Gerhard Dehm

List of Publications by Year in Descending Order

357 papers	9,298 citations	48 h-index	80 g-index
367 ext. papers	10,642 ext. citations	6 avg, IF	6.53 L-index

#	Paper	IF	Citations
357	Deformation and phase transformation in polycrystalline cementite (Fe3C) during single- and multi-pass sliding wear. *Acta Materialia*, **2022**, 227, 117694	8.4	0
356	Dislocation-mediated electronic conductivity in rutile. *Materials Today Nano*, **2022**, 17, 100171	9.7	1
355	Non-uniform He bubble formation in W/W2C composite: Experimental and ab-initio study. *Acta Materialia*, **2022**, 226, 117608	8.4	0
354	Size effects in the plastic deformation of NiAl thin films. *International Journal of Materials Research*, **2022**, 95, 769-778	0.5	
353	Strain rate dependent deformation behavior of BCC-structured Ti29Zr24Nb23Hf24 high entropy alloy at elevated temperatures. *Journal of Alloys and Compounds*, **2022**, 891, 161859	5.7	4
352	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	3.1	4
351	Massive interstitial solid solution alloys achieve near-theoretical strength.. *Nature Communications*, **2022**, 13, 1102	17.4	3
350	Strategies for damage tolerance enhancement in metal/ceramic thin films: Lessons learned from Ti/TiN. *Acta Materialia*, **2022**, 228, 117777	8.4	3
349	Size scaling in bi-crystalline Cu micropillars containing a coherent twin boundary. *Acta Materialia*, **2022**, 230, 117841	8.4	
348	Effect of hybridization in PdAlY-(Ni/Au/Ir) metallic glasses thin films on electrical resistivity. *Scripta Materialia*, **2022**, 214, 114681	5.6	
347	Ultralong one-dimensional plastic zone created in aluminum underneath a nanoscale indent. *Acta Materialia*, **2022**, 117944	8.4	1
346	Microstructure and mechanical behavior of Pt-modified NiAl diffusion coatings. *International Journal of Materials Research*, **2022**, 97, 689-698	0.5	
345	Effect of composition and nanostructure on the mechanical properties and thermal stability of Zr100-xCux thin film metallic glasses. *Materials and Design*, **2022**, 110752	8.1	1
344	Dual phase patterning during a congruent grain boundary phase transition in elemental copper. *Nature Communications*, **2022**, 13,	17.4	1
343	Symbiotic crystal-glass alloys via dynamic chemical partitioning. *Materials Today*, **2021**, 51, 6-6	21.8	4
342	Microstructure and residual stress evolution in nanocrystalline Cu-Zr thin films. *Journal of Alloys and Compounds*, **2021**, 896, 162799	5.7	0
341	Aluminum depletion induced by co-segregation of carbon and boron in a bcc-iron grain boundary. *Nature Communications*, **2021**, 12, 6008	17.4	4

340	Understanding Grain Boundary Electrical Resistivity in Cu: The Effect of Boundary Structure. *ACS Nano*, **2021**, 15, 16607-16615	16.7	7
339	Nanocrystalline equiatomic CoCrFeNi alloy thin films: Are they single phase fcc?. *Surface and Coatings Technology*, **2021**, 410, 126945	4.4	4
338	Nanoindentation pop-in in oxides at room temperature: Dislocation activation or crack formation?. *Journal of the American Ceramic Society*, **2021**, 104, 4728-4741	3.8	9
337	Effect of synthesis temperature on the phase formation of NiTiAlFeCr compositionally complex alloy thin films. *Journal of Alloys and Compounds*, **2021**, 854, 155178	5.7	3
336	Combinatorial exploration of B2/L21 precipitation strengthened AlCrFeNiTi compositionally complex alloys. *Journal of Alloys and Compounds*, **2021**, 853, 156111	5.7	13
335	Influence of strain rate on the activation of {110}, {112}, {123} slip in ferrite of DP800. *Materialia*, **2021**, 15, 100983	3.2	4
334	Reducing cohesion of metal powders for additive manufacturing by nanoparticle dry-coating. *Powder Technology*, **2021**, 379, 585-595	5.2	6
333	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	4.3	1
332	On the fracture behavior of Cr2AlC coatings. *Materials and Design*, **2021**, 206, 109757	8.1	2
331	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	0.5	5
330	Faceting diagram for Ag segregation induced nanofaceting at an asymmetric Cu tilt grain boundary. *Acta Materialia*, **2021**, 214, 116960	8.4	1
329	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	8.4	6
328	Reactive wear protection through strong and deformable oxide nanocomposite surfaces. *Nature Communications*, **2021**, 12, 5518	17.4	8
327	On the role of pre-existing defects in influencing hardness in nanoscale indentations □nsights from atomistic simulations. *Journal of the Mechanics and Physics of Solids*, **2021**, 154, 104511	5	5
326	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	6.7	
325	Structure and hardness of in situ synthesized nano-oxide strengthened CoCrFeNi high entropy alloy thin films. *Scripta Materialia*, **2021**, 203, 114044	5.6	2
324	Scratch hardness at a small scale: Experimental methods and correlation to nanoindentation hardness. *Tribology International*, **2021**, 163, 107168	4.9	5
323	Phase decomposition in nanocrystalline Cr0.8Cu0.2 thin films. *Journal of Alloys and Compounds*, **2021**, 888, 161391	5.7	2

322	Bulk nanostructured AlCoCrFeMnNi chemically complex alloy synthesized by laser-powder bed fusion. *Additive Manufacturing*, **2020**, 35, 101337	6.1	1
321	Insight into indentation-induced plastic flow in austenitic stainless steel. *Journal of Materials Science*, **2020**, 55, 9095-9108	4.3	7
320	Observations of grain-boundary phase transformations in an elemental metal. *Nature*, **2020**, 579, 375-378	50.4	65
319	Interplay of Chemistry and Faceting at Grain Boundaries in a Model Al Alloy. *Physical Review Letters*, **2020**, 124, 106102	7.4	15
318	How tensile tests allow a screening of the fracture toughness of hard coatings. *Surface and Coatings Technology*, **2020**, 390, 125645	4.4	4
317	Effect of size and domain orientation on strength of Barium Titanate. *Scripta Materialia*, **2020**, 182, 68-73	3.6	6
316	Experimental conditions affecting the measured fracture toughness at the microscale: Notch geometry and crack extension measurement. *Materials and Design*, **2020**, 191, 108582	8.1	14
315	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	11.5	6
314	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	9
313	Composition dependence of hardness and elastic modulus of the cubic and hexagonal NbCo2 Laves phase polytypes studied by nanoindentation. *Journal of Materials Research*, **2020**, 35, 185-195	2.5	7
312	Thin-Film Microtensile-Test Structures for High-Throughput Characterization of Mechanical Properties. *ACS Combinatorial Science*, **2020**, 22, 142-149	3.9	5
311	Unveiling the Re effect in Ni-based single crystal superalloys. *Nature Communications*, **2020**, 11, 389	17.4	42
310	Tantalum and zirconium induced structural transitions at complex [111] tilt grain boundaries in copper. *Acta Materialia*, **2020**, 190, 93-104	8.4	9
309	Investigation of single asperity wear at the microscale in an austenitic steel. *Wear*, **2020**, 452-453, 203289	3.5	1
308	Review on Quantum Mechanically Guided Design of Ultra-Strong Metallic Glasses. *Frontiers in Materials*, **2020**, 7,	4	4
307	Dislocation plasticity in FeCoCrMnNi high-entropy alloy: quantitative insights from in situ transmission electron microscopy deformation. *Materials Research Letters*, **2020**, 8, 216-224	7.4	15
306	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	5.3	4
305	Mapping the mechanical properties in nitride coatings at the nanometer scale. *Acta Materialia*, **2020**, 194, 343-353	8.4	2

