Eduard Arzt

List of Publications by Year
in descending order

373 papers	23,280 citations	8755 75 h-index	9345 143 g-index
385 all docs	385 docs citations	385 times ranked	12788 citing authors

#	Article	IF	Citations
1	Materials become insensitive to flaws at nanoscale: Lessons from nature. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 5597-5600.	7.1	1,641
2	Size effects in materials due to microstructural and dimensional constraints: a comparative review. Acta Materialia, 1998, 46, 5611-5626.	7.9	1,015
3	From micro to nano contacts in biological attachment devices. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 10603-10606.	7.1	985
4	Mechanics of hierarchical adhesion structures of geckos. Mechanics of Materials, 2005, 37, 275-285.	3.2	592
5	Evidence for capillarity contributions to gecko adhesion from single spatula nanomechanical measurements. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 16293-16296.	7.1	576
6	Fabrication Approaches for Generating Complex Micro- and Nanopatterns on Polymeric Surfaces. Chemical Reviews, 2008, 108, 911-945.	47.7	423
7	A new model-based creep equation for dispersion strengthened materials. Acta Metallurgica Et Materialia, 1990, 38, 671-683.	1.8	415
8	Geckoâ€Inspired Surfaces: A Path to Strong and Reversible Dry Adhesives. Advanced Materials, 2010, 22, 2125-2137.	21.0	415
9	Contact Shape Controls Adhesion of Bioinspired Fibrillar Surfaces. Langmuir, 2007, 23, 10235-10243.	3.5	395
10	Adhesion of Bioinspired Micropatterned Surfaces:Â Effects of Pillar Radius, Aspect Ratio, and Preload. Langmuir, 2007, 23, 3495-3502.	3.5	381
11	Threshold stresses for dislocation climb over hard particles: The effect of an attractive interaction. Acta Metallurgica, 1986, 34, 1893-1898.	2.1	375
12	Observation of Giant Diffusivity Along Dislocation Cores. Science, 2008, 319, 1646-1649.	12.6	374
13	Size effect on strength and strain hardening of small-scale [111] nickel compression pillars. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2008, 489, 319-329.	5.6	345
14	The influence of an increasing particle coordination on the densification of spherical powders. Acta Metallurgica, 1982, 30, 1883-1890.	2.1	344
15	Practical applications of hotisostatic Pressing diagrams: Four case studies. Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science, 1983, 14, 211-221.	1.4	342
16	Interface controlled diffusional creep. Acta Metallurgica, 1983, 31, 1977-1989.	2.1	295
17	Bioinspired Surfaces with Switchable Adhesion. Advanced Materials, 2007, 19, 3833-3837.	21.0	295
18	The kinetics of dislocation climb over hard particlesâ€”II. Effects of an attractive particle-dislocation interaction. Acta Metallurgica, 1988, 36, 1053-1060.	2.1	284

#	Article	IF	Citations
19	Quantitative analysis of strengthening mechanisms in thin Cu films: Effects of film thickness, grain size, and passivation. Journal of Materials Research, 1998, 13, 1307-1317.	2.6	256
20	Adhesion design maps for bio-inspired attachment systems. Acta Biomaterialia, 2005, 1, 5-13.	8.3	250
21	Resolving the nanoscale adhesion of individual gecko spatulae by atomic force microscopy. Biology Letters, 2005, 1, 2-4.	2.3	239
22	Effects of contact shape on the scaling of biological attachments. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2005, 461, 305-319.	2.1	236
23	Functional Adhesive Surfaces with â€œGeckoâ€•Effect: The Concept of Contact Splitting. Advanced Engineering Materials, 2010, 12, 335-348.	3.5	221
24	Patterned Surfaces with Pillars with Controlled 3D Tip Geometry Mimicking Bioattachment Devices. Advanced Materials, 2007, 19, 1973-1977.	21.0	210
25	Correlation between Critical Temperature and Strength of Small-Scale bcc Pillars. Physical Review Letters, 2009, 103, 105501.	7.8	207
26	Hierarchical Geckoâ€Like Adhesives. Advanced Materials, 2009, 21, 479-482.	21.0	202
27	Crack-like grain-boundary diffusion wedges in thin metal films. Acta Materialia, 1999, 47, 2865-2878.	7.9	199
28	A Geckoâ€Inspired Reversible Adhesive. Advanced Materials, 2008, 20, 3905-3909.	21.0	187
29	Electromigration failure by shape change of voids in bamboo lines. Journal of Applied Physics, 1994, 76, 1563-1571.	2.5	185
30	Influence of surface roughness on gecko adhesion. Acta Biomaterialia, 2007, 3, 607-610.	8.3	184
31	Densification of Powders by Particle Deformation. Powder Metallurgy, 1983, 26, 82-88.	1.7	180
32	Threshold stresses in materials containing dispersed particles. Scripta Metallurgica, 1982, 16, 1285-1290.	1.2	178
33	Length-scale-controlled fatigue mechanisms in thin copper films. Acta Materialia, 2006, 54, 3127-3139.	7.9	172
34	Electrical transport in pure and boron-doped carbon nanotubes. Applied Physics Letters, 1999, 74, 3149-3151.	3.3	171
35	Size effects on yield strength and strain hardening for ultra-thin Cu films with and without passivation: A study by synchrotron and bulge test techniques. Acta Materialia, 2008, 56, 2318-2335.	7.9	153
36	The kinetics of dislocation climb over hard particlesâ€”I. Climb without attractive particle-dislocation interaction. Acta Metallurgica, 1988, 36, 1043-1051.	2.1	152

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37	Loss of pseudoelasticity in nickelâ€“titanium sub-micron compression pillars. Acta Materialia, 2007, 55, 3845-3855.	7.9	144
38	Weak beam studies of dislocation/dispersoid interaction in an ods superalloy. Scripta Metallurgica, 1985, 19, 1129-1134.	1.2	136
39	Texture, microstructure and mechanical properties of equiaxed ultrafine-grained Zr fabricated by accumulative roll bonding. Acta Materialia, 2008, 56, 1228-1242.	7.9	136
40	Local mechanical properties of the head articulation cuticle in the beetle Pachnoda marginata (Coleoptera, Scarabaeidae). Journal of Experimental Biology, 2006, 209, 722-730.	1.7	135
41	Thermomechanical behavior of different texture components in Cu thin films. Acta Materialia, 2001, 49, 2145-2160.	7.9	133
42	Constrained diffusional creep in UHV-produced copper thin films. Acta Materialia, 2001, 49, 2395-2403.	7.9	128
43	Strain bursts in plastically deforming molybdenum micro- and nanopillars. Philosophical Magazine, 2008, 88, 3861-3874.	1.6	128
44	Engineering Micropatterned Dry Adhesives: From Contact Theory to Handling Applications. Advanced Functional Materials, 2018, 28, 1800865.	14.9	127
45	Effects of grain orientation on hillock formation and grain growth in aluminum films on silicon substrates. Scripta Metallurgica Et Materialia, 1992, 27, 285-290.	1.0	126
46	Effect of orientation and loading rate on compression behavior of small-scale Mo pillars. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2009, 508, 241-246.	5.6	125
47	The effect of shape on the adhesion of fibrillar surfaces. Acta Biomaterialia, 2008, 4, 1669-1676.	8.3	123
48	Stressâ€“temperature behavior of unpassivated thin copper films. Acta Materialia, 1999, 47, 415-426.	7.9	120
49	Mechanisms of hot-isostatic pressing. Acta Metallurgica, 1983, 31, 1829-1840.	2.1	119
50	Interface controlled plasticity in metals: dispersion hardening and thin film deformation. Progress in Materials Science, 2001, 46, 283-307.	32.8	118
51	Functional surface microstructures inspired by nature â€“ From adhesion and wetting principles to sustainable new devices. Progress in Materials Science, 2021, 120, 100823.	32.8	117
52	Particle Deformation and Sliding During Compaction of Spherical Powders: A Study by Quantitative Metallography. Powder Metallurgy, 1978, 21, 179-187.	1.7	110
53	Microstructure and creep properties of dispersion-strengthened aluminum alloys. Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science, 1992, 23, 1521-1393.	1.4	109
54	Hierarchical bioinspired adhesive surfacesâ€”a review. Bioinspiration and Biomimetics, 2016, 11, 051001.	2.9	109

