

# Arne Kromm

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/7343863/publications.pdf>

Version: 2024-02-01

80  
papers

1,120  
citations

567144

15  
h-index

501076

28  
g-index

83  
all docs

83  
docs citations

83  
times ranked

729  
citing authors

#	ARTICLE	IF	CITATIONS
1	The Importance of Subsurface Residual Stress in Laser Powder Bed Fusion IN718. <i>Advanced Engineering Materials</i> , 2022, 24, 2100895.	1.6	6
2	Triaxial Residual Stress in Laser Powder Bed Fused 316L: Effects of Interlayer Time and Scanning Velocity. <i>Advanced Engineering Materials</i> , 2022, 24, .	1.6	7
3	Determination of residual stress evolution during repair welding of high-strength steel components. <i>Forces in Mechanics</i> , 2022, 6, 100073.	1.3	6
4	Investigation of residual stresses and microstructure effects on the fatigue behaviour of a L-PBF AlSi10Mg alloy. <i>Procedia Structural Integrity</i> , 2022, 38, 564-571.	0.3	6
5	Assessment of the Solidification Cracking Susceptibility of Welding Consumables in the Vareststraint Test by Means of an Extended Evaluation Methodology. <i>Advanced Engineering Materials</i> , 2022, 24, .	1.6	2
6	Influence of Heat Control on Properties and Residual Stresses of Additive-Welded High-Strength Steel Components. <i>Metals</i> , 2022, 12, 951.	1.0	5
7	Critical role of scan strategies on the development of microstructure, texture, and residual stresses during laser powder bed fusion additive manufacturing. <i>Additive Manufacturing</i> , 2021, 38, 101792.	1.7	55
8	Influence of welding stresses on relief cracking during heat treatment of a creep-resistant 13CrMoV steel Part III: assessment of residual stresses from small-scale to real component welds. <i>Welding in the World, Le Soudage Dans Le Monde</i> , 2021, 65, 1671-1685.	1.3	3
9	Process-related influences and correlations in wire arc additive manufacturing of high-strength steels. <i>IOP Conference Series: Materials Science and Engineering</i> , 2021, 1147, 012002.	0.3	3
10	Scanning Manufacturing Parameters Determining the Residual Stress State in LPBF IN718 Small Parts. <i>Advanced Engineering Materials</i> , 2021, 23, 2100158.	1.6	23
11	On the interplay of microstructure and residual stress in LPBF IN718. <i>Journal of Materials Science</i> , 2021, 56, 5845-5867.	1.7	32
12	Towards the Optimization of Post-Laser Powder Bed Fusion Stress-Relieve Treatments of Stainless Steel 316L. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2021, 52, 5342-5356.	1.1	13
13	Diffraction-Based Residual Stress Characterization in Laser Additive Manufacturing of Metals. <i>Metals</i> , 2021, 11, 1830.	1.0	15
14	Thin-wall effects and anisotropic deformation mechanisms of an additively manufactured Ni-based superalloy. <i>Additive Manufacturing</i> , 2020, 36, 101672.	1.7	6
15	Capability of martensitic low transformation temperature welding consumables for increasing the fatigue strength of high strength steel joints. <i>Materialprüfung/Materials Testing</i> , 2020, 62, 891-900.	0.8	3
16	The residual stress in as-built Laser Powder Bed Fusion IN718 alloy as a consequence of the scanning strategy induced microstructure. <i>Scientific Reports</i> , 2020, 10, 14645.	1.6	43
17	Solidification Cracking Assessment of LTT Filler Materials by Means of Vareststraint Testing and $\hat{\mu}$ CT. <i>Materials</i> , 2020, 13, 2726.	1.3	1
18	Influence of welding stresses on relief cracking during heat treatment of a creep-resistant 13CrMoV steel: part I – effect of heat control on welding stresses and stress relief cracking. <i>Welding in the World, Le Soudage Dans Le Monde</i> , 2020, 64, 807-817.	1.3	6

