Odd Sture Hopperstad

List of Publications by Year
in descending order

67	1,743	236833	302012
papers	citations	25 h-index	39 g-index

69	69	69	1087
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	On the influence of stress triaxiality and strain rate on the behaviour of a structural steel. Part II. Numerical study. European Journal of Mechanics, A/Solids, 2003, 22, 15-32.	2.1	130
2	Multi-level modelling of mechanical anisotropy of commercial pure aluminium plate: Crystal plasticity models, advanced yield functions and parameter identification. International Journal of Plasticity, 2015, 66, 3-30.	4.1	127
3	Evaluation of uncoupled ductile fracture criteria for the dual-phase steel Docol 600DL. International Journal of Mechanical Sciences, 2012, 62, 133-146.	3.6	107
4	Anisotropic failure modes of high-strength aluminium alloy under various stress states. International Journal of Plasticity, 2013, 48, 34-53.	4.1	77
5	Latent hardening and plastic anisotropy evolution in AA6060 aluminium alloy. International Journal of Plasticity, 2016, 76, 51-74.	4.1	76
6	Evaluation of identification methods for YLD2004-18p. International Journal of Plasticity, 2008, 24, 2248-2277.	4.1	68
7	On the plastic anisotropy of an aluminium alloy and its influence on constrained multiaxial flow. International Journal of Plasticity, 2011, 27, 2005-2025.	4.1	56
8	An experimental study on the dynamic fracture of extruded AA6xxx and AA7xxx aluminium alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2009, 523, 253-262.	2.6	52
9	Effects of particles and solutes on strength, work-hardening and ductile fracture of aluminium alloys. Mechanics of Materials, 2014, 79, 58-72.	1.7	51
10	Influence of microstructure on work-hardening and ductile fracture of aluminium alloys. Materials & Design, 2015, 70, 31-44.	5.1	50
11	A Lode-dependent Gurson model motivated by unit cell analyses. Engineering Fracture Mechanics, 2018, 190, 299-318.	2.0	40
12	Influence of loading path on ductile fracture of tensile specimens made from aluminium alloys. International Journal of Solids and Structures, 2016, 88-89, 17-34.	1.3	37
13	Strength differential effect in age hardened aluminum alloys. International Journal of Plasticity, 2017, 99, 144-161.	4.1	37
14	An experimentalâ€“numerical method to determine the work-hardening of anisotropic ductile materials at large strains. International Journal of Mechanical Sciences, 2014, 88, 25-36.	3.6	33
15	Unit cell simulations and porous plasticity modelling for strongly anisotropic FCC metals. European Journal of Mechanics, A/Solids, 2017, 65, 360-383.	2.1	32
16	On the coupling of damage and single crystal plasticity for ductile polycrystalline materials. International Journal of Plasticity, 2021, 142, 102996.	4.1	32
17	Deformation and strain localization in polycrystals with plastically heterogeneous grains. International Journal of Plasticity, 2016, 86, 128-150.	4.1	30
18	Behavior of PVC and HDPE under highly triaxial stress states: An experimental and numerical study. Mechanics of Materials, 2014, 72, 94-108.	1.7	29

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19	A study of the influence of precipitate-free zones on the strain localization and failure of the aluminium alloy AA7075-T651. Philosophical Magazine, 2015, 95, 3278-3304.	0.7	28
20	A Combined Precipitation, Yield Stress, and Work Hardening Model for Al-Mg-Si Alloys Incorporating the Effects of Strain Rate and Temperature. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2018, 49, 3592-3609.	1.1	28
21	Lattice rotations in precipitate free zones in an Al-Mg-Si alloy. Materials Characterization, 2018, 144, 522-531.	1.9	27
22	Modelling and simulation of ductile failure in textured aluminium alloys subjected to compression-tension loading. International Journal of Plasticity, 2019, 118, 36-69.	4.1	27
23	Three-Point Bending of Heat-Treatable Aluminum Alloys: Influence of Microstructure and Texture on Bendability and Fracture Behavior. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2011, 42, 3386-3398.	1.1	26
24	The role of quench rate on the plastic flow and fracture of three aluminium alloys with different grain structure and texture. International Journal of Engineering Science, 2020, 150, 103257.	2.7	26
25	Behaviour of extruded aluminium alloys under proportional and non-proportional strain paths. Journal of Materials Processing Technology, 2009, 209, 4750-4764.	3.1	25
26	Influence of yield surface curvature on the macroscopic yielding and ductile failure of isotropic porous plastic materials. Journal of the Mechanics and Physics of Solids, 2017, 107, 253-283.	2.3	25
27	Influence of strain rate and temperature on the mechanical behaviour of rubber-modified polypropylene and cross-linked polyethylene. Mechanics of Materials, 2017, 114, 40-56.	1.7	25
28	Nano-scale characterisation of sheared Î²â€•precipitates in a deformed Al-Mg-Si alloy. Scientific Reports, 2019, 9, 17446.	1.6	25
29	On the effect of plastic anisotropy, strength and work hardening on the tensile ductility of aluminium alloys. International Journal of Solids and Structures, 2020, 188-189, 118-132.	1.3	25
30	On the description of ductile fracture in metals by the strain localization theory. International Journal of Fracture, 2018, 209, 27-51.	1.1	24
31	Effects of heat-treatment on the plastic anisotropy of extruded aluminium alloy AA6063. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 708, 208-221.	2.6	23
32	Influence of stress state on plastic flow and ductile fracture of three 6000-series aluminium alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 783, 139295.	2.6	23
33	Simulation of large-strain behaviour of aluminium alloy under tensile loading using anisotropic plasticity models. Computers and Structures, 2015, 157, 60-75.	2.4	20
34	Evaluation of constitutive models for textured aluminium alloys using plane-strain tension and shear tests. International Journal of Material Forming, 2011, 4, 227-241.	0.9	19
35	Experimental detection of forming limit strains on samples with multiple local necks. Journal of Materials Processing Technology, 2016, 227, 216-226.	3.1	19
36	Experimental set-up for determination of the large-strain tensile behaviour of polymers at low temperatures. Polymer Testing, 2016, 53, 305-313.	2.3	18

