

Jorg M Wieszorek

List of Publications by Year in descending order

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103
papers

2,601
citations

257450

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104
docs citations

104
times ranked

2716
citing authors

#	ARTICLE	IF	CITATIONS
1	Site-specific preparation of plan-view samples with large field of view for atomic resolution STEM and TEM studies of rapidly solidified multi-phase Al-Cu thin films. <i>Materials Characterization</i> , 2022, 189, 111943.	4.4	3
2	Studying rapid solidification microstructure evolution in hypoeutectic ternary Al(Cu-Ag) alloys by fast in-situ and post-mortem TEM experiments. <i>Microscopy and Microanalysis</i> , 2021, 27, 2962-2966.	0.4	0
3	Phase field modeling of rapid resolidification of Al-Cu thin films. <i>Journal of Crystal Growth</i> , 2020, 532, 125418.	1.5	36
4	Imaging transient solidification behavior. <i>MRS Bulletin</i> , 2020, 45, 916-926.	3.5	16
5	Interface velocity dependent solute trapping and phase selection during rapid solidification of laser melted hypo-eutectic Al-11at.%Cu alloy. <i>Acta Materialia</i> , 2020, 195, 341-357.	7.9	40
6	Geometric dynamic recrystallization of austenitic stainless steel through linear plane-strain machining. <i>Philosophical Magazine</i> , 2020, 100, 1102-1128.	1.6	3
7	Elastic and Plastic Strain Measurement Using Electron Backscatter Diffraction Technique: The Influence of Sample Preparation. <i>Microscopy and Microanalysis</i> , 2019, 25, 534-535.	0.4	3
8	HAADF and Analytical TEM of The Metastable $\hat{\epsilon}$ -Al and $\hat{\epsilon}'$ -Al ₂ Cu Phases in a Rapidly Solidified Hypo-Eutectic Al-Cu Alloy. <i>Microscopy and Microanalysis</i> , 2019, 25, 1528-1529.	0.4	2
9	20 renewable biowastes derived carbon materials as green counter electrodes for dye-sensitized solar cells. <i>Materials Chemistry and Physics</i> , 2018, 204, 294-304.	4.0	41
10	Dislocation nucleation facilitated by atomic segregation. <i>Nature Materials</i> , 2018, 17, 56-63.	27.5	99
11	Composition and automated crystal orientation mapping of rapid solidification products in hypoeutectic Al-4 at.%Cu alloys. <i>Acta Materialia</i> , 2018, 145, 71-83.	7.9	39
12	Effect of thermo-mechanical processing on sensitization and corrosion in alloy 600 studied by SEM- and TEM-Based diffraction and orientation imaging techniques. <i>Journal of Nuclear Materials</i> , 2018, 505, 276-288.	2.7	16
13	Effects of hot-compaction on the structure and properties of Al-Mn-Fe-X alloys strengthened with quasi-crystalline icosahedral phase. <i>Materials and Design</i> , 2017, 126, 162-173.	7.0	20
14	Enhanced thermal stability of a quasicrystalline phase in rapidly solidified Al-Mn-Fe-X alloys. <i>Journal of Alloys and Compounds</i> , 2017, 702, 216-228.	5.5	16
15	Alkali-assisted hydrothermal route to control submicron-sized nanoporous carbon spheres with uniform distribution. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2017, 515, 1-11.	4.7	37
16	Composition and Crystal Orientation Mapping of nano-scale multi-phase Rapid Solidification Microstructures in hypo-eutectic Al-Cu Alloy Thin Films. <i>Microscopy and Microanalysis</i> , 2017, 23, 1078-1079.	0.4	4
17	Cooperative effect of carbon black and dimethyl sulfoxide on PEDOT:PSS hole transport layer for inverted planar perovskite solar cells. <i>Solar Energy</i> , 2017, 157, 125-132.	6.1	31
18	Atom Probe Tomography and analytical Scanning Transmission Electron Microscopy of Rapid Solidification Microstructures in Al-Cu Alloy Thin Films. <i>Microscopy and Microanalysis</i> , 2017, 23, 688-689.	0.4	2