304	Atomic scale configuration of planar defects in the Nb-rich C14 Laves phase NbFe2. *Acta Materialia*, **2020**, 183, 362-376	8.4	16
303	Electronic structure based design of thin film metallic glasses with superior fracture toughness. *Materials and Design*, **2020**, 186, 108327	8.1	11
302	Could face-centered cubic titanium in cold-rolled commercially-pure titanium only be a Ti-hydride?. *Scripta Materialia*, **2020**, 178, 39-43	5.6	13
301	Interfacial fracture toughness of sintered hybrid silver interconnects. *Journal of Materials Science*, **2020**, 55, 2891-2904	4.3	7
300	Interfacial nanophases stabilize nanotwins in high-entropy alloys. *Acta Materialia*, **2020**, 185, 218-232	8.4	27
299	Crystal structure and composition dependence of mechanical properties of single-crystalline NbCo2 Laves phase. *Acta Materialia*, **2020**, 184, 151-163	8.4	11
298	Dislocation-induced breakthrough of strength and ductility trade-off in a non-equiatomic high-entropy alloy. *Acta Materialia*, **2020**, 185, 45-54	8.4	38
297	Early stage phase separation of AlCoCr0.75Cu0.5FeNi high-entropy powder at the nanoscale. *Journal of Alloys and Compounds*, **2020**, 820, 153149	5.7	4
296	Size dependent strength, slip transfer and slip compatibility in nanotwinned silver. *Acta Materialia*, **2020**, 184, 120-131	8.4	10
295	Microstructure evolution and thermal stability of equiatomic CoCrFeNi films on (0001) □Al2O3. *Acta Materialia*, **2020**, 200, 908-921	8.4	6
294	Dislocation plasticity and detwinning under thermal stresses in nanotwinned Ag thin films. *Acta Materialia*, **2020**, 198, 61-71	8.4	1
293	Atomistic deformation behavior of single and twin crystalline Cu nanopillars with preexisting dislocations. *Acta Materialia*, **2020**, 197, 54-68	8.4	10
292	Crystal-Glass High-Entropy Nanocomposites with Near Theoretical Compressive Strength and Large Deformability. *Advanced Materials*, **2020**, 32, e2002619	24	22
291	Effect of Oxygen on High-temperature Phase Equilibria in Ternary Ti-Al-Nb Alloys. *Zeitschrift Fur Anorganische Und Allgemeine Chemie*, **2020**, 646, 1151-1156	1.3	12
290	On the commensuration of plastic plowing at the microscale. *Tribology International*, **2020**, 151, 106477	4.9	3
289	Microscale plastic anisotropy of basal and pyramidal I slip in pure magnesium tested in shear. *Materialia*, **2020**, 14, 100932	3.2	5
288	Unraveling indentation-induced slip steps in austenitic stainless steel. *Materials and Design*, **2019**, 183, 108169	8.1	11
287	Towards quantifying the shear delamination of thin films. *Materialia*, **2019**, 8, 100421	3.2	1

286	How close can indents be placed without risking an erroneous pop-in statistics?. *Materialia*, **2019**, 7, 100378	3.2	6
285	Tungsten carbide as a deoxidation agent for plasma-facing tungsten-based materials. *Journal of Nuclear Materials*, **2019**, 524, 135-140	3.3	7
284	Micro fracture investigations of white etching layers. *Materials and Design*, **2019**, 180, 107892	8.1	12
283	Advances in in situ nanomechanical testing. *MRS Bulletin*, **2019**, 44, 438-442	3.2	19
282	Iron Aluminides. *Annual Review of Materials Research*, **2019**, 49, 297-326	12.8	30
281	Synthesis, microstructure, and hardness of rapidly solidified Cu-Cr alloys. *Journal of Alloys and Compounds*, **2019**, 794, 203-209	5.7	12
280	Initiation and stagnation of room temperature grain coarsening in cyclically strained gold films. *Acta Materialia*, **2019**, 169, 99-108	8.4	11
279	Atomic level bonding mechanism in steel/aluminum joints produced by cold pressure welding. *Materialia*, **2019**, 7, 100396	3.2	6
278	Development of a high-temperature micromechanics stage with a novel temperature measurement approach. *Review of Scientific Instruments*, **2019**, 90, 073904	1.7	0
277	Aggregation control of Ru and Ir nanoparticles by tunable aryl alkyl imidazolium ionic liquids. *Nanoscale*, **2019**, 11, 4073-4082	7.7	19
276	Au-Sn solders applied in transient liquid phase bonding: Microstructure and mechanical behavior. *Materialia*, **2019**, 8, 100503	3.2	6
275	Tribolayer formation during macro- and microscale cyclic contact. *Tribology International*, **2019**, 129, 436-441	4.9	1
274	Oxygen-mediated deformation and grain refinement in Cu-Fe nanocrystalline alloys. *Acta Materialia* , **2019**, 166, 281-293	8.4	27
273	Plastic deformation of tungsten due to deuterium plasma exposure: Insights from micro-compression tests. *Scripta Materialia*, **2019**, 162, 132-135	5.6	10
272	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	8.4	5
271	Synthesis and mechanical testing of grain boundaries at the micro and sub-micro scale. *Materialpruefung/Materials Testing*, **2019**, 61, 5-18	1.9	7
270	In situ atomic-scale observation of oxidation and decomposition processes in nanocrystalline alloys. *Nature Communications*, **2018**, 9, 946	17.4	13
269	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	8.1	18

