

Jens Gibmeier

List of Publications by Year in descending order

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110
papers

1,602
citations

430874

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111
all docs

111
docs citations

111
times ranked

1523
citing authors

#	ARTICLE	IF	CITATIONS
1	Effect of surface topography and residual stress on the taper connection stability in total hip arthroplasty. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2022, 128, 105119.	3.1	2
2	Interrelation between Microstructure and Residual Stresses for Low-Pressure Carburizing of Steel AISI 5120 under Defined Process Parameter Variation. <i>HTM - Journal of Heat Treatment and Materials</i> , 2022, 77, 29-52.	0.2	1
3	Assessment of the Solidification Cracking Susceptibility of Welding Consumables in the Varestraint Test by Means of an Extended Evaluation Methodology. <i>Advanced Engineering Materials</i> , 2022, 24, .	3.5	2
4	Review on study of internal load transfer in metal matrix composites using diffraction techniques. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2022, 840, 142973.	5.6	33
5	Influence of FeCl ₃ and H ₂ O ₂ in corrosion testing of modular taper connections in total hip arthroplasty: An in vitro study. <i>Acta Biomaterialia</i> , 2022, 145, 427-435.	8.3	1
6	In-Situ Synchrotron X-ray Diffraction Investigation of Microstructural Evolutions During Low-Pressure Carburizing. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2021, 52, 1427-1442.	2.2	3
7	Numerical characterization of residual stresses in a four-point-bending experiment of textured duplex stainless steel. <i>Archive of Applied Mechanics</i> , 2021, 91, 3541-3555.	2.2	2
8	Investigations on Residual Stresses within Hot-Bulk-Formed Components Using Process Simulation and the Contour Method. <i>Metals</i> , 2021, 11, 566.	2.3	2
9	Neutron and X-ray Diffraction Analysis of Macro and Phase-Specific Micro Residual Stresses in Deep Rolled Duplex Stainless Steels. <i>Materials</i> , 2021, 14, 1854.	2.9	6
10	Residual stresses in deep-drawn cups made of duplex stainless steel X2CrNiN23-4. <i>Forschung Im Ingenieurwesen/Engineering Research</i> , 2021, 85, 795-806.	1.6	3
11	Influence of Shot Peening on the Isothermal Fatigue Behavior of the Gamma Titanium Aluminide Ti-48Al-2Cr-2Nb at 750 Å°C. <i>Metals</i> , 2021, 11, 1083.	2.3	5
12	Real-time stress evolution during laser surface line hardening at varying maximum surface temperatures using synchrotron X-ray diffraction. <i>Optics and Laser Technology</i> , 2021, 140, 106964.	4.6	1
13	In situ Investigation during Low Pressure Carburizing by Means of Synchrotron X-ray Diffraction*. <i>HTM - Journal of Heat Treatment and Materials</i> , 2021, 76, 417-431.	0.2	0
14	Short-Term Heat Treatment of Ti6Al4V ELI as Implant Material. <i>Materials</i> , 2020, 13, 4948.	2.9	2
15	Phase-Specific Strain Hardening and Load Partitioning of Cold Rolled Duplex Stainless Steel X2CrNiN23-4. <i>Crystals</i> , 2020, 10, 976.	2.2	7
16	Effects of finish turning on an austenitic weld investigated using diffraction methods. <i>International Journal of Advanced Manufacturing Technology</i> , 2020, 108, 635-645.	3.0	3
17	Corrosion Behavior of Surface-Treated Metallic Implant Materials. <i>Materials</i> , 2020, 13, 2011.	2.9	12
18	Solidification Cracking Assessment of LTT Filler Materials by Means of Varestraint Testing and ÅµCT. <i>Materials</i> , 2020, 13, 2726.	2.9	1