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55	Dislocation sources and the flow stress of polycrystalline thin metal films. Philosophical Magazine Letters, 2003, 83, 1-8.	1.2	108
56	Nanostructured medical sutures with antibacterial properties. Biomaterials, 2015, 52, 291-300.	11.4	103
57	Electromigration mechanisms in conductor lines: Void shape changes and slit-like failure. Acta Materialia, 1997, 45, 1599-1611.	7.9	102
58	Parallel glide: unexpected dislocation motion parallel to the substrate in ultrathin copper films. Acta Materialia, 2003, 51, 4471-4485.	7.9	99
59	Effect of Contact Angle Hysteresis on the Measurement of Capillary Forces. Langmuir, 2008, 24, 1391-1396.	3.5	96
60	Temperature-dependent size effects on the strength of Ta and W micropillars. Acta Materialia, 2016, 103, 483-494.	7.9	96
61	A model for the effect of line width and mechanical strength on electromigration failure of interconnects with â€œnear-bambooâ€•grain structures. Journal of Materials Research, 1991, 6, 731-736.	2.6	95
62	Small-scale plasticity in thin Cu and Al films. Microelectronic Engineering, 2003, 70, 412-424.	2.4	93
63	Adhesion Characteristics of PDMS Surfaces During Repeated Pullâ€Off Force Measurements. Advanced Engineering Materials, 2010, 12, 398-404.	3.5	93
64	Dealloying of Auâ€“Ag thin films with a composition gradient: Influence on morphology of nanoporous Au. Thin Solid Films, 2007, 515, 7122-7126.	1.8	87
65	Discrete dislocation simulation of plastic deformation in metal thin films. Acta Materialia, 2004, 52, 773-784.	7.9	86
66	X-ray diffraction as a tool to study the mechanical behaviour of thin films. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2000, 288, 209-216.	5.6	85
67	Structure and properties of the glandular surface in the digestive zone of the pitcher in the carnivorous plant Nepenthes ventrata and its role in insect trapping and retention. Journal of Experimental Biology, 2004, 207, 2947-2963.	1.7	84
68	Preliminary investigation of a NiAl composite prepared by cryomilling. Journal of Materials Research, 1990, 5, 271-277.	2.6	83
69	A new method to study cyclic deformation of thin films in tension and compression. Journal of Materials Research, 1999, 14, 2373-2376.	2.6	83
70	Microstructure of thermal hillocks on blanket Al thin films. Thin Solid Films, 2000, 371, 278-282.	1.8	81
71	Dislocation sources in discrete dislocation simulations of thin-film plasticity and the Hall-Petch relation. Modelling and Simulation in Materials Science and Engineering, 2001, 9, 157-169.	2.0	81
72	Damage Behavior of 200-nm Thin Copper Films Under Cyclic Loading. Journal of Materials Research, 2005, 20, 201-207.	2.6	80

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73	Tensile testing of ultrathin polycrystalline films: A synchrotron-based technique. Review of Scientific Instruments, 2004, 75, 1110-1119.	1.3	77
74	Composite Pillars with a Tunable Interface for Adhesion to Rough Substrates. ACS Applied Materials & Interfaces, 2017, 9, 1036-1044.	8.0	77
75	Design Parameters and Current Fabrication Approaches for Developing Bioinspired Dry Adhesives. Macromolecular Bioscience, 2007, 7, 118-127.	4.1	76
76	Influence of orientation on the size effect in bcc pillars with different critical temperatures. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2011, 528, 1540-1547.	5.6	76
77	Fibrillar Elastomeric Micropatterns Create Tunable Adhesion Even to Rough Surfaces. Advanced Functional Materials, 2016, 26, 4687-4694.	14.9	76
78	Creep behavior of magnesium die-cast alloy ZA85. Scripta Materialia, 2003, 48, 985-990.	5.2	75
79	Quasi-crystalline grain-boundary phase in the magnesium die-cast alloy ZA85. Scripta Materialia, 2001, 45, 517-524.	5.2	74
80	Dislocation Plasticity in Thin Metal Films. MRS Bulletin, 2002, 27, 30-37.	3.5	74
81	Fatigue behavior of polycrystalline thin copper films. International Journal of Materials Research, 2002, 93, 392-400.	0.8	74
82	Enhancement of Capillary Forces by Multiple Liquid Bridges. Langmuir, 2008, 24, 8813-8820.	3.5	74
83	Capillary Forces between Chemically Different Substrates. Langmuir, 2008, 24, 10161-10168.	3.5	74
84	Grain size determination and limits to Hall-Petch behavior in nanocrystalline NiAl powders. Scripta Materialia, 1997, 8, 855-865.	0.5	73
85	Numerical simulation of electromigrationâ€induced shape changes of voids in bamboo lines. Applied Physics Letters, 1995, 66, 2063-2065.	3.3	72
86	Designing Model Systems for Enhanced Adhesion. MRS Bulletin, 2007, 32, 496-503.	3.5	72
87	Numerical simulation of the edge stress singularity and the adhesion strength for compliant mushroom fibrils adhered to rigid substrates. International Journal of Solids and Structures, 2016, 85-86, 160-171.	2.7	70
88	Nanofibrillar Patterns by Plasma Etching: The Influence of Polymer Crystallinity and Orientation in Surface Morphology. Macromolecules, 2010, 43, 9908-9917.	4.8	69
89	Exploring Biological Surfaces by Nanoindentation. Journal of Materials Research, 2004, 19, 880-887.	2.6	68
90	Texture transition in Cu thin films: Electron backscatter diffraction vs. X-ray diffraction. Acta Materialia, 2006, 54, 3863-3870.	7.9	68

