Alan Needleman

List of Publications by Year
in descending order

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216 papers	27,651 citations	9264 74 h-index	5394 164 g-index
221 all docs	221 docs citations	221 times ranked	8370 citing authors

#	Article	IF	Citations
1	Analysis of the cup-cone fracture in a round tensile bar. Acta Metallurgica, 1984, 32, 157-169.	2.1	2,787
2	Numerical simulations of fast crack growth in brittle solids. Journal of the Mechanics and Physics of Solids, 1994, 42, 1397-1434.	4.8	2,011
3	Overview no. 42 Texture development and strain hardening in rate dependent polycrystals. Acta Metallurgica, 1985, 33, 923-953.	2.1	1,538
4	Material rate dependence and localized deformation in crystalline solids. Acta Metallurgica, 1983, 31, 1951-1976.	2.1	1,355
5	An analysis of nonuniform and localized deformation in ductile single crystals. Acta Metallurgica, 1982, 30, 1087-1119.	2.1	1,210
6	An experimental and numerical study of deformation in metal-ceramic composites. Acta Metallurgica, 1989, 37, 3029-3050.	2.1	739
7	Material rate dependence and mesh sensitivity in localization problems. Computer Methods in Applied Mechanics and Engineering, 1988, 67, 69-85.	6.6	719
8	Void growth and coalescence in porous plastic solids. International Journal of Solids and Structures, 1988, 24, 835-853.	2.7	680
9	An analysis of ductile rupture in notched bars. Journal of the Mechanics and Physics of Solids, 1984, 32, 461-490.	4.8	647
10	A tangent modulus method for rate dependent solids. Computers and Structures, 1984, 18, 875-887.	4.4	633
11	Void nucleation by inclusion debonding in a crystal matrix. Modelling and Simulation in Materials Science and Engineering, 1993, 1, 111-132.	2.0	616
12	A comparison of methods for calculating energy release rates. Engineering Fracture Mechanics, 1985, 21, 405-421.	4.3	577
13	An analysis of tensile decohesion along an interface. Journal of the Mechanics and Physics of Solids, 1990, 38, 289-324.	4.8	524
14	A finite element method for localized failure analysis. Computer Methods in Applied Mechanics and Engineering, 1987, 61, 189-214.	6.6	510
15	An analysis of ductile rupture modes at a crack tip. Journal of the Mechanics and Physics of Solids, 1987, 35, 151-183.	4.8	386
16	An analysis of the effects of matrix void growth on deformation and ductility in metal-ceramic composites. Acta Metallurgica Et Materialia, 1991, 39, 2317-2335.	1.8	340
17	Flow localization in the plane strain tensile test. Journal of the Mechanics and Physics of Solids, 1981, 29, 115-142.	4.8	303
18	A numerical study of necking in circular cylindrical bar. Journal of the Mechanics and Physics of Solids, 1972, 20, 111-127.	4.8	274

