

# Martina Zimmermann

## List of Publications by Year in descending order

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69  
papers

860  
citations

516215

16  
h-index

525886

27  
g-index

75  
all docs

75  
docs citations

75  
times ranked

621  
citing authors

#	ARTICLE	IF	CITATIONS
1	Very high cycle fatigue behaviour of austenitic stainless steel and the effect of strain-induced martensite. <i>International Journal of Fatigue</i> , 2010, 32, 936-942.	2.8	92
2	Diversity of damage evolution during cyclic loading at very high numbers of cycles. <i>International Materials Reviews</i> , 2012, 57, 73-91.	9.4	59
3	Localized cyclic deformation and corresponding dislocation arrangements of polycrystalline Ni-base superalloys and pure Nickel in the VHCF regime. <i>International Journal of Fatigue</i> , 2011, 33, 2-9.	2.8	52
4	Mechanical performance and corrosion behaviour of Zr-based bulk metallic glass produced by selective laser melting. <i>Materials and Design</i> , 2020, 189, 108532.	3.3	48
5	Cyclic deformation behavior of austenitic Cr-Ni-steels in the VHCF regime: Part I – Experimental study. <i>International Journal of Fatigue</i> , 2016, 93, 250-260.	2.8	43
6	Adjusting the very high cycle fatigue properties of a metastable austenitic stainless steel by means of the martensite content. <i>Procedia Engineering</i> , 2010, 2, 1663-1672.	1.2	35
7	Effect of precipitation condition, prestrain and temperature on the fatigue behaviour of wrought nickel-based superalloys in the VHCF range. <i>Acta Materialia</i> , 2011, 59, 5288-5304.	3.8	32
8	A Worm-Like Biomimetic Crawling Robot Based on Cylindrical Dielectric Elastomer Actuators. <i>Frontiers in Robotics and AI</i> , 2020, 7, 9.	2.0	32
9	A Biomimetic Fish Fin-Like Robot Based on Textile Reinforced Silicone. <i>Micromachines</i> , 2020, 11, 298.	1.4	28
10	Controlling the Young's modulus of a $\beta$ -type Ti-Nb alloy via strong texturing by LPBF. <i>Materials and Design</i> , 2022, 216, 110516.	3.3	27
11	Microstructural characterisation and constitutive behaviour of alloy RR1000 under fatigue and creep-fatigue loading conditions. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2009, 518, 27-34.	2.6	25
12	On the effects of particle strengthening and temperature on the VHCF behavior at high frequency. <i>International Journal of Fatigue</i> , 2011, 33, 42-48.	2.8	24
13	Design procedure for triply periodic minimal surface based biomimetic scaffolds. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2022, 126, 104871.	1.5	24
14	High-frequency cyclic testing of welded aluminium alloy joints in the region of very high cycle fatigue (VHCF). <i>International Journal of Fatigue</i> , 2013, 57, 120-130.	2.8	22
15	Melt Spinning of Highly Stretchable, Electrically Conductive Filament Yarns. <i>Polymers</i> , 2021, 13, 590.	2.0	19
16	Influence of surface condition due to laser beam cutting on the fatigue behavior of metastable austenitic stainless steel AISI 304. <i>Engineering Fracture Mechanics</i> , 2017, 185, 227-240.	2.0	18
17	Thermomechanical processing of In-containing $\beta$ -type Ti-Nb alloys. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2018, 79, 283-291.	1.5	17
18	Powder metallurgical processing of low modulus $\beta$ -type Ti-45Nb to bulk and macro-porous compacts. <i>Powder Technology</i> , 2017, 322, 393-401.	2.1	16