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91	Abnormal growth of â€œgiantâ€•grains in silver thin films. Acta Materialia, 2001, 49, 1041-1050.	7.9	66
92	Strength Effects in Micropillars of a Dispersion Strengthened Superalloy. Advanced Engineering Materials, 2010, 12, 385-388.	3.5	66
93	On void nucleation and growth in metal interconnect lines under electromigration conditions. Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science, 1992, 23, 2007-2013.	1.4	65
94	Effect of nano- and micro-roughness on adhesion of bioinspired micropatterned surfaces. Acta Biomaterialia, 2012, 8, 282-288.	8.3	64
95	Electromigration induced transgranular slit failures in near bamboo Al and Alâ€2% Cu thinâ€film interconnects. Applied Physics Letters, 1992, 61, 3121-3123.	3.3	63
96	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.	3.3	63
97	Biological and artificial attachment devices: Lessons for materials scientists from flies and geckos. Materials Science and Engineering C, 2006, 26, 1245-1250.	7.3	63
98	Thermal Vacancies and High-Temperature Mechanical Properties of FeAl. Physica Status Solidi A, 1997, 160, 531-540.	1.7	62
99	Towards a micromechanical understanding of biological surface devices. International Journal of Materials Research, 2002, 93, 345-351.	0.8	62
100	Effect of real contact geometry on adhesion. Applied Physics Letters, 2006, 89, 121905.	3.3	62
101	Adhesion design maps for fibrillar adhesives: The effect of shape. Acta Biomaterialia, 2009, 5, 597-606.	8.3	61
102	Numerical study of adhesion enhancement by composite fibrils with soft tip layers. Journal of the Mechanics and Physics of Solids, 2017, 99, 357-378.	4.8	60
103	Microstructural development in dispersion strengthened NiAl produced by mechanical alloying and secondary recrystallization. Acta Materialia, 1997, 45, 201-211.	7.9	59
104	Temperatureâ€Induced Switchable Adhesion using Nickelâ€“Titaniumâ€“Polydimethylsiloxane Hybrid Surfaces. Advanced Functional Materials, 2015, 25, 3013-3021.	14.9	58
105	Strong Wet and Dry Adhesion by Cupped Microstructures. ACS Applied Materials & Interfaces, 2019, 11, 26483-26490.	8.0	58
106	Microstructural evolution in passivated Al films on Si substrates during thermal cycling. Acta Materialia, 2002, 50, 3435-3452.	7.9	57
107	Bioinspired pressure actuated adhesive system. Materials Science and Engineering C, 2011, 31, 1152-1159.	7.3	57
108	Kinetics and driving forces of abnormal grain growth in thin Cu films. Acta Materialia, 2012, 60, 2397-2406.	7.9	57

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109	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.	5.6	56
110	Orientation-independent pseudoelasticity in small-scale NiTi compression pillars. Scripta Materialia, 2008, 59, 7-10.	5.2	56
111	Brittle-to-ductile transition in ultrathin Ta/Cu film systems. Journal of Materials Research, 2009, 24, 1906-1918.	2.6	56
112	High temperature creep behavior of oxide dispersion strengthened NiAl intermetallics. Acta Materialia, 1998, 46, 2717-2727.	7.9	54
113	Temperature rise during mechanical alloying. Scripta Metallurgica Et Materialia, 1992, 27, 749-754.	1.0	53
114	Detachment of an adhered micropillar from a dissimilar substrate. Journal of the Mechanics and Physics of Solids, 2015, 75, 159-183.	4.8	53
115	Surface detection in nanoindentation of soft polymers. Journal of Materials Research, 2007, 22, 3107-3119.	2.6	50
116	Observation and Modelling of Electromigration-Induced Void growth in Al-Based Interconnects. Materials Research Society Symposia Proceedings, 1993, 309, 199.	0.1	49
117	Effect of Viscoelasticity on Adhesion of Bioinspired Micropatterned Epoxy Surfaces. Langmuir, 2011, 27, 7752-7759.	3.5	49
118	1300 K compressive properties of a reaction milled NiAlâ€“AlN composite. Journal of Materials Research, 1990, 5, 2819-2827.	2.6	48
119	Strong single-crystalline Au films tested by a new synchrotron technique. Acta Materialia, 2008, 56, 1876-1889.	7.9	47
120	Growth of giant grains in silver thin films. Scripta Materialia, 1999, 41, 709-714.	5.2	44
121	Influence of test temperature on the size effect in molybdenum small-scale compression pillars. Philosophical Magazine Letters, 2013, 93, 331-338.	1.2	43
122	Effect of calcium additions on the creep behavior of magnesium die-cast alloy ZA85. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2005, 36, 1713-1719.	2.2	42
123	Adhesion of Flat and Structured PDMS Samples to Spherical and Flat Probes: A Comparative Study. Journal of Adhesion, 2011, 87, 447-465.	3.0	42
124	Funnelâ€shaped Microstructures for Strong Reversible Adhesion. Advanced Materials Interfaces, 2017, 4, 1700292.	3.7	42
125	Microstructural size effects on the hardness of nanocrystalline TiN/amorphous-SiNx coatings prepared by magnetron sputtering. Thin Solid Films, 2005, 473, 114-122.	1.8	40
126	A Theoretical Description of Elastic Pillar Substrates in Biophysical Experiments. ChemPhysChem, 2005, 6, 1492-1498.	2.1	40

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127	Advanced testing of adhesion and friction with a microtribometer. Review of Scientific Instruments, 2006, 77, 066105.	1.3	40
128	Effects of alloying elements on electromigration. Microelectronics Reliability, 1998, 38, 1015-1020.	1.7	39
129	Electromigration-induced Cu motion and precipitation in bamboo Alâ€“Cu interconnects. Acta Materialia, 2003, 51, 49-60.	7.9	39
130	Micrometer-Scale Tensile Testing of Biological Attachment Devices. Advanced Materials, 2006, 18, 874-877.	21.0	39
131	Textures of thin copper films. Journal of Materials Research, 1998, 13, 2962-2968.	2.6	38
132	The elastic modulus of spruce wood cell wall material measured by an in situ bending technique. Journal of Materials Science, 2006, 41, 5122-5126.	3.7	38
133	Preload-responsive adhesion: effects of aspect ratio, tip shape and alignment. Journal of the Royal Society Interface, 2013, 10, 20130171.	3.4	38
134	The whole is more than the sum of all its parts: collective effect of spider attachment organs. Journal of Experimental Biology, 2014, 217, 222-224.	1.7	38
135	A quantitative study of the hardness of a superhard nanocrystalline titanium nitride/silicon nitride coating. Scripta Materialia, 2005, 52, 1269-1274.	5.2	36
136	Creep behavior of Î³-TiAl sheet material with differently spaced fully lamellar microstructures. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2002, 329-331, 840-846.	5.6	35
137	Channel cracking of Î²-NiAl thin films on Si substrates. Acta Materialia, 2004, 52, 2325-2336.	7.9	35
138	Hierarchical macroscopic fibrillar adhesives: in situ study of buckling and adhesion mechanisms on wavy substrates. Bioinspiration and Biomimetics, 2015, 10, 066002.	2.9	35
139	Microstructural Development and Densification During Hipping of Ceramics and Metals. Powder Metallurgy, 1988, 31, 63-69.	1.7	34
140	TEM investigations of the superdislocations and their interaction with particles in dispersion strengthened intermetallics. Intermetallics, 1999, 7, 423-436.	3.9	34
141	In Situ Observation Reveals Local Detachment Mechanisms and Suction Effects in Micropatterned Adhesives. Advanced Functional Materials, 2019, 29, 1807713.	14.9	34
142	In situ indentation testing of elastomers. Acta Materialia, 2008, 56, 4390-4401.	7.9	33
143	Single Macroscopic Pillars as Model System for Bioinspired Adhesives: Influence of Tip Dimension, Aspect Ratio, and Tilt Angle. ACS Applied Materials & Interfaces, 2014, 6, 7076-7083.	8.0	33
144	Mechanical properties of a single gecko seta. International Journal of Materials Research, 2008, 99, 1113-1118.	0.3	32

