

Felix Hofmann

List of Publications by Year in descending order

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papers

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citations

257357

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docs citations

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times ranked

2126
citing authors

#	ARTICLE	IF	CITATIONS
1	Lattice swelling and modulus change in a helium-implanted tungsten alloy: X-ray micro-diffraction, surface acoustic wave measurements, and multiscale modelling. <i>Acta Materialia</i> , 2015, 89, 352-363.	3.8	123
2	3D lattice distortions and defect structures in ion-implanted nano-crystals. <i>Scientific Reports</i> , 2017, 7, 45993.	1.6	96
3	Consistent determination of geometrically necessary dislocation density from simulations and experiments. <i>International Journal of Plasticity</i> , 2018, 109, 18-42.	4.1	94
4	Non-Contact Measurement of Thermal Diffusivity in Ion-Implanted Nuclear Materials. <i>Scientific Reports</i> , 2015, 5, 16042.	1.6	78
5	Measurements of stress fields near a grain boundary: Exploring blocked arrays of dislocations in 3D. <i>Acta Materialia</i> , 2015, 96, 229-236.	3.8	76
6	Residual stresses in Linear Friction Welding of aluminium alloys. <i>Materials & Design</i> , 2013, 50, 360-369.	5.1	60
7	Dislocation density distribution at slip band-grain boundary intersections. <i>Acta Materialia</i> , 2020, 182, 172-183.	3.8	60
8	Crack tip deformation fields and fatigue crack growth rates in Ti-6Al-4V. <i>International Journal of Fatigue</i> , 2009, 31, 1771-1779.	2.8	50
9	Thermal diffusivity degradation and point defect density in self-ion implanted tungsten. <i>Acta Materialia</i> , 2020, 193, 270-279.	3.8	47
10	X-ray micro-beam characterization of lattice rotations and distortions due to an individual dislocation. <i>Nature Communications</i> , 2013, 4, 2774.	5.8	46
11	Strain tomography of polycrystalline zirconia dental prostheses by synchrotron X-ray diffraction. <i>Acta Materialia</i> , 2011, 59, 2501-2513.	3.8	42
12	Lifetime of sub-THz coherent acoustic phonons in a GaAs-AlAs superlattice. <i>Applied Physics Letters</i> , 2013, 102, .	1.5	41
13	Mapping the full lattice strain tensor of a single dislocation by high angular resolution transmission Kikuchi diffraction (HR-TKD). <i>Scripta Materialia</i> , 2019, 164, 36-41.	2.6	39
14	Evaluation of the overload effect on fatigue crack growth with the help of synchrotron XRD strain mapping. <i>Engineering Fracture Mechanics</i> , 2010, 77, 3216-3226.	2.0	38
15	Observation of Transient and Asymptotic Driven Structural States of Tungsten Exposed to Radiation. <i>Physical Review Letters</i> , 2020, 125, 225503.	2.9	38
16	Transient grating spectroscopy: An ultrarapid, nondestructive materials evaluation technique. <i>MRS Bulletin</i> , 2019, 44, 392-402.	1.7	37
17	The effect of helium implantation on the deformation behaviour of tungsten: X-ray micro-diffraction and nanoindentation. <i>Scripta Materialia</i> , 2018, 146, 335-339.	2.6	36
18	Effect of microstructures and texture development on tensile properties of Mg-10Gd-3Y alloy. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2011, 528, 2250-2258.	2.6	34