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19	Determination of crystal growth rates during rapid solidification of polycrystalline aluminum by nano-scale spatio-temporal resolution <i>in situ</i> transmission electron microscopy. <i>Journal of Applied Physics</i> , 2016, 120, .	2.5	18
20	Nano-Scale Spatio-Temporal Resolution <i>in situ</i> TEM and Numerical Modeling of Rapid Solidification Microstructure Evolution in Al Alloys After Laser Melting. <i>Microscopy and Microanalysis</i> , 2016, 22, 1754-1755.	0.4	1
21	Time-Resolved <i>In Situ</i> Measurements During Rapid Alloy Solidification: Experimental Insight for Additive Manufacturing. <i>Jom</i> , 2016, 68, 985-999.	1.9	53
22	Quantitative Determination of Thermal Fields and Transformation Rates in Rapidly Solidifying Aluminum by Numerical Modeling and <i>In-situ</i> TEM. <i>Microscopy and Microanalysis</i> , 2015, 21, 811-812.	0.4	2
23	Microstructural characterization and density change of 304 stainless steel reflector blocks after long-term irradiation in EBR-II. <i>Journal of Nuclear Materials</i> , 2015, 465, 516-530.	2.7	28
24	Gradient nanostructure and residual stresses induced by Ultrasonic Nano-crystal Surface Modification in 304 austenitic stainless steel for high strength and high ductility. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2014, 613, 274-288.	5.6	258
25	<i>In situ</i> transmission electron microscopy of crystal growth-mode transitions during rapid solidification of a hypoeutectic Al-Cu alloy. <i>Acta Materialia</i> , 2014, 65, 56-68.	7.9	87
26	Validation of Ultrasonic Velocity Measurements for Detecting Void Swelling in First-Wall Structural Materials. <i>Fusion Science and Technology</i> , 2014, 66, 77-82.	1.1	17
27	Precession Electron Diffraction based TEM Studies of Microstructure Evolution in Severely Plastically Deformed Austenitic Stainless Steel. <i>Microscopy and Microanalysis</i> , 2014, 20, 1446-1447.	0.4	2
28	Charge Density Determination for Al-rich Composition L1 ₀ -ordered gamma-TiAl by Convergent Beam Electron Diffraction. <i>Microscopy and Microanalysis</i> , 2014, 20, 1492-1493.	0.4	0
29	Rapid Solidification in Thin-Film Al-Cu Alloys: Capturing the Dynamics with Time-Resolved <i>In Situ</i> TEM. <i>Microscopy and Microanalysis</i> , 2014, 20, 1580-1581.	0.4	0
30	Capturing Dynamics of Pulsed Laser Induced Melting and Rapid Solidification in Aluminum Polycrystals with Nanoscale Temporal Resolution <i>In-situ</i> TEM. <i>Microscopy and Microanalysis</i> , 2014, 20, 1582-1583.	0.4	2
31	Crystal Growth Mode Changes during Pulsed Laser Induced Rapid Solidification in Nanoscale Thin Films of Al-Cu Eutectic. <i>Microscopy and Microanalysis</i> , 2014, 20, 1662-1663.	0.4	21
32	Transmission Electron Microscopy of 304-type Stainless Steel after Exposure to Neutron Flux and Irradiation Temperature Gradients. <i>Microscopy and Microanalysis</i> , 2014, 20, 1822-1823.	0.4	10
33	Development of a nondestructive inspection method for irradiation-induced microstructural evolution of thick 304 stainless steel blocks. <i>Journal of Nuclear Materials</i> , 2013, 440, 500-507.	2.7	25
34	Comparison of convergent beam electron diffraction methods for simultaneous structure and Debye Waller factor determination. <i>Ultramicroscopy</i> , 2013, 126, 48-59.	1.9	3
35	Strengthening of austenitic stainless steel by formation of nanocrystalline δ -phase through severe plastic deformation during two-dimensional linear plane-strain machining. <i>Scripta Materialia</i> , 2013, 68, 667-670.	5.2	17
36	Validation of density functionals for transition metals and intermetallics using data from quantitative electron diffraction. <i>Journal of Chemical Physics</i> , 2013, 138, 084504.	3.0	6