268	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	8.1	9
267	Overview on micro- and nanomechanical testing: New insights in interface plasticity and fracture at small length scales. *Acta Materialia*, **2018**, 142, 248-282	8.4	170
266	Microstructure and mechanical properties in the thin film system Cu-Zr. *Thin Solid Films*, **2018**, 645, 193-202	2.2	7
265	Nano-laminated thin film metallic glass design for outstanding mechanical properties. *Scripta Materialia*, **2018**, 155, 73-77	5.6	14
264	Formation of eta carbide in ferrous martensite by room temperature aging. *Acta Materialia*, **2018**, 158, 297-312	8.4	26
263	Strain-Induced Asymmetric Line Segregation at Faceted Si Grain Boundaries. *Physical Review Letters* , **2018**, 121, 015702	7.4	50
262	On the nature of twin boundary-associated strengthening in Fe-Mn-C steel. *Scripta Materialia*, **2018**, 156, 27-31	5.6	20
261	Fracture toughness of Mo2BC thin films: Intrinsic toughness versus system toughening. *Materials and Design*, **2018**, 154, 20-27	8.1	25
260	Thermal stability of nanocomposite Mo2BC hard coatings deposited by magnetron sputtering. *Surface and Coatings Technology*, **2018**, 349, 378-383	4.4	8
259	Microstructural and mechanical characterization of an equiatomic YGdTbDyHo high entropy alloy with hexagonal close-packed structure. *Acta Materialia*, **2018**, 156, 86-96	8.4	37
258	Tetragonal fcc-Fe induced by carbide precipitates: Atomic scale insights from correlative electron microscopy, atom probe tomography, and density functional theory. *Physical Review Materials*, **2018**, 2,	3.2	13
257	Segregation-Induced Nanofaceting Transition at an Asymmetric Tilt Grain Boundary in Copper. *Physical Review Letters*, **2018**, 121, 255502	7.4	27
256	On the segregation of Re at dislocations in the phase of Ni-based single crystal superalloys. *Materialia*, **2018**, 4, 109-114	3.2	38
255	Dislocation slip transmission through a coherent {111} copper twin boundary: Strain rate sensitivity, activation volume and strength distribution function. *Acta Materialia*, **2018**, 161, 412-419	8.4	28
254	Bidirectional Transformation Enables Hierarchical Nanolaminate Dual-Phase High-Entropy Alloys. *Advanced Materials*, **2018**, 30, e1804727	24	110
253	Hydrogen embrittlement of tungsten induced by deuterium plasma: Insights from nanoindentation tests. *Journal of Materials Research*, **2018**, 33, 3530-3536	2.5	19
252	Sulfur induced embrittlement in high-purity, polycrystalline copper. *Acta Materialia*, **2018**, 156, 64-75	8.4	9
251	Stability, phase separation and oxidation of a supersaturated nanocrystalline Cu-33 at.% Cr thin film alloy. *Thin Solid Films*, **2017**, 623, 48-58	2.2	4

250	Effect of annealing on the size dependent deformation behavior of thin cobalt films on flexible substrates. *Thin Solid Films*, **2017**, 624, 34-40	2.2	5
249	Kinetics and crystallization path of a Fe-based metallic glass alloy. *Acta Materialia*, **2017**, 127, 341-350	8.4	33
248	In situ Laue: Instrumental Setup for the Deformation of Micron Sized Samples **2017**, 425-438		
247	Dislocation-twin boundary interaction in small scale Cu bi-crystals loaded in different crystallographic directions. *Acta Materialia*, **2017**, 129, 91-97	8.4	39
246	Dislocation interaction and twinning-induced plasticity in face-centered cubic Fe-Mn-C micro-pillars. *Acta Materialia*, **2017**, 132, 162-173	8.4	28
245	Microstructural evolution and solid state dewetting of epitaxial Al thin films on sapphire (Al2O3). *Acta Materialia*, **2017**, 133, 356-366	8.4	27
244	Strain rate dependence of the slip transfer through a penetrable high angle grain boundary in copper. *Scripta Materialia*, **2017**, 138, 88-91	5.6	16
243	Compressed Bi-crystal micropillars showing a sigmoidal deformation state A computational study. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing* , **2017**, 700, 168-174	5.3	
242	100 years public private partnership in metallurgical and materials science research. *Materials Today*, **2017**, 20, 335-337	21.8	
241	Surface optical phonon propagation in defect modulated nanowires. *Journal of Applied Physics*, **2017**, 121, 085702	2.5	2
240	Microcantilever Fracture Testing of Intermetallic Cu3Sn in Lead-Free Solder Interconnects. *Journal of Electronic Materials*, **2017**, 46, 1607-1611	1.9	2
239	Size effect in bi-crystalline micropillars with a penetrable high angle grain boundary. *Acta Materialia* , **2017**, 129, 312-320	8.4	40
238	Pre- and post-buckling behavior of bi-crystalline micropillars: Origin and consequences. *Acta Materialia*, **2017**, 124, 195-203	8.4	16
237	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, 075305	2.5	8
236	Annealing induced void formation in epitaxial Al thin films on sapphire (Al2O3). *Acta Materialia*, **2017**, 140, 355-365	8.4	15
235	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	5.3	18
234	In-situ tracking the structural and chemical evolution of nanostructured CuCr alloys. *Acta Materialia* , **2017**, 138, 42-51	8.4	15
233	Beam-induced atomic migration at Ag-containing nanofacets at an asymmetric Cu grain boundary. *Journal of Materials Research*, **2017**, 32, 968-982	2.5	3

232	In-situ TEM Study of Mechanical Size Effects in TiC Strengthened Steels. *Microscopy and Microanalysis*, **2017**, 23, 732-733	0.5	
231	On the influence of microcantilever pre-crack geometries on the apparent fracture toughness of brittle materials. *Acta Materialia*, **2017**, 136, 281-287	8.4	33
230	Gold–Palladium Bimetallic Catalyst Stability: Consequences for Hydrogen Peroxide Selectivity. *ACS Catalysis*, **2017**, 7, 5699-5705	13.1	58
229	Maintaining strength in supersaturated copper–chromium thin films annealed at 0.5 of the melting temperature of Cu. *Journal of Materials Science*, **2017**, 52, 913-920	4.3	4
228	In-situ TEM study of diffusion kinetics and electron irradiation effects on the Cr phase separation of a nanocrystalline Cu–4 at.% Cr thin film alloy. *Journal of Alloys and Compounds*, **2017**, 695, 1583-1590	5.7	8
227	Mechanical size effects in a single crystalline equiatomic FeCrCoMnNi high entropy alloy. *Scripta Materialia*, **2017**, 129, 52-55	5.6	36
226	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	3.1	8
225	Stress intensity factor dependence on anisotropy and geometry during micro-fracture experiments. *Scripta Materialia*, **2017**, 127, 76-78	5.6	28
224	Nanostructure of Mo2BC thin films and the effect on mechanical properties **2016**, 319-320		
223	Coccospheres confer mechanical protection: New evidence for an old hypothesis. *Acta Biomaterialia*, **2016**, 42, 258-264	10.8	16
222	Importance and Challenges of Electrochemical in Situ Liquid Cell Electron Microscopy for Energy Conversion Research. *Accounts of Chemical Research*, **2016**, 49, 2015-22	24.3	136
221	Strain-induced phase transformation of a thin Co film on flexible substrates. *Acta Materialia*, **2016**, 121, 227-233	8.4	13
220	Heat-Induced Phase Transformation of Three-Dimensional Nb3O7(OH) Superstructures: Effect of Atmosphere and Electron Beam. *Crystal Growth and Design*, **2016**, 16, 4309-4317	3.5	10
219	Deformation-Induced Martensite: A New Paradigm for Exceptional Steels. *Advanced Materials*, **2016** , 28, 7753-7	24	48
218	Microscale Fracture Behavior of Single Crystal Silicon Beams at Elevated Temperatures. *Nano Letters*, **2016**, 16, 7597-7603	11.5	42
217	Fracture toughness of intermetallic Cu6Sn5 in lead-free solder microelectronics. *Scripta Materialia*, **2016**, 123, 38-41	5.6	19
216	Size and orientation dependent mechanical behavior of body-centered tetragonal Sn at 0.6 of the melting temperature. *Acta Materialia*, **2016**, 115, 76-82	8.4	14
215	Are Mo2BC nanocrystalline coatings damage resistant? Insights from comparative tension experiments. *Surface and Coatings Technology*, **2016**, 289, 213-218	4.4	24

