Eduard Arzt

List of Publications by Year in Descending Order

366 papers	20,086 citations	71 h-index	133 g-index
385 ext. papers	21,759 ext. citations	5.9 avg, IF	6.92 L-index

#	Paper	IF	Citations
366	Microstructure of die-cast alloys Mg□nAl(□a): a study by electron microscopy and small-angle neutron scattering. *International Journal of Materials Research*, **2022**, 94, 564-571	0.5	
365	Size effects in the plastic deformation of NiAl thin films. *International Journal of Materials Research*, **2022**, 95, 769-778	0.5	
364	Water as a "glue": Elasticity-enhanced wet attachment of biomimetic microcup structures.. *Science Advances*, **2022**, 8, eabm9341	14.3	2
363	Attachment of bioinspired microfibrils in fluids: transition from a hydrodynamic to hydrostatic mechanism.. *Journal of the Royal Society Interface*, **2022**, 19, 20220050	4.1	0
362	Microstructure and mechanical behavior of Pt-modified NiAl diffusion coatings. *International Journal of Materials Research*, **2022**, 97, 689-698	0.5	
361	A Design Strategy for Mushroom-Shaped Microfibrils With Optimized Dry Adhesion: Experiments and Finite Element Analyses. *Journal of Applied Mechanics, Transactions ASME*, **2021**, 88,	2.7	10
360	Breakdown of continuum models for spherical probe adhesion tests on micropatterned surfaces. *Journal of the Mechanics and Physics of Solids*, **2021**, 150, 104365	5	2
359	Micro-mechanical response of ultrafine grain and nanocrystalline tantalum. *Journal of Materials Research and Technology*, **2021**, 12, 1804-1815	5.5	3
358	Self-Adhesive Silicone Microstructures for the Treatment of Tympanic Membrane Perforations. *Advanced NanoBiomed Research*, **2021**, 1, 2100057	0	1
357	Functional surface microstructures inspired by nature □ From adhesion and wetting principles to sustainable new devices. *Progress in Materials Science*, **2021**, 120, 100823	42.2	24
356	Switchable Underwater Adhesion by Deformable Cupped Microstructures. *Advanced Materials Interfaces*, **2020**, 7, 2001269	4.6	13
355	Enhancing Dry Adhesion of Polymeric Micropatterns by Electric Fields. *ACS Applied Materials & Interfaces*, **2020**, 12, 27708-27716	9.5	6
354	In Situ Observation Reveals Local Detachment Mechanisms and Suction Effects in Micropatterned Adhesives. *Advanced Functional Materials*, **2019**, 29, 1807713	15.6	26
353	A Self-Adhesive Elastomeric Wound Scaffold for Sensitive Adhesion to Tissue. *Polymers*, **2019**, 11,	4.5	6
352	On the Nature of the Transparent Teeth of the Deep-Sea Dragonfish, Aristostomias scintillans. *Matter*, **2019**, 1, 235-249	12.7	12
351	Like A Second Skin **2019**,		7
350	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	15.6	2

349	Statistical properties of defect-dependent detachment strength in bioinspired dry adhesives. *Journal of the Royal Society Interface*, **2019**, 16, 20190239	4.1	11
348	Tailored polyurethane acrylate blend for large-scale and high-performance micropatterned dry adhesives. *Journal of Materials Science*, **2019**, 54, 12925-12937	4.3	3
347	Strong Wet and Dry Adhesion by Cupped Microstructures. *ACS Applied Materials & Interfaces*, **2019**, 11, 26483-26490	9.5	33
346	Friction properties of the head articulation in the beetle Pachnoda marginata (Coleoptera, Scarabaeidae). *Biotribology*, **2019**, 17, 30-39	2.3	6
345	Switchable double-sided micropatterned adhesives for selective fixation and detachment. *Journal of the Mechanics and Physics of Solids*, **2019**, 123, 20-27	5	18
344	Scaling of bird wings and feathers for efficient flight. *Science Advances*, **2019**, 5, eaat4269	14.3	12
343	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	4.1	7
342	Engineering Micropatterned Dry Adhesives: From Contact Theory to Handling Applications. *Advanced Functional Materials*, **2018**, 28, 1800865	15.6	75
341	Thin Film Composite Silicon Elastomers for Cell Culture and Skin Applications: Manufacturing and Characterization. *Journal of Visualized Experiments*, **2018**,	1.6	1
340	Roll-to-Roll Manufacturing of Micropatterned Adhesives by Template Compression. *Materials*, **2018**, 12,	3.5	14
339	Cohesive detachment of an elastic pillar from a dissimilar substrate. *Journal of the Mechanics and Physics of Solids*, **2017**, 101, 30-43	5	22
338	Composite Pillars with a Tunable Interface for Adhesion to Rough Substrates. *ACS Applied Materials & Interfaces*, **2017**, 9, 1036-1044	9.5	60
337	Adhesion and Cellular Compatibility of Silicone-Based Skin Adhesives. *Macromolecular Materials and Engineering*, **2017**, 302, 1600526	3.9	12
336	Elevated temperature adhesion of bioinspired polymeric micropatterns to glass. *Journal of the Mechanical Behavior of Biomedical Materials*, **2017**, 76, 110-118	4.1	17
335	Numerical study of adhesion enhancement by composite fibrils with soft tip layers. *Journal of the Mechanics and Physics of Solids*, **2017**, 99, 357-378	5	48
334	Funnel-Shaped Microstructures for Strong Reversible Adhesion. *Advanced Materials Interfaces*, **2017**, 4, 1700292	4.6	30
333	Development of a Transparent Scratch Resistant Coating through Direct Oxidation of Al-Coated Glass . *Advanced Engineering Materials*, **2017**, 19, 1600617	3.5	5
332	Hierarchical bioinspired adhesive surfaces-a review. *Bioinspiration and Biomimetics*, **2016**, 11, 051001	2.6	79

331	Temperature-dependent size effects on the strength of Ta and W micropillars. *Acta Materialia*, **2016**, 103, 483-494	8.4	76
330	Bioinspired polydimethylsiloxane-based composites with high shear resistance against wet tissue. *Journal of the Mechanical Behavior of Biomedical Materials*, **2016**, 61, 87-95	4.1	22
329	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	3.1	47
328	Fibrillar Elastomeric Micropatterns Create Tunable Adhesion Even to Rough Surfaces. *Advanced Functional Materials*, **2016**, 26, 4687-4694	15.6	60
327	Nanostructured medical sutures with antibacterial properties. *Biomaterials*, **2015**, 52, 291-300	15.6	87
326	Detachment of an adhered micropillar from a dissimilar substrate. *Journal of the Mechanics and Physics of Solids*, **2015**, 75, 159-183	5	42
325	Temperature-Induced Switchable Adhesion using Nickel-Titanium-Polydimethylsiloxane Hybrid Surfaces. *Advanced Functional Materials*, **2015**, 25, 3013-3021	15.6	46
324	Indentation-induced two-way shape-memory effect in aged Ti–50.9 at.% Ni. *MRS Communications*, **2015**, 5, 77-82	2.7	5
323	Hierarchical macroscopic fibrillar adhesives: in situ study of buckling and adhesion mechanisms on wavy substrates. *Bioinspiration and Biomimetics*, **2015**, 10, 066002	2.6	29
322	The whole is more than the sum of all its parts: collective effect of spider attachment organs. *Journal of Experimental Biology*, **2014**, 217, 222-4	3	35
321	Vickers Indentation Induced One-Way and Two-Way Shape Memory Effect in Austenitic NiTi. *Advanced Engineering Materials*, **2014**, 16, 72-79	3.5	10
320	Single macroscopic pillars as model system for bioinspired adhesives: influence of tip dimension, aspect ratio, and tilt angle. *ACS Applied Materials & Interfaces*, **2014**, 6, 7076-83	9.5	26
319	Surface structure influences contact killing of bacteria by copper. *MicrobiologyOpen*, **2014**, 3, 327-32	3.4	24
318	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	3.4	20
317	Buckling of an Adhesive Polymeric Micropillar **2013**, 89, 140-158		20
316	Influence of test temperature on the size effect in molybdenum small-scale compression pillars. *Philosophical Magazine Letters*, **2013**, 93, 331-338	1	34
315	Fabrication of metal nanoparticle arrays by controlled decomposition of polymer particles. *Nanotechnology*, **2013**, 24, 085304	3.4	17
314	Mechanistic analysis of force–displacement measurements on macroscopic single adhesive pillars. *Journal of the Mechanics and Physics of Solids*, **2013**, 61, 1295-1304	5	7

