

Kyriakos Komvopoulos

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304
papers

10,340
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51
h-index

87
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331
ext. papers

11,287
ext. citations

3.2
avg. IF

6.58
L-index

#	Paper	IF	Citations
304	Platinum nanoparticle shape effects on benzene hydrogenation selectivity. <i>Nano Letters</i> , 2007 , 7, 3097-1015	10.15	747
303	Contact analysis of elastic-plastic fractal surfaces. <i>Journal of Applied Physics</i> , 1998 , 84, 3617-3624	2.5	402
302	Surface engineering and microtribology for microelectromechanical systems. <i>Wear</i> , 1996 , 200, 305-327	3.5	302
301	Elastic-Plastic Finite Element Analysis of Indented Layered Media. <i>Journal of Tribology</i> , 1989 , 111, 430-438	3.98	175
300	Electrical contact resistance theory for conductive rough surfaces. <i>Journal of Applied Physics</i> , 2003 , 94, 3153-3162	2.5	172
299	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
298	Failure mechanisms of single-crystal silicon electrodes in lithium-ion batteries. <i>Nature Communications</i> , 2016 , 7, 11886	17.4	156
297	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
296	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
295	Cell-shape regulation of smooth muscle cell proliferation. <i>Biophysical Journal</i> , 2009 , 96, 3423-32	2.9	143
294	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
293	Finite Element Modeling of Orthogonal Metal Cutting. <i>Journal of Engineering for Industry</i> , 1991 , 113, 253-267		138
292	Directional adhesion of gecko-inspired angled microfiber arrays. <i>Applied Physics Letters</i> , 2008 , 93, 191910	9.4	131
291	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
290	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
289	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
288	Analysis of the spherical indentation cycle for elastic-perfectly plastic solids. <i>Journal of Materials Research</i> , 2004 , 19, 3641-3653	2.5	114

287	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
286	Surface nanostructuring by nano-/femtosecond laser-assisted scanning force microscopy. <i>Journal of Applied Physics</i> , 2005 , 97, 104319	2.5	108
285	A Fractal Analysis of Stiction in Microelectromechanical Systems. <i>Journal of Tribology</i> , 1997 , 119, 391-400.	0.8	107
284	Mechanotransduction of bovine articular cartilage superficial zone protein by transforming growth factor beta signaling. <i>Arthritis and Rheumatism</i> , 2007 , 56, 3706-14		105
283	Nanomechanical Properties of Polymers Determined From Nanoindentation Experiments. <i>Journal of Tribology</i> , 2001 , 123, 624-631	1.8	103
282	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
281	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
280	Highly Stretchable Microsupercapacitor Arrays with Honeycomb Structures for Integrated Wearable Electronic Systems. <i>ACS Nano</i> , 2016 , 10, 9306-9315	16.7	95
279	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
278	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
277	The Mechanism of Friction in Boundary Lubrication. <i>Journal of Tribology</i> , 1985 , 107, 452-462	1.8	89
276	Increased friction coefficient and superficial zone protein expression in patients with advanced osteoarthritis. <i>Arthritis and Rheumatism</i> , 2010 , 62, 2680-7		86
275	Elastic Finite Element Analysis of Multi-Asperity Contacts. <i>Journal of Tribology</i> , 1992 , 114, 823-831	1.8	86
274	Nanoscale pseudoelastic behavior of indented titanium Dicalcium phosphate films. <i>Applied Physics Letters</i> , 2003 , 83, 3773-3775	3.4	85
273	Plasma surface chemical treatment of electrospun poly(L-lactide) microfibrous scaffolds for enhanced cell adhesion, growth, and infiltration. <i>Tissue Engineering - Part A</i> , 2013 , 19, 1188-98	3.9	83
272	The Role of Hard Layers in Lubricated and Dry Sliding. <i>Journal of Tribology</i> , 1987 , 109, 223-231	1.8	81
271	Atomic force microscope investigation of the boundary-lubricant layer in articular cartilage. <i>Osteoarthritis and Cartilage</i> , 2010 , 18, 956-63	6.2	80
270			78

