

Subra Suresh

List of Publications by Year in descending order

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290
papers

43,897
citations

1792

103
h-index

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202
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299
all docs

299
docs citations

299
times ranked

26827
citing authors

#	ARTICLE	IF	CITATIONS
1	Strengthening Materials by Engineering Coherent Internal Boundaries at the Nanoscale. <i>Science</i> , 2009, 324, 349-352.	6.0	1,953
2	Mechanical behavior of nanocrystalline metals and alloys11The Golden Jubilee Issueâ€”Selected topics in Materials Science and Engineering: Past, Present and Future, edited by S. Suresh. <i>Acta Materialia</i> , 2003, 51, 5743-5774.	3.8	1,746
3	Computational modeling of the forward and reverse problems in instrumented sharp indentation. <i>Acta Materialia</i> , 2001, 49, 3899-3918.	3.8	1,272
4	Biomechanics and biophysics of cancer cellsâ†. <i>Acta Biomaterialia</i> , 2007, 3, 413-438.	4.1	957
5	Cell and molecular mechanics of biological materials. <i>Nature Materials</i> , 2003, 2, 715-725.	13.3	914
6	Sizeâ€Dependent Endocytosis of Nanoparticles. <i>Advanced Materials</i> , 2009, 21, 419-424.	11.1	895
7	Connections between single-cell biomechanics and human disease states: gastrointestinal cancer and malaria. <i>Acta Biomaterialia</i> , 2005, 1, 15-30.	4.1	748
8	An experimental and numerical study of deformation in metal-ceramic composites. <i>Acta Metallurgica</i> , 1989, 37, 3029-3050.	2.1	739
9	Mechanistic models for the activation volume and rate sensitivity in metals with nanocrystalline grains and nano-scale twins. <i>Acta Materialia</i> , 2005, 53, 3369-3382.	3.8	725
10	Graded Materials for Resistance to Contact Deformation and Damage. <i>Science</i> , 2001, 292, 2447-2451.	6.0	716
11	A new method for estimating residual stresses by instrumented sharp indentation. <i>Acta Materialia</i> , 1998, 46, 5755-5767.	3.8	700
12	Mechanics of the human red blood cell deformed by optical tweezers. <i>Journal of the Mechanics and Physics of Solids</i> , 2003, 51, 2259-2280.	2.3	696
13	Deformation of electrodeposited nanocrystalline nickel. <i>Acta Materialia</i> , 2003, 51, 387-405.	3.8	696
14	Isolation of exosomes from whole blood by integrating acoustics and microfluidics. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, 10584-10589.	3.3	633
15	Acoustic separation of circulating tumor cells. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 4970-4975.	3.3	632
16	Determination of elastoplastic properties by instrumented sharp indentation. <i>Scripta Materialia</i> , 1999, 40, 1191-1198.	2.6	628
17	Atomistic mechanisms governing elastic limit and incipient plasticity in crystals. <i>Nature</i> , 2002, 418, 307-310.	13.7	621
18	Refractive index maps and membrane dynamics of human red blood cells parasitized by <i>Plasmodium falciparum</i> . <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2008, 105, 13730-13735.	3.3	619

