

Sandra Korte-Kerzel

List of Publications by Year in descending order

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100
papers

2,988
citations

147801

31
h-index

189892

50
g-index

100
all docs

100
docs citations

100
times ranked

2702
citing authors

#	ARTICLE	IF	CITATIONS
1	Defect phases â€œ thermodynamics and impact on material properties. International Materials Reviews, 2022, 67, 89-117.	19.3	17
2	Nanoindentation-induced deformation twinning in MAX phase Ti ₂ AlN. Acta Materialia, 2022, 227, 117665.	7.9	5
3	Orientation dependence of the fracture mechanisms in (V,Al)N coatings determined by micropillar compression. Journal of Materials Research, 2022, 37, 1003.	2.6	1
4	Characterization Methods along the Process Chain of Electrical Steel Sheetâ€”From Best Practices to Advanced Characterization. Materials, 2022, 15, 32.	2.9	5
5	Mechanical properties of heterogeneous, porous LiFePO ₄ cathodes obtained using statistical nanoindentation and micromechanical simulations. Journal of Power Sources, 2022, 539, 231565.	7.8	5
6	Synergistic effects of solutes on active deformation modes, grain boundary segregation and texture evolution in Mg-Gd-Zn alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2022, 847, 143348.	5.6	15
7	On the effect of strain and triaxiality on void evolution in a heterogeneous microstructure â€œ A statistical and single void study of damage in DP800 steel. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 799, 140332.	5.6	22
8	Finding and Characterising Active Slip Systems: A Short Review and Tutorial with Automation Tools. Materials, 2021, 14, 407.	2.9	11
9	Texture Selection Mechanisms during Recrystallization and Grain Growth of a Magnesium-Erbium-Zinc Alloy. Metals, 2021, 11, 171.	2.3	9
10	Exploring the transfer of plasticity across Laves phase interfaces in a dual phase magnesium alloy. Materials and Design, 2021, 202, 109572.	7.0	14
11	Dislocation-mediated plasticity in the Al ₂ Cu $\hat{\imath}$ -phase. Acta Materialia, 2021, 209, 116748.	7.9	9
12	Laves phase crystal analysis (LaCA): Atomistic identification of lattice defects in C14 and C15 topologically close-packed phases. Journal of Materials Research, 2021, 36, 2010-2024.	2.6	7
13	Plastic deformation of the CaMg ₂ C14-Laves phase from 50 - 250Å°C. Materialia, 2021, 20, 101237.	2.7	13
14	Co-deformation between the metallic matrix and intermetallic phases in a creep-resistant Mg-3.68Al-3.8Ca alloy. Materials and Design, 2021, 210, 110113.	7.0	9
15	Material Design for Low-Loss Non-Oriented Electrical Steel for Energy Efficient Drives. Materials, 2021, 14, 6588.	2.9	18
16	Integrated Process Simulation of Non-Oriented Electrical Steel. Materials, 2021, 14, 6659.	2.9	6
17	Influence of Process Parameters on Grain Size and Texture Evolution of Fe-3.2 wt.-% Si Non-Oriented Electrical Steels. Materials, 2021, 14, 6822.	2.9	9
18	Grain Size Influence on the Magnetic Property Deterioration of Blanked Non-Oriented Electrical Steels. Materials, 2021, 14, 7055.	2.9	8

