

Kyriakos Komvopoulos

List of Publications by Year in descending order

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328
papers

12,197
citations

28272

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39667

94
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331
all docs

331
docs citations

331
times ranked

10231
citing authors

#	ARTICLE	IF	CITATIONS
1	Platinum Nanoparticle Shape Effects on Benzene Hydrogenation Selectivity. Nano Letters, 2007, 7, 3097-3101.	9.1	811
2	Contact analysis of elastic-plastic fractal surfaces. Journal of Applied Physics, 1998, 84, 3617-3624.	2.5	556
3	Surface engineering and microtribology for microelectromechanical systems. Wear, 1996, 200, 305-327.	3.1	341
4	A Fractal Theory of the Interfacial Temperature Distribution in the Slow Sliding Regime: Part I – Elastic Contact and Heat Transfer Analysis. Journal of Tribology, 1994, 116, 812-822.	1.9	214
5	Failure mechanisms of single-crystal silicon electrodes in lithium-ion batteries. Nature Communications, 2016, 7, 11886.	12.8	211
6	Electrical contact resistance theory for conductive rough surfaces. Journal of Applied Physics, 2003, 94, 3153-3162.	2.5	207
7	Elastic-Plastic Finite Element Analysis of Indented Layered Media. Journal of Tribology, 1989, 111, 430-439.	1.9	191
8	Femtosecond laser aperturless near-field nanomachining of metals assisted by scanning probe microscopy. Applied Physics Letters, 2003, 82, 1146-1148.	3.3	178
9	Cell-Shape Regulation of Smooth Muscle Cell Proliferation. Biophysical Journal, 2009, 96, 3423-3432.	0.5	175
10	Adhesion and friction forces in microelectromechanical systems: mechanisms, measurement, surface modification techniques, and adhesion theory. Journal of Adhesion Science and Technology, 2003, 17, 477-517.	2.6	171
11	Finite Element Analysis of a Layered Elastic Solid in Normal Contact With a Rigid Surface. Journal of Tribology, 1988, 110, 477-485.	1.9	165
12	Finite Element Modeling of Orthogonal Metal Cutting. Journal of Engineering for Industry, 1991, 113, 253-267.	0.8	154
13	Three-Dimensional Contact Analysis of Elastic-Plastic Layered Media With Fractal Surface Topographies. Journal of Tribology, 2001, 123, 632-640.	1.9	153
14	Directional adhesion of gecko-inspired angled microfiber arrays. Applied Physics Letters, 2008, 93, .	3.3	146
15	Analysis of the spherical indentation cycle for elastic – perfectly plastic solids. Journal of Materials Research, 2004, 19, 3641-3653.	2.6	141
16	Elastic-Plastic Finite Element Analysis of Repeated Indentation of a Half-Space by a Rigid Sphere. Journal of Applied Mechanics, Transactions ASME, 1993, 60, 829-841.	2.2	137
17	Effect of vacuum arc deposition parameters on the properties of amorphous carbon thin films. Surface and Coatings Technology, 1994, 68-69, 388-393.	4.8	132
18	A Fractal Theory of the Interfacial Temperature Distribution in the Slow Sliding Regime: Part II – Multiple Domains, Elastoplastic Contacts and Applications. Journal of Tribology, 1994, 116, 824-832.	1.9	131