214	Investigation of solid state dewetting phenomena of epitaxial Al thin films on sapphire using electron microscopy **2016**, 203-204		
213	Superlattice effect for enhanced fracture toughness of hard coatings. *Scripta Materialia*, **2016**, 124, 67-70	3.6	98
212	Electronic hybridisation implications for the damage-tolerance of thin film metallic glasses. *Scientific Reports*, **2016**, 6, 36556	4.9	21
211	Can microscale fracture tests provide reliable fracture toughness values? A case study in silicon. *Journal of Materials Research*, **2015**, 30, 686-698	2.5	105
210	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	5.3	21
209	The peculiarity of the metal-ceramic interface. *Scientific Reports*, **2015**, 5, 11460	4.9	18
208	Comparing small scale plasticity of copper-chromium nanolayered and alloyed thin films at elevated temperatures. *Acta Materialia*, **2015**, 93, 175-186	8.4	24
207	Nanotribology in austenite: Normal force dependence. *Wear*, **2015**, 338-339, 430-435	3.5	9
206	Micro-tension study of miniaturized Cu lines at variable temperatures. *Acta Materialia*, **2015**, 92, 243-254	8.4	10
205	Downscaling metal-dielectric interface fracture experiments to sub-micron dimensions: A feasibility study using TEM. *Surface and Coatings Technology*, **2015**, 270, 1-7	4.4	7
204	Formation of dislocation networks in a coherent Cu Σ3(1 1 1) twin boundary. *Scripta Materialia*, **2015**, 102, 71-74	5.6	23
203	Nanotribology in austenite: Plastic plowing and crack formation. *Wear*, **2015**, 338-339, 436-440	3.5	17
202	Adhesion measurement of a buried Cr interlayer on polyimide. *Philosophical Magazine*, **2015**, 95, 1982-1991	1.6	15
201	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	2.5	4
200	Mechanical and chemical investigation of the interface between tungsten-based metallizations and annealed borophosphosilicate glass. *Thin Solid Films*, **2015**, 583, 170-176	2.2	7
199	Importance of dislocation pile-ups on the mechanical properties and the Bauschinger effect in microcantilevers. *Journal of Materials Research*, **2015**, 30, 791-797	2.5	27
198	Transition from shear to stress-assisted diffusion of copper–chromium nanolayered thin films at elevated temperatures. *Acta Materialia*, **2015**, 100, 73-80	8.4	19
197	Influence of initial microstructure on thermomechanical fatigue behavior of Cu films on substrates. *Microelectronic Engineering*, **2015**, 137, 5-10	2.5	5

196	Nanostructure and mechanical behavior of metastable Cu□r thin films grown by molecular beam epitaxy. *Acta Materialia*, **2015**, 83, 318-332	8.4	43
195	Study on the Atomic and Electronic Structure in CrN (VN, TiN) Films using CS-Corrected TEM. *Microscopy and Microanalysis*, **2015**, 21, 2079-2080	0.5	
194	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	8.4	56
193	In Situ TEM Microcompression of Single and Bicrystalline Samples: Insights and Limitations. *Jom*, **2015**, 67, 1704-1712	2.1	28
192	Interface fracture and chemistry of a tungsten-based metallization on borophosphosilicate glass. *Philosophical Magazine*, **2015**, 95, 1967-1981	1.6	4
191	Cyclic bending experiments on free-standing Cu micron lines observed by electron backscatter diffraction. *Acta Materialia*, **2015**, 83, 460-469	8.4	26
190	Internal and external stresses: In situ TEM compression of Cu bicrystals containing a twin boundary. *Scripta Materialia*, **2015**, 100, 94-97	5.6	35
189	Growth mechanism of Al2Cu precipitates during in situ TEM heating of a HPT deformed Al□wt.%Cu alloy. *Journal of Alloys and Compounds*, **2014**, 600, 43-50	5.7	5
188	Crack deflection in multi-layered four-point bending samples. *International Journal of Fracture*, **2014**, 190, 167-176	2.3	6
187	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	5.3	27
186	Differences in deformation behavior of bicrystalline Cu micropillars containing a twin boundary or a large-angle grain boundary. *Acta Materialia*, **2014**, 73, 240-250	8.4	101
185	Damage evolution during cyclic tension□ension loading of micron-sized Cu lines. *Acta Materialia*, **2014**, 67, 297-307	8.4	26
184	Intermetallic phase selection during homogenization for AA6082 alloy. *Philosophical Magazine*, **2014**, 94, 830-846	1.6	12
183	An elevated temperature study of a Ti adhesion layer on polyimide. *Thin Solid Films*, **2013**, 531, 354-361	2.2	31
182	Elastoplastic buckling as source of misinterpretation of micropillar tests. *Acta Materialia*, **2013**, 61, 4996-5007	8.4	14
181	Insights into the atomic and electronic structure triggered by ordered nitrogen vacancies in CrN. *Physical Review B*, **2013**, 87,	3.3	18
180	Transmission electron microscopy characterization of CrN films on MgO(001). *Thin Solid Films*, **2013**, 545, 154-160	2.2	3
179	Microcompression and cyclic deformation behaviors of coaxial copper bicrystals with a single twin boundary. *Scripta Materialia*, **2013**, 69, 199-202	5.6	28

