# Subra Suresh

## List of Publications by Year in descending order

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|---|---|---|---|
| 290 papers | 43,897 citations | 1799 103 h-index | 2178 202 g-index |
| 299 all docs | 299 docs citations | 299 times ranked | 26827 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Analyses of internal structures and defects in materials using physics-informed neural networks. Science Advances, 2022, 8, eabk0644. | 10.3 | 80 |
| 2 | Recyclable and Reusable Natural Plantâ€Based Paper for Repeated Digital Printing and Unprinting. Advanced Materials, 2022, 34, e2109367. | 21.0 | 7 |
| 3 | Assessing hypoxic damage to placental trophoblasts by measuring membrane viscosity of extracellular vesicles. Placenta, 2022, 121, 14-22. | 1.5 | 2 |
| 4 | Plantâ€Based Substrate Materials for Flexible Green Electronics. Advanced Materials Technologies, 2022, 7, . | 5.8 | 5 |
| 5 | Artificial intelligence velocimetry and microaneurysm-on-a-chip for three-dimensional analysis of blood flow in physiology and disease. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, . | 7.1 | 50 |
| 6 | Machine learning for deep elastic strain engineering of semiconductor electronic band structure and effective mass. Npj Computational Materials, 2021, 7, . | 8.7 | 17 |
| 7 | Direct isolation of circulating extracellular vesicles from blood for vascular risk profiling in type 2 diabetes mellitus. Lab on A Chip, 2021, 21, 2511-2523. | 6.0 | 33 |
| 8 | Digital printing of shape-morphing natural materials. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, . | 7.1 | 21 |
| 9 | Metallization of diamond. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 24634-24639. | 7.1 | 29 |
| 10 | Transformation of hard pollen into soft matter. Nature Communications, 2020, 11, 1449. | 12.8 | 58 |
| 11 | Extraction of mechanical properties of materials through deep learning from instrumented indentation. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 7052-7062. | 7.1 | 178 |
| 12 | 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. | 7.1 | 68 |
| 13 | Mechanical fatigue of human red blood cells. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 19828-19834. | 7.1 | 44 |
| 14 | 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. | 7.1 | 70 |
| 15 | Improved fatigue resistance of gradient nanograined Cu. Acta Materialia, 2019, 166, 56-66. | 7.9 | 87 |
| 16 | Ultralarge elastic deformation of nanoscale diamond. Science, 2018, 360, 300-302. | 12.6 | 208 |
| 17 | Controlled molecular self-assembly of complex three-dimensional structures in soft materials. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 70-74. | 7.1 | 23 |
| 18 | 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. | 7.1 | 68 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | Mechanics of diseased red blood cells in human spleen and consequences for hereditary blood disorders. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 9574-9579. | 7.1 | 93 |
| 20 | Simultaneous polymerization and adhesion under hypoxia in sickle cell disease. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 9473-9478. | 7.1 | 55 |
| 21 | Circulating Tumor Cell Phenotyping via Highâ€Throughput Acoustic Separation. Small, 2018, 14, e1801131. | 10.0 | 115 |
| 22 | Formation and size distribution of self-assembled vesicles. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 2910-2915. | 7.1 | 113 |
| 23 | Sliding of coherent twin boundaries. Nature Communications, 2017, 8, 1108. | 12.8 | 44 |
| 24 | Isolation of exosomes from whole blood by integrating acoustics and microfluidics. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 10584-10589. | 7.1 | 633 |
| 25 | Patient-specific modeling of individual sickle cell behavior under transient hypoxia. PLoS Computational Biology, 2017, 13, e1005426. | 3.2 | 24 |
