

Erik Mejdal Lauridsen

List of Publications by Year in descending order

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75
papers

3,473
citations

159585

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138484

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75
docs citations

75
times ranked

2140
citing authors

#	ARTICLE	IF	CITATIONS
1	Macroscopic mapping of microscale fibers in freeform injection molded fiber-reinforced composites using X-ray scattering tensor tomography. <i>Composites Part B: Engineering</i> , 2022, 233, 109634.	12.0	7
2	Advanced Acquisition Strategies for Lab-Based Diffraction Contrast Tomography. <i>Integrating Materials and Manufacturing Innovation</i> , 2022, 11, 1-12.	2.6	9
3	Tracking polycrystal evolution non-destructively in 3D by laboratory X-ray diffraction contrast tomography. <i>Materials Characterization</i> , 2021, 172, 110814.	4.4	16
4	Crystallographic tomography and molecular modelling of structured organic polycrystalline powders. <i>CrystEngComm</i> , 2021, 23, 2520-2531.	2.6	8
5	3D Non-Destructive Characterization of Electrical Steels for Quantitative Texture Analysis with Lab-Based X-ray Diffraction Contrast Tomography. <i>Integrating Materials and Manufacturing Innovation</i> , 2021, 10, 551-558.	2.6	3
6	3D Crystal Orientation Mapping of Recrystallization in Severely Cold-rolled Pure Iron Using Laboratory Diffraction Contrast Tomography. <i>ISIJ International</i> , 2020, 60, 528-533.	1.4	11
7	Characterization of metals in four dimensions. <i>Materials Research Letters</i> , 2020, 8, 462-476.	8.7	32
8	A Forward Modeling Approach to High-Reliability Grain Mapping by Laboratory Diffraction Contrast Tomography (LabDCT). <i>Jom</i> , 2019, 71, 2695-2704.	1.9	22
9	Mapping Grain Morphology and Grain Orientations by Laboratory Diffraction Contrast Tomography. <i>Microscopy and Microanalysis</i> , 2019, 25, 366-367.	0.4	0
10	Diffraction small angle X-ray scattering imaging for anisotropic structures. <i>Nature Communications</i> , 2019, 10, 5130.	12.8	36
11	Non-destructive Characterization of Polycrystalline Materials in 3D by Laboratory Diffraction Contrast Tomography. <i>Integrating Materials and Manufacturing Innovation</i> , 2019, 8, 217-225.	2.6	19
12	Statistics and Reproducibility of Grain Morphologies and Crystallographic Orientations Mapped by Laboratory Diffraction Contrast Tomography. <i>IOP Conference Series: Materials Science and Engineering</i> , 2019, 580, 012046.	0.6	1
13	Integral mean curvature analysis of 3D grain growth: Linearity of dV/dt and grain volume. <i>IOP Conference Series: Materials Science and Engineering</i> , 2019, 580, 012020.	0.6	9
14	Grain boundary wetting correlated to the grain boundary properties: A laboratory-based multimodal X-ray tomography investigation. <i>Scripta Materialia</i> , 2019, 163, 77-81.	5.2	32
15	3D grain reconstruction from laboratory diffraction contrast tomography. <i>Journal of Applied Crystallography</i> , 2019, 52, 643-651.	4.5	50
16	Integrated imaging in three dimensions: Providing a new lens on grain boundaries, particles, and their correlations in polycrystalline silicon. <i>Acta Materialia</i> , 2018, 148, 225-234.	7.9	20
17	Investigating phase behavior and structural changes in NiO/Ni-YSZ composite with monochromatic in-situ 2D and static 3D neutron imaging. <i>Physica B: Condensed Matter</i> , 2018, 551, 24-28.	2.7	6
18	Coupling between creep and redox behavior in nickel - yttria stabilized zirconia observed in-situ by monochromatic neutron imaging. <i>Journal of Power Sources</i> , 2017, 340, 167-175.	7.8	17