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145	Elevated temperature adhesion of bioinspired polymeric micropatterns to glass. Journal of the Mechanical Behavior of Biomedical Materials, 2017, 76, 110-118.	3.1	32
146	Scaling of bird wings and feathers for efficient flight. Science Advances, 2019, 5, eaat4269.	10.3	32
147	Ordering versus disordering tendencies in mechanically alloyed (NixFe1â^'x)Al alloys. Scripta Metallurgica Et Materialia, 1994, 30, 1569-1574.	1.0	31
148	High temperature, low cycle fatigue behaviour of an aluminium alloy (Alâ€"12Siâ€"CuMgNi). Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2000, 276, 283-287.	5.6	31
149	Facile, fast, and inexpensive synthesis of monodisperse amorphous Nickel-Phosphide nanoparticles of predefined size. Chemical Communications, 2011, 47, 4108.	4.1	31
150	Nanofibrillar Patterns on PET: The Influence of Plasma Parameters in Surface Morphology. Plasma Processes and Polymers, 2011, 8, 876-884.	3.0	31
151	Surface structure influences contact killing of bacteria by copper. MicrobiologyOpen, 2014, 3, 327-332.	3.0	31
152	Cohesive detachment of an elastic pillar from a dissimilar substrate. Journal of the Mechanics and Physics of Solids, 2017, 101, 30-43.	4.8	31
153	Dislocation dynamics in sub-micron confinement: recent progress in Cu thin film plasticity. International Journal of Materials Research, 2002, 93, 383-391.	0.8	31
154	Investigation of the stresses in continuous thin films and patterned lines by xâ€ray diffraction. Applied Physics Letters, 1994, 64, 1097-1099.	3.3	30
155	Comparison of mechanical properties and microstructure of Al(1 wt.%Si) and Al(1 wt.%Si, 0.5 wt.%Cu) thin films. Thin Solid Films, 1995, 263, 175-184.	1.8	30
156	Effects of thickness on the characteristic length scale of dislocation plasticity in Ag thin films. Acta Materialia, 2001, 49, 3597-3607.	7.9	29
157	Experimental Parameters Controlling Adhesion of Biomimetic Fibrillar Surfaces. Journal of Adhesion, 2009, 85, 646-661.	3.0	29
158	Current density and line width effects in electromigration: a new damage-based lifetime model. Acta Materialia, 1998, 46, 3733-3743.	7.9	28
159	Switchable double-sided micropatterned adhesives for selective fixation and detachment. Journal of the Mechanics and Physics of Solids, 2019, 123, 20-27.	4.8	28
160	Discrete contact mechanics of a fibrillar surface with backing layer interactions. Journal of the Mechanics and Physics of Solids, 2010, 58, 1571-1581.	4.8	27
161	Note: An adhesion measurement setup for bioinspired fibrillar surfaces using flat probes. Review of Scientific Instruments, 2012, 83, 016101.	1.3	27
162	Electromigration damage in mechanically deformed Al conductor lines: dislocations as fast diffusion paths. Acta Materialia, 2000, 48, 2199-2208.	7.9	26

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163	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.	5.6	26
164	Temperature dependence of mechanical properties in ultrathin Au films with and without passivation. Journal of Materials Research, 2008, 23, 2406-2419.	2.6	26
165	Switchable Underwater Adhesion by Deformable Cupped Microstructures. Advanced Materials Interfaces, 2020, 7, 2001269.	3.7	26
166	Dispersion strengthening of intermetallics. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1997, 234-236, 22-29.	5.6	25
167	Calculation of the electromigration wind force in Al alloys. Physical Review B, 1999, 59, 7451-7457.	3.2	25
168	Buckling of an Adhesive Polymeric Micropillar. Journal of Adhesion, 2013, 89, 140-158.	3.0	25
169	Detachment Behavior of Mushroom-Shaped Fibrillar Adhesive Surfaces in Peel Testing. Langmuir, 2013, 29, 15394-15404.	3.5	25
170	Electromigration Damage in Conductor Lines: Recent Progress in Microscopic Observation and Mechanistic Modelling. Materials Research Society Symposia Proceedings, 1994, 338, 397.	0.1	24
171	Bioinspired polydimethylsiloxane-based composites with high shear resistance against wet tissue. Journal of the Mechanical Behavior of Biomedical Materials, 2016, 61, 87-95.	3.1	24
172	On the Nature of the Transparent Teeth of the Deep-Sea Dragonfish, Aristostomias scintillans. Matter, 2019, 1, 235-249.	10.0	24
173	Roll-to-Roll Manufacturing of Micropatterned Adhesives by Template Compression. Materials, 2019, 12, 97.	2.9	24
174	Single macropillars as model systems for tilt angle dependent adhesion measurements. International Journal of Adhesion and Adhesives, 2012, 36, 32-38.	2.9	23
175	Effect of viscoelasticity on the spherical and flat adhesion characteristics of photopolymerizable acrylate polymer networks. International Journal of Adhesion and Adhesives, 2013, 44, 184-194.	2.9	23
176	Plastic deformation and its influence on diffusion process during mechanical alloying. Scripta Metallurgica Et Materialia, 1993, 28, 395-400.	1.0	21
177	SINTERING PROCESSES. , 1996, , 2627-2662.		21
178	Quantitative Analysis of Electromigration Damage in Al-based Conductor Lines. Journal of Materials Research, 1997, 12, 2027-2037.	2.6	21
179	X-ray microdiffraction: local stress distributions in polycrystalline and epitaxial thin films. Microelectronic Engineering, 2004, 75, 117-126.	2.4	21
180	Ultra high-cycle fatigue in pure Al thin films and line structures. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2006, 421, 68-76.	5.6	21

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181	Growth of electromigration-induced hillocks in Al interconnects. Journal of Materials Research, 2002, 17, 2727-2735.	2.6	20
182	Biomimetic Models of the Actin Cytoskeleton. Small, 2007, 3, 1015-1022.	10.0	20
183	Adhesion and Cellular Compatibility of Siliconeâ€Based Skin Adhesives. Macromolecular Materials and Engineering, 2017, 302, 1600526.	3.6	20
184	Like A Second Skin. , 2019, , .		20
185	A Design Strategy for Mushroom-Shaped Microfibrils With Optimized Dry Adhesion: Experiments and Finite Element Analyses. Journal of Applied Mechanics, Transactions ASME, 2021, 88, .	2.2	20
186	Microstructural Aspects of Interconnect Failure. Materials Research Society Symposia Proceedings, 1992, 265, 131-142.	0.1	19
187	1400 and 1500 K compressive creep properties of an NiAlî—¸AlN composite. Scripta Metallurgica Et Materialia, 1992, 26, 1925-1930.	1.0	19
188	Mechanical strength and microstructure of oxygen ion-implanted Al films. Journal of Materials Research, 1994, 9, 318-327.	2.6	19
189	Defect Dependent Adhesion of Fibrillar Surfaces. Journal of Adhesion, 2008, 84, 675-681.	3.0	19
190	Fabrication of metal nanoparticle arrays by controlled decomposition of polymer particles. Nanotechnology, 2013, 24, 085304.	2.6	19
191	Statistical properties of defect-dependent detachment strength in bioinspired dry adhesives. Journal of the Royal Society Interface, 2019, 16, 20190239.	3.4	19
192	In situ transmission electron microscopy investigation of threading dislocation motion in passivated thin aluminum films. Journal of Materials Research, 1999, 14, 4673-4676.	2.6	18
193	Characterization of controlled microstructures in a Î³-TiAl(Cr, Mo, Si, B) alloy. Intermetallics, 1999, 7, 1081-1087.	3.9	18
194	Creep of aluminum-based closed-cell foams. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2003, 34, 2809-2817.	2.2	18
195	Size Effect on Crack Formation in Cu/Ta and Ta/Cu/Ta Thin Film Systems. Materials Research Society Symposia Proceedings, 2004, 821, 72.	0.1	18
196	Strained thin copper films as model catalysts in the materials gap. Catalysis Letters, 2005, 102, 91-97.	2.6	18
197	Humidity influence on the adhesion of biomimetic fibrillar surfaces. International Journal of Materials Research, 2009, 100, 1119-1126.	0.3	18
198	Biâ€Stable Adhesion of a Surface with a Dimple. Advanced Engineering Materials, 2010, 12, 389-397.	3.5	18

