

Kyriakos Komvopoulos

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

304
papers

10,340
citations

51
h-index

87
g-index

331
ext. papers

11,287
ext. citations

3.2
avg, IF

6.58
L-index

| # | Paper | IF | Citations |
|-----|--|-----|-----------|
| 304 | An electrostatic finite element analysis of the electrospinning process of bilayer constructs using a parallel-plate collector. <i>Materials Letters</i> , 2022 , 313, 131649 | 3.3 | 0 |
| 303 | A molecular dynamics analysis of the effect of surface passivation on the adhesion, deformation behavior and structure stability of amorphous carbon ultrathin films. <i>Materials Letters</i> , 2021 , 289, 129433 | 3.3 | 1 |
| 302 | Design Challenges in Polymeric Scaffolds for Tissue Engineering. <i>Frontiers in Bioengineering and Biotechnology</i> , 2021 , 9, 617141 | 5.8 | 15 |
| 301 | Thermal stability and diffusion characteristics of ultrathin amorphous carbon films grown on crystalline and nitrogenated silicon substrates by filtered cathodic vacuum arc deposition. <i>Scientific Reports</i> , 2021 , 11, 13106 | 4.9 | 0 |
| 300 | Single-step metal-catalyzed synthesis of hybrid planar graphene/bicircular graphitic carbon structures using an amorphous carbon thin film as a precursor. <i>Applied Surface Science</i> , 2021 , 552, 149018 | 6.7 | 0 |
| 299 | A molecular dynamics study of the oxidation mechanism, nanostructure evolution, and friction characteristics of ultrathin amorphous carbon films in vacuum and oxygen atmosphere. <i>Scientific Reports</i> , 2021 , 11, 3914 | 4.9 | 2 |
| 298 | Structure evolution during deposition and thermal annealing of amorphous carbon ultrathin films investigated by molecular dynamics simulations. <i>Scientific Reports</i> , 2020 , 10, 8089 | 4.9 | 10 |
| 297 | Influence of Si on the Microstructure and Mechanical and Tribological Properties of Ag/a-C:H Films. <i>Tribology Transactions</i> , 2020 , 63, 897-905 | 1.8 | 1 |
| 296 | A Multiscale Theoretical Analysis of the Mechanical, Thermal, and Electrical Characteristics of Rough Contact Interfaces Demonstrating Fractal Behavior. <i>Frontiers in Mechanical Engineering</i> , 2020 , 6, | 2.6 | 1 |
| 295 | Nanoindentation-induced deformation, microfracture, and phase transformation in crystalline materials investigated in situ by acoustic emission. <i>Journal of Materials Research</i> , 2020 , 35, 380-390 | 2.5 | 0 |
| 294 | Anisotropic and curved lattice members enhance the structural integrity and mechanical performance of architected metamaterials. <i>International Journal of Solids and Structures</i> , 2020 , 193-194, 287-301 | 3.1 | 12 |
| 293 | A stress analysis method for molecular dynamics systems. <i>International Journal of Solids and Structures</i> , 2020 , 193-194, 98-105 | 3.1 | 8 |
| 292 | A review of graphene synthesis by indirect and direct deposition methods. <i>Journal of Materials Research</i> , 2020 , 35, 76-89 | 2.5 | 24 |
| 291 | Tailoring 3D Buckling and Post Contact in Microlattice Metamaterials. <i>Advanced Structured Materials</i> , 2020 , 471-484 | 0.6 | |
| 290 | Fracture and fatigue of the surface layer of layered media due to adhesive sliding contact. <i>Engineering Fracture Mechanics</i> , 2020 , 223, 106697 | 4.2 | 1 |
| 289 | Comparison of the mechanical performance of architected three-dimensional intertwined lattices at the macro/microscale. <i>Extreme Mechanics Letters</i> , 2020 , 40, 100930 | 3.9 | 4 |
| 288 | Molecular dynamics simulations of internal stress evolution in ultrathin amorphous carbon films subjected to thermal annealing. <i>Thin Solid Films</i> , 2020 , 713, 138247 | 2.2 | 5 |

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| 287 | Regulating the mechanical behavior of metamaterial microlattices by tactical structure modification. <i>Journal of the Mechanics and Physics of Solids</i> , 2020 , 144, 104112 | 5 | 14 |
| 286 | On the mechanics of metal imprinting by nominally flat and patterned rigid surfaces. <i>International Journal of Solids and Structures</i> , 2020 , 206, 426-435 | 3.1 | 2 |
| 285 | Intertwined microlattices greatly enhance the performance of mechanical metamaterials. <i>Mathematics and Mechanics of Solids</i> , 2019 , 24, 2636-2648 | 2.3 | 25 |
| 284 | Viscoelastic properties of plasma-treated low-density polyethylene surfaces determined by nanoscale dynamic mechanical analysis. <i>Materials Research Letters</i> , 2019 , 7, 320-326 | 7.4 | 1 |
| 283 | A fracture mechanics analysis of asperity cracking due to sliding contact. <i>International Journal of Solids and Structures</i> , 2019 , 171, 1-9 | 3.1 | 5 |
| 282 | Mechanical designs employing buckling physics for reversible and omnidirectional stretchability in microsupercapacitor arrays. <i>Materials Research Letters</i> , 2019 , 7, 110-116 | 7.4 | 4 |
| 281 | Dynamic spherical indentation of strain hardening materials with and without strain rate dependent deformation behavior. <i>Mechanics of Materials</i> , 2019 , 133, 128-137 | 3.3 | 8 |
| 280 | Vacancies for controlling the behavior of microstructured three-dimensional mechanical metamaterials. <i>Mathematics and Mechanics of Solids</i> , 2019 , 24, 511-524 | 2.3 | 27 |
| 279 | Dynamic spherical indentation of elastic-plastic solids. <i>International Journal of Solids and Structures</i> , 2018 , 146, 180-191 | 3.1 | 11 |
| 278 | Nanostructure, structural stability, and diffusion characteristics of layered coatings for heat-assisted magnetic recording head media. <i>Scientific Reports</i> , 2018 , 8, 9807 | 4.9 | 10 |
| 277 | Highly flexible, foldable, and rollable microsupercapacitors on an ultrathin polyimide substrate with high power density. <i>Microsystems and Nanoengineering</i> , 2018 , 4, 16 | 7.7 | 36 |
| 276 | Ultrathin amorphous carbon films synthesized by filtered cathodic vacuum arc used as protective overcoats of heat-assisted magnetic recording heads. <i>Scientific Reports</i> , 2018 , 8, 9647 | 4.9 | 11 |
| 275 | Effect of material optical properties on thermo-plasmonics of heat-assisted magnetic recording devices. <i>Journal of Applied Physics</i> , 2018 , 124, 185109 | 2.5 | 3 |
| 274 | A generalized mechanics theory of idealized rough surfaces under dry and liquid-mediated plastic contact conditions. <i>International Journal of Solids and Structures</i> , 2018 , 155, 304-318 | 3.1 | 1 |
| 273 | Electromagnetic and Thermomechanical Analysis of Near-Field Heat Transfer in Heat-Assisted Magnetic Recording Heads. <i>IEEE Transactions on Magnetics</i> , 2018 , 54, 1-6 | 2 | |
| 272 | Thermal stability of ultrathin amorphous carbon films synthesized by plasma-enhanced chemical vapor deposition and filtered cathodic vacuum arc. <i>Philosophical Magazine</i> , 2017 , 97, 820-832 | 1.6 | 7 |
| 271 | The Chemistry of Electrolyte Reduction on Silicon Electrodes Revealed by in Situ ATR-FTIR Spectroscopy. <i>Journal of Physical Chemistry C</i> , 2017 , 121, 14476-14483 | 3.8 | 52 |
| 270 | An inverse finite element method for determining residual and current stress fields in solids. <i>Computational Mechanics</i> , 2016 , 58, 797-817 | 4 | 2 |