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19	Microstructural evolution during sintering of copper particles studied by laboratory diffraction contrast tomography (LabDCT). Scientific Reports, 2017, 7, 5251.	3.3	58
20	4D Study of Grain Growth in Armco Iron Using Laboratory X-ray Diffraction Contrast Tomography. IOP Conference Series: Materials Science and Engineering, 2017, 219, 012039.	0.6	12
21	<i>In situ</i> time-of-flight neutron imaging of NiO-YSZ anode support reduction under influence of stress. Journal of Applied Crystallography, 2016, 49, 1674-1681.	4.5	21
22	Non-destructive mapping of grain orientations in 3D by laboratory X-ray microscopy. Scientific Reports, 2015, 5, 14665.	3.3	114
23	Flexible sample environment for high resolution neutron imaging at high temperatures in controlled atmosphere. Review of Scientific Instruments, 2015, 86, 125109.	1.3	13
24	Effect of stress on NiO reduction in solid oxide fuel cells: a new application of energy-resolved neutron imaging. Journal of Applied Crystallography, 2015, 48, 401-408.	4.5	18
25	Phase Transition Mapping by Means of Neutron Imaging in SOFC Anode Supports during Reduction under Applied Stress. ECS Transactions, 2015, 68, 1103-1114.	0.5	8
26	Grain growth in four dimensions: A comparison between simulation and experiment. Acta Materialia, 2014, 78, 125-134.	7.9	49
27	Grain Centre Mapping - 3DXRD Measurements of Average Grain Characteristic. , 2014, , 254-279.		0
28	3D X-RAY DIFFRACTION MICROSCOPY. , 2014, , 205-253.		1
29	In situ characterization of delamination and crack growth of a CGO-LSM multi-layer ceramic sample investigated by X-ray tomographic microscopy. Journal of the European Ceramic Society, 2014, 34, 3019-3025.	5.7	3
30	Mapping misoriented fibers using X-ray dark field tomography. Applied Physics A: Materials Science and Processing, 2014, 115, 741-745.	2.3	11
31	Three-dimensional simulations of microstructural evolution in polycrystalline dual-phase materials with constant volume fractions. Acta Materialia, 2013, 61, 1220-1228.	7.9	18
32	3D in situ observations of glass fibre/matrix interfacial debonding. Composites Part A: Applied Science and Manufacturing, 2013, 55, 63-73.	7.6	43
33	Interface Orientation Distribution during Grain Growth in Bulk SrTiO ₃ Measured by Means of 3D X-Ray Diffraction Contrast Tomography. Materials Research Society Symposia Proceedings, 2012, 1421, 58.	0.1	0
34	Towards a Phase Field Model of the Microstructural Evolution of Duplex Steel with Experimental Verification. Materials Science Forum, 2012, 715-716, 635-642.	0.3	1
35	In situ observations of microscale damage evolution in unidirectional natural fibre composites. Composites Part A: Applied Science and Manufacturing, 2012, 43, 1639-1649.	7.6	46
36	Three-dimensional grain structure of sintered bulk strontium titanate from X-ray diffraction contrast tomography. Scripta Materialia, 2012, 66, 1-4.	5.2	39

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37	The evolution of interfacial morphology during coarsening: A comparison between 4D experiments and phase-field simulations. <i>Scripta Materialia</i> , 2011, 64, 394-397.	5.2	46
38	In situ measurements of growth rates and grain-averaged activation energies of individual grains during recrystallization of 50% cold-rolled aluminium. <i>Scripta Materialia</i> , 2011, 64, 1003-1006.	5.2	30
39	3-D growth of a short fatigue crack within a polycrystalline microstructure studied using combined diffraction and phase-contrast X-ray tomography. <i>Acta Materialia</i> , 2011, 59, 590-601.	7.9	166
40	On the Use of Laguerre Tessellations for Representations of 3D Grain Structures. <i>Advanced Engineering Materials</i> , 2011, 13, 165-170.	3.5	54
41	Pinch-off of rods by bulk diffusion. <i>Acta Materialia</i> , 2011, 59, 4922-4932.	7.9	28
42	Characterization of polycrystalline materials using synchrotron X-ray imaging and diffraction techniques. <i>Jom</i> , 2010, 62, 22-28.	1.9	42
43	Non-destructive analysis of micro texture and grain boundary character from X-ray diffraction contrast tomography. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2010, 268, 291-296.	1.4	25
44	Universality and self-similarity in pinch-off of rods by bulk diffusion. <i>Nature Physics</i> , 2010, 6, 796-800.	16.7	38
45	New opportunities for 3D materials science of polycrystalline materials at the micrometre lengthscale by combined use of X-ray diffraction and X-ray imaging. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2009, 524, 69-76.	5.6	164
46	Three-dimensional grain mapping by x-ray diffraction contrast tomography and the use of Friedel pairs in diffraction data analysis. <i>Review of Scientific Instruments</i> , 2009, 80, 033905.	1.3	223
47	Three-Dimensional Characterization of Polycrystalline Materials by Combination of X-ray Diffraction and X-ray Imaging Techniques. <i>Microscopy and Microanalysis</i> , 2009, 15, 616-617.	0.4	2
48	X-ray diffraction contrast tomography: a novel technique for three-dimensional grain mapping of polycrystals. I. Direct beam case. <i>Journal of Applied Crystallography</i> , 2008, 41, 302-309.	4.5	221
49	Direct observation of 3-D grain growth in Al-0.1% Mn. <i>Scripta Materialia</i> , 2008, 59, 491-494.	5.2	79
50	Ferrite Formation during Slow Continuous Cooling in Steel. <i>Materials Science Forum</i> , 2007, 550, 357-362.	0.3	7
51	High-resolution three-dimensional mapping of individual grains in polycrystals by topotomography. <i>Journal of Applied Crystallography</i> , 2007, 40, 905-911.	4.5	42
52	Two-Dimensional and Three-Dimensional Analyses of Sigma Precipitates and Porosity in a Superaustenitic Stainless Steel. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2007, 38, 2721-2726.	2.2	29
53	Experimental surface charge density of the Si(100)-2x1-H surface. <i>Physical Review B</i> , 2006, 74, .	3.2	15
54	X-ray microscopy in four dimensions. <i>Materials Today</i> , 2006, 9, 18-25.	14.2	81