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19	Residual stresses and microstructure in Powder Bed Direct Laser Deposition (PB DLD) samples. International Journal of Material Forming, 2015, 8, 245-254.	0.9	33
20	Nanoscale imaging of the full strain tensor of specific dislocations extracted from a bulk sample. Physical Review Materials, 2020, 4, .	0.9	32
21	Temperature dependence of helium-implantation-induced lattice swelling in polycrystalline tungsten: X-ray micro-diffraction and Eigenstrain modelling. Scripta Materialia, 2015, 107, 96-99.	2.6	30
22	Analysis of strain error sources in micro-beam Laue diffraction. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2011, 660, 130-137.	0.7	28
23	Glancing-incidence focussed ion beam milling: A coherent X-ray diffraction study of 3D nano-scale lattice strains and crystal defects. Acta Materialia, 2018, 154, 113-123.	3.8	28
24	Correcting for contact area changes in nanoindentation using surface acoustic waves. Scripta Materialia, 2017, 128, 83-86.	2.6	24
25	Micro-beam Laue alignment of multi-reflection Bragg coherent diffraction imaging measurements. Journal of Synchrotron Radiation, 2017, 24, 1048-1055.	1.0	24
26	Hardening and Strain Localisation in Helium-Ion-Implanted Tungsten. Scientific Reports, 2019, 9, 18354.	1.6	24
27	Modified deformation behaviour of self-ion irradiated tungsten: A combined nano-indentation, HR-EBSD and crystal plasticity study. International Journal of Plasticity, 2020, 135, 102817.	4.1	24
28	Laue-DIC: a new method for improved stress field measurements at the micrometer scale. Journal of Synchrotron Radiation, 2015, 22, 980-994.	1.0	23
29	in situ high-temperature tensile testing of a polycrystalline nickel-based superalloy. Materials at High Temperatures, 2016, 33, 338-345.	0.5	23
30	Probing intra-granular deformation by micro-beam Laue diffraction. Procedia Engineering, 2009, 1, 193-196.	1.2	22
31	Helium-implantation-induced lattice strains and defects in tungsten probed by X-ray micro-diffraction. Materials and Design, 2018, 160, 1226-1237.	3.3	22
32	Imaging of grain-level orientation and strain in thicker metallic polycrystals by high energy transmission micro-beam Laue (HETL) diffraction techniques. International Journal of Materials Research, 2012, 103, 192-199.	0.1	22
33	High energy transmission micro-beam Laue synchrotron X-ray diffraction. Materials Letters, 2010, 64, 1302-1305.	1.3	21
34	Increase in elastic anisotropy of single crystal tungsten upon He-ion implantation measured with laser-generated surface acoustic waves. Applied Physics Letters, 2016, 109, .	1.5	21
35	Numerical exploration of the Dang Van high cycle fatigue criterion: application to gradient effects. Journal of Mechanics of Materials and Structures, 2009, 4, 293-308.	0.4	20
36	X-ray laser-induced electron dynamics observed by femtosecond diffraction from nanocrystals of Buckminsterfullerene. Science Advances, 2016, 2, e1601186.	4.7	20

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37	Nanoscale lattice strains in self-ion implanted tungsten. <i>Acta Materialia</i> , 2020, 195, 219-228.	3.8	20
38	Triaxial residual strains in a railway rail measured by neutron diffraction. <i>Journal of Strain Analysis for Engineering Design</i> , 2009, 44, 563-568.	1.0	19
39	Probing multi-scale mechanical damage in connective tissues using X-ray diffraction. <i>Acta Biomaterialia</i> , 2016, 45, 321-327.	4.1	19
40	Dislocation-based plasticity model and micro-beam Laue diffraction analysis of polycrystalline Ni foil: A forward prediction. <i>Philosophical Magazine</i> , 2010, 90, 3999-4011.	0.7	18
41	Polycrystal deformation analysis by high energy synchrotron X-ray diffraction on the I12 JEEP beamline at Diamond Light Source. <i>Materials Letters</i> , 2010, 64, 1724-1727.	1.3	16
42	Characterising Ion-Irradiated FeCr: Hardness, Thermal Diffusivity and Lattice Strain. <i>Acta Materialia</i> , 2020, 201, 535-546.	3.8	16
43	Mapping the dislocation sub-structure of deformed polycrystalline Ni by scanning microbeam diffraction topography. <i>Scripta Materialia</i> , 2011, 64, 884-887.	2.6	15
44	Crystal plasticity and hardening: A dislocation dynamics study. <i>Procedia Engineering</i> , 2009, 1, 241-244.	1.2	14
45	High-energy transmission Laue micro-beam X-ray diffraction: a probe for intra-granular lattice orientation and elastic strain in thicker samples. <i>Journal of Synchrotron Radiation</i> , 2012, 19, 307-318.	1.0	14
46	Radiation damage in a micron-sized protein crystal studied via reciprocal space mapping and Bragg coherent diffractive imaging. <i>Structural Dynamics</i> , 2015, 2, 041704.	0.9	14
47	Bragg coherent diffraction imaging and metrics for radiation damage in protein micro-crystallography. <i>Journal of Synchrotron Radiation</i> , 2017, 24, 83-94.	1.0	14
48	Diffraction post-processing of 3D dislocation dynamics simulations for direct comparison with micro-beam Laue experiments. <i>Materials Letters</i> , 2012, 89, 66-69.	1.3	13
49	Analysis of the internal structure and lattice (mis)orientation in individual grains of deformed CP nickel polycrystals by synchrotron X-ray micro-diffraction and microscopy. <i>International Journal of Fatigue</i> , 2012, 42, 1-13.	2.8	13
50	Lifetime of high-order thickness resonances of thin silicon membranes. <i>Ultrasonics</i> , 2015, 56, 116-121.	2.1	13
51	Non-contact, non-destructive mapping of thermal diffusivity and surface acoustic wave speed using transient grating spectroscopy. <i>Review of Scientific Instruments</i> , 2020, 91, 054902.	0.6	13
52	Residual stress characterization in 12%-Cr steel friction stir welds by neutron diffraction. <i>Journal of Strain Analysis for Engineering Design</i> , 2012, 47, 203-213.	1.0	12
53	Simultaneous X-ray diffraction, crystallography and fluorescence mapping using the Maia detector. <i>Acta Materialia</i> , 2018, 144, 1-10.	3.8	12
54	Transient grating spectroscopy of thermal diffusivity degradation in deuterium implanted tungsten. <i>Scripta Materialia</i> , 2020, 174, 6-10.	2.6	12

