

A Amine Benzerga

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

96
papers

4,282
citations

34
h-index

64
g-index

103
ext. papers

4,864
ext. citations

4.5
avg, IF

6.21
L-index

#	Paper	IF	Citations
96	A Predictive Multisurface Approach to Damage Modeling in Mg Alloys. <i>Minerals, Metals and Materials Series</i> , 2022 , 293-297	0.3	
95	Ductile Fracture in Plane Stress. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2022 , 89,	2.7	1
94	On the micromechanics of void mediated failure in HCP crystals. <i>Journal of the Mechanics and Physics of Solids</i> , 2022 , 104923	5	1
93	An analysis of deformation and failure in rectangular tensile bars accounting for void shape changes. <i>International Journal of Fracture</i> , 2021 , 230, 133	2.3	3
92	A variational fast Fourier transform method for phase-transforming materials. <i>Modelling and Simulation in Materials Science and Engineering</i> , 2021 , 29, 045001	2	4
91	An analysis of Lode effects in ductile failure. <i>Journal of the Mechanics and Physics of Solids</i> , 2021 , 153, 104468	5	6
90	Shear Transformation Zone (STZ) plasticity analysis of constrained shear. <i>Mechanics of Materials</i> , 2021 , 160, 103935	3.3	1
89	Ductile failure as a constitutive instability in porous plastic solids. <i>Journal of the Mechanics and Physics of Solids</i> , 2020 , 139, 103917	5	8
88	Effect of UV-aging on the mechanical and fracture behavior of low density polyethylene. <i>Polymer Degradation and Stability</i> , 2020 , 180, 109185	4.7	14
87	Photo-oxidation of semicrystalline polymers: Damage nucleation versus growth. <i>Polymer</i> , 2020 , 188, 122090	3.9	4
86	Energy dissipation rate and kinetic relations for Eshelby transformations. <i>Journal of the Mechanics and Physics of Solids</i> , 2020 , 136, 103699	5	4
85	Microstructural Origin of Residual Stress Relief in Aluminum. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2019 , 50, 5038-5055	2.3	10
84	Limits on Transformation Strains for Non-Negative Dissipation. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2019 , 86, 051005	2.7	3
83	Plastic flow anisotropy drives shear fracture. <i>Scientific Reports</i> , 2019 , 9, 1425	4.9	20
82	Interplay between the effects of deformation mechanisms and dynamic recrystallization on the failure of Mg-3Al-1Zn. <i>Acta Materialia</i> , 2019 , 168, 448-472	8.4	37
81	Modeling the 3D Plastic Anisotropy of a Magnesium Alloy Processed Using Severe Plastic Deformation. <i>Minerals, Metals and Materials Series</i> , 2019 , 283-287	0.3	1
80	A Theory for Designing Ductile Materials with Anisotropy. <i>Minerals, Metals and Materials Series</i> , 2019 , 359-362	0.3	1

79	Void growth and coalescence in hexagonal close packed crystals. <i>Journal of the Mechanics and Physics of Solids</i> , 2019 , 125, 198-224	5	29
78	Evolution of the 3D plastic anisotropy of HCP metals: Experiments and modeling. <i>International Journal of Plasticity</i> , 2019 , 117, 71-92	7.6	29
77	Environmentally enhanced creep crack growth by grain boundary cavitation under cyclic loading. <i>Acta Materialia</i> , 2018 , 153, 136-146	8.4	14
76	Discrete shear-transformation-zone plasticity modeling of notched bars. <i>Journal of the Mechanics and Physics of Solids</i> , 2018 , 111, 18-42	5	15
75	Micromechanics-based constitutive relations for post-localization analysis. <i>MethodsX</i> , 2018 , 5, 1431-1439.	3	9
74	Void growth and coalescence in a magnesium alloy studied by synchrotron radiation laminography. <i>Acta Materialia</i> , 2018 , 155, 80-94	8.4	20
73	A mechanism of failure in shear bands. <i>Extreme Mechanics Letters</i> , 2018 , 23, 67-71	3.9	34
72	Three dimensional simulations of texture and triaxiality effects on the plasticity of magnesium alloys. <i>Acta Materialia</i> , 2017 , 127, 54-72	8.4	33
71	Discrete dislocation simulations of compression of tapered micropillars. <i>Journal of the Mechanics and Physics of Solids</i> , 2017 , 101, 223-234	5	20
70	Effects of Texture and Triaxiality on the Plasticity of Magnesium Alloys. <i>Minerals, Metals and Materials Series</i> , 2017 , 563-569	0.3	
69	Ductility Enhancement in Mg Alloys by Anisotropy Engineering. <i>Minerals, Metals and Materials Series</i> , 2017 , 153-158	0.3	
68	Theoretical and numerical analysis of void coalescence in porous ductile solids under arbitrary loadings. <i>International Journal of Plasticity</i> , 2017 , 91, 160-181	7.6	27
67	Towards designing anisotropy for ductility enhancement: A theory-driven investigation in Mg-alloys. <i>Acta Materialia</i> , 2017 , 131, 349-362	8.4	28
66	Creep crack growth by grain boundary cavitation under monotonic and cyclic loading. <i>Journal of the Mechanics and Physics of Solids</i> , 2017 , 108, 68-84	5	20
65	Modeling damage accumulation to fracture in a magnesium-rare earth alloy. <i>Acta Materialia</i> , 2017 , 124, 225-236	8.4	30
64	Discrete shear transformation zone plasticity. <i>Extreme Mechanics Letters</i> , 2016 , 9, 21-29	3.9	7
63	On the modeling of asymmetric yield functions. <i>International Journal of Solids and Structures</i> , 2016 , 80, 486-500	3.1	13
62	On plastic flow in notched hexagonal close packed single crystals. <i>Journal of the Mechanics and Physics of Solids</i> , 2016 , 94, 273-297	5	34