178	Diffusive and massive phase transformations in TiAlNb alloys – Modelling and experiments. *Intermetallics*, **2013**, 38, 126-138	3.5	12
177	Investigation of reversible plasticity in a micron-sized, single crystalline copper bending beam by X-ray Laue diffraction. *Philosophical Magazine*, **2012**, 92, 3231-3242	1.6	23
176	Study of the human tooth using a low-voltage CS-corrected TEM. *Microscopy and Microanalysis*, **2012**, 18, 254-255	0.5	
175	Robust mechanical performance of chromium-coated polyethylene terephthalate over a broad range of conditions. *Philosophical Magazine*, **2012**, 92, 3346-3362	1.6	10
174	Influence of impurity elements on the nucleation and growth of Si in high purity melt-spun Al-Si-based alloys. *Philosophical Magazine*, **2012**, 92, 3789-3805	1.6	40
173	Yield stress influenced by the ratio of wire diameter to grain size – a competition between the effects of specimen microstructure and dimension in micro-sized polycrystalline copper wires. *Philosophical Magazine*, **2012**, 92, 3243-3256	1.6	55
172	Conventional and Advanced Electron Transmission Microscopy **2012**, 39-69		1
171	Formation of Surface Patterns Observed with Reflection Electron Microscopy **2012**, 99-122		1
170	Dynamic Transmission Electron Microscopy **2012**, 71-97		1
169	Electron and Ion Irradiation **2012**, 123-143		1
168	Observing Chemical Reactions Using Transmission Electron Microscopy **2012**, 145-170		1
167	In-Situ TEM Studies of Vapor- and Liquid-Phase Crystal Growth **2012**, 171-189		4
166	In-Situ TEM Studies of Oxidation **2012**, 191-208		1
165	Mechanical Testing with the Scanning Electron Microscope **2012**, 209-225		
164	In-Situ TEM Straining Experiments: Recent Progress in Stages and Small-Scale Mechanics **2012**, 227-254		1
163	In-Situ Nanoindentation in the Transmission Electron Microscope **2012**, 255-277		
162	Lorentz Microscopy **2012**, 347-369		1
161	In-Situ TEM with Electrical Bias on Ferroelectric Oxides **2012**, 321-346		

160	Introduction to Scanning Electron Microscopy **2012**, 1-37		0
159	Current-Induced Transport: Electromigration **2012**, 279-301		
158	Cathodoluminescence in Scanning and Transmission Electron Microscopies **2012**, 303-319		
157	In Situ Study of TiAl Lamellae Formation in Supersaturated -Ti3Al Grains. *Advanced Engineering Materials*, **2012**, 14, 299-303	3.5	11
156	Expected and unexpected plastic behavior at the micron scale: An in situ Laue tensile study. *Acta Materialia*, **2012**, 60, 1252-1258	8.4	31
155	Kinetics and driving forces of abnormal grain growth in thin Cu films. *Acta Materialia*, **2012**, 60, 2397-2406	8.4	37
154	Novel temperature dependent tensile test of freestanding copper thin film structures. *Review of Scientific Instruments*, **2012**, 83, 064702	1.7	23
153	Advanced nanomechanics in the TEM: effects of thermal annealing on FIB prepared Cu samples. *Philosophical Magazine*, **2012**, 92, 3269-3289	1.6	41
152	On the limits of the interfacial yield model for fragmentation testing of brittle films on polymer substrates. *Philosophical Magazine*, **2012**, 92, 3363-3380	1.6	9
151	Quantitative Approaches for in situ SEM and TEM Deformation Studies. *Microscopy and Microanalysis*, **2012**, 18, 736-737	0.5	
150	Sample Preparation by Metallography and Focused Ion Beam for Nanomechanical Testing. *Praktische Metallographie/Practical Metallography*, **2012**, 49, 343-355	0.3	21
149	Atomic and Electronic Interface Structure of a VN Hard Coating on MgO. *Microscopy and Microanalysis*, **2011**, 17, 1370-1371	0.5	
148	Grain resolved orientation changes and texture evolution in a thermally strained Al film on Si substrate. *Surface and Coatings Technology*, **2011**, 206, 1850-1854	4.4	7
147	The effect of film thickness variations in periodic cracking: Analysis and experiments. *Surface and Coatings Technology*, **2011**, 206, 1830-1836	4.4	23
146	The effect of temperature and strain rate on the periodic cracking of amorphous AlxOy films on Cu. *Surface and Coatings Technology*, **2011**, 206, 1855-1859	4.4	2
145	Dislocation plasticity of Al film on polyimide investigated by cross-sectional in situ transmission electron microscopy straining. *Scripta Materialia*, **2011**, 65, 456-459	5.6	9
144	Impact of instrumental constraints and imperfections on the dislocation structure in micron-sized Cu compression pillars. *Acta Materialia*, **2011**, 59, 5618-5626	8.4	44
143	In Situ Laue: Instrumental Setup for the Deformation of Micron Sized Samples. *Advanced Engineering Materials*, **2011**, 13, 837-844	3.5	24

142	Interface failure and adhesion measured by focused ion beam cutting of metal–polymer interfaces. *Philosophical Magazine Letters*, **2011**, 91, 530-536	1	15
141	Microstructure evolution and mechanical properties of an intermetallic Ti-43.5Al-4Nb-1Mo-0.1B alloy after ageing below the eutectoid temperature. *International Journal of Materials Research*, **2011**, 102, 703-708	0.5	41
140	Deformation mechanisms in micron-sized PST TiAl compression samples: Experiment and model. *Acta Materialia*, **2011**, 59, 3410-3421	8.4	30
139	Work hardening in micropillar compression: In situ experiments and modeling. *Acta Materialia*, **2011**, 59, 3825-3840	8.4	73
138	Electrical properties and structure of grain boundaries in n-conducting BaTiO3 ceramics. *Journal of the European Ceramic Society*, **2011**, 31, 763-771	6	18
137	Dislocation storage in single slip-oriented Cu micro-tensile samples: new insights via X-ray microdiffraction. *Philosophical Magazine*, **2011**, 91, 1256-1264	1.6	37
136	Microstructure and adhesion of as-deposited and annealed Cu/Ti films on polyimide. *International Journal of Materials Research*, **2011**, 102, 1-6	0.5	16
135	Physical Metallurgy and Properties of Solidifying TiAl Based Alloys. *Materials Research Society Symposia Proceedings*, **2011**, 1295, 95		1
134	A Mechanical Method for Preparing TEM Samples from Brittle Films on Compliant Substrates. *Praktische Metallographie/Practical Metallography*, **2011**, 48, 408-413	0.3	7
133	In Situ TEM Heating Study of the Lamellae Formation inside the Matrix of a Ti-45Al-7.5Nb Alloy. *Advanced Materials Research*, **2010**, 146-147, 1365-1368	0.5	1
132	Disparate tendency of stress evolution of thin and thick electroplated Cu films at room temperature **2010**,		1
131	Unveiling the atomic and electronic structure of the VN/MgO interface. *Physical Review B*, **2010**, 82,	3.3	3
130	Study of nanometer-scaled lamellar microstructure in a Ti45Al7.5Nb alloy Experiments and modeling. *Intermetallics*, **2010**, 18, 509-517	3.5	21
129	Can local hot spots induce /lamellae during incomplete massive transformation of TiAl alloys?. *Intermetallics*, **2010**, 18, 972-976	3.5	6
128	Stress, Sheet Resistance, and Microstructure Evolution of Electroplated Cu Films During Self-Annealing. *IEEE Transactions on Device and Materials Reliability*, **2010**, 10, 47-54	1.6	27
127	In situ TEM study of microplasticity and Bauschinger effect in nanocrystalline metals. *Acta Materialia*, **2010**, 58, 4772-4782	8.4	66
126	Fracture and Delamination of Chromium Thin Films on Polymer Substrates. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2010**, 41, 870-875	2.3	66
125	Microplasticity phenomena in thermomechanically strained nickel thin films. *Journal of Materials Science*, **2010**, 45, 3874-3881	4.3	7