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19	Efficient characterization tools for deformation-induced damage at different scales. <i>Production Engineering</i> , 2020, 14, 95-104.	2.3	6
20	Damage Analysis in Dual-Phase Steel Using Deep Learning: Transfer from Uniaxial to Biaxial Straining Conditions by Image Data Augmentation. <i>Jom</i> , 2020, 72, 4420-4430.	1.9	13
21	The role of mesoscopic deformation heterogeneities in plastic flow and recrystallization of a magnesium sheet alloy. <i>Materialia</i> , 2020, 12, 100715.	2.7	7
22	On the mechanical properties and deformation mechanisms of manganese sulphide inclusions. <i>Materials and Design</i> , 2020, 193, 108801.	7.0	12
23	Normal and abnormal grain growth in magnesium: Experimental observations and simulations. <i>Journal of Materials Science and Technology</i> , 2020, 50, 257-270.	10.7	29
24	The role of recrystallization and grain growth in optimizing the sheet texture of magnesium alloys with calcium addition during annealing. <i>Journal of Magnesium and Alloys</i> , 2020, 8, 252-268.	11.9	44
25	3D pore structure characterization and hardness in a powder bed fusion-processed fully amorphous Zr-based bulk metallic glass. <i>Materials Characterization</i> , 2020, 162, 110178.	4.4	28
26	Correlating magnetic properties of ferritic NO electrical steel containing 2.4Åm.%Si with hot strip microstructure. <i>Journal of Magnetism and Magnetic Materials</i> , 2020, 501, 166431.	2.3	9
27	Compatible deformation and extra strengthening by heterogeneous nanolayer composites. <i>Scripta Materialia</i> , 2020, 179, 30-35.	5.2	23
28	Deformation of Åµm- and mm-sized Fe2.4wt%Si single- and bi-crystals with a high angle grain boundary at room temperature. <i>Acta Materialia</i> , 2020, 194, 452-463.	7.9	12
29	Superior microstructure and mechanical properties of a next-generation AZX310 magnesium sheet alloy. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2019, 763, 138112.	5.6	17
30	On the correlation of crystallographic macro-texture and magnetic magnetization anisotropy in non-oriented electrical steel. <i>Journal of Magnetism and Magnetic Materials</i> , 2019, 490, 165485.	2.3	21
31	Low temperature deformation of MoSi2 and the effect of Ta, Nb and Al as alloying elements. <i>Acta Materialia</i> , 2019, 181, 385-398.	7.9	16
32	Strain heterogeneity and micro-damage nucleation under tensile stresses in an Mgâ€“5Alâ€“3Ca alloy with an intermetallic skeleton. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2019, 767, 138414.	5.6	19
33	Investigation of the electroplastic effect using nanoindentation. <i>Materials and Design</i> , 2019, 183, 108153.	7.0	30
34	Mechanical characterisation of the protective Al2O3 scale in Cr2AlC MAX phases. <i>Journal of the European Ceramic Society</i> , 2019, 39, 5149-5155.	5.7	9
35	The effect of large plastic deformation on elevated temperature mechanical behavior of dynamic strain aging Al-Mg alloys. <i>Acta Materialia</i> , 2019, 181, 67-77.	7.9	23
36	Plastic deformation of single crystalline C14 Mg2Ca Laves phase at room temperature. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2019, 759, 754-761.	5.6	37

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37	Atomistic simulations of basal dislocations in Mg interacting with Mg ₁₇ Al ₁₂ precipitates. <i>Materialia</i> , 2019, 7, 100355.	2.7	31
38	Large-area, high-resolution characterisation and classification of damage mechanisms in dual-phase steel using deep learning. <i>PLoS ONE</i> , 2019, 14, e0216493.	2.5	42
39	Global and High-Resolution Damage Quantification in Dual-Phase Steel Bending Samples with Varying Stress States. <i>Metals</i> , 2019, 9, 319.	2.3	33
40	Ti and its alloys as examples of cryogenic focused ion beam milling of environmentally-sensitive materials. <i>Nature Communications</i> , 2019, 10, 942.	12.8	89
41	Basal slip in Laves phases: The synchroshear dislocation. <i>Scripta Materialia</i> , 2019, 166, 134-138.	5.2	37
42	On the role of Laves phases on the mechanical properties of Mg-Al-Ca alloys. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2019, 756, 272-283.	5.6	56
43	Influence of Austenite Conditioning on the Mechanical Properties of a Microalloyed Bainitic Steel. <i>Steel Research International</i> , 2019, 90, 1800584.	1.8	1
44	Analysis of microstructure formation in cast Zn alloys derived from computational thermodynamics of the Zn-Al-Cu-Mg system. <i>Journal of Materials Science</i> , 2019, 54, 9887-9906.	3.7	3
45	On the structure of defects in the Fe ₇ Mo ₆ 1/4-Phase. <i>Acta Materialia</i> , 2019, 167, 257-266.	7.9	35
46	On the influence of the heat treatment on microstructure formation and mechanical properties of near- β Ti-Fe alloys. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2019, 748, 301-312.	5.6	30
47	Impact of grain boundaries on microstructure evolution during deformation of a magnesium tricrystal. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2019, 742, 295-304.	5.6	8
48	Modelling of differential scanning calorimetry heating curves for precipitation and dissolution in an Al-Mg-Si. <i>Computational Materials Science</i> , 2019, 158, 235-242.	3.0	10
49	High strain rate testing at the nano-scale: A proposed methodology for impact nanoindentation. <i>Materials and Design</i> , 2018, 151, 17-28.	7.0	30
50	Manipulation of matter by electric and magnetic fields: Toward novel synthesis and processing routes of inorganic materials. <i>Materials Today</i> , 2018, 21, 527-536.	14.2	63
51	Room temperature plasticity in m-Al ₁₃ Co ₄ studied by microcompression and high resolution scanning transmission electron microscopy. <i>Scripta Materialia</i> , 2018, 146, 327-330.	5.2	13
52	Impact of the interaction of material production and mechanical processing on the magnetic properties of non-oriented electrical steel. <i>AIP Advances</i> , 2018, 8, .	1.3	14
53	From quantum to continuum mechanics: studying the fracture toughness of transition metal nitrides and oxynitrides. <i>Materials Research Letters</i> , 2018, 6, 142-151.	8.7	30
54	Creep behaviour of eutectic Zn-Al-Cu-Mg alloys. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2018, 724, 80-94.	5.6	24

