

Eduard Arzt

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21,759
ext. citations

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#	Paper	IF	Citations
366	Materials become insensitive to flaws at nanoscale: lessons from nature. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2003 , 100, 5597-600	11.5	1428
365	Size effects in materials due to microstructural and dimensional constraints: a comparative review. <i>Acta Materialia</i> , 1998 , 46, 5611-5626	8.4	892
364	From micro to nano contacts in biological attachment devices. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2003 , 100, 10603-6	11.5	849
363	Evidence for capillarity contributions to gecko adhesion from single spatula nanomechanical measurements. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2005 , 102, 16293-6	11.5	510
362	Mechanics of hierarchical adhesion structures of geckos. <i>Mechanics of Materials</i> , 2005 , 37, 275-285	3.3	502
361	Fabrication approaches for generating complex micro- and nanopatterns on polymeric surfaces. <i>Chemical Reviews</i> , 2008 , 108, 911-45	68.1	372
360	Gecko-inspired surfaces: a path to strong and reversible dry adhesives. <i>Advanced Materials</i> , 2010 , 22, 2125-37	24	368
359	A new model-based creep equation for dispersion strengthened materials. <i>Acta Metallurgica Et Materialia</i> , 1990 , 38, 671-683		366
358	Contact shape controls adhesion of bioinspired fibrillar surfaces. <i>Langmuir</i> , 2007 , 23, 10235-43	4	348
357	Adhesion of bioinspired micropatterned surfaces: effects of pillar radius, aspect ratio, and preload. <i>Langmuir</i> , 2007 , 23, 3495-502	4	340
356	Threshold stresses for dislocation climb over hard particles: The effect of an attractive interaction. <i>Acta Metallurgica</i> , 1986 , 34, 1893-1898		327
355	Practical applications of hotisostatic Pressing diagrams: Four case studies. <i>Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science</i> , 1983 , 14, 211-221		315
354	The influence of an increasing particle coordination on the densification of spherical powders. <i>Acta Metallurgica</i> , 1982 , 30, 1883-1890		309
353	Size effect on strength and strain hardening of small-scale [111] nickel compression pillars. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2008 , 489, 319-329	5.3	307
352	Observation of giant diffusivity along dislocation cores. <i>Science</i> , 2008 , 319, 1646-9	33.3	275
351	Interface controlled diffusional creep. <i>Acta Metallurgica</i> , 1983 , 31, 1977-1989		261
350	Bioinspired Surfaces with Switchable Adhesion. <i>Advanced Materials</i> , 2007 , 19, 3833-3837	24	256

349	The kinetics of dislocation climb over hard particles \square . Effects of an attractive particle-dislocation interaction. <i>Acta Metallurgica</i> , 1988 , 36, 1053-1060		236
348	Quantitative analysis of strengthening mechanisms in thin Cu films: Effects of film thickness, grain size, and passivation. <i>Journal of Materials Research</i> , 1998 , 13, 1307-1317	2.5	232
347	Resolving the nanoscale adhesion of individual gecko spatulae by atomic force microscopy. <i>Biology Letters</i> , 2005 , 1, 2-4	3.6	221
346	Effects of contact shape on the scaling of biological attachments. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2005 , 461, 305-319	2.4	221
345	Adhesion design maps for bio-inspired attachment systems. <i>Acta Biomaterialia</i> , 2005 , 1, 5-13	10.8	216
344	Patterned Surfaces with Pillars with Controlled 3D Tip Geometry Mimicking Bioattachment Devices. <i>Advanced Materials</i> , 2007 , 19, 1973-1977	24	189