#	ARTICLE	IF	CITATIONS
19	Influence of welding stresses on relief cracking during heat treatment of a creep-resistant 13CrMoV steel Part II: mechanisms of stress relief cracking during post weld heat treatment. <i>Welding in the World, Le Soudage Dans Le Monde</i> , 2020, 64, 819-829.	1.3	7
20	Surface- and volume-based investigation on influences of different Vastrestraint testing parameters and chemical compositions on solidification cracking in LTT filler metals. <i>Welding in the World, Le Soudage Dans Le Monde</i> , 2020, 64, 913-923.	1.3	7
21	A Critical Discussion on the Diffraction-Based Experimental Determination of Residual Stress in AM Parts. , 2020, , 122-138.		5
22	On the influence of TiB <sub>2</sub> , TiC, and TiN hard particles on the microstructure of localized laser dispersed AISI D2 tool steel surfaces. <i>Journal of Laser Applications</i> , 2020, 32, 022028.	0.8	3
23	Welding stress control in high-strength steel components using adapted heat control concepts. <i>Welding in the World, Le Soudage Dans Le Monde</i> , 2019, 63, 647-661.	1.3	13
24	Formation of multi-axial welding stresses due to material behaviour during fabrication of high-strength steel components. <i>Welding in the World, Le Soudage Dans Le Monde</i> , 2019, 63, 43-51.	1.3	8
25	<i>In situ</i> analysis of the strain evolution during welding using low transformation temperature filler materials. <i>Science and Technology of Welding and Joining</i> , 2019, 24, 243-255.	1.5	7
26	Load analyses of welded high-strength steel structures using image correlation and diffraction techniques. <i>Welding in the World, Le Soudage Dans Le Monde</i> , 2018, 62, 459-469.	1.3	7
27	Influence of Support Configurations on the Characteristics of Selective Laser-Melted Inconel 718. <i>Jom</i> , 2018, 70, 343-348.	0.9	26
28	Investigation of physically simulated weld HAZ and CCT diagram of HSLA armour steel. <i>Welding in the World, Le Soudage Dans Le Monde</i> , 2018, 62, 47-54.	1.3	17
29	The Influence of the Support Structure on Residual Stress and Distortion in SLM Inconel 718 Parts. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2018, 49, 3038-3046.	1.1	75
30	From the Field to the Lab: Real Scale Assessment of Stresses in Welded Components. <i>Materials Performance and Characterization</i> , 2018, 7, 574-593.	0.2	4
31	Residual Stress in Selective Laser Melted Inconel 718: Influence of the Removal from Base Plate and Deposition Hatch Length. <i>Materials Performance and Characterization</i> , 2018, 7, 717-735.	0.2	21
32	Residual Stress Formation in Component Related Stress Relief Cracking Tests of a Welded Creep-Resistant Steel. , 2018, , .		1
33	Residual Stresses in Selective Laser Melted Samples of a Nickel Based Superalloy. , 2018, , .		5
34	Engineering approach to assess residual stresses in welded components. <i>Welding in the World, Le Soudage Dans Le Monde</i> , 2017, 61, 91-106.	1.3	12
35	Reversed austenite for enhancing ductility of martensitic stainless steel. <i>IOP Conference Series: Materials Science and Engineering</i> , 2017, 181, 012034.	0.3	10
36	Measurement and numerical modeling of residual stresses in welded HSLA component-like I-girders. <i>Welding in the World, Le Soudage Dans Le Monde</i> , 2017, 61, 223-229.	1.3	8