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| 269 | Highly Stretchable Microsupercapacitor Arrays with Honeycomb Structures for Integrated Wearable Electronic Systems. <i>ACS Nano</i> , 2016 , 10, 9306-9315 | 16.7 | 95 |
| 268 | Failure mechanisms of single-crystal silicon electrodes in lithium-ion batteries. <i>Nature Communications</i> , 2016 , 7, 11886 | 17.4 | 156 |
| 267 | The effect of Argon ion irradiation on the thickness and structure of ultrathin amorphous carbon films. <i>Journal of Applied Physics</i> , 2016 , 119, 095304 | 2.5 | 15 |
| 266 | Stretchable microsupercapacitor arrays with a composite honeycomb structure 2016 , | | 1 |
| 265 | High-energy-density, all-solid-state microsupercapacitors with three-dimensional interdigital electrodes of carbon/polymer electrolyte composite. <i>Nanotechnology</i> , 2016 , 27, 045701 | 3.4 | 34 |
| 264 | Bilayer amorphous carbon films synthesized by filtered cathodic vacuum arc deposition. <i>Journal of Materials Research</i> , 2016 , 31, 3161-3167 | 2.5 | 5 |
| 263 | A molecular dynamics analysis of ion irradiation of ultrathin amorphous carbon films. <i>Journal of Applied Physics</i> , 2016 , 120, 125311 | 2.5 | |
| 262 | Friction, nanostructure, and residual stress of single-layer and multi-layer amorphous carbon films deposited by radio-frequency sputtering. <i>Journal of Materials Research</i> , 2016 , 31, 1857-1864 | 2.5 | 1 |
| 261 | Cyclohexene and 1,4-Cyclohexadiene Hydrogenation Occur through Mutually Exclusive Intermediate Pathways on Platinum Nanoparticles. <i>Journal of Physical Chemistry C</i> , 2016 , 120, 8246-8250 ^{3.8} | | 6 |
| 260 | Friction properties of amorphous carbon ultrathin films deposited by filtered cathodic vacuum arc and radio-frequency sputtering. <i>Thin Solid Films</i> , 2015 , 579, 167-173 | 2.2 | 20 |
| 259 | The Role of Duty Cycle of Substrate Pulse Biasing in Filtered Cathodic Vacuum Arc Deposition of Amorphous Carbon Films. <i>IEEE Transactions on Magnetics</i> , 2015 , 51, 1-9 | 2 | 4 |
| 258 | Single-cell mechanics--An experimental-computational method for quantifying the membrane-cytoskeleton elasticity of cells. <i>Acta Biomaterialia</i> , 2015 , 27, 224-235 | 10.8 | 8 |
| 257 | A 3D all-solid-state microsupercapacitor with electrodes consisting of activated carbon/polymer electrolyte composite 2015 , | | 2 |
| 256 | Electrospun bilayer fibrous scaffolds for enhanced cell infiltration and vascularization in vivo. <i>Acta Biomaterialia</i> , 2015 , 13, 131-41 | 10.8 | 50 |
| 255 | Hybridization and tribomechanical properties of ultrathin amorphous carbon films synthesized by radio-frequency low-pressure plasma discharges. <i>Surface and Coatings Technology</i> , 2015 , 262, 15-20 | 4.4 | 8 |
| 254 | Peridynamics analysis of the nanoscale friction and wear properties of amorphous carbon thin films. <i>Journal of Mechanics of Materials and Structures</i> , 2015 , 10, 559-572 | 1.2 | 14 |
| 253 | A catalytic path for electrolyte reduction in lithium-ion cells revealed by in situ attenuated total reflection-Fourier transform infrared spectroscopy. <i>Journal of the American Chemical Society</i> , 2015 , 137, 3181-4 | 16.4 | 58 |
| 252 | Sum frequency generation vibrational spectroscopy of 1,3-butadiene hydrogenation on 4 nm Pt@SiO ₂ , Pd@SiO ₂ , and Rh@SiO ₂ core-shell catalysts. <i>Nano Letters</i> , 2015 , 15, 39-44 | 11.5 | 36 |

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| 251 | Adhesive contact of an elastic semi-infinite solid with a rigid rough surface: Strength of adhesion and contact instabilities. <i>International Journal of Solids and Structures</i> , 2014 , 51, 1197-1207 | 3.1 | 13 |
| 250 | CO oxidation on PtSn nanoparticle catalysts occurs at the interface of Pt and Sn oxide domains formed under reaction conditions. <i>Journal of Catalysis</i> , 2014 , 312, 17-25 | 7.3 | 99 |
| 249 | Mechanical properties of electrospun bilayer fibrous membranes as potential scaffolds for tissue engineering. <i>Acta Biomaterialia</i> , 2014 , 10, 2718-26 | 10.8 | 27 |
| 248 | Contact mechanics analysis of oscillatory sliding of a rigid fractal surface against an elastic-plastic half-space. <i>Philosophical Magazine</i> , 2014 , 94, 3215-3233 | 1.6 | 8 |
| 247 | In vitro investigation of skin damage due to microscale shearing. <i>Journal of Biomedical Materials Research - Part A</i> , 2014 , 102, 4078-86 | 5.4 | 5 |
| 246 | Identification of Diethyl 2,5-Dioxahexane Dicarboxylate and Polyethylene Carbonate as Decomposition Products of Ethylene Carbonate Based Electrolytes by Fourier Transform Infrared Spectroscopy. <i>Journal of Physical Chemistry C</i> , 2014 , 118, 14732-14738 | 3.8 | 29 |
| 245 | Skin viscoelasticity studied in vitro by microprobe-based techniques. <i>Journal of Biomechanics</i> , 2014 , 47, 553-9 | 2.9 | 12 |
| 244 | Plasma-assisted heparin conjugation on electrospun poly(L-lactide) fibrous scaffolds. <i>Journal of Biomedical Materials Research - Part A</i> , 2014 , 102, 1408-14 | 5.4 | 23 |
| 243 | An elastic-plastic analysis of spherical indentation: Constitutive equations for single-indentation unloading and development of plasticity due to repeated indentation. <i>Mechanics of Materials</i> , 2014 , 76, 93-101 | 3.3 | 20 |
| 242 | A reverse updated Lagrangian finite element formulation for determining material properties from measured force and displacement data. <i>Computational Mechanics</i> , 2014 , 54, 1375-1394 | 4 | 2 |
| 241 | The effect of deposition energy of energetic atoms on the growth and structure of ultrathin amorphous carbon films studied by molecular dynamics simulations. <i>Journal Physics D: Applied Physics</i> , 2014 , 47, 245303 | 3 | 10 |
| 240 | In vitro measurement of the mechanical properties of skin by nano/microindentation methods. <i>Journal of Biomechanics</i> , 2014 , 47, 1186-92 | 2.9 | 19 |
| 239 | Tuning the electronic structure of titanium oxide support to enhance the electrochemical activity of platinum nanoparticles. <i>Nano Letters</i> , 2013 , 13, 4469-74 | 11.5 | 63 |
| 238 | Plasma surface chemical treatment of electrospun poly(L-lactide) microfibrillar scaffolds for enhanced cell adhesion, growth, and infiltration. <i>Tissue Engineering - Part A</i> , 2013 , 19, 1188-98 | 3.9 | 83 |
| 237 | Elastic-Plastic Analysis of Adhesive Sliding Contacts. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2013 , 80, | 2.7 | 2 |
| 236 | Carbon Overcoat Oxidation in Heat-Assisted Magnetic Recording. <i>IEEE Transactions on Magnetics</i> , 2013 , 49, 3721-3724 | 2 | 36 |
| 235 | Fracture mechanics analysis of asperity cracking due to adhesive normal contact. <i>International Journal of Fracture</i> , 2013 , 181, 273-283 | 2.3 | 6 |
| 234 | Surface adhesion and hardening effects on elastic-plastic deformation, shakedown and ratcheting behavior of half-spaces subjected to repeated sliding contact. <i>International Journal of Solids and Structures</i> , 2013 , 50, 876-886 | 3.1 | 5 |