343	Crack-like grain-boundary diffusion wedges in thin metal films. <i>Acta Materialia</i> , 1999 , 47, 2865-2878	8.4	186
342	Functional Adhesive Surfaces with GeckoEffect: The Concept of Contact Splitting. <i>Advanced Engineering Materials</i> , 2010 , 12, 335-348	3.5	182
341	Correlation between critical temperature and strength of small-scale bcc pillars. <i>Physical Review Letters</i> , 2009 , 103, 105501	7.4	179
340	Hierarchical Gecko-Like Adhesives. <i>Advanced Materials</i> , 2009 , 21, 479-482	24	177
339	Influence of surface roughness on gecko adhesion. <i>Acta Biomaterialia</i> , 2007 , 3, 607-10	10.8	166
338	A Gecko-Inspired Reversible Adhesive. <i>Advanced Materials</i> , 2008 , 20, 3905-3909	24	165
337	Densification of Powders by Particle Deformation. <i>Powder Metallurgy</i> , 1983 , 26, 82-88	1.9	162
336	Threshold stresses in materials containing dispersed particles. <i>Scripta Metallurgica</i> , 1982 , 16, 1285-1290		162
335	Electromigration failure by shape change of voids in bamboo lines. <i>Journal of Applied Physics</i> , 1994 , 76, 1563-1571	2.5	156
334	Electrical transport in pure and boron-doped carbon nanotubes. <i>Applied Physics Letters</i> , 1999 , 74, 3149-3151	3.4	155
333	Length-scale-controlled fatigue mechanisms in thin copper films. <i>Acta Materialia</i> , 2006 , 54, 3127-3139	8.4	142
332	The kinetics of dislocation climb over hard particles \square Climb without attractive particle-dislocation interaction. <i>Acta Metallurgica</i> , 1988 , 36, 1043-1051		133

331	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. <i>Acta Materialia</i> , 2008 , 56, 2318-2335	8.4	132
330	Loss of pseudoelasticity in nickel-titanium sub-micron compression pillars. <i>Acta Materialia</i> , 2007 , 55, 3845-3855	8.4	123
329	Thermomechanical behavior of different texture components in Cu thin films. <i>Acta Materialia</i> , 2001 , 49, 2145-2160	8.4	120
328	Effects of grain orientation on hillock formation and grain growth in aluminum films on silicon substrates. <i>Scripta Metallurgica Et Materialia</i> , 1992 , 27, 285-290		118
327	Weak beam studies of dislocation/dispersoid interaction in an ods superalloy. <i>Scripta Metallurgica</i> , 1985 , 19, 1129-1134		118
326	Constrained diffusional creep in UHV-produced copper thin films. <i>Acta Materialia</i> , 2001 , 49, 2395-2403	8.4	117
325	Effect of orientation and loading rate on compression behavior of small-scale Mo pillars. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2009 , 508, 241-246	5.3	115
324	Texture, microstructure and mechanical properties of equiaxed ultrafine-grained Zr fabricated by accumulative roll bonding. <i>Acta Materialia</i> , 2008 , 56, 1228-1242	8.4	114
323	Strain bursts in plastically deforming molybdenum micro- and nanopillars. <i>Philosophical Magazine</i> , 2008 , 88, 3861-3874	1.6	111
322	Stress-temperature behavior of unpassivated thin copper films. <i>Acta Materialia</i> , 1999 , 47, 415-426	8.4	110
321	The effect of shape on the adhesion of fibrillar surfaces. <i>Acta Biomaterialia</i> , 2008 , 4, 1669-76	10.8	107
320	Interface controlled plasticity in metals: dispersion hardening and thin film deformation. <i>Progress in Materials Science</i> , 2001 , 46, 283-307	42.2	106
319	Mechanisms of hot-isostatic pressing. <i>Acta Metallurgica</i> , 1983 , 31, 1829-1840		105
318	Local mechanical properties of the head articulation cuticle in the beetle <i>Pachnoda marginata</i> (Coleoptera, Scarabaeidae). <i>Journal of Experimental Biology</i> , 2006 , 209, 722-30	3	103