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55	Synchrotron based reciprocal space mapping and dislocation substructure analysis. <i>Materials Letters</i> , 2009, 63, 1077-1081.	1.3	11
56	Digital image correlation and finite element analysis of inter- and intra-granular deformation. <i>Procedia Engineering</i> , 2009, 1, 197-200.	1.2	11
57	Combining Laue Microdiffraction and Digital Image Correlation for Improved Measurements of the Elastic Strain Field with Micrometer Spatial Resolution. <i>Procedia IUTAM</i> , 2012, 4, 133-143.	1.2	11
58	Orientation-dependent indentation response of helium-implanted tungsten. <i>Applied Physics Letters</i> , 2019, 114, 221905.	1.5	11
59	A method for the <i>in situ</i> measurement of evolving elliptical cross-sections in initially cylindrical Taylor impact specimens. <i>Journal of Strain Analysis for Engineering Design</i> , 2010, 45, 429-437.	1.0	10
60	RICH TOMOGRAPHY TECHNIQUES FOR THE ANALYSIS OF MICROSTRUCTURE AND DEFORMATION. <i>International Journal of Computational Methods</i> , 2014, 11, 1343006.	0.8	10
61	3D reconstruction of the spatial distribution of dislocation loops using an automated stereo-imaging approach. <i>Ultramicroscopy</i> , 2018, 195, 58-68.	0.8	10
62	Mapping data between sample and detector conjugated spaces in Bragg coherent diffraction imaging. <i>Journal of Synchrotron Radiation</i> , 2019, 26, 2055-2063.	1.0	10
63	Revealing nano-scale lattice distortions in implanted material with 3D Bragg ptychography. <i>Nature Communications</i> , 2021, 12, 7059.	5.8	10
64	INTRAGRANULAR LATTICE MISORIENTATION MAPPING BY SYNCHROTRON X-RAY MICRO-BEAMS: LAUE VS ENERGY-RESOLVED LAUE VS MONOCHROMATIC RECIPROCAL SPACE ANALYSIS. <i>International Journal of Modern Physics B</i> , 2010, 24, 279-287.	1.0	9
65	Surface terraces in pure tungsten formed by high temperature oxidation. <i>Scripta Materialia</i> , 2019, 173, 110-114.	2.6	9
66	Helium-Ion-Implantation in Tungsten: Progress towards a Coherent Understanding of the Damage Formed and its Effects on Properties. <i>Procedia IUTAM</i> , 2017, 21, 78-85.	1.2	8
67	Probing multi-scale mechanics of peripheral nerve collagen and myelin by X-ray diffraction. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2018, 87, 205-212.	1.5	8
68	Thermal diffusivity recovery and defect annealing kinetics of self-ion implanted tungsten probed by <i>in situ</i> transient grating spectroscopy. <i>Acta Materialia</i> , 2022, 232, 117926.	3.8	8
69	Orientation dependence of the nano-indentation behaviour of pure Tungsten. <i>Scripta Materialia</i> , 2020, 189, 135-139.	2.6	7
70	Estimate for thermal diffusivity in highly irradiated tungsten using molecular dynamics simulation. <i>Physical Review Materials</i> , 2021, 5, .	0.9	7
71	Intrinsic to extrinsic phonon lifetime transition in a GaAs/AlAs superlattice. <i>Journal of Physics Condensed Matter</i> , 2013, 25, 295401.	0.7	6
72	Annealing of focused ion beam damage in gold microcrystals: an <i>in situ</i> Bragg coherent X-ray diffraction imaging study. <i>Journal of Synchrotron Radiation</i> , 2021, 28, 550-565.	1.0	6