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19	Cyclic deformation characteristics of the metastable $\beta$ -type Ti-40Nb alloy. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2019, 761, 137966.	2.6	16
20	Simulation of irreversible damage accumulation in the very high cycle fatigue (VHCF) regime using the boundary element method. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2013, 575, 169-176.	2.6	15
21	Cyclic deformation behavior of austenitic Cr-Ni-steels in the VHCF regime: Part II – Microstructure-sensitive simulation. <i>International Journal of Fatigue</i> , 2016, 93, 261-271.	2.8	15
22	Influence of loading frequency and role of surface micro-defects on fatigue behavior of metastable austenitic stainless steel AISI 304. <i>International Journal of Fatigue</i> , 2017, 103, 48-59.	2.8	13
23	Alloy Design and Microstructure Evolution in the Al <sub>x</sub> CoCrFeNi Alloy System Synthesized by Laser Metal Deposition. <i>Frontiers in Materials</i> , 2020, 7, .	1.2	13
24	Influence of Notch Effects Created by Laser Cutting Process on Fatigue Behavior of Metastable Austenitic Stainless Steel. <i>Procedia Engineering</i> , 2016, 160, 175-182.	1.2	12
25	Effects of thermomechanical history and environment on the fatigue behavior of ( $\beta$ )-Ti-Nb implant alloys. <i>MATEC Web of Conferences</i> , 2018, 165, 06001.	0.1	10
26	Near-threshold crack extension mechanisms in an aluminum alloy studied by SEM and X-ray tomography. <i>International Journal of Fatigue</i> , 2019, 119, 102-111.	2.8	9
27	Fatigue Behavior of Non-Optimized Laser-Cut Medical Grade Ti-6Al-4V-ELI Sheets and the Effects of Mechanical Post-Processing. <i>Metals</i> , 2019, 9, 843.	1.0	9
28	Influence of prestraining on the high-temperature fatigue behaviour of polycrystalline nickel-based superalloys in the VHCF range. <i>Procedia Engineering</i> , 2010, 2, 1383-1392.	1.2	8
29	Effect of Geometry and Distribution of Inclusions on the VHCF Properties of a Metastable Austenitic Stainless Steel. <i>Advanced Materials Research</i> , 0, 891-892, 440-445.	0.3	8
30	Prehistory effects on the VHCF behaviour of engineering metallic materials with different strengthening mechanisms. <i>Journal of Physics: Conference Series</i> , 2010, 240, 012040.	0.3	7
31	Experimental investigation and analytical description of the damage evolution in a Ni-based superalloy beyond 10 <sup>6</sup> loading cycles. <i>International Journal of Fatigue</i> , 2016, 93, 272-280.	2.8	7
32	Analysis of Crack Extension Mechanism in the Near-Threshold Regime in an Aluminum Alloy. <i>Procedia Structural Integrity</i> , 2017, 7, 235-241.	0.3	7
33	On sample size effects in fracture toughness determination of Bulk Metallic Glasses. <i>Engineering Fracture Mechanics</i> , 2018, 202, 500-507.	2.0	7
34	Improving and monitoring the magnetic pulse welding process between dissimilar metals. <i>Welding in the World, Le Soudage Dans Le Monde</i> , 2021, 65, 199-209.	1.3	7
35	Development of a probabilistic model for the prediction of fatigue life in the very high cycle fatigue (VHCF) range based on inclusion population. <i>Procedia Structural Integrity</i> , 2016, 2, 1085-1092.	0.3	6
36	Fatigue properties of a new generation $\beta$ -type Ti-Nb alloy for osteosynthesis with an industrial standard surface condition. <i>International Journal of Fatigue</i> , 2017, 103, 147-156.	2.8	6

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37	Crack growth behavior in an aluminum alloy under very low stress amplitudes. <i>Journal of Materials Research</i> , 2017, 32, 4354-4361.	1.2	6
38	X-ray computer tomography (XCT) of fatigue damage in laser-machined versus milled carbon fiber reinforced polymer matrix composites. <i>Engineering Fracture Mechanics</i> , 2021, 252, 107820.	2.0	6
39	Thermo-Electro-Mechanical Characterization of PDMS-Based Dielectric Elastomer Actuators. <i>Materials</i> , 2022, 15, 221.	1.3	6
40	Simulation of Deformation-induced Martensite Formation and its Influence on the Resonant Behavior in the Very High Cycle Fatigue (VHCF) Regime. , 2014, 3, 1135-1142.		4
41	Simulation of the Interaction of Plastic Deformation in Shear Bands with Deformation-Induced Martensitic Phase Transformation in the VHCF Regime. <i>Key Engineering Materials</i> , 0, 664, 314-325.	0.4	4
42	Untersuchungen zur Wechselwirkung von Versetzungen und Ausscheidungen in einer Nickelbasis-Superlegierung im VHCF-Bereich. <i>Materialwissenschaft Und Werkstofftechnik</i> , 2011, 42, 200-211.	0.5	3
43	Effect of martensite content and geometry of inclusions on the VHCF properties of predeformed metastable austenitic stainless steels. <i>Procedia Structural Integrity</i> , 2016, 2, 1093-1100.	0.3	3
44	High Temperature Fatigue of Nickel-based Superalloys during High Frequency Testing. <i>Procedia Engineering</i> , 2013, 55, 645-649.	1.2	2
45	Simulation of microstructural damage evolution during very high cycle fatigue (VHCF) using the boundary element method. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2013, 13, 75-76.	0.2	2
46	Using Martensite Formation during Tube Forming to Optimize Fatigue Strength. <i>Steel Research International</i> , 2014, 85, 1355-1363.	1.0	2
47	Numerical investigation of the influence of shear band localization on the resonant behavior in the VHCF regime. <i>Theoretical and Applied Mechanics Letters</i> , 2014, 4, 051004.	1.3	2
48	Characterization of the Long Crack Propagation Behaviour in a Hardenable Aluminium Alloy in Very High Cycle Fatigue Regime. <i>Procedia Structural Integrity</i> , 2018, 13, 590-595.	0.3	2
49	Numerical analysis of the thermally induced damage in remote laser cut carbon fibre reinforced polymers. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2019, 19, e201900505.	0.2	2
50	Influence of the edge quality to the water sorption of remote laser and mechanically cut carbon fibre reinforced polymer. <i>Technologies for Lightweight Structures</i> , 2020, 3, 34-41.	0.1	2
51	Fatigue Behavior of Precipitation Hardening Alloys in the LCF and VHCF Regime. <i>Advanced Materials Research</i> , 0, 891-892, 476-481.	0.3	1
52	Influence of Process-Related Defects on the Fatigue Behaviour of Welded Aluminium Joints at Very High Cycles. <i>Advanced Materials Research</i> , 0, 891-892, 1476-1481.	0.3	1
53	Fatigue Behaviour of Laser Beam Welded Circular Weld Seams under Multi-Axial Loading. <i>Advanced Materials Research</i> , 0, 891-892, 1397-1402.	0.3	1
54	Development of a probabilistic model for the prediction of fatigue life in the very high cycle fatigue (VHCF) range based on inclusion population. <i>MATEC Web of Conferences</i> , 2014, 12, 10001.	0.1	1