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19	A cohesive segments method for the simulation of crack growth. Computational Mechanics, 2003, 31, 69-77.	4.0	259
20	Aspects of boundary-value problem solutions with three-dimensional dislocation dynamics. Modelling and Simulation in Materials Science and Engineering, 2002, 10, 437-468.	2.0	236
21	On microstructural evolution and micromechanical modelling of deformation of a whisker-reinforced metal-matrix composite. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1989, 107, 49-61.	5.6	231
22	An analysis of the mechanical disadvantage of myocardial infarction in the canine left ventricle.. Circulation Research, 1980, 47, 728-741.	4.5	216
23	Effects of nonlocal damage in porous plastic solids. International Journal of Solids and Structures, 1995, 32, 1063-1077.	2.7	216
24	Void growth and failure in notched bars. Journal of the Mechanics and Physics of Solids, 1988, 36, 317-351.	4.8	203
25	Comparison of discrete dislocation and continuum plasticity predictions for a composite material. Acta Materialia, 1997, 45, 3163-3179.	7.9	198
26	A comparison of nonlocal continuum and discrete dislocation plasticity predictions. Journal of the Mechanics and Physics of Solids, 2003, 51, 281-310.	4.8	197
27	Plastic deformation of freestanding thin films: Experiments and modeling. Journal of the Mechanics and Physics of Solids, 2006, 54, 2089-2110.	4.8	197
28	Numerical simulations of dynamic crack growth along an interface. International Journal of Fracture, 1996, 74, 289-324.	2.2	191
29	Void nucleation effects on shear localization in porous plastic solids. International Journal of Fracture, 1982, 19, 163-182.	2.2	190
30	The simulation of dynamic crack propagation using the cohesive segments method. Journal of the Mechanics and Physics of Solids, 2008, 56, 70-92.	4.8	187
31	Localization of deformation in rate sensitive porous plastic solids. International Journal of Fracture, 1983, 21, 261-278.	2.2	186
32	Ductile failure modeling. International Journal of Fracture, 2016, 201, 29-80.	2.2	181
33	Boundary layers in constrained plastic flow: comparison of nonlocal and discrete dislocation plasticity. Journal of the Mechanics and Physics of Solids, 2001, 49, 1361-1395.	4.8	177
34	Discretevs smeared crack models for concrete fracture: bridging the gap. International Journal for Numerical and Analytical Methods in Geomechanics, 2004, 28, 583-607.	3.3	177
35	Void nucleation at fiber ends in Alî—¸SiC composites. Scripta Metallurgica, 1987, 21, 705-710.	1.2	175
36	Boundary conditions in small-deformation, single-crystal plasticity that account for the Burgers vector. Journal of the Mechanics and Physics of Solids, 2005, 53, 1-31.	4.8	174

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37	Computational mechanics at the mesoscale. Acta Materialia, 2000, 48, 105-124.	7.9	166
38	Micromechanical modelling of interfacial decohesion. Ultramicroscopy, 1992, 40, 203-214.	1.9	161
39	A discrete dislocation analysis of bending. International Journal of Plasticity, 1999, 15, 837-868.	8.8	158
40	A discrete dislocation analysis of mode I crack growth. Journal of the Mechanics and Physics of Solids, 2000, 48, 1133-1157.	4.8	150
41	Plasticity size effects in tension and compression of single crystals. Journal of the Mechanics and Physics of Solids, 2005, 53, 2661-2691.	4.8	148
42	Mesh-independent discrete numerical representations of cohesive-zone models. Engineering Fracture Mechanics, 2006, 73, 160-177.	4.3	141
43	Discrete dislocation analysis of size effects in thin films. Journal of Applied Physics, 2003, 93, 5920-5928.	2.5	139
44	Finite element analyses of shear localization in rate and temperature dependent solids. Mechanics of Materials, 1986, 5, 339-361.	3.2	128
45	Effective elastic response of two-phase composites. Acta Metallurgica Et Materialia, 1994, 42, 77-97.	1.8	128
46	Finite element analysis of crystalline solids. Computer Methods in Applied Mechanics and Engineering, 1985, 52, 689-708.	6.6	124
47	Discrete dislocation modeling of fatigue crack propagation. Acta Materialia, 2002, 50, 831-846.	7.9	124
48	Non-normality and bifurcation in plane strain tension and compression. Journal of the Mechanics and Physics of Solids, 1979, 27, 231-254.	4.8	123
49	Inflation of spherical rubber balloons. International Journal of Solids and Structures, 1977, 13, 409-421.	2.7	120
50	An analysis of dynamic, ductile crack growth in a double edge cracked specimen. International Journal of Fracture, 1991, 49, 41-67.	2.2	117
51	An analysis of equilibrium dislocation distributions. Acta Metallurgica Et Materialia, 1993, 41, 625-642.	1.8	117
52	Modeling and Simulation of Dynamic Fragmentation in Brittle Materials. International Journal of Fracture, 1999, 96, 101-125.	2.2	112
53	The effect of bond strength and loading rate on the conditions governing the attainment of intersonic crack growth along interfaces. Journal of the Mechanics and Physics of Solids, 1999, 47, 2411-2449.	4.8	108
54	Finite element simulations of shear localization in plate impact. Journal of the Mechanics and Physics of Solids, 1994, 42, 423-458.	4.8	105