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19	Determination of Temperature-Dependent Elastic Constants of Steel AISI 4140 by Use of In Situ X-ray Dilatometry Experiments. <i>Materials</i> , 2020, 13, 2378.	2.9	7
20	Phase Transformation-Induced Changes in Microstructure and Residual Stresses in Thermally Sprayed MnCoFeO4 Protective Coatings. <i>Journal of Thermal Spray Technology</i> , 2020, 29, 1242-1255.	3.1	5
21	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.	2.5	7
22	In Situ Synchrotron X-Ray Diffraction Stress Analysis During Laser Surface Line Hardening of Samples with Specific Geometric Features. <i>Minerals, Metals and Materials Series</i> , 2020, , 2127-2138.	0.4	0
23	Non-destructive Neutron Surface Residual Stress Analysis. <i>Journal of Nondestructive Evaluation</i> , 2019, 38, 1.	2.4	1
24	Phase-specific residual stresses induced by deep drawing of lean duplex steel: measurement vs. simulation. <i>Production Engineering</i> , 2019, 13, 227-237.	2.3	10
25	Fast neutron surface strain scanning with high spatial resolution. <i>Materials Characterization</i> , 2019, 154, 53-60.	4.4	2
26	Internal load transfer in an interpenetrating metal/ceramic composite material studied using energy dispersive synchrotron X-ray diffraction. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2019, 753, 247-252.	5.6	21
27	20 Hz synchrotron X-ray diffraction analysis in laser-pulsed WC-Co hard metal reveals oscillatory stresses and reversible composite plastification. <i>International Journal of Refractory Metals and Hard Materials</i> , 2019, 82, 121-128.	3.8	9
28	Electrocautery Damage Can Reduce Implant Fatigue Strength. <i>Journal of Bone and Joint Surgery - Series A</i> , 2019, 101, 868-878.	3.0	13
29	<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.	3.1	7
30	Experimental and Simulative Studies on Residual Stress Formation for Laser-Beam Surface Hardening*. <i>HTM - Journal of Heat Treatment and Materials</i> , 2019, 74, 23-35.	0.2	7
31	Treatment of spatial resolution effects in neutron residual strain scanning. <i>Physica B: Condensed Matter</i> , 2018, 551, 468-471.	2.7	8
32	Study of stability of microstructure and residual strain after thermal loading of plasma sprayed YSZ by through surface neutron scanning. <i>Physica B: Condensed Matter</i> , 2018, 551, 69-78.	2.7	6
33	Process dependent porosity and the influence of shot peening on porosity morphology regarding selective laser melted AlSi10Mg parts. <i>Additive Manufacturing</i> , 2018, 20, 77-89.	3.0	80
34	Vacuum plasma spraying of functionally graded tungsten/EUROFER97 coatings for fusion applications. <i>Fusion Engineering and Design</i> , 2018, 133, 148-156.	1.9	24
35	Two-Dimensional Residual Stress Mapping of Multilayer LTT Weld Joints Using the Contour Method. <i>Materials Performance and Characterization</i> , 2018, 7, 545-558.	0.3	1
36	Influence of shot peening on the mechanical properties of bulk amorphous Vitreloy 105. <i>Surface Engineering</i> , 2017, 33, 721-730.	2.2	11

