assemblies due to high gradient stress under contact loading. Engineering Failure Analysis, 2011, 18, 314-324.	4.0	21
30	Computational analysis for understanding the failure mechanism of APSâ€“TBC. Computational Materials Science, 2012, 57, 38-42.	3.0	20
31	Measurement of Young's Modulus and Poisson's Ratio of Thermal Barrier Coatings. Chinese Journal of Aeronautics, 2005, 18, 180-184.	5.3	19
32	An improved viscoplastic constitutive model and its application to creep behavior of turbine blade. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 707, 344-355.	5.6	19
33	A numerical approach to simulate 3D crack propagation in turbine blades. International Journal of Mechanical Sciences, 2020, 171, 105408.	6.7	19
34	In situ investigation of failure in 3D braided SiCf/SiC composites under flexural loading. Composite Structures, 2021, 270, 114067.	5.8	19
35	Thermomechanical fatigue experimental study on a notched directionally solidified Ni-base superalloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 674, 451-458.	5.6	18
36	Investigation and modeling of low cycle fatigue behaviors of two Ni-based superalloys under dwell conditions. International Journal of Pressure Vessels and Piping, 2009, 86, 616-621.	2.6	16

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37	Out of phase thermal mechanical fatigue investigation of a directionally solidified superalloy DZ125. Chinese Journal of Aeronautics, 2016, 29, 257-267.	5.3	16
38	The role of coarsening on LCF behaviour using small coupons of a DS Ni-based superalloy. International Journal of Fatigue, 2019, 125, 418-431.	5.7	16
39	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
40	Influence of MCrAlY coating on low-cycle fatigue behavior of a directionally solidified nickel-based superalloy in hot corrosive environment. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 678, 57-64.	5.6	15
41	Accelerated LCFâ€creep experimental methodology for durability life evaluation of turbine blade. Fatigue and Fracture of Engineering Materials and Structures, 2018, 41, 1196-1207.	3.4	15
42	Influence of the different salt deposits on the fatigue behavior of a directionally solidified nickel-based superalloy. International Journal of Fatigue, 2016, 84, 91-96.	5.7	14
43	Effect of high temperature on compression property and deformation recovery of ceramic fiber reinforced silica aerogel composites. Science China Technological Sciences, 2017, 60, 1681-1691.	4.0	14
44	Constitutive modeling of a directionally solidified nickel-based superalloy DZ125 subjected to thermal mechanical creep fatigue loadings. Rare Metals, 2019, 38, 922-936.	7.1	14
45	Residual fatigue life prediction based on a novel damage accumulation model considering loading history. Fatigue and Fracture of Engineering Materials and Structures, 2020, 43, 1005-1021.	3.4	14
46	An orientation-dependent creep life evaluation method for nickel-based single crystal superalloys. Chinese Journal of Aeronautics, 2022, 35, 238-249.	5.3	14
47	Multiscale investigation on fatigue properties and damage of a 3D braided SiC/SiC + PyC/SiC composites in the full stress range at 1300 Â°C. Journal of the European Ceramic Society, 2022, 42, 1208-1218.	5.7	14
48	Effect of multi-axial stress state on creep behavior and stress rupture life of a Ni-based DS superalloy. Computational Materials Science, 2014, 85, 20-31.	3.0	13
49	Low-temperature hot corrosion effects on the low-cycle fatigue lifetime and cracking behaviors of a powder metallurgy Ni-based superalloy. International Journal of Fatigue, 2018, 116, 334-343.	5.7	13
50	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
51	Evaluation Study on Iterative Inverse Modeling Procedure for Determining Post-Necking Hardening Behavior of Sheet Metal at Elevated Temperature. Metals, 2018, 8, 1044.	2.3	11
52	Mechanical properties deterioration and its relationship with microstructural variation using small coupons sampled from serviced turbine blades. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 757, 134-145.	5.6	11
53	The influence of temperature and orientation on fatigue crack growth behavior of a directional solidification nickel-based superalloy: Experimental investigation and modelling. International Journal of Fatigue, 2019, 125, 505-519.	5.7	10
54	The Effects of Grain Size and Twins Density on High Temperature Oxidation Behavior of Nickel-Based Superalloy GH738. Materials, 2020, 13, 4166.	2.9	10

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55	A physically based methodology for predicting anisotropic creep properties of Ni-based superalloys. Rare Metals, 2016, 35, 606-614.	7.1	9
56	Oxidation-induced damage of an uncoated and coated nickel-based superalloy under simulated gas environment. Rare Metals, 2018, 37, 204-209.	7.1	9
57	Low-cycle fatigue behavior of a directionally solidified Ni-based superalloy subjected to gas hot corrosion pre-exposure. Rare Metals, 2019, 38, 227-232.	7.1	9
58	A modified constitutive model considering microstructure degradation of Ni-based superalloys and its application to microstructural damage calculation. Journal of Alloys and Compounds, 2021, 882, 160605.	5.5	9
59	The framework of hot corrosion fatigue life estimation of a PM superalloy using notch fatigue methodology combined with pit evolution. International Journal of Fatigue, 2021, 153, 106483.	5.7	9
60	Low cycle fatigue behavior and life evaluation of a P/M nickel base superalloy under different dwell conditions. Procedia Engineering, 2010, 2, 2103-2110.	1.2	7
61	A modern and robust methodology for modeling anisotropic creep characteristics of Ni-based DS and SC superalloys. Science China Technological Sciences, 2014, 57, 1802-1815.	4.0	7
62	A simple unified critical plane damage parameter for high-temperature LCF life prediction of a Ni-based DS superalloy. Journal of Materials Science, 2014, 49, 7625-7638.	3.7	7
63	Deformation and rupture behaviors of SiC/SiC under creep, fatigue and dwell-fatigue load at 1300â€Â°C. Ceramics International, 2019, 45, 21440-21447.	4.8	7
64	Experimental investigation on creepâ€fatigue behaviours of asâ€received and serviceâ€exposed turbine blades: Mechanism and life evaluation. Fatigue and Fracture of Engineering Materials and Structures, 2020, 43, 2892-2906.	3.4	7
65	Viscoplastic constitutive model for Ni-based directionally solidified superalloy: Experimental validation on notched specimen. Engineering Failure Analysis, 2020, 118, 104930.	4.0	7
66	Finite element analysis and life modeling of a notched superalloy under thermal mechanical fatigue loading. International Journal of Pressure Vessels and Piping, 2018, 165, 51-58.	2.6	6
67	High-temperature hot-corrosion effects on the creepâ€“fatigue behavior of a directionally solidified nickel-based superalloy: Mechanism and lifetime prediction. International Journal of Damage Mechanics, 2020, 29, 798-809.	4.2	6
68	A fatigue life estimation approach considering the effect of geometry and stress sensitivity. Theoretical and Applied Fracture Mechanics, 2021, 112, 102915.	4.7	6
69	Unified modeling of high temperature deformations of a Ni-based polycrystalline wrought superalloy under tension-compression, cyclic, creep and creep-fatigue loadings. Science China Technological Sciences, 2015, 58, 248-257.	4.0	5
70	Low-cycle fatigue lifetime estimation of Tiâ€“6Alâ€“4V welded joints by a continuum damage mechanics model. Rare Metals, 2016, 35, 299-302.	7.1	5
71	Failure assessment of the first stage highâ€pressure turbine blades in an aeroâ€engine turbine. Fatigue and Fracture of Engineering Materials and Structures, 2017, 40, 2092-2106.	3.4	5
72	Fatigue behavior of uncoated and MCrAlY-coated DS nickel-based superalloys pre-exposed in hot corrosion condition. Rare Metals, 2018, 37, 936-941.	7.1	5

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73	Experimental investigation and simulation on stress rupture behavior of a Ni-based DS superalloy affected by initial elastic-plastic multi-axial stress state. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 757, 124-133.	5.6	5
74	Prediction of Tensile Strength and Deformation of Diffusion Bonding Joint for Inconel 718 Using Deep Neural Network. Metals, 2020, 10, 1266.	2.3	5
75	The Influence of Different Microstructure on Tensile Deformation and Acoustic Emission Behaviors of Low-Alloy Steel. Materials, 2020, 13, 4981.	2.9	5
76	Experimental, analytical and numerical investigation on tensile behavior of twisted fiber yarns. Chinese Journal of Aeronautics, 2021, 34, 278-288.	5.3	5
77	Low-cycle fatigue of MCrAlY-coated superalloys: A fracture mechanics-based analysis. Materials Science and Technology, 2021, 37, 151-161.	1.6	5
78	Experimental investigation and numerical modeling for elasto-plastic notch-root stress/strain analysis under monotonic loadings. Science China Technological Sciences, 2014, 57, 1411-1424.	4.0	4
79	High-temperature oxidation behavior of DZ125 Ni-based superalloy under tensile stress. Rare Metals, 2022, 41, 4188-4193.	7.1	4
80	Study on Constitutive Relation of Nickel-Base Superalloy Inconel 718 Based on Long Short Term Memory Recurrent Neural Network. Metals, 2020, 10, 1588.	2.3	4
81	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
82	Mechanical modeling of a stitched sandwich thermal protection structure with ceramic-fiber-reinforced SiO₂ aerogel as core layer. Journal of Sandwich Structures and Materials, 2022, 24, 1028-1048.	3.5	4
83	Creepâ€fatigue behavior of thinâ€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
84	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
85	Tensile properties and failure analysis of Tiâ€“6Alâ€“4V joints by electron beam welding. Rare Metals, 2016, 35, 450-455.	7.1	3
86	A novel fatigue life model considering surface-damage induced performance degradation. Engineering Fracture Mechanics, 2020, 228, 106899.	4.3	3
87	Tension and compression moduli characterization of a bimodular ceramic-fiber reinforced SiO2 aerogel composite. Materialpruefung/Materials Testing, 2020, 62, 1003-1009.	2.2	3
88	In-situ measurement of elastic modulus for ceramic top-coat at high temperature. Central South University, 2008, 15, 372-376.	0.5	2
89	Continuum damage mechanism-based life prediction for Ni-based superalloy under complex loadings. Materials at High Temperatures, 2013, 30, 287-294.	1.0	2
90	Life prediction for thermal barrier coating systems in gas turbine vanes. Materials Research Innovations, 2014, 18, S4-983-S4-989.	2.3	2

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91	Low cyclic fatigue behavior of electron-beam-welded Tiâ€“6Alâ€“4V titanium joint. Rare Metals, 2016, 35, 230-234.	7.1	2
92	Isothermal Fatigue and Creep-Fatigue Interaction Behavior of Nickel-Base Directionally Solidified Superalloy. Strength of Materials, 2018, 50, 98-106.	0.5	2
93	Influence of orientation and temperature on the fatigue crack growth of directionally solidification superalloys DZ125. MATEC Web of Conferences, 2018, 165, 13014.	0.2	2
94	Experimental Investigation on the Creep and Low Cycle Fatigue Behaviors of a Serviced Turbine Blade. , 2019, , .		2
95	Evaluation of properties and thermal stress field for thermal barrier coatings. Central South University, 2008, 15, 367-371.	0.5	1
96	Effects of temperature on oxidation behaviour of air plasma sprayed thermal barrier coatings. Materials at High Temperatures, 2009, 26, 365-368.	1.0	1
97	Fatigue response, fracture characteristic and life modeling of a near-alpha titanium alloy under typical cyclic loadings in service. Rare Metals, 2016, 35, 676-685.	7.1	1
98	The influence of microstructure on CTOD fracture toughness of DZ125 base metal and brazed joint. Journal of Physics: Conference Series, 2020, 1653, 012032.	0.4	1
99	Low-cycle fatigue behavior of DZ125 superalloy under prior exposure conditions. Rare Metals, 2017, , 1.	7.1	0
100	Stress analysis and lifetime prediction for Tiâ€“6Alâ€“4V welding joint under fatigue loading. Materials Science and Technology, 2021, 37, 969-978.	1.6	0