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37	Ultrafast Imaging of Rapid Alloy Solidification in Al-Cu Thin Films. <i>Microscopy and Microanalysis</i> , 2012, 18, 602-603.	0.4	3
38	Approaches for ultrafast imaging of transient materials processes in the transmission electron microscope. <i>Micron</i> , 2012, 43, 1108-1120.	2.2	67
39	High precision electronic charge density determination for L1 ₀ -ordered $\hat{\Gamma}$ ³ -TiAl by quantitative convergent beam electron diffraction. <i>Philosophical Magazine</i> , 2012, 92, 4408-4424.	1.6	3
40	Grain size determination in nano-scale polycrystalline aggregates by precession illumination-hollow cone dark field imaging in the transmission electron microscope. <i>Materials Characterization</i> , 2012, 63, 17-26.	4.4	14
41	Effect of hydrogen on hardness of amorphous silicon. <i>Applied Physics A: Materials Science and Processing</i> , 2011, 102, 131-135.	2.3	11
42	Grain Boundary Mediated Displacive-Diffusional Formation of $\hat{\Gamma}$ ₁ -Phase MnAl. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2011, 42, 594-604.	2.2	41
43	Slip Transfer Across Hetero-Interfaces in Two-Phase Titanium Aluminum Intermetallics. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2011, 42, 605-612.	2.2	8
44	Simultaneous determination of highly precise Debye-Waller factors and multiple structure factors for chemically ordered tetragonal FePd. <i>Acta Crystallographica Section A: Foundations and Advances</i> , 2011, 67, 229-239.	0.3	10
45	Revealing the transient states of rapid solidification in aluminum thin films using ultrafast <i>in situ</i> transmission electron microscopy. <i>Philosophical Magazine Letters</i> , 2011, 91, 287-296.	1.2	35
46	Effect of keV ion irradiation on mechanical properties of hydrogenated amorphous silicon. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2010, 268, 2660-2665.	1.4	5
47	Determination of Debye-Waller factor and structure factors for Si by quantitative convergent-beam electron diffraction using off-axis multi-beam orientations. <i>Acta Crystallographica Section A: Foundations and Advances</i> , 2010, 66, 685-693.	0.3	12
48	Simultaneous determination of highly precise Debye-Waller factors and structure factors for chemically ordered NiAl. <i>Acta Crystallographica Section A: Foundations and Advances</i> , 2010, 66, 694-702.	0.3	12
49	Nanoindentation-induced pile-up in hydrogenated amorphous silicon. <i>Journal of Physics: Conference Series</i> , 2010, 253, 012054.	0.4	4
50	Nanoindentation of hydrogenated amorphous silicon. <i>Philosophical Magazine</i> , 2010, 90, 4027-4039.	1.6	2
51	Magnetic force microscopy of combined reaction-processed polycrystalline equiatomic bulk L10 FePd. <i>Journal of Materials Research</i> , 2009, 24, 2677-2687.	2.6	1
52	Electron microscopy of geometrically confined copper thin films after rapid lateral solidification. <i>Thin Solid Films</i> , 2009, 517, 3629-3634.	1.8	14
53	Four-zone solidification microstructure formed by laser melting of copper thin films. <i>Applied Surface Science</i> , 2009, 256, 105-111.	6.1	15
54	Cold-working and annealing of the chemically ordered L10-phase Fe ₅₀ Pd ₅₀ . <i>Intermetallics</i> , 2009, 17, 865-871.	3.9	3