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37	Residual stresses of LTT welds in large-scale components. <i>Welding in the World, Le Soudage Dans Le Monde</i> , 2017, 61, 1089-1097.	2.5	9
38	Incremental Hole Drilling for Residual Stress Analysis of Thin Walled Components with Regard to Plasticity Effects. <i>Experimental Mechanics</i> , 2017, 57, 1457-1467.	2.0	17
39	Spatially resolved temporal stress evolution during laser surface spot hardening of steel. <i>Journal of Materials Processing Technology</i> , 2017, 239, 326-335.	6.3	16
40	Investigations on the Initial Stress Evolution During Atmospheric Plasma Spraying of YSZ by In Situ Curvature Measurement. <i>Journal of Thermal Spray Technology</i> , 2016, 25, 672-683.	3.1	15
41	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.	2.5	10
42	Incremental Hole Drilling for Residual Stress Analysis of Strongly Textured Material States – A New Calibration Approach. <i>Experimental Mechanics</i> , 2016, 56, 369-380.	2.0	13
43	Effect of multiple passes treatment in waterjet peening on fatigue performance. <i>Applied Surface Science</i> , 2016, 388, 468-474.	6.1	41
44	Development of Functionally Graded Tungsten/EUROFER Coating System for First Wall Application. <i>Fusion Science and Technology</i> , 2015, 68, 578-581.	1.1	18
45	Locally resolved stress and strain analysis of sinter-joined micro valves using synchrotron X-ray diffraction and conical slit apertures. <i>Microsystem Technologies</i> , 2015, 21, 1787-1795.	2.0	2
46	Application of the Incremental Hole-Drilling Method on Thick Film Systems – An Approximate Evaluation Approach. <i>Experimental Mechanics</i> , 2015, 55, 499-507.	2.0	8
47	Study on micro texturing of uncoated cemented carbide cutting tools for wear improvement and built-up edge stabilisation. <i>Journal of Materials Processing Technology</i> , 2015, 215, 62-70.	6.3	220
48	Fatigue Performance of Medical Ti6Al4V Alloy after Mechanical Surface Treatments. <i>PLoS ONE</i> , 2015, 10, e0121963.	2.5	49
49	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.	6.3	11
50	Detailed analysis of microstructure of intentionally formed built-up edges for improving wear behaviour in dry metal cutting process of steel. <i>Wear</i> , 2014, 311, 21-30.	3.1	58
51	X-ray tensor tomography. <i>Europhysics Letters</i> , 2014, 105, 38002.	2.0	81
52	Effect of Preloading on Local Residual Stresses Induced by Laser Surface Hardening of Steel. <i>Advanced Materials Research</i> , 2014, 996, 562-567.	0.3	1
53	Optimization of a multi-channel parabolic guide for the material science diffractometer STRESS-SPEC at FRM II. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2014, 736, 150-155.	1.6	1
54	Effect of Built-Up Edge Formation on Residual Stresses Induced by Dry Cutting of Normalized Steel. <i>Advanced Materials Research</i> , 2014, 996, 603-608.	0.3	2

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55	Residual Stress Analysis of Thick Film Systems by the Incremental Hole-Drilling Method*. HTM - Journal of Heat Treatment and Materials, 2014, 69, 71-79.	0.2	7
56	Time-Resolved X-Ray Diffraction Stress Analysis during Laser Surface Hardening of Steel. HTM - Journal of Heat Treatment and Materials, 2014, 69, 360-367.	0.2	2
57	Residual Stress Analysis of Strongly Textured Materials by Means of the Incremental Hole-Drilling Method – Survey on the Application Limits. Materialpruefung/Materials Testing, 2014, 56, 915-922.	2.2	3
58	Effect of Phase architecture on mechanical properties of interpenetrating metal/ceramic composites. , 2014, , 77-86.		1
59	Residual Stress Analysis on Thick Film Systems by the Incremental Hole-Drilling Method – Simulation and Experimental Results. Experimental Mechanics, 2013, 53, 965-976.	2.0	13
60	Metal-ceramic-composite casting of complex micro components. Microsystem Technologies, 2013, 19, 159-165.	2.0	5
61	Numerical study of internal load transfer in metal/ceramic composites based on freeze-cast ceramic preforms and experimental validation. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2013, 585, 10-16.	5.6	24
62	Laser Surface Hardening of Steel: Effect of Process Atmosphere on the Microstructure and Residual Stresses. Materials Science Forum, 2013, 772, 149-153.	0.3	9
63	Internal load transfer and damage evolution in a 3D interpenetrating metal/ceramic composite. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2012, 551, 272-279.	5.6	25
64	Fast <i>in situ</i> phase and stress analysis during laser surface treatment: A synchrotron x-ray diffraction approach. Review of Scientific Instruments, 2012, 83, 115101.	1.3	12
65	In situ study of structural integrity of low transformation temperature (LTT)-welds. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2011, 528, 5566-5575.	5.6	33
66	Inelastic behavior of the single domain of metal-ceramic composites with lamellar microstructure. Proceedings in Applied Mathematics and Mechanics, 2011, 11, 285-286.	0.2	4
67	Internal load transfer in a metal matrix composite with a three-dimensional interpenetrating structure. Acta Materialia, 2011, 59, 1424-1435.	7.9	66
68	Minimization of spurious strains by using a Si bent-perfect-crystal monochromator: neutron surface strain scanning of a shot-peened sample. Measurement Science and Technology, 2011, 22, 065705.	2.6	10
69	Time- and temperature-resolved synchrotron X-ray diffraction: observation of phase transformation and strain evolution in novel low temperature transformation weld filler materials. Journal of Strain Analysis for Engineering Design, 2011, 46, 563-579.	1.8	11
70	Real Time Monitoring of the Strain Evolution during Rapid Heat Treatment of Steel Samples by Means of Synchrotron X-Ray Diffraction. Materials Science Forum, 2010, 638-642, 2423-2428.	0.3	2
71	In Situ Studies of Phase Transformation and Residual Stresses in LTT Alloys During Welding Using Synchrotron Radiation. , 2010, , 13-26.		3
72	In-situ-Analyse der Phasenumwandlungskinetik während des Schweißens. Materialpruefung/Materials Testing, 2010, 52, 204-210.	2.2	1

