Robert L Jackson

List of Publications by Year
in descending order

163	4,355	136950	123424
papers	citations	32 h-index	61 g-index

164	164	164	2054
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Flow factor modeling of combustion engine ring and cylinder components in mixed hydrodynamic lubrication. Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology, 2023, 237, 210-221.	1.8	1
2	An investigation of the elastic cylindrical line contact equations for plane strain and stress considering friction. Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology, 2022, 236, 1889-1897.	1.8	4
3	Carbon nanotube (CNT) reinforced 316L stainless steel composites made by laser powder bed fusion: Microstructure and wear response. Wear, 2022, 496-497, 204281.	3.1	18
4	Layered 2D Nanomaterials to Tailor Friction and Wear in Machine Elementsâ€"A Review. Advanced Materials Interfaces, 2022, 9, .	3.7	80
5	Modelling of Lubricated Electrical Contacts. Lubricants, 2022, 10, 32.	2.9	11
6	Elastic Rough Surface Contact and the Root Mean Square Slope of Measured Surfaces over Multiple Scales. Fractal and Fractional, 2021, 5, 44.	3.3	7
7	A mixed lubrication analysis of a flatâ€land thrust bearing with a surface optimisation method. Lubrication Science, 2021, 33, 335-346.	2.1	5
8	Evaluating Elastic-Plastic Wavy and Spherical Asperity-Based Statistical and Multi-Scale Rough Surface Contact Models with Deterministic Results. Materials, 2021, 14, 3864.	2.9	10
9	Friction and wear properties of biomass-derived oils via thermochemical conversion processes. Biomass and Bioenergy, 2021, 155, 106269.	5.7	4
10	Development and Validation of the Statistical Elastic and Elastic-plastic Rough Surface Contact Model for Small Contact to Complete Contact. , 2021, , .		0
11	Electro-thermo-mechanical Contact Analysis Considering Temperature Dependent Material Properties and Electrical Contact Resistance Determination. , 2021, , .		4
12	Elastic and elastic-perfectly plastic analysis of an axisymmetric sinusoidal surface asperity contact. Tribology - Materials, Surfaces and Interfaces, 2020, 14, 1-21.	1.4	9
13	A mixed lubrication analysis of a thrust bearing with fractal rough surfaces. Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology, 2020, 234, 608-621.	1.8	16
14	The effect of resolution on the deterministic finite element elastic-plastic rough surface contact under combined normal and tangential loading. Tribology International, 2020, 144, 106141.	5.9	25
15	A comparison of nanoscale measurements with the theoretical models of real and nominal contact areas. Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology, 2020, 234, 1735-1745.	1.8	5
16	A Comprehensive Review of the Finite Element Modeling of Electrical Connectors Including Their Contacts. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2020, 10, 836-844.	2.5	15
17	Comparison Between the Hyperelastic Behavior of Fresh and Frozen Equine Articular Cartilage in Various Joints. Journal of Biomechanical Engineering, 2020, 142, .	1.3	2
18	An Investigation of the Electrical Contact Resistance Change, Lubrication, and Wear Properties of a Nanolubricant. , 2020, , .		4

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19	The generalized Tabor parameter for adhesive rough contacts near complete contact. Journal of the Mechanics and Physics of Solids, 2019, 122, 126-140.	4.8	7
20	Effect of Electrical Contact Degradation on Analog Signal Transmission. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2019, 9, 2374-2382.	2.5	2
21	Tribological behavior of 17â€“4â€PH stainless steel fabricated by traditional manufacturing and laser-based additive manufacturing methods. Wear, 2019, 440-441, 203100.	3.1	23
22	Boundary element method (BEM) applied to the rough surface contact vs. BEM in computational mechanics. Friction, 2019, 7, 359-371.	6.4	14
23	Deterministic elastic-plastic modelling of rough surface contact including spectral interpolation and comparison to theoretical models. Tribology International, 2019, 135, 246-258.	5.9	30
24	The Effect of Convection on Electro-thermal Modeling of Whisker Shorting. , 2019, , .		0
25	Nanoscale Measurements of the Real Area of Contact and Comparison to Theoretical Models. , 2019, , .		1
26	An Investigation of Silver-Nanoparticle-Laden Lubricants for Electrical Contacts. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2019, 9, 193-200.	2.5	13
27	Strain Hardening From Elasticâ€“Perfectly Plastic to Perfectly Elastic Flattening Single Asperity Contact. Journal of Tribology, 2019, 141, .	1.9	16
28	A New Method for the Measurement of Real Area of Contact by the Adhesive Transfer of Thin Au film. Tribology Letters, 2018, 66, 1.	2.6	12
29	Periodic Contact Problems in Plane Elasticity: The Fracture Mechanics Approach. Journal of Tribology, 2018, 140, .	1.9	15
30	A Solution of Rigid Perfectly Plastic Cylindrical Indentation in Plane Strain and Comparison to Elastic-Plastic Finite Element Predictions With Hardening. Journal of Applied Mechanics, Transactions ASME, 2018, 85, .	2.2	10
31	Some Closed-Form Results for Adhesive Rough Contacts Near Complete Contact on Loading and Unloading in the Johnson, Kendall, and Roberts Regime. Journal of Tribology, 2018, 140, .	1.9	7
32	A Multiphysics Coupled Electro-thermo-mechanical Model of Whisker Shorting. , 2018, , .		3
33	Theoretical and Finite Element Analysis of Static Friction Between Multi-Scale Rough Surfaces. Tribology Letters, 2018, 66, 1.	2.6	24
34	An Analysis of the Multiscale Structure of Surfaces with Various Finishes. Tribology Transactions, 2017, 60, 121-134.	2.0	21
35	Statistical models of nearly complete elastic rough surface contact-comparison with numerical solutions. Tribology International, 2017, