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	Sliding Mechanism for Release of Superlight Objects from Micropatterned Adhesives. Advanced Materials Interfaces, 2022, 9, .	3.7	6
2	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
3	Size effects in the plastic deformation of NiAl thin films. International Journal of Materials Research, 2022, 95, 769-778.	0.3	0
4	Predicting the adhesion strength of micropatterned surfaces using supervised machine learning. Materials Today, 2022, 53, 41-50.	14.2	8
5	Water as a â€œglueâ€• Elasticity-enhanced wet attachment of biomimetic microcup structures. Science Advances, 2022, 8, eabm9341.	10.3	17
6	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
7	Microstructure and mechanical behavior of Pt-modified NiAl diffusion coatings. International Journal of Materials Research, 2022, 97, 689-698.	0.3	0
8	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
9	Micro-mechanical response of ultrafine grain and nanocrystalline tantalum. Journal of Materials Research and Technology, 2021, 12, 1804-1815.	5.8	4
10	Selfâ€Adhesive Silicone Microstructures for the Treatment of Tympanic Membrane Perforations. Advanced NanoBiomed Research, 2021, 1, 2100057.	3.6	3
11	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
12	Optoacoustically induced auditory brainstem responses in the mouse model enhanced through an absorbing film. Journal of Biomedical Optics, 2021, 26, .	2.6	2
13	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
14	Switchable Underwater Adhesion by Deformable Cupped Microstructures. Advanced Materials Interfaces, 2020, 7, 2001269.	3.7	26
15	Enhancing Dry Adhesion of Polymeric Micropatterns by Electric Fields. ACS Applied Materials & Interfaces, 2020, 12, 27708-27716.	8.0	12
16	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
17	Statistical properties of defect-dependent detachment strength in bioinspired dry adhesives. Journal of the Royal Society Interface, 2019, 16, 20190239.	3.4	19
18	Tailored polyurethane acrylate blend for large-scale and high-performance micropatterned dry adhesives. Journal of Materials Science, 2019, 54, 12925-12937.	3.7	6

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19	Strong Wet and Dry Adhesion by Cupped Microstructures. ACS Applied Materials & Interfaces, 2019, 11, 26483-26490.	8.0	58
20	In Situ Observation Reveals Local Detachment Mechanisms and Suction Effects in Micropatterned Adhesives. Advanced Functional Materials, 2019, 29, 1807713.	14.9	34
21	A Self-Adhesive Elastomeric Wound Scaffold for Sensitive Adhesion to Tissue. Polymers, 2019, 11, 942.	4.5	12
22	On the Nature of the Transparent Teeth of the Deep-Sea Dragonfish, Aristostomias scintillans. Matter, 2019, 1, 235-249.	10.0	24
23	Like A Second Skin. , 2019, , .		20
24	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
25	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
26	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
27	Scaling of bird wings and feathers for efficient flight. Science Advances, 2019, 5, eaat4269.	10.3	32
28	Roll-to-Roll Manufacturing of Micropatterned Adhesives by Template Compression. Materials, 2019, 12, 97.	2.9	24
29	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
30	Engineering Micropatterned Dry Adhesives: From Contact Theory to Handling Applications. Advanced Functional Materials, 2018, 28, 1800865.	14.9	127
31	Thin Film Composite Silicon Elastomers for Cell Culture and Skin Applications: Manufacturing and Characterization. Journal of Visualized Experiments, 2018, , .	0.3	2
32	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
33	Composite Pillars with a Tunable Interface for Adhesion to Rough Substrates. ACS Applied Materials & Interfaces, 2017, 9, 1036-1044.	8.0	77
34	Adhesion and Cellular Compatibility of Siliconeâ€Based Skin Adhesives. Macromolecular Materials and Engineering, 2017, 302, 1600526.	3.6	20
35	Elevated temperature adhesion of bioinspired polymeric micropatterns to glass. Journal of the Mechanical Behavior of Biomedical Materials, 2017, 76, 110-118.	3.1	32
36	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

