Sandra Korte-Kerzel

List of Publications by Year
in descending order

100	2,988	147801	189892
papers	citations	31 h-index	50 g-index

100	100	100	2702
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Atomic force microscopy characterization of the surface wettability of natural fibres. Applied Surface Science, 2007, 253, 3627-3635.	6.1	141
2	Intrinsic and extrinsic size effects in the deformation of amorphous CuZr/nanocrystalline Cu nanolaminates. Acta Materialia, 2014, 80, 94-106.	7.9	135
3	Discussion of the dependence of the effect of size on the yield stress in hard materials studied by microcompression of MgO. Philosophical Magazine, 2011, 91, 1150-1162.	1.6	129
4	A rare-earth free magnesium alloy with improved intrinsic ductility. Scientific Reports, 2017, 7, 10458.	3.3	129
5	Deformation of silicon â€“ Insights from microcompression testing at 25â€“500Â°C. International Journal of Plasticity, 2011, 27, 1853-1866.	8.8	115
6	Micropillar compression of ceramics at elevated temperatures. Scripta Materialia, 2009, 60, 807-810.	5.2	112
7	Ductileâ€“brittle transition in micropillar compression of GaAs at room temperature. Philosophical Magazine, 2011, 91, 1190-1199.	1.6	111
8	Ti and its alloys as examples of cryogenic focused ion beam milling of environmentally-sensitive materials. Nature Communications, 2019, 10, 942.	12.8	89
9	High temperature microcompression and nanoindentation in vacuum. Journal of Materials Research, 2012, 27, 167-176.	2.6	71
10	Manipulation of matter by electric and magnetic fields: Toward novel synthesis and processing routes of inorganic materials. Materials Today, 2018, 21, 527-536.	14.2	63
11	Dislocations and Plastic Deformation in MgO Crystals: A Review. Crystals, 2018, 8, 240.	2.2	62
12	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
13	On the role of Laves phases on the mechanical properties of Mg-Al-Ca alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 756, 272-283.	5.6	56
14	Deformation in the Î³-Mg17Al12 phase at 25â€“278ÂÂ°C. Acta Materialia, 2016, 113, 221-229.	7.9	54
15	Fracture modes in micropillar compression of brittle crystals. Journal of Materials Research, 2012, 27, 141-151.	2.6	53
16	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
17	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
18	Three-dimensional electron backscattered diffraction analysis of deformation in MgO micropillars. Acta Materialia, 2011, 59, 7241-7254.	7.9	47

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19	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
20	The role of recrystallization and grain growth in optimizing the sheet texture of magnesium alloys with calcium addition during annealing. Journal of Magnesium and Alloys, 2020, 8, 252-268.	11.9	44
21	Influence of test temperature on the size effect in molybdenum small-scale compression pillars. Philosophical Magazine Letters, 2013, 93, 331-338.	1.2	43
22	Large-area, high-resolution characterisation and classification of damage mechanisms in dual-phase steel using deep learning. PLoS ONE, 2019, 14, e0216493.	2.5	42
23	Dislocation interaction and twinning-induced plasticity in face-centered cubic Fe-Mn-C micro-pillars. Acta Materialia, 2017, 132, 162-173.	7.9	41
24	On extracting mechanical properties from nanoindentation at temperatures up to 1000ÂÂ°C. Extreme Mechanics Letters, 2017, 17, 43-49.	4.1	41
25	Room temperature deformation in the Fe7Mo6 Î¼-Phase. International Journal of Plasticity, 2018, 108, 125-143.	8.8	41
26	Composition and cooling-rate dependence of plastic deformation, densification, and cracking in sodium borosilicate glasses during pyramidal indentation. Journal of Non-Crystalline Solids, 2015, 419, 97-109.	3.1	37
27	Plastic deformation of single crystalline C14 Mg2Ca Laves phase at room temperature. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 759, 754-761.	5.6	37
28	Basal slip in Laves phases: The synchroshear dislocation. Scripta Materialia, 2019, 166, 134-138.	5.2	37
29	On the twinning shear of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si1.gif" overflow="scroll"><mml:mrow><mml:mrow><mml:mo>{</mml:mo><mml:mrow><mml:mn>10</mml:mn><mml:mrow><mml:mover accent="true"><mml:mn>1</mml:mn><mml:mo>Â¯</mml:mo></mml:mover><mml:mn>2</mml:mn></mml:mrow><mml:mo>}	7.9	36
30	Mechanical behaviour of Znâ€“Alâ€“Cuâ€“Mg alloys: Deformation mechanisms of as-cast microstructures. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 651, 675-687.	5.6	35
31	On the structure of defects in the Fe7Mo6 Î¼-Phase. Acta Materialia, 2019, 167, 257-266.	7.9	35
32	Global and High-Resolution Damage Quantification in Dual-Phase Steel Bending Samples with Varying Stress States. Metals, 2019, 9, 319.	2.3	33
33	Atomistic simulations of basal dislocations in Mg interacting with Mg17Al12 precipitates. Materialia, 2019, 7, 100355.	2.7	31
34	High strain rate testing at the nano-scale: A proposed methodology for impact nanoindentation. Materials and Design, 2018, 151, 17-28.	7.0	30
35	From quantum to continuum mechanics: studying the fracture toughness of transition metal nitrides and oxynitrides. Materials Research Letters, 2018, 6, 142-151.	8.7	30
36	On the nature of twin boundary-associated strengthening in Fe-Mn-C steel. Scripta Materialia, 2018, 156, 27-31.	5.2	30