#	ARTICLE	IF	CITATIONS
37	Effect of hatch length on the development of microstructure, texture and residual stresses in selective laser melted superalloy Inconel 718. <i>Materials and Design</i> , 2017, 134, 139-150.	3.3	202
38	Residual stresses of LTT welds in large-scale components. <i>Welding in the World, Le Soudage Dans Le Monde</i> , 2017, 61, 1089-1097.	1.3	9
39	Optimization of welding loads with narrow groove and application of modified spray arc process. <i>Welding in the World, Le Soudage Dans Le Monde</i> , 2017, 61, 1077-1087.	1.3	6
40	Welding residual stresses in 960 MPa grade QT and TMCP high-strength steels. <i>Journal of Manufacturing Processes</i> , 2017, 27, 226-232.	2.8	35
41	Residual Stress Influence on the Flexural Buckling of Welded I-Girders. , 2017, , .		3
42	Multi-axial Analyses of Welding Stresses in High-Strength Steel Welds. , 2017, , .		2
43	Influence of Heat Control on Residual Stresses in Low Transformation Temperature (LTT) Large Scale Welds. , 2017, , .		0
44	Combining Sectioning Method and X Ray Diffraction for Evaluation of Residual Stresses in Welded High Strength Steel Components. , 2017, , .		0
45	Influence of Weld Repair by Gouging on the Residual Stresses in High Strength Steels. , 2017, , .		0
46	Real-time radiography for observation of crack growth during GTA welding. <i>Welding in the World, Le Soudage Dans Le Monde</i> , 2016, 60, 931-937.	1.3	9
47	In-situ load analysis in multi-run welding using LTT filler materials. <i>Welding in the World, Le Soudage Dans Le Monde</i> , 2016, 60, 1159-1168.	1.3	10
48	Improving welding stresses by filler metal and heat control selection in component-related butt joints of high-strength steel. <i>Welding in the World, Le Soudage Dans Le Monde</i> , 2015, 59, 455-464.	1.3	13
49	Residual stresses in repair welds of high-strength low-alloy steels. <i>Welding in the World, Le Soudage Dans Le Monde</i> , 2015, 59, 757-765.	1.3	9
50	Properties and weldability of modified low transformation temperature filler wires. <i>Welding in the World, Le Soudage Dans Le Monde</i> , 2015, 59, 413-425.	1.3	7
51	Real time monitoring of phase transformation and strain evolution in LTT weld filler material using EDXRD. <i>Journal of Materials Processing Technology</i> , 2014, 214, 2739-2747.	3.1	11
52	Residual stress engineering by low transformation temperature alloys – state of the art and recent developments. <i>Welding in the World, Le Soudage Dans Le Monde</i> , 2014, 58, 729-741.	1.3	38
53	Welding Residual Stress Distribution of Quenched and Tempered and Thermo-Mechanically Hot Rolled High Strength Steels. <i>Advanced Materials Research</i> , 2014, 996, 457-462.	0.3	7
54	Stress Build-Up during Multilayer Welding with Novel Martensitic Filler Materials*. <i>HTM - Journal of Heat Treatment and Materials</i> , 2014, 69, 80-88.	0.1	0

