Tian Fu Guo

List of Publications by Year
in descending order

83 papers	1,741 citations	279487 23 h-index	301761 39 g-index
83 all docs	83 docs citations	83 times ranked	1026 citing authors

#	Article	IF	Citations
1	Atomic Scale Fluctuations Govern Brittle Fracture and Cavitation Behavior in Metallic Glasses. Physical Review Letters, 2011, 107, 215501.	2.9	177
2	Continuum modeling of a porous solid with pressure-sensitive dilatant matrix. Journal of the Mechanics and Physics of Solids, 2008, 56, 2188-2212.	2.3	127
3	Mixed mode near-tip fields for cracks in materials with strain-gradient effects. Journal of the Mechanics and Physics of Solids, 1997, 45, 439-465.	2.3	110
4	Void interaction and coalescence in polymeric materials. International Journal of Solids and Structures, 2007, 44, 1787-1808.	1.3	92
5	Title is missing!. International Journal of Fracture, 1999, 100, 1-27.	1.1	75
6	Void behaviors from low to high triaxialities: Transition from void collapse to void coalescence. International Journal of Plasticity, 2016, 84, 183-202.	4.1	73
7	Atomistic origin of size effects in fatigue behavior of metallic glasses. Journal of the Mechanics and Physics of Solids, 2017, 104, 84-95.	2.3	68
8	Modeling vapor pressure effects on void rupture and crack growth resistance. Acta Materialia, 2002, 50, 3487-3500.	3.8	53
9	Effects of pressure-sensitivity and plastic dilatancy on void growth and interaction. International Journal of Solids and Structures, 2006, 43, 6380-6397.	1.3	51
10	On the energetics of tensile and shear void coalescences. Journal of the Mechanics and Physics of Solids, 2015, 82, 259-286.	2.3	46
11	Vapor pressure and void size effects on failure of a constrained ductile film. Journal of the Mechanics and Physics of Solids, 2003, 51, 993-1014.	2.3	41
12	Phase field modeling of fracture in nonlinearly elastic solids via energy decomposition. Computer Methods in Applied Mechanics and Engineering, 2019, 347, 477-494.	3.4	40
13	Cavitation in materials with distributed weak zones: Implications on the origin of brittle fracture in metallic glasses. Journal of the Mechanics and Physics of Solids, 2013, 61, 1047-1064.	2.3	39
14	Shear bands mediate cavitation in brittle metallic glasses. Scripta Materialia, 2013, 68, 567-570.	2.6	38
15	Surface instability maps for soft materials. Soft Matter, 2010, 6, 5743.	1.2	35
16	Thermal and vapor pressure effects on cavitation and void growth. Journal of Materials Science, 2001, 36, 5871-5876.	1.7	32
17	Tuning the thermal conductivity of multi-layer graphene with interlayer bonding and tensile strain. Applied Physics A: Materials Science and Processing, 2015, 120, 1275-1281.	1.1	32
18	Void-sheet analysis on macroscopic strain localization and void coalescence. Journal of the Mechanics and Physics of Solids, 2018, 118, 172-203.	2.3	31