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| 233 | Structural stability of hydrogenated amorphous carbon overcoats used in heat-assisted magnetic recording investigated by rapid thermal annealing. <i>Journal of Applied Physics</i> , 2013 , 113, 083517 | 2.5 | 36 |
| 232 | Delamination of an elastic film from an elastic-plastic substrate during adhesive contact loading and unloading. <i>International Journal of Solids and Structures</i> , 2013 , 50, 2549-2560 | 3.1 | 9 |
| 231 | Elastic-plastic spherical indentation: Deformation regimes, evolution of plasticity, and hardening effect. <i>Mechanics of Materials</i> , 2013 , 61, 91-100 | 3.3 | 57 |
| 230 | Structure Sensitivity in Pt Nanoparticle Catalysts for Hydrogenation of 1,3-Butadiene: In Situ Study of Reaction Intermediates Using SFG Vibrational Spectroscopy. <i>Journal of Physical Chemistry C</i> , 2013 , 117, 1809-1817 | 3.8 | 34 |
| 229 | Engineering the microstructure of electrospun fibrous scaffolds by microtopography. <i>Biomacromolecules</i> , 2013 , 14, 1349-60 | 6.9 | 37 |
| 228 | Adhesive Contact of Elastic-Plastic Layered Media: Effective Tabor Parameter and Mode of Surface Separation. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2013 , 80, | 2.7 | 5 |
| 227 | The multilayered structure of ultrathin amorphous carbon films synthesized by filtered cathodic vacuum arc deposition. <i>Journal of Materials Research</i> , 2013 , 28, 2124-2131 | 2.5 | 21 |
| 226 | Effect of fluorocarbon self-assembled monolayer films on sidewall adhesion and friction of surface micromachines with impacting and sliding contact interfaces. <i>Journal of Applied Physics</i> , 2013 , 113, 224505 | 2.5 | 19 |
| 225 | High-vacuum adhesion and friction properties of sliding contact-mode micromachines. <i>Applied Physics Letters</i> , 2013 , 103, 033507 | 3.4 | 2 |
| 224 | A slip-line plasticity analysis of abrasive wear of a smooth and soft surface sliding against a rough (fractal) and hard surface. <i>International Journal of Solids and Structures</i> , 2012 , 49, 121-131 | 3.1 | 12 |
| 223 | A slip-line plasticity analysis of sliding friction of rough surfaces exhibiting self-affine (fractal) behavior. <i>Journal of the Mechanics and Physics of Solids</i> , 2012 , 60, 538-555 | 5 | 6 |
| 222 | Sidewall Adhesion and Sliding Contact Behavior of Polycrystalline Silicon Microdevices Operated in High Vacuum. <i>Journal of Microelectromechanical Systems</i> , 2012 , 21, 359-369 | 2.5 | 12 |
| 221 | Incidence Angle Effect of Energetic Carbon Ions on Deposition Rate, Topography, and Structure of Ultrathin Amorphous Carbon Films Deposited by Filtered Cathodic Vacuum Arc. <i>IEEE Transactions on Magnetics</i> , 2012 , 48, 2220-2227 | 2 | 18 |
| 220 | Sum Frequency Generation Vibrational Spectroscopy of Colloidal Platinum Nanoparticle Catalysts: Disorder versus Removal of Organic Capping. <i>Journal of Physical Chemistry C</i> , 2012 , 116, 17540-17546 | 3.8 | 40 |
| 219 | A discrete dislocation plasticity analysis of a single-crystal semi-infinite medium indented by a rigid surface exhibiting multi-scale roughness. <i>Philosophical Magazine</i> , 2012 , 92, 2984-3005 | 1.6 | 9 |
| 218 | Tribological altruism: A sacrificial layer mechanism of synovial joint lubrication in articular cartilage. <i>Journal of Biomechanics</i> , 2012 , 45, 2426-31 | 2.9 | 19 |
| 217 | High-Pressure Adsorption of Ethylene on Cubic Pt Nanoparticles and Pt(100) Single Crystals Probed by in Situ Sum Frequency Generation Vibrational Spectroscopy. <i>ACS Catalysis</i> , 2012 , 2, 2377-2386 | 13.1 | 18 |
| 216 | Evolution of sidewall adhesion in surface micromachines due to repetitive impact loading. <i>Journal of Applied Physics</i> , 2012 , 111, 054507 | 2.5 | 6 |

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| 215 | Nanoscale mechanical and tribological properties of fluorocarbon films grafted onto plasma-treated low-density polyethylene surfaces. <i>Journal Physics D: Applied Physics</i> , 2012 , 45, 095401 | 3 | 4 |
| 214 | The effect of impact velocity on interfacial adhesion of contact-mode surface micromachines. <i>Applied Physics Letters</i> , 2012 , 101, 053506 | 3-4 | 3 |
| 213 | Titanium Oxide/Platinum Catalysis: Charge Transfer from a Titanium Oxide Support Controls Activity and Selectivity in Methanol Oxidation on Platinum. <i>Journal of Physical Chemistry C</i> , 2011 , 115, 22960-22964 | 3.8 | 21 |
| 212 | A Discrete Dislocation Plasticity Analysis of a Single-Crystal Half-Space Indented by a Rigid Cylinder. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2011 , 78, | 2.7 | 3 |
| 211 | Thermal Stability of Ultrathin Amorphous Carbon Films for Energy-Assisted Magnetic Recording. <i>IEEE Transactions on Magnetics</i> , 2011 , 47, 2277-2282 | 2 | 36 |
| 210 | Surface chemical patterning for long-term single-cell culture. <i>Journal of Biomedical Materials Research - Part A</i> , 2011 , 96, 507-12 | 5-4 | 12 |
| 209 | Sum Frequency Generation Vibrational Spectroscopy and Kinetic Study of 2-Methylfuran and 2,5-Dimethylfuran Hydrogenation over 7 nm Platinum Cubic Nanoparticles. <i>Journal of Physical Chemistry C</i> , 2011 , 115, 8104-8109 | 3.8 | 30 |
| 208 | Highly n-Type Titanium Oxide as an Electronically Active Support for Platinum in the Catalytic Oxidation of Carbon Monoxide. <i>Journal of Physical Chemistry C</i> , 2011 , 115, 16006-16011 | 3.8 | 38 |
| 207 | Adhesion-induced instabilities in elastic and elastic-plastic contacts during single and repetitive normal loading. <i>Journal of the Mechanics and Physics of Solids</i> , 2011 , 59, 884-897 | 5 | 21 |
| 206 | Dependence of nanoscale friction and adhesion properties of articular cartilage on contact load. <i>Journal of Biomechanics</i> , 2011 , 44, 1340-5 | 2.9 | 29 |
| 205 | The role of lubricant entrapment at biological interfaces: reduction of friction and adhesion in articular cartilage. <i>Journal of Biomechanics</i> , 2011 , 44, 2015-20 | 2.9 | 41 |
| 204 | Friction and Wear of Hemiarthroplasty Biomaterials in Reciprocating Sliding Contact With Articular Cartilage. <i>Journal of Tribology</i> , 2011 , 133, | 1.8 | 18 |
| 203 | Integration of plasma-assisted surface chemical modification, soft lithography, and protein surface activation for single-cell patterning. <i>Applied Physics Letters</i> , 2010 , 97, 043705 | 3.4 | 8 |
| 202 | A Quasi-Static Mechanics Analysis of Three-Dimensional Nanoscale Surface Polishing. <i>Journal of Manufacturing Science and Engineering, Transactions of the ASME</i> , 2010 , 132, | 3.3 | 2 |
| 201 | Furan hydrogenation over Pt(111) and Pt(100) single-crystal surfaces and Pt nanoparticles from 1 to 7 nm: a kinetic and sum frequency generation vibrational spectroscopy study. <i>Journal of the American Chemical Society</i> , 2010 , 132, 13088-95 | 16.4 | 98 |
| 200 | In situ synchrotron X-ray microdiffraction analysis of thermomechanically induced phase transformations in Cu ₃ AlNi shape-memory alloy. <i>Philosophical Magazine</i> , 2010 , 90, 2235-2248 | 1.6 | 9 |
| 199 | Dynamic Finite Element Analysis of Failure in Alternating Phase-Shift Masks Caused by Megasonic Cleaning. <i>IEEE Transactions on Components and Packaging Technologies</i> , 2010 , 33, 46-55 | | 6 |
| 198 | Nanomechanical and Friction Properties of Ultrathin Amorphous Carbon Films Studied by Molecular Dynamics Analysis 2010 , | | 1 |