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37	Investigation of the electroplastic effect using nanoindentation. Materials and Design, 2019, 183, 108153.	7.0	30
38	On the influence of the heat treatment on microstructure formation and mechanical properties of near-Î± Ti-Fe alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 748, 301-312.	5.6	30
39	Normal and abnormal grain growth in magnesium: Experimental observations and simulations. Journal of Materials Science and Technology, 2020, 50, 257-270.	10.7	29
40	3D pore structure characterization and hardness in a powder bed fusion-processed fully amorphous Zr-based bulk metallic glass. Materials Characterization, 2020, 162, 110178.	4.4	28
41	Twinning effects in deformed and annealed magnesiumâ€“neodymium alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 647, 91-104.	5.6	27
42	Creep behaviour of eutectic Zn-Al-Cu-Mg alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 724, 80-94.	5.6	24
43	The effect of large plastic deformation on elevated temperature mechanical behavior of dynamic strain aging Al-Mg alloys. Acta Materialia, 2019, 181, 67-77.	7.9	23
44	Compatible deformation and extra strengthening by heterogeneous nanolayer composites. Scripta Materialia, 2020, 179, 30-35.	5.2	23
45	Studying Plasticity in Hard and Soft Nbâ€“Co Intermetallics. Advanced Engineering Materials, 2012, 14, 991-997.	3.5	22
46	On the effect of strain and triaxiality on void evolution in a heterogeneous microstructure â€“ 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
47	On the correlation of crystallographic macro-texture and magnetic magnetization anisotropy in non-oriented electrical steel. Journal of Magnetism and Magnetic Materials, 2019, 490, 165485.	2.3	21
48	Effect of processing route on the composition and properties of hemp fibre. Fibers and Polymers, 2008, 9, 593-603.	2.1	20
49	Strain heterogeneity and micro-damage nucleation under tensile stresses in an Mgâ€“5Alâ€“3Ca alloy with an intermetallic skeleton. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 767, 138414.	5.6	19
50	Material Design for Low-Loss Non-Oriented Electrical Steel for Energy Efficient Drives. Materials, 2021, 14, 6588.	2.9	18
51	Local mechanical properties and plasticity mechanisms in a Zn-Al eutectic alloy. Materials and Design, 2018, 157, 337-350.	7.0	17
52	Superior microstructure and mechanical properties of a next-generation AZX310 magnesium sheet alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 763, 138112.	5.6	17
53	Defect phases â€“ thermodynamics and impact on material properties. International Materials Reviews, 2022, 67, 89-117.	19.3	17
54	Softening non-metallic crystals by inhomogeneous elasticity. Scientific Reports, 2017, 7, 11602.	3.3	16

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55	Eliminating deformation incompatibility in composites by gradient nanolayer architectures. Scientific Reports, 2018, 8, 16216.	3.3	16
56	Low temperature deformation of MoSi2 and the effect of Ta, Nb and Al as alloying elements. Acta Materialia, 2019, 181, 385-398.	7.9	16
57	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
58	Influence of Cooling Rate on Cracking and Plastic Deformation during Impact and Indentation of Borosilicate Glasses. Frontiers in Materials, 2017, 4, .	2.4	14
59	Impact of the interaction of material production and mechanical processing on the magnetic properties of non-oriented electrical steel. AIP Advances, 2018, 8, .	1.3	14
60	Exploring the transfer of plasticity across Laves phase interfaces in a dual phase magnesium alloy. Materials and Design, 2021, 202, 109572.	7.0	14
61	Local mechanical properties of the (Î²0+Ï‰0) composite in multiphase titanium aluminides studied with nanoindentation at room and high temperatures. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 665, 135-140.	5.6	13
62	On the effect of precipitates on the cyclic deformation behavior of an Alâ€“Mgâ€“Si alloy. Journal of Materials Research, 2017, 32, 4398-4410.	2.6	13
63	Room temperature plasticity in m-Al13Co4 studied by microcompression and high resolution scanning transmission electron microscopy. Scripta Materialia, 2018, 146, 327-330.	5.2	13
64	Damage Analysis in Dual-Phase Steel Using Deep Learning: Transfer from Uniaxial to Biaxial Straining Conditions by Image Data Augmentation. Jom, 2020, 72, 4420-4430.	1.9	13
65	Plastic deformation of the CaMg2 C14-Laves phase from 50 - 250Â°C. Materialia, 2021, 20, 101237.	2.7	13
66	Elastic and plastic properties of In_xGa_{1â^'x}As. Journal Physics D: Applied Physics, 2008, 41, 205406.	2.8	12
67	Anomalous yielding in the complex metallic alloy Al13Co4. Acta Materialia, 2013, 61, 7189-7196.	7.9	12
68	On the mechanical properties and deformation mechanisms of manganese sulphide inclusions. Materials and Design, 2020, 193, 108801.	7.0	12
69	Deformation of Âµm- and mm-sized Fe2.4wt%Si single- and bi-crystals with a high angle grain boundary at room temperature. Acta Materialia, 2020, 194, 452-463.	7.9	12
70	Finding and Characterising Active Slip Systems: A Short Review and Tutorial with Automation Tools. Materials, 2021, 14, 407.	2.9	11
71	On the effect of material processing: microstructural and magnetic properties of electrical steel sheets. , 2014, , .		10
72	Effect of the Interdependence of Cold Rolling Strategies and Subsequent Punching on Magnetic Properties of NO Steel Sheets. IEEE Transactions on Magnetics, 2016, 52, 1-4.	2.1	10