313	CHAPTER 14:Bio-inspired Adhesive Surfaces: From Principles to Applications. *RSC Smart Materials*, **2013**, 310-321	0.6	
312	Detachment behavior of mushroom-shaped fibrillar adhesive surfaces in peel testing. *Langmuir*, **2013**, 29, 15394-404	4	16
311	Preload-responsive adhesion: effects of aspect ratio, tip shape and alignment. *Journal of the Royal Society Interface*, **2013**, 10, 20130171	4.1	33
310	Adhesion behavior of polymer networks with tailored mechanical properties using spherical and flat contacts. *MRS Communications*, **2013**, 3, 73-77	2.7	4
309	Estimating the modulatory effects of nanoparticles on neuronal circuits using computational upscaling. *International Journal of Nanomedicine*, **2013**, 8, 3559-72	7.3	1
308	Dr. Herbert Karl Schmid. *International Journal of Materials Research*, **2013**, 104, 919-920	0.5	
307	Cataglyphis desert ants improve their mobility by raising the gaster. *Journal of Theoretical Biology*, **2012**, 297, 17-25	2.3	16
306	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	0	14
305	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	5.6	
304	Kinetics and driving forces of abnormal grain growth in thin Cu films. *Acta Materialia*, **2012**, 60, 2397-2406	3.4	37
303	Effect of nano- and micro-roughness on adhesion of bioinspired micropatterned surfaces. *Acta Biomaterialia*, **2012**, 8, 282-8	10.8	55
302	Single macropillars as model systems for tilt angle dependent adhesion measurements. *International Journal of Adhesion and Adhesives*, **2012**, 36, 32-38	3.4	18
301	Bioinspired polymeric surface patterns for medical applications. *Journal of Applied Biomaterials and Functional Materials*, **2012**, 10, 287-92	1.8	7
300	Biotechnological Mineral Composites via Vaterite Precursors. *Materials Research Society Symposia Proceedings*, **2012**, 1465, 32		2
299	Note: An adhesion measurement setup for bioinspired fibrillar surfaces using flat probes. *Review of Scientific Instruments*, **2012**, 83, 016101	1.7	23
298	Modeling the influences of nanoparticles on neural field oscillations in thalamocortical networks. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2012**, 2012, 1230-3	0.9	
297	Adhesion of Flat and Structured PDMS Samples to Spherical and Flat Probes: A Comparative Study **2011**, 87, 447-465		39
296	Facile, fast, and inexpensive synthesis of monodisperse amorphous nickel-phosphide nanoparticles of predefined size. *Chemical Communications*, **2011**, 47, 4108-10	5.8	31