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| 197 | Nanoscale Pseudoelastic Behavior of Cu ₄₉ Ni Shape-Memory Alloy Induced by Partial Indentation Unloading. <i>Nanoscience and Nanotechnology Letters</i> , 2010 , 2, 332-336 | 0.8 | 9 |
| 196 | Atomic force microscope investigation of the boundary-lubricant layer in articular cartilage. <i>Osteoarthritis and Cartilage</i> , 2010 , 18, 956-63 | 6.2 | 80 |
| 195 | Increased friction coefficient and superficial zone protein expression in patients with advanced osteoarthritis. <i>Arthritis and Rheumatism</i> , 2010 , 62, 2680-7 | | 86 |
| 194 | An adhesive wear model of fractal surfaces in normal contact. <i>International Journal of Solids and Structures</i> , 2010 , 47, 912-921 | 3.1 | 43 |
| 193 | Surface modification of magnetic recording media by filtered cathodic vacuum arc. <i>Journal of Applied Physics</i> , 2009 , 106, 093504 | 2.5 | 60 |
| 192 | Scale-dependent nanomechanical behavior and anisotropic friction of nanotextured silicon surfaces. <i>Journal of Materials Research</i> , 2009 , 24, 3038-3043 | 2.5 | 18 |
| 191 | Regulation of the friction coefficient of articular cartilage by TGF-beta1 and IL-1beta. <i>Journal of Orthopaedic Research</i> , 2009 , 27, 249-56 | 3.8 | 48 |
| 190 | Plasma-assisted surface chemical patterning for single-cell culture. <i>Biomaterials</i> , 2009 , 30, 4203-10 | 15.6 | 34 |
| 189 | Cell-shape regulation of smooth muscle cell proliferation. <i>Biophysical Journal</i> , 2009 , 96, 3423-32 | 2.9 | 143 |
| 188 | Synthesis of Polyethylene Glycol-Like Films from Capacitively Coupled Plasma of Diethylene Glycol Dimethyl Ether Monomer. <i>Journal of Physical Chemistry C</i> , 2009 , 113, 213-219 | 3.8 | 21 |
| 187 | Synthesis of ultrathin carbon films by direct current filtered cathodic vacuum arc. <i>Journal of Applied Physics</i> , 2009 , 105, 083305 | 2.5 | 66 |
| 186 | Wear of Polysilicon Surface Micromachines Operated in High Vacuum. <i>Journal of Microelectromechanical Systems</i> , 2009 , 18, 229-238 | 2.5 | 18 |
| 185 | Enhancement of Photoprotection and Mechanical Properties of Polymers by Deposition of Thin Coatings 2009 , 327-343 | | |
| 184 | Sum Frequency Generation Vibrational Spectroscopy of Pyridine Hydrogenation on Platinum Nanoparticles. <i>Journal of Physical Chemistry C</i> , 2008 , 112, 11865-11868 | 3.8 | 36 |
| 183 | Formation of diamondlike nanocrystallites in amorphous carbon films synthesized by radio-frequency sputtering. <i>Journal of Materials Research</i> , 2008 , 23, 700-703 | 2.5 | 3 |
| 182 | The interface of functional biotribology and regenerative medicine in synovial joints. <i>Tissue Engineering - Part B: Reviews</i> , 2008 , 14, 235-47 | 7.9 | 89 |
| 181 | Directional adhesion of gecko-inspired angled microfiber arrays. <i>Applied Physics Letters</i> , 2008 , 93, 191910.4 | 10.4 | 131 |
| 180 | Direct-current cathodic vacuum arc system with magnetic-field mechanism for plasma stabilization. <i>Review of Scientific Instruments</i> , 2008 , 79, 073905 | 1.7 | 51 |

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|-----|---|-------|-----|
| 179 | Antiwear Properties of Blends Containing Mixtures of Zinc Dialkyl Dithiophosphate and Different Detergents. <i>Tribology Transactions</i> , 2008 , 52, 73-85 | 1.8 | 7 |
| 178 | Differential regulation of endothelial cell adhesion, spreading, and cytoskeleton on low-density polyethylene by nanotopography and surface chemistry modification induced by argon plasma treatment. <i>Journal of Biomedical Materials Research - Part A</i> , 2008 , 84, 828-36 | 5.4 | 48 |
| 177 | Levitation compensation method for dynamic electrostatic comb-drive actuators. <i>Sensors and Actuators A: Physical</i> , 2008 , 143, 383-389 | 3.9 | 12 |
| 176 | Effects of multi-scale roughness and frictional heating on solid body contact deformation. <i>Comptes Rendus - Mecanique</i> , 2008 , 336, 149-162 | 2.1 | 19 |
| 175 | Physicochemical Properties and Morphology of Fluorocarbon Films Synthesized on Crosslinked Polyethylene by Capacitively Coupled Octafluorocyclobutane Plasma. <i>Journal of Physical Chemistry C</i> , 2007 , 111, 4358-4367 | 3.8 | 15 |
| 174 | Mechanotransduction of bovine articular cartilage superficial zone protein by transforming growth factor beta signaling. <i>Arthritis and Rheumatism</i> , 2007 , 56, 3706-14 | | 105 |
| 173 | Stress analysis of a layered elastic solid in contact with a rough surface exhibiting fractal behavior. <i>International Journal of Solids and Structures</i> , 2007 , 44, 2109-2129 | 3.1 | 33 |
| 172 | Thermomechanical effects on phase transformations in single-crystal Cu-Al-Ni shape-memory alloy. <i>Journal of Materials Research</i> , 2007 , 22, 994-1003 | 2.5 | 8 |
| 171 | Microdevice for measuring friction and adhesion properties of sidewall contact interfaces of microelectromechanical systems. <i>Review of Scientific Instruments</i> , 2007 , 78, 065106 | 1.7 | 23 |
| 170 | A Reduced-Order Dynamic Model of Nonlinear Oscillating Devices. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , 2007 , 129, 514-521 | 1.6 | |
| 169 | Regulation of Cell Adhesion and Proliferation by Physicochemical Surface Modification and Protein Enhancement Due to Mechanotransduction 2007 , 973 | | |
| 168 | Dependence of nanomechanical modification of polymers on plasma-induced cross-linking. <i>Journal of Applied Physics</i> , 2007 , 101, 014307 | 2.5 | 24 |
| 167 | Microscale friction phenomena in oscillatory sliding contacts. <i>Journal of Applied Physics</i> , 2007 , 102, 123503 | 2.5 | 11 |
| 166 | Interfacial viscoelasticity of thin polymer films studied by nanoscale dynamic mechanical analysis. <i>Applied Physics Letters</i> , 2007 , 90, 021910 | 3.4 | 15 |
| 165 | Platinum nanoparticle shape effects on benzene hydrogenation selectivity. <i>Nano Letters</i> , 2007 , 7, 3097-1015 | 10.15 | 747 |
| 164 | Evolution of interfacial adhesion force in dynamic micromachines due to repetitive impact loading. <i>Applied Physics Letters</i> , 2007 , 91, 063102 | 3.4 | 8 |
| 163 | Tetrahedral and Trigonal Carbon Atom Hybridization in Thin Amorphous Carbon Films Synthesized by Radio-Frequency Sputtering. <i>Journal of Physical Chemistry C</i> , 2007 , 111, 9891-9896 | 3.8 | 23 |
| 162 | Effects of electrical and thermal phenomena on the evolution of adhesion at contact interfaces of electrostatically activated surface microstructures. <i>Applied Physics Letters</i> , 2007 , 90, 093510 | 3.4 | 8 |

