Gerhard Dehm

List of Publications by Year
in descending order

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345 papers	12,091 citations	28274 55 h-index	43889 91 g-index
367 all docs	367 docs citations	367 times ranked	7481 citing authors

#	Article	IF	Citations
1	Strain rate dependent deformation behavior of BCC-structured Ti29Zr24Nb23Hf24 high entropy alloy at elevated temperatures. Journal of Alloys and Compounds, 2022, 891, 161859.	5.5	19
2	Microstructure and residual stress evolution in nanocrystalline Cu-Zr thin films. Journal of Alloys and Compounds, 2022, 896, 162799.	5.5	6
3	Deformation and phase transformation in polycrystalline cementite (Fe3C) during single- and multi-pass sliding wear. Acta Materialia, 2022, 227, 117694.	7.9	7
4	Dislocation-mediated electronic conductivity in rutile. Materials Today Nano, 2022, 17, 100171.	4.6	9
5	Non-uniform He bubble formation in W/W2C composite: Experimental and ab-initio study. Acta Materialia, 2022, 226, 117608.	7.9	3
6	Size effects in the plastic deformation of NiAl thin films. International Journal of Materials Research, 2022, 95, 769-778.	0.3	0
7	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. Ultramicroscopy, 2022, 237, 113517.	1.9	17
8	Massive interstitial solid solution alloys achieve near-theoretical strength. Nature Communications, 2022, 13, 1102.	12.8	29
9	Strategies for damage tolerance enhancement in metal/ceramic thin films: Lessons learned from Ti/TiN. Acta Materialia, 2022, 228, 117777.	7.9	22
10	Size scaling in bi-crystalline Cu micropillars containing a coherent twin boundary. Acta Materialia, 2022, 230, 117841.	7.9	3
11	Effect of hybridization in PdAlY-(Ni/Au/Ir) metallic glasses thin films on electrical resistivity. Scripta Materialia, 2022, 214, 114681.	5.2	0
12	Ultralong one-dimensional plastic zone created in aluminum underneath a nanoscale indent. Acta Materialia, 2022, 232, 117944.	7.9	12
13	Microstructure and mechanical behavior of Pt-modified NiAl diffusion coatings. International Journal of Materials Research, 2022, 97, 689-698.	0.3	0
14	Effect of composition and nanostructure on the mechanical properties and thermal stability of Zr100-xCux thin film metallic glasses. Materials and Design, 2022, 219, 110752.	7.0	6
15	Dual phase patterning during a congruent grain boundary phase transition in elemental copper. Nature Communications, 2022, 13, .	12.8	17
16	Influence of crystal orientation on twinning in austenitic stainless-steel during single micro-asperity tribology and nanoindentation. Wear, 2022, 504-505, 204403.	3.1	1
17	Dynamic cryo-mechanical properties of additively manufactured nanocrystalline nickel 3D microarchitectures. Materials and Design, 2022, 220, 110836.	7.0	4
18	Effect of synthesis temperature on the phase formation of NiTiAlFeCr compositionally complex alloy thin films. Journal of Alloys and Compounds, 2021, 854, 155178.	5.5	4

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19	Combinatorial exploration of B2/L21 precipitation strengthened AlCrFeNiTi compositionally complex alloys. Journal of Alloys and Compounds, 2021, 853, 156111.	5.5	22
20	Influence of strain rate on the activation of {110}, {112}, {123} slip in ferrite of DP800. Materialia, 2021, 15, 100983.	2.7	6
21	Reducing cohesion of metal powders for additive manufacturing by nanoparticle dry-coating. Powder Technology, 2021, 379, 585-595.	4.2	28
22	In situ nanoindentation during electrochemical hydrogen charging: a comparison between front-side and a novel back-side charging approach. Journal of Materials Science, 2021, 56, 8732-8744.	3.7	9
23	Nanocrystalline equiatomic CoCrFeNi alloy thin films: Are they single phase fcc?. Surface and Coatings Technology, 2021, 410, 126945.	4.8	12
24	Nanoindentation popâ€in in oxides at room temperature: Dislocation activation or crack formation?. Journal of the American Ceramic Society, 2021, 104, 4728-4741.	3.8	28
