Thilo F Morgeneyer

List of Publications by Year in Descending Order

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	3D in situ study of damage during a shear to tension load path change in an aluminium alloy. *Acta Materialia*, **2022**, 231, 117842	8.4	1
70	On the use of stereo-digital image correlation for the alignment of a fatigue testing machine in accordance with international standards: A feasibility study. *Strain*, **2021**, 57, e12382	1.7	0
69	Strength, fatigue strength and toughness of dissimilar Ti17 Ti64 linear friction welded joints: Effect of soft surface contamination and depletion of precipitates. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2021**, 799, 139989	5.3	3
68	Ductile damage of AA2024-T3 under shear loading: Mechanism analysis through in-situ laminography. *Acta Materialia*, **2021**, 205, 116556	8.4	5
67	Nanocavitation mechanisms in deformed High Density PolyEthylene (HDPE) using synchrotron radiation NanoTomography. *Polymer*, **2021**, 229, 123959	3.9	2
66	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	7.6	7
65	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. *Materials Characterization*, **2020**, 169, 110570	3.9	4
64	Microstructural observations supporting thermography measurements for short glass fibre thermoplastic composites under fatigue loading. *Continuum Mechanics and Thermodynamics*, **2020**, 32, 451-469	3.5	4
63	Strength and fatigue strength of a similar Ti-6Al-2Sn-4Zr-2Mo-0.1Si linear friction welded joint. *Fatigue and Fracture of Engineering Materials and Structures*, **2019**, 42, 1100-1117	3	11
62	Quantitative Anisotropic Damage Mechanism in a Forged Aluminum Alloy Studied by Synchrotron Tomography and Finite Element Simulations. *Advances in Materials Science and Engineering*, **2019**, 2019, 1-12	1.5	0
61	Effect of hardening on toughness captured by stress-based damage nucleation in 6061 aluminum alloy. *Acta Materialia*, **2019**, 180, 349-365	8.4	13
60	On the Origin of the Anisotropic Damage of X100 Line Pipe Steel: Part I In Situ Synchrotron Tomography Experiments. *Integrating Materials and Manufacturing Innovation*, **2019**, 8, 570-596	2.9	2
59	A comparative study of image segmentation methods for micromechanical simulations of ductile damage. *Computational Materials Science*, **2019**, 159, 43-65	3.2	9
58	Portevin-Le Chatelier effect triggered by complex loading paths in an AlCu aluminium alloy. *Philosophical Magazine*, **2019**, 99, 659-678	1.6	8
57	Effect of void arrangement on ductile damage mechanisms in nodular graphite cast iron: In situ 3D measurements. *Engineering Fracture Mechanics*, **2018**, 192, 242-261	4.2	19
56	Evaluation of measurement uncertainties of digital volume correlation applied to laminography data. *Journal of Strain Analysis for Engineering Design*, **2018**, 53, 49-65	1.3	11
55	On deformation and damage micromechanisms in strong work hardening 2198 T3 aluminium alloy. *Acta Materialia*, **2018**, 149, 29-45	8.4	15