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19	Quasi-cleavage processes driven by dislocation pileups. Acta Materialia, 1996, 44, 3049-3058.	3.8	29
20	Phase field simulation for fracture behavior of hyperelastic material at large deformation based on edge-based smoothed finite element method. Engineering Fracture Mechanics, 2020, 238, 107233.	2.0	27
21	Evolution of crack tip process zones. Modelling and Simulation in Materials Science and Engineering, 1994, 2, 767-782.	0.8	26
22	Vapor Pressure Assisted Void Growth and Cracking of Polymeric Films and Interfaces. Journal of Materials Science, 2003, 11, 277-290.	1.2	26
23	Pressure-sensitive ductile layers â€“ I. Modeling the growth of extensive damage. International Journal of Solids and Structures, 2007, 44, 2553-2570.	1.3	25
24	Vapor pressure and residual stress effects on failure of an adhesive film. International Journal of Solids and Structures, 2005, 42, 4795-4810.	1.3	24
25	Rate effects on toughness in elastic nonlinear viscous solids. Journal of the Mechanics and Physics of Solids, 2008, 56, 974-992.	2.3	20
26	Fracture in tensionâ€“compression-asymmetry solids via phase field modeling. Computer Methods in Applied Mechanics and Engineering, 2019, 357, 112573.	3.4	20
27	Tension-compression asymmetry at finite strains: A theoretical model and exact solutions. Journal of the Mechanics and Physics of Solids, 2020, 143, 104084.	2.3	19
28	A phase-field model for fracture in water-containing soft solids. Engineering Fracture Mechanics, 2019, 212, 180-196.	2.0	18
29	Cavitation in brittle metallic glasses â€“ Effects of stress state and distributed weak zones. International Journal of Solids and Structures, 2014, 51, 4373-4385.	1.3	17
30	Near-Tip Fields for Cracks in Materials with Strain Gradient Effects. Solid Mechanics and Its Applications, 1997, , 231-243.	0.1	17
31	Tunnel reinforcement via topology optimization. International Journal for Numerical and Analytical Methods in Geomechanics, 2000, 24, 201-213.	1.7	16
32	Vapor pressure and residual stress effects on the toughness of polymeric adhesive joints. Engineering Fracture Mechanics, 2004, 71, 2435-2448.	2.0	16
33	Vapor Pressure and Residual Stress Effects on Mixed Mode Toughness of an Adhesive Film. International Journal of Fracture, 2005, 134, 349-368.	1.1	16
34	Uniaxial stress-driven grain boundary migration in Hexagonal Close-packed (HCP) metals: Theory and MD simulations. International Journal of Plasticity, 2017, 95, 82-104.	4.1	16
35	Force prediction in blow-out preventer shearing of drill pipes. Engineering Failure Analysis, 2017, 74, 159-171.	1.8	15
36	Transition of surfaceâ€“interface creasing in bilayer hydrogels. Soft Matter, 2017, 13, 6011-6020.	1.2	15

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37	In situ TEM investigation on void coalescence in metallic materials. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 734, 260-268.	2.6	14
38	Mode mixity and nonlinear viscous effects on toughness of interfaces. International Journal of Solids and Structures, 2008, 45, 2493-2511.	1.3	13
39	Dimension-controlled formation of crease patterns on soft solids. Soft Matter, 2017, 13, 619-626.	1.2	13
40	Pressure-sensitive ductile layers â€“ II. 3D models of extensive damage. International Journal of Solids and Structures, 2007, 44, 5349-5368.	1.3	12
41	Voiding and fracture in high-entropy alloy under multi-axis stress states. Materials Letters, 2019, 237, 220-223.	1.3	11
42	Deformation and pattern transformation of porous soft solids under biaxial loading: Experiments and simulations. Extreme Mechanics Letters, 2018, 20, 81-90.	2.0	10
43	Crack Tip Profiles Generated by Anisotropic Damage. International Journal of Damage Mechanics, 1993, 2, 364-384.	2.4	9
44	Fracture in strain gradient elasticity. Metals and Materials International, 1998, 4, 593-600.	0.2	9
45	Vapor pressure assisted crack growth at interfaces under mixed mode loading. Computational Materials Science, 2004, 30, 425-432.	1.4	9
46	Dynamic toughness in elastic nonlinear viscous solids. Journal of the Mechanics and Physics of Solids, 2009, 57, 384-400.	2.3	9
47	Vapor pressure and voiding effects on thin film damage. Thin Solid Films, 2006, 504, 325-330.	0.8	8
48	Void nucleation in alloys with lamella particles under biaxial loadings. Extreme Mechanics Letters, 2018, 22, 42-50.	2.0	8
49	twin nucleation at prismatic/basal boundary in hexagonal close-packed metals. Philosophical Magazine, 2019, 99, 2584-2603.	0.7	8
50	Influence of Nonuniform Initial Porosity Distribution on Adhesive Failure in Electronic Packages. IEEE Transactions on Components and Packaging Technologies, 2008, 31, 277-284.	1.4	7
51	Humidity-driven bifurcation in a hydrogel-actuated nanostructure: A three-dimensional computational analysis. International Journal of Solids and Structures, 2010, 47, 2034-2042.	1.3	7
52	Crack tip superblunting: experiment, theory and numerical simulation. Acta Mechanica Sinica/Lixue Xuebao, 1993, 9, 131-141.	1.5	6
53	Popcorn Failure and Unstable Void Growth in Plastic Electronic Packages. Key Engineering Materials, 2002, 227, 61-66.	0.4	6
54	Câˆ—-controlled creep crack growth by grain boundary cavitation. Acta Materialia, 2008, 56, 5293-5303.	3.8	6