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55	Eliminating deformation incompatibility in composites by gradient nanolayer architectures. Scientific Reports, 2018, 8, 16216.	3.3	16
56	Data on measurement of the strain partitioning in a multiphase Zn-Al eutectic alloy. Data in Brief, 2018, 20, 1639-1644.	1.0	0
57	Deformation mechanisms, activated slip systems and critical resolved shear stresses in an Mg-LPSO alloy studied by micro-pillar compression. Materials and Design, 2018, 154, 203-216.	7.0	47
58	Room temperature deformation in the Fe ₇ Mo ₆ $\frac{1}{4}$ -Phase. International Journal of Plasticity, 2018, 108, 125-143.	8.8	41
59	Local mechanical properties and plasticity mechanisms in a Zn-Al eutectic alloy. Materials and Design, 2018, 157, 337-350.	7.0	17
60	Dislocations and Plastic Deformation in MgO Crystals: A Review. Crystals, 2018, 8, 240.	2.2	62
61	On the nature of twin boundary-associated strengthening in Fe-Mn-C steel. Scripta Materialia, 2018, 156, 27-31.	5.2	30
62	Low-loss FeSi sheet for energy-efficient electrical drives. AIMS Materials Science, 2018, 5, 1184-1198.	1.4	4
63	Dislocation interaction and twinning-induced plasticity in face-centered cubic Fe-Mn-C micro-pillars. Acta Materialia, 2017, 132, 162-173.	7.9	41
64	On the twinning shear of $\langle 110 \rangle$ in magnesium α -Mg. Experimental determination and formal description. Acta Materialia, 2017, 134, 267-273.	7.9	41
65	Microcompression of brittle and anisotropic crystals: recent advances and current challenges in studying plasticity in hard materials. MRS Communications, 2017, 7, 109-120.	1.8	53
66	Room temperature deformation of LPSO structures by non-basal slip. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 682, 354-358.	5.6	59
67	On extracting mechanical properties from nanoindentation at temperatures up to 1000 \AA °C. Extreme Mechanics Letters, 2017, 17, 43-49.	4.1	41
68	Softening non-metallic crystals by inhomogeneous elasticity. Scientific Reports, 2017, 7, 11602.	3.3	16
69	A rare-earth free magnesium alloy with improved intrinsic ductility. Scientific Reports, 2017, 7, 10458.	3.3	129
70	On the effect of precipitates on the cyclic deformation behavior of an Al-Mg-Si alloy. Journal of Materials Research, 2017, 32, 4398-4410.	2.6	13
71	Investigation of the deformation behavior of aluminum micropillars produced by focused ion beam machining using Ga and Xe ions. Scripta Materialia, 2017, 127, 191-194.	5.2	52
72	Non-Newtonian Flow to the Theoretical Strength of Glasses via Impact Nanoindentation at Room Temperature. Scientific Reports, 2017, 7, 17618.	3.3	9

