Christian H Liebscher

List of Publications by Year in descending order

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#	Article	IF	CITATIONS
1	Quantitative analysis of grain boundary diffusion, segregation and precipitation at a sub-nanometer scale. Acta Materialia, 2022, 225, 117522.	7.9	18
2	Superior mechanical properties of a selective-laser-melted AlZnMgCuScZr alloy enabled by a tunable hierarchical microstructure and dual-nanoprecipitation. Materials Today, 2022, 52, 90-101.	14.2	92
3	Free, flexible and fast: Orientation mapping using the multi-core and GPU-accelerated template matching capabilities in the Python-based open source 4D-STEM analysis toolbox Pyxem. Revealingcoomple2.0012r03t7uctu05f07mation mechanisms in the Al <mml:math< td=""><td>1.9</td><td>17</td></mml:math<>	1.9	17
4	xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si2.svg"> <mml:msub><mml:mrow /><mml:mn>20</mml:mn></mml:mrow </mml:msub> Cr <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si2.svg"><mml:msub><mml:mrow /><mml:mn>20</mml:mn></mml:mrow </mml:msub>Fe<mml:math< td=""><td>7.9</td><td>4</td></mml:math<></mml:math 	7.9	4
5	xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si3.svg"> <mml:msub><mml:mrow Reconstructing dual-phase nanometer scale grains within a pearlitic steel tip in 3D through 4D-scanning precession electron diffraction tomography and automated crystal orientation mapping. Ultramicroscopy, 2022, 238, 113536.</mml:mrow </mml:msub>	1.9	3
6	Microstructure Evolution of a New Precipitation-Strengthened Fe–Al–Ni–Ti Alloy down to Atomic Scale. Metals, 2022, 12, 906.	2.3	1
7	Dual phase patterning during a congruent grain boundary phase transition in elemental copper. Nature Communications, 2022, 13, .	12.8	17
8	Combinatorial exploration of B2/L21 precipitation strengthened AlCrFeNiTi compositionally complex alloys. Journal of Alloys and Compounds, 2021, 853, 156111.	5.5	22
9	Investigation of the orientation relationship between nano-sized G-phase precipitates and austenite with scanning nano-beam electron diffraction using a pixelated detector. Scripta Materialia, 2021, 201, 113930.	5.2	6
10	Automated Crystal Orientation Mapping by Precession Electron Diffraction-Assisted Four-Dimensional Scanning Transmission Electron Microscopy Using a Scintillator-Based CMOS Detector. Microscopy and Microanalysis, 2021, 27, 1102-1112.	0.4	14
11	Faceting diagram for Ag segregation induced nanofaceting at an asymmetric Cu tilt grain boundary. Acta Materialia, 2021, 214, 116960.	7.9	12
12	Segmentation of Static and Dynamic Atomic-Resolution Microscopy Data Sets with Unsupervised Machine Learning Using Local Symmetry Descriptors. Microscopy and Microanalysis, 2021, , 1-11.	0.4	1
13	Towards superior high temperature properties in low density ferritic AlCrFeNiTi compositionally complex alloys. Acta Materialia, 2021, 216, 117113.	7.9	20
14	Enhanced thermal stability of (Ti,Al)N coatings by oxygen incorporation. Acta Materialia, 2021, 218, 117204.	7.9	26
15	Structure and hardness of in situ synthesized nano-oxide strengthened CoCrFeNi high entropy alloy thin films. Scripta Materialia, 2021, 203, 114044.	5.2	12
16	Aluminum depletion induced by co-segregation of carbon and boron in a bcc-iron grain boundary. Nature Communications, 2021, 12, 6008.	12.8	24
17	Could face-centered cubic titanium in cold-rolled commercially-pure titanium only be a Ti-hydride?. Scripta Materialia, 2020, 178, 39-43.	5.2	36
18	Interfacial nanophases stabilize nanotwins in high-entropy alloys. Acta Materialia, 2020, 185, 218-232.	7.9	57