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37	Funnelâ€Shaped Microstructures for Strong Reversible Adhesion. Advanced Materials Interfaces, 2017, 4, 1700292.	3.7	42
38	Development of a Transparent Scratch Resistant Coating through Direct Oxidation of Alâ€Coated Glass. Advanced Engineering Materials, 2017, 19, 1600617.	3.5	6
39	Fibrillar Elastomeric Micropatterns Create Tunable Adhesion Even to Rough Surfaces. Advanced Functional Materials, 2016, 26, 4687-4694.	14.9	76
40	Hierarchical bioinspired adhesive surfacesâ€”a review. Bioinspiration and Biomimetics, 2016, 11, 051001.	2.9	109
41	Temperature-dependent size effects on the strength of Ta and W micropillars. Acta Materialia, 2016, 103, 483-494.	7.9	96
42	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
43	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
44	Gecko Adhesion. , 2016, , 1308-1319.		0
45	Hierarchical macroscopic fibrillar adhesives: in situ study of buckling and adhesion mechanisms on wavy substrates. Bioinspiration and Biomimetics, 2015, 10, 066002.	2.9	35
46	Nanostructured medical sutures with antibacterial properties. Biomaterials, 2015, 52, 291-300.	11.4	103
47	Detachment of an adhered micropillar from a dissimilar substrate. Journal of the Mechanics and Physics of Solids, 2015, 75, 159-183.	4.8	53
48	Temperatureâ€Induced Switchable Adhesion using Nickelâ€“Titaniumâ€“Polydimethylsiloxane Hybrid Surfaces. Advanced Functional Materials, 2015, 25, 3013-3021.	14.9	58
49	Indentation-induced two-way shape-memory effect in aged Tiâ^'50.9 at.% Ni. MRS Communications, 2015, 5, 77-82.	1.8	5
50	Surface structure influences contact killing of bacteria by copper. MicrobiologyOpen, 2014, 3, 327-332.	3.0	31
51	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
52	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
53	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
54	Gecko Adhesion. , 2014, , 1-12.		2

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55	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
56	Buckling of an Adhesive Polymeric Micropillar. Journal of Adhesion, 2013, 89, 140-158.	3.0	25
57	Influence of test temperature on the size effect in molybdenum small-scale compression pillars. Philosophical Magazine Letters, 2013, 93, 331-338.	1.2	43
58	Fabrication of metal nanoparticle arrays by controlled decomposition of polymer particles. Nanotechnology, 2013, 24, 085304.	2.6	19
59	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
60	CHAPTER 14. Bioâ€inspired Adhesive Surfaces: From Principles to Applications. RSC Smart Materials, 2013, , 310-321.	0.1	0
61	Detachment Behavior of Mushroom-Shaped Fibrillar Adhesive Surfaces in Peel Testing. Langmuir, 2013, 29, 15394-15404.	3.5	25
62	Preload-responsive adhesion: effects of aspect ratio, tip shape and alignment. Journal of the Royal Society Interface, 2013, 10, 20130171.	3.4	38
63	Indentation-induced two-way shape-memory effect in NiTi. , 2013, , .		0
64	Adhesion behavior of polymer networks with tailored mechanical properties using spherical and flat contacts. MRS Communications, 2013, 3, 73-77.	1.8	5
65	Estimating the modulatory effects of nanoparticles on neuronal circuits using computational upscaling. International Journal of Nanomedicine, 2013, 8, 3559.	6.7	3
66	Dr. Herbert Karl Schmid. International Journal of Materials Research, 2013, 104, 919-920.	0.3	0
67	Bioinspired Polymeric Surface Patterns for Medical Applications. Journal of Applied Biomaterials and Functional Materials, 2012, 10, 287-292.	1.6	8
68	Biotechnological Mineral Composites via Vaterite Precursors. Materials Research Society Symposia Proceedings, 2012, 1465, 32.	0.1	3
69	Note: An adhesion measurement setup for bioinspired fibrillar surfaces using flat probes. Review of Scientific Instruments, 2012, 83, 016101.	1.3	27
70	Modeling the influences of nanoparticles on neural field oscillations in thalamocortical networks. , 2012, 2012, 1230-3.		0
71	Graphene. , 2012, , 968-978.		0
72	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