54	On the crystallographic, stage I-like, character of fine granular area formation in internal fish-eye fatigue cracks. *International Journal of Fatigue*, **2018**, 106, 132-142	5	26
53	On the calibration of elastoplastic parameters at the microscale via X-ray microtomography and digital volume correlation for the simulation of ductile damage. *European Journal of Mechanics, A/Solids*, **2018**, 72, 287-297	3.7	14
52	Impact of machine stiffness on pop-in crack propagation instabilities. *Engineering Fracture Mechanics*, **2018**, 202, 405-422	4.2	3
51	Ductile damage mechanism under shear-dominated loading: In-situ tomography experiments on dual phase steel and localization analysis. *International Journal of Plasticity*, **2018**, 109, 169-192	7.6	34
50	Experimental-Numerical Validation Framework for Micromechanical Simulations. *Lecture Notes in Applied and Computational Mechanics*, **2018**, 147-161	0.3	
49	Early Strain Localization in Strong Work Hardening Aluminum Alloy (2198 T3): 3D Laminography and DVC Measurement. *Conference Proceedings of the Society for Experimental Mechanics*, **2018**, 15-17	0.3	
48	Recent advances in finite element modelling of ductile fracture at mesoscale. *Procedia Manufacturing*, **2018**, 15, 39-45	1.5	2
47	3D Stress Fields Versus Void Distributions Ahead Of a Notch Tip For Semi-crystalline Polymers. *Procedia Structural Integrity*, **2018**, 13, 1751-1755	1	1
46	Void growth and coalescence in a magnesium alloy studied by synchrotron radiation laminography. *Acta Materialia*, **2018**, 155, 80-94	8.4	20
45	On the choice of boundary conditions for micromechanical simulations based on 3D imaging. *International Journal of Solids and Structures*, **2017**, 112, 83-96	3.1	25
44	Interaction of the Portevin Le Chatelier phenomenon with ductile fracture of a thin aluminum CT specimen: experiments and simulations. *International Journal of Fracture*, **2017**, 206, 95-122	2.3	10
43	Numerical validation framework for micromechanical simulations based on synchrotron 3D imaging. *Computational Mechanics*, **2017**, 59, 419-441	4	30
42	Voiding Mechanisms in Deformed Polyamide 6 Observed at the Nanometric Scale. *Macromolecules*, **2017**, 50, 4372-4383	5.5	18
41	Local approach to stress relaxation cracking in a AISI 316L-type austenitic stainless steel: Tomography damage quantification and FE simulations. *Engineering Fracture Mechanics*, **2017**, 183, 170-179	4.2	5
40	A constitutive model accounting for strain ageing effects on work-hardening. Application to a CMn steel. *Comptes Rendus - Mecanique*, **2017**, 345, 908-921	2.1	9
39	In Situ Observation of Strained Bands and Ductile Damage in Thin AA2139-T3 Alloy Sheets. *Procedia IUTAM*, **2017**, 20, 66-72		1
38	On strain and damage interactions during tearing: 3D in situ measurements and simulations for a ductile alloy (AA2139-T3). *Journal of the Mechanics and Physics of Solids*, **2016**, 96, 550-571	5	30
37	Numerical investigation of dynamic strain ageing and slant ductile fracture in a notched specimen and comparison with synchrotron tomography 3D-DVC. *Procedia Structural Integrity*, **2016**, 2, 3385-3392	1	4

36	Real-time image-content-based beamline control for smart 4D X-ray imaging. *Journal of Synchrotron Radiation*, **2016**, 23, 1254-63	2.4	41
35	Slant strained band development during flat to slant crack transition in AA 2198 T8 sheet: in situ 3D measurements. *International Journal of Fracture*, **2016**, 200, 49-62	2.3	16
34	Intergranular damage during stress relaxation in AISI 316L-type austenitic stainless steels: Effect of carbon, nitrogen and phosphorus contents. *Acta Materialia*, **2016**, 103, 893-908	8.4	32
33	In situ 3D Synchrotron Laminography Assessment of Edge Fracture in Dual-Phase Steels: Quantitative and Numerical Analysis. *Experimental Mechanics*, **2016**, 56, 177-195	2.6	16
32	3D Damage Micromechanisms in Polyamide 6 Ahead of a Severe Notch Studied by In Situ Synchrotron Laminography. *Macromolecular Chemistry and Physics*, **2016**, 217, 701-715	2.6	10
31	Comparison of voiding mechanisms in semi-crystalline polyamide 6 during tensile and creep tests. *Polymer Testing*, **2016**, 49, 137-146	4.5	16
30	Three dimensional quantification of anisotropic void evolution in deformed semi-crystalline polyamide 6. *International Journal of Plasticity*, **2016**, 83, 19-36	7.6	26
29	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. *Polymer Testing* , **2016**, 55, 297-309	4.5	12
28	Three-dimensional characterization of fatigue-relevant intermetallic particles in high-strength aluminium alloys using synchrotron X-ray nanotomography. *Philosophical Magazine*, **2015**, 95, 2731-2746	1.6	9
27	Damage based model to study the effect of notch introduction technique on the J-integral value of PolyOxyMethylene. *Engineering Fracture Mechanics*, **2015**, 149, 214-229	4.2	1
26	Fatigue lifetime and tearing resistance of AA2198 Al□Cu□Li alloy friction stir welds: Effect of defects. *International Journal of Fatigue*, **2015**, 70, 463-472	5	49
25	On the Use of Regularized DVC to Analyze Strain Localization. *Conference Proceedings of the Society for Experimental Mechanics*, **2015**, 161-166	0.3	
24	In situ 3-D observation of early strain localization during failure of thin Al alloy (2198) sheet. *Acta Materialia*, **2014**, 69, 78-91	8.4	84
23	Microstructural Characterization of Internal Welding Defects and Their Effect on the Tensile Behavior of FSW Joints of AA2198 Al-Cu-Li Alloy. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2014**, 45, 5531-5544	2.3	35
22	In situ laminography study of three-dimensional individual void shape evolution at crack initiation and comparison with Gurson□Tvergaard□Needleman-type simulations. *Acta Materialia*, **2014**, 78, 254-270	8.4	32
21	Nanovoid morphology and distribution in deformed HDPE studied by magnified synchrotron radiation holotomography. *Polymer*, **2014**, 55, 6439-6443	3.9	32
20	Localized strain field measurement on laminography data with mechanical regularization. *Nuclear Instruments & Methods in Physics Research B*, **2014**, 324, 70-79	1.2	36
19	Three-Dimensional Damage Evolution Measurement in EB-PVD TBCs Using Synchrotron Laminography. *Oxidation of Metals*, **2013**, 79, 313-323	1.6	11