#	ARTICLE	IF	CITATIONS
55	Fatigue Strength Improvement of Welded Structures Using New Low Transformation Temperature Filler Materials. <i>Procedia Engineering</i> , 2013, 66, 192-201.	1.2	14
56	Thermal Stability of Retained Austenite in Low Alloyed TRIP-Steel Determined by High Energy Synchrotron Radiation. <i>Materials Science Forum</i> , 2013, 772, 129-133.	0.3	0
57	Henry Granjon Prize Competition 2011. <i>Welding in the World, Le Soudage Dans Le Monde</i> , 2012, 56, 2-11.	1.3	2
58	Effects of Heat Control on the Stress Build- up during High- Strength Steel Welding under defined restraint conditions. <i>Welding in the World, Le Soudage Dans Le Monde</i> , 2011, 55, 58-65.	1.3	14
59	Characterizing PHASE TRANSFORMATIONS of different LTT alloys and their effect on RESIDUAL STRESSES and COLD CRACKING. <i>Welding in the World, Le Soudage Dans Le Monde</i> , 2011, 55, 48-56.	1.3	34
60	In-situ Analysis of Solid State Phase Transformation in TRIP-aided Steels by Synchrotron Diffraction. <i>Yosetsu Gakkai Ronbunshu/Quarterly Journal of the Japan Welding Society</i> , 2011, 29, 81s-85s.	0.1	0
61	In situ study of structural integrity of low transformation temperature (LTT)-welds. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2011, 528, 5566-5575.	2.6	33
62	Welding Residual Stresses Depending on Solid-State Transformation Behaviour Studied by Numerical and Experimental Methods. <i>Materials Science Forum</i> , 2011, 681, 85-90.	0.3	8
63	Time- and temperature-resolved synchrotron X-ray diffraction: observation of phase transformation and strain evolution in novel low temperature transformation weld filler materials. <i>Journal of Strain Analysis for Engineering Design</i> , 2011, 46, 563-579.	1.0	11
64	High-energy synchrotron diffraction study of a transformation induced plasticity steel during tensile deformation. <i>Journal of Strain Analysis for Engineering Design</i> , 2011, 46, 581-591.	1.0	6
65	In-situ synchrotron diffraction and digital image correlation technique for characterizations of retained austenite stability in low-alloyed transformation induced plasticity steel. <i>Scripta Materialia</i> , 2010, 63, 1149-1152.	2.6	19
66	In Situ Studies of Phase Transformation and Residual Stresses in LTT Alloys During Welding Using Synchrotron Radiation. , 2010, , 13-26.		3
67	In-situ-Analyse der Phasenumwandlungskinetik während des Schweißens. <i>Materialprüfung/Materials Testing</i> , 2010, 52, 204-210.	0.8	1
68	Formation of welding residual stresses in low transformation temperature (LTT) materials. <i>Soldagem E Inspecao</i> , 2009, 14, 74-81.	0.6	18
69	Determination of Residual Stresses in Low Transformation Temperature (LTT -) Weld Metals using X-ray and High Energy Synchrotron Radiation. <i>Welding in the World, Le Soudage Dans Le Monde</i> , 2009, 53, 3-16.	1.3	26
70	In-situ-phase analysis using synchrotron radiation of low transformation temperature (LTT) welding material. <i>Soldagem E Inspecao</i> , 2009, 14, 82-88.	0.6	13
71	Influence of Local Weld Deformation on the Solidification Cracking Susceptibility of a Fully Austenitic Stainless Steel. , 2008, , 127-145.		6
72	&lt;i>&gt;In Situ&lt;/i>; Observation of Phase Transformations during Welding of Low Transformation Temperature Filler Material. <i>Materials Science Forum</i> , 0, 638-642, 3769-3774.	0.3	21

#	ARTICLE	IF	CITATIONS
73	Residual Stresses in Multilayer Welds with Different Martensitic Transformation Temperatures Analyzed by High-Energy Synchrotron Diffraction. Materials Science Forum, 0, 681, 37-42.	0.3	24
74	Residual Stress in Steel Fusion Welds Joined Using Low Transformation Temperature (LTT) Filler Material. Materials Science Forum, 0, 768-769, 620-627.	0.3	11
75	Residual Stress Engineering in Fatigue Resistant Welds. Materials Science Forum, 0, 768-769, 613-619.	0.3	3
76	Effect of Martensitic Phase Transformation on Stress Build-up during Multilayer Welding. Materials Science Forum, 0, 768-769, 660-667.	0.3	5
77	Influence of Heat Control on Welding Stresses in Multilayer-Component Welds of High-Strength Steel S960QL. Advanced Materials Research, 0, 996, 475-480.	0.3	4
78	Evaluation of Weld Filler Alloying Concepts for Residual Stress Engineering by Means of Neutron and X-Ray Diffraction. Advanced Materials Research, 0, 996, 469-474.	0.3	5
79	&lt;i>In Situ&/i> Observation of Stress Accumulation during Sub-Merged Arc Welding. Advanced Materials Research, 0, 996, 417-423.	0.3	1
80	&lt;i>In Situ&/i> EDXRD Study of MAG-Welding Using LTT Weld Filler Materials under Structural Restraint. Materials Science Forum, 0, 905, 107-113.	0.3	5