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37	Anisotropic tensile failure of metals by the strain localization theory: An application to a high-strength aluminium alloy. European Journal of Mechanics, A/Solids, 2018, 69, 99-112.	2.1	16
38	Work hardening and plastic anisotropy of naturally and artificially aged aluminium alloy AA6063. Mechanics of Materials, 2019, 136, 103069.	1.7	16
39	Crash Behavior of Foam-based Components: Validation of Numerical Simulations. Advanced Engineering Materials, 2002, 4, 771-776.	1.6	15
40	Anisotropic Plasticity and Fracture of Three 6000-Series Aluminum Alloys. Metals, 2021, 11, 557.	1.0	15
41	Numerical study of ductile failure under non-proportional loading. European Journal of Mechanics, A/Solids, 2019, 74, 221-241.	2.1	14
42	Finite element simulation of ductile fracture in polycrystalline materials using a regularized porous crystal plasticity model. International Journal of Fracture, 2021, 228, 15-31.	1.1	14
43	On crystallographic aspects of heterogeneous plastic flow during ductile tearing: 3D measurements and crystal plasticity simulations for AA7075-T651. International Journal of Plasticity, 2021, 144, 103028.	4.1	14
44	Influence of stress triaxiality and strain rate on stress-strain behaviour and dilation of mineral-filled PVC. Polymer Testing, 2019, 75, 350-357.	2.3	12
45	Effects of constituent particle content on ductile fracture in isotropic and anisotropic 6000-series aluminium alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 820, 141420.	2.6	12
46	Ductile failure predictions using micromechanically-based computational models. Journal of the Mechanics and Physics of Solids, 2022, 164, 104873.	2.3	12
47	Using unit cell simulations to investigate fracture due to compressionâ€“tension loading. Engineering Fracture Mechanics, 2016, 162, 269-289.	2.0	10
48	Dynamic versus quasi-static loading of X65 offshore steel pipes. European Physical Journal: Special Topics, 2016, 225, 325-334.	1.2	10
49	Volumetric strain measurement of polymeric materials subjected to uniaxial tension. Strain, 2019, 55, e12314.	1.4	9
50	Tensile ductility of extruded aluminium alloy AA6063 in different tempers. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 744, 500-511.	2.6	9
51	Anisotropic yield surfaces of additively manufactured metals simulated with crystal plasticity. European Journal of Mechanics, A/Solids, 2022, 94, 104506.	2.1	9
52	Work-hardening behaviour of a heat-treatable AA7108 aluminium alloy deformed to intermediate strains by compression. Journal of Materials Science, 2010, 45, 5323-5331.	1.7	8
53	Modeling the effect of notch geometry on the deformation of a strongly anisotropic aluminum alloy. European Journal of Mechanics, A/Solids, 2020, 82, 104004.	2.1	8
54	On fracture anisotropy in textured aluminium alloys. International Journal of Solids and Structures, 2022, 244-245, 111563.	1.3	7

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55	X-ray computed tomography investigation of dilation of mineral-filled PVC under monotonic loading. Mechanics of Materials, 2020, 142, 103296.	1.7	6
56	Influence of loading conditions on the tensile response of degraded polyamide 11. Polymer, 2021, 229, 123966.	1.8	5
57	Effect of alloying elements on stage-III work-hardening behaviour of Alâ€“Znâ€“Mg(â€“Cu) alloys. International Journal of Materials Research, 2012, 103, 603-608.	0.1	4
58	Influence of sigma-phase precipitation on the impact behaviour of duplex stainless steel pipe fittings. Ships and Offshore Structures, 0, , 1-13.	0.9	4
59	Ballistic Impact of Structural Steels at Low Temperatures. Journal of Applied Mechanics, Transactions ASME, 2022, 89, .	1.1	4
60	A Numerical Study on Ductile Failure of Porous Ductile Solids With Rate-Dependent Matrix Behavior. Journal of Applied Mechanics, Transactions ASME, 2020, 87, .	1.1	3
61	Micromechanical modelling of ductile fracture in pipeline steel using a bifurcation-enriched porous plasticity model. International Journal of Fracture, 2021, 227, 57-78.	1.1	3
62	On the Material Characterization of an Aluminium Alloy Using Different Specimens and Identification Methods. Proceedings (mdpi), 2018, 2, 400.	0.2	2
63	Influence of particle content on the ductility of extruded non-recrystallized aluminium alloys subjected to shear loading. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2022, 850, 143409.	2.6	2
64	Cast Magnesium Safety Components - Energy Absorption Capacity. , 2005, , 930-935.		1
65	Quasi-Static and Dynamic Testing of Annealed Float Glass. Proceedings (mdpi), 2018, 2, 495.	0.2	1
66	Simulation of ductile fracture in aluminium alloys with random or strong texture using heuristic extensions of the Gurson model. Engineering Fracture Mechanics, 2022, 269, 108418.	2.0	1
67	ATLAS of yield surfaces for strongly textured FCC polycrystals. AIP Conference Proceedings, 2019, , .	0.3	0