18	3D Digital Volume Correlation of Synchrotron Radiation Laminography Images of Ductile Crack Initiation: An Initial Feasibility Study. *Experimental Mechanics*, **2013**, 53, 543-556	2.6	61
17	Three-dimensional quantitative in situ study of crack initiation and propagation in AA6061 aluminum alloy sheets via synchrotron laminography and finite-element simulations. *Acta Materialia*, **2013**, 61, 2571-2582	8.4	52
16	Failure of Magnesium Sheets Under Monotonic Loading: 3D Examination of Fracture Mode and Mechanisms. *International Journal of Fracture*, **2013**, 183, 105-112	2.3	18
15	Three-dimensional investigation of thermal barrier coatings by synchrotron-radiation computed laminography. *Scripta Materialia*, **2012**, 66, 471-474	5.6	19
14	Effect of Multiaxial Stress State on Morphology and Spatial Distribution of Voids in Deformed Semicrystalline Polymer Assessed by X-ray Tomography. *Macromolecules*, **2012**, 45, 4658-4668	5.5	40
13	Bulk evaluation of ductile damage development using high resolution tomography and laminography. *Comptes Rendus Physique*, **2012**, 13, 328-336	1.4	12
12	Synchrotron and neutron laminography for three-dimensional imaging of devices and flat material specimens. *International Journal of Materials Research*, **2012**, 103, 170-173	0.5	21
11	Plastic flow and ductile rupture of a 2198 Al□Cu□i aluminum alloy. *Computational Materials Science* , **2011**, 50, 1365-1371	3.2	47
10	Flat to slant ductile fracture transition: Tomography examination and simulations using shear-controlled void nucleation. *Scripta Materialia*, **2011**, 65, 1002-1005	5.6	40
9	Ductile crack initiation and propagation assessed via in situ synchrotron radiation-computed laminography. *Scripta Materialia*, **2011**, 65, 1010-1013	5.6	43
8	Effect of joint line remnant on fatigue lifetime of friction stir welded Al□Cu□i alloy. *Science and Technology of Welding and Joining*, **2010**, 15, 694-698	3.7	30
7	Damage observation in a high-manganese austenitic TWIP steel by synchrotron radiation computed tomography. *Scripta Materialia*, **2010**, 63, 1220-1223	5.6	37
6	Influence of strain rate on P92 microstructural stability during fatigue tests at high temperature. *Procedia Engineering*, **2010**, 2, 2141-2150		32
5	Damage of semicrystalline polyamide 6 assessed by 3D X-ray tomography: From microstructural evolution to constitutive modeling. *Journal of Polymer Science, Part B: Polymer Physics*, **2010**, 48, 1516-1525	2.6	44
4	Experimental and numerical analysis of toughness anisotropy in AA2139 Al-alloy sheet. *Acta Materialia*, **2009**, 57, 3902-3915	8.4	44
3	Evolution of voids during ductile crack propagation in an aluminium alloy sheet toughness test studied by synchrotron radiation computed tomography. *Acta Materialia*, **2008**, 56, 1671-1679	8.4	57
2	Quench sensitivity of toughness in an Al alloy: Direct observation and analysis of failure initiation at the precipitate-free zone. *Acta Materialia*, **2008**, 56, 2872-2884	8.4	68
1	Experimental Analysis of Toughness in 6156 Al-Alloy Sheet for Aerospace Applications. *Materials Science Forum*, **2006**, 519-521, 1023-1028	0.4	8