295	Bioinspired Patterned Adhesives **2011**, 319-335		1
294	Adhesion of biocompatible and biodegradable micropatterned surfaces. *International Journal of Artificial Organs*, **2011**, 34, 180-4	1.9	13
293	Transfer Printing Processes **2011**, 69-92		1
292	Patterned Materials and Surfaces for Optical Applications **2011**, 337-360		
291	Nanofibrillar Patterns on PET: The Influence of Plasma Parameters in Surface Morphology. *Plasma Processes and Polymers*, **2011**, 8, 876-884	3.4	26
290	From science to industrial application. *Adhesion Adhesives and Sealants*, **2011**, 8, 40-44	0.3	
289	On the possible effects of nanoparticles on neuronal feedback circuits: A modeling study **2011**,		1
288	Effect of viscoelasticity on adhesion of bioinspired micropatterned epoxy surfaces. *Langmuir*, **2011**, 27, 7752-9	4	41
287	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	5.3	63
286	Bioinspired pressure actuated adhesive system. *Materials Science and Engineering C*, **2011**, 31, 1152-1159	3.3	49
285	Surface Instability and Pattern Formation in thin Polymer Films **2011**, 217-265		8
284	In situ observation of contact mechanisms in bioinspired adhesives at high magnification. *MRS Communications*, **2011**, 1, 53-56	2.7	10
283	Effect of pre-straining on the size effect in molybdenum pillars. *Philosophical Magazine Letters*, **2010**, 90, 841-849	1	18
282	Nanoindentation studies on crosslinking and curing effects of PDMS. *International Journal of Materials Research*, **2010**, 101, 1014-1023	0.5	13
281	Nanofibrillar Patterns by Plasma Etching: The Influence of Polymer Crystallinity and Orientation in Surface Morphology. *Macromolecules*, **2010**, 43, 9908-9917	5.5	60
280	Low cycle fatigue and creep–fatigue interaction in short fibre reinforced aluminium alloy composite. *Materials Science and Technology*, **2010**, 26, 1363-1372	1.5	3
279	Modeling the effects of nanoparticles on neuronal cells: from ionic channels to network dynamics. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2010**, 2010, 3816-9	0.9	6
278	Klinische und diagnostische Befunde bei Exposition gegenüber Nanopartikeln und neuen Materialien. *Zentralblatt Fur Arbeitsmedizin, Arbeitsschutz Und Ergonomie*, **2010**, 60, 328-348	0.3	4

277	Strength Effects in Micropillars of a Dispersion Strengthened Superalloy. *Advanced Engineering Materials*, **2010**, 12, 385-388	3.5	59
276	Adhesion Characteristics of PDMS Surfaces During Repeated Pull-Off Force Measurements. *Advanced Engineering Materials*, **2010**, 12, 398-404	3.5	78
275	Bi-Stable Adhesion of a Surface with a Dimple. *Advanced Engineering Materials*, **2010**, 12, 389-397	3.5	17
274	Micropatterned Polymer Surfaces and Cellular Response of Dictyostelium. *Advanced Engineering Materials*, **2010**, 12, 405-411	3.5	1
273	Functional Adhesive Surfaces with "Gecko" Effect: The Concept of Contact Splitting. *Advanced Engineering Materials*, **2010**, 12, 335-348	3.5	182
272	Gecko-inspired surfaces: a path to strong and reversible dry adhesives. *Advanced Materials*, **2010**, 22, 2125-37	24	368
271	Discrete contact mechanics of a fibrillar surface with backing layer interactions. *Journal of the Mechanics and Physics of Solids*, **2010**, 58, 1571-1581	5	24
270	Experimental Parameters Controlling Adhesion of Biomimetic Fibrillar Surfaces **2009**, 85, 646-661		22
269	Correlation between critical temperature and strength of small-scale bcc pillars. *Physical Review Letters*, **2009**, 103, 105501	7.4	179
268	In vitro adhesion measurements between skin and micropatterned poly(dimethylsiloxane) surfaces. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2009**, 2009, 6018-21	0.9	
267	Contact area determination in indentation testing of elastomers. *Journal of Materials Research*, **2009**, 24, 736-748	2.5	10
266	Brittle-to-ductile transition in ultrathin Ta/Cu film systems. *Journal of Materials Research*, **2009**, 24, 1906-1918	2.5	49
265	Mechanism Maps for Frictional Attachment Between Fibrillar Surfaces. *Journal of Applied Mechanics, Transactions ASME*, **2009**, 76,	2.7	4
264	Humidity influence on the adhesion of biomimetic fibrillar surfaces. *International Journal of Materials Research*, **2009**, 100, 1119-1126	0.5	17
263	Correlation between Activation Volume and Pillar Diameter for Mo and Nb BCC Pillars. *Materials Research Society Symposia Proceedings*, **2009**, 1185, 85		2
262	Hierarchical Gecko-Like Adhesives. *Advanced Materials*, **2009**, 21, 479-482	24	177
261	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	5.3	115
260	Investigation of the Bulge Test Response of Molybdenum Thin Films at Room Temperature and at 100 °C. *Strain*, **2009**, 45, 238-248	1.7	3