317	Microstructure and creep properties of dispersion-strengthened aluminum alloys. <i>Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science</i> , 1992 , 23, 1521-1393		102
316	Particle Deformation and Sliding During Compaction of Spherical Powders: A Study by Quantitative Metallography. <i>Powder Metallurgy</i> , 1978 , 21, 179-187	1.9	101
315	Dislocation sources and the flow stress of polycrystalline thin metal films. <i>Philosophical Magazine Letters</i> , 2003 , 83, 1-8	1	99
314	Parallel glide: unexpected dislocation motion parallel to the substrate in ultrathin copper films. <i>Acta Materialia</i> , 2003 , 51, 4471-4485	8.4	93

313	Electromigration mechanisms in conductor lines: Void shape changes and slit-like failure. <i>Acta Materialia</i> , 1997 , 45, 1599-1611	8.4	92
312	Small-scale plasticity in thin Cu and Al films. <i>Microelectronic Engineering</i> , 2003 , 70, 412-424	2.5	89
311	Nanostructured medical sutures with antibacterial properties. <i>Biomaterials</i> , 2015 , 52, 291-300	15.6	87
310	A model for the effect of line width and mechanical strength on electromigration failure of interconnects with Bear-bamboo grain structures. <i>Journal of Materials Research</i> , 1991 , 6, 731-736	2.5	87
309	Effect of contact angle hysteresis on the measurement of capillary forces. <i>Langmuir</i> , 2008 , 24, 1391-6	4	83
308	Hierarchical bioinspired adhesive surfaces-a review. <i>Bioinspiration and Biomimetics</i> , 2016 , 11, 051001	2.6	79
307	Discrete dislocation simulation of plastic deformation in metal thin films. <i>Acta Materialia</i> , 2004 , 52, 773-784	8.4	79
306	Adhesion Characteristics of PDMS Surfaces During Repeated Pull-Off Force Measurements. <i>Advanced Engineering Materials</i> , 2010 , 12, 398-404	3.5	78
305	Dealloying of AuAg thin films with a composition gradient: Influence on morphology of nanoporous Au. <i>Thin Solid Films</i> , 2007 , 515, 7122-7126	2.2	77
304	X-ray diffraction as a tool to study the mechanical behaviour of thin films. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2000 , 288, 209-216	5.3	77
303	A new method to study cyclic deformation of thin films in tension and compression. <i>Journal of Materials Research</i> , 1999 , 14, 2373-2376	2.5	77
302	Temperature-dependent size effects on the strength of Ta and W micropillars. <i>Acta Materialia</i> , 2016 , 103, 483-494	8.4	76
301	Engineering Micropatterned Dry Adhesives: From Contact Theory to Handling Applications. <i>Advanced Functional Materials</i> , 2018 , 28, 1800865	15.6	75
300	Preliminary investigation of a NiAl composite prepared by cryomilling. <i>Journal of Materials Research</i> , 1990 , 5, 271-277	2.5	75
299	Damage behavior of 200-nm thin copper films under cyclic loading. <i>Journal of Materials Research</i> , 2005 , 20, 201-207	2.5	74
298	Dislocation sources in discrete dislocation simulations of thin-film plasticity and the Hall-Petch relation. <i>Modelling and Simulation in Materials Science and Engineering</i> , 2001 , 9, 157-169	2	73
297	Microstructure of thermal hillocks on blanket Al thin films. <i>Thin Solid Films</i> , 2000 , 371, 278-282	2.2	72
296	Tensile testing of ultrathin polycrystalline films: A synchrotron-based technique. <i>Review of Scientific Instruments</i> , 2004 , 75, 1110-1119	1.7	71

295	Creep behavior of magnesium die-cast alloy ZA85. <i>Scripta Materialia</i> , 2003 , 48, 985-990	5.6	71
294	Structure and properties of the glandular surface in the digestive zone of the pitcher in the carnivorous plant <i>Nepenthes ventrata</i> and its role in insect trapping and retention. <i>Journal of Experimental Biology</i> , 2004 , 207, 2947-63	3	69