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55	Novel microstructures from severely deformed Al ϵ -Ti alloys created by chip formation in machining. Journal of Materials Science, 2008, 43, 7474-7480.	3.7	8
56	Microstructural changes of nanocrystalline nickel during cold rolling. Acta Materialia, 2008, 56, 4836-4845.	7.9	35
57	Morphology and grain structure evolution during epitaxial growth of Ag films on native-oxide-covered Si surface. Journal of Applied Physics, 2008, 103, 103507.	2.5	11
58	Inter- and Intra-Agglomerate Fracture in Nanocrystalline Nickel. Physical Review Letters, 2008, 100, 105502.	7.8	31
59	Large lattice strain in individual grains of deformed nanocrystalline Ni. Applied Physics Letters, 2008, 92, .	3.3	9
60	Cold-Working and Annealing of L1 ϵ -Ordered Iron-Palladium Base Intermetallics. Materials Science Forum, 2007, 539-543, 1487-1494.	0.3	6
61	Laser-Induced Microstructural Modification of Polycrystalline Cu and Ag Films Encapsulated in SiO $_2$. Materials Research Society Symposia Proceedings, 2007, 990, 1.	0.1	0
62	Microstructure of pulsed laser deposited FePd thin films on amorphous and crystalline substrates. Intermetallics, 2007, 15, 1606-1611.	3.9	7
63	Dislocation Dynamics in Nanocrystalline Nickel. Physical Review Letters, 2007, 98, 095502.	7.8	58
64	Interpretation of Magnetic Force Microscopy Contrast Using Commercially Available Batch Tips for Investigation of Surface Magnetic Domain Structure in Polycrystalline Bulk Equiatomic L1 $_0$ FePd. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2007, 38, 2479-2487.	2.2	3
65	Influence of Processing Parameters on Microstructure of Pulsed Laser Deposited Au Thin Films. Materials Research Society Symposia Proceedings, 2006, 979, 1.	0.1	0
66	Texture evolution in equiaxed polycrystalline L1 ϵ -ordered FePd during coarsening at 600 $^{\circ}$ C. International Journal of Materials Research, 2006, 97, 304-309.	0.8	4
67	Elastic constants of equiatomic L1 $_0$ -ordered FePd single crystals. Acta Materialia, 2006, 54, 881-889.	7.9	21
68	Texture evolution in combined reaction transformed equiatomic ferromagnetic L1 $_0$ -ordered FePd intermetallics. Scripta Materialia, 2006, 54, 955-960.	5.2	9
69	UFG to NC FePd by Combined Reaction Transformation Mode of Severely Plastically Deformed Disordered FePd. Materials Research Society Symposia Proceedings, 2006, 980, 18.	0.1	0
70	Cold-Deformation and Annealing of equiaxed L1 $_0$ -ordered FePd Intermetallics. Materials Research Society Symposia Proceedings, 2006, 980, 6.	0.1	0
71	Microstructural Evolution during Post Deposition Annealing of Pulsed Laser Deposited Fe(100-x) Pdx Thin Films. Materials Research Society Symposia Proceedings, 2006, 980, 8.	0.1	1
72	Formation of Defect Structures during Annealing of Cold-deformed L1 $_0$ -ordered equiatomic FePd Intermetallics. Materials Research Society Symposia Proceedings, 2004, 842, 393.	0.1	0