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73	Modelling of differential scanning calorimetry heating curves for precipitation and dissolution in an Al-Mg-Si. Computational Materials Science, 2019, 158, 235-242.	3.0	10
74	Non-Newtonian Flow to the Theoretical Strength of Glasses via Impact Nanoindentation at Room Temperature. Scientific Reports, 2017, 7, 17618.	3.3	9
75	Mechanical characterisation of the protective Al2O3 scale in Cr2AlC MAX phases. Journal of the European Ceramic Society, 2019, 39, 5149-5155.	5.7	9
76	Correlating magnetic properties of ferritic NO electrical steel containing 2.4Âm.%Si with hot strip microstructure. Journal of Magnetism and Magnetic Materials, 2020, 501, 166431.	2.3	9
77	Texture Selection Mechanisms during Recrystallization and Grain Growth of a Magnesium-Erbium-Zinc Alloy. Metals, 2021, 11, 171.	2.3	9
78	Dislocation-mediated plasticity in the Al2Cu Î¸-phase. Acta Materialia, 2021, 209, 116748.	7.9	9
79	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
80	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
81	Impact of grain boundaries on microstructure evolution during deformation of a magnesium tricrystal. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 742, 295-304.	5.6	8
82	Grain Size Influence on the Magnetic Property Deterioration of Blanked Non-Oriented Electrical Steels. Materials, 2021, 14, 7055.	2.9	8
83	The role of mesoscopic deformation heterogeneities in plastic flow and recrystallization of a magnesium sheet alloy. Materialia, 2020, 12, 100715.	2.7	7
84	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
85	Efficient characterization tools for deformation-induced damage at different scales. Production Engineering, 2020, 14, 95-104.	2.3	6
86	Integrated Process Simulation of Non-Oriented Electrical Steel. Materials, 2021, 14, 6659.	2.9	6
87	Nanoindentation-induced deformation twinning in MAX phase Ti2AlN. Acta Materialia, 2022, 227, 117665.	7.9	5
88	Characterization Methods along the Process Chain of Electrical Steel Sheetâ€"From Best Practices to Advanced Characterization. Materials, 2022, 15, 32.	2.9	5
89	Mechanical properties of heterogeneous, porous LiFePO4 cathodes obtained using statistical nanoindentation and micromechanical simulations. Journal of Power Sources, 2022, 539, 231565.	7.8	5
90	Onset of plasticity in InxGa1â^'xAs multilayers. Acta Materialia, 2010, 58, 59-66.	7.9	4

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91	Low-loss FeSi sheet for energy-efficient electrical drives. AIMS Materials Science, 2018, 5, 1184-1198.	1.4	4
92	Discontinuous yield in InGaAs thin films. Surface and Coatings Technology, 2008, 203, 713-716.	4.8	3
93	Precipitation and decomposition phenomena in a Zn-Al-Cu-Mg alloy. Materials Letters, 2016, 175, 27-31.	2.6	3
94	Analysis of microstructure formation in cast Zn alloys derived from computational thermodynamics of the Znâ€“Alâ€“Cuâ€“Mg system. Journal of Materials Science, 2019, 54, 9887-9906.	3.7	3
95	Investment Casting of Magnesium. , 2005, , 752-757.		2
96	Influence of Austenite Conditioning on the Mechanical Properties of a Microalloyed Bainitic Steel. Steel Research International, 2019, 90, 1800584.	1.8	1
97	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
98	Data on measurement of the strain partitioning in a multiphase Zn-Al eutectic alloy. Data in Brief, 2018, 20, 1639-1644.	1.0	0
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