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73	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
74	Kinetics and driving forces of abnormal grain growth in thin Cu films. Acta Materialia, 2012, 60, 2397-2406.	7.9	57
75	Effect of nano- and micro-roughness on adhesion of bioinspired micropatterned surfaces. Acta Biomaterialia, 2012, 8, 282-288.	8.3	64
76	Single macropillars as model systems for tilt angle dependent adhesion measurements. International Journal of Adhesion and Adhesives, 2012, 36, 32-38.	2.9	23
77	Cataglyphis desert ants improve their mobility by raising the gaster. Journal of Theoretical Biology, 2012, 297, 17-25.	1.7	17
78	From science to industrial application. Adhesion Adhesives and Sealants, 2011, 8, 40-44.	0.1	0
79	On the possible effects of nanoparticles on neuronal feedback circuits: A modeling study. , 2011, , .		1
80	Effect of Viscoelasticity on Adhesion of Bioinspired Micropatterned Epoxy Surfaces. Langmuir, 2011, 27, 7752-7759.	3.5	49
81	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
82	Facile, fast, and inexpensive synthesis of monodisperse amorphous Nickel-Phosphide nanoparticles of predefined size. Chemical Communications, 2011, 47, 4108.	4.1	31
83	Adhesion of Biocompatible and Biodegradable Micropatterned Surfaces. International Journal of Artificial Organs, 2011, 34, 180-184.	1.4	16
84	Nanofibrillar Patterns on PET: The Influence of Plasma Parameters in Surface Morphology. Plasma Processes and Polymers, 2011, 8, 876-884.	3.0	31
85	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
86	Bioinspired pressure actuated adhesive system. Materials Science and Engineering C, 2011, 31, 1152-1159.	7.3	57
87	In situ observation of contact mechanisms in bioinspired adhesives at high magnification. MRS Communications, 2011, 1, 53-56.	1.8	11
88	Strength Effects in Micropillars of a Dispersion Strengthened Superalloy. Advanced Engineering Materials, 2010, 12, 385-388.	3.5	66
89	Adhesion Characteristics of PDMS Surfaces During Repeated Pullâ€Off Force Measurements. Advanced Engineering Materials, 2010, 12, 398-404.	3.5	93
90	Biâ€Stable Adhesion of a Surface with a Dimple. Advanced Engineering Materials, 2010, 12, 389-397.	3.5	18

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91	Micropatterned Polymer Surfaces and Cellular Response of Dictyostelium. Advanced Engineering Materials, 2010, 12, 405-411.	3.5	1
92	Functional Adhesive Surfaces with â€œGeckoâ€•Effect: The Concept of Contact Splitting. Advanced Engineering Materials, 2010, 12, 335-348.	3.5	221
93	Geckoâ€Inspired Surfaces: A Path to Strong and Reversible Dry Adhesives. Advanced Materials, 2010, 22, 2125-2137.	21.0	415
94	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
95	Effect of pre-straining on the size effect in molybdenum pillars. Philosophical Magazine Letters, 2010, 90, 841-849.	1.2	18
96	Nanoindentation studies on crosslinking and curing effects of PDMS. International Journal of Materials Research, 2010, 101, 1014-1023.	0.3	16
97	Nanofibrillar Patterns by Plasma Etching: The Influence of Polymer Crystallinity and Orientation in Surface Morphology. Macromolecules, 2010, 43, 9908-9917.	4.8	69
98	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
99	Modeling the effects of nanoparticles on neuronal cells: From ionic channels to network dynamics. , 2010, 2010, 3816-9.		7
100	Experimental Parameters Controlling Adhesion of Biomimetic Fibrillar Surfaces. Journal of Adhesion, 2009, 85, 646-661.	3.0	29
101	Correlation between Critical Temperature and Strength of Small-Scale bcc Pillars. Physical Review Letters, 2009, 103, 105501.	7.8	207
102	In vitro adhesion measurements between skin and micropatterned poly(dimethylsiloxane) surfaces. , 2009, 2009, 6018-21.		1
103	Contact area determination in indentation testing of elastomers. Journal of Materials Research, 2009, 24, 736-748.	2.6	11
104	Brittle-to-ductile transition in ultrathin Ta/Cu film systems. Journal of Materials Research, 2009, 24, 1906-1918.	2.6	56
105	Mechanism Maps for Frictional Attachment Between Fibrillar Surfaces. Journal of Applied Mechanics, Transactions ASME, 2009, 76, .	2.2	5
106	Humidity influence on the adhesion of biomimetic fibrillar surfaces. International Journal of Materials Research, 2009, 100, 1119-1126.	0.3	18
107	Correlation between Activation Volume and Pillar Diameter for Mo and Nb BCC Pillars. Materials Research Society Symposia Proceedings, 2009, 1185, 85.	0.1	2
108	Hierarchical Geckoâ€Like Adhesives. Advanced Materials, 2009, 21, 479-482.	21.0	202