259	Adhesion design maps for fibrillar adhesives: the effect of shape. *Acta Biomaterialia*, **2009**, 5, 597-606	10.8	54
258	Bioinspired adhesion systems - competing with the gecko. *Vakuum in Forschung Und Praxis*, **2009**, 21, A14-A17	0.3	1
257	Was wir von Geckos lernen können. *Nachrichten Aus Der Chemie*, **2009**, 57, 137-139	0.1	1
256	Effect of repeated contact on adhesion measurements involving polydimethylsiloxane structural material. *IOP Conference Series: Materials Science and Engineering*, **2009**, 5, 012004	0.4	13
255	Orientation-independent pseudoelasticity in small-scale NiTi compression pillars. *Scripta Materialia*, **2008**, 59, 7-10	5.6	48
254	Enhancement of capillary forces by multiple liquid bridges. *Langmuir*, **2008**, 24, 8813-20	4	61
253	Effect of contact angle hysteresis on the measurement of capillary forces. *Langmuir*, **2008**, 24, 1391-6	4	83
252	Fabrication approaches for generating complex micro- and nanopatterns on polymeric surfaces. *Chemical Reviews*, **2008**, 108, 911-45	68.1	372
251	Capillary forces between chemically different substrates. *Langmuir*, **2008**, 24, 10161-8	4	66
250	Observation of giant diffusivity along dislocation cores. *Science*, **2008**, 319, 1646-9	33.3	275
249	Strain bursts in plastically deforming molybdenum micro- and nanopillars. *Philosophical Magazine*, **2008**, 88, 3861-3874	1.6	111
248	Mechanical properties of a single gecko seta. *International Journal of Materials Research*, **2008**, 99, 1113-1118	0.5	29
247	Temperature dependence of mechanical properties in ultrathin Au films with and without passivation. *Journal of Materials Research*, **2008**, 23, 2406-2419	2.5	24
246	Defect Dependent Adhesion of Fibrillar Surfaces **2008**, 84, 675-681		14
245	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	5.3	307
244	The effect of shape on the adhesion of fibrillar surfaces. *Acta Biomaterialia*, **2008**, 4, 1669-76	10.8	107
243	A Gecko-Inspired Reversible Adhesive. *Advanced Materials*, **2008**, 20, 3905-3909	24	165
242	Texture, microstructure and mechanical properties of equiaxed ultrafine-grained Zr fabricated by accumulative roll bonding. *Acta Materialia*, **2008**, 56, 1228-1242	8.4	114

241	Strong single-crystalline Au films tested by a new synchrotron technique. *Acta Materialia*, **2008**, 56, 1876-1889	8.4	41
240	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	8.4	132
239	In situ indentation testing of elastomers. *Acta Materialia*, **2008**, 56, 4390-4401	8.4	30
238	Adhesion of bioinspired micropatterned surfaces: effects of pillar radius, aspect ratio, and preload. *Langmuir*, **2007**, 23, 3495-502	4	340
237	Contact shape controls adhesion of bioinspired fibrillar surfaces. *Langmuir*, **2007**, 23, 10235-43	4	348
236	Patterned Surfaces with Pillars with Controlled 3D Tip Geometry Mimicking Bioattachment Devices. *Advanced Materials*, **2007**, 19, 1973-1977	24	189
235	Bioinspired Surfaces with Switchable Adhesion. *Advanced Materials*, **2007**, 19, 3833-3837	24	256
234	Design parameters and current fabrication approaches for developing bioinspired dry adhesives. *Macromolecular Bioscience*, **2007**, 7, 118-27	5.5	68
233	Fatigue damage in thin film Al interconnects at ultra high frequency: A finite element analysis approach. *Thin Solid Films*, **2007**, 515, 3291-3297	2.2	9
232	Dealloying of Au-Ag thin films with a composition gradient: Influence on morphology of nanoporous Au. *Thin Solid Films*, **2007**, 515, 7122-7126	2.2	77
231	Loss of pseudoelasticity in nickel-titanium sub-micron compression pillars. *Acta Materialia*, **2007**, 55, 3845-3855	8.4	123
230	Biomimetic models of the actin cytoskeleton. *Small*, **2007**, 3, 1015-22	11	19
229	Influence of surface roughness on gecko adhesion. *Acta Biomaterialia*, **2007**, 3, 607-10	10.8	166
228	Adhesive contact between flat punches with finite edge radius and an elastic half-space. *International Journal of Materials Research*, **2007**, 98, 1156-1162	0.5	3
227	Surface detection in nanoindentation of soft polymers. *Journal of Materials Research*, **2007**, 22, 3107-3119	2.5	40
226	Designing Model Systems for Enhanced Adhesion. *MRS Bulletin*, **2007**, 32, 496-503	3.2	67
225	Mucoadhesive micropatterns for enhanced grip. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society*, **2007**, 2007, 1457-62		1
224	Biological and artificial attachment devices: Lessons for materials scientists from flies and geckos. *Materials Science and Engineering C*, **2006**, 26, 1245-1250	8.3	56

223	Thixoforging of continuous fiber-reinforced AlSi/AlMg-alloys. *International Journal of Machine Tools and Manufacture*, **2006**, 46, 1227-1232	9.4	4
222	Micrometer-Scale Tensile Testing of Biological Attachment Devices. *Advanced Materials*, **2006**, 18, 874-877	7.4	38
221	Microstructure and mechanical behavior of Pt-modified NiAl diffusion coatings. *International Journal of Materials Research*, **2006**, 97, 689-698	0.5	6
220	Passivation Effects in Copper Thin Films. *AIP Conference Proceedings*, **2006**,	0	1
219	Thermomechanical Behavior of Thin Metal Films under Different Ambient Conditions. *AIP Conference Proceedings*, **2006**,	0	3
218	Strain Energy Effects on Texture Evolution in Thin Films: Biaxial vs. Uniaxial Stress State. *AIP Conference Proceedings*, **2006**,	0	1
217	Thermomechanical Properties of Thin □Fe Films Above the Brittle to Ductile Transition Temperature. *Materials Research Society Symposia Proceedings*, **2006**, 924, 1		1
216	Damage analysis in Al thin films fatigued at ultrahigh frequencies. *Journal of Applied Physics*, **2006**, 99, 113501	2.5	13
215	Advanced testing of adhesion and friction with a microtribometer. *Review of Scientific Instruments*, **2006**, 77, 066105	1.7	39
214	Local mechanical properties of the head articulation cuticle in the beetle Pachnoda marginata (Coleoptera, Scarabaeidae). *Journal of Experimental Biology*, **2006**, 209, 722-30	3	103
213	Effect of real contact geometry on adhesion. *Applied Physics Letters*, **2006**, 89, 121905	3.4	58
212	Creep of Mg-Zn-Al-Alloys **2006**, 693-698		2
211	Length-scale-controlled fatigue mechanisms in thin copper films. *Acta Materialia*, **2006**, 54, 3127-3139	8.4	142
210	Texture transition in Cu thin films: Electron backscatter diffraction vs. X-ray diffraction. *Acta Materialia*, **2006**, 54, 3863-3870	8.4	55
209	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	5.3	17
208	The elastic modulus of spruce wood cell wall material measured by an in situ bending technique. *Journal of Materials Science*, **2006**, 41, 5122-5126	4.3	37
207	Resolving the nanoscale adhesion of individual gecko spatulae by atomic force microscopy. *Biology Letters*, **2005**, 1, 2-4	3.6	221
206	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	2.4	221