| 26 | Cellular normoxic biophysical markers of hydroxyurea treatment in sickle cell disease. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 9527-9532. | 7.1 | 36 |
| 27 | Biomechanics of red blood cells in human spleen and consequences for physiology and disease. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 7804-7809. | 7.1 | 193 |
| 28 | Three-dimensional manipulation of single cells using surface acoustic waves. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 1522-1527. | 7.1 | 448 |
| 29 | Patient-specific blood rheology in sickle-cell anaemia. Interface Focus, 2016, 6, 20150065. | 3.0 | 47 |
| 30 | De Novo Generated Human Red Blood Cells in Humanized Mice Support Plasmodium falciparum Infection. PLoS ONE, 2015, 10, e0129825. | 2.5 | 27 |
| 31 | Kinetics of sickle cell biorheology and implications for painful vasoocclusive crisis. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 1422-1427. | 7.1 | 99 |
| 32 | Multiple stiffening effects of nanoscale knobs on human red blood cells infected with Plasmodium falciparum malaria parasite. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 6068-6073. | 7.1 | 108 |
| 33 | Acoustic separation of circulating tumor cells. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 4970-4975. | 7.1 | 632 |
| 34 | Cyclic deformation leads to defect healing and strengthening of small-volume metal crystals. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 13502-13507. | 7.1 | 40 |
| 35 | Human natural killer cells control Plasmodium falciparum infection by eliminating infected red blood cells. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 1479-1484. | 7.1 | 67 |
| 36 | Quantitative biomechanics of healthy and diseased human red blood cells using dielectrophoresis in a microfluidic system. Extreme Mechanics Letters, 2014, 1, 35-41. | 4.1 | 88 |

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| 37 | Analysis of size-dependent slip transfer and inter-twin flow stress in a nanotwinned fcc metal. Acta Materialia, 2014, 67, 409-417. | 7.9 | 25 |
| 38 | Computational Biorheology of Human Blood Flow in Health and Disease. Annals of Biomedical Engineering, 2014, 42, 368-387. | 2.5 | 73 |
| 39 | Cell separation using tilted-angle standing surface acoustic waves. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 12992-12997. | 7.1 | 390 |
| 40 | Small Molecule Targeting Malaria Merozoite Surface Protein-1 (MSP-1) Prevents Host Invasion of Divergent Plasmodial Species. Journal of Infectious Diseases, 2014, 210, 1616-1626. | 4.0 | 36 |
| 41 | Electric impedance microflow cytometry for characterization of cell disease states. Lab on A Chip, 2013, 13, 3903. | 6.0 | 84 |
| 42 | 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. | 7.1 | 61 |
| 43 | Cytoadherence of erythrocytes invaded by Plasmodium falciparum: Quantitative contact-probing of a human malaria receptor. Acta Biomaterialia, 2013, 9, 6349-6359. | 8.3 | 27 |
| 44 | Lipid bilayer and cytoskeletal interactions in a red blood cell. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 13356-13361. | 7.1 | 155 |
| 45 | Anisotropic light scattering of individual sickle red blood cells. Journal of Biomedical Optics, 2012, 17, 040501. | 2.6 | 43 |
| 46 | Pf155/RESA protein influences the dynamic microcirculatory behavior of ring-stage Plasmodium falciparum infected red blood cells. Scientific Reports, 2012, 2, 614. | 3.3 | 61 |
| 47 | Aluminium-Titanium Diboride (Al-TiB2) Metal Matrix Composites: Challenges and Opportunities. Procedia Engineering, 2012, 38, 89-97. | 1.2 | 102 |
| 48 | Global challenges need global solutions. Nature, 2012, 490, 337-338. | 27.8 | 35 |
| 49 | Optical measurement of biomechanical properties of individual erythrocytes from a sickle cell patient. Acta Biomaterialia, 2012, 8, 4130-4138. | 8.3 | 112 |