#	Article	IF	Citations
199	Effect of pre-straining on the size effect in molybdenum pillars. Philosophical Magazine Letters, 2010, 90, 841-849.	1.2	18
200	Alloying Effects on Electromigration Mass Transport. Physical Review Letters, 2001, 87, 035901.	7.8	17
201	Microstructural changes in the cell walls of a closed-cell aluminium foam during creep. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 2002, 82, 2895-2907.	0.6	17
202	Cataglyphis desert ants improve their mobility by raising the gaster. Journal of Theoretical Biology, 2012, 297, 17-25.	1.7	17
203	Water as a â€œglueâ€• Elasticity-enhanced wet attachment of biomimetic microcup structures. Science Advances, 2022, 8, eabm9341.	10.3	17
204	Effects of order on dispersion strengthening at high temperatures: A first model. Scripta Metallurgica Et Materialia, 1993, 28, 843-848.	1.0	16
205	Observation of Dislocation DisAppearance in Aluminum Thin Films and Consequences for Thin Film Properties. Materials Research Society Symposia Proceedings, 1997, 505, 149.	0.1	16
206	Stress and texture development during martensitic transformation in cobalt thin films. Scripta Materialia, 2001, 44, 25-30.	5.2	16
207	Obtaining different orientation relationships for Cu films grown on (0001) Î±-Al‹sub›2‹/sub›O‹sub›3‹/sub›substrates by magnetron sputtering. International Journal of Materials Research, 2005, 96, 249-254.	0.8	16
208	Nanoindentation studies on crosslinking and curing effects of PDMS. International Journal of Materials Research, 2010, 101, 1014-1023.	0.3	16
209	Adhesion of Biocompatible and Biodegradable Micropatterned Surfaces. International Journal of Artificial Organs, 2011, 34, 180-184.	1.4	16
210	Hierarchical super-structure identified by polarized light microscopy, electron microscopy and nanoindentation: Implications for the limits of biological control over the growth mode of abalone sea shells. BMC Biophysics, 2012, 5, 19.	4.4	16
211	Adhesion and relaxation of a soft elastomer on surfaces with skin like roughness. Journal of the Mechanical Behavior of Biomedical Materials, 2018, 80, 303-310.	3.1	16
212	In-Situ Tem Investigation During Thermal Cycling of thin Copper Films. Materials Research Society Symposia Proceedings, 1996, 436, 221.	0.1	15
213	Chemical solution deposition derived buffer layers for MOCVD-grown GaN films. Journal of Crystal Growth, 2001, 233, 57-67.	1.5	15
214	Local Strains Measured in Al Lines During Thermal Cycling and Electromigration Using Convergent-beam Electron Diffraction. Journal of Materials Research, 2005, 20, 1851-1859.	2.6	15
215	Diffusive reaction during mechanical alloying of intermetallics. Scripta Metallurgica Et Materialia, 1992, 27, 635-639.	1.0	14
216	TEM-study of the interaction between superdislocations and dispersoids in a Ni3Al alloy. Scripta Materialia, 1997, 36, 341-345.	5.2	14

#	Article	IF	Citations
217	High-temperature creep in a coarse-grained oxide-dispersion strengthened Ni3Al alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1997, 231, 198-205.	5.6	14
218	Electromigration in single-crystal aluminum lines with fast diffusion paths made by nanoindentation. Acta Materialia, 1998, 46, 1969-1979.	7.9	14
219	A model for dispersion strengthening of ordered intermetallics at high temperatures. Acta Materialia, 1998, 46, 6575-6584.	7.9	14
220	Interconnect failure due to cyclic loading. AIP Conference Proceedings, 2002, , .	0.4	14
221	Electromigration-induced damage in bamboo Al interconnects. Journal of Electronic Materials, 2002, 31, 45-49.	2.2	14
222	Influence of tantalum and silver interlayers on thermal stress evolution in copper thin films on silicon substrates. Scripta Materialia, 2004, 50, 733-737.	5.2	14
223	Damage analysis in Al thin films fatigued at ultrahigh frequencies. Journal of Applied Physics, 2006, 99, 113501.	2.5	14
224	Effect of repeated contact on adhesion measurements involving polydimethylsiloxane structural material. IOP Conference Series: Materials Science and Engineering, 2009, 5, 012004.	0.6	14
225	Crack initiation and propagation during high-temperature fatigue of oxide dispersion-strengthened superalloys. Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science, 1991, 22, 837-851.	1.4	13
226	Shape changes of voids in bamboo lines: A new electromigration failure mechanism. Quality and Reliability Engineering International, 1995, 11, 279-283.	2.3	13
227	Creep of dispersion strengthened alloys controlled by jog nucleation. Acta Materialia, 1996, 44, 2751-2758.	7.9	13
228	Selective specimen preparation for TEM observation of the cross-section of individual carbon nanotube/metal junctions. Ultramicroscopy, 2000, 85, 93-98.	1.9	13
229	Grain-boundary Voiding in Self-passivated Cuâ€“1 at.% Al Alloy Films on Si Substrates. Journal of Materials Research, 2002, 17, 1363-1370.	2.6	13
230	Texture dependence of the martensitic transformation in cobalt thin films. Scripta Materialia, 2003, 48, 1129-1133.	5.2	12
231	A Self-Adhesive Elastomeric Wound Scaffold for Sensitive Adhesion to Tissue. Polymers, 2019, 11, 942.	4.5	12
232	Enhancing Dry Adhesion of Polymeric Micropatterns by Electric Fields. ACS Applied Materials & Interfaces, 2020, 12, 27708-27716.	8.0	12
233	Electromigration Resistance and Mechanical Strength: New Perspectives for Interconnect Materials?. Materials Research Society Symposia Proceedings, 1991, 239, 677.	0.1	11
234	Internal friction in F.C.C. alloys due to solute drag on dislocationsâ€”I. A model for the effect of core diffusion. Acta Metallurgica Et Materialia, 1994, 42, 3785-3800.	1.8	11