293	Numerical simulation of electromigration-induced shape changes of voids in bamboo lines. <i>Applied Physics Letters</i> , 1995 , 66, 2063-2065	3.4	69
292	Design parameters and current fabrication approaches for developing bioinspired dry adhesives. <i>Macromolecular Bioscience</i> , 2007 , 7, 118-27	5.5	68
291	Fatigue behavior of polycrystalline thin copper films. <i>International Journal of Materials Research</i> , 2002 , 93, 392-400		68
290	Grain size determination and limits to Hall-Petch behavior in nanocrystalline NiAl powders. <i>Scripta Materialia</i> , 1997 , 8, 855-865		67
289	Designing Model Systems for Enhanced Adhesion. <i>MRS Bulletin</i> , 2007 , 32, 496-503	3.2	67
288	Capillary forces between chemically different substrates. <i>Langmuir</i> , 2008 , 24, 10161-8	4	66
287	Dislocation Plasticity in Thin Metal Films. <i>MRS Bulletin</i> , 2002 , 27, 30-37	3.2	66
286	Quasi-crystalline grain-boundary phase in the magnesium die-cast alloy ZA85. <i>Scripta Materialia</i> , 2001 , 45, 517-524	5.6	64
285	Influence of orientation on the size effect in bcc pillars with different critical temperatures. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2011 , 528, 1540-1547	5.3	63
284	On void nucleation and growth in metal interconnect lines under electromigration conditions. <i>Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science</i> , 1992 , 23, 2007-2013		62
283	Enhancement of capillary forces by multiple liquid bridges. <i>Langmuir</i> , 2008 , 24, 8813-20	4	61
282	Composite Pillars with a Tunable Interface for Adhesion to Rough Substrates. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 1036-1044	9.5	60
281	Nanofibrillar Patterns by Plasma Etching: The Influence of Polymer Crystallinity and Orientation in Surface Morphology. <i>Macromolecules</i> , 2010 , 43, 9908-9917	5.5	60
280	Fibrillar Elastomeric Micropatterns Create Tunable Adhesion Even to Rough Surfaces. <i>Advanced Functional Materials</i> , 2016 , 26, 4687-4694	15.6	60
279	Strength Effects in Micropillars of a Dispersion Strengthened Superalloy. <i>Advanced Engineering Materials</i> , 2010 , 12, 385-388	3.5	59
278	Thermal Vacancies and High-Temperature Mechanical Properties of FeAl. <i>Physica Status Solidi A</i> , 1997 , 160, 531-540		58

277	Effect of real contact geometry on adhesion. <i>Applied Physics Letters</i> , 2006 , 89, 121905	3.4	58
276	In situ transmission electron microscopy study of dislocations in a polycrystalline Cu thin film constrained by a substrate. <i>Applied Physics Letters</i> , 2000 , 77, 1126-1128	3.4	58
275	Electromigration induced transgranular slit failures in near bamboo Al and Al-2% Cu thin-film interconnects. <i>Applied Physics Letters</i> , 1992 , 61, 3121-3123	3.4	58
274	Biological and artificial attachment devices: Lessons for materials scientists from flies and geckos. <i>Materials Science and Engineering C</i> , 2006 , 26, 1245-1250	8.3	56
273	Effect of nano- and micro-roughness on adhesion of bioinspired micropatterned surfaces. <i>Acta Biomaterialia</i> , 2012 , 8, 282-8	10.8	55
272	Microstructural development in dispersion strengthened NiAl produced by mechanical alloying and secondary recrystallization. <i>Acta Materialia</i> , 1997 , 45, 201-211	8.4	55
271	Texture transition in Cu thin films: Electron backscatter diffraction vs. X-ray diffraction. <i>Acta Materialia</i> , 2006 , 54, 3863-3870	8.4	55
270	Adhesion design maps for fibrillar adhesives: the effect of shape. <i>Acta Biomaterialia</i> , 2009 , 5, 597-606	10.8	54