| 50 | Cultivating Global Science. Science, 2012, 336, 959-959. | 12.6 | 10 |
| 51 | Repeated frictional sliding properties of copper containing nanoscale twins. Scripta Materialia, 2012, 66, 849-853. | 5.2 | 19 |
| 52 | Host cell deformability is linked to transmission in the human malaria parasite Plasmodium falciparum. Cellular Microbiology, 2012, 14, 983-993. | 2.1 | 102 |
| 53 | A microfabricated deformability-based flow cytometer with application to malaria. Lab on A Chip, 2011, 11, 1065. | 6.0 | 223 |
| 54 | A unified mechanistic model for size-dependent deformation in nanocrystalline and nanotwinned metals. Acta Materialia, 2011, 59, 6861-6868. | 7.9 | 70 |

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| 55 | Deformation, structural changes and damage evolution in nanotwinned copper under repeated frictional contact sliding. Acta Materialia, 2011, 59, 7311-7324. | 7.9 | 44 |
| 56 | Dynamic mechanical response of brain tissue in indentation in vivo, in situ and in vitro. Acta Biomaterialia, 2011, 7, 4090-4101. | 8.3 | 107 |
| 57 | Combined Simulation and Experimental Study of Large Deformation of Red Blood Cells in Microfluidic Systems. Annals of Biomedical Engineering, 2011, 39, 1041-1050. | 2.5 | 88 |
| 58 | Fracture toughness and fatigue crack growth characteristics of nanotwinned copper. Acta Materialia, 2011, 59, 2437-2446. | 7.9 | 158 |
| 59 | Biomechanics of single cortical neurons. Acta Biomaterialia, 2011, 7, 1210-1219. | 8.3 | 68 |
| 60 | Subra suresh discusses strategies to â€œSustain the U.S. Innovation Engineâ€• Jom, 2011, 63, 13-16. | 1.9 | 0 |
| 61 | Biomechanics of brain tissue. Acta Biomaterialia, 2011, 7, 83-95. | 8.3 | 160 |
| 62 | Quantifying the biophysical characteristics of Plasmodium-falciparum -parasitized red blood cells in microcirculation. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 35-39. | 7.1 | 165 |
| 63 | Measuring single-cell density. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 10992-10996. | 7.1 | 287 |
| 64 | Moving Toward Global Science. Science, 2011, 333, 802-802. | 12.6 | 44 |
| 65 | Multiscale Modeling of Red Blood Cell Mechanics and Blood Flow in Malaria. PLoS Computational Biology, 2011, 7, e1002270. | 3.2 | 98 |
| 66 | Biophysics of Malarial Parasite Exit from Infected Erythrocytes. PLoS ONE, 2011, 6, e20869. | 2.5 | 84 |
| 67 | A new method for evaluating the plastic properties of materials through instrumented frictional sliding tests. Acta Materialia, 2010, 58, 6385-6392. | 7.9 | 28 |
| 68 | Shape and Biomechanical Characteristics of Human Red Blood Cells in Health and Disease. MRS Bulletin, 2010, 35, 382-388. | 3.5 | 424 |
| 69 | Static and dynamic light scattering of healthy and malaria-parasite invaded red blood cells. Journal of Biomedical Optics, 2010, 15, 020506. | 2.6 | 85 |
| 70 | Protection mechanisms of the iron-plated armor of a deep-sea hydrothermal vent gastropod. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 987-992. | 7.1 | 201 |
| 71 | Metabolic remodeling of the human red blood cell membrane. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 1289-1294. | 7.1 | 358 |
| 72 | Febrile temperature leads to significant stiffening ofPlasmodium falciparumparasitized erythrocytes. American Journal of Physiology - Cell Physiology, 2009, 296, C59-C64. | 4.6 | 33 |

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|---|---|---|---|
| 73 | Sizeâ€Ðependent Endocytosis of Nanoparticles. Advanced Materials, 2009, 21, 419-424. | 21.0 | 895 |
| 74 | Stress relaxation and the structure size-dependence of plastic deformation in nanotwinned copper. Acta Materialia, 2009, 57, 5165-5173. | 7.9 | 156 |
| 75 | Steady-state frictional sliding contact on surfaces of plastically graded materials. Acta Materialia, 2009, 57, 511-524. | 7.9 | 46 |