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73	In situ Study of Internal Load Transfer in a Novel Metal/Ceramic Composite Exhibiting Lamellar Microstructure Using Energy Dispersive Synchrotron X-ray Diffraction. <i>Advanced Engineering Materials</i> , 2009, 11, 471-477.	3.5	37
74	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.	2.5	26
75	Residual stresses in novel metal/ceramic composites exhibiting a lamellar microstructure. <i>Powder Diffraction</i> , 2009, 24, S59-S64.	0.2	4
76	On the capability of revealing the pseudosymmetry of the chalcopyrite-type crystal structure. <i>Crystal Research and Technology</i> , 2008, 43, 234-239.	1.3	15
77	S141 Residual Stresses and In-Situ Measurement of Phase Transformation in Low Transformation Temperature (LTT) Welding Materials. <i>Powder Diffraction</i> , 2008, 23, 188-188.	0.2	4
78	The materials science synchrotron beamline EDDI for energy-dispersive diffraction analysis. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2007, 578, 23-33.	1.6	194
79	Local Stress-Ratio Criterion for Incremental Hole-Drilling Measurements of Shot-Peening Stresses. <i>Journal of Engineering Materials and Technology, Transactions of the ASME</i> , 2006, 128, 193-201.	1.4	13
80	Experiments and Material Parameter Identification Using Finite Elements. Uniaxial Tests and Validation Using Instrumented Indentation Tests. <i>Experimental Mechanics</i> , 2006, 46, 5-18.	2.0	27
81	Untersuchung einer mehrlagigen Schweißnaht eines dickwandigen Rohres aus dem austenitischen Stahl X6 CrNiNb 18 10. <i>Materialwissenschaft Und Werkstofftechnik</i> , 2006, 37, 947-959.	0.9	0
82	In Situ X-Ray Stress Analysis for the Highly Textured Mg-Base Wrought Alloy AZ31. <i>Materials Science Forum</i> , 2006, 524-525, 931-936.	0.3	0
83	In Situ X-Ray Diffraction Study of Load Partitioning and Microyielding for the Super Duplex Stainless Steel SAF2507 (UNS S32750). <i>Materials Science Forum</i> , 2006, 524-525, 847-852.	0.3	6
84	Determination of Real Space Residual Stress Distributions $f_{ij}(z)$ of Surface Treated Materials with Diffraction Methods Part I: Angle-Dispersive Approach. <i>Materials Science Forum</i> , 2006, 524-525, 31-36.	0.3	4
85	Effect of Applied and Residual Stresses on the Analysis of Mechanical Properties by Means of Instrumented Indentation Techniques. <i>Materials Science Forum</i> , 2005, 490-491, 454-459.	0.3	7
86	Residual Stress Determination by the Hole Drilling Method in the Case of Highly Stressed Surface Layers. <i>Zairyo/Journal of the Society of Materials Science, Japan</i> , 2004, 53, 21-25.	0.2	3
87	Glass capillaries as primary optics for X-ray stress analysis. <i>Materialwissenschaft Und Werkstofftechnik</i> , 2003, 34, 115-119.	0.9	0
88	Characterisation of residual stress distribution in clinching joints of carbon steel by diffraction methods. <i>Materials Science and Technology</i> , 2003, 19, 336-342.	1.6	3
89	OS4(2)-5(OS04W0113) Microhardness Measurements as a Tool for Stress Analysis. <i>The Abstracts of ATEM International Conference on Advanced Technology in Experimental Mechanics Asian Conference on Experimental Mechanics</i> , 2003, 2003, 75.	0.0	0
90	OS04W0113 Microhardness measurements as a tool for stress analysis. <i>The Abstracts of ATEM International Conference on Advanced Technology in Experimental Mechanics Asian Conference on Experimental Mechanics</i> , 2003, 2003.2, _OS04W0113-_OS04W0113.	0.0	0