269	In situ transmission electron microscopy study of thermal-stress-induced dislocations in a thin Cu film constrained by a Si substrate. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2001 , 309-310, 468-472	5.3	53
268	Abnormal growth of giant grains in silver thin films. <i>Acta Materialia</i> , 2001 , 49, 1041-1050	8.4	52
267	Towards a micromechanical understanding of biological surface devices. <i>International Journal of Materials Research</i> , 2002 , 93, 345-351		52
266	Exploring Biological Surfaces by Nanoindentation. <i>Journal of Materials Research</i> , 2004 , 19, 880-887	2.5	51
265	Microstructural evolution in passivated Al films on Si substrates during thermal cycling. <i>Acta Materialia</i> , 2002 , 50, 3435-3452	8.4	51
264	Temperature rise during mechanical alloying. <i>Scripta Metallurgica Et Materialia</i> , 1992 , 27, 749-754		50
263	Brittle-to-ductile transition in ultrathin Ta/Cu film systems. <i>Journal of Materials Research</i> , 2009 , 24, 1906-1918	4.9	49
262	Bioinspired pressure actuated adhesive system. <i>Materials Science and Engineering C</i> , 2011 , 31, 1152-1159	8.3	49
261	Numerical study of adhesion enhancement by composite fibrils with soft tip layers. <i>Journal of the Mechanics and Physics of Solids</i> , 2017 , 99, 357-378	5	48
260	Orientation-independent pseudoelasticity in small-scale NiTi compression pillars. <i>Scripta Materialia</i> , 2008 , 59, 7-10	5.6	48

259	Numerical simulation of the edge stress singularity and the adhesion strength for compliant mushroom fibrils adhered to rigid substrates. <i>International Journal of Solids and Structures</i> , 2016 , 85-86, 160-171	3.1	47
258	High temperature creep behavior of oxide dispersion strengthened NiAl intermetallics. <i>Acta Materialia</i> , 1998 , 46, 2717-2727	8.4	47
257	Temperature-Induced Switchable Adhesion using Nickel-Titanium-Polydimethylsiloxane Hybrid Surfaces. <i>Advanced Functional Materials</i> , 2015 , 25, 3013-3021	15.6	46
256	Observation and modelling of electromigration-induced void growth in Al-based interconnects. <i>Materials Research Society Symposia Proceedings</i> , 1993 , 309, 199		44
255	1300 K compressive properties of a reaction milled NiAl/AlN composite. <i>Journal of Materials Research</i> , 1990 , 5, 2819-2827	2.5	43
254	Detachment of an adhered micropillar from a dissimilar substrate. <i>Journal of the Mechanics and Physics of Solids</i> , 2015 , 75, 159-183	5	42
253	Effect of viscoelasticity on adhesion of bioinspired micropatterned epoxy surfaces. <i>Langmuir</i> , 2011 , 27, 7752-9	4	41
252	Strong single-crystalline Au films tested by a new synchrotron technique. <i>Acta Materialia</i> , 2008 , 56, 1876-1889	6.1	41
251	Growth of giant grains in silver thin films. <i>Scripta Materialia</i> , 1999 , 41, 709-714	5.6	41
250	Surface detection in nanoindentation of soft polymers. <i>Journal of Materials Research</i> , 2007 , 22, 3107-3119	1.5	40
249	Effect of calcium additions on the creep behavior of magnesium die-cast alloy ZA85. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2005 , 36, 1713-1719	2.3	40
248	Adhesion of Flat and Structured PDMS Samples to Spherical and Flat Probes: A Comparative Study 2011 , 87, 447-465		39
247	Advanced testing of adhesion and friction with a microtribometer. <i>Review of Scientific Instruments</i> , 2006 , 77, 066105	1.7	39
246	Microstructural size effects on the hardness of nanocrystalline TiN/amorphous-SiNx coatings prepared by magnetron sputtering. <i>Thin Solid Films</i> , 2005 , 473, 114-122	2.2	39