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19	Mechanotransduction of bovine articular cartilage superficial zone protein by transforming growth factor β^2 signaling. <i>Arthritis and Rheumatism</i> , 2007, 56, 3706-3714.	6.7	129
20	Surface nanostructuring by nano-/femtosecond laser-assisted scanning force microscopy. <i>Journal of Applied Physics</i> , 2005, 97, 104319.	2.5	126
21	A Fractal Analysis of Stiction in Microelectromechanical Systems. <i>Journal of Tribology</i> , 1997, 119, 391-400.	1.9	124
22	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.	6.2	122
23	Highly Stretchable Microsupercapacitor Arrays with Honeycomb Structures for Integrated Wearable Electronic Systems. <i>ACS Nano</i> , 2016, 10, 9306-9315.	14.6	118
24	The Interface of Functional Biotribology and Regenerative Medicine in Synovial Joints. <i>Tissue Engineering - Part B: Reviews</i> , 2008, 14, 235-247.	4.8	117
25	Nanomechanical Properties of Polymers Determined From Nanoindentation Experiments. <i>Journal of Tribology</i> , 2001, 123, 624-631.	1.9	116
26	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	109
27	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, 13088-13095.	13.7	108
28	The Mechanism of Friction in Boundary Lubrication. <i>Journal of Tribology</i> , 1985, 107, 452-462.	1.9	104
29	Increased friction coefficient and superficial zone protein expression in patients with advanced osteoarthritis. <i>Arthritis and Rheumatism</i> , 2010, 62, 2680-2687.	6.7	103
30	Atomic force microscope investigation of the boundary-lubricant layer in articular cartilage. <i>Osteoarthritis and Cartilage</i> , 2010, 18, 956-963.	1.3	99
31	Elastic Finite Element Analysis of Multi-Asperity Contacts. <i>Journal of Tribology</i> , 1992, 114, 823-831.	1.9	98
32	The effect of release-etch processing on surface microstructure stiction. , 0, , .		94
33	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, 1188-1198.	3.1	90
34	Nanoscale pseudoelastic behavior of indented titanium-nickel films. <i>Applied Physics Letters</i> , 2003, 83, 3773-3775.	3.3	89
35	Plowing Friction in Dry and Lubricated Metal Sliding. <i>Journal of Tribology</i> , 1986, 108, 301-312.	1.9	83
36	The Role of Hard Layers in Lubricated and Dry Sliding. <i>Journal of Tribology</i> , 1987, 109, 223-231.	1.9	83

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37	Design Challenges in Polymeric Scaffolds for Tissue Engineering. <i>Frontiers in Bioengineering and Biotechnology</i> , 2021, 9, 617141.	4.1	82
38	Elastic-plastic spherical indentation: Deformation regimes, evolution of plasticity, and hardening effect. <i>Mechanics of Materials</i> , 2013, 61, 91-100.	3.2	78
39	A Catalytic Path for Electrolyte Reduction in Lithium-Ion Cells Revealed by <i>in Situ</i> Attenuated Total Reflection-Fourier Transform Infrared Spectroscopy. <i>Journal of the American Chemical Society</i> , 2015, 137, 3181-3184.	13.7	76
40	Viscoelastic properties of polymer surfaces investigated by nanoscale dynamic mechanical analysis. <i>Applied Physics Letters</i> , 2006, 88, 131901.	3.3	74
41	The Chemistry of Electrolyte Reduction on Silicon Electrodes Revealed by <i>in Situ</i> ATR-FTIR Spectroscopy. <i>Journal of Physical Chemistry C</i> , 2017, 121, 14476-14483.	3.1	74
42	Tuning the Electronic Structure of Titanium Oxide Support to Enhance the Electrochemical Activity of Platinum Nanoparticles. <i>Nano Letters</i> , 2013, 13, 4469-4474.	9.1	72
43	Synthesis of ultrathin carbon films by direct current filtered cathodic vacuum arc. <i>Journal of Applied Physics</i> , 2009, 105, .	2.5	69
44	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.	2.2	63
45	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.	2.2	62
46	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.	1.9	62
47	Tribological Properties and Microstructure Evolution of Ultra-High Molecular Weight Polyethylene. <i>Journal of Tribology</i> , 1999, 121, 394-402.	1.9	62
48	Processing and Characterization of Laser-Cladded Coating Materials. <i>Journal of Engineering Materials and Technology, Transactions of the ASME</i> , 1990, 112, 131-143.	1.4	61
49	Surface modification of magnetic recording media by filtered cathodic vacuum arc. <i>Journal of Applied Physics</i> , 2009, 106, 093504.	2.5	61
50	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, 3647-3652.	3.5	60
51	Regulation of the friction coefficient of articular cartilage by TGF- β 1 and IL-1 β . <i>Journal of Orthopaedic Research</i> , 2009, 27, 249-256.	2.3	59
52	Electrospun bilayer fibrous scaffolds for enhanced cell infiltration and vascularization in vivo. <i>Acta Biomaterialia</i> , 2015, 13, 131-141.	8.3	59
53	Head-disk interface contact mechanics for ultrahigh density magnetic recording. <i>Wear</i> , 2000, 238, 1-11.	3.1	58
54	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, 15920-15925.	2.6	58