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73	Slip Transfer across Hetero-Interfaces in two-phase Titanium Aluminum Intermetallics. Materials Research Society Symposia Proceedings, 2004, 819, N4.5.1/P4.5.1.	0.1	2
74	Slip Transfer across Hetero-Interfaces in two-phase Titanium Aluminum Intermetallics. Materials Research Society Symposia Proceedings, 2004, 821, 162.	0.1	0
75	Magnetic age hardening of cold-deformed bulk equiatomic Fe-Pd intermetallics during isothermal annealing. Journal of Magnetism and Magnetic Materials, 2004, 270, 157-166.	2.3	25
76	Transmission electron microscopy of room temperature deformed polytwinned L10-ordered FePd. Acta Materialia, 2004, 52, 395-403.	7.9	13
77	Effects of grain size on coercivity of combined-reaction-processed FePd intermetallics. Acta Materialia, 2004, 52, 2903-2911.	7.9	29
78	Grain Boundary-Mediated Plasticity in Nanocrystalline Nickel. Science, 2004, 305, 654-657.	12.6	803
79	The influence of deformation by cold-work on L10-ordering in anisotropic FePd. Journal of Alloys and Compounds, 2004, 378, 285-289.	5.5	9
80	Dislocation and twin interactions with polytwin interfaces in L10-ordered FePd. Intermetallics, 2003, 11, 9-21.	3.9	6
81	Microstructural evolution of PST-TiAl during low-rate compressive micro-straining at 1023 K in hard and soft orientations. Intermetallics, 2003, 11, 589-600.	3.9	13
82	Microstructural changes during annealing of FePd-based thin films. Intermetallics, 2003, 11, 963-969.	3.9	20
83	Fracture and cavitation in a constrained thin metal layer under a scale effect in layered materials. Philosophical Magazine, 2003, 83, 1807-1826.	1.6	1
84	Interactions of Mechanical Twinning and Dislocation Glide with Polytwin-Interfaces in L10-Ordered Iron-Palladium Intermetallics. Materials Research Society Symposia Proceedings, 2002, 753, 1.	0.1	0
85	Evolution of microstructure and defect structure in L10-ordered manganese aluminide permanent magnet alloys. Intermetallics, 2001, 9, 949-954.	3.9	33
86	Microstructural characterization of novel in-situ Al-Be composites. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2000, 31, 2963-2971.	2.2	12
87	Mechanisms of plasticity and fracture of partially lamellar titanium aluminum. Intermetallics, 2000, 8, 99-113.	3.9	13
88	Planar defects in massively transformed Ti-Al alloys. Philosophical Magazine Letters, 1999, 79, 519-530.	1.2	5
89	On the stability of β phase in Ti-6-22-22S and Ti-6-4 alloys. Scripta Materialia, 1999, 41, 659-665.	5.2	14
90	Deformation Behavior of β -Lamellae in Fully Lamellar Ti-48Al-2Mn-2Nb at Room Temperature. Scripta Materialia, 1998, 38, 811-817.	5.2	27

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91	Precipitation of ordered $\hat{L}\pm 2$ phase in Ti-6Al-2Zr alloy. Acta Materialia, 1998, 46, 4485-4495.	7.9	34
92	Activation of slip in lamellae of α_2 -Ti ₃ Al in TiAl alloys. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 1998, 78, 217-238.	0.6	7
93	Interaction of dislocations and interstitial solute in \hat{L}^3 -TiAl. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 1998, 77, 661-674.	0.6	13
94	Activation of slip in lamellae of $\hat{L}\pm 2$ -Ti ₃ Al in TiAl alloys. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 1998, 78, 217-238.	0.6	6
95	Determining directly from experiment the magnitude of the Burgers vector of glissile c-component dislocations in Ti Al. Philosophical Magazine Letters, 1997, 75, 281-290.	1.2	4
96	Deformation mechanisms in a binary Ti-48 at.%Al alloy with lamellar microstructure. Philosophical Magazine Letters, 1997, 75, 271-280.	1.2	29
97	Hrtem Studies of Dislocations and Interfaces in TiAl. Materials Research Society Symposia Proceedings, 1996, 466, 131.	0.1	2
98	Crystallization of amorphous phase in sputter-deposited Ti-Al alloy thin films. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 1996, 27, 2047-2050.	2.2	13
99	On the dissociation of prism plane superdislocations in Ti ₃ Al. Philosophical Magazine Letters, 1995, 72, 393-403.	1.2	8
100	On the hierarchy of planar fault energies in TiAl. Scripta Metallurgica Et Materialia, 1995, 33, 451-458.	1.0	24
101	Burgers vector determination of decorated dislocations in \hat{L}^3 -TiAl by diffraction contrast and large-angle convergent-beam electron diffraction. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 1994, 69, 285-299.	0.6	11
102	"Optimisation" of imaging conditions for weak beam studies of dislocation core structures in Ti ₃ Al. European Physical Journal Special Topics, 1993, 03, C7-435-C7-440.	0.2	0
103	Studies of point defects and tribological properties of nitrogen-implanted stainless steel. Materials Letters, 1991, 12, 16-20.	2.6	4