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109	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
110	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
111	Adhesion design maps for fibrillar adhesives: The effect of shape. Acta Biomaterialia, 2009, 5, 597-606.	8.3	61
112	Bioinspired adhesion systems â€•competing with the gecko. Vakuum in Forschung Und Praxis, 2009, 21, A14.	0.1	2
113	Was wir von Geckos lernen kÃ¶nnen. Nachrichten Aus Der Chemie, 2009, 57, 137-139.	0.0	1
114	Effect of repeated contact on adhesion measurements involving polydimethylsiloxane structural material. IOP Conference Series: Materials Science and Engineering, 2009, 5, 012004.	0.6	14
115	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
116	The effect of shape on the adhesion of fibrillar surfaces. Acta Biomaterialia, 2008, 4, 1669-1676.	8.3	123
117	A Geckoâ€inspired Reversible Adhesive. Advanced Materials, 2008, 20, 3905-3909.	21.0	187
118	Texture, microstructure and mechanical properties of equiaxed ultrafine-grained Zr fabricated by accumulative roll bonding. Acta Materialia, 2008, 56, 1228-1242.	7.9	136
119	Strong single-crystalline Au films tested by a new synchrotron technique. Acta Materialia, 2008, 56, 1876-1889.	7.9	47
120	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
121	In situ indentation testing of elastomers. Acta Materialia, 2008, 56, 4390-4401.	7.9	33
122	Orientation-independent pseudoelasticity in small-scale NiTi compression pillars. Scripta Materialia, 2008, 59, 7-10.	5.2	56
123	Enhancement of Capillary Forces by Multiple Liquid Bridges. Langmuir, 2008, 24, 8813-8820.	3.5	74
124	Effect of Contact Angle Hysteresis on the Measurement of Capillary Forces. Langmuir, 2008, 24, 1391-1396.	3.5	96
125	Fabrication Approaches for Generating Complex Micro- and Nanopatterns on Polymeric Surfaces. Chemical Reviews, 2008, 108, 911-945.	47.7	423
126	Capillary Forces between Chemically Different Substrates. Langmuir, 2008, 24, 10161-10168.	3.5	74

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127	Observation of Giant Diffusivity Along Dislocation Cores. Science, 2008, 319, 1646-1649.	12.6	374
128	Strain bursts in plastically deforming molybdenum micro- and nanopillars. Philosophical Magazine, 2008, 88, 3861-3874.	1.6	128
129	Mechanical properties of a single gecko seta. International Journal of Materials Research, 2008, 99, 1113-1118.	0.3	32
130	Temperature dependence of mechanical properties in ultrathin Au films with and without passivation. Journal of Materials Research, 2008, 23, 2406-2419.	2.6	26
131	Defect Dependent Adhesion of Fibrillar Surfaces. Journal of Adhesion, 2008, 84, 675-681.	3.0	19
132	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
133	Surface detection in nanoindentation of soft polymers. Journal of Materials Research, 2007, 22, 3107-3119.	2.6	50
134	Designing Model Systems for Enhanced Adhesion. MRS Bulletin, 2007, 32, 496-503.	3.5	72
135	Mucoadhesive Micropatterns for Enhanced Grip. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, 2007, 1457-62.	0.5	1
136	Adhesion of Bioinspired Micropatterned Surfaces:Â Effects of Pillar Radius, Aspect Ratio, and Preload. Langmuir, 2007, 23, 3495-3502.	3.5	381
137	Contact Shape Controls Adhesion of Bioinspired Fibrillar Surfaces. Langmuir, 2007, 23, 10235-10243.	3.5	395
138	Patterned Surfaces with Pillars with Controlled 3D Tip Geometry Mimicking Bioattachment Devices. Advanced Materials, 2007, 19, 1973-1977.	21.0	210
139	Bioinspired Surfaces with Switchable Adhesion. Advanced Materials, 2007, 19, 3833-3837.	21.0	295
140	Design Parameters and Current Fabrication Approaches for Developing Bioinspired Dry Adhesives. Macromolecular Bioscience, 2007, 7, 118-127.	4.1	76
141	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
142	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
143	Loss of pseudoelasticity in nickelâ€“titanium sub-micron compression pillars. Acta Materialia, 2007, 55, 3845-3855.	7.9	144
144	Biomimetic Models of the Actin Cytoskeleton. Small, 2007, 3, 1015-1022.	10.0	20