25	On the fracture behavior of Cr2AlC coatings. Materials and Design, 2021, 206, 109757.	7.0	10
26	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
27	Faceting diagram for Ag segregation induced nanofaceting at an asymmetric Cu tilt grain boundary. Acta Materialia, 2021, 214, 116960.	7.9	12
28	Dopant-segregation to grain boundaries controls electrical conductivity of n-type NbCo(Pt)Sn half-Heusler alloy mediating thermoelectric performance. Acta Materialia, 2021, 217, 117147.	7.9	24
29	Reactive wear protection through strong and deformable oxide nanocomposite surfaces. Nature Communications, 2021, 12, 5518.	12.8	70
30	On the role of pre-existing defects in influencing hardness in nanoscale indentations â€" Insights from atomistic simulations. Journal of the Mechanics and Physics of Solids, 2021, 154, 104511.	4.8	9
31	Influence of substrates and e-beam evaporation parameters on the microstructure of nanocrystalline and epitaxially grown Ti thin films. Applied Surface Science, 2021, 562, 150194.	6.1	5
32	Structure and hardness of in situ synthesized nano-oxide strengthened CoCrFeNi high entropy alloy thin films. Scripta Materialia, 2021, 203, 114044.	5.2	12
33	Scratch hardness at a small scale: Experimental methods and correlation to nanoindentation hardness. Tribology International, 2021, 163, 107168.	5.9	15
34	Phase decomposition in nanocrystalline Cr0.8Cu0.2 thin films. Journal of Alloys and Compounds, 2021, 888, 161391.	5.5	3
35	Aluminum depletion induced by co-segregation of carbon and boron in a bcc-iron grain boundary. Nature Communications, 2021, 12, 6008.	12.8	24
36	Understanding Grain Boundary Electrical Resistivity in Cu: The Effect of Boundary Structure. ACS Nano, 2021, 15, 16607-16615.	14.6	65

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37	Symbiotic crystal-glass alloys via dynamic chemical partitioning. Materials Today, 2021, 51, 6-14.	14.2	34
38	Atomic scale configuration of planar defects in the Nb-rich C14 Laves phase NbFe2. Acta Materialia, 2020, 183, 362-376.	7.9	29
39	Electronic structure based design of thin film metallic glasses with superior fracture toughness. Materials and Design, 2020, 186, 108327.	7.0	13
40	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
41	Interfacial fracture toughness of sintered hybrid silver interconnects. Journal of Materials Science, 2020, 55, 2891-2904.	3.7	17
42	Interfacial nanophases stabilize nanotwins in high-entropy alloys. Acta Materialia, 2020, 185, 218-232.	7.9	57
43	Crystal structure and composition dependence of mechanical properties of single-crystalline NbCo2 Laves phase. Acta Materialia, 2020, 184, 151-163.	7.9	29
44	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
45	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
46	Size dependent strength, slip transfer and slip compatibility in nanotwinned silver. Acta Materialia, 2020, 184, 120-131.	7.9	23
47	Microstructure evolution and thermal stability of equiatomic CoCrFeNi films on (0001) Î±-Al2O3. Acta Materialia, 2020, 200, 908-921.	7.9	12
48	Dislocation plasticity and detwinning under thermal stresses in nanotwinned Ag thin films. Acta Materialia, 2020, 198, 61-71.	7.9	2
49	Atomistic deformation behavior of single and twin crystalline Cu nanopillars with preexisting dislocations. Acta Materialia, 2020, 197, 54-68.	7.9	20
50	Crystalâ€“Glass Highâ€Entropy Nanocomposites with Near Theoretical Compressive Strength and Large Deformability. Advanced Materials, 2020, 32, e2002619.	21.0	66
51	Effect of Oxygen on Highâ€temperature Phase Equilibria in Ternary Tiâ€Alâ€Nb Alloys. Zeitschrift Fur Anorganische Und Allgemeine Chemie, 2020, 646, 1151-1156.	1.2	26
52	On the commensuration of plastic plowing at the microscale. Tribology International, 2020, 151, 106477.	5.9	8