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|-----|---|-----|----|
| 161 | Enhancement of the photoprotection and nanomechanical properties of polycarbonate by deposition of thin ceramic coatings. <i>Journal of Applied Physics</i> , 2006 , 99, 104310 | 2.5 | 12 |
| 160 | Effect of low-pressure plasma discharge conditions on the thickness and roughness of ultrathin films of amorphous carbon. <i>Journal of Applied Physics</i> , 2006 , 100, 063307 | 2.5 | 9 |
| 159 | Nanoscale plastic deformation and fracture of polymers studied by in situ nanoindentation in a transmission electron microscope. <i>Applied Physics Letters</i> , 2006 , 88, 181908 | 3.4 | 15 |
| 158 | Conformational changes at polymer gel interfaces upon saturation with various liquids studied by infrared-visible sum frequency generation vibrational spectroscopy. <i>Applied Physics Letters</i> , 2006 , 88, 134105 | 3.4 | 15 |
| 157 | Friction Reduction and Antiwear Capacity of Engine Oil Blends Containing Zinc Dialkyl Dithiophosphate and Molybdenum-Complex Additives. <i>Tribology Transactions</i> , 2006 , 49, 151-165 | 1.8 | 23 |
| 156 | Probabilistic analysis of tetrahedral carbon hybridization in amorphous carbon films. <i>Applied Physics Letters</i> , 2006 , 88, 221908 | 3.4 | 7 |
| 155 | Carbon monoxide adsorption and oxidation on monolayer films of cubic platinum nanoparticles investigated by infrared-visible sum frequency generation vibrational spectroscopy. <i>Journal of Physical Chemistry B</i> , 2006 , 110, 15920-5 | 3.4 | 56 |
| 154 | Effect of reactive species on surface crosslinking of plasma-treated polymers investigated by surface force microscopy. <i>Applied Physics Letters</i> , 2006 , 89, 124102 | 3.4 | 40 |
| 153 | The Effect of Adhesion on the Static Friction Properties of Sidewall Contact Interfaces of Microelectromechanical Devices. <i>Journal of Microelectromechanical Systems</i> , 2006 , 15, 1612-1621 | 2.5 | 28 |
| 152 | Effect of ion energy fluence on the topography and wettability of low-density polyethylene exposed to inductively coupled argon plasma. <i>Journal Physics D: Applied Physics</i> , 2006 , 39, 1084-1094 | 3 | 16 |
| 151 | Viscoelastic properties of polymer surfaces investigated by nanoscale dynamic mechanical analysis. <i>Applied Physics Letters</i> , 2006 , 88, 131901 | 3.4 | 64 |
| 150 | Surface and interface viscoelastic behaviors of thin polymer films investigated by nanoindentation. <i>Journal of Applied Physics</i> , 2006 , 100, 114329 | 2.5 | 22 |
| 149 | Dynamic analysis of single and cyclic indentation of an elastic-plastic multi-layered medium by a rigid fractal surface. <i>Journal of the Mechanics and Physics of Solids</i> , 2006 , 54, 927-950 | 5 | 12 |
| 148 | Nanoscale Pseudoelasticity of Single-crystal Cu ₃₁ Al ₆₉ Ni shape-memory Alloy Induced by Cyclic Nanoindentation. <i>Journal of Materials Science</i> , 2006 , 41, 5021-5024 | 4.3 | 25 |
| 147 | Wear Mechanisms of Untreated and Gamma Irradiated Ultra-High Molecular Weight Polyethylene for Total Joint Replacements. <i>Journal of Tribology</i> , 2005 , 127, 273-279 | 1.8 | 6 |
| 146 | Static friction in polysilicon surface micromachines. <i>Journal of Microelectromechanical Systems</i> , 2005 , 14, 651-663 | 2.5 | 22 |
| 145 | Entropically mediated polyolefin blend segregation at buried sapphire and air interfaces investigated by infrared-visible sum frequency generation vibrational spectroscopy. <i>Journal of Physical Chemistry B</i> , 2005 , 109, 23415-8 | 3.4 | 16 |
| 144 | Surface modification of low-density polyethylene by inductively coupled argon plasma. <i>Journal of Physical Chemistry B</i> , 2005 , 109, 17623-9 | 3.4 | 48 |

| | | | |
|-----|--|-----|-----|
| 143 | Molecular restructuring at poly(n-butyl methacrylate) and poly(methyl methacrylate) surfaces due to compression by a sapphire prism studied by infrared-visible sum frequency generation vibrational spectroscopy. <i>Langmuir</i> , 2005 , 21, 3647-52 | 4 | 57 |
| 142 | Impact of a Rigid Sphere on an Elastic Homogeneous Half-Space. <i>Journal of Tribology</i> , 2005 , 127, 325-330. | 1.8 | 19 |
| 141 | A Mechanics Approach to Static Friction of Elastic-Plastic Fractal Surfaces. <i>Journal of Tribology</i> , 2005 , 127, 315-324 | 1.8 | 36 |
| 140 | Thermomechanical Analysis of Semi-infinite Solid in Sliding Contact With a Fractal Surface. <i>Journal of Tribology</i> , 2005 , 127, 331-342 | 1.8 | 22 |
| 139 | Contact Fatigue Analysis of an Elastic-Plastic Layered Medium With a Surface Crack in Sliding Contact With a Fractal Surface. <i>Journal of Tribology</i> , 2005 , 127, 503-512 | 1.8 | 6 |
| 138 | An experimental study of sidewall adhesion in microelectromechanical systems. <i>Journal of Microelectromechanical Systems</i> , 2005 , 14, 1356-1363 | 2.5 | 46 |
| 137 | A Molecular Dynamics Analysis of Surface Interference and Tip Shape and Size Effects on Atomic-Scale Friction. <i>Journal of Tribology</i> , 2005 , 127, 513-521 | 1.8 | 36 |
| 136 | Analytical current-voltage relationships for electron tunneling across rough interfaces. <i>Journal of Applied Physics</i> , 2005 , 97, 073701 | 2.5 | 26 |
| 135 | Synergistic Effects of Boron-, Sulfur-, and Phosphorus-Containing Lubricants in Boundary Lubrication of Steel Surfaces. <i>Tribology Transactions</i> , 2005 , 48, 218-229 | 1.8 | 15 |
| 134 | Pseudoelasticity of martensitic titanium-nickel shape-memory films studied by in situ heating nanoindentation and transmission electron microscopy. <i>Applied Physics Letters</i> , 2005 , 87, 263108 | 3.4 | 30 |
| 133 | In situ transmission electron microscopy and nanoindentation studies of phase transformation and pseudoelasticity of shape-memory titanium-nickel films. <i>Journal of Materials Research</i> , 2005 , 20, 1808-1813 | 2.5 | 22 |
| 132 | Breakdown of ultrathin native oxide films at contact interfaces of electromechanically stressed silicon microdevices. <i>Journal of Applied Physics</i> , 2005 , 97, 124102 | 2.5 | 5 |
| 131 | Surface nanostructuring by nano-/femtosecond laser-assisted scanning force microscopy. <i>Journal of Applied Physics</i> , 2005 , 97, 104319 | 2.5 | 108 |
| 130 | Thickness effect on thermally induced phase transformations in sputtered titanium-nickel shape-memory films. <i>Journal of Materials Research</i> , 2005 , 20, 1606-1612 | 2.5 | 32 |
| 129 | Significance of Surface Topography on Performance and Lifetime of MEMS Switches and Relays. <i>Materials Research Society Symposia Proceedings</i> , 2005 , 872, 1 | | |
| 128 | Nanoconfinement Effect on the Mechanical Behavior of Polymer Thin Films. <i>Materials Research Society Symposia Proceedings</i> , 2005 , 880, 1 | | 1 |
| 127 | The Role of Surface Topography in MEMS Switches and Relays 2004 , 107 | | 1 |
| 126 | Pseudoelasticity of shape-memory titanium-nickel films subjected to dynamic nanoindentation. <i>Applied Physics Letters</i> , 2004 , 84, 4274-4276 | 3.4 | 42 |