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55	Mapping grains and their dynamics in three dimensions. Nuclear Instruments & Methods in Physics Research B, 2006, 246, 232-237.	1.4	8
56	Phase transformations in steel studied by 3DXRD microscopy. Nuclear Instruments & Methods in Physics Research B, 2006, 246, 194-200.	1.4	32
57	Nondestructive approaches for 3-D materials characterization. Jom, 2006, 58, 40-44.	1.9	25
58	Non-destructive characterization of recrystallization kinetics using three-dimensional X-ray diffraction microscopy. Scripta Materialia, 2006, 55, 51-56.	5.2	59
59	3DXRD microscopy for the study of solid-state phase transformation kinetics. Nuclear Instruments & Methods in Physics Research B, 2005, 238, 107-110.	1.4	4
60	Direct observation of subgrain evolution during recovery of cold-rolled aluminium. Scripta Materialia, 2004, 50, 477-481.	5.2	31
61	Reply to the discussion by Aaronson et al. to "Grain nucleation and growth during phase transformations" by S.E. Offerman et al., Science, 298, 1003 (November 1, 2002). Scripta Materialia, 2004, 51, 937-941.	5.2	17
62	An algebraic algorithm for generation of three-dimensional grain maps based on diffraction with a wide beam of hard X-rays. Journal of Applied Crystallography, 2004, 37, 96-102.	4.5	22
63	Solid-state phase transformations involving solute partitioning: modeling and measuring on the level of individual grains. Acta Materialia, 2004, 52, 4757-4766.	7.9	46
64	Growth kinetics of individual grains during recrystallization with an intermediate cooling cycle. Scripta Materialia, 2003, 48, 513-518.	5.2	7
65	Non-destructive mapping of grains in three dimensions. Scripta Materialia, 2003, 49, 1093-1096.	5.2	44
66	3D-characterisation of microstructure evolution during annealing of a deformed aluminum single crystal. Acta Materialia, 2003, 51, 2517-2529.	7.9	16
67	Recrystallization kinetics of individual bulk grains in 90% cold-rolled aluminium. Acta Materialia, 2003, 51, 4423-4435.	7.9	104
68	In situ observations on the austenite stability in TRIP-steel during tensile testing. Steel Research = Archiv für Das Eisenhüttenwesen, 2002, 73, 236-241.	0.3	21
69	Grain Nucleation and Growth During Phase Transformations. Science, 2002, 298, 1003-1005.	12.6	339
70	Tracking: a method for structural characterization of grains in powders or polycrystals. Journal of Applied Crystallography, 2001, 34, 744-750.	4.5	165
71	Three-dimensional maps of grain boundaries and the stress state of individual grains in polycrystals and powders. Journal of Applied Crystallography, 2001, 34, 751-756.	4.5	320
72	A three-dimensional X-ray diffraction microscope for deformation studies of polycrystals. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2001, 319-321, 179-181.	5.6	37

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73	Application of high-energy synchrotron radiation for texture studies. Journal of Applied Crystallography, 2000, 33, 364-371.	4.5	24
74	Kinetics of individual grains during recrystallization. Scripta Materialia, 2000, 43, 561-566.	5.2	91
75	Structure determination of the Si(001)-(2 \times 1)-H reconstruction by surface X-ray diffraction: weakening of the dimer bond by the addition of hydrogen. Surface Science, 2000, 453, 18-24.	1.9	16