CHRISTIAN H LIEBSCHER

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19	Dislocation-induced breakthrough of strength and ductility trade-off in a non-equiatomic high-entropy alloy. Acta Materialia, 2020, 185, 45-54.	7.9	76
20	Early stage phase separation of AlCoCr0.75Cu0.5FeNi high-entropy powder at the nanoscale. Journal of Alloys and Compounds, 2020, 820, 153149.	5.5	6
21	Ultrastrong lightweight compositionally complex steels via dual-nanoprecipitation. Science Advances, 2020, 6, .	10.3	118
22	Novel Multicomponent B2-Ordered Aluminides: Compositional Design, Synthesis, Characterization, and Thermal Stability. Metals, 2020, 10, 1411.	2.3	15
23	Current Challenges and Opportunities in Microstructure-Related Properties of Advanced High-Strength Steels. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2020, 51, 5517-5586.	2.2	115
24	Observations of grain-boundary phase transformations in an elemental metal. Nature, 2020, 579, 375-378.	27.8	136
25	Unveiling the Re effect in Ni-based single crystal superalloys. Nature Communications, 2020, 11, 389.	12.8	101
26	Dislocation plasticity in FeCoCrMnNi high-entropy alloy: quantitative insights from <i>in situ</i> transmission electron microscopy deformation. Materials Research Letters, 2020, 8, 216-224.	8.7	35
27	Mapping the mechanical properties in nitride coatings at the nanometer scale. Acta Materialia, 2020, 194, 343-353.	7.9	6
28	Atomic level bonding mechanism in steel/aluminum joints produced by cold pressure welding. Materialia, 2019, 7, 100396.	2.7	14
29	Ti and its alloys as examples of cryogenic focused ion beam milling of environmentally-sensitive materials. Nature Communications, 2019, 10, 942.	12.8	89
30	Joint non-rigid image registration and reconstruction for quantitative atomic resolution scanning transmission electron microscopy. Ultramicroscopy, 2019, 198, 49-57.	1.9	13
31	Segregation-Induced Nanofaceting Transition at an Asymmetric Tilt Grain Boundary in Copper. Physical Review Letters, 2018, 121, 255502.	7.8	40
32	Bidirectional Transformation Enables Hierarchical Nanolaminate Dualâ€Phase Highâ€Entropy Alloys. Advanced Materials, 2018, 30, e1804727.	21.0	167
33	Sulfur – induced embrittlement in high-purity, polycrystalline copper. Acta Materialia, 2018, 156, 64-75.	7.9	13
34	Strain-Induced Asymmetric Line Segregation at Faceted Si Grain Boundaries. Physical Review Letters, 2018, 121, 015702.	7.8	65
35	On the Influence of Nb/Ti Ratio on Environmentally-Assisted Crack Growth in High-Strength Nickel-Based Superalloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2018, 49, 3923-3937.	2.2	7
36	Tetragonal fcc-Fe induced by κ -carbide precipitates: Atomic scale insights from correlative electron microscopy, atom probe tomography, and density functional theory. Physical Review Materials, 2018, 2,	2.4	14

CHRISTIAN H LIEBSCHER

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37	Correlating Atom Probe Tomography with Atomic-Resolved Scanning Transmission Electron Microscopy: Example of Segregation at Silicon Grain Boundaries. Microscopy and Microanalysis, 2017, 23, 291-299.	0.4	24
38	Effect of titanium additions upon microstructure and properties of precipitation-strengthened Fe-Ni-Al-Cr ferritic alloys. Acta Materialia, 2017, 128, 103-112.	7.9	46
39	Beam-induced atomic migration at Ag-containing nanofacets at an asymmetric Cu grain boundary. Journal of Materials Research, 2017, 32, 968-982.	2.6	7
40	Gold–Palladium Bimetallic Catalyst Stability: Consequences for Hydrogen Peroxide Selectivity. ACS Catalysis, 2017, 7, 5699-5705.	11.2	76
41	Electronic structure of metastable bcc Cu–Cr alloy thin films: Comparison of electron energy-loss spectroscopy and first-principles calculations. Ultramicroscopy, 2017, 178, 96-104.	1.9	8
42	Ferritic Alloys with Extreme Creep Resistance via Coherent Hierarchical Precipitates. Scientific Reports, 2015, 5, 16327.	3.3	80
43	Diffraction contrast imaging using virtual apertures. Ultramicroscopy, 2015, 155, 1-10.	1.9	86
44	Interaction of <scp>l</scp> -Cysteine with ZnO: Structure, Surface Chemistry, and Optical Properties. Langmuir, 2015, 31, 5701-5711.	3.5	46
45	Creep properties and microstructure of a precipitation-strengthened ferritic Fe–Al–Ni–Cr alloy. Acta Materialia, 2014, 71, 89-99.	7.9	133
46	X-ray irradiation induced reduction and nanoclustering of lead in borosilicate glass. CrystEngComm, 2014, 16, 9331-9339.	2.6	23
47	On the formation of hierarchically structured L2 1 -Ni2TiAl type precipitates in a ferritic alloy. Journal of Materials Science, 2013, 48, 2067-2075.	3.7	39
48	Sintered silicon nitride/nano-silicon carbide materials based on preceramic polymers and ceramic powder. Journal of the European Ceramic Society, 2012, 32, 1893-1899.	5.7	14
49	High Temperature Strengthening Mechanisms in the Alloy Platinum-5% Rhodium DPH. Platinum Metals Review, 2011, 55, 217-224.	1.2	10
50	Catalytic formation of carbon phases in metal modified, porous polymer derived SiCN ceramics. Carbon, 2011, 49, 3065-3072.	10.3	36
51	Improvement of thermal and mechanical properties of a phenolic resin nanocomposite by <i>in situ</i> formation of silsesquioxanes from a molecular precursor. Journal of Applied Polymer Science, 2010, 117, 2272-2277.	2.6	21
52	Development of MgAl2O4 spinel coating on graphite surface to improve its water-wettability and oxidation resistance. Ceramics International, 2009, 35, 457-461.	4.8	36
53	A novel approach to synthesis of nanosize MgAl2O4 spinel powder through sol–gel citrate technique and subsequent heat treatment. Ceramics International, 2009, 35, 933-937.	4.8	42