| | | | |
|-----|--|-----|-----|
| 125 | Electrical contact resistance theory for conductive rough surfaces separated by a thin insulating film. <i>Journal of Applied Physics</i> , 2004 , 95, 576-585 | 2.5 | 90 |
| 124 | Analysis of the spherical indentation cycle for elastic-perfectly plastic solids. <i>Journal of Materials Research</i> , 2004 , 19, 3641-3653 | 2.5 | 114 |
| 123 | Electromechanically induced transition from nonohmic to ohmic behavior at contact interfaces. <i>Applied Physics Letters</i> , 2004 , 84, 4842-4844 | 3.4 | 14 |
| 122 | Nanoindentation of polycrystalline silicon-carbide thin films studied by acoustic emission. <i>Applied Physics Letters</i> , 2004 , 85, 1695-1697 | 3.4 | 5 |
| 121 | Thermomechanical Analysis of Semi-Infinite Solid in Sliding Contact With a Fractal Surface 2004 , 1307 | | |
| 120 | A Mechanics Approach to Static Friction of Elastic-Plastic Fractal Surfaces 2004 , 1361 | | |
| 119 | Mechanical and Thermomechanical Elastic-Plastic Contact Analysis of Layered Media With Patterned Surfaces. <i>Journal of Tribology</i> , 2004 , 126, 9-17 | 1.8 | 48 |
| 118 | Dynamic Indentation of an Elastic-Plastic Multi-Layered Medium by a Rigid Cylinder. <i>Journal of Tribology</i> , 2004 , 126, 18-27 | 1.8 | 18 |
| 117 | Tribological and Nanomechanical Properties of Unmodified and Crosslinked Ultra-High Molecular Weight Polyethylene for Total Joint Replacements. <i>Journal of Tribology</i> , 2004 , 126, 386-394 | 1.8 | 27 |
| 116 | Nanomechanical and Nanotribological Properties of an Antiwear Tribofilm Produced from Phosphorus-Containing Additives on Boundary-Lubricated Steel Surfaces. <i>Journal of Tribology</i> , 2004 , 126, 775-780 | 1.8 | 11 |
| 115 | Transmission electron microscopy and electron energy loss spectroscopy analysis of ultrathin amorphous carbon films. <i>Journal of Materials Research</i> , 2004 , 19, 2131-2136 | 2.5 | 18 |
| 114 | Electrical contact resistance as a diagnostic tool for MEMS contact interfaces. <i>Journal of Microelectromechanical Systems</i> , 2004 , 13, 977-987 | 2.5 | 38 |
| 113 | X-Ray Photoelectron Spectroscopy Analysis of Antiwear Tribofilms Produced on Boundary-Lubricated Steel Surfaces from Sulfur- and Phosphorus-Containing Additives and Metal Deactivator Additive. <i>Tribology Transactions</i> , 2004 , 47, 321-327 | 1.8 | 18 |
| 112 | Nanomechanical and Nanotribological Properties of an Antiwear Tribofilm Produced From Phosphorus-Containing Additives on Boundary-Lubricated Steel Surfaces 2004 , | | 1 |
| 111 | Surface Cracking in Elastic-Plastic Multi-Layered Media Due to Repeated Sliding Contact. <i>Journal of Tribology</i> , 2004 , 126, 655-663 | 1.8 | 11 |
| 110 | Indentation Analysis of Elastic-Plastic Homogeneous and Layered Media: Criteria for Determining the Real Material Hardness. <i>Journal of Tribology</i> , 2003 , 125, 685-691 | 1.8 | 45 |
| 109 | Effect of Residual Stress in Surface Layer on Contact Deformation of Elastic-Plastic Layered Media. <i>Journal of Tribology</i> , 2003 , 125, 692-699 | 1.8 | 30 |
| 108 | Three-Dimensional Finite Element Analysis of Elastic-Plastic Layered Media Under Thermomechanical Surface Loading. <i>Journal of Tribology</i> , 2003 , 125, 52-59 | 1.8 | 50 |

| | | | |
|-----|--|-----|-----|
| 107 | Effect of Surface Patterning on Contact Deformation of Elastic-Plastic Layered Media. <i>Journal of Tribology</i> , 2003 , 125, 16-24 | 1.8 | 37 |
| 106 | Determination of Real Material Properties From Nanoindentation Experiments 2003 , 89 | | |
| 105 | Dynamic MEMS devices for multi-axial fatigue and elastic modulus measurement 2003 , | | 6 |
| 104 | Microstructure and nanomechanical and optical properties of single- and multi-layer carbon films synthesized by radio frequency sputtering. <i>Surface and Coatings Technology</i> , 2003 , 168, 12-22 | 4.4 | 13 |
| 103 | Effects of film thickness and contact load on nanotribological properties of sputtered amorphous carbon thin films. <i>Wear</i> , 2003 , 254, 1010-1018 | 3.5 | 32 |
| 102 | Effects of copolymer segment length and reversible deformation on the molecular surface structure of polyurethane. <i>Applied Physics Letters</i> , 2003 , 83, 3066-3068 | 3.4 | 5 |
| 101 | Surface Reordering of Stretched Polyurethane Block Copolymer Films Studied by Sum Frequency Generation Vibrational Spectroscopy. <i>Journal of Physical Chemistry B</i> , 2003 , 107, 6377-6383 | 3.4 | 9 |
| 100 | Electrical contact resistance theory for conductive rough surfaces. <i>Journal of Applied Physics</i> , 2003 , 94, 3153-3162 | 2.5 | 172 |
| 99 | Adhesion and friction forces in microelectromechanical systems: mechanisms, measurement, surface modification techniques, and adhesion theory. <i>Journal of Adhesion Science and Technology</i> , 2003 , 17, 477-517 | 2 | 141 |
| 98 | Effect of Sulfur- and Phosphorus-Containing Additives and Metal Deactivator on the Tribological Properties of Boundary-Lubricated Steel Surfaces. <i>Tribology Transactions</i> , 2003 , 46, 315-325 | 1.8 | 20 |
| 97 | Nanoscale pseudoelastic behavior of indented titanium–nickel films. <i>Applied Physics Letters</i> , 2003 , 83, 3773-3775 | 3.4 | 85 |
| 96 | Analysis of interfacial adhesion based on electrical contact resistance measurements. <i>Journal of Applied Physics</i> , 2003 , 94, 6386-6390 | 2.5 | 15 |
| 95 | Femtosecond laser aperturless near-field nanomachining of metals assisted by scanning probe microscopy. <i>Applied Physics Letters</i> , 2003 , 82, 1146-1148 | 3.4 | 147 |
| 94 | Effect of stress-induced phase transformation on nanomechanical properties of sputtered amorphous carbon films. <i>Applied Physics Letters</i> , 2003 , 82, 2437-2439 | 3.4 | 15 |
| 93 | Nanoengineering and Tribophysics for Microelectromechanical Systems 2003 , 139-164 | | |
| 92 | Effects of Counterface Roughness and Conformity on the Tribological Performance of Crosslinked and Non-crosslinked Medical-Grade Ultra-High Molecular Weight Polyethylene. <i>Materials Research Society Symposia Proceedings</i> , 2002 , 724, N5.10.1 | | 1 |
| 91 | Nanomechanical properties and morphology of thick polyurethane films under contact pressure and stretching. <i>Journal of Applied Physics</i> , 2002 , 91, 375 | 2.5 | 23 |
| 90 | Correlation of surface molecular composition to nanoscale elastic behavior and topography of stretched polyurethane films. <i>Applied Physics Letters</i> , 2002 , 80, 1829-1831 | 3.4 | 11 |

| | | | |
|----|--|-----|-----|
| 89 | Stability and Resolution Analysis of a Phase-Locked Loop Natural Frequency Tracking System for MEMS Fatigue Testing. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , 2002 , 124, 599-605 | 1.6 | 40 |
| 88 | Nanomechanical properties of energetically treated polyethylene surfaces. <i>Journal of Materials Research</i> , 2002 , 17, 423-430 | 2.5 | 20 |
| 87 | Elastic-Plastic Finite Element Analysis for the Head-Disk Interface With Fractal Topography Description. <i>Journal of Tribology</i> , 2002 , 124, 775-784 | 1.8 | 16 |
| 86 | Antiwear Tribofilm Formation on Steel Surfaces Lubricated With Gear Oil Containing Borate, Phosphorus, and Sulfur Additives. <i>Tribology Transactions</i> , 2002 , 45, 568-575 | 1.8 | 34 |
| 85 | Chemical and biological characteristics of low-temperature plasma treated ultra-high molecular weight polyethylene for biomedical applications. <i>Journal of Materials Science: Materials in Medicine</i> , 2001 , 12, 549-56 | 4.5 | 22 |
| 84 | Three-Dimensional Contact Analysis of Elastic-Plastic Layered Media With Fractal Surface Topographies. <i>Journal of Tribology</i> , 2001 , 123, 632-640 | 1.8 | 130 |
| 83 | Nanomechanical and Nanotribological Properties of Carbon, Chromium, and Titanium Carbide Ultrathin Films. <i>Journal of Tribology</i> , 2001 , 123, 717-724 | 1.8 | 19 |
| 82 | Nanotribological and Nanomechanical Properties of Ultrathin Amorphous Carbon Films Synthesized by Radio Frequency Sputtering. <i>Journal of Tribology</i> , 2001 , 123, 641-650 | 1.8 | 45 |
| 81 | PLASMA-ENHANCED SURFACE MODIFICATION OF LOW LINEAR-DENSITY POLYETHYLENE CATHETERS. <i>Journal of Mechanics in Medicine and Biology</i> , 2001 , 01, 17-31 | 0.7 | 5 |
| 80 | Stability of ultrathin amorphous carbon films deposited on smooth silicon substrates by radio frequency sputtering. <i>Journal of Applied Physics</i> , 2001 , 89, 2422-2433 | 2.5 | 23 |
| 79 | Mechanical and friction properties of thermoplastic polyurethanes determined by scanning force microscopy. <i>Journal of Applied Physics</i> , 2001 , 89, 5712-5719 | 2.5 | 24 |
| 78 | Nanomechanical Properties of Polymers Determined From Nanoindentation Experiments. <i>Journal of Tribology</i> , 2001 , 123, 624-631 | 1.8 | 103 |
| 77 | Electromechanical devices for microscale fatigue testing 2001 , 221-230 | | |
| 76 | Static Friction and Initiation of Slip at Magnetic Head-Disk Interfaces. <i>Journal of Tribology</i> , 2000 , 122, 246-256 | 1.8 | 14 |
| 75 | Head-Disk interface contact mechanics for ultrahigh density magnetic recording. <i>Wear</i> , 2000 , 238, 1-11 | 3.5 | 51 |
| 74 | Boundary Lubrication of Steel Surfaces with Borate, Phosphorus, and Sulfur Containing Lubricants at Relatively Low and Elevated Temperatures. <i>Tribology Transactions</i> , 2000 , 43, 569-578 | 1.8 | 11 |
| 73 | Implanted argon atoms as sensing probes of residual stress in ultrathin films. <i>Applied Physics Letters</i> , 2000 , 76, 3206-3208 | 3.4 | 22 |
| 72 | Transmission electron microscopy study of diamond nucleation and growth on smooth silicon surfaces coated with a thin amorphous carbon film. <i>Diamond and Related Materials</i> , 2000 , 9, 274-282 | 3.5 | 6 |