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19	Nano-sized twins induce high rate sensitivity of flow stress in pure copper. <i>Acta Materialia</i> , 2005, 53, 2169-2179.	3.8	613
20	Some critical experiments on the strain-rate sensitivity of nanocrystalline nickel. <i>Acta Materialia</i> , 2003, 51, 5159-5172.	3.8	527
21	Interfacial plasticity governs strain rate sensitivity and ductility in nanostructured metals. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007, 104, 3031-3036.	3.3	522
22	Discrete and continuous deformation during nanoindentation of thin films. <i>Acta Materialia</i> , 2000, 48, 2277-2295.	3.8	497
23	Oxide-Induced Crack Closure: An Explanation for Near-Threshold Corrosion Fatigue Crack Growth Behavior. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 1981, 12, 1435-1443.	1.1	455
24	Strength, strain-rate sensitivity and ductility of copper with nanoscale twins. <i>Acta Materialia</i> , 2006, 54, 5421-5432.	3.8	448
25	Three-dimensional manipulation of single cells using surface acoustic waves. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 1522-1527.	3.3	448
26	Shape and Biomechanical Characteristics of Human Red Blood Cells in Health and Disease. <i>MRS Bulletin</i> , 2010, 35, 382-388.	1.7	424
27	A geometric model for fatigue crack closure induced by fracture surface roughness. <i>Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science</i> , 1982, 13, 1627-1631.	1.4	400
28	Biomechanics and biophysics of cancer cells. <i>Acta Materialia</i> , 2007, 55, 3989-4014.	3.8	393
29	Cell separation using tilted-angle standing surface acoustic waves. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, 12992-12997.	3.3	390
30	Microstructural development in an aluminum alloy-SiC whisker composite. <i>Acta Metallurgica</i> , 1988, 36, 1691-1704.	2.1	388
31	Spectrin-Level Modeling of the Cytoskeleton and Optical Tweezers Stretching of the Erythrocyte. <i>Biophysical Journal</i> , 2005, 88, 3707-3719.	0.2	376
32	Deformation of metal-matrix composites with continuous fibers: geometrical effects of fiber distribution and shape. <i>Acta Metallurgica Et Materialia</i> , 1991, 39, 735-752.	1.9	365
33	Nanoscale heterogeneity promotes energy dissipation in bone. <i>Nature Materials</i> , 2007, 6, 454-462.	13.3	362
34	Quantifying the early stages of plasticity through nanoscale experiments and simulations. <i>Physical Review B</i> , 2003, 67, .	1.1	361
35	Metabolic remodeling of the human red blood cell membrane. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010, 107, 1289-1294.	3.3	358
36	An analysis of the effects of matrix void growth on deformation and ductility in metal-ceramic composites. <i>Acta Metallurgica Et Materialia</i> , 1991, 39, 2317-2335.	1.9	340

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37	Crack deflection: Implications for the growth of long and short fatigue cracks. <i>Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science</i> , 1983, 14, 2375-2385.	1.4	321
38	Study of mechanical deformation in bulk metallic glass through instrumented indentation. <i>Acta Materialia</i> , 2001, 49, 3781-3789.	3.8	313
39	Nano-indentation of copper thin films on silicon substrates. <i>Scripta Materialia</i> , 1999, 41, 951-957.	2.6	310
40	Grain size effects on the fatigue response of nanocrystalline metals. <i>Scripta Materialia</i> , 2003, 49, 675-680.	2.6	301
41	Depth-sensing instrumented indentation with dual sharp indenters. <i>Acta Materialia</i> , 2003, 51, 3713-3729.	3.8	299
42	Measuring single-cell density. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011, 108, 10992-10996.	3.3	287
43	Theory of indentation of piezoelectric materials. <i>Acta Materialia</i> , 1999, 47, 2153-2164.	3.8	270
44	The biomechanics toolbox: experimental approaches for living cells and biomolecules. <i>Acta Materialia</i> , 2003, 51, 5881-5905.	3.8	268
45	Indentation of solids with gradients in elastic properties: Part I. Point force. <i>International Journal of Solids and Structures</i> , 1997, 34, 2357-2392.	1.3	241
46	Fatigue behavior of nanocrystalline metals and alloys. <i>International Journal of Fatigue</i> , 2005, 27, 1147-1158.	2.8	241
47	Simulation of defect nucleation in a crystal. <i>Nature</i> , 2001, 411, 656-656.	13.7	238
48	Cytoskeletal dynamics of human erythrocyte. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007, 104, 4937-4942.	3.3	234
49	On microstructural evolution and micromechanical modelling of deformation of a whisker-reinforced metal-matrix composite. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 1989, 107, 49-61.	2.6	231
50	Some considerations on fatigue crack closure at near-threshold stress intensities due to fracture surface morphology. <i>Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science</i> , 1982, 13, 937-940.	1.4	230
51	Predictive modeling of nanoindentation-induced homogeneous dislocation nucleation in copper. <i>Journal of the Mechanics and Physics of Solids</i> , 2004, 52, 691-724.	2.3	227
52	A microfabricated deformability-based flow cytometer with application to malaria. <i>Lab on A Chip</i> , 2011, 11, 1065.	3.1	223
53	Micromechanisms of fatigue crack growth retardation following overloads. <i>Engineering Fracture Mechanics</i> , 1983, 18, 577-593.	2.0	211
54	Ultralarge elastic deformation of nanoscale diamond. <i>Science</i> , 2018, 360, 300-302.	6.0	208