#	Article	IF	Citations
235	High-temperature low-cycle fatigue of an iron-base oxide-dispersion strengthened alloy: Grain structure effects and lifetime correlations. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 1995, 26, 1067-1077.	2.2	11
236	Plastic Deformation in Thin Copper Films Determined by X-Ray Micro-Tensile Tests. Materials Research Society Symposia Proceedings, 1996, 436, 59.	0.1	11
237	Deformation Mechanisms in Thin Cu Films. Materials Research Society Symposia Proceedings, 1998, 516, 287.	0.1	11
238	Electromigration proximity effects of two neighboring fast-diffusion segments in single-crystal aluminum lines. Journal of Applied Physics, 1999, 85, 2108-2113.	2.5	11
239	Contact area determination in indentation testing of elastomers. Journal of Materials Research, 2009, 24, 736-748.	2.6	11
240	In situ observation of contact mechanisms in bioinspired adhesives at high magnification. MRS Communications, 2011, 1, 53-56.	1.8	11
241	Diffusion creep in a coarse grained ods superalloy under transverse loading. Scripta Metallurgica, 1988, 22, 1353-1356.	1.2	10
242	Internal friction in F.C.C. alloys due to solute drag on dislocationâ€”II. Experimental studies on Alî—¸Si alloys. Acta Metallurgica Et Materialia, 1994, 42, 3801-3809.	1.8	10
243	Energy Storage And Recovery In Thin Metal Films On Substrates. Materials Research Society Symposia Proceedings, 1997, 505, 605.	0.1	10
244	Mechanical spectroscopy of a high-Nb-bearingÎ³-TiAl-based alloy with near-gamma and fully lamellar microstructure. Philosophical Magazine Letters, 2004, 84, 383-393.	1.2	10
245	Mechanistic analysis of forceâ€“displacement measurements on macroscopic single adhesive pillars. Journal of the Mechanics and Physics of Solids, 2013, 61, 1295-1304.	4.8	10
246	Vickers Indentation Induced Oneâ€‹scp>W</scp>ay and Twoâ€‹scp>W</scp>ay Shape Memory Effect in Austenitic Ni<scp>T</scp>i. Advanced Engineering Materials, 2014, 16, 72-79.	3.5	10
247	Sintering Processes. , 1990, , 157-184.		9
248	On the pinning of grain boundary motion by surface grooves. Scripta Metallurgica Et Materialia, 1992, 26, 1325-1330.	1.0	9
249	Elevated temperature compressive strength properties of oxide dispersion strengthened NiAl after cryomilling and roasting in nitrogen. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2000, 291, 173-185.	5.6	9
250	Influence of Film/Substrate Interface Structure on Plasticity in Metal Thin Films. Materials Research Society Symposia Proceedings, 2001, 673, 1.	0.1	9
251	Mechanical and Thermal Expansion Behavior of Thin Fe-36 wt.-%Ni Invar Films. Advanced Engineering Materials, 2002, 4, 305-308.	3.5	9
252	Size effects in the plastic deformation of NiAl thin films. International Journal of Materials Research, 2004, 95, 769-778.	0.8	9

#	Article	IF	Citations
253	Fatigue damage in thin film Al interconnects at ultra high frequency: A finite element analysis approach. Thin Solid Films, 2007, 515, 3291-3297.	1.8	9
254	Dispersion Strengthened Intermetallics by Mechanical Alloying: Creep Results and Dislocation Mechanisms. Materials Research Society Symposia Proceedings, 1992, 288, 861.	0.1	8
255	Detailed Study of Electromigration Induced Damage in Al and AlCuSi Interconnects. Materials Research Society Symposia Proceedings, 1994, 338, 373.	0.1	8
256	Metalle unter Extrembedingungen: Wie der Elektronenwind Bambusstrukturen zerstÃ¶rt. Physik Journal, 1996, 52, 227-231.	0.1	8
257	A New Type of Dislocation Mechanism in Ultrathin Copper Films. Materials Research Society Symposia Proceedings, 2001, 695, 1.	0.1	8
258	Nucleation model for hcp martensite: Application to Co thin films. European Physical Journal Special Topics, 2003, 112, 107-110.	0.2	8
259	Pipe-diffusion ripening of Si precipitates in Al-0.5%Cu-1%Si thin films. Philosophical Magazine, 2005, 85, 3541-3552.	1.6	8
260	Bioinspired Polymeric Surface Patterns for Medical Applications. Journal of Applied Biomaterials and Functional Materials, 2012, 10, 287-292.	1.6	8
261	Friction properties of the head articulation in the beetle Pachnoda marginata (Coleoptera,) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 5	1.9	8
262	Predicting the adhesion strength of micropatterned surfaces using supervised machine learning. Materials Today, 2022, 53, 41-50.	14.2	8
263	A Simple Model for Stress Voiding in Passivated Thin Film Conductors. Materials Research Society Symposia Proceedings, 1992, 265, 45-50.	0.1	7
264	Electromigration Induced Resistance Changes in Passivated Aluminum Thin Film Conductors. Materials Research Society Symposia Proceedings, 1993, 309, 301.	0.1	7
265	Discrete dislocation sim ulation of thin film plasticit y. Materials Research Society Symposia Proceedings, 2001, 673, 1.	0.1	7
266	Thixoforging of continuous fiber-reinforced AlSi/AlMg-alloys. International Journal of Machine Tools and Manufacture, 2006, 46, 1227-1232.	13.4	7
267	Modeling the effects of nanoparticles on neuronal cells: From ionic channels to network dynamics. , 2010, 2010, 3816-9.		7
268	Breakdown of continuum models for spherical probe adhesion tests on micropatterned surfaces. Journal of the Mechanics and Physics of Solids, 2021, 150, 104365.	4.8	7
269	Mechanical Properties of Al-Cu Films with Various Heat Treatments. Materials Research Society Symposia Proceedings, 1997, 473, 409.	0.1	6
270	Interactions at interface between Cu99Ti1 thin films and polyimide. Applied Physics Letters, 1997, 70, 1251-1253.	3.3	6

#	Article	IF	Citations
271	Observations of Dislocation Motion and Stress Inhomogeneities in a Thin Copper Film. Materials Research Society Symposia Proceedings, 2001, 673, 1.	0.1	6
272	Evolution of fiber fragmentation in a short-fiber-reinforced metal-matrix model composite during tensile creep deformationâ€"An acoustic emission study. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2002, 33, 1549-1557.	2.2	6
273	Plasticity-Related Phenomena in Metallic Films on Substrates. Materials Research Society Symposia Proceedings, 2003, 779, 421.	0.1	6
274	A New Synchrotron-based Technique for Measuring Stresses in Ultrathin Metallic Films. Materials Research Society Symposia Proceedings, 2004, 821, 48.	0.1	6
275	Microstructure and mechanical behavior of Pt-modified NiAl diffusion coatings. International Journal of Materials Research, 2006, 97, 689-698.	0.3	6
276	Development of a Transparent Scratch Resistant Coating through Direct Oxidation of Alâ€Coated Glass. Advanced Engineering Materials, 2017, 19, 1600617.	3.5	6
277	Tailored polyurethane acrylate blend for large-scale and high-performance micropatterned dry adhesives. Journal of Materials Science, 2019, 54, 12925-12937.	3.7	6
278	Sliding Mechanism for Release of Superlight Objects from Micropatterned Adhesives. Advanced Materials Interfaces, 2022, 9, .	3.7	6
279	Quantitative Analysis of Electromigration-Induced Damage in Al-Based Interconnects. Materials Research Society Symposia Proceedings, 1992, 265, 119.	0.1	5
280	Influence of Coarse Second Phase Additions on Mechanical Properties of NiAl. Materials Research Society Symposia Proceedings, 1992, 288, 1087.	0.1	5
281	Orientationally Resolved Grain Size Distributions in Thin Films. Materials Science Forum, 1998, 273-275, 237-242.	0.3	5
282	Micro-Tensile and Fatigue Testing of Copper Thin Films on Substrates. Materials Research Society Symposia Proceedings, 1998, 546, 133.	0.1	5
283	The Effect of Film Thickness on Stress and Transformation Behavior in Cobalt Thin Films. Materials Research Society Symposia Proceedings, 1999, 594, 219.	0.1	5
284	Microstructure of Physical Vapour Deposited Ti-Si-N Coatings. Materials Research Society Symposia Proceedings, 2001, 704, 731.	0.1	5
285	Mechanism Maps for Frictional Attachment Between Fibrillar Surfaces. Journal of Applied Mechanics, Transactions ASME, 2009, 76, .	2.2	5
286	Adhesion behavior of polymer networks with tailored mechanical properties using spherical and flat contacts. MRS Communications, 2013, 3, 73-77.	1.8	5
287	Indentation-induced two-way shape-memory effect in aged Tiâ^'50.9 at.% Ni. MRS Communications, 2015, 5, 77-82.	1.8	5
288	Creep of Particle-Reinforced NiAl Intermetallics: New Materials For Up to 1400Â°C. Materials Research Society Symposia Proceedings, 1994, 364, 525.	0.1	4