53	Microscale plastic anisotropy of basal and pyramidal I slip in pure magnesium tested in shear. Materialia, 2020, 14, 100932.	2.7	9
54	Bulk nanostructured AlCoCrFeMnNi chemically complex alloy synthesized by laser-powder bed fusion. Additive Manufacturing, 2020, 35, 101337.	3.0	3

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55	Insight into indentation-induced plastic flow in austenitic stainless steel. Journal of Materials Science, 2020, 55, 9095-9108.	3.7	12
56	Observations of grain-boundary phase transformations in an elemental metal. Nature, 2020, 579, 375-378.	27.8	136
57	Interplay of Chemistry and Faceting at Grain Boundaries in a Model Al Alloy. Physical Review Letters, 2020, 124, 106102.	7.8	25
58	How tensile tests allow a screening of the fracture toughness of hard coatings. Surface and Coatings Technology, 2020, 390, 125645.	4.8	10
59	Effect of size and domain orientation on strength of Barium Titanate. Scripta Materialia, 2020, 182, 68-73.	5.2	16
60	Experimental conditions affecting the measured fracture toughness at the microscale: Notch geometry and crack extension measurement. Materials and Design, 2020, 191, 108582.	7.0	30
61	Time-dependent plasticity in silicon microbeams mediated by dislocation nucleation. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 16864-16871.	7.1	12
62	Approaches to Measure the Resistivity of Grain Boundaries in Metals with High Sensitivity and Spatial Resolution: A Case Study Employing Cu. ACS Applied Electronic Materials, 2020, 2, 2049-2056.	4.3	22
63	Composition dependence of hardness and elastic modulus of the cubic and hexagonal NbCo₂Laves phase polytypes studied by nanoindentation. Journal of Materials Research, 2020, 35, 185-195.	2.6	15
64	Thin-Film Microtensile-Test Structures for High-Throughput Characterization of Mechanical Properties. ACS Combinatorial Science, 2020, 22, 142-149.	3.8	13
65	Unveiling the Re effect in Ni-based single crystal superalloys. Nature Communications, 2020, 11, 389.	12.8	101
66	Tantalum and zirconium induced structural transitions at complex [111] tilt grain boundaries in copper. Acta Materialia, 2020, 190, 93-104.	7.9	17
67	Investigation of single asperity wear at the microscale in an austenitic steel. Wear, 2020, 452-453, 203289.	3.1	6
68	Review on Quantum Mechanically Guided Design of Ultra-Strong Metallic Glasses. Frontiers in Materials, 2020, 7, .	2.4	7
69	Dislocation plasticity in FeCoCrMnNi high-entropy alloy: quantitative insights from in situ transmission electron microscopy deformation. Materials Research Letters, 2020, 8, 216-224.	8.7	35
70	Influence of Ti3Ni4 precipitates on the indentation-induced two-way shape-memory effect in Nickel-Titanium. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 792, 139373.	5.6	6
71	Mapping the mechanical properties in nitride coatings at the nanometer scale. Acta Materialia, 2020, 194, 343-353.	7.9	6
72	Atomic level bonding mechanism in steel/aluminum joints produced by cold pressure welding. Materialia, 2019, 7, 100396.	2.7	14

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73	Development of a high-temperature micromechanics stage with a novel temperature measurement approach. Review of Scientific Instruments, 2019, 90, 073904.	1.3	1
74	Unraveling indentation-induced slip steps in austenitic stainless steel. Materials and Design, 2019, 183, 108169.	7.0	15
75	Towards quantifying the shear delamination of thin films. Materialia, 2019, 8, 100421.	2.7	1
76	How close can indents be placed without risking an erroneous pop-in statistics?. Materialia, 2019, 7, 100378.	2.7	9
77	Tungsten carbide as a deoxidation agent for plasma-facing tungsten-based materials. Journal of Nuclear Materials, 2019, 524, 135-140.	2.7	12