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55	An adhesive wear model of fractal surfaces in normal contact. International Journal of Solids and Structures, 2010, 47, 912-921.	2.7	57
56	Three-Dimensional Finite Element Analysis of Surface Deformation and Stresses in an Elastic-Plastic Layered Medium Subjected to Indentation and Sliding Contact Loading. Journal of Applied Mechanics, Transactions ASME, 1996, 63, 365-375.	2.2	55
57	Microstructure and nanomechanical properties of nitrogenated amorphous carbon thin films synthesized by reactive radio frequency sputtering. Journal of Applied Physics, 1999, 85, 2642-2651.	2.5	55
58	Mechanical and Thermomechanical Elastic-Plastic Contact Analysis of Layered Media With Patterned Surfaces. Journal of Tribology, 2004, 126, 9-17.	1.9	54
59	Direct-current cathodic vacuum arc system with magnetic-field mechanism for plasma stabilization. Review of Scientific Instruments, 2008, 79, 073905.	1.3	54
60	The Effect of Tribofilm Formation and Humidity on the Friction and Wear Properties of Ceramic Materials. Journal of Tribology, 1992, 114, 131-140.	1.9	53
61	Stability and Resonance Analysis of a Phase-Locked Loop Natural Frequency Tracking System for MEMS Fatigue Testing. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2002, 124, 599-605.	1.6	53
62	Three-Dimensional Finite Element Analysis of Elastic-Plastic Layered Media Under Thermomechanical Surface Loading. Journal of Tribology, 2003, 125, 52-59.	1.9	53
63	Effect of graphitic carbon films on diamond nucleation by microwave-plasma-enhanced chemical-vapor deposition. Journal of Applied Physics, 1993, 74, 2841-2849.	2.5	52
64	Indentation Analysis of Elastic-Plastic Homogeneous and Layered Media: Criteria for Determining the Real Material Hardness. Journal of Tribology, 2003, 125, 685-691.	1.9	52
65	Differential regulation of endothelial cell adhesion, spreading, and cytoskeleton on low-density polyethylene by nanopography and surface chemistry modification induced by argon plasma treatment. Journal of Biomedical Materials Research - Part A, 2008, 84A, 828-836.	4.0	52
66	Finite element analysis of subsurface crack propagation in a half-space due to a moving asperity contact. Wear, 1997, 209, 57-68.	3.1	50
67	An experimental study of sidewall adhesion in microelectromechanical systems. Journal of Microelectromechanical Systems, 2005, 14, 1356-1363.	2.5	50
68	Highly flexible, foldable, and rollable microsupercapacitors on an ultrathin polyimide substrate with high power density. Microsystems and Nanoengineering, 2018, 4, 16.	7.0	50
69	Surface Modification of Low-Density Polyethylene by Inductively Coupled Argon Plasma. Journal of Physical Chemistry B, 2005, 109, 17623-17629.	2.6	49
70	Nanotribological and Nanomechanical Properties of Ultrathin Amorphous Carbon Films Synthesized by Radio Frequency Sputtering. Journal of Tribology, 2001, 123, 641-650.	1.9	48
71	Pseudoelasticity of shape-memory titanium-nickel films subjected to dynamic nanoindentation. Applied Physics Letters, 2004, 84, 4274-4276.	3.3	48
72	Hardness of Thin-Film Media: Scratch Experiments and Finite Element Simulations. Journal of Tribology, 1996, 118, 1-11.	1.9	47

