

Thilo F Morgeneyer

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71
papers

1,477
citations

26
h-index

35
g-index

73
ext. papers

1,742
ext. citations

4.1
avg, IF

4.83
L-index

#	Paper	IF	Citations
71	In situ 3-D observation of early strain localization during failure of thin Al alloy (2198) sheet. <i>Acta Materialia</i> , 2014 , 69, 78-91	8.4	84
70	Quench sensitivity of toughness in an Al alloy: Direct observation and analysis of failure initiation at the precipitate-free zone. <i>Acta Materialia</i> , 2008 , 56, 2872-2884	8.4	68
69	3D Digital Volume Correlation of Synchrotron Radiation Laminography Images of Ductile Crack Initiation: An Initial Feasibility Study. <i>Experimental Mechanics</i> , 2013 , 53, 543-556	2.6	61
68	Evolution of voids during ductile crack propagation in an aluminium alloy sheet toughness test studied by synchrotron radiation computed tomography. <i>Acta Materialia</i> , 2008 , 56, 1671-1679	8.4	57
67	Three-dimensional quantitative in situ study of crack initiation and propagation in AA6061 aluminum alloy sheets via synchrotron laminography and finite-element simulations. <i>Acta Materialia</i> , 2013 , 61, 2571-2582	8.4	52
66	Fatigue lifetime and tearing resistance of AA2198 AlCuLi alloy friction stir welds: Effect of defects. <i>International Journal of Fatigue</i> , 2015 , 70, 463-472	5	49
65	Plastic flow and ductile rupture of a 2198 AlCuLi aluminum alloy. <i>Computational Materials Science</i> , 2011 , 50, 1365-1371	3.2	47
64	Experimental and numerical analysis of toughness anisotropy in AA2139 Al-alloy sheet. <i>Acta Materialia</i> , 2009 , 57, 3902-3915	8.4	44
63	Damage of semicrystalline polyamide 6 assessed by 3D X-ray tomography: From microstructural evolution to constitutive modeling. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2010 , 48, 1516-1526	2.6	44
62	Ductile crack initiation and propagation assessed via in situ synchrotron radiation-computed laminography. <i>Scripta Materialia</i> , 2011 , 65, 1010-1013	5.6	43
61	Real-time image-content-based beamline control for smart 4D X-ray imaging. <i>Journal of Synchrotron Radiation</i> , 2016 , 23, 1254-63	2.4	41
60	Effect of Multiaxial Stress State on Morphology and Spatial Distribution of Voids in Deformed Semicrystalline Polymer Assessed by X-ray Tomography. <i>Macromolecules</i> , 2012 , 45, 4658-4668	5.5	40
59	Flat to slant ductile fracture transition: Tomography examination and simulations using shear-controlled void nucleation. <i>Scripta Materialia</i> , 2011 , 65, 1002-1005	5.6	40
58	Damage observation in a high-manganese austenitic TWIP steel by synchrotron radiation computed tomography. <i>Scripta Materialia</i> , 2010 , 63, 1220-1223	5.6	37
57	Localized strain field measurement on laminography data with mechanical regularization. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2014 , 324, 70-79	1.2	36
56	Microstructural Characterization of Internal Welding Defects and Their Effect on the Tensile Behavior of FSW Joints of AA2198 Al-Cu-Li Alloy. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2014 , 45, 5531-5544	2.3	35
55	Ductile damage mechanism under shear-dominated loading: In-situ tomography experiments on dual phase steel and localization analysis. <i>International Journal of Plasticity</i> , 2018 , 109, 169-192	7.6	34