78	Micro fracture investigations of white etching layers. Materials and Design, 2019, 180, 107892.	7.0	24
79	Advances in in situ nanomechanical testing. MRS Bulletin, 2019, 44, 438-442.	3.5	31
80	Iron Aluminides. Annual Review of Materials Research, 2019, 49, 297-326.	9.3	71
81	Synthesis, microstructure, and hardness of rapidly solidified Cu-Cr alloys. Journal of Alloys and Compounds, 2019, 794, 203-209.	5.5	24
82	Initiation and stagnation of room temperature grain coarsening in cyclically strained gold films. Acta Materialia, 2019, 169, 99-108.	7.9	17
83	Aggregation control of Ru and Ir nanoparticles by tunable aryl alkyl imidazolium ionic liquids. Nanoscale, 2019, 11, 4073-4082.	5.6	26
84	Auâ€“Sn solders applied in transient liquid phase bonding: Microstructure and mechanical behavior. Materialia, 2019, 8, 100503.	2.7	7
85	Tribolayer formation during macro- and microscale cyclic contact. Tribology International, 2019, 129, 436-441.	5.9	2
86	Oxygen-mediated deformation and grain refinement in Cu-Fe nanocrystalline alloys. Acta Materialia, 2019, 166, 281-293.	7.9	37
87	Plastic deformation of tungsten due to deuterium plasma exposure: Insights from micro-compression tests. Scripta Materialia, 2019, 162, 132-135.	5.2	11
88	On pinning-depinning and microkink-flow in solid state dewetting: Insights by in-situ ESEM on Al thin films. Acta Materialia, 2019, 165, 153-163.	7.9	6
89	Synthesis and mechanical testing of grain boundaries at the micro and sub-micro scale. Materialpruefung/Materials Testing, 2019, 61, 5-18.	2.2	10
90	In situ atomic-scale observation of oxidation and decomposition processes in nanocrystalline alloys. Nature Communications, 2018, 9, 946.	12.8	14

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91	Influence of composition and crystal structure on the fracture toughness of NbCo2 Laves phase studied by micro-cantilever bending tests. Materials and Design, 2018, 145, 116-121.	7.0	24
92	Modifying the nanostructure and the mechanical properties of Mo2BC hard coatings: Influence of substrate temperature during magnetron sputtering. Materials and Design, 2018, 142, 203-211.	7.0	16
93	Overview on micro- and nanomechanical testing: New insights in interface plasticity and fracture at small length scales. Acta Materialia, 2018, 142, 248-282.	7.9	268
94	Microstructure and mechanical properties in the thin film system Cu-Zr. Thin Solid Films, 2018, 645, 193-202.	1.8	10
95	Segregation-Induced Nanofaceting Transition at an Asymmetric Tilt Grain Boundary in Copper. Physical Review Letters, 2018, 121, 255502.	7.8	40
96	On the segregation of Re at dislocations in the Î³' phase of Ni-based single crystal superalloys. Materialia, 2018, 4, 109-114.	2.7	51
97	Dislocation slip transmission through a coherent Î£3{111} copper twin boundary: Strain rate sensitivity, activation volume and strength distribution function. Acta Materialia, 2018, 161, 412-419.	7.9	41
98	Bidirectional Transformation Enables Hierarchical Nanolaminate Dualâ€Phase Highâ€Entropy Alloys. Advanced Materials, 2018, 30, e1804727.	21.0	167
99	Hydrogen embrittlement of tungsten induced by deuterium plasma: Insights from nanoindentation tests. Journal of Materials Research, 2018, 33, 3530-3536.	2.6	27
100	Sulfur â€“ induced embrittlement in high-purity, polycrystalline copper. Acta Materialia, 2018, 156, 64-75.	7.9	13
101	Nano-laminated thin film metallic glass design for outstanding mechanical properties. Scripta Materialia, 2018, 155, 73-77.	5.2	23
102	Formation of eta carbide in ferrous martensite by room temperature aging. Acta Materialia, 2018, 158, 297-312.	7.9	52
103	Strain-Induced Asymmetric Line Segregation at Faceted Si Grain Boundaries. Physical Review Letters, 2018, 121, 015702.	7.8	65
104	On the nature of twin boundary-associated strengthening in Fe-Mn-C steel. Scripta Materialia, 2018, 156, 27-31.	5.2	30