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55	Determination of elasto-plastic properties by instrumented sharp indentation: guidelines for property extraction. <i>Scripta Materialia</i> , 2000, 42, 833-839.	2.6	206
56	Protection mechanisms of the iron-plated armor of a deep-sea hydrothermal vent gastropod. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010, 107, 987-992.	3.3	201
57	Indentation of solids with gradients in elastic properties: Part II. axisymmetric indentors. <i>International Journal of Solids and Structures</i> , 1997, 34, 2393-2428.	1.3	200
58	Mixed-Mode Fracture Toughness of Ceramic Materials. <i>Journal of the American Ceramic Society</i> , 1990, 73, 1257-1267.	1.9	195
59	Crack propagation in ceramics under cyclic loads. <i>Journal of Materials Science</i> , 1987, 22, 1173-1192.	1.7	193
60	Biomechanics of red blood cells in human spleen and consequences for physiology and disease. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 7804-7809.	3.3	193
61	Molecularly based analysis of deformation of spectrin network and human erythrocyte. <i>Materials Science and Engineering C</i> , 2006, 26, 1232-1244.	3.8	190
62	Small and large deformation of thick and thin-film multi-layers: Effects of layer geometry, plasticity and compositional gradients. <i>Journal of the Mechanics and Physics of Solids</i> , 1996, 44, 683-721.	2.3	189
63	Viscoelasticity of the human red blood cell. <i>American Journal of Physiology - Cell Physiology</i> , 2007, 293, C597-C605.	2.1	187
64	Elastoplastic analysis of thermal cycling: layered materials with compositional gradients. <i>Acta Metallurgica Et Materialia</i> , 1995, 43, 1335-1354.	1.9	184
65	Effect of plasmodial RESA protein on deformability of human red blood cells harboring <i>Plasmodium falciparum</i> . <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007, 104, 9213-9217.	3.3	184
66	Extraction of mechanical properties of materials through deep learning from instrumented indentation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 7052-7062.	3.3	178
67	Effects of thermal residual stresses and fiber packing on deformation of metal-matrix composites. <i>Acta Metallurgica Et Materialia</i> , 1993, 41, 1665-1681.	1.9	175
68	Aspects of equivalence between contact mechanics and fracture mechanics: theoretical connections and a life-prediction methodology for fretting-fatigue. <i>Acta Materialia</i> , 1998, 46, 2955-2968.	3.8	172
69	Spherical indentation of compositionally graded materials: Theory and experiments. <i>Acta Materialia</i> , 1997, 45, 1307-1321.	3.8	170
70	Elastic clues in cancer detection. <i>Nature Nanotechnology</i> , 2007, 2, 748-749.	15.6	165
71	Quantifying the biophysical characteristics of <i>Plasmodium-falciparum</i> -parasitized red blood cells in microcirculation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011, 108, 35-39.	3.3	165
72	Biomechanics of brain tissue. <i>Acta Biomaterialia</i> , 2011, 7, 83-95.	4.1	160