#	Article	IF	Citations
289	Alloying effects in electromigration: What controls the electromigration drift?. AIP Conference Proceedings, 1999, , .	0.4	4
290	Low cycle fatigue and creepâ€“fatigue interaction in short fibre reinforced aluminium alloy composite. Materials Science and Technology, 2010, 26, 1363-1372.	1.6	4
291	Micro-mechanical response of ultrafine grain and nanocrystalline tantalum. Journal of Materials Research and Technology, 2021, 12, 1804-1815.	5.8	4
292	Attachment of bioinspired microfibrils in fluids: transition from a hydrodynamic to hydrostatic mechanism. Journal of the Royal Society Interface, 2022, 19, 20220050.	3.4	4
293	<title>Morphology and crystallography of electromigration-induced transgranular slit failures in aluminum alloy interconnects</title>. , 1993, , .		3
294	Influence of a Capping Layer on the Mechanical Properties of Copper Films. Materials Research Society Symposia Proceedings, 1994, 356, 453.	0.1	3
295	Electroplasticity and Electromigration. Materials Research Society Symposia Proceedings, 1994, 356, 483.	0.1	3
296	Monitoring of Deformation Induced Microcracking in Polycrystalline NiAl. Materials Research Society Symposia Proceedings, 1994, 364, 543.	0.1	3
297	Influence of Film Thickness and Capping Layer on the Mechanical Properties of Copper Films. Materials Research Society Symposia Proceedings, 1995, 391, 309.	0.1	3
298	Numerical Simulation of Surface Diffusion Controlled Motion and Shape Change of Electromigration Voids. Materials Research Society Symposia Proceedings, 1996, 428, 161.	0.1	3
299	Microstructural Development of Dispersion Strengthened Cu Thin Films. Materials Research Society Symposia Proceedings, 1999, 562, 257.	0.1	3
300	The Role of Chemical Composition for the Ductility and Microstructure of Thin NiAl Films. Materials Research Society Symposia Proceedings, 2001, 695, 1.	0.1	3
301	Hillock formation and thermal stresses in thin Au films on Si substrates. Materials Research Society Symposia Proceedings, 2005, 875, 1.	0.1	3
302	Creep of Mg-Zn-Al-Alloys. , 2006, , 693-698.		3
303	Thermomechanical Behavior of Thin Metal Films under Different Ambient Conditions. AIP Conference Proceedings, 2006, , .	0.4	3
304	Adhesive contact between flat punches with finite edge radius and an elastic half-space. International Journal of Materials Research, 2007, 98, 1156-1162.	0.3	3
305	Investigation of the Bulge Test Response of Molybdenum Thin Films at Room Temperature and at 100â€ƒÂ°C. Strain, 2009, 45, 238-248.	2.4	3
306	Biotechnological Mineral Composites via Vaterite Precursors. Materials Research Society Symposia Proceedings, 2012, 1465, 32.	0.1	3

#	Article	IF	Citations
307	Estimating the modulatory effects of nanoparticles on neuronal circuits using computational upscaling. International Journal of Nanomedicine, 2013, 8, 3559.	6.7	3
308	Selfâ€Adhesive Silicone Microstructures for the Treatment of Tympanic Membrane Perforations. Advanced NanoBiomed Research, 2021, 1, 2100057.	3.6	3
309	Hot Isostatic Pressing: Developments in Theory. , 1991, , 215-219.		2
310	Microstructure evolution in thin metal films: Implications for VLSI interconnection reliability. AIP Conference Proceedings, 1992, , .	0.4	2
311	Damping in Aluminium Alloys with Incoherent Particles. Materials Science Forum, 1993, 119-121, 365-370.	0.3	2
312	Alloying effects in electromigration: Modeling and experiments. , 1998, , .		2
313	Model studies of electromigration using indented single-crystal aluminum lines. , 1999, , .		2
314	Creep of Oxide-dispersion Strengthened Alloys. , 2001, , 1800-1805.		2
315	Internal Friction of Copper Thin Layers on Silicon Substrates. Defect and Diffusion Forum, 2002, 203-205, 285-288.	0.4	2
316	Strain Energy Effects on Texture Evolution in Thin Films: Biaxial vs. Uniaxial Stress State. AIP Conference Proceedings, 2006, , .	0.4	2
317	Correlation between Activation Volume and Pillar Diameter for Mo and Nb BCC Pillars. Materials Research Society Symposia Proceedings, 2009, 1185, 85.	0.1	2
318	Bioinspired adhesion systems â€•competing with the gecko. Vakuum in Forschung Und Praxis, 2009, 21, A14.	0.1	2
319	Thin Film Composite Silicon Elastomers for Cell Culture and Skin Applications: Manufacturing and Characterization. Journal of Visualized Experiments, 2018, , .	0.3	2
320	Adhesion: In Situ Observation Reveals Local Detachment Mechanisms and Suction Effects in Micropatterned Adhesives (Adv. Funct. Mater. 14/2019). Advanced Functional Materials, 2019, 29, 1970091.	14.9	2
321	Optoacoustically induced auditory brainstem responses in the mouse model enhanced through an absorbing film. Journal of Biomedical Optics, 2021, 26, .	2.6	2
322	Gecko Adhesion. , 2014, , 1-12.		2
323	High temperature Alî—¸Al2O3 alloys with a coarse elongated grain structure. Scripta Metallurgica, 1989, 23, 1595-1598.	1.2	1
324	1300 K Compressive Properties of a Reaction Milled NiAl-AlN Composite. Materials Research Society Symposia Proceedings, 1990, 194, 211.	0.1	1