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91	About the Effect of Residual Stresses on Microhardness Readings. Materials Science Forum, 2002, 404-407, 349-354.	0.3	4
92	Round Robin Test on the Determination of Residual Stress Depth Distributions by X-ray Diffraction. Materials Science Forum, 2002, 404-407, 659-664.	0.3	6
93	Residual Stress Distributions around Clinched Joints. Materials Science Forum, 2002, 404-407, 617-622.	0.3	5
94	Residual stress in clinched joints of metals. Applied Physics A: Materials Science and Processing, 2002, 74, s1440-s1442.	2.3	12
95	Plastic Deformation during Application of the Hole-Drilling Method. Materials Science Forum, 2000, 347-349, 131-137.	0.3	26
96	<i>In Situ&/i> Observation of Phase Transformations during Welding of Low Transformation Temperature Filler Material. Materials Science Forum, 0, 638-642, 3769-3774.	0.3	21
97	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
98	Local Residual Stress Distributions Induced by Repeated Austenite-Martensite Transformation via Laser Surface Hardening of Steel AISI 4140. Materials Science Forum, 0, 681, 321-326.	0.3	12
99	Neutron Surface Residual Stress Scanning Using Optimisation of a Si Bent Perfect Crystal Monochromator for Minimising Spurious Strains. Materials Science Forum, 0, 681, 399-404.	0.3	3
100	Strain Evolution during Mechanical Loading of the Magnesium Base Alloy LAE442 Studied by means of High Energy Synchrotron Diffraction. Materials Science Forum, 0, 681, 437-442.	0.3	0
101	EDXRD Setup for Real Time Observation of a Gas Tungsten Arc (GTA) Welding Process. Materials Science Forum, 0, 706-709, 1655-1660.	0.3	3
102	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
103	Influence of the Interfacial Roughness on Residual Stress Analysis of Thick Film Systems by Incremental Hole Drilling. Materials Science Forum, 0, 768-769, 136-143.	0.3	6
104	Load Partitioning Study in a 3D Interpenetrating AlSi12/Al₂O₃ Metal/Ceramic Composite. Materials Science Forum, 0, 772, 103-107.	0.3	3
105	Neutron Residual Strain Surface Scans - Experimental Results and Monte Carlo Simulations. Materials Science Forum, 0, 768-769, 52-59.	0.3	5
106	Residual Stress Depth Distributions for Atmospheric Plasma Sprayed MnCo_{1.9}Fe_{0.1}O₄ Spinel Layers on Crofer Steel Substrate. Materials Science Forum, 0, 905, 174-181.	0.3	2
107	50 Hz X-ray Diffraction Stress Analysis and Numerical Process Simulation at Laser Surface Line Hardening of Web Structures. Advanced Engineering Materials, 0, , 2100119.	3.5	1
108	Investigation of the Effects of Low-Pressure Carburizing Process Parameters on Microstructural Evolution by Means of In Situ Synchrotron X-ray Diffraction. Advanced Engineering Materials, 0, , 2100124.	3.5	1

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109	Effect of Applied and Residual Stresses on the Analysis of Mechanical Properties by Means of Instrumented Indentation Techniques. Materials Science Forum, 0, , 454-459.	0.3	1
110	<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