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55	Effective plastic response of two-phase composites. Acta Metallurgica Et Materialia, 1995, 43, 1701-1722.	1.8	105
56	Discrete dislocation plasticity analysis of the grain size dependence of the flow strength of polycrystals. International Journal of Plasticity, 2008, 24, 2149-2172.	8.8	104
57	A discrete dislocation analysis of near-threshold fatigue crack growth. Acta Materialia, 2001, 49, 3189-3203.	7.9	102
58	The stored energy of cold work: Predictions from discrete dislocation plasticity. Acta Materialia, 2005, 53, 4765-4779.	7.9	101
59	Effect of material rate sensitivity on failure modes in the Charpy V-notch test. Journal of the Mechanics and Physics of Solids, 1986, 34, 213-241.	4.8	99
60	Effects of triaxial stressing on creep cavitation of grain boundaries. Acta Metallurgica, 1983, 31, 919-926.	2.1	97
61	Effect of specimen thickness on the creep response of a Ni-based single-crystal superalloy. Acta Materialia, 2012, 60, 5697-5711.	7.9	96
62	Size effects in uniaxial deformation of single and polycrystals: a discrete dislocation plasticity analysis. Modelling and Simulation in Materials Science and Engineering, 2006, 14, 409-422.	2.0	95
63	Effect of inclusion density on ductile fracture toughness and roughness. Journal of the Mechanics and Physics of Solids, 2014, 63, 62-79.	4.8	95
64	Indentation of porous solids. International Journal of Solids and Structures, 1992, 29, 1613-1636.	2.7	94
65	Discrete dislocation plasticity modeling of short cracks in single crystals. Acta Materialia, 2003, 51, 1-15.	7.9	93
66	Plastic flow in a composite: a comparison of nonlocal continuum and discrete dislocation predictions. International Journal of Solids and Structures, 2001, 38, 833-853.	2.7	86
67	Thermally and mechanically induced residual strains in Al-SiC composites. Acta Metallurgica Et Materialia, 1992, 40, 2391-2412.	1.8	85
68	On the development of shear bands in pure bending. International Journal of Solids and Structures, 1982, 18, 121-138.	2.7	83
69	Effect of an interphase region on debonding of a CNT reinforced polymer composite. Composites Science and Technology, 2010, 70, 2207-2215.	7.8	82
70	Analysis of uniaxial compression of vertically aligned carbon nanotubes. Journal of the Mechanics and Physics of Solids, 2011, 59, 2227-2237.	4.8	80
71	Discrete dislocation plasticity analysis of the wedge indentation of films. Journal of the Mechanics and Physics of Solids, 2006, 54, 2281-2303.	4.8	79
72	Necking of biaxially stretched elastic-plastic circular plates. Journal of the Mechanics and Physics of Solids, 1977, 25, 159-183.	4.8	78

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73	Properties of dynamic rupture and energy partition in a solid with a frictional interface. Journal of the Mechanics and Physics of Solids, 2008, 56, 5-24.	4.8	78
74	An analysis of the effect of residual stresses on deformation and damage mechanisms in Alî—¸SiC composites. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1991, 132, 31-38.	5.6	77
75	Analysis of a brittle-ductile transition under dynamic shear loading. International Journal of Solids and Structures, 1995, 32, 2571-2590.	2.7	77
76	Void growth due to creep and grain boundary diffusion at high triaxialities. Journal of the Mechanics and Physics of Solids, 1995, 43, 123-165.	4.8	75
77	Numerical implementation of non-local polycrystal plasticity using fast Fourier transforms. Journal of the Mechanics and Physics of Solids, 2016, 97, 333-351.	4.8	75
78	Numerical simulations of dynamic interfacial crack growth allowing for crack growth away from the bond line. International Journal of Fracture, 1996, 74, 253-275.	2.2	74
79	An analysis of the temperature and rate dependence of Charpy V-notch energies for a high nitrogen steel. International Journal of Fracture, 1988, 37, 197-215.	2.2	73
80	Discrete dislocation plasticity and crack tip fields in single crystals. Journal of the Mechanics and Physics of Solids, 2001, 49, 2133-2153.	4.8	73
81	Nonlocal effects on localization in a void-sheet. International Journal of Solids and Structures, 1997, 34, 2221-2238.	2.7	72
82	A numerical study of dynamic crack growth in elastic-viscoplastic solids. International Journal of Solids and Structures, 1997, 34, 769-787.	2.7	71
83	An analysis of residual stress formation in whisker-reinforced Alî—¸SiC composites. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1990, 125, 129-140.	5.6	70
84	Effect of crack meandering on dynamic, ductile fracture. Journal of the Mechanics and Physics of Solids, 1992, 40, 447-471.	4.8	70
85	Mesh effects in the analysis of dynamic ductile crack growth. Engineering Fracture Mechanics, 1994, 47, 75-91.	4.3	70
86	A finite thickness band method for ductile fracture analysis. International Journal of Plasticity, 2009, 25, 2349-2365.	8.8	69
87	Instability and failure of internally pressurized ductile metal cylinders. Journal of the Mechanics and Physics of Solids, 1982, 30, 121-154.	4.8	67
88	Three dimensional analysis of dynamic ductile crack growth in a thin plate. Journal of the Mechanics and Physics of Solids, 1996, 44, 439-459.	4.8	67
89	Effect of interfacial compliance on bifurcation of a layer bonded to a substrate. International Journal of Solids and Structures, 1997, 34, 4305-4326.	2.7	63
90	Finite strain discrete dislocation plasticity. Journal of the Mechanics and Physics of Solids, 2003, 51, 2057-2083.	4.8	63

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91	Dynamic crack growth across an interface. International Journal of Fracture, 1997, 85, 381-402.	2.2	59
92	A numerical study of void distribution effects on dynamic, ductile crack growth. Engineering Fracture Mechanics, 1991, 38, 157-173.	4.3	57
93	Frictional sliding modes along an interface between identical elastic plates subject to shear impact loading. Journal of the Mechanics and Physics of Solids, 2005, 53, 884-922.	4.8	57
94	Grain boundary crack growth in metastable titanium Î² alloys. Acta Materialia, 2015, 82, 167-178.	7.9	57
95	Stability of solids with interfaces. Journal of the Mechanics and Physics of Solids, 1992, 40, 613-640.	4.8	55
96	Dynamic crack growth along a polymer compositeâ€“Homalite interface. Journal of the Mechanics and Physics of Solids, 2003, 51, 425-460.	4.8	55
97	Void growth versus void collapse in a creeping single crystal. Journal of the Mechanics and Physics of Solids, 2013, 61, 1169-1184.	4.8	55
98	An analysis of inclusion morphology effects on void nucleation. Modelling and Simulation in Materials Science and Engineering, 2002, 10, 163-183.	2.0	54
99	Effect of boundaries and interfaces on shear-band localization. International Journal of Solids and Structures, 1991, 28, 859-877.	2.7	53
100	An analysis of ductile failure by grain boundary void growth. Acta Metallurgica, 1989, 37, 99-120.	2.1	52
101	3D analysis of failure modes in the Charpy impact test. Modelling and Simulation in Materials Science and Engineering, 1994, 2, 617-635.	2.0	52
102	Size effects in polycrystalline thin films analyzed by discrete dislocation plasticity. Thin Solid Films, 2005, 479, 329-338.	1.8	52
103	Numerical modeling of crack growth under dynamic loading conditions. Computational Mechanics, 1997, 19, 463-469.	4.0	50
104	Numerical modeling of the ductile-brittle transition. International Journal of Fracture, 2000, 101, 73-97.	2.2	49
105	A finite strain, finite band method for modeling ductile fracture. International Journal of Plasticity, 2012, 28, 53-69.	8.8	49
106	On localized thermal track buckling. International Journal of Mechanical Sciences, 1981, 23, 577-587.	6.7	47
107	Flow localization in strain hardening crystalline solids. Scripta Metallurgica, 1984, 18, 429-435.	1.2	47
108	Discrete dislocation plasticity analysis of static friction. Acta Materialia, 2004, 52, 3135-3149.	7.9	47