205	Damage behavior of 200-nm thin copper films under cyclic loading. *Journal of Materials Research*, **2005**, 20, 201-207	2.5	74
204	Obtaining different orientation relationships for Cu films grown on (0001) Al2O3substrates by magnetron sputtering. *International Journal of Materials Research*, **2005**, 96, 249-254		11
203	Fatigue failure of titanium implants for mandibular reconstruction. *International Journal of Materials Research*, **2005**, 96, 894-901		
202	Mechanics of hierarchical adhesion structures of geckos. *Mechanics of Materials*, **2005**, 37, 275-285	3.3	502
201	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
200	A quantitative study of the hardness of a superhard nanocrystalline titanium nitride/silicon nitride coating. *Scripta Materialia*, **2005**, 52, 1269-1274	5.6	30
199	A theoretical description of elastic pillar substrates in biophysical experiments. *ChemPhysChem*, **2005**, 6, 1492-8	3.2	39
198	Adhesion design maps for bio-inspired attachment systems. *Acta Biomaterialia*, **2005**, 1, 5-13	10.8	216
197	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	2.3	40
196	Strained thin copper films as model catalysts in the materials gap. *Catalysis Letters*, **2005**, 102, 91-97	2.8	14
195	Pipe-diffusion ripening of Si precipitates in Al-0.5%Cu-1%Si thin films. *Philosophical Magazine*, **2005**, 85, 3541-3552	1.6	7
194	Hillock formation and thermal stresses in thin Au films on Si substrates. *Materials Research Society Symposia Proceedings*, **2005**, 875, 1		2
193	Local strains measured in Al lines during thermal cycling and electromigration using convergent-beam electron diffraction. *Journal of Materials Research*, **2005**, 20, 1851-1859	2.5	11
192	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, 16293-6	11.5	510
191	Influence of Gas Atmosphere on the Plasticity of Metal Thin Films. *Materials Research Society Symposia Proceedings*, **2005**, 875, 1		
190	Size effects in the plastic deformation of NiAl thin films. *International Journal of Materials Research*, **2004**, 95, 769-778		9
189	Exploring Biological Surfaces by Nanoindentation. *Journal of Materials Research*, **2004**, 19, 880-887	2.5	51
188	Tensile testing of ultrathin polycrystalline films: A synchrotron-based technique. *Review of Scientific Instruments*, **2004**, 75, 1110-1119	1.7	71

187	Size Effect on Crack Formation in Cu/Ta and Ta/Cu/Ta Thin Film Systems. *Materials Research Society Symposia Proceedings*, **2004**, 821, 72		14
186	Internal Friction of a High-Nb Gamma-TiAl-Based Alloy with Different Microstructures. *Materials Research Society Symposia Proceedings*, **2004**, 842, 483		
185	Microstructure and Thermo-Mechanical Behavior of NiAl Coatings. *Materials Research Society Symposia Proceedings*, **2004**, 842, 55		
184	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, 2947-63	3	69
183	A New Synchrotron-based Technique for Measuring Stresses in Ultrathin Metallic Films. *Materials Research Society Symposia Proceedings*, **2004**, 821, 48		4
182	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
181	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
180	X-ray microdiffraction: local stress distributions in polycrystalline and epitaxial thin films. *Microelectronic Engineering*, **2004**, 75, 117-126	2.5	20
179	Discrete dislocation simulation of plastic deformation in metal thin films. *Acta Materialia*, **2004**, 52, 773-784	8.4	79
178	Channel cracking of □NiAl thin films on Si substrates. *Acta Materialia*, **2004**, 52, 2325-2336	8.4	33
177	A Model for the Increased Elastic Compliance in Human Cancer Cells. *Materials Research Society Symposia Proceedings*, **2004**, 844, 1		
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