245	A theoretical description of elastic pillar substrates in biophysical experiments. <i>ChemPhysChem</i> , 2005 , 6, 1492-8	3.2	39
244	Micrometer-Scale Tensile Testing of Biological Attachment Devices. <i>Advanced Materials</i> , 2006 , 18, 874-877		38
243	Kinetics and driving forces of abnormal grain growth in thin Cu films. <i>Acta Materialia</i> , 2012 , 60, 2397-2406	1.4	37
242	The elastic modulus of spruce wood cell wall material measured by an in situ bending technique. <i>Journal of Materials Science</i> , 2006 , 41, 5122-5126	4.3	37

241	The whole is more than the sum of all its parts: collective effect of spider attachment organs. <i>Journal of Experimental Biology</i> , 2014 , 217, 222-4	3	35
240	Textures of thin copper films. <i>Journal of Materials Research</i> , 1998 , 13, 2962-2968	2.5	35
239	Influence of test temperature on the size effect in molybdenum small-scale compression pillars. <i>Philosophical Magazine Letters</i> , 2013 , 93, 331-338	1	34
238	Strong Wet and Dry Adhesion by Cupped Microstructures. <i>ACS Applied Materials & Interfaces</i> , 2019 , 11, 26483-26490	9.5	33
237	Preload-responsive adhesion: effects of aspect ratio, tip shape and alignment. <i>Journal of the Royal Society Interface</i> , 2013 , 10, 20130171	4.1	33
236	Effects of alloying elements on electromigration. <i>Microelectronics Reliability</i> , 1998 , 38, 1015-1020	1.2	33
235	Channel cracking of ENiAl thin films on Si substrates. <i>Acta Materialia</i> , 2004 , 52, 2325-2336	8.4	33
234	Electromigration-induced Cu motion and precipitation in bamboo AlCu interconnects. <i>Acta Materialia</i> , 2003 , 51, 49-60	8.4	32
233	Facile, fast, and inexpensive synthesis of monodisperse amorphous nickel-phosphide nanoparticles of predefined size. <i>Chemical Communications</i> , 2011 , 47, 4108-10	5.8	31
232	Funnel-Shaped Microstructures for Strong Reversible Adhesion. <i>Advanced Materials Interfaces</i> , 2017 , 4, 1700292	4.6	30
231	In situ indentation testing of elastomers. <i>Acta Materialia</i> , 2008 , 56, 4390-4401	8.4	30
230	A quantitative study of the hardness of a superhard nanocrystalline titanium nitride/silicon nitride coating. <i>Scripta Materialia</i> , 2005 , 52, 1269-1274	5.6	30
229	Dislocation dynamics in sub-micron confinement: recent progress in Cu thin film plasticity. <i>International Journal of Materials Research</i> , 2002 , 93, 383-391		30
228	Hierarchical macroscopic fibrillar adhesives: in situ study of buckling and adhesion mechanisms on wavy substrates. <i>Bioinspiration and Biomimetics</i> , 2015 , 10, 066002	2.6	29
227	Mechanical properties of a single gecko seta. <i>International Journal of Materials Research</i> , 2008 , 99, 1113-1118	1.1	29
226	Investigation of the stresses in continuous thin films and patterned lines by x-ray diffraction. <i>Applied Physics Letters</i> , 1994 , 64, 1097-1099	3.4	29
225	Creep behavior of AlAl sheet material with differently spaced fully lamellar microstructures. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2002 , 329-331, 840-846	5.3	28
224	Effects of thickness on the characteristic length scale of dislocation plasticity in Ag thin films. <i>Acta Materialia</i> , 2001 , 49, 3597-3607	8.4	28

223	TEM investigations of the superdislocations and their interaction with particles in dispersion strengthened intermetallics. <i>Intermetallics</i> , 1999 , 7, 423-436	3.5	28
222	Comparison of mechanical properties and microstructure of Al(1 wt.%Si) and Al(1 wt.%Si, 0.5 wt.%Cu) thin films. <i>Thin Solid Films</i> , 1995 , 263, 175-184	2.2	28