| | | | |
|----|--|-----|-----|
| 71 | Transitions from nanoscale to microscale dynamic friction mechanisms on polyethylene and silicon surfaces. <i>Journal of Applied Physics</i> , 2000 , 87, 3143-3150 | 2.5 | 28 |
| 70 | Tribological Properties and Microstructure Evolution of Ultra-High Molecular Weight Polyethylene. <i>Journal of Tribology</i> , 1999 , 121, 394-402 | 1.8 | 55 |
| 69 | Microstructure modification of amorphous carbon films by ion-implantation techniques. <i>Journal of Materials Research</i> , 1999 , 14, 2181-2190 | 2.5 | 4 |
| 68 | Microstructure and nanomechanical properties of nitrogenated amorphous carbon thin films synthesized by reactive radio frequency sputtering. <i>Journal of Applied Physics</i> , 1999 , 85, 2642-2651 | 2.5 | 53 |
| 67 | Dependence of growth and nanomechanical properties of ultrathin amorphous carbon films on radio frequency sputtering conditions. <i>Journal of Applied Physics</i> , 1999 , 86, 2268-2277 | 2.5 | 19 |
| 66 | Ion implantation post-processing of amorphous carbon films. <i>Diamond and Related Materials</i> , 1999 , 8, 451-456 | 3.5 | 9 |
| 65 | Contact analysis of elastic-plastic fractal surfaces. <i>Journal of Applied Physics</i> , 1998 , 84, 3617-3624 | 2.5 | 402 |
| 64 | Three-Dimensional Elastic-Plastic Fractal Analysis of Surface Adhesion in Microelectromechanical Systems. <i>Journal of Tribology</i> , 1998 , 120, 808-813 | 1.8 | 35 |
| 63 | Cutting Force Variation Due to Wear of Multi-Layer Ceramic Coated Tools. <i>Journal of Tribology</i> , 1998 , 120, 75-81 | 1.8 | 12 |
| 62 | Surface texturing and chemical treatment methods for reducing high adhesion forces at micromachine interfaces 1998 , 3512, 106 | | 4 |
| 61 | Three-Dimensional Molecular Dynamics Analysis of Atomic-Scale Indentation. <i>Journal of Tribology</i> , 1998 , 120, 385-392 | 1.8 | 11 |
| 60 | Plasma Surface Modification of Medical-Grade Ultra-High Molecular Weight Polyethylene for Improved Tribological Properties. <i>Materials Research Society Symposia Proceedings</i> , 1998 , 550, 331 | | 5 |
| 59 | Molecular dynamics simulation of single and repeated indentation. <i>Journal of Applied Physics</i> , 1997 , 82, 4823-4830 | 2.5 | 31 |
| 58 | Correlation Between Acoustic Emission and Wear of Multi-Layer Ceramic Coated Carbide Tools. <i>Journal of Manufacturing Science and Engineering, Transactions of the ASME</i> , 1997 , 119, 238-246 | 3.3 | 19 |
| 57 | Wear Mechanisms of Multi-Layer Coated Cemented Carbide Cutting Tools. <i>Journal of Tribology</i> , 1997 , 119, 8-17 | 1.8 | 35 |
| 56 | A Fractal Analysis of Stiction in Microelectromechanical Systems. <i>Journal of Tribology</i> , 1997 , 119, 391-400 | 1.8 | 107 |
| 55 | Friction and Wear Micromechanisms of Amorphous Carbon Thin Films. <i>Journal of Tribology</i> , 1997 , 119, 823-829 | 1.8 | 13 |
| 54 | Thermoelastic Finite Element Analysis of Subsurface Cracking Due to Sliding Surface Traction. <i>Journal of Engineering Materials and Technology, Transactions of the ASME</i> , 1997 , 119, 71-78 | 1.8 | 14 |

| | | | |
|----|---|-----|-----|
| 53 | Three-Dimensional Finite Element Analysis of Subsurface Stress and Strain Fields Due to Sliding Contact on an Elastic-Plastic Layered Medium. <i>Journal of Tribology</i> , 1997 , 119, 332-341 | 1.8 | 53 |
| 52 | Finite element analysis of subsurface crack propagation in a half-space due to a moving asperity contact. <i>Wear</i> , 1997 , 209, 57-68 | 3.5 | 46 |
| 51 | Friction Force, Contact Resistance, and Lubricant Shear Behavior at the Magnetic Head-Disk Interface During Starting. <i>Journal of Tribology</i> , 1997 , 119, 830-839 | 1.8 | 7 |
| 50 | Hardness of Thin-Film Media: Scratch Experiments and Finite Element Simulations. <i>Journal of Tribology</i> , 1996 , 118, 1-11 | 1.8 | 40 |
| 49 | Three-Dimensional Finite Element Analysis of Surface Deformation and Stresses in an Elastic-Plastic Layered Medium Subjected to Indentation and Sliding Contact Loading. <i>Journal of Applied Mechanics, Transactions ASME</i> , 1996 , 63, 365-375 | 2.7 | 49 |
| 48 | Diamond growth on hard carbon films. <i>Diamond and Related Materials</i> , 1996 , 5, 1080-1086 | 3.5 | 5 |
| 47 | Nanoscale Indentation Hardness and Wear Characterization of Hydrogenated Carbon Thin Films. <i>Journal of Tribology</i> , 1996 , 118, 431-438 | 1.8 | 20 |
| 46 | Three-Dimensional Finite Element Analysis of Subsurface Stresses and Shakedown Due to Repeated Sliding on a Layered Medium. <i>Journal of Applied Mechanics, Transactions ASME</i> , 1996 , 63, 967-973 | 2.7 | 24 |
| 45 | Microstructural analysis and oxidation behavior of laser-processed Fe-Cr-Al-Y alloy coatings. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 1996 , 27, 381-390 | 2.3 | 15 |
| 44 | Subsurface crack mechanisms under indentation loading. <i>Wear</i> , 1996 , 199, 9-23 | 3.5 | 35 |
| 43 | Surface engineering and microtribology for microelectromechanical systems. <i>Wear</i> , 1996 , 200, 305-327 | 3.5 | 302 |
| 42 | Effect of pretreatment process parameters on diamond nucleation on unscratched silicon substrates coated with amorphous carbon films. <i>Journal of Applied Physics</i> , 1996 , 79, 485-492 | 2.5 | 16 |
| 41 | Microstructural and microhardness characteristics of laser-synthesized Fe-Cr-W-C Coatings. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 1995 , 26, 2131-2139 | 2.3 | 24 |
| 40 | Effect of amorphous carbon film structure on diamond nucleation. <i>Journal of Applied Physics</i> , 1995 , 78, 2720-2724 | 2.5 | 9 |
| 39 | Diamond nucleation on unscratched silicon substrates coated with various non-diamond carbon films by microwave plasma-enhanced chemical vapor deposition. <i>Journal of Materials Research</i> , 1995 , 10, 165-174 | 2.5 | 28 |
| 38 | A Fractal Theory of the Temperature Distribution at Elastic Contacts of Fast Sliding Surfaces. <i>Journal of Tribology</i> , 1995 , 117, 203-214 | 1.8 | 37 |
| 37 | Finite Element Analysis of Repeated Indentation of an Elastic-Plastic Layered Medium by a Rigid Sphere, Part II: Subsurface Results. <i>Journal of Applied Mechanics, Transactions ASME</i> , 1995 , 62, 29-42 | 2.7 | 59 |
| 36 | Diamond-Like Carbon Films for Silicon Passivation in Microelectromechanical Devices. <i>Materials Research Society Symposia Proceedings</i> , 1995 , 383, 391 | | 30 |