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55	Thermomechanical Analysis of Plastic Ball Grid Arrays With Vapor Pressure Effects. IEEE Transactions on Components and Packaging Technologies, 2009, 32, 12-19.	1.4	6
56	Formation of gears through buckling multilayered filmâ€“hydrogel structures. Thin Solid Films, 2010, 518, 6048-6051.	0.8	5
57	Modeling hydrogen attack effect on creep fracture toughness. International Journal of Solids and Structures, 2011, 48, 2909-2919.	1.3	5
58	Surface Instability of Bilayer Hydrogel Subjected to Both Compression and Solvent Absorption. Polymers, 2018, 10, 624.	2.0	5
59	An Effective Multiscale Methodology for the Analysis of Marine Flexible Risers. Journal of Marine Science and Engineering, 2019, 7, 340.	1.2	5
60	Mixed Graph-FEM phase field modeling of fracture in plates and shells with nonlinearly elastic solids. Computer Methods in Applied Mechanics and Engineering, 2021, 389, 114282.	3.4	4
61	Effect of dual-scale microstructure on the toughness of laminar zirconia composites. International Journal of Fracture, 1996, 78, 315-330.	1.1	3
62	The role of autocatalysis and transformation shear in crack tip zone shape and toughening of zirconia ceramics. International Journal of Solids and Structures, 1997, 34, 4213-4236.	1.3	3
63	Instability analysis of a programmed hydrogel plate under swelling. Journal of Applied Physics, 2011, 109, 063527.	1.1	3
64	Multiscale Finite Element Analysis of Unbonded Flexible Risers. , 2014, , .		3
65	FEM solutions for plane stress mode-I and mode-II cracks in strain gradient plasticity. Science in China Series A: Mathematics, 2000, 43, 969-979.	0.5	2
66	Computational Modeling of the Effect of Sulci during Tumor Growth and Cerebral Edema. Journal of Nanomaterials, 2016, 2016, 1-9.	1.5	2
67	The Effect of Void Arrangement on the Pattern Transformation of Porous Soft Solids under Biaxial Loading. Materials, 2021, 14, 1205.	1.3	2
68	The analytical solutions based on the concept of finite element methods. Applied Mathematics and Mechanics (English Edition), 1990, 11, 321-331.	1.9	1
69	An Alternative Decomposition of the Strain Gradient Tensor. Journal of Applied Mechanics, Transactions ASME, 2002, 69, 139-141.	1.1	1
70	Rate Dependent Interface Delamination in Plastic IC Packages. , 2007, , .		1
71	Creep fracture toughness using conventional and cell element approaches. Computational Materials Science, 2008, 44, 138-144.	1.4	1
72	VOID GROWTH AND INTERACTION IN A SOFT MATERIAL. International Journal of Modern Physics B, 2010, 24, 295-304.	1.0	1

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73	Tunnel reinforcement via topology optimization. , 2000, 24, 201.		1
74	Vapor Pressure Assisted Interface Delamination and Failure of Plastic IC Packages: A Micromechanics Approach. , 2003, , 391.		0
75	Influence of Non-Uniform Initial Porosity Distribution on Adhesive Failure in Electronic Packages. , 0, , .		0
76	Modeling adhesive failure in electronic packages. , 2006, , .		0
77	Influence of Vapor Pressure on Rate-Dependent Void Growth in IC Packages. , 2007, , .		0
78	Micromechanical Modeling of Unidirectional CFRP Composites with Proportional Stressing. Journal of Multiscale Modeling, 0, , .	1.0	0
79	318 A Mechanism-Based Approach for Interface Toughness of Ductile Layer Joining Elastic Solids. The Proceedings of the JSME Materials and Processing Conference (M&P), 2002, 10.1, 570-575.	0.1	0
80	COMPUTATIONAL STUDY OF VAPOR PRESSURE ASSISTED CRACK GROWTH AT POLYMER/CERAMIC INTERFACES. , 2002, , .		0
81	Void growth and damage ahead of a crack in pressure-sensitive dilatant polymers. WIT Transactions on the Built Environment, 2006, , .	0.0	0
82	Mechanism-Based Modeling of Thermal- and Moisture-Induced Failure of IC Devices. , 2010, , 301-331.		0
83	Role of Vapor Pressure on Popcorn Cracking in IC Packages. Materials Performance and Characterization, 2014, 3, 542-563.	0.2	0