54	Intergranular damage during stress relaxation in AISI 316L-type austenitic stainless steels: Effect of carbon, nitrogen and phosphorus contents. <i>Acta Materialia</i> , 2016 , 103, 893-908	8.4	32
53	In situ laminography study of three-dimensional individual void shape evolution at crack initiation and comparison with Gurson-ǀvergaard-ǀneedleman-type simulations. <i>Acta Materialia</i> , 2014 , 78, 254-270	8.4	32
52	Nanovoid morphology and distribution in deformed HDPE studied by magnified synchrotron radiation holotomography. <i>Polymer</i> , 2014 , 55, 6439-6443	3.9	32
51	Influence of strain rate on P92 microstructural stability during fatigue tests at high temperature. <i>Procedia Engineering</i> , 2010 , 2, 2141-2150		32
50	Numerical validation framework for micromechanical simulations based on synchrotron 3D imaging. <i>Computational Mechanics</i> , 2017 , 59, 419-441	4	30
49	On strain and damage interactions during tearing: 3D in situ measurements and simulations for a ductile alloy (AA2139-T3). <i>Journal of the Mechanics and Physics of Solids</i> , 2016 , 96, 550-571	5	30
48	Effect of joint line remnant on fatigue lifetime of friction stir welded Alǀuǀi alloy. <i>Science and Technology of Welding and Joining</i> , 2010 , 15, 694-698	3.7	30
47	On the crystallographic, stage I-like, character of fine granular area formation in internal fish-eye fatigue cracks. <i>International Journal of Fatigue</i> , 2018 , 106, 132-142	5	26
46	Three dimensional quantification of anisotropic void evolution in deformed semi-crystalline polyamide 6. <i>International Journal of Plasticity</i> , 2016 , 83, 19-36	7.6	26
45	On the choice of boundary conditions for micromechanical simulations based on 3Dǀimaging. <i>International Journal of Solids and Structures</i> , 2017 , 112, 83-96	3.1	25
44	Synchrotron and neutron laminography for three-dimensional imaging of devices and flat material specimens. <i>International Journal of Materials Research</i> , 2012 , 103, 170-173	0.5	21
43	Void growth and coalescence in a magnesium alloy studied by synchrotron radiation laminography. <i>Acta Materialia</i> , 2018 , 155, 80-94	8.4	20
42	Effect of void arrangement on ductile damage mechanisms in nodular graphite cast iron: In situ 3D measurements. <i>Engineering Fracture Mechanics</i> , 2018 , 192, 242-261	4.2	19
41	Three-dimensional investigation of thermal barrier coatings by synchrotron-radiation computed laminography. <i>Scripta Materialia</i> , 2012 , 66, 471-474	5.6	19
40	Voiding Mechanisms in Deformed Polyamide 6 Observed at the Nanometric Scale. <i>Macromolecules</i> , 2017 , 50, 4372-4383	5.5	18
39	Failure of Magnesium Sheets Under Monotonic Loading: 3D Examination of Fracture Mode and Mechanisms. <i>International Journal of Fracture</i> , 2013 , 183, 105-112	2.3	18
38	Slant strained band development during flat to slant crack transition in AA 2198 T8 sheet: in situ 3D measurements. <i>International Journal of Fracture</i> , 2016 , 200, 49-62	2.3	16
37	In situ 3D Synchrotron Laminography Assessment of Edge Fracture in Dual-Phase Steels: Quantitative and Numerical Analysis. <i>Experimental Mechanics</i> , 2016 , 56, 177-195	2.6	16

36	Comparison of voiding mechanisms in semi-crystalline polyamide 6 during tensile and creep tests. <i>Polymer Testing</i> , 2016 , 49, 137-146	4.5	16
35	On deformation and damage micromechanisms in strong work hardening 2198 T3 aluminium alloy. <i>Acta Materialia</i> , 2018 , 149, 29-45	8.4	15
34	On the calibration of elastoplastic parameters at the microscale via X-ray microtomography and digital volume correlation for the simulation of ductile damage. <i>European Journal of Mechanics, A/Solids</i> , 2018 , 72, 287-297	3.7	14
33	Effect of hardening on toughness captured by stress-based damage nucleation in 6061 aluminum alloy. <i>Acta Materialia</i> , 2019 , 180, 349-365	8.4	13
32	Bulk evaluation of ductile damage development using high resolution tomography and laminography. <i>Comptes Rendus Physique</i> , 2012 , 13, 328-336	1.4	12
31	Structural versus microstructural evolution of semi-crystalline polymers during necking under tension: Influence of the skin-core effects, the relative humidity and the strain rate. <i>Polymer Testing</i> , 2016 , 55, 297-309	4.5	12
30	Strength and fatigue strength of a similar Ti-6Al-2Sn-4Zr-2Mo-0.1Si linear friction welded joint. <i>Fatigue and Fracture of Engineering Materials and Structures</i> , 2019 , 42, 1100-1117	3	11
29	Evaluation of measurement uncertainties of digital volume correlation applied to laminography data. <i>Journal of Strain Analysis for Engineering Design</i> , 2018 , 53, 49-65	1.3	11
28	Three-Dimensional Damage Evolution Measurement in EB-PVD TBCs Using Synchrotron Laminography. <i>Oxidation of Metals</i> , 2013 , 79, 313-323	1.6	11
27	Interaction of the Portevin-Le Chatelier phenomenon with ductile fracture of a thin aluminum CT specimen: experiments and simulations. <i>International Journal of Fracture</i> , 2017 , 206, 95-122	2.3	10
26	3D Damage Micromechanisms in Polyamide 6 Ahead of a Severe Notch Studied by In Situ Synchrotron Laminography. <i>Macromolecular Chemistry and Physics</i> , 2016 , 217, 701-715	2.6	10
25	A constitutive model accounting for strain ageing effects on work-hardening. Application to a CMn steel. <i>Comptes Rendus - Mecanique</i> , 2017 , 345, 908-921	2.1	9
24	Three-dimensional characterization of fatigue-relevant intermetallic particles in high-strength aluminium alloys using synchrotron X-ray nanotomography. <i>Philosophical Magazine</i> , 2015 , 95, 2731-2746	1.6	9
23	A comparative study of image segmentation methods for micromechanical simulations of ductile damage. <i>Computational Materials Science</i> , 2019 , 159, 43-65	3.2	9
22	Experimental Analysis of Toughness in 6156 Al-Alloy Sheet for Aerospace Applications. <i>Materials Science Forum</i> , 2006 , 519-521, 1023-1028	0.4	8
21	Portevin-Le Chatelier effect triggered by complex loading paths in an AlCu aluminium alloy. <i>Philosophical Magazine</i> , 2019 , 99, 659-678	1.6	8
20	On crystallographic aspects of heterogeneous plastic flow during ductile tearing: 3D measurements and crystal plasticity simulations for AA7075-T651. <i>International Journal of Plasticity</i> , 2021 , 144, 103028	7.6	7
19	Local approach to stress relaxation cracking in a AISI 316L-type austenitic stainless steel: Tomography damage quantification and FE simulations. <i>Engineering Fracture Mechanics</i> , 2017 , 183, 170-179	4.7	5