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73	Influence of Cooling Rate on Cracking and Plastic Deformation during Impact and Indentation of Borosilicate Glasses. <i>Frontiers in Materials</i> , 2017, 4, .	2.4	14
74	Deformation in the β -Mg ₁₇ Al ₁₂ phase at 25–278°C. <i>Acta Materialia</i> , 2016, 113, 221-229.	7.9	54
75	Local mechanical properties of the (Ti ₂ O+TiO) composite in multiphase titanium aluminides studied with nanoindentation at room and high temperatures. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2016, 665, 135-140.	5.6	13
76	Precipitation and decomposition phenomena in a Zn-Al-Cu-Mg alloy. <i>Materials Letters</i> , 2016, 175, 27-31.	2.6	3
77	Effect of the Interdependence of Cold Rolling Strategies and Subsequent Punching on Magnetic Properties of NO Steel Sheets. <i>IEEE Transactions on Magnetics</i> , 2016, 52, 1-4.	2.1	10
78	Mechanical behaviour of Zn–Al–Cu–Mg alloys: Deformation mechanisms of as-cast microstructures. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2016, 651, 675-687.	5.6	35
79	Composition and cooling-rate dependence of plastic deformation, densification, and cracking in sodium borosilicate glasses during pyramidal indentation. <i>Journal of Non-Crystalline Solids</i> , 2015, 419, 97-109.	3.1	37
80	Twinning effects in deformed and annealed magnesium–neodymium alloys. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2015, 647, 91-104.	5.6	27
81	On the effect of material processing: microstructural and magnetic properties of electrical steel sheets. , 2014, , .		10
82	Intrinsic and extrinsic size effects in the deformation of amorphous CuZr/nanocrystalline Cu nanolaminates. <i>Acta Materialia</i> , 2014, 80, 94-106.	7.9	135
83	Anomalous yielding in the complex metallic alloy Al ₁₃ Co ₄ . <i>Acta Materialia</i> , 2013, 61, 7189-7196.	7.9	12
84	Influence of test temperature on the size effect in molybdenum small-scale compression pillars. <i>Philosophical Magazine Letters</i> , 2013, 93, 331-338.	1.2	43
85	Fracture modes in micropillar compression of brittle crystals. <i>Journal of Materials Research</i> , 2012, 27, 141-151.	2.6	53
86	High temperature microcompression and nanoindentation in vacuum. <i>Journal of Materials Research</i> , 2012, 27, 167-176.	2.6	71
87	Studying Plasticity in Hard and Soft Nb–Co Intermetallics. <i>Advanced Engineering Materials</i> , 2012, 14, 991-997.	3.5	22
88	Discussion of the dependence of the effect of size on the yield stress in hard materials studied by microcompression of MgO. <i>Philosophical Magazine</i> , 2011, 91, 1150-1162.	1.6	129
89	Ductile–brittle transition in micropillar compression of GaAs at room temperature. <i>Philosophical Magazine</i> , 2011, 91, 1190-1199.	1.6	111
90	Deformation of silicon – Insights from microcompression testing at 25–500°C. <i>International Journal of Plasticity</i> , 2011, 27, 1853-1866.	8.8	115

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91	Three-dimensional electron backscattered diffraction analysis of deformation in MgO micropillars. Acta Materialia, 2011, 59, 7241-7254.	7.9	47
92	Onset of plasticity in In _x Ga _{1-x} As multilayers. Acta Materialia, 2010, 58, 59-66.	7.9	4
93	Micropillar compression of ceramics at elevated temperatures. Scripta Materialia, 2009, 60, 807-810.	5.2	112
94	Discontinuous yield in InGaAs thin films. Surface and Coatings Technology, 2008, 203, 713-716.	4.8	3
95	Effect of processing route on the composition and properties of hemp fibre. Fibers and Polymers, 2008, 9, 593-603.	2.1	20
96	Elastic and plastic properties of In _x Ga _{1-x} As. Journal Physics D: Applied Physics, 2008, 41, 205406.	2.8	12
97	Atomic force microscopy characterization of the surface wettability of natural fibres. Applied Surface Science, 2007, 253, 3627-3635.	6.1	141
98	Investment Casting of Magnesium. , 2005, , 752-757.		2
99	Co-Deformation of the Metallic Matrix and Intermetallic Phases in an Mg-3.68Al-3.8Ca Alloy. SSRN Electronic Journal, 0, , .	0.4	0
100	On the Abnormal Grain Growth in Pure Magnesium. SSRN Electronic Journal, 0, , .	0.4	0