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73	Probing Deformation Substructure by Synchrotron X-ray Diffraction and Dislocation Dynamics Modelling. <i>Journal of Nanoscience and Nanotechnology</i> , 2010, 10, 5935-5950.	0.9	5
74	ON THE MEASUREMENT AND INTERPRETATION OF RESIDUAL STRESS AT THE MICRO-SCALE. <i>International Journal of Modern Physics B</i> , 2010, 24, 1-9.	1.0	5
75	Observation of crack growth in a polycrystalline ferroelectric by synchrotron X-ray diffraction. <i>Scripta Materialia</i> , 2017, 140, 23-26.	2.6	5
76	New perspectives on collision cascade damage in self-ion irradiated tungsten from HR-EBSD and ECCI. <i>Journal of Nuclear Materials</i> , 2021, 554, 153074.	1.3	5
77	Eigenstrain analysis of non-uniformly shaped shot-peened samples. <i>Procedia Engineering</i> , 2009, 1, 151-154.	1.2	4
78	Residual stress measurement on the I12 JEEP beamline at Diamond Light Source. <i>Diamond Light Source Proceedings</i> , 2010, 1, .	0.1	4
79	Mapping of domain structure in Barium Titanate single crystals by synchrotron x-ray topography. <i>Proceedings of SPIE</i> , 2010, , .	0.8	4
80	Polycrystalline materials analysis using the Maia pixelated energy-dispersive X-ray area detector. <i>Powder Diffraction</i> , 2017, 32, S16-S21.	0.4	4
81	Synchrotron X-ray analysis of microstructure and microdeformation in a recast AA6063 aluminium alloy. <i>Journal of Strain Analysis for Engineering Design</i> , 2010, 45, 351-364.	1.0	3
82	Measurements of Long-range Electronic Correlations During Femtosecond Diffraction Experiments Performed on Nanocrystals of Buckminsterfullerene. <i>Journal of Visualized Experiments</i> , 2017, , .	0.2	3
83	Synchrotron investigations of non-uniformly shaped shot-peened samples. <i>Zeitschrift für Kristallographie, Supplement</i> , 2009, 2009, 315-320.	0.5	3
84	Deformation behaviour of ion-irradiated FeCr: A nanoindentation study. <i>Journal of Materials Research</i> , 2022, 37, 2045-2060.	1.2	2
85	Shedding coherent light on defects. <i>Nature Materials</i> , 2015, 14, 756-757.	13.3	1
86	Multi-modal Nanoscale Imaging of Materials and Biology. <i>Microscopy and Microanalysis</i> , 2018, 24, 32-33.	0.2	1
87	In situ Bragg coherent X-ray diffraction imaging of corrosion in a Co-Fe alloy microcrystal. <i>CrystEngComm</i> , 0, , .	1.3	1
88	Micro-scale characterization of deformation and distortion in ductile (poly)crystals by synchrotron X-ray beams. <i>Diamond Light Source Proceedings</i> , 2010, 1, .	0.1	0
89	Combined micro-beam Laue and white beam topography: mapping local lattice orientation and misorientation. <i>Diamond Light Source Proceedings</i> , 2010, 1, .	0.1	0
90	Probing mesoscopic lattice misorientation by strain gradient crystal plasticity modelling and micro-beam Laue diffraction experiments. <i>International Journal of Theoretical and Applied Multiscale Mechanics</i> , 2011, 2, 12.	0.5	0

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91	High-Energy Transmission Laue (HETL) Micro-Beam Diffraction. , 2014, , 82-124.		0
92	Understanding Strain And Irradiation Segregation In Fusion Materials. Microscopy and Microanalysis, 2021, 27, 2648-2649.	0.2	0
93	Computation of Burgers vectors from elastic strain and lattice rotation data. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2022, 478, .	1.0	0