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73	Large deformation of living cells using laser traps. <i>Acta Materialia</i> , 2004, 52, 1837-1845.	3.8	159
74	Fracture toughness and fatigue crack growth characteristics of nanotwinned copper. <i>Acta Materialia</i> , 2011, 59, 2437-2446.	3.8	158
75	Fracture normal to a bimaterial interface: Effects of plasticity on crack-tip shielding and amplification. <i>Acta Metallurgica Et Materialia</i> , 1995, 43, 1157-1169.	1.9	157
76	Stress relaxation and the structure size-dependence of plastic deformation in nanotwinned copper. <i>Acta Materialia</i> , 2009, 57, 5165-5173.	3.8	156
77	Mechanical response of human red blood cells in health and disease: Some structure-property-function relationships. <i>Journal of Materials Research</i> , 2006, 21, 1871-1877.	1.2	155
78	Lipid bilayer and cytoskeletal interactions in a red blood cell. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, 13356-13361.	3.3	155
79	Mechanisms of Slow Fatigue Crack Growth in High Strength Aluminum Alloys: Role of Microstructure and Environment. <i>Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science</i> , 1984, 15, 369-379.	1.4	153
80	Accelerated aging in cast Al alloy-SiC particulate composites. <i>Scripta Metallurgica</i> , 1989, 23, 1599-1602.	1.2	150
81	Measurement of residual stress in plasma-sprayed metallic, ceramic and composite coatings. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 1998, 257, 215-224.	2.6	149
82	Stresses, curvatures, and shape changes arising from patterned lines on silicon wafers. <i>Journal of Applied Physics</i> , 1996, 80, 1388-1398.	1.1	143
83	Microscopic and macroscopic aspects of fracture in lithium-containing aluminum alloys. <i>Acta Metallurgica</i> , 1987, 35, 25-46.	2.1	140
84	Coefficients of thermal expansion of metal-matrix composites for electronic packaging. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 1994, 25, 839-850.	1.1	132
85	Effective elastic response of two-phase composites. <i>Acta Metallurgica Et Materialia</i> , 1994, 42, 77-97.	1.9	128
86	Engineering the resistance to sliding-contact damage through controlled gradients in elastic properties at contact surfaces. <i>Acta Materialia</i> , 1999, 47, 3915-3926.	3.8	127
87	Strain rate sensitivity of Cu with nanoscale twins. <i>Scripta Materialia</i> , 2006, 55, 319-322.	2.6	126
88	Hertzian Crack Suppression in Ceramics with Elastic Modulus Graded Surfaces. <i>Journal of the American Ceramic Society</i> , 1998, 81, 2301-2308.	1.9	125
89	Crack initiation in cyclic compression and its applications. <i>Engineering Fracture Mechanics</i> , 1985, 21, 453-463.	2.0	124
90	Statistical Properties of Residual Stresses and Intergranular Fracture in Ceramic Materials. <i>Journal of Applied Mechanics, Transactions ASME</i> , 1993, 60, 77-84.	1.1	122

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91	Theory and experiments of fracture in cyclic compression: Single phase ceramics, transforming ceramics and ceramic composites. <i>Acta Metallurgica</i> , 1988, 36, 1455-1470.	2.1	117
92	Micromechanical modeling of reinforcement fracture in particle-reinforced metal-matrix composites. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 1994, 25, 2403-2420.	1.1	117
93	The growth of a fatigue crack approaching a perpendicularly-oriented, bimaterial interface. <i>Scripta Metallurgica Et Materialia</i> , 1992, 27, 1189-1194.	1.0	116
94	A comprehensive unit cell model: a study of coupled effects in piezoelectric $1\hat{a}^{\circ}3$ composites. <i>International Journal of Solids and Structures</i> , 2000, 37, 5447-5464.	1.3	116
95	Circulating Tumor Cell Phenotyping via High-Throughput Acoustic Separation. <i>Small</i> , 2018, 14, e1801131.	5.2	115
96	High-Temperature Failure of an Alumina-Silicon Carbide Composite under Cyclic loads: Mechanisms of Fatigue Crack-Tip Damage. <i>Journal of the American Ceramic Society</i> , 1989, 72, 1233-1238.	1.9	114
97	Formation and size distribution of self-assembled vesicles. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, 2910-2915.	3.3	113
98	Optical measurement of biomechanical properties of individual erythrocytes from a sickle cell patient. <i>Acta Biomaterialia</i> , 2012, 8, 4130-4138.	4.1	112
99	Effects of sic content on fatigue crack growth in. <i>Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science</i> , 1992, 23, 2231-2242.	1.4	110
100	Large deformation and geometric instability of substrates with thin-film deposits. <i>Journal of Applied Physics</i> , 1997, 81, 3457-3464.	1.1	109
101	On the influence of environment on the load ratio dependence of fatigue thresholds in pressure vessel steel. <i>Engineering Fracture Mechanics</i> , 1983, 18, 785-800.	2.0	108
102	Multiple stiffening effects of nanoscale knobs on human red blood cells infected with <i>Plasmodium falciparum</i> malaria parasite. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 6068-6073.	3.3	108
103	Dynamic mechanical response of brain tissue in indentation in vivo, in situ and in vitro. <i>Acta Biomaterialia</i> , 2011, 7, 4090-4101.	4.1	107
104	Effects of SiC reinforcement and aging treatment on fatigue crack growth in an Al ₃ SiC composite. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 1988, 102, 211-216.	2.6	105
105	An experimental and numerical study of cyclic deformation in metal-matrix composites. <i>Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science</i> , 1992, 23, 919-934.	1.4	105
106	Effective plastic response of two-phase composites. <i>Acta Metallurgica Et Materialia</i> , 1995, 43, 1701-1722.	1.9	105
107	Aluminium-Titanium Diboride (Al-TiB ₂) Metal Matrix Composites: Challenges and Opportunities. <i>Procedia Engineering</i> , 2012, 38, 89-97.	1.2	102
108	Host cell deformability is linked to transmission in the human malaria parasite <i>Plasmodium falciparum</i> . <i>Cellular Microbiology</i> , 2012, 14, 983-993.	1.1	102