| 76 | Strengthening Materials by Engineering Coherent Internal Boundaries at the Nanoscale. Science, 2009, 324, 349-352. | 12.6 | 1,953 |
| 77 | Mechanical Response of Rat Cortical Neurons: AFM Indentations and Preliminary Modeling. , 2009, , . | | 1 |
| 78 | Computational Modeling of the Micropipette Aspiration of Malaria Infected Erythrocytes. IFMBE Proceedings, 2009, , 1788-1791. | 0.3 | 2 |
| 79 | Effects of mechanical properties and surface friction on elasto-plastic sliding contact. Mechanics of Materials, 2008, 40, 206-219. | 3.2 | 84 |
| 80 | Mechanics of indentation of plastically graded materialsâ€"II: Experiments on nanocrystalline alloys with grain size gradients. Journal of the Mechanics and Physics of Solids, 2008, 56, 172-183. | 4.8 | 69 |
| 81 | Mechanics of indentation of plastically graded materialsâ€"I: Analysis. Journal of the Mechanics and Physics of Solids, 2008, 56, 157-171. | 4.8 | 78 |
| 82 | Three-dimensional model of strength and ductility of polycrystalline copper containing nanoscale twins. Acta Materialia, 2008, 56, 4647-4657. | 7.9 | 65 |
| 83 | Deformation of the ultra-strong. Nature, 2008, 456, 716-717. | 27.8 | 71 |
| 84 | Refractive index maps and membrane dynamics of human red blood cells parasitized by Plasmodium falciparum. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 13730-13735. | 7.1 | 619 |
| 85 | Cytoskeletal dynamics of human erythrocyte. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 4937-4942. | 7.1 | 234 |
| 86 | Effect of plasmodial RESA protein on deformability of human red blood cells harboring Plasmodium falciparum. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 9213-9217. | 7.1 | 184 |
| 87 | Viscoelasticity of the human red blood cell. American Journal of Physiology - Cell Physiology, 2007, 293, C597-C605. | 4.6 | 187 |
| 88 | Interfacial plasticity governs strain rate sensitivity and ductility in nanostructured metals. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 3031-3036. | 7.1 | 522 |
| 89 | The frictional sliding response of elasto-plastic materials in contact with a conical indenter. International Journal of Solids and Structures, 2007, 44, 1970-1989. | 2.7 | 68 |
| 90 | Biomechanics and biophysics of cancer cellsâ˜†. Acta Materialia, 2007, 55, 3989-4014. | 7.9 | 393 |

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| 91 | Nanoscale heterogeneity promotes energy dissipation in bone. Nature Materials, 2007, 6, 454-462. | 27.5 | 362 |
| 92 | Elastic clues in cancer detection. Nature Nanotechnology, 2007, 2, 748-749. | 31.5 | 165 |
| 93 | Biomechanics and biophysics of cancer cellsâ˜†. Acta Biomaterialia, 2007, 3, 413-438. | 8.3 | 957 |
| 94 | Mechanical response of human red blood cells in health and disease: Some structure-property-function relationships. Journal of Materials Research, 2006, 21, 1871-1877. | 2.6 | 155 |
| 95 | Colloid model for atoms. Nature Materials, 2006, 5, 253-254. | 27.5 | 32 |
| 96 | Strength, strain-rate sensitivity and ductility of copper with nanoscale twins. Acta Materialia, 2006, 54, 5421-5432. | 7.9 | 448 |
| 97 | Molecularly based analysis of deformation of spectrin network and human erythrocyte. Materials Science and Engineering C, 2006, 26, 1232-1244. | 7.3 | 190 |
| 98 | Cyclic strain hardening of nanocrystalline nickel. Scripta Materialia, 2006, 54, 1151-1155. | 5.2 | 69 |
| 99 | Strain rate sensitivity of Cu with nanoscale twins. Scripta Materialia, 2006, 55, 319-322. | 5.2 | 126 |
| 100 | Fatigue behavior of nanocrystalline metals and alloys. International Journal of Fatigue, 2005, 27, 1147-1158. | 5.7 | 241 |
| 101 | Effects of grain refinement and strength on friction and damage evolution under repeated sliding contact in nanostructured metals. International Journal of Fatigue, 2005, 27, 1159-1163. | 5.7 | 55 |