105	Fracture toughness of Mo2BC thin films: Intrinsic toughness versus system toughening. Materials and Design, 2018, 154, 20-27.	7.0	38
106	Thermal stability of nanocomposite Mo2BC hard coatings deposited by magnetron sputtering. Surface and Coatings Technology, 2018, 349, 378-383.	4.8	8
107	Microstructural and mechanical characterization of an equiatomic YGdTbDyHo high entropy alloy with hexagonal close-packed structure. Acta Materialia, 2018, 156, 86-96.	7.9	58
108	Tetragonal fcc-Fe induced by Îº -carbide precipitates: Atomic scale insights from correlative electron microscopy, atom probe tomography, and density functional theory. Physical Review Materials, 2018, 2, .	2.4	14

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109	Stability, phase separation and oxidation of a supersaturated nanocrystalline Cu-33 at.% Cr thin film alloy. Thin Solid Films, 2017, 623, 48-58.	1.8	4
110	Effect of annealing on the size dependent deformation behavior of thin cobalt films on flexible substrates. Thin Solid Films, 2017, 624, 34-40.	1.8	7
111	Kinetics and crystallization path of a Fe-based metallic glass alloy. Acta Materialia, 2017, 127, 341-350.	7.9	47
112	Dislocation-twin boundary interaction in small scale Cu bi-crystals loaded in different crystallographic directions. Acta Materialia, 2017, 129, 91-97.	7.9	51
113	Dislocation interaction and twinning-induced plasticity in face-centered cubic Fe-Mn-C micro-pillars. Acta Materialia, 2017, 132, 162-173.	7.9	41
114	Microstructural evolution and solid state dewetting of epitaxial Al thin films on sapphire (Î±-Al2O3). Acta Materialia, 2017, 133, 356-366.	7.9	34
115	Strain rate dependence of the slip transfer through a penetrable high angle grain boundary in copper. Scripta Materialia, 2017, 138, 88-91.	5.2	23
116	Compressed Bi-crystal micropillars showing a sigmoidal deformation state â€“ A computational study. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 700, 168-174.	5.6	0
117	100 years publicâ€“private partnership in metallurgical and materials science research. Materials Today, 2017, 20, 335-337.	14.2	0
118	Surface optical phonon propagation in defect modulated nanowires. Journal of Applied Physics, 2017, 121, 085702.	2.5	2
119	Microcantilever Fracture Testing of Intermetallic Cu3Sn in Lead-Free Solder Interconnects. Journal of Electronic Materials, 2017, 46, 1607-1611.	2.2	4
120	Size effect in bi-crystalline micropillars with a penetrable high angle grain boundary. Acta Materialia, 2017, 129, 312-320.	7.9	57
121	Pre- and post-buckling behavior of bi-crystalline micropillars: Origin and consequences. Acta Materialia, 2017, 124, 195-203.	7.9	18
122	Nanostructure of and structural defects in a Mo2BC hard coating investigated by transmission electron microscopy and atom probe tomography. Journal of Applied Physics, 2017, 122, .	2.5	11
123	Annealing induced void formation in epitaxial Al thin films on sapphire (Î±-Al2O3). Acta Materialia, 2017, 140, 355-365.	7.9	19
124	Fracture behavior of nanostructured heavily cold drawn pearlitic steel wires before and after annealing. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 707, 164-171.	5.6	22
125	In-situ tracking the structural and chemical evolution of nanostructured CuCr alloys. Acta Materialia, 2017, 138, 42-51.	7.9	17
126	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

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127	In-situ TEM Study of Mechanical Size Effects in TiC Strengthened Steels. Microscopy and Microanalysis, 2017, 23, 732-733.	0.4	0
128	On the influence of microcantilever pre-crack geometries on the apparent fracture toughness of brittle materials. Acta Materialia, 2017, 136, 281-287.	7.9	53
129	Goldâ€“Palladium Bimetallic Catalyst Stability: Consequences for Hydrogen Peroxide Selectivity. ACS Catalysis, 2017, 7, 5699-5705.	11.2	76