269	Plowing Friction in Dry and Lubricated Metal Sliding. <i>Journal of Tribology</i> , 1986 , 108, 301-312	1.8	73
268	Synthesis of ultrathin carbon films by direct current filtered cathodic vacuum arc. <i>Journal of Applied Physics</i> , 2009 , 105, 083305	2.5	66
267	Viscoelastic properties of polymer surfaces investigated by nanoscale dynamic mechanical analysis. <i>Applied Physics Letters</i> , 2006 , 88, 131901	3.4	64
266	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
265	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
264	Surface modification of magnetic recording media by filtered cathodic vacuum arc. <i>Journal of Applied Physics</i> , 2009 , 106, 093504	2.5	60
263	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
262	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
261	Elastic-plastic spherical indentation: Deformation regimes, evolution of plasticity, and hardening effect. <i>Mechanics of Materials</i> , 2013 , 61, 91-100	3.3	57
260	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
259	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
258	Tribological Properties and Microstructure Evolution of Ultra-High Molecular Weight Polyethylene. <i>Journal of Tribology</i> , 1999 , 121, 394-402	1.8	55
257	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
256	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
255	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
254	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
253	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
252	Head-disk interface contact mechanics for ultrahigh density magnetic recording. <i>Wear</i> , 2000 , 238, 1-11	3.5	51

251	Electrospun bilayer fibrous scaffolds for enhanced cell infiltration and vascularization in vivo. <i>Acta Biomaterialia</i> , 2015 , 13, 131-41	10.8	50
250	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
249	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
248	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
247	Differential regulation of endothelial cell adhesion, spreading, and cytoskeleton on low-density polyethylene by nanopopography 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
246	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
245	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
244	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
243	An experimental study of sidewall adhesion in microelectromechanical systems. <i>Journal of Microelectromechanical Systems</i> , 2005 , 14, 1356-1363	2.5	46
242	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
241	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
240	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
239	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
238	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
237	Pseudoelasticity of shape-memory titanium Bickel films subjected to dynamic nanoindentation. <i>Applied Physics Letters</i> , 2004 , 84, 4274-4276	3.4	42
236	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
235	Sliding Friction Mechanisms of Boundary-Lubricated Layered Surfaces: Part III Theoretical Analysis. <i>Tribology Transactions</i> , 1991 , 34, 281-291	1.8	41
234	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

233	Hardness of Thin-Film Media: Scratch Experiments and Finite Element Simulations. <i>Journal of Tribology</i> , 1996 , 118, 1-11	1.8	40
232	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
231	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
230	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
229	Electrical contact resistance as a diagnostic tool for MEMS contact interfaces. <i>Journal of Microelectromechanical Systems</i> , 2004 , 13, 977-987	2.5	38
228	Engineering the microstructure of electrospun fibrous scaffolds by microtopography. <i>Biomacromolecules</i> , 2013 , 14, 1349-60	6.9	37
227	Effect of Surface Patterning on Contact Deformation of Elastic-Plastic Layered Media. <i>Journal of Tribology</i> , 2003 , 125, 16-24	1.8	37
226	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
225	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
224	Carbon Overcoat Oxidation in Heat-Assisted Magnetic Recording. <i>IEEE Transactions on Magnetics</i> , 2013 , 49, 3721-3724	2	36
223	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
222	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
221	Thermal Stability of Ultrathin Amorphous Carbon Films for Energy-Assisted Magnetic Recording. <i>IEEE Transactions on Magnetics</i> , 2011 , 47, 2277-2282	2	36
220	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
219	A Mechanics Approach to Static Friction of Elastic-Plastic Fractal Surfaces. <i>Journal of Tribology</i> , 2005 , 127, 315-324	1.8	36
218	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
217	Wear Mechanisms of Multi-Layer Coated Cemented Carbide Cutting Tools. <i>Journal of Tribology</i> , 1997 , 119, 8-17	1.8	35
216	Three-Dimensional Elastic-Plastic Fractal Analysis of Surface Adhesion in Microelectromechanical Systems. <i>Journal of Tribology</i> , 1998 , 120, 808-813	1.8	35