61	Failure of metals I: Brittle and ductile fracture. <i>Acta Materialia</i> , 2016 , 107, 424-483	8.4	488
60	A unified criterion for the growth and coalescence of microvoids. <i>Journal of the Mechanics and Physics of Solids</i> , 2016 , 97, 19-36	5	22
59	Failure of metals III: Fracture and fatigue of nanostructured metallic materials. <i>Acta Materialia</i> , 2016 , 107, 508-544	8.4	119
58	Strain Localization in Determining the Constitutive Response of Polymers 2016 ,		1
57	Effect of strain rate and temperature on fracture of magnesium alloy AZ31B. <i>Acta Materialia</i> , 2016 , 112, 194-208	8.4	70
56	Analysis of shape memory alloy sensory particles for damage detection via substructure and continuum damage modeling 2016 ,		2
55	Constitutive relations and their time integration for anisotropic elasto-plastic porous materials. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2016 , 310, 495-534	5.7	12
54	On fracture loci of ductile materials under non-proportional loading. <i>International Journal of Mechanical Sciences</i> , 2016 , 117, 135-151	5.5	29
53	Ductile failure modeling. <i>International Journal of Fracture</i> , 2016 , 201, 29-80	2.3	123
52	On Void Coalescence Under Combined Tension and Shear. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2015 , 82,	2.7	37
51	A micromechanical model for the dynamic behavior of porous media in the void coalescence stage. <i>International Journal of Solids and Structures</i> , 2015 , 71, 1-18	3.1	15
50	High-temperature discrete dislocation plasticity. <i>Journal of the Mechanics and Physics of Solids</i> , 2015 , 82, 1-22	5	37
49	Numerical assessment of an anisotropic porous metal plasticity model. <i>Mechanics of Materials</i> , 2015 , 90, 212-228	3.3	10
48	On the notch ductility of a magnesium-rare earth alloy. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2015 , 647, 74-83	5.3	31
47	On the path-dependence of the fracture locus in ductile materials: Experiments. <i>International Journal of Solids and Structures</i> , 2015 , 71, 79-90	3.1	46
46	Orientation-dependent plastic deformation in transformer steel: Experiments and dislocation dynamics simulations. <i>Acta Materialia</i> , 2015 , 84, 256-264	8.4	7
45	Coalescence of voids by internal necking: Theoretical estimates and numerical results. <i>Journal of the Mechanics and Physics of Solids</i> , 2015 , 75, 140-158	5	39
44	Micromechanical Models of Ductile Damage and Fracture 2015 , 939-962		0

43	Fracture Strains, Damage Mechanisms and Anisotropy in a Magnesium Alloy Across a Range of Stress Triaxialities. <i>Experimental Mechanics</i> , 2014 , 54, 493-499	2.6	30
42	Effect of Stress Triaxiality on the Flow and Fracture of Mg Alloy AZ31. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2014 , 45, 3292-3307	2.3	99
41	Finite-strain elasto-viscoplastic behavior of an epoxy resin: Experiments and modeling in the glassy regime. <i>International Journal of Plasticity</i> , 2014 , 62, 138-161	7.6	51
40	Effective Yield Criterion Accounting for Microvoid Coalescence. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2014 , 81,	2.7	70
39	Determination of the intrinsic behavior of polymers using digital image correlation combined with video-monitored testing. <i>International Journal of Solids and Structures</i> , 2013 , 50, 1869-1878	3.1	32
38	On the localization of plastic flow in glassy polymers. <i>European Journal of Mechanics, A/Solids</i> , 2013 , 39, 251-267	3.7	12
37	Finite element implementation of a macromolecular viscoplastic polymer model. <i>International Journal for Numerical Methods in Engineering</i> , 2013 , 94, 895-919	2.4	12
36	Micromechanical Models of Ductile Damage and Fracture 2013 , 1-22		
35	Power-law creep from discrete dislocation dynamics. <i>Physical Review Letters</i> , 2012 , 109, 265504	7.4	81
34	On the path-dependence of the fracture locus in ductile materials I Analysis. <i>International Journal of Plasticity</i> , 2012 , 37, 157-170	7.6	88
33	Void growth and coalescence in anisotropic plastic solids. <i>International Journal of Solids and Structures</i> , 2011 , 48, 1696-1710	3.1	70
32	Work hardening in micropillar compression: In situ experiments and modeling. <i>Acta Materialia</i> , 2011 , 59, 3825-3840	8.4	73
31	Ductile Fracture by Void Growth to Coalescence. <i>Advances in Applied Mechanics</i> , 2010 , 44, 169-305	10	395
30	A constitutive model for plastically anisotropic solids with non-spherical voids. <i>Journal of the Mechanics and Physics of Solids</i> , 2010 , 58, 874-901	5	148
29	Size effects in aluminium alloy castings. <i>Acta Materialia</i> , 2010 , 58, 3006-3013	8.4	24
28	On the effects of dislocation density on micropillar strength. <i>Materials Research Society Symposia Proceedings</i> , 2009 , 1185, 61		1
27	Computational Methodology for Modeling Fracture in Fiber-Reinforced Polymer Composites. <i>Journal of Aerospace Engineering</i> , 2009 , 22, 296-303	1.4	7
26	Micro-pillar plasticity: 2.5D mesoscopic simulations. <i>Journal of the Mechanics and Physics of Solids</i> , 2009 , 57, 1459-1469	5	50