| 102 | Nano-sized twins induce high rate sensitivity of flow stress in pure copper. Acta Materialia, 2005, 53, 2169-2179. | 7.9 | 613 |
| 103 | Mechanistic models for the activation volume and rate sensitivity in metals with nanocrystalline grains and nano-scale twins. Acta Materialia, 2005, 53, 3369-3382. | 7.9 | 725 |
| 104 | Connections between single-cell biomechanics and human disease states: gastrointestinal cancer and malaria. Acta Biomaterialia, 2005, 1, 15-30. | 8.3 | 748 |
| 105 | Shell buckling of individual multiwalled carbon nanotubes using nanoindentation. Applied Physics Letters, 2005, 87, 103109. | 3.3 | 78 |
| 106 | Spectrin-Level Modeling of the Cytoskeleton and Optical Tweezers Stretching of the Erythrocyte. Biophysical Journal, 2005, 88, 3707-3719. | 0.5 | 376 |
| 107 | Continuous force-displacement relationships for the human red blood cell at different erythrocytic developmental stages ofPlasmodium falciparummalaria parasite. Materials Research Society Symposia Proceedings, 2004, 844, 1. | 0.1 | 2 |
| 108 | Elastic criterion for dislocation nucleation. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2004, 365, 25-30. | 5.6 | 52 |

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| 109 | Predictive modeling of nanoindentation-induced homogeneous dislocation nucleation in copper. Journal of the Mechanics and Physics of Solids, 2004, 52, 691-724. | 4.8 | 227 |
| 110 | Large deformation of living cells using laser traps. Acta Materialia, 2004, 52, 1837-1845. | 7.9 | 159 |
| 111 | Identification of crack location and depth in a cantilever beam using a modular neural network approach. Smart Materials and Structures, 2004, 13, 907-915. | 3.5 | 60 |
| 112 | Defect Nucleation. Solid Mechanics and Its Applications, 2004, , 203-211. | 0.2 | 0 |
| 113 | Nanoindentation of patterned metal lines on a Si substrate. Scripta Materialia, 2003, 48, 249-254. | 5.2 | 40 |
| 114 | Grain size effects on the fatigue response of nanocrystalline metals. Scripta Materialia, 2003, 49, 675-680. | 5.2 | 301 |
| 115 | Dynamic indentation for determining the strain rate sensitivity of metals. Journal of the Mechanics and Physics of Solids, 2003, 51, 1923-1938. | 4.8 | 48 |
| 116 | Mechanics of the human red blood cell deformed by optical tweezers. Journal of the Mechanics and Physics of Solids, 2003, 51, 2259-2280. | 4.8 | 696 |
| 117 | Measurement of full-field curvature and geometrical instability of thin film-substrate systems through CGS interferometry. Journal of the Mechanics and Physics of Solids, 2003, 51, 2191-2211. | 4.8 | 52 |
| 118 | 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. Acta Materialia, 2003, 51, 5743-5774. | 7.9 | 1,746 |
| 119 | The biomechanics toolbox: experimental approaches for living cells and biomolecules. Acta Materialia, 2003, 51, 5881-5905. | 7.9 | 268 |
| 120 | Deformation of electrodeposited nanocrystalline nickel. Acta Materialia, 2003, 51, 387-405. | 7.9 | 696 |
| 121 | Nanostructured Alâ€"Fe alloys produced by e-beam deposition: static and dynamic tensile properties. Acta Materialia, 2003, 51, 4197-4208. | 7.9 | 76 |
| 122 | Some critical experiments on the strain-rate sensitivity of nanocrystalline nickel. Acta Materialia, 2003, 51, 5159-5172. | 7.9 | 527 |
| 123 | Cell and molecular mechanics of biological materials. Nature Materials, 2003, 2, 715-725. | 27.5 | 914 |
| 124 | Depth-sensing instrumented indentation with dual sharp indenters. Acta Materialia, 2003, 51, 3713-3729. | 7.9 | 299 |
| 125 | Model experiments for direct visualization of grain boundary deformation in nanocrystalline metals. Applied Physics Letters, 2003, 83, 1441-1443. | 3.3 | 65 |
| 126 | Quantifying the early stages of plasticity through nanoscale experiments and simulations. Physical Review B, 2003, 67, . | 3.2 | 361 |