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220	Microstructural Development and Densification During Hipping of Ceramics and Metals. <i>Powder Metallurgy</i> , 1988 , 31, 63-69	1.9	28
219	In Situ Observation Reveals Local Detachment Mechanisms and Suction Effects in Micropatterned Adhesives. <i>Advanced Functional Materials</i> , 2019 , 29, 1807713	15.6	26
218	Single macroscopic pillars as model system for bioinspired adhesives: influence of tip dimension, aspect ratio, and tilt angle. <i>ACS Applied Materials & Interfaces</i> , 2014 , 6, 7076-83	9.5	26
217	Nanofibrillar Patterns on PET: The Influence of Plasma Parameters in Surface Morphology. <i>Plasma Processes and Polymers</i> , 2011 , 8, 876-884	3.4	26
216	High temperature, low cycle fatigue behaviour of an aluminium alloy (Al-2Si-1CuMgNi). <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2000 , 276, 283-287	5.3	26
215	Dynamic observation of Al thin films plastically strained in a TEM. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2001 , 309-310, 463-467	5.3	25
214	Surface structure influences contact killing of bacteria by copper. <i>MicrobiologyOpen</i> , 2014 , 3, 327-32	3.4	24
213	Discrete contact mechanics of a fibrillar surface with backing layer interactions. <i>Journal of the Mechanics and Physics of Solids</i> , 2010 , 58, 1571-1581	5	24
212	Temperature dependence of mechanical properties in ultrathin Au films with and without passivation. <i>Journal of Materials Research</i> , 2008 , 23, 2406-2419	2.5	24
211	Electromigration damage in mechanically deformed Al conductor lines: dislocations as fast diffusion paths. <i>Acta Materialia</i> , 2000 , 48, 2199-2208	8.4	24
210	Functional surface microstructures inspired by nature – From adhesion and wetting principles to sustainable new devices. <i>Progress in Materials Science</i> , 2021 , 120, 100823	42.2	24
209	Note: An adhesion measurement setup for bioinspired fibrillar surfaces using flat probes. <i>Review of Scientific Instruments</i> , 2012 , 83, 016101	1.7	23
208	Dispersion strengthening of intermetallics. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 1997 , 234-236, 22-29	5.3	23
207	Cohesive detachment of an elastic pillar from a dissimilar substrate. <i>Journal of the Mechanics and Physics of Solids</i> , 2017 , 101, 30-43	5	22
206	Bioinspired polydimethylsiloxane-based composites with high shear resistance against wet tissue. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2016 , 61, 87-95	4.1	22

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204	Current density and line width effects in electromigration: a new damage-based lifetime model. <i>Acta Materialia</i> , 1998 , 46, 3733-3743	8.4	22
203	Calculation of the electromigration wind force in Al alloys. <i>Physical Review B</i> , 1999 , 59, 7451-7457	3.3	21
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201	Buckling of an Adhesive Polymeric Micropillar 2013 , 89, 140-158		20
200	Quantitative Analysis of Electromigration Damage in Al-based Conductor Lines. <i>Journal of Materials Research</i> , 1997 , 12, 2027-2037	2.5	20
199	X-ray microdiffraction: local stress distributions in polycrystalline and epitaxial thin films. <i>Microelectronic Engineering</i> , 2004 , 75, 117-126	2.5	20
198	Biomimetic models of the actin cytoskeleton. <i>Small</i> , 2007 , 3, 1015-22	11	19
197	Plastic deformation and its influence on diffusion process during mechanical alloying. <i>Scripta Metallurgica Et Materialia</i> , 1993 , 28, 395-400		19
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