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109	Multiphase equilibrium analysis via a generalized equation of state for associating mixtures. <i>Industrial & Engineering Chemistry Research</i> , 1992, 31, 2783-2794.	1.8	101
110	Combined Mode I-Mode III Fracture of Fatigue-Precracked Alumina. <i>Journal of the American Ceramic Society</i> , 1987, 70, 726-733.	1.9	99
111	Elastoplastic analysis of thermal cycling: Layered materials with sharp interfaces. <i>Journal of the Mechanics and Physics of Solids</i> , 1994, 42, 979-1018.	2.3	99
112	Kinetics of sickle cell biorheology and implications for painful vasoocclusive crisis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 1422-1427.	3.3	99
113	Multiscale Modeling of Red Blood Cell Mechanics and Blood Flow in Malaria. <i>PLoS Computational Biology</i> , 2011, 7, e1002270.	1.5	98
114	Size effects on the onset of plastic deformation during nanoindentation of thin films and patterned lines. <i>Journal of Applied Physics</i> , 2003, 94, 6050-6058.	1.1	94
115	Gradients in elastic modulus for improved contact-damage resistance. Part I: The silicon nitride-oxynitride glass system. <i>Acta Materialia</i> , 2001, 49, 3255-3262.	3.8	93
116	Mechanics of diseased red blood cells in human spleen and consequences for hereditary blood disorders. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 9574-9579.	3.3	93
117	Thermal expansion of metals reinforced with ceramic particles and microcellular foams. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 1996, 27, 3700-3717.	1.1	88
118	Continuous measurements of load-penetration curves with spherical microindenters and the estimation of mechanical properties. <i>Journal of Materials Research</i> , 1998, 13, 1390-1400.	1.2	88
119	Combined Simulation and Experimental Study of Large Deformation of Red Blood Cells in Microfluidic Systems. <i>Annals of Biomedical Engineering</i> , 2011, 39, 1041-1050.	1.3	88
120	Quantitative biomechanics of healthy and diseased human red blood cells using dielectrophoresis in a microfluidic system. <i>Extreme Mechanics Letters</i> , 2014, 1, 35-41.	2.0	88
121	Improved fatigue resistance of gradient nanograined Cu. <i>Acta Materialia</i> , 2019, 166, 56-66.	3.8	87
122	Influence of corrosion deposits on near-threshold fatigue crack growth behavior in 2xxx and 7xxx series aluminum alloys. <i>Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science</i> , 1982, 13, 2271-2280.	1.4	86
123	Dynamic fatigue crack growth in polycrystalline alumina under cyclic compression. <i>Journal of Materials Science Letters</i> , 1986, 5, 774-778.	0.5	86
124	Static and dynamic light scattering of healthy and malaria-parasite invaded red blood cells. <i>Journal of Biomedical Optics</i> , 2010, 15, 020506.	1.4	85
125	Effects of mechanical properties and surface friction on elasto-plastic sliding contact. <i>Mechanics of Materials</i> , 2008, 40, 206-219.	1.7	84
126	Electric impedance microflow cytometry for characterization of cell disease states. <i>Lab on A Chip</i> , 2013, 13, 3903.	3.1	84

