

Thilo F Morgeneyer

List of Publications by Year in descending order

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72
papers

1,958
citations

185998

28
h-index

276539

41
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73
all docs

73
docs citations

73
times ranked

1262
citing authors

#	ARTICLE	IF	CITATIONS
1	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.	3.8	100
2	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.	3.8	86
3	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.	3.8	71
4	Real-time image-content-based beamline control for smart 4D X-ray imaging. <i>Journal of Synchrotron Radiation</i> , 2016, 23, 1254-1263.	1.0	69
5	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.	1.1	66
6	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.	3.8	66
7	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.	4.1	64
8	Fatigue lifetime and tearing resistance of AA2198 Al-Cu-Li alloy friction stir welds: Effect of defects. <i>International Journal of Fatigue</i> , 2015, 70, 463-472.	2.8	59
9	Plastic flow and ductile rupture of a 2198 Al-Cu-Li aluminum alloy. <i>Computational Materials Science</i> , 2011, 50, 1365-1371.	1.4	55
10	Experimental and numerical analysis of toughness anisotropy in AA2139 Al-alloy sheet. <i>Acta Materialia</i> , 2009, 57, 3902-3915.	3.8	54
11	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, 1516-1525.	2.4	48
12	Ductile crack initiation and propagation assessed via in situ synchrotron radiation-computed laminography. <i>Scripta Materialia</i> , 2011, 65, 1010-1013.	2.6	47
13	Localized strain field measurement on laminography data with mechanical regularization. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2014, 324, 70-79.	0.6	47
14	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.	2.2	46
15	Flat to slant ductile fracture transition: Tomography examination and simulations using shear-controlled void nucleation. <i>Scripta Materialia</i> , 2011, 65, 1002-1005.	2.6	44
16	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.	3.8	44
17	Numerical validation framework for micromechanical simulations based on synchrotron 3D imaging. <i>Computational Mechanics</i> , 2017, 59, 419-441.	2.2	43
18	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.	1.1	41

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19	In situ laminography study of three-dimensional individual void shape evolution at crack initiation and comparison with Gurson's Tvergaard's Needleman-type simulations. <i>Acta Materialia</i> , 2014, 78, 254-270.	3.8	41
20	Damage observation in a high-manganese austenitic TWIP steel by synchrotron radiation computed tomography. <i>Scripta Materialia</i> , 2010, 63, 1220-1223.	2.6	38
21	On the choice of boundary conditions for micromechanical simulations based on 3D imaging. <i>International Journal of Solids and Structures</i> , 2017, 112, 83-96.	1.3	37
22	Influence of strain rate on P92 microstructural stability during fatigue tests at high temperature. <i>Procedia Engineering</i> , 2010, 2, 2141-2150.	1.2	36
23	Nanovoid morphology and distribution in deformed HDPE studied by magnified synchrotron radiation holotomography. <i>Polymer</i> , 2014, 55, 6439-6443.	1.8	36
24	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.	2.8	36
25	Effect of joint line remnant on fatigue lifetime of friction stir welded Al-Cu-Li alloy. <i>Science and Technology of Welding and Joining</i> , 2010, 15, 694-698.	1.5	34
26	Three dimensional quantification of anisotropic void evolution in deformed semi-crystalline polyamide 6. <i>International Journal of Plasticity</i> , 2016, 83, 19-36.	4.1	34
27	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.	2.3	32
28	Void growth and coalescence in a magnesium alloy studied by synchrotron radiation laminography. <i>Acta Materialia</i> , 2018, 155, 80-94.	3.8	31
29	Effect of hardening on toughness captured by stress-based damage nucleation in 6061 aluminum alloy. <i>Acta Materialia</i> , 2019, 180, 349-365.	3.8	29
30	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.	2.0	28
31	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.	0.1	27
32	Ductile damage of AA2024-T3 under shear loading: Mechanism analysis through in-situ laminography. <i>Acta Materialia</i> , 2021, 205, 116556.	3.8	26
33	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.	2.1	24
34	Voiding Mechanisms in Deformed Polyamide 6 Observed at the Nanometric Scale. <i>Macromolecules</i> , 2017, 50, 4372-4383.	2.2	23
35	Three-dimensional investigation of thermal barrier coatings by synchrotron-radiation computed laminography. <i>Scripta Materialia</i> , 2012, 66, 471-474.	2.6	22
36	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.	1.1	21