#	Article	IF	Citations
325	Secondary Recrystallization of ODS-Superalloys: The Influence of Carbide Phases. Materials Science Forum, 1992, 94-96, 635-642.	0.3	1
326	Observation and Modelling of Electromigration-Induced Void Growth In Al-Based Interconnects. Materials Research Society Symposia Proceedings, 1993, 308, 267.	0.1	1
327	High temperature damping in dispersion-strengthened aluminium alloys. Journal of Alloys and Compounds, 1994, 211-212, 414-418.	5.5	1
328	Electromigration in Single-Crystal Aluminum Lines Pre-Damaged by Nanoindentation. Materials Research Society Symposia Proceedings, 1996, 428, 225.	0.1	1
329	Microstructure and Mechanical Properties of Thin Al-Si-Ge Films. Materials Research Society Symposia Proceedings, 1996, 436, 21.	0.1	1
330	Powder Processing of NiAl for Elevated Temperature Strength. Materials Research Society Symposia Proceedings, 1996, 460, 487.	0.1	1
331	Influence of water absorption by silicate glass on the strains in passivated Al conductor lines. Journal of Electronic Materials, 1998, 27, 853-857.	2.2	1
332	Copper Versus Magnesium as an Alloying Element in Aluminum Interconnects: Effects on Electromigration. Materials Research Society Symposia Proceedings, 1998, 516, 269.	0.1	1
333	Diffusional Hillock Formation in Al Thin Films Controlled by Creep. Materials Research Society Symposia Proceedings, 1999, 594, 129.	0.1	1
334	Passivation Effects in Copper Thin Films. AIP Conference Proceedings, 2006, , .	0.4	1
335	Thermomechanical Properties of Thin Î±-Fe Films Above the Brittle to Ductile Transition Temperature. Materials Research Society Symposia Proceedings, 2006, 924, 1.	0.1	1
336	Mucoadhesive Micropatterns for Enhanced Grip. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, 2007, 1457-62.	0.5	1
337	In vitro adhesion measurements between skin and micropatterned poly(dimethylsiloxane) surfaces. , 2009, 2009, 6018-21.		1
338	Was wir von Geckos lernen kÃ¶nnen. Nachrichten Aus Der Chemie, 2009, 57, 137-139.	0.0	1
339	Micropatterned Polymer Surfaces and Cellular Response of Dictyostelium. Advanced Engineering Materials, 2010, 12, 405-411.	3.5	1
340	On the possible effects of nanoparticles on neuronal feedback circuits: A modeling study. , 2011, , .		1
341	Response to comment on: Size effects on yield strength and strain hardening for ultra-thin Cu films with and without passivation: A study by synchrotron and bulge test techniques. Scripta Materialia, 2012, 67, 740-742.	5.2	1
342	The Compaction of Rapidly Solidified Materials. , 1986, , 137-155.		1

#	Article	IF	Citations
343	In-cycle strain evolution in a short-fiber reinforced aluminum-alloy during thermal cycling creep. , 1998, , 449-454.		1
344	Dispersion Strengthening of Disordered and Ordered Metallic Materials: From Dislocation Mechanisms to New Alloys / DispersionshÃrtung von ungeordneten und geordneten metallischen Werkstoffen: Vom Versetzungsmechanismus zur neuen Legierung DispersionshÃrtung, ein klassischer metallkundlicher. International Journal of Materials Research, 1996, 87, 874-884.	0.3	1
345	Parallel Glide: A Fundamentally Different Type of Dislocation Motion in Ultrathin Metal Films. Materials Research Society Symposia Proceedings, 2003, 779, 441.	0.1	1
346	The Role of Carbide Phases in the Secondary Recrystallization of Nickel-Base ODS-Superalloys. , 1991, , .		0
347	Dispersion Strengthening of AL Films by Oxygen Ion Implantation. Materials Research Society Symposia Proceedings, 1993, 308, 317.	0.1	0
348	Dispersion Strengthening of Al Films by Oxygen Ion Implantation. Materials Research Society Symposia Proceedings, 1993, 309, 249.	0.1	0
349	Mechanical Properties and Microstructure of AL(1wt%SI) And AL(1wt%SI, 0.5wt%CU) Thin Films. The Role of Diffusional Creep in the Tensile Stress Regime. Materials Research Society Symposia Proceedings, 1994, 356, 435.	0.1	0
350	Electromigration-induced voiding mechanisms in metallizations. AIP Conference Proceedings, 1996, , .	0.4	0
351	Temperature dependence of the resistivity of individual multi-walled pure/boron doped carbon nanotubes at elevated temperatures. , 1999, , .		0
352	Microstructural Development of Dispersion Strengthened Cu Thin Films. Materials Research Society Symposia Proceedings, 1999, 564, 359.	0.1	0
353	Constrained Diffusional Creep in Thin Copper Films. Materials Research Society Symposia Proceedings, 2001, 673, 1.	0.1	0
354	A New Approach to Understanding Electromigration in Al(Cu) Alloys on an Atomistic Basis. Defect and Diffusion Forum, 2001, 194-199, 151-156.	0.4	0
355	3D simulation of the dislocation dynamics in polycrystalline metal thin films. Materials Research Society Symposia Proceedings, 2003, 779, 431.	0.1	0
356	Internal Friction of a High-Nb Gamma-TiAl-Based Alloy with Different Microstructures. Materials Research Society Symposia Proceedings, 2004, 842, 483.	0.1	0
357	Microstructure and Thermo-Mechanical Behavior of NiAl Coatings. Materials Research Society Symposia Proceedings, 2004, 842, 55.	0.1	0
358	A Model for the Increased Elastic Compliance in Human Cancer Cells. Materials Research Society Symposia Proceedings, 2004, 844, 1.	0.1	0
359	Fatigue failure of titanium implants for mandibular reconstruction. International Journal of Materials Research, 2005, 96, 894-901.	0.8	0
360	Influence of Gas Atmosphere on the Plasticity of Metal Thin Films. Materials Research Society Symposia Proceedings, 2005, 875, 1.	0.1	0

#	Article	IF	Citations
361	Local Deformation in Al Interconnects Measured During Thermal Cycling and Electromigration. AIP Conference Proceedings, 2006, , .	0.4	0
362	From science to industrial application. Adhesion Adhesives and Sealants, 2011, 8, 40-44.	0.1	0
363	Modeling the influences of nanoparticles on neural field oscillations in thalamocortical networks. , 2012, 2012, 1230-3.		0
364	Graphene. , 2012, , 968-978.		0
365	CHAPTER 14. Bioâ€inspired Adhesive Surfaces: From Principles to Applications. RSC Smart Materials, 2013, , 310-321.	0.1	0
366	Indentation-induced two-way shape-memory effect in NiTi. , 2013, , .		0
367	Dr. Herbert Karl Schmid. International Journal of Materials Research, 2013, 104, 919-920.	0.3	0
368	Gecko Adhesion. , 2016, , 1308-1319.		0
369	In Memoriam Prof. Dr. phil. Dr. techn. h. c. mult. Hellmut F. Fischmeister (1927â€“2019). International Journal of Materials Research, 2020, 111, 96-97.	0.3	0
370	Microstructure of die-cast alloys Mgâ€“Znâ€“Al(â€“Ca): a study by electron microscopy and small-angle neutron scattering. International Journal of Materials Research, 2022, 94, 564-571.	0.3	0
371	Size effects in the plastic deformation of NiAl thin films. International Journal of Materials Research, 2022, 95, 769-778.	0.3	0
372	ON THE INTERFACE REACTION IN DIFFUSIONAL CREEP AND DISCONTINUOUS PRECIPITATION. Journal De Physique Colloque, 1985, 46, C4-627-C4-632.	0.2	0
373	Microstructure and mechanical behavior of Pt-modified NiAl diffusion coatings. International Journal of Materials Research, 2022, 97, 689-698.	0.3	0