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73	The role of lubricant entrapment at biological interfaces: Reduction of friction and adhesion in articular cartilage. <i>Journal of Biomechanics</i> , 2011, 44, 2015-2020.	2.1	46
74	Carbon Overcoat Oxidation in Heat-Assisted Magnetic Recording. <i>IEEE Transactions on Magnetics</i> , 2013, 49, 3721-3724.	2.1	44
75	Sliding Friction Mechanisms of Boundary-Lubricated Layered Surfaces: Part II—Theoretical Analysis. <i>Tribology Transactions</i> , 1991, 34, 281-291.	2.0	43
76	A Fractal Theory of the Temperature Distribution at Elastic Contacts of Fast Sliding Surfaces. <i>Journal of Tribology</i> , 1995, 117, 203-214.	1.9	43
77	Antiwear Tribofilm Formation on Steel Surfaces Lubricated With Gear Oil Containing Borate, Phosphorus, and Sulfur Additives. <i>Tribology Transactions</i> , 2002, 45, 568-575.	2.0	43
78	Effect of Surface Patterning on Contact Deformation of Elastic-Plastic Layered Media. <i>Journal of Tribology</i> , 2003, 125, 16-24.	1.9	43
79	Electrical Contact Resistance as a Diagnostic Tool for MEMS Contact Interfaces. <i>Journal of Microelectromechanical Systems</i> , 2004, 13, 977-987.	2.5	43
80	A review of graphene synthesis by indirect and direct deposition methods. <i>Journal of Materials Research</i> , 2020, 35, 76-89.	2.6	43
81	A Mechanics Approach to Static Friction of Elastic-Plastic Fractal Surfaces. <i>Journal of Tribology</i> , 2005, 127, 315-324.	1.9	42
82	Effect of reactive species on surface crosslinking of plasma-treated polymers investigated by surface force microscopy. <i>Applied Physics Letters</i> , 2006, 89, 124102.	3.3	42
83	Thermal Stability of Ultrathin Amorphous Carbon Films for Energy-Assisted Magnetic Recording. <i>IEEE Transactions on Magnetics</i> , 2011, 47, 2277-2282.	2.1	41
84	Wear Mechanisms of Multi-Layer Coated Cemented Carbide Cutting Tools. <i>Journal of Tribology</i> , 1997, 119, 8-17.	1.9	40
85	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.	2.7	40
86	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.	3.1	40
87	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.	3.1	40
88	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	39
89	Three-Dimensional Elastic-Plastic Fractal Analysis of Surface Adhesion in Microelectromechanical Systems. <i>Journal of Tribology</i> , 1998, 120, 808-813.	1.9	39
90	Effects of film thickness and contact load on nanotribological properties of sputtered amorphous carbon thin films. <i>Wear</i> , 2003, 254, 1010-1018.	3.1	39

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91	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, .	2.5	39
92	Regulating the mechanical behavior of metamaterial microlattices by tactical structure modification. <i>Journal of the Mechanics and Physics of Solids</i> , 2020, 144, 104112.	4.8	39
93	Sum Frequency Generation Vibrational Spectroscopy of Pyridine Hydrogenation on Platinum Nanoparticles. <i>Journal of Physical Chemistry C</i> , 2008, 112, 11865-11868.	3.1	38
94	Engineering the Microstructure of Electrospun Fibrous Scaffolds by Microtopography. <i>Biomacromolecules</i> , 2013, 14, 1349-1360.	5.4	38
95	Intertwined microlattices greatly enhance the performance of mechanical metamaterials. <i>Mathematics and Mechanics of Solids</i> , 2019, 24, 2636-2648.	2.4	38
96	Subsurface crack mechanisms under indentation loading. <i>Wear</i> , 1996, 199, 9-23.	3.1	37
97	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.	1.9	37
98	Plasma-assisted surface chemical patterning for single-cell culture. <i>Biomaterials</i> , 2009, 30, 4203-4210.	11.4	36
99	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.	3.1	36
100	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.	3.1	36
101	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.	3.1	36
102	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.	9.1	36
103	High-energy-density, all-solid-state microsupercapacitors with three-dimensional interdigital electrodes of carbon/polymer electrolyte composite. <i>Nanotechnology</i> , 2016, 27, 045701.	2.6	35
104	Vacancies for controlling the behavior of microstructured three-dimensional mechanical metamaterials. <i>Mathematics and Mechanics of Solids</i> , 2019, 24, 511-524.	2.4	35
105	Wear of boundary-lubricated metal surfaces. <i>Wear</i> , 1986, 107, 107-132.	3.1	34
106	Thickness Effect on Thermally Induced Phase Transformations in Sputtered Titanium-nickel Shape-memory Films. <i>Journal of Materials Research</i> , 2005, 20, 1606-1612.	2.6	34
107	Diamond-Like Carbon Films for Silicon Passivation in Microelectromechanical Devices. <i>Materials Research Society Symposia Proceedings</i> , 1995, 383, 391.	0.1	33
108	Effect of Residual Stress in Surface Layer on Contact Deformation of Elastic-Plastic Layered Media. <i>Journal of Tribology</i> , 2003, 125, 692-699.	1.9	33