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37	On deformation and damage micromechanisms in strong work hardening 2198 T3 aluminium alloy. <i>Acta Materialia</i> , 2018, 149, 29-45.	3.8	20
38	Failure of Magnesium Sheets Under Monotonic Loading: 3D Examination of Fracture Mode and Mechanisms. <i>International Journal of Fracture</i> , 2013, 183, 105-112.	1.1	19
39	A constitutive model accounting for strain ageing effects on work-hardening. Application to a C-Mn steel. <i>Comptes Rendus - Mecanique</i> , 2017, 345, 908-921.	2.1	19
40	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.	1.7	18
41	Bulk evaluation of ductile damage development using high resolution tomography and laminography. <i>Comptes Rendus Physique</i> , 2012, 13, 328-336.	0.3	17
42	Comparison of voiding mechanisms in semi-crystalline polyamide 6 during tensile and creep tests. <i>Polymer Testing</i> , 2016, 49, 137-146.	2.3	17
43	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.	1.1	17
44	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.	1.0	17
45	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.	3.8	17
46	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.	2.3	16
47	Interaction of the Portevin-LeChatelier phenomenon with ductile fracture of a thin aluminum CT specimen: experiments and simulations. <i>International Journal of Fracture</i> , 2017, 206, 95-122.	1.1	16
48	Three-Dimensional Damage Evolution Measurement in EB-PVD TBCs Using Synchrotron Laminography. <i>Oxidation of Metals</i> , 2013, 79, 313-323.	1.0	14
49	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.	4.1	14
50	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.	0.7	13
51	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.	1.1	13
52	Portevin-Le Chatelier effect triggered by complex loading paths in an Al-Cu aluminium alloy. <i>Philosophical Magazine</i> , 2019, 99, 659-678.	0.7	13
53	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.	1.9	13
54	A comparative study of image segmentation methods for micromechanical simulations of ductile damage. <i>Computational Materials Science</i> , 2019, 159, 43-65.	1.4	12

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55	Nanocavitation mechanisms in deformed High Density PolyEthylene (HDPE) using synchrotron radiation NanoTomography. <i>Polymer</i> , 2021, 229, 123959.	1.8	10
56	Microstructural observations supporting thermography measurements for short glass fibre thermoplastic composites under fatigue loading. <i>Continuum Mechanics and Thermodynamics</i> , 2020, 32, 451-469.	1.4	9
57	Strength, fatigue strength and toughness of dissimilar Ti17-Ti64 linear friction welded joints: Effect of soft surface contamination and depletion of β precipitates. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2021, 799, 139989.	2.6	9
58	Experimental Analysis of Toughness in 6156 Al-Alloy Sheet for Aerospace Applications. <i>Materials Science Forum</i> , 2006, 519-521, 1023-1028.	0.3	8
59	Impact of machine stiffness on pop-in crack propagation instabilities. <i>Engineering Fracture Mechanics</i> , 2018, 202, 405-422.	2.0	8
60	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.	0.3	7
61	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.	2.0	5
62	On the Origin of the Anisotropic Damage of X100 Line Pipe Steel: Part I In Situ Synchrotron Tomography Experiments. <i>Integrating Materials and Manufacturing Innovation</i> , 2019, 8, 570-596.	1.2	5
63	Recent advances in finite element modelling of ductile fracture at mesoscale. <i>Procedia Manufacturing</i> , 2018, 15, 39-45.	1.9	2
64	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.	2.0	1
65	In Situ Observation of Strained Bands and Ductile Damage in Thin AA2139-T3 Alloy Sheets. <i>Procedia IUTAM</i> , 2017, 20, 66-72.	1.2	1
66	3D Stress Fields Versus Void Distributions Ahead Of a Notch Tip For Semi-crystalline Polymers. <i>Procedia Structural Integrity</i> , 2018, 13, 1751-1755.	0.3	1
67	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.	1.0	1
68	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.	1.4	1
69	Numerical modeling of ductile fracture at the microscale combined with X-ray laminography and digital volume correlation. <i>AIP Conference Proceedings</i> , 2017, , .	0.3	0
70	Experimental-Numerical Validation Framework for Micromechanical Simulations. <i>Lecture Notes in Applied and Computational Mechanics</i> , 2018, , 147-161.	2.0	0
71	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	0
72	Effects of neutron irradiation and post-irradiation annealing on pop-in crack propagation instabilities in 6061 aluminium alloy. <i>Journal of Nuclear Materials</i> , 2022, , 153909.	1.3	0