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|---|---|---|---|
| 127 | Size effects on the onset of plastic deformation during nanoindentation of thin films and patterned lines. Journal of Applied Physics, 2003, 94, 6050-6058. | 2.5 | 94 |
| 128 | Simulation of nanoindentation via interatomic potential finite element method. , 2003, , 795-799. | | 1 |
| 129 | Size effects on the mechanical properties of thin polycrystalline metal films on substrates. Acta Materialia, 2002, 50, 1881-1893. | 7.9 | 62 |
| 130 | Stepwiseâ€Graded Si<sub>3</sub>N<sub>4</sub>â€“SiC Ceramics with Improved Wear Properties. Journal of the American Ceramic Society, 2002, 85, 2059-2064. | 3.8 | 38 |
| 131 | Atomistic mechanisms governing elastic limit and incipient plasticity in crystals. Nature, 2002, 418, 307-310. | 27.8 | 621 |
| 132 | Microstructural evolution in passivated Al films on Si substrates during thermal cycling. Acta Materialia, 2002, 50, 3435-3452. | 7.9 | 57 |
| 133 | Analysis of the impact of a sharp indenter. International Journal of Solids and Structures, 2002, 39, 281-295. | 2.7 | 50 |
| 134 | Graded Materials for Resistance to Contact Deformation and Damage. Science, 2001, 292, 2447-2451. | 12.6 | 716 |
| 135 | Parametric study of the volume fraction of fibers in 1â€“3 PZT/Polyurethane piezoelectric composites during indentation. Ferroelectrics, 2001, 255, 1-12. | 0.6 | 2 |
| 136 | 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. | 2.2 | 60 |
| 137 | Gradients in elastic modulus for improved contact-damage resistance. Part I: The silicon nitrideâ€“oxynitride glass system. Acta Materialia, 2001, 49, 3255-3262. | 7.9 | 93 |
| 138 | Large deformation of thin films and layered flat panels: effects of gravity. Acta Materialia, 2001, 49, 3671-3688. | 7.9 | 12 |
| 139 | Computational modeling of the forward and reverse problems in instrumented sharp indentation. Acta Materialia, 2001, 49, 3899-3918. | 7.9 | 1,272 |
| 140 | Instrumented spherical micro-indentation of plasma-sprayed coatings. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2001, 316, 1-10. | 5.6 | 43 |
| 141 | Interface cracks in layered materials subjected to a uniform temperature change. International Journal of Fracture, 2001, 110, 325-349. | 2.2 | 14 |
| 142 | Dynamic observation of Al thin films plastically strained in a TEM. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2001, 309-310, 463-467. | 5.6 | 26 |
| 143 | Effects of anisotropy and slip geometry on fatigue fracture of Cu/sapphire bicrystals. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2001, 314, 55-66. | 5.6 | 8 |
| 144 | Gradients in elastic modulus for improved contact-damage resistance. part ii: the silicon nitrideâ€“silicon carbide system. Acta Materialia, 2001, 49, 3263-3268. | 7.9 | 67 |

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| 145 | Study of mechanical deformation in bulk metallic glass through instrumented indentation. Acta Materialia, 2001, 49, 3781-3789. | 7.9 | 313 |
| 146 | Simulation of defect nucleation in a crystal. Nature, 2001, 411, 656-656. | 27.8 | 238 |
| 147 | A comprehensive unit cell model: a study of coupled effects in piezoelectric 1â€“3 composites. International Journal of Solids and Structures, 2000, 37, 5447-5464. | 2.7 | 116 |
| 148 | Effects of line and passivation geometry on curvature evolution during processing and thermal cycling in copper interconnect lines. Acta Materialia, 2000, 48, 3169-3175. | 7.9 | 40 |
| 149 | Discrete and continuous deformation during nanoindentation of thin films. Acta Materialia, 2000, 48, 2277-2295. | 7.9 | 497 |
| 150 | Determination of elasto-plastic properties by instrumented sharp indentation: guidelines for property extraction. Scripta Materialia, 2000, 42, 833-839. | 5.2 | 206 |