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109	Dependence of nanoscale friction and adhesion properties of articular cartilage on contact load. <i>Journal of Biomechanics</i> , 2011, 44, 1340-1345.	2.1	33
110	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.	2.7	33
111	Molecular dynamics simulation of single and repeated indentation. <i>Journal of Applied Physics</i> , 1997, 82, 4823-4830.	2.5	32
112	Analytical current-voltage relationships for electron tunneling across rough interfaces. <i>Journal of Applied Physics</i> , 2005, 97, 073701.	2.5	32
113	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	32
114	Mechanical properties of electrospun bilayer fibrous membranes as potential scaffolds for tissue engineering. <i>Acta Biomaterialia</i> , 2014, 10, 2718-2726.	8.3	32
115	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.	2.6	31
116	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.	1.9	31
117	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.	3.3	31
118	Nanoscale Pseudoelasticity of Single-crystal Cu-Al-Ni shape-memory Alloy Induced by Cyclic Nanoindentation. <i>Journal of Materials Science</i> , 2006, 41, 5021-5024.	3.7	30
119	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.	3.2	30
120	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	29
121	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.	4.8	29
122	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.	2.2	28
123	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.	2.2	27
124	Mechanical and friction properties of thermoplastic polyurethanes determined by scanning force microscopy. <i>Journal of Applied Physics</i> , 2001, 89, 5712-5719.	2.5	27
125	Effects of multi-scale roughness and frictional heating on solid body contact deformation. <i>Comptes Rendus - Mecanique</i> , 2008, 336, 149-162.	2.1	27
126	Plasma-assisted heparin conjugation on electrospun poly(ϵ -lactide) fibrous scaffolds. <i>Journal of Biomedical Materials Research - Part A</i> , 2014, 102, 1408-1414.	4.0	27

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127	Nanomechanical properties and morphology of thick polyurethane films under contact pressure and stretching. <i>Journal of Applied Physics</i> , 2002, 91, 375.	2.5	26
128	Dependence of nanomechanical modification of polymers on plasma-induced cross-linking. <i>Journal of Applied Physics</i> , 2007, 101, 014307.	2.5	26
129	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.	2.2	25
130	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	25
131	Thermomechanical Analysis of Semi-infinite Solid in Sliding Contact With a Fractal Surface. <i>Journal of Tribology</i> , 2005, 127, 331-342.	1.9	25
132	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.	2.0	25
133	Microdevice for measuring friction and adhesion properties of sidewall contact interfaces of microelectromechanical systems. <i>Review of Scientific Instruments</i> , 2007, 78, 065106.	1.3	25
134	Friction and Wear of Hemiarthroplasty Biomaterials in Reciprocating Sliding Contact With Articular Cartilage. <i>Journal of Tribology</i> , 2011, 133, .	1.9	25
135	In vitro measurement of the mechanical properties of skin by nano/microindentation methods. <i>Journal of Biomechanics</i> , 2014, 47, 1186-1192.	2.1	25
136	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.	1.8	25
137	Dynamic spherical indentation of elastic-plastic solids. <i>International Journal of Solids and Structures</i> , 2018, 146, 180-191.	2.7	25
138	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, 549-556.	3.6	24
139	Impact of a Rigid Sphere on an Elastic Homogeneous Half-Space. <i>Journal of Tribology</i> , 2005, 127, 325-330.	1.9	24
140	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.	2.6	24
141	Static friction in polysilicon surface micromachines. <i>Journal of Microelectromechanical Systems</i> , 2005, 14, 651-663.	2.5	24
142	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.	3.1	24
143	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.	2.6	24
144	Implanted argon atoms as sensing probes of residual stress in ultrathin films. <i>Applied Physics Letters</i> , 2000, 76, 3206-3208.	3.3	23

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145	Surface and interface viscoelastic behaviors of thin polymer films investigated by nanoindentation. <i>Journal of Applied Physics</i> , 2006, 100, 114329.	2.5	23
146	Tribological altruism: A sacrificial layer mechanism of synovial joint lubrication in articular cartilage. <i>Journal of Biomechanics</i> , 2012, 45, 2426-2431.	2.1	23
147	Nanomechanical properties of energetically treated polyethylene surfaces. <i>Journal of Materials Research</i> , 2002, 17, 423-430.	2.6	22
148	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.	2.0	22
149	Dynamic Indentation of an Elastic-Plastic Multi-Layered Medium by a Rigid Cylinder. <i>Journal of Tribology</i> , 2004, 126, 18-27.	1.9	22
150	Scale-dependent nanomechanical behavior and anisotropic friction of nanotextured silicon surfaces. <i>Journal of Materials Research</i> , 2009, 24, 3038-3043.	2.6	22
151	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.	3.1	22
152	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.	3.1	22
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.	2.1	22
154	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.	2.6	21
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