124	Cyclic loading behavior of micro-sized polycrystalline copper wires. *Procedia Engineering*, **2010**, 2, 925-930		11
123	Investigation of the fatigue behavior of Al thin films with different microstructure. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2010**, 527, 7757-7763	5.3	26
122	Micron-sized fracture experiments on amorphous SiOx films and SiOx/SiNx multi-layers. *Thin Solid Films*, **2010**, 518, 5796-5801	2.2	21
121	Structural characterization of a Cu/MgO(001) interface using CS-corrected HRTEM. *Thin Solid Films*, **2010**, 519, 1662-1667	2.2	24
120	Adhesion energies of Cr thin films on polyimide determined from buckling: Experiment and model. *Acta Materialia*, **2010**, 58, 5520-5531	8.4	97
119	Overview on established and novel FIB based miniaturized mechanical testing using in-situ SEM. *International Journal of Materials Research*, **2009**, 100, 1074-1087	0.5	47
118	Deformation twinning in Ni-Mn-Ga micropillars with 10M martensite. *Journal of Applied Physics*, **2009**, 106, 53906	2.5	15
117	Influence of the indenter tip geometry and environment on the indentation modulus of enamel. *Journal of Materials Research*, **2009**, 24, 616-625	2.5	19
116	On the importance of sample compliance in uniaxial microtesting. *Scripta Materialia*, **2009**, 60, 148-151	5.6	69
115	Micro-compression testing: A critical discussion of experimental constraints. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2009**, 505, 79-87	5.3	164
114	Stress-controlled fatigue behaviour of micro-sized polycrystalline copper wires. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2009**, 515, 71-78	5.3	21
113	In situ observation of dislocation nucleation and escape in a submicrometre aluminium single crystal. *Nature Materials*, **2009**, 8, 95-100	27	355
112	A comparative micro-cantilever study of the mechanical behavior of silicon based passivation films. *Thin Solid Films*, **2009**, 518, 247-256	2.2	163
111	Can micro-compression testing provide stress–strain data for thin films?. *Thin Solid Films*, **2009**, 518, 1517–1521	2.2	15
110	Interface fracture properties of thin films studied by using the micro-cantilever deflection technique. *Surface and Coatings Technology*, **2009**, 204, 878-881	4.4	62
109	Miniaturized single-crystalline fcc metals deformed in tension: New insights in size-dependent plasticity. *Progress in Materials Science*, **2009**, 54, 664-688	42.2	134
108	Trends in the Development of New Mg Alloys. *Annual Review of Materials Research*, **2008**, 38, 505-533	12.8	169
107	Crystal rotation in Cu single crystal micropillars: In situ Laue and electron backscatter diffraction. *Applied Physics Letters*, **2008**, 92, 071905	3.4	67

106	Nanometer-scaled lamellar microstructures in Ti45Al7.5Nb(0; 0.5)C alloys and their influence on hardness. *Intermetallics*, **2008**, 16, 868-875	3.5	58
105	Observation of giant diffusivity along dislocation cores. *Science*, **2008**, 319, 1646-9	33.3	275
104	Visualizing the Behavior of Dislocations: Seeing is Believing. *MRS Bulletin*, **2008**, 33, 122-131	3.2	30
103	Tensile behaviour of micro-sized copper wires studied using a novel fibre tensile module. *International Journal of Materials Research*, **2008**, 99, 716-724	0.5	29
102	Initial Stages of Lamellae Formation in High Nb Containing TiAl Based Alloys. *Materials Research Society Symposia Proceedings*, **2008**, 1128, 40701		
101	Dislocation-induced crystal rotations in micro-compressed single crystal copper columns. *Journal of Materials Science*, **2008**, 43, 2503-2506	4.3	42
100	N-K electron energy-loss near-edge structures for TiN/VN layers: an ab initio and experimental study. *Analytical and Bioanalytical Chemistry*, **2008**, 390, 1447-53	4.4	12
99	Testing Thin Films by Microcompression: Benefits and Limits. *BHM-Zeitschrift Fuer Rohstoffe Geotechnik Metallurgie Werkstoffe Maschinen-Und Anlagentechnik*, **2008**, 153, 257-262	0.6	4
98	Thermal Stresses and Microstructure of Tungsten Films on Copper. *BHM-Zeitschrift Fuer Rohstoffe Geotechnik Metallurgie Werkstoffe Maschinen-Und Anlagentechnik*, **2008**, 153, 273-277	0.6	3
97	A further step towards an understanding of size-dependent crystal plasticity: In situ tension experiments of miniaturized single-crystal copper samples. *Acta Materialia*, **2008**, 56, 580-592	8.4	396
96	Interface structure of epitaxial (111) VN films on (111) MgO substrates. *Thin Solid Films*, **2008**, 517, 1177-1181	2.1	15
95	Precipitation processes in a Mg-Zn-Sn alloy studied by TEM and SAXS. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2008**, 494, 158-165	5.3	38
94	Experimental studies on epitaxially grown TiN and VN films. *Thin Solid Films*, **2007**, 516, 369-373	2.2	27
93	Size-independent stresses in Al thin films thermally strained down to -100°C. *Acta Materialia*, **2007**, 55, 1941-1946	8.4	35
92	In situ TEM straining of single crystal Au films on polyimide: Change of deformation mechanisms at the nanoscale. *Acta Materialia*, **2007**, 55, 5558-5571	8.4	101
91	Strain compensation by twinning in Au thin films: Experiment and model. *Acta Materialia*, **2007**, 55, 6659-6665	8.4	24
90	FIB damage of Cu and possible consequences for miniaturized mechanical tests. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2007**, 459, 262-272	5.3	346
89	Influence of external and internal length scale on the flow stress of copper. *International Journal of Materials Research*, **2007**, 98, 1047-1053	0.5	24