25	Evolution of geometrically necessary dislocation density from computational dislocation dynamics. <i>IOP Conference Series: Materials Science and Engineering</i> , 2009 , 3, 012008	0.4	2
24	Effects of Manufacturing-Induced Voids on Local Failure in Polymer-Based Composites. <i>Journal of Engineering Materials and Technology, Transactions of the ASME</i> , 2008 , 130,	1.8	35
23	A phenomenological model of size-dependent hardening in crystal plasticity. <i>Philosophical Magazine</i> , 2008 , 88, 3585-3601	1.6	17
22	Size effects under homogeneous deformation of single crystals: A discrete dislocation analysis. <i>Journal of the Mechanics and Physics of Solids</i> , 2008 , 56, 132-156	5	83
21	An approximate yield criterion for anisotropic porous media. <i>Comptes Rendus - Mecanique</i> , 2008 , 336, 685-692	2.1	39
20	A computational framework for analyzing the dynamic response of glassy polymers. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2008 , 197, 4485-4502	5.7	10
19	A discrete dislocation analysis of the Bauschinger effect in microcrystals. <i>Acta Materialia</i> , 2008 , 56, 5477-5491	5.4	21
18	An analysis of impact-induced deformation and fracture modes in amorphous glassy polymers. <i>Engineering Fracture Mechanics</i> , 2008 , 75, 3328-3342	4.2	14
17	An analysis of exhaustion hardening in micron-scale plasticity. <i>International Journal of Plasticity</i> , 2008 , 24, 1128-1157	7.6	63
16	A Computational Methodology for Modeling Ductile Fracture. <i>IUTAM Symposium on Cellular, Molecular and Tissue Mechanics</i> , 2008 , 67-77	0.3	
15	A discrete dislocation analysis of strengthening in bilayer thin films. <i>Modelling and Simulation in Materials Science and Engineering</i> , 2007 , 15, S239-S254	2	12
14	Scale dependence of mechanical properties of single crystals under uniform deformation. <i>Scripta Materialia</i> , 2006 , 54, 1937-1941	5.6	76
13	The stored energy of cold work: Predictions from discrete dislocation plasticity. <i>Acta Materialia</i> , 2005 , 53, 4765-4779	8.4	80
12	Incorporating three-dimensional mechanisms into two-dimensional dislocation dynamics. <i>Modelling and Simulation in Materials Science and Engineering</i> , 2004 , 12, 159-196	2	134
11	Incorporating three-dimensional mechanisms into two-dimensional dislocation dynamics. <i>Modelling and Simulation in Materials Science and Engineering</i> , 2004 , 12, 557-559	2	7
10	Material inertia and size effects in the Charpy V-notch test. <i>European Journal of Mechanics, A/Solids</i> , 2004 , 23, 373-386	3.7	4
9	Anisotropic ductile fracture. <i>Acta Materialia</i> , 2004 , 52, 4639-4650	8.4	200
8	Anisotropic ductile fracture. <i>Acta Materialia</i> , 2004 , 52, 4623-4638	8.4	188

7	Discrete Dislocation Predictions for Single Crystal Hardening: Tension VS Bending. <i>Solid Mechanics and Its Applications</i> , 2004 , 235-242	0.4	
6	Size Effects in the Charpy V-Notch Test. <i>International Journal of Fracture</i> , 2002 , 116, 275-296	2.3	29
5	Synergistic effects of plastic anisotropy and void coalescence on fracture mode in plane strain. <i>Modelling and Simulation in Materials Science and Engineering</i> , 2002 , 10, 73-102	2	63
4	Plastic potentials for anisotropic porous solids. <i>European Journal of Mechanics, A/Solids</i> , 2001 , 20, 397-434	3.7	243
3	Smaller is softer: an inverse size effect in a cast aluminum alloy. <i>Acta Materialia</i> , 2001 , 49, 3071-3083	8.4	34
2	Coalescence-Controlled Anisotropic Ductile Fracture. <i>Journal of Engineering Materials and Technology, Transactions of the ASME</i> , 1999 , 121, 221-229	1.8	122
1	Discrete Dislocation Simulations of Taper Effects in Micropillar Compression	701-709	