Weiguo Li

List of Publications by Year
in descending order

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		279798	395702
77 papers	1,419 citations	23 h-index	33 g-index
77 all docs	77 docs citations	77 times ranked	997 citing authors

#	ARTICLE	IF	CITATIONS
1	The temperature-dependent fracture strength model for ultra-high temperature ceramics. Acta Mechanica Sinica/Lixue Xuebao, 2010, 26, 235-239.	3.4	122
2	Theoretical prediction of temperature dependent yield strength for metallic materials. International Journal of Mechanical Sciences, 2016, 105, 273-278.	6.7	70
3	A new temperature dependent fracture strength model for the ZrB2â€“SiC composites. Journal of the European Ceramic Society, 2015, 35, 2957-2962.	5.7	62
4	Modeling the effect of temperature on the yield strength of precipitation strengthening Ni-base superalloys. International Journal of Plasticity, 2019, 116, 143-158.	8.8	54
5	Phase stability, mechanical properties and electronic structure of TiAl alloying with W, Mo, Sc and Yb: First-principles study. Journal of Alloys and Compounds, 2016, 658, 689-696.	5.5	53
6	Fracture strength of the particulate-reinforced ultra-high temperature ceramics based on a temperature dependent fracture toughness model. Journal of the Mechanics and Physics of Solids, 2017, 107, 365-378.	4.8	50
7	The structural stability, mechanical properties and stacking fault energy of Al3Zr precipitates in Al-Cu-Zr alloys: HRTEM observations and first-principles calculations. Journal of Alloys and Compounds, 2016, 681, 96-108.	5.5	49
8	Structural stability, mechanical properties and stacking fault energies of TiAl3 alloyed with Zn, Cu, Ag: First-principles study. Journal of Alloys and Compounds, 2016, 666, 185-196.	5.5	47
9	A Model of Temperature-Dependent Young's Modulus for Ultrahigh Temperature Ceramics. Research Letters in Physics, 2011, 2011, 1-3.	0.2	41
10	First principle study on the temperature dependent elastic constants, anisotropy, generalized stacking fault energy and dislocation core of NiAl and FeAl. Computational Materials Science, 2015, 103, 116-125.	3.0	40
11	The temperature-dependent fracture models for fiber-reinforced ceramic matrix composites. Composite Structures, 2016, 140, 534-539.	5.8	36
12	The Temperatureâ€Dependent Ideal Tensile Strength of ZrB₂, HfB₂, and TiB₂. Journal of the American Ceramic Society, 2015, 98, 190-196.	3.8	35
13	A novel temperature dependent yield strength model for metals considering precipitation strengthening and strain rate. Computational Materials Science, 2017, 129, 147-155.	3.0	35
14	Thermal Shock Resistance of Ultra-High-Temperature Ceramics Under Aerodynamic Thermal Environments. AIAA Journal, 2013, 51, 840-848.	2.6	30
15	A novel theoretical model to predict the temperature-dependent fracture strength of ceramic materials. Journal of the European Ceramic Society, 2017, 37, 5071-5077.	5.7	30
16	Tensile properties and temperature-dependent yield strength prediction of GH4033 wrought superalloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 676, 165-172.	5.6	28
17	A novel theoretical model for the temperature dependence of band gap energy in semiconductors. Journal Physics D: Applied Physics, 2017, 50, 40LT02.	2.8	28
18	Unified Thermal Shock Resistance of Ultra-High Temperature Ceramics Under Different Thermal Environments. Journal of Thermal Stresses, 2014, 37, 14-33.	2.0	27

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19	First principles study on the phase stability and mechanical properties of MoSi2 alloyed with Al, Mg and Ge. Intermetallics, 2015, 67, 26-34.	3.9	24
20	Modelling the effect of temperature and damage on the fracture strength of ultra-high temperature ceramics. International Journal of Fracture, 2012, 176, 181-188.	2.2	23
21	Effect of the cooling medium temperature on the thermal shock resistance of ceramic materials. Materials Letters, 2015, 138, 216-218.	2.6	23
22	Temperature dependent fracture strength model for the laminated ZrB 2 based composites. Composite Structures, 2017, 162, 39-46.	5.8	23
23	First-principles study on the adhesive properties of Al/TiC interfaces: Revisited. Computational Materials Science, 2017, 126, 108-120.	3.0	23
24	Theoretical models and influencing factor analysis for the temperature-dependent tensile strength of ceramic fibers and their unidirectional composites. Composite Structures, 2017, 164, 23-31.	5.8	21
25	Thermal shock resistance of ultra-high temperature ceramics including the effects of thermal environment and external constraints. Materials & Design, 2012, 37, 211-214.	5.1	20
26	Effects of microstructures and flaw evolution on the fracture strength of ZrB2â€“MoSi2 composites under high temperatures. Journal of Alloys and Compounds, 2015, 644, 582-588.	5.5	19
27	Characterization models for thermal shock resistance and fracture strength of ultra-high temperature ceramics at high temperatures. Theoretical and Applied Fracture Mechanics, 2017, 90, 1-13.	4.7	19
28	Modeling of temperature dependent yield strength for stainless steel considering nonlinear behavior and the effect of phase transition. Construction and Building Materials, 2018, 159, 147-154.	7.2	19
29	Tomographic reconstruction of damage images in hollow cylinders using Lamb waves. Ultrasonics, 2014, 54, 2015-2023.	3.9	18
30	Temperature dependent first matrix cracking stress model for the unidirectional fiber reinforced ceramic composites. Journal of the European Ceramic Society, 2017, 37, 1305-1310.	5.7	18
31	A theoretical model for yield strength anomaly of Ni-base superalloys at elevated temperature. Journal of Alloys and Compounds, 2017, 706, 340-343.	5.5	18
32	Determining fracture strength and critical flaw of the ZrB2â€“SiC composites on high temperature oxidation using theoretical method. Composites Part B: Engineering, 2017, 129, 198-203.	12.0	18
33	Influence of thermal shock damage on the flexure strength of alumina ceramic at different temperatures. Materials Letters, 2016, 173, 91-94.	2.6	17
34	Temperature-damage-dependent thermal shock resistance model for ultra-high temperature ceramics. Engineering Fracture Mechanics, 2012, 82, 9-16.	4.3	16
35	Temperature dependence of the three-point bending fracture behavior of sodaâ€“limeâ€“silica glass with surface scratch. Journal of Non-Crystalline Solids, 2015, 409, 126-130.	3.1	16
36	Thermal shock modeling of Ultra-High Temperature Ceramics under active cooling. Computers and Mathematics With Applications, 2009, 58, 2373-2378.	2.7	15

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37	Effect of temperature on elastic constants, generalized stacking fault energy and dislocation cores in MgO and CaO. Computational Condensed Matter, 2014, 1, 38-44.	2.1	13
38	The mechanical and electronic properties of Al/TiC interfaces alloyed by Mg, Zn, Cu, Fe and Ti: First-principles study. Physica Scripta, 2015, 90, 035701.	2.5	13
39	Thermal shock study of ceramic materials subjected to heating using a simple developed test method. Journal of Alloys and Compounds, 2015, 626, 56-59.	5.5	13
40	First-principles calculations on the stacking fault energy, surface energy and dislocation properties of NbCr2 and HfCr2. Computational Materials Science, 2017, 140, 334-343.	3.0	13
41	Thermal Shock Resistance of Ultra-High-Temperature Ceramic Thermal Protection System. Journal of Spacecraft and Rockets, 2014, 51, 986-990.	1.9	12
42	Thermal shock resistance of ultra-high temperature ceramics under active cooling condition including the effects of external constraints. Applied Thermal Engineering, 2017, 110, 1247-1254.	6.0	12
43	Effects of mechanical shock on thermal shock behavior of ceramics in quenching experiments. Ceramics International, 2017, 43, 1584-1587.	4.8	12
44	The Effects of Water Entry Postures on the Thermal Shock Behavior of Alumina. International Journal of Applied Ceramic Technology, 2016, 13, 56-60.	2.1	11
45	Modeling of the temperature-dependent ideal tensile strength of solids. Physica Scripta, 2014, 89, 085803.	2.5	10
46	Elastic properties of magnesium with virtual long-period stacking-ordered structure: First-principles study. Computational Materials Science, 2015, 110, 191-197.	3.0	9
47	A THERMO-DAMAGE STRENGTH MODEL FOR THE SiC-DEPLETED LAYER OF ULTRA-HIGH-TEMPERATURE CERAMICS ON HIGH TEMPERATURE OXIDATION. International Journal of Applied Mechanics, 2013, 05, 1350026.	2.2	8
48	The Phase Stability, Ductility and Hardness of MoN and NbN: First-Principles Study. Journal of Electronic Materials, 2017, 46, 1914-1925.	2.2	8
49	Third Order Elastic Constants and Debye Temperature of MgB2 Under Different Pressure: First-Principles Methods. Journal of Superconductivity and Novel Magnetism, 2015, 28, 1483-1489.	1.8	7
50	The Adhesive Properties of Coherent and Semicoherent NiAl/V Interfaces Within the Peierls-Nabarro Model. Crystals, 2016, 6, 32.	2.2	7
51	EFFECTS OF THERMAL ENVIRONMENTS ON THE THERMAL SHOCK RESISTANCE OF ULTRA-HIGH TEMPERATURE CERAMICS. Modern Physics Letters B, 2008, 22, 1375-1380.	1.9	6
52	Effective thermal conductivity of ultra-high temperature ceramics with thermal contact resistance. Physica Scripta, 2012, 86, 055402.	2.5	6
53	Theoretical Research on Thermal Shock Resistance of Ultra-High Temperature Ceramics Focusing on the Adjustment of Stress Reduction Factor. Materials, 2013, 6, 551-564.	2.9	6
54	Thermal shock resistance of ZnS wave-transparent ceramic considering the effects of constraint and pneumatic pressure. Journal of the Ceramic Society of Japan, 2014, 122, 688-694.	1.1	6

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55	Effects of mechanical boundary conditions on thermal shock resistance of ultra-high temperature ceramics. Applied Mathematics and Mechanics (English Edition), 2015, 36, 201-210.	3.6	6
56	The direct uniaxial tensile strength of chemical vapor deposited zinc sulfide from room temperature to 600Â°C. Materials Letters, 2015, 158, 140-142.	2.6	6
57	Segregation and mechanical properties of Si, Fe and Ti on the Al/Al2.5X0.5Zr (X = Cu, Zn, Ag) coherent interfaces: First-principles calculations. Computational Materials Science, 2018, 141, 325-340.	3.0	6
58	Modeling the temperature and test rate dependent fracture strength of zirconia and alumina single crystal fibers. Composites Part B: Engineering, 2018, 133, 26-34.	12.0	6
59	An ascending thermal shock study of ceramics: Size effects and the characterization method. Materials Chemistry and Physics, 2018, 203, 34-39.	4.0	5
60	Theoretical prediction of temperature dependent shear modulus of bulk metallic glasses. Intermetallics, 2017, 91, 86-89.	3.9	5
61	Heat Transfer and Failure Mode Analyses of Ultrahigh-Temperature Ceramic Thermal Protection System of Hypersonic Vehicles. Mathematical Problems in Engineering, 2014, 2014, 1-11.	1.1	4
62	Numerical Simulation for Thermal Shock Resistance of Ultra-High Temperature Ceramics Considering the Effects of Initial Stress Field. Advances in Materials Science and Engineering, 2011, 2011, 1-7.	1.8	3
63	Temperature Dependent Residual Stress Models for Ultra-High-Temperature Ceramics on High Temperature Oxidation. Applied Composite Materials, 2017, 24, 879-891.	2.5	3
64	Temperature-dependent critical resolved shear stress model for (Cuâ€“Au)â€“Co alloys in pure shear mode. Philosophical Magazine, 2018, 98, 251-261.	1.6	3
65	Thermal Shock Resistance of Chemical Vapour Deposited Zinc Sulfide at Elevated Temperatures. Transactions of the Indian Ceramic Society, 2016, 75, 215-219.	1.0	2
66	The transformation pathways for vitual long period stacking-ordered Mg: First-principles study. Computational Materials Science, 2016, 114, 1-12.	3.0	2
67	A Theoretical Model for Predicting Fracture Strength and Critical Flaw Size of the ZrB2-ZrC Composites at High Temperatures. Applied Composite Materials, 2018, 25, 635-646.	2.5	2
68	A Thermodamage Strength Theoretical Model of Ceramic Materials Taking into Account the Effect of Residual Stress. Advances in Materials Science and Engineering, 2012, 2012, 1-7.	1.8	1
69	Numerical Simulation for Thermal Shock Resistance of Thermal Protection Materials Considering Different Operating Environments. Scientific World Journal, The, 2013, 2013, 1-7.	2.1	1
70	A Constitutive Description for Shape Memory Alloys with the Growth of Martensite Band. Materials, 2014, 7, 576-590.	2.9	1
71	Effects of In-Plane Geometric Shapes on Thermal Shock Resistance of Ultra-High Temperature Ceramic Components. Transactions of the Indian Ceramic Society, 2015, 74, 6-10.	1.0	1
72	The Core Structure and Peierls Stress of âŒ© 11 2 Â¯ 0 âŒª $langle 11overline {2}0angle $ Dislocations in MgB2 with Mg and B Vacancies. Journal of Superconductivity and Novel Magnetism, 2015, 28, 1743-1748.	1.8	1

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73	High temperature and pressure effects on the elastic properties of B2 intermetallics AgRE. Open Physics, 2015, 13, .	1.7	1
74	A Theoretical Model for Predicting the Ultimate Strength of Superalloys in a Wide Temperature Range. Advanced Engineering Materials, 2022, 24, .	3.5	1
75	A Model for Determining Strength for Embedded Elliptical Crack in Ultra-high-temperature Ceramics. Materials, 2015, 8, 5018-5027.	2.9	0
76	High Pressure Effects on the Properties of âŒ©110âŒª {001} Dislocation in Superconducting ZnCNi3 and MgCNi3 Determined from First Principles Calculations Combined with an Improved Peierls-Nabarro Equation. Journal of Superconductivity and Novel Magnetism, 2015, 28, 2281-2291.	1.8	0
77	A Temperature-Damage-Dependent Fracture Strength Model for Ultra-High Temperature Ceramics. Advanced Science Letters, 2012, 5, 535-537.	0.2	0