88	Combined ab-initio and N-K, Ti-L2,3, V-L2,3 electron energy-loss near edge structure studies for TiN and VN films. *International Journal of Materials Research*, **2007**, 98, 1060-1065	0.5	5
87	Conventional TEM Investigation Of The FIB Damage In Copper. *Microscopy and Microanalysis*, **2007**, 13, 100-101	0.5	10
86	Size-Induced Transition from Perfect to Partial Dislocation Plasticity in Single Crystal Au Films on Polyimide. *Microscopy and Microanalysis*, **2007**, 13, 278-279	0.5	1
85	A Comparison of the Electronic Structure of N-K in TiN and VN using EELS and Ab-initio Calculations. *Microscopy and Microanalysis*, **2007**, 13, 414-415	0.5	
84	Dynamical growth of Cu–Pt nanowires with a nanonecklace morphology. *Nanotechnology*, **2007**, 18, 415601	3.4	5
83	TEM investigations of the structural evolution in a pearlitic steel deformed by high-pressure torsion. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2006**, 37, 1963-1968	2.3	92
82	Determination of Mechanical Properties of Copper at the Micron Scale. *Advanced Engineering Materials*, **2006**, 8, 1119-1125	3.5	174
81	Mechanical Size-Effects in Miniaturized and Bulk Materials. *Advanced Engineering Materials*, **2006**, 8, 1033-1045	3.5	64
80	In-Situ X-ray Diffraction as a Tool to Probe Mechanical Phenomena Down to the Nano-Scale. *Advanced Engineering Materials*, **2006**, 8, 1084-1088	3.5	0
79	Microstructure and mechanical behavior of Pt-modified NiAl diffusion coatings. *International Journal of Materials Research*, **2006**, 97, 689-698	0.5	6
78	Passivation Effects in Copper Thin Films. *AIP Conference Proceedings*, **2006**,	0	1
77	Thermomechanical Behavior of Thin Metal Films under Different Ambient Conditions. *AIP Conference Proceedings*, **2006**,	0	3
76	Strain Energy Effects on Texture Evolution in Thin Films: Biaxial vs. Uniaxial Stress State. *AIP Conference Proceedings*, **2006**,	0	1
75	Grain refinement in γ-TiAl-based alloys by solid state phase transformations. *Intermetallics*, **2006**, 14, 1380-1385	3.5	104
74	Texture transition in Cu thin films: Electron backscatter diffraction vs. X-ray diffraction. *Acta Materialia*, **2006**, 54, 3863-3870	8.4	55
73	Bonding at copper–alumina interfaces established by different surface treatments: a critical review. *Journal of Materials Science*, **2006**, 41, 5161-5168	4.3	29
72	In-situ TEM straining experiments of Al films on polyimide using a novel FIB design for specimen preparation. *Journal of Materials Science*, **2006**, 41, 4484-4489	4.3	24
71	Creep behaviour and related high temperature microstructural stability of Ti–46Al–8Nb sheet material. *Intermetallics*, **2005**, 13, 515-524	3.5	75

70	Obtaining different orientation relationships for Cu films grown on (0001) Al2O3substrates by magnetron sputtering. *International Journal of Materials Research*, **2005**, 96, 249-254		11
69	Microstructural size effects on the hardness of nanocrystalline TiN/amorphous-SiNx coatings prepared by magnetron sputtering. *Thin Solid Films*, **2005**, 473, 114-122	2.2	39
68	A quantitative study of the hardness of a superhard nanocrystalline titanium nitride/silicon nitride coating. *Scripta Materialia*, **2005**, 52, 1269-1274	5.6	30
67	Strained thin copper films as model catalysts in the materials gap. *Catalysis Letters*, **2005**, 102, 91-97	2.8	14
66	Pipe-diffusion ripening of Si precipitates in Al-0.5%Cu-1%Si thin films. *Philosophical Magazine*, **2005**, 85, 3541-3552	1.6	7
65	Precipitation hardening in Mg-Z-Sn alloys with minor additions of Ca and Si. *International Journal of Materials Research*, **2005**, 96, 1081-1087		14
64	In-Situ TEM Study of Plastic Stress Relaxation Mechanisms and Interface Effects in Metallic Films. *Materials Research Society Symposia Proceedings*, **2005**, 875, 1		6
63	Influence of Gas Atmosphere on the Plasticity of Metal Thin Films. *Materials Research Society Symposia Proceedings*, **2005**, 875, 1		
62	Microstructure and mechanical properties of Si and YN doped powder metallurgical tantalum. *International Journal of Materials Research*, **2004**, 95, 573-578		4
61	Size effects in the plastic deformation of NiAl thin films. *International Journal of Materials Research*, **2004**, 95, 769-778		9
60	Internal Friction of a High-Nb Gamma-TiAl-Based Alloy with Different Microstructures. *Materials Research Society Symposia Proceedings*, **2004**, 842, 483		
59	Microstructure and Thermo-Mechanical Behavior of NiAl Coatings. *Materials Research Society Symposia Proceedings*, **2004**, 842, 55		
58	Mechanical spectroscopy of a high-Nb-bearing TiAl-based alloy with near-gamma and fully lamellar microstructure. *Philosophical Magazine Letters*, **2004**, 84, 383-393	1	9
57	Microstructure of Alumina Composites Containing Niobium and Niobium Aluminides. *Journal of the American Ceramic Society*, **2004**, 83, 397-402	3.8	9
56	Thermal stability of Ti and Pt nanowires manufactured by Ga+ focused ion beam. *Journal of Microscopy*, **2004**, 214, 252-60	1.9	15
55	Transmission electron microscopy of fluorapatite-gelatine composite particles prepared using focused ion beam milling. *Journal of Microscopy*, **2004**, 214, 208-12	1.9	21
54	Influence of tantalum and silver interlayers on thermal stress evolution in copper thin films on silicon substrates. *Scripta Materialia*, **2004**, 50, 733-737	5.6	14
53	Channel cracking of NiAl thin films on Si substrates. *Acta Materialia*, **2004**, 52, 2325-2336	8.4	33

52	Plasticity-Related Phenomena in Metallic Films on Substrates. *Materials Research Society Symposia Proceedings*, **2003**, 779, 421		5
51	Mechanical Size-Effects and Dislocation Dynamics in Cu Thin Films. *Microscopy and Microanalysis*, **2003**, 9, 246-247	0.5	1
50	Small-scale plasticity in thin Cu and Al films. *Microelectronic Engineering*, **2003**, 70, 412-424	2.5	89
49	Characterization of biocompatible Ti(CNO) layers on polymeric substrates. *Applied Surface Science*, **2003**, 219, 329-337	6.7	1
48	Parallel glide: unexpected dislocation motion parallel to the substrate in ultrathin copper films. *Acta Materialia*, **2003**, 51, 4471-4485	8.4	93
47	Cyclic deformation of polycrystalline Cu films. *Philosophical Magazine*, **2003**, 83, 693-710	1.6	110
46	Parallel Glide: A Fundamentally Different Type of Dislocation Motion in Ultrathin Metal Films. *Materials Research Society Symposia Proceedings*, **2003**, 779, 441		1
45	Designed fully lamellar microstructures in a □TiAl based alloy: adjustment and microstructural changes upon long-term isothermal exposure at 700 and 800□C. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2002**, 329-331, 124-129	5.3	48
44	On the role of twinning during room temperature deformation of □TiAl based alloys. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2002**, 329-331, 177-183	5.3	18
43	Growth and microstructural stability of epitaxial Al films on (0001) □Al2O3 substrates. *Acta Materialia*, **2002**, 50, 5021-5032	8.4	73
42	In situ TEM observation of dislocation motion in thermally strained Al nanowires. *Acta Materialia*, **2002**, 50, 5033-5047	8.4	29
41	Laser cladding of Co-based hardfacing on Cu substrate. *Journal of Materials Science*, **2002**, 37, 5345-5353	4.3	36
40	Strain Rate Dependence of the Deformation Mechanisms in a Fully Lamellar □TiAl-Based Alloy. *International Journal of Materials Research*, **2002**, 93, 180-185		7
39	Microstructural stability and creep behavior of a lamellar □TiAl based alloy with extremely fine lamellar spacing. *Intermetallics*, **2002**, 10, 459-466	3.5	40
38	Dislocation dynamics in sub-micron confinement: recent progress in Cu thin film plasticity. *International Journal of Materials Research*, **2002**, 93, 383-391		30
37	In situ transmission electron microscopy study of thermal-stress-induced dislocations in a thin Cu film constrained by a Si substrate. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2001**, 309-310, 468-472	5.3	53
36	Dynamic observation of Al thin films plastically strained in a TEM. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2001**, 309-310, 463-467	5.3	25
35	Effects of thickness on the characteristic length scale of dislocation plasticity in Ag thin films. *Acta Materialia*, **2001**, 49, 3597-3607	8.4	28