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145	Influence of surface roughness on gecko adhesion. Acta Biomaterialia, 2007, 3, 607-610.	8.3	184
146	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
147	Effect of real contact geometry on adhesion. Applied Physics Letters, 2006, 89, 121905.	3.3	62
148	Creep of Mg-Zn-Al-Alloys. , 2006, , 693-698.		3
149	Length-scale-controlled fatigue mechanisms in thin copper films. Acta Materialia, 2006, 54, 3127-3139.	7.9	172
150	Texture transition in Cu thin films: Electron backscatter diffraction vs. X-ray diffraction. Acta Materialia, 2006, 54, 3863-3870.	7.9	68
151	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
152	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
153	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
154	Thixoforging of continuous fiber-reinforced AlSi/AlMg-alloys. International Journal of Machine Tools and Manufacture, 2006, 46, 1227-1232.	13.4	7
155	Micrometer-Scale Tensile Testing of Biological Attachment Devices. Advanced Materials, 2006, 18, 874-877.	21.0	39
156	Microstructure and mechanical behavior of Pt-modified NiAl diffusion coatings. International Journal of Materials Research, 2006, 97, 689-698.	0.3	6
157	Passivation Effects in Copper Thin Films. AIP Conference Proceedings, 2006, , .	0.4	1
158	Thermomechanical Behavior of Thin Metal Films under Different Ambient Conditions. AIP Conference Proceedings, 2006, , .	0.4	3
159	Strain Energy Effects on Texture Evolution in Thin Films: Biaxial vs. Uniaxial Stress State. AIP Conference Proceedings, 2006, , .	0.4	2
160	Local Deformation in Al Interconnects Measured During Thermal Cycling and Electromigration. AIP Conference Proceedings, 2006, , .	0.4	0
161	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
162	Damage analysis in Al thin films fatigued at ultrahigh frequencies. Journal of Applied Physics, 2006, 99, 113501.	2.5	14

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163	Advanced testing of adhesion and friction with a microtribometer. Review of Scientific Instruments, 2006, 77, 066105.	1.3	40
164	Obtaining different orientation relationships for Cu films grown on (0001) Î±-Al₂O₃substrates by magnetron sputtering. International Journal of Materials Research, 2005, 96, 249-254.	0.8	16
165	Fatigue failure of titanium implants for mandibular reconstruction. International Journal of Materials Research, 2005, 96, 894-901.	0.8	0
166	Mechanics of hierarchical adhesion structures of geckos. Mechanics of Materials, 2005, 37, 275-285.	3.2	592
167	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
168	A quantitative study of the hardness of a superhard nanocrystalline titanium nitride/silicon nitride coating. Scripta Materialia, 2005, 52, 1269-1274.	5.2	36
169	A Theoretical Description of Elastic Pillar Substrates in Biophysical Experiments. ChemPhysChem, 2005, 6, 1492-1498.	2.1	40
170	Adhesion design maps for bio-inspired attachment systems. Acta Biomaterialia, 2005, 1, 5-13.	8.3	250
171	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
172	Strained thin copper films as model catalysts in the materials gap. Catalysis Letters, 2005, 102, 91-97.	2.6	18
173	Pipe-diffusion ripening of Si precipitates in Al-0.5%Cu-1%Si thin films. Philosophical Magazine, 2005, 85, 3541-3552.	1.6	8
174	Hillock formation and thermal stresses in thin Au films on Si substrates. Materials Research Society Symposia Proceedings, 2005, 875, 1.	0.1	3
175	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
176	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
177	Influence of Gas Atmosphere on the Plasticity of Metal Thin Films. Materials Research Society Symposia Proceedings, 2005, 875, 1.	0.1	0
178	Resolving the nanoscale adhesion of individual gecko spatulae by atomic force microscopy. Biology Letters, 2005, 1, 2-4.	2.3	239
179	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
180	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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181	Size effects in the plastic deformation of NiAl thin films. International Journal of Materials Research, 2004, 95, 769-778.	0.8	9
182	Exploring Biological Surfaces by Nanoindentation. Journal of Materials Research, 2004, 19, 880-887.	2.6	68
183	Tensile testing of ultrathin polycrystalline films: A synchrotron-based technique. Review of Scientific Instruments, 2004, 75, 1110-1119.	1.3	77
184	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
185	Internal Friction of a High-Nb Gamma-TiAl-Based Alloy with Different Microstructures. Materials Research Society Symposia Proceedings, 2004, 842, 483.	0.1	0
186	Microstructure and Thermo-Mechanical Behavior of NiAl Coatings. Materials Research Society Symposia Proceedings, 2004, 842, 55.	0.1	0
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373	Particle Deformation and Sliding During Compaction of Spherical Powders: A Study by Quantitative Metallography. Powder Metallurgy, 1978, 21, 179-187.	1.7	110