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109	Scaling of discrete dislocation predictions for near-threshold fatigue crack growth. Acta Materialia, 2003, 51, 4637-4651.	7.9	45
110	Surface versus bulk nucleation of dislocations during contact. Journal of the Mechanics and Physics of Solids, 2007, 55, 1120-1144.	4.8	45
111	Constraint effects on the ductile-brittle transition in small scale yielding. Journal of the Mechanics and Physics of Solids, 1996, 44, 1255-1282.	4.8	43
112	A finite element method for analyzing localization in rate dependent solids at finite strains. Computer Methods in Applied Mechanics and Engineering, 1989, 73, 235-258.	6.6	42
113	The bauschinger effect in whisker-reinforced metal-matrix composites. Scripta Metallurgica Et Materialia, 1990, 24, 1203-1208.	1.0	42
114	Buckling of sandwich beams with compliant interfaces. Computers and Structures, 2002, 80, 1329-1335.	4.4	42
115	Three dimensional microstructural effects on plane strain ductile crack growth. International Journal of Solids and Structures, 2006, 43, 6165-6179.	2.7	42
116	Effects of reinforcement orientation on the tensile response of metal-matrix composites. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1995, 197, 1-10.	5.6	41
117	Crack growth in lamellar titanium aluminide. International Journal of Fracture, 2001, 111, 163-189.	2.2	41
118	Energy dissipation in dynamic fracture of brittle materials. Modelling and Simulation in Materials Science and Engineering, 1999, 7, 573-586.	2.0	40
119	Postbifurcation behavior and imperfection sensitivity of elastic-plastic circular plates. International Journal of Mechanical Sciences, 1975, 17, 1-13.	6.7	39
120	Discrete dislocation modelling of submicron indentation. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2005, 400-401, 456-459.	5.6	38
121	Smaller is softer: an inverse size effect in a cast aluminum alloy. Acta Materialia, 2001, 49, 3071-3083.	7.9	37
122	Ductile failure analyses on massively parallel computers. Computer Methods in Applied Mechanics and Engineering, 1994, 119, 283-309.	6.6	36
123	An analysis of the imperfection sensitivity of square elastic-plastic plates under axial compression. International Journal of Solids and Structures, 1976, 12, 185-201.	2.7	34
124	Size Effects in the Charpy V-Notch Test. International Journal of Fracture, 2002, 116, 275-296.	2.2	33
125	Local Relative Density Modulates Failure and Strength in Vertically Aligned Carbon Nanotubes. ACS Nano, 2013, 7, 8593-8604.	14.6	33
126	An analysis of shear band development incorporating heat conduction. Mechanics of Materials, 1986, 5, 363-373.	3.2	32

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127	Contact area and size effects in discrete dislocation modeling of wedge indentation. Journal of Materials Research, 2007, 22, 655-663.	2.6	32
128	Multi-scale plasticity modeling: Coupled discrete dislocation and continuum crystal plasticity. Journal of the Mechanics and Physics of Solids, 2008, 56, 3167-3180.	4.8	32
129	A finite element method for plane strain deformations of incompressible solids. Computer Methods in Applied Mechanics and Engineering, 1978, 15, 223-240.	6.6	31
130	An analysis of myocardial infarction. The effect of regional changes in contractility.. Circulation Research, 1984, 55, 805-815.	4.5	31
131	Analysis of the Charpy V-notch test for welds. Engineering Fracture Mechanics, 2000, 65, 627-643.	4.3	31
132	Size effects in aluminium alloy castings. Acta Materialia, 2010, 58, 3006-3013.	7.9	31
133	Necking of pressurized spherical membranes. Journal of the Mechanics and Physics of Solids, 1976, 24, 339-359.	4.8	30
134	Dynamic 3D analysis of the Charpy V-notch test. Modelling and Simulation in Materials Science and Engineering, 1993, 1, 467-484.	2.0	29
135	Micromechanics Simulations of Fracture. Annual Review of Materials Research, 2002, 32, 141-162.	9.3	29
136	Hybrid discrete dislocation models for fatigue crack growth. International Journal of Fatigue, 2010, 32, 1511-1520.	5.7	29
137	Effect of inhomogeneities on dynamic crack growth in an elastic solid. Modelling and Simulation in Materials Science and Engineering, 1997, 5, 489-516.	2.0	28
138	Effect of the number and orientation of active slip systems on plane strain single crystal indentation. Modelling and Simulation in Materials Science and Engineering, 2006, 14, 1105-1125.	2.0	28
139	3D analyses of the effect of weld orientation in Charpy specimens. Engineering Fracture Mechanics, 2004, 71, 2179-2195.	4.3	27
140	Polymer indentation: Numerical analysis and comparison with a spherical cavity model. Journal of the Mechanics and Physics of Solids, 2011, 59, 1669-1684.	4.8	27
141	The cohesive band model: a cohesive surface formulation with stress triaxiality. International Journal of Fracture, 2013, 181, 177-188.	2.2	27
142	Fatigue crack growth from a cracked elastic particle into a ductile matrix. Philosophical Magazine, 2008, 88, 3565-3583.	1.6	26
143	Phenomenological modeling of the effect of specimen thickness on the creep response of Ni-based superalloy single crystals. Acta Materialia, 2013, 61, 6506-6516.	7.9	26
144	An analysis of thickness effects in the Izod test. International Journal of Solids and Structures, 2008, 45, 3951-3966.	2.7	25