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127	Biophysics of Malarial Parasite Exit from Infected Erythrocytes. PLoS ONE, 2011, 6, e20869.	1.1	84
128	Plasticity effects on fracture normal to interfaces with homogeneous and graded compositions. International Journal of Solids and Structures, 1997, 34, 3415-3432.	1.3	82
129	Fatigue crack propagation in dual-phase steels: Effects of ferritic-martensitic microstructures on crack path morphology. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 1984, 15, 1193-1207.	1.1	80
130	Analyses of internal structures and defects in materials using physics-informed neural networks. Science Advances, 2022, 8, eabk0644.	4.7	80
131	Plastic near-tip fields for branched cracks. International Journal of Fracture, 1986, 30, 237-259.	1.1	78
132	Shell buckling of individual multiwalled carbon nanotubes using nanoindentation. Applied Physics Letters, 2005, 87, 103109.	1.5	78
133	Mechanics of indentation of plastically graded materials: Analysis. Journal of the Mechanics and Physics of Solids, 2008, 56, 157-171.	2.3	78
134	Nanostructured Al-Fe alloys produced by e-beam deposition: static and dynamic tensile properties. Acta Materialia, 2003, 51, 4197-4208.	3.8	76
135	Computational Biorheology of Human Blood Flow in Health and Disease. Annals of Biomedical Engineering, 2014, 42, 368-387.	1.3	73
136	An experimental study of spherical indentation on piezoelectric materials. Acta Materialia, 1999, 47, 2417-2430.	3.8	72
137	Deformation of the ultra-strong. Nature, 2008, 456, 716-717.	13.7	71
138	A unified mechanistic model for size-dependent deformation in nanocrystalline and nanotwinned metals. Acta Materialia, 2011, 59, 6861-6868.	3.8	70
139	Deep elastic strain engineering of bandgap through machine learning. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 4117-4122.	3.3	70
140	Plastic deformation of continuous fiber-reinforced metal-matrix composites: Effects of fiber shape and distribution. Scripta Metallurgica Et Materialia, 1990, 24, 325-330.	1.0	69
141	Cyclic strain hardening of nanocrystalline nickel. Scripta Materialia, 2006, 54, 1151-1155.	2.6	69
142	Mechanics of indentation of plastically graded materials: Experiments on nanocrystalline alloys with grain size gradients. Journal of the Mechanics and Physics of Solids, 2008, 56, 172-183.	2.3	69
143	The frictional sliding response of elasto-plastic materials in contact with a conical indenter. International Journal of Solids and Structures, 2007, 44, 1970-1989.	1.3	68
144	Biomechanics of single cortical neurons. Acta Biomaterialia, 2011, 7, 1210-1219.	4.1	68

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145	Differential growth and shape formation in plant organs. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 12359-12364.	3.3	68
146	Actuation and locomotion driven by moisture in paper made with natural pollen. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 8711-8718.	3.3	68
147	Fatigue cracking in materials with brittle surface coatings. Scripta Metallurgica Et Materialia, 1993, 29, 237-242.	1.0	67
148	Gradients in elastic modulus for improved contact-damage resistance. part ii: the silicon nitride-silicon carbide system. Acta Materialia, 2001, 49, 3263-3268.	3.8	67
149	Human natural killer cells control <i>Plasmodium falciparum</i> infection by eliminating infected red blood cells. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 1479-1484.	3.3	67
150	Determination of processing-induced stresses and properties of layered and graded coatings: Experimental method and results for plasma-sprayed Ni ₃ Al ₂ O ₃ . Acta Materialia, 1997, 45, 3123-3134.	3.8	65
151	Model experiments for direct visualization of grain boundary deformation in nanocrystalline metals. Applied Physics Letters, 2003, 83, 1441-1443.	1.5	65
152	Three-dimensional model of strength and ductility of polycrystalline copper containing nanoscale twins. Acta Materialia, 2008, 56, 4647-4657.	3.8	65
153	Size effects on the mechanical properties of thin polycrystalline metal films on substrates. Acta Materialia, 2002, 50, 1881-1893.	3.8	62
154	Curvature changes during thermal cycling of a compositionally graded Ni ₃ Al ₂ O ₃ multi-layered material. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1996, 205, 59-71.	2.6	61
155	Electrical response during indentation of piezoelectric materials: A new method for material characterization. Journal of Applied Physics, 1999, 85, 380-387.	1.1	61
156	Pf155/RESA protein influences the dynamic microcirculatory behavior of ring-stage Plasmodium falciparum infected red blood cells. Scientific Reports, 2012, 2, 614.	1.6	61
157	Real-time, high-resolution study of nanocrystallization and fatigue cracking in a cyclically strained metallic glass. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 19725-19730.	3.3	61
158	Stress evolution in passivated thin films of Cu on silica substrates. Journal of Materials Research, 1998, 13, 1928-1937.	1.2	60
159	An experimental investigation of fretting fatigue in Ti-6Al-4V: the role of contact conditions and microstructure. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2001, 32, 1131-1146.	1.1	60
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