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55	Modeling and simulation of temperature-dependent cyclic plastic deformation of austenitic stainless steels at the VHCF limit. <i>Procedia Structural Integrity</i> , 2016, 2, 1156-1163.	0.3	1
56	Cyclic deformation behavior of austenitic stainless steels in the very high cycle fatigue regime – Experimental results and mechanism-based simulations. <i>Journal of Materials Research</i> , 2017, 32, 4387-4397.	1.2	1
57	Simulation of the VHCF deformation of austenitic stainless steels and its effect on the resonant behaviour. , 2018, , 73-94.		1
58	Understanding the near-threshold crack growth behavior in an aluminum alloy by x-ray tomography. <i>MATEC Web of Conferences</i> , 2018, 165, 13007.	0.1	1
59	Influence of Microstructural Inhomogeneities on the Fatigue Crack Growth Behavior Under Very Low Amplitudes for Two Different Aluminum Alloys. <i>Structural Integrity</i> , 2019, , 303-310.	0.8	1
60	Analysis of the remote laser cutting process induced damage in carbon fibre reinforced polymers with cutting process simulations. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2021, 20, e202000098.	0.2	1
61	Prediction of Size and Position of Fracture Relevant Defects of Samples Fatigued in the VHCF Area on the Basis of Metallographic Examinations. <i>Praktische Metallographie/Practical Metallography</i> , 2016, 53, 435-449.	0.1	1
62	Crack growth behaviour of aluminium wrought alloys in the Very High Cycle Fatigue regime. <i>MATEC Web of Conferences</i> , 2018, 165, 20007.	0.1	1
63	Mechanical Properties of Remote-Laser Cut CFRP and Thermographic Laser-Process Monitoring. <i>Materials Sciences and Applications</i> , 2020, 11, 560-575.	0.3	1
64	VHCF Behavior of Inconel 718 in Different Heat Treatment Conditions in a Hot Air Environment. <i>Metals</i> , 2022, 12, 1062.	1.0	1
65	Modeling of deformation-induced phase transformation during very high cycle fatigue (VHCF) using the boundary element method. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2014, 14, 169-170.	0.2	0
66	Development of a Probabilistic Model for the Prediction of Fatigue Life in the Very High Cycle Fatigue (VHCF) Range Based on Inclusion Population. <i>Advanced Materials Research</i> , 0, 891-892, 1093-1098.	0.3	0
67	Influence of microstructural discontinuities on the behaviour of long cracks in the VHCF regime for the aluminium alloys EN AW 6082 and EN AW 5083. <i>MATEC Web of Conferences</i> , 2018, 165, 20005.	0.1	0
68	Influence of rolling texture on near-threshold crack extension behavior in aluminum alloy EN AW-6082. <i>Materialpruefung/Materials Testing</i> , 2019, 61, 309-316.	0.8	0
69	Analysis of the remote laser cutting process induced damage in carbon fibre reinforced polymers. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2021, 21, .	0.2	0