18	Ductile damage of AA2024-T3 under shear loading: Mechanism analysis through in-situ laminography. <i>Acta Materialia</i> , 2021 , 205, 116556	8.4	5
17	Numerical investigation of dynamic strain ageing and slant ductile fracture in a notched specimen and comparison with synchrotron tomography 3D-DVC. <i>Procedia Structural Integrity</i> , 2016 , 2, 3385-3392 ¹		4
16	On the effect of a thermal treatment on the tensile and fatigue properties of weak zones of similar Ti17 linear friction welded joints and parent material. <i>Materials Characterization</i> , 2020 , 169, 110570	3.9	4
15	Microstructural observations supporting thermography measurements for short glass fibre thermoplastic composites under fatigue loading. <i>Continuum Mechanics and Thermodynamics</i> , 2020 , 32, 451-469	3.5	4
14	Impact of machine stiffness on pop-in crack propagation instabilities. <i>Engineering Fracture Mechanics</i> , 2018 , 202, 405-422	4.2	3
13	Strength, fatigue strength and toughness of dissimilar Ti17/Ti64 linear friction welded joints: Effect of soft surface contamination and depletion of precipitates. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2021 , 799, 139989	5.3	3
12	On the Origin of the Anisotropic Damage of X100 Line Pipe Steel: Part II In Situ Synchrotron Tomography Experiments. <i>Integrating Materials and Manufacturing Innovation</i> , 2019 , 8, 570-596	2.9	2
11	Recent advances in finite element modelling of ductile fracture at mesoscale. <i>Procedia Manufacturing</i> , 2018 , 15, 39-45	1.5	2
10	Nanocavitation mechanisms in deformed High Density PolyEthylene (HDPE) using synchrotron radiation NanoTomography. <i>Polymer</i> , 2021 , 229, 123959	3.9	2
9	Damage based model to study the effect of notch introduction technique on the J-integral value of PolyOxyMethylene. <i>Engineering Fracture Mechanics</i> , 2015 , 149, 214-229	4.2	1
8	In Situ Observation of Strained Bands and Ductile Damage in Thin AA2139-T3 Alloy Sheets. <i>Procedia IUTAM</i> , 2017 , 20, 66-72		1
7	3D Stress Fields Versus Void Distributions Ahead Of a Notch Tip For Semi-crystalline Polymers. <i>Procedia Structural Integrity</i> , 2018 , 13, 1751-1755	1	1
6	3D in situ study of damage during a shear to tension load path change in an aluminium alloy. <i>Acta Materialia</i> , 2022 , 231, 117842	8.4	1
5	Quantitative Anisotropic Damage Mechanism in a Forged Aluminum Alloy Studied by Synchrotron Tomography and Finite Element Simulations. <i>Advances in Materials Science and Engineering</i> , 2019 , 2019, 1-12	1.5	0
4	On the use of stereo-digital image correlation for the alignment of a fatigue testing machine in accordance with international standards: A feasibility study. <i>Strain</i> , 2021 , 57, e12382	1.7	0
3	On the Use of Regularized DVC to Analyze Strain Localization. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2015 , 161-166	0.3	
2	Experimental-Numerical Validation Framework for Micromechanical Simulations. <i>Lecture Notes in Applied and Computational Mechanics</i> , 2018 , 147-161	0.3	
1	Early Strain Localization in Strong Work Hardening Aluminum Alloy (2198 T3): 3D Laminography and DVC Measurement. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2018 , 15-17	0.3	