215	Subsurface crack mechanisms under indentation loading. <i>Wear</i> , 1996 , 199, 9-23	3.5	35
214	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
213	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
212	Plasma-assisted surface chemical patterning for single-cell culture. <i>Biomaterials</i> , 2009 , 30, 4203-10	15.6	34
211	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
210	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
209	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
208	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
207	Molecular dynamics simulation of single and repeated indentation. <i>Journal of Applied Physics</i> , 1997 , 82, 4823-4830	2.5	31
206	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
205	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
204	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
203	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
202	Diamond-Like Carbon Films for Silicon Passivation in Microelectromechanical Devices. <i>Materials Research Society Symposia Proceedings</i> , 1995 , 383, 391		30
201	Wear of boundary-lubricated metal surfaces. <i>Wear</i> , 1986 , 107, 107-132	3.5	30
200	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
199	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
198	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

197	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
196	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
195	Mechanical properties of electrospun bilayer fibrous membranes as potential scaffolds for tissue engineering. <i>Acta Biomaterialia</i> , 2014 , 10, 2718-26	10.8	27
194	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
193	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
192	Analytical current-voltage relationships for electron tunneling across rough interfaces. <i>Journal of Applied Physics</i> , 2005 , 97, 073701	2.5	26
191	Intertwined microlattices greatly enhance the performance of mechanical metamaterials. <i>Mathematics and Mechanics of Solids</i> , 2019 , 24, 2636-2648	2.3	25
190	Nanoscale Pseudoelasticity of Single-crystal Cu ₃ AlNi shape-memory Alloy Induced by Cyclic Nanoindentation. <i>Journal of Materials Science</i> , 2006 , 41, 5021-5024	4.3	25
189	A review of graphene synthesis by indirect and direct deposition methods. <i>Journal of Materials Research</i> , 2020 , 35, 76-89	2.5	24
188	Dependence of nanomechanical modification of polymers on plasma-induced cross-linking. <i>Journal of Applied Physics</i> , 2007 , 101, 014307	2.5	24
187	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
186	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	2.3	24
185	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	2.7	24
184	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
183	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
182	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
181	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
180	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

179	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
178	Static friction in polysilicon surface micromachines. <i>Journal of Microelectromechanical Systems</i> , 2005 , 14, 651-663	2.5	22
177	Surface and interface viscoelastic behaviors of thin polymer films investigated by nanoindentation. <i>Journal of Applied Physics</i> , 2006 , 100, 114329	2.5	22
176	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
175	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
174	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
173	Implanted argon atoms as sensing probes of residual stress in ultrathin films. <i>Applied Physics Letters</i> , 2000 , 76, 3206-3208	3.4	22
172	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
171	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
170	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
169	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
168	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
167	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
166	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
165	Nanomechanical properties of energetically treated polyethylene surfaces. <i>Journal of Materials Research</i> , 2002 , 17, 423-430	2.5	20
164	Nanoscale Indentation Hardness and Wear Characterization of Hydrogenated Carbon Thin Films. <i>Journal of Tribology</i> , 1996 , 118, 431-438	1.8	20
163	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
162	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

161	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
160	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
159	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
158	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
157	Impact of a Rigid Sphere on an Elastic Homogeneous Half-Space. <i>Journal of Tribology</i> , 2005 , 127, 325-330	3.8	19
156	Nanomechanical and Nanotribological Properties of Carbon, Chromium, and Titanium Carbide Ultrathin Films. <i>Journal of Tribology</i> , 2001 , 123, 717-724	1.8	19
155	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
154	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
153	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
152	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
151	Scale-dependent nanomechanical behavior and anisotropic friction of nanotextured silicon surfaces. <i>Journal of Materials Research</i> , 2009 , 24, 3038-3043	2.5	18
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