130	Maintaining strength in supersaturated copperâ€“chromium thin films annealed at 0.5 of the melting temperature of Cu. Journal of Materials Science, 2017, 52, 913-920.	3.7	5
131	Inâ€“situ TEM study of diffusion kinetics and electron irradiation effects on the Cr phase separation of a nanocrystalline Cuâ€“4 at.% Cr thin film alloy. Journal of Alloys and Compounds, 2017, 695, 1583-1590.	5.5	12
132	Mechanical size effects in a single crystalline equiatomic FeCrCoMnNi high entropy alloy. Scripta Materialia, 2017, 129, 52-55.	5.2	46
133	Electronic structure of metastable bcc Cuâ€“Cr alloy thin films: Comparison of electron energy-loss spectroscopy and first-principles calculations. Ultramicroscopy, 2017, 178, 96-104.	1.9	8
134	Stress intensity factor dependence on anisotropy and geometry during micro-fracture experiments. Scripta Materialia, 2017, 127, 76-78.	5.2	36
135	Superlattice effect for enhanced fracture toughness of hard coatings. Scripta Materialia, 2016, 124, 67-70.	5.2	128
136	Electronic hybridisation implications for the damage-tolerance of thin film metallic glasses. Scientific Reports, 2016, 6, 36556.	3.3	26
137	Coccospheres confer mechanical protection: New evidence for an old hypothesis. Acta Biomaterialia, 2016, 42, 258-264.	8.3	26
138	Importance and Challenges of Electrochemical in Situ Liquid Cell Electron Microscopy for Energy Conversion Research. Accounts of Chemical Research, 2016, 49, 2015-2022.	15.6	185
139	Strain-induced phase transformation of a thin Co film on flexible substrates. Acta Materialia, 2016, 121, 227-233.	7.9	19
140	Heat-Induced Phase Transformation of Three-Dimensional Nb3O7(OH) Superstructures: Effect of Atmosphere and Electron Beam. Crystal Growth and Design, 2016, 16, 4309-4317.	3.0	11
141	Deformationâ€Induced Martensite: A New Paradigm for Exceptional Steels. Advanced Materials, 2016, 28, 7753-7757.	21.0	61
142	Microscale Fracture Behavior of Single Crystal Silicon Beams at Elevated Temperatures. Nano Letters, 2016, 16, 7597-7603.	9.1	49
143	Fracture toughness of intermetallic Cu6Sn5 in lead-free solder microelectronics. Scripta Materialia, 2016, 123, 38-41.	5.2	26
144	Size and orientation dependent mechanical behavior of body-centered tetragonal Sn at 0.6 of the melting temperature. Acta Materialia, 2016, 115, 76-82.	7.9	20

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145	Are Mo2BC nanocrystalline coatings damage resistant? Insights from comparative tension experiments. Surface and Coatings Technology, 2016, 289, 213-218.	4.8	29
146	Study on the Atomic and Electronic Structure in CrN (VN, TiN) Films using CS-Corrected TEM. Microscopy and Microanalysis, 2015, 21, 2079-2080.	0.4	0
147	The influence of a brittle Cr interlayer on the deformation behavior of thin Cu films on flexible substrates: Experiment and model. Acta Materialia, 2015, 89, 278-289.	7.9	76
148	In Situ TEM Microcompression of Single and Bicrystalline Samples: Insights and Limitations. Jom, 2015, 67, 1704-1712.	1.9	35
149	Interface fracture and chemistry of a tungsten-based metallization on borophosphosilicate glass. Philosophical Magazine, 2015, 95, 1967-1981.	1.6	6
150	Cyclic bending experiments on free-standing Cu micron lines observed by electron backscatter diffraction. Acta Materialia, 2015, 83, 460-469.	7.9	34
151	Internal and external stresses: In situ TEM compression of Cu bicrystals containing a twin boundary. Scripta Materialia, 2015, 100, 94-97.	5.2	45
152	Can microscale fracture tests provide reliable fracture toughness values? A case study in silicon. Journal of Materials Research, 2015, 30, 686-698.	2.6	129
153	Influence of inclined twin boundaries on the deformation behavior of Cu micropillars. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 642, 65-70.	5.6	27
154	The peculiarity of the metal-ceramic interface. Scientific Reports, 2015, 5, 11460.	3.3	22
155	Comparing small scale plasticity of copper-chromium nanolayered and alloyed thin films at elevated temperatures. Acta Materialia, 2015, 93, 175-186.	7.9	27
156	Nanotribology in austenite: Normal force dependence. Wear, 2015, 338-339, 430-435.	3.1	13
157	Micro-tension study of miniaturized Cu lines at variable temperatures. Acta Materialia, 2015, 92, 243-254.	7.9	13
158	Downscaling metal-dielectric interface fracture experiments to sub-micron dimensions: A feasibility study using TEM. Surface and Coatings Technology, 2015, 270, 1-7.	4.8	9
159	Formation of dislocation networks in a coherent Cu Î£3(1 1 1) twin boundary. Scripta Materialia, 2015, 102, 71-74.	5.2	26
160	Nanotribology in austenite: Plastic plowing and crack formation. Wear, 2015, 338-339, 436-440.	3.1	24
161	Adhesion measurement of a buried Cr interlayer on polyimide. Philosophical Magazine, 2015, 95, 1982-1991.	1.6	15
162	Following crack path selection in multifilm structures with weak and strong interfaces by in situ 4-point-bending. Journal of Materials Research, 2015, 30, 1090-1097.	2.6	4

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163	Mechanical and chemical investigation of the interface between tungsten-based metallizations and annealed borophosphosilicate glass. Thin Solid Films, 2015, 583, 170-176.	1.8	7
164	Importance of dislocation pile-ups on the mechanical properties and the Bauschinger effect in microcantilevers. Journal of Materials Research, 2015, 30, 791-797.	2.6	36
165	Transition from shear to stress-assisted diffusion of copperâ€“chromium nanolayered thin films at elevated temperatures. Acta Materialia, 2015, 100, 73-80.	7.9	23
166	Influence of initial microstructure on thermomechanical fatigue behavior of Cu films on substrates. Microelectronic Engineering, 2015, 137, 5-10.	2.4	7
167	Nanostructure and mechanical behavior of metastable Cuâ€“Cr thin films grown by molecular beam epitaxy. Acta Materialia, 2015, 83, 318-332.	7.9	50
168	Intermetallic phase selection during homogenization for AA6082 alloy. Philosophical Magazine, 2014, 94, 830-846.	1.6	14
169	Growth mechanism of Al2Cu precipitates during in situ TEM heating of a HPT deformed Alâ€“3wt.%Cu alloy. Journal of Alloys and Compounds, 2014, 600, 43-50.	5.5	9
170	Crack deflection in multi-layered four-point bending samples. International Journal of Fracture, 2014, 190, 167-176.	2.2	9
171	Temperature dependent transition of intragranular plastic to intergranular brittle failure in electrodeposited Cu micro-tensile samples. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2014, 618, 398-405.	5.6	37
172	Differences in deformation behavior of bicrystalline Cu micropillars containing a twin boundary or a large-angle grain boundary. Acta Materialia, 2014, 73, 240-250.	7.9	120
173	Damage evolution during cyclic tensionâ€“tension loading of micron-sized Cu lines. Acta Materialia, 2014, 67, 297-307.	7.9	31
174	An elevated temperature study of a Ti adhesion layer on polyimide. Thin Solid Films, 2013, 531, 354-361.	1.8	43
175	Elastoplastic buckling as source of misinterpretation of micropillar tests. Acta Materialia, 2013, 61, 4996-5007.	7.9	14
176	Insights into the atomic and electronic structure triggered by ordered nitrogen vacancies in CrN. Physical Review B, 2013, 87, .	3.2	22
177	Transmission electron microscopy characterization of CrN films on MgO(001). Thin Solid Films, 2013, 545, 154-160.	1.8	3
178	Microcompression and cyclic deformation behaviors of coaxial copper bicrystals with a single twin boundary. Scripta Materialia, 2013, 69, 199-202.	5.2	36
179	Diffusive and massive phase transformations in Tiâ€“Alâ€“Nb alloys â€“ Modelling and experiments. Intermetallics, 2013, 38, 126-138.	3.9	14
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