| 151 | Effects of sulfur on the fatigue and fracture resistance of interfaces between Î³-Ni(Cr) and Î±-Al2O3. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2000, 31, 1977-1983. | 2.2 | 18 |
| 152 | Mechanical and electrical responses of piezoelectric solids to conical indentation. Journal of Applied Physics, 2000, 87, 8451-8456. | 2.5 | 46 |
| 153 | An Experimental Investigation of Fretting Fatigue with Spherical Contact in 7075-T6 Aluminum Alloy. , 2000, , 213-227. | | 19 |
| 154 | In situ transmission electron microscopy investigation of threading dislocation motion in passivated thin aluminum films. Journal of Materials Research, 1999, 14, 4673-4676. | 2.6 | 18 |
| 155 | Electrical response during indentation of piezoelectric materials: A new method for material characterization. Journal of Applied Physics, 1999, 85, 380-387. | 2.5 | 61 |
| 156 | Grain morphology, texture, and microhardness gradients in aluminum diffusion-bonded to aluminum oxide. Acta Materialia, 1999, 47, 501-515. | 7.9 | 10 |
| 157 | An experimental study of spherical indentation on piezoelectric materials. Acta Materialia, 1999, 47, 2417-2430. | 7.9 | 72 |
| 158 | Engineering the resistance to sliding-contact damage through controlled gradients in elastic properties at contact surfaces. Acta Materialia, 1999, 47, 3915-3926. | 7.9 | 127 |
| 159 | The role of adhesion in contact fatigue. Acta Materialia, 1999, 47, 4653-4664. | 7.9 | 41 |
| 160 | Theory of indentation of piezoelectric materials. Acta Materialia, 1999, 47, 2153-2164. | 7.9 | 270 |
| 161 | Thermoelastic analysis of periodic thin lines deposited on a substrate. Journal of the Mechanics and Physics of Solids, 1999, 47, 1113-1130. | 4.8 | 46 |
| 162 | The influence of solid-state and liquid-phase bonding on fatigue at Al/Al2O3 interfaces. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 1999, 30, 763-769. | 2.2 | 0 |

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| 163 | Determination of elastoplastic properties by instrumented sharp indentation. Scripta Materialia, 1999, 40, 1191-1198. | 5.2 | 628 |
| 164 | Onset of plastic yielding in thin metal lines deposited on substrates. Scripta Materialia, 1999, 41, 297-304. | 5.2 | 3 |
| 165 | Nano-indentation of copper thin films on silicon substrates. Scripta Materialia, 1999, 41, 951-957. | 5.2 | 310 |
| 166 | Electrical response during indentation of a 1-3 piezoelectric ceramic-polymer composite. Journal of Applied Physics, 1999, 86, 603-606. | 2.5 | 27 |
| 167 | Indentation of Piezoelectric Ceramics: Theory, Experiments and Applications. Materials Research Society Symposia Proceedings, 1999, 604, 51. | 0.1 | 0 |
| 168 | Forming of Ceramics during Firing without the Application of External Pressure. Journal of the American Ceramic Society, 1999, 82, 1401-1408. | 3.8 | 4 |
| 169 | Fatigue crack nucleation in metallic materials. , 1999, , 17-28. | | 1 |
| 170 | Modeling and experimental studies on fretting fatigue. , 1999, , 355-359. | | 0 |
| 171 | Spherical indentation of composite laminates with controlled gradients in elastic anisotropy. International Journal of Solids and Structures, 1998, 35, 5097-5113. | 2.7 | 53 |
| 172 | Measurement of residual stress in plasma-sprayed metallic, ceramic and composite coatings. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1998, 257, 215-224. | 5.6 | 149 |
| 173 | Aspects of equivalence between contact mechanics and fracture mechanics: theoretical connections and a life-prediction methodology for fretting-fatigue. Acta Materialia, 1998, 46, 2955-2968. | 7.9 | 172 |
| 174 | A new method for estimating residual stresses by instrumented sharp indentation. Acta Materialia, 1998, 46, 5755-5767. | 7.9 | 700 |
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