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145	Three-dimensional analysis of creep in a metal matrix composite. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1992, 158, 129-137.	5.6	24
146	Two hardening mechanisms in single crystal thin films studied by discrete dislocation plasticity. Philosophical Magazine, 2005, 85, 1507-1518.	1.6	24
147	Discrete dislocation analysis of the wedge indentation of polycrystals. Acta Materialia, 2007, 55, 6408-6415.	7.9	24
148	On the buckling of elastic-plastic columns with asymmetric cross-sections. International Journal of Mechanical Sciences, 1975, 17, 419-424.	6.7	23
149	Buckling of eccentrically stiffened elastic-plastic panels on two simple supports or multiply supported. International Journal of Solids and Structures, 1975, 11, 647-663.	2.7	23
150	An analysis of dislocation nucleation near a free surface. International Journal of Solids and Structures, 2007, 44, 1719-1732.	2.7	23
151	Multi-asperity contact: A comparison between discrete dislocation and crystal plasticity predictions. Philosophical Magazine, 2008, 88, 3713-3729.	1.6	23
152	A finite element model of the infarcted left ventricle. Journal of Biomechanics, 1983, 16, 45-58.	2.1	22
153	Summary report: computational issues in the mechanical behavior of metals and intermetallics. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1992, 159, 1-34.	5.6	20
154	Prediction of Ductile Fracture Surface Roughness Scaling. Journal of Applied Mechanics, Transactions ASME, 2012, 79, .	2.2	20
155	Discrete shear-transformation-zone plasticity modeling of notched bars. Journal of the Mechanics and Physics of Solids, 2018, 111, 18-42.	4.8	20
156	A discrete dislocation analysis of rate effects on mode I crack growth. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2001, 317, 37-43.	5.6	19
157	Micromechanics of Fracture: Connecting Physics to Engineering. MRS Bulletin, 2001, 26, 211-214.	3.5	19
158	Bifurcation of elastic-plastic spherical shells subject to internal pressure. Journal of the Mechanics and Physics of Solids, 1975, 23, 357-367.	4.8	18
159	A micromechanical analysis of the ductile-brittle transition at a weld. Engineering Fracture Mechanics, 1999, 62, 317-338.	4.3	18
160	Discrete dislocation plasticity analysis of crack-tip fields in polycrystalline materials. Philosophical Magazine, 2005, 85, 3047-3071.	1.6	17
161	Intergranular fracture prediction and microstructure design. International Journal of Fracture, 2019, 216, 135-148.	2.2	17
162	The effect of plasticity on dynamic crack growth across an interface. International Journal of Fracture, 1998, 94, 383-399.	2.2	16

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163	Buckling localization in a cylindrical panel under axial compression. International Journal of Solids and Structures, 2000, 37, 6825-6842.	2.7	16
164	Deformation of plastically compressible hardening-softening-hardening solids. Acta Mechanica Sinica/Lixue Xuebao, 2012, 28, 1115-1124.	3.4	16
165	Microcrack nucleation and growth in elastic lamellar solids. International Journal of Fracture, 2000, 105, 321-342.	2.2	15
166	Slip modes and partitioning of energy during dynamic frictional sliding between identical elasticâ€“viscoplastic solids. International Journal of Fracture, 2010, 162, 51-67.	2.2	15
167	A microstructurally motivated description of the deformation of vertically aligned carbon nanotube structures. Applied Physics Letters, 2012, 100, .	3.3	15
168	Continuum mechanics studies of plastic instabilities. Revue De Physique AppliquÃ©e, 1988, 23, 585-593.	0.4	15
169	Stochastic microcrack nucleation in lamellar solids. Engineering Fracture Mechanics, 2003, 70, 1869-1884.	4.3	14
170	A simple model for size effects in constrained shear. Extreme Mechanics Letters, 2019, 33, 100581.	4.1	14
171	Identification of Plastic Properties From Conical Indentation Using a Bayesian-Type Statistical Approach. Journal of Applied Mechanics, Transactions ASME, 2019, 86, .	2.2	14
172	Energy dissipation rate and kinetic relations for Eshelby transformations. Journal of the Mechanics and Physics of Solids, 2020, 136, 103699.	4.8	14
173	The influence of nucleation criterion on shear localization in rate-sensitive porous plastic solids. International Journal of Plasticity, 1992, 8, 315-330.	8.8	13
174	Sensitivity analysis for failure and damage in dynamically loaded tensile bars. Computer Methods in Applied Mechanics and Engineering, 1998, 151, 461-478.	6.6	13
175	Statistics of ductile fracture surfaces: the effect of material parameters. International Journal of Fracture, 2013, 184, 137-149.	2.2	13
176	Crack tip fields at a ductile single crystal-rigid material interface. International Journal of Fracture, 2003, 122, 131-159.	2.2	12
177	Dynamic neck development in a polymer tube under internal pressure loading. International Journal of Solids and Structures, 2008, 45, 580-592.	2.7	12
178	Uniaxial Tension of a Class of Compressible Solids With Plastic Non-Normality. Journal of Applied Mechanics, Transactions ASME, 2013, 80, .	2.2	12
179	Issues in the finite element modeling of polyphase plasticity. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1994, 175, 43-48.	5.6	10
180	Discrete shear transformation zone plasticity. Extreme Mechanics Letters, 2016, 9, 21-29.	4.1	9

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181	COMPUTATIONAL MICROMECHANICS. , 1989, , 217-240.		9
182	Dislocation Plasticity Effects on Interfacial Fracture. Journal of Materials Science, 2003, 11, 291-301.	1.2	8
183	Statistical aspects of discrete dislocation plasticity. Scripta Materialia, 2006, 54, 729-733.	5.2	8
184	Characterization of plastically compressible solids via spherical indentation. Journal of the Mechanics and Physics of Solids, 2021, 148, 104283.	4.8	8
185	A numerical study of localized deformation in bi-crystals. Mechanics of Materials, 1985, 4, 417-435.	3.2	7
186	Conical indentation of thick elastic spherical shells. Journal of Mechanics of Materials and Structures, 2011, 6, 443-451.	0.6	7
187	Constraint and size effects in confined layer plasticity. Journal of the Mechanics and Physics of Solids, 2021, 149, 104328.	4.8	7
188	Simulated small-angle scattering patterns for a plastically deformed model composite material. Modelling and Simulation in Materials Science and Engineering, 2000, 8, 557-581.	2.0	5
189	Discrete Dislocation Plasticity. Key Engineering Materials, 2003, 233-236, 13-24.	0.4	5
190	Effect of Properties and Turgor Pressure on the Indentation Response of Plant Cells. Journal of Applied Mechanics, Transactions ASME, 2018, 85, .	2.2	5
191	Elastic-Viscoplastic Analysis of Ductile Fracture. , 1992, , 3-14.		5
192	Influence of Grain Size Distribution on Ductile Intergranular Crack Growth Resistance. Journal of Applied Mechanics, Transactions ASME, 2020, 87, .	2.2	5
193	Relaxation of Thermal Stress by Dislocation Motion in Passivated Metal Interconnects. Journal of Materials Research, 2004, 19, 1216-1226.	2.6	4
194	Limits on Transformation Strains for Non-Negative Dissipation. Journal of Applied Mechanics, Transactions ASME, 2019, 86, 051005.	2.2	4
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