34	Interface controlled plasticity in metals: dispersion hardening and thin film deformation. *Progress in Materials Science*, **2001**, 46, 283-307	42.2	106
33	Equilibrium Amorphous Silicon□Calcium□Oxygen Films at Interfaces in Copper□Alumina Composites Prepared by Melt Infiltration. *Journal of the American Ceramic Society*, **2001**, 84, 623-630	3.8	26
32	Quasi-crystalline grain-boundary phase in the magnesium die-cast alloy ZA85. *Scripta Materialia*, **2001**, 45, 517-524	5.6	64
31	Influence of Film/Substrate Interface Structure on Plasticity in Metal Thin Films. *Materials Research Society Symposia Proceedings*, **2001**, 673, 1		9
30	Observations of Dislocation Motion and Stress Inhomogeneities in a Thin Copper Film. *Materials Research Society Symposia Proceedings*, **2001**, 673, 1		6
29	A New Type of Dislocation Mechanism in Ultrathin Copper Films. *Materials Research Society Symposia Proceedings*, **2001**, 695, 1		8
28	Microstructure of Physical Vapour Deposited TiSiN Coatings. *Materials Research Society Symposia Proceedings*, **2001**, 704, 731		5
27	Dislocations in Thin Films: Observations **2001**, 2329-2331		
26	Creep Behavior and Microstructural Stability of Lamellar □TiAl (Cr, Mo, Si, B) with Extremely Fine Lamellar Spacing. *Materials Research Society Symposia Proceedings*, **2000**, 646, 125		1
25	Computational Modeling and Experimental Study of the Deformation Behavior of □TiAl-Based Alloys. *Advanced Engineering Materials*, **2000**, 2, 662-666	3.5	9
24	Effect of heat-treatments and hot-isostatic pressing on phase transformation and microstructure in a □B2 containing □TiAl based alloy. *Scripta Materialia*, **2000**, 42, 1065-1070	5.6	38
23	In situ transmission electron microscopy study of dislocations in a polycrystalline Cu thin film constrained by a substrate. *Applied Physics Letters*, **2000**, 77, 1126-1128	3.4	58
22	On the origin of acoustic emission during room temperature compressive deformation of a □TiAl based alloy. *Intermetallics*, **2000**, 8, 823-830	3.5	32
21	Laser surface treatment of steels with CrB2 and Ni2B powders. *Journal of Laser Applications*, **1999**, 11, 216-219	2.1	2
20	Microstructure and tribological properties of Ni-based claddings on Cu substrates. *Wear*, **1999**, 225-229, 18-26	3.5	39
19	Microstructure and Phase Evolution of Niobium-Aluminide□Alumina Composites Prepared by Melt-Infiltration. *Physica Status Solidi A*, **1998**, 166, 241-255		17
18	Growth and structure of internal Cu/Al2O3 and Cu/Ti/Al2O3 interfaces11Paper presented at Sympos. Synergistic Synthesis of Inorganic Materials, March 1996, Schlo□Ringberg, Germany.. *Acta Materialia*, **1998**, 46, 759-772	8.4	49
17	Electron-energy-loss spectroscopy studies of Cu-□Al2O3 interfaces grown by molecular beam epitaxy. *Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties*, **1998**, 78, 439-465		62

16	Formation and interface structure of TiC particles in dispersion-strengthened Cu alloys. *Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties*, **1998**, 77, 1531-1554		8
15	Microstructure of Nb BASED A12O3 Composites. *Microscopy and Microanalysis*, **1998**, 4, 588-589	0.5	
14	Structure and Composition of Interfaces in Ceramics and Ceramic Composites **1998**, 1-12		
13	Microstructure of Ni2B Laser-Induced Surface-Alloyed Fe. *Materials Research Society Symposia Proceedings*, **1997**, 481, 45		
12	A microindentation method for estimating interfacial shear strength and its use in studying the influence of titanium transition layers on the interface strength of epitaxial copper films on sapphire. *Acta Materialia*, **1997**, 45, 489-499	8.4	21
11	The influence of chromium addition on the toughness of NiAl2O3 interfaces. *Acta Materialia*, **1997**, 45, 3503-3513	8.4	52
10	Synthesis of analytical and high-resolution transmission electron microscopy to determine the interface structure of Cu/Al2O3. *Ultramicroscopy*, **1997**, 67, 207-217	3.1	44
9	Quantification of irradiation damage generated during HRTEM with 1250 keV electrons. *Ultramicroscopy*, **1996**, 63, 49-55	3.1	12
8	Retrieval of crystal defect structures from HREM images by simulated evolution II. Experimental image evaluation. *Ultramicroscopy*, **1996**, 65, 217-228	3.1	41
7	Electron Energy-Loss Spectroscopy at Cu/Al2O3 and Ti/Al2O3 Interfaces. *Materials Science Forum*, **1996**, 207-209, 181-184	0.4	8
6	Atomic structure of internal Cu/Al2O3 interfaces. *Proceedings Annual Meeting Electron Microscopy Society of America*, **1996**, 54, 686-687		
5	Measurement of coherency states of metalceramic interfaces by HREM image processing. *Physica Status Solidi A*, **1995**, 150, 77-87		23
4	Growth and structure of copper thin films deposited on (0001) sapphire by molecular beam epitaxy. *The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties*, **1995**, 71, 1111-1124		101
3	Measurement of the Interfacial Shear Strength of Thin Copper Films on Sapphire by Microindentation Experiments. *Materials Research Society Symposia Proceedings*, **1995**, 403, 151		
2	Electron Energy-Loss Near-Edge Structure of Metal-Alumina Interfaces. *Microscopy Microanalysis Microstructures*, **1995**, 6, 19-31		54
1	Electron-energy-loss spectroscopy studies of Cu-Al2O3 interfaces grown by molecular beam epitaxy		8