| | | | |
|----|--|-----|-----|
| 35 | Nanoscale Indentation Hardness and Wear Characterization of Hydrogenated Carbon Thin Films. <i>Journal of Tribology</i> , 1995 , 117, 594-601 | 1.8 | 12 |
| 34 | Finite Element Analysis of Repeated Indentation of an Elastic-Plastic Layered Medium by a Rigid Sphere, Part I: Surface Results. <i>Journal of Applied Mechanics, Transactions ASME</i> , 1995 , 62, 20-28 | 2.7 | 61 |
| 33 | Closure to Discussion of A Fractal Theory of the Temperature Distribution at Elastic Contacts of Fast Sliding Surfaces[(1995, ASME J. Tribol., 117, pp. 214-215). <i>Journal of Tribology</i> , 1995 , 117, 215-215 | 1.8 | |
| 32 | Closure to Discussion of A Fractal Theory of the Interfacial Temperature Distribution in the Slow Sliding Regime: Part I Elastic Contact and Heat Transfer Analysis[(1994, ASME J. Tribol., 116, p. 822). <i>Journal of Tribology</i> , 1994 , 116, 822-823 | 1.8 | 2 |
| 31 | Discussion: Effects of Friction on Contact of Transverse Ground Surfaces[(Mann, J. B., Farris, T. N., and Chandrasekar, S., 1994, ASME J. Tribol., 116, pp. 430-437). <i>Journal of Tribology</i> , 1994 , 116, 437-437 | 1.8 | 1 |
| 30 | A pretreatment process for enhanced diamond nucleation on smooth silicon substrates coated with hard carbon films. <i>Journal of Materials Research</i> , 1994 , 9, 2148-2153 | 2.5 | 20 |
| 29 | A Fractal Theory of the Interfacial Temperature Distribution in the Slow Sliding Regime: Part II Multiple Domains, Elastoplastic Contacts and Applications. <i>Journal of Tribology</i> , 1994 , 116, 824-832 | 1.8 | 111 |
| 28 | A Fractal Theory of the Interfacial Temperature Distribution in the Slow Sliding Regime: Part I Elastic Contact and Heat Transfer Analysis. <i>Journal of Tribology</i> , 1994 , 116, 812-822 | 1.8 | 170 |
| 27 | Effect of Process Parameters on the Microstructure, Geometry and Microhardness of Laser-Clad Coating Materials. <i>Materials Science Forum</i> , 1994 , 163-165, 417-422 | 0.4 | 13 |
| 26 | Self-assembled monolayer film for enhanced imaging of rough surfaces with atomic force microscopy. <i>Journal of Applied Physics</i> , 1994 , 76, 5731-5737 | 2.5 | 30 |
| 25 | Surface modification of magnetic recording heads by plasma immersion ion implantation and deposition. <i>Journal of Applied Physics</i> , 1994 , 76, 1656-1664 | 2.5 | 19 |
| 24 | Effect of vacuum arc deposition parameters on the properties of amorphous carbon thin films. <i>Surface and Coatings Technology</i> , 1994 , 68-69, 388-393 | 4.4 | 121 |
| 23 | Effect of graphitic carbon films on diamond nucleation by microwave-plasma-enhanced chemical-vapor deposition. <i>Journal of Applied Physics</i> , 1993 , 74, 2841-2849 | 2.5 | 46 |
| 22 | Elastic-Plastic Finite Element Analysis of Repeated Indentation of a Half-Space by a Rigid Sphere. <i>Journal of Applied Mechanics, Transactions ASME</i> , 1993 , 60, 829-841 | 2.7 | 120 |
| 21 | Microstructural characterization and In Situ transmission electron microscopy analysis of laser-processed and thermally treated Fe-Cr-W-C clad coatings. <i>Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science</i> , 1993 , 24, 1621-1629 | | 18 |
| 20 | Elastic Finite Element Analysis of Multi-Asperity Contacts. <i>Journal of Tribology</i> , 1992 , 114, 823-831 | 1.8 | 86 |
| 19 | The Effect of Tribofilm Formation and Humidity on the Friction and Wear Properties of Ceramic Materials. <i>Journal of Tribology</i> , 1992 , 114, 131-140 | 1.8 | 44 |
| 18 | Discussion: Contact Stress Analysis of a Layered Transversely Isotropic Half-Space[(Kuo, C. H., and Keer, L. M., 1992, ASME J. Tribol., 114, pp. 253-261). <i>Journal of Tribology</i> , 1992 , 114, 261-262 | 1.8 | |

| | | | |
|----|--|-----|-----|
| 17 | Processing Effects on Microstructural Characteristics and Properties of Reactively Ion-Plated Titanium Nitride Coatings. <i>Journal of the American Ceramic Society</i> , 1992 , 75, 854-863 | 3.8 | 4 |
| 16 | Sliding Friction Mechanisms of Boundary-Lubricated Layered Surfaces: Part I Basic Mechanical Aspects and Experimental Results. <i>Tribology Transactions</i> , 1991 , 34, 266-280 | 1.8 | 13 |
| 15 | Finite Element Modeling of Orthogonal Metal Cutting. <i>Journal of Engineering for Industry</i> , 1991 , 113, 253-267 | | 138 |
| 14 | Sliding Friction Mechanisms of Boundary-Lubricated Layered Surfaces: Part II Theoretical Analysis. <i>Tribology Transactions</i> , 1991 , 34, 281-291 | 1.8 | 41 |
| 13 | Processing and Characterization of Multi-Layered Wear-Resistant Ceramic Coatings. <i>Journal of Engineering Materials and Technology, Transactions of the ASME</i> , 1990 , 112, 164-174 | 1.8 | 4 |
| 12 | Processing and Characterization of Laser-Cladded Coating Materials. <i>Journal of Engineering Materials and Technology, Transactions of the ASME</i> , 1990 , 112, 131-143 | 1.8 | 55 |
| 11 | Elastic-Plastic Finite Element Analysis of Indented Layered Media. <i>Journal of Tribology</i> , 1989 , 111, 430-439 | 1.8 | 175 |
| 10 | In-Situ SEM Study of Boundary Lubricated Contacts. <i>Tribology Transactions</i> , 1988 , 31, 360-369 | 1.8 | 3 |
| 9 | Finite Element Analysis of a Layered Elastic Solid in Normal Contact With a Rigid Surface. <i>Journal of Tribology</i> , 1988 , 110, 477-485 | 1.8 | 151 |
| 8 | Discussion: A Preliminary Analysis of Subsurface Crack Branching Under a Surface Compressive Load (Miller, G. R., 1988, ASME J. Tribol., 110, pp. 292-296). <i>Journal of Tribology</i> , 1988 , 110, 296-297 | 1.8 | |
| 7 | The Role of Hard Layers in Lubricated and Dry Sliding. <i>Journal of Tribology</i> , 1987 , 109, 223-231 | 1.8 | 81 |
| 6 | The Significance of Oxide Layers in Boundary Lubrication. <i>Journal of Tribology</i> , 1986 , 108, 502-513 | 1.8 | 18 |
| 5 | Wear of boundary-lubricated metal surfaces. <i>Wear</i> , 1986 , 107, 107-132 | 3.5 | 30 |
| 4 | Plowing Friction in Dry and Lubricated Metal Sliding. <i>Journal of Tribology</i> , 1986 , 108, 301-312 | 1.8 | 73 |
| 3 | Closure to Discussions of Plowing Friction in Dry and Lubricated Metal Sliding (1986, ASME J. Tribol., 108, p. 312). <i>Journal of Tribology</i> , 1986 , 108, 313-313 | 1.8 | 1 |
| 2 | The Mechanism of Friction in Boundary Lubrication. <i>Journal of Tribology</i> , 1985 , 107, 452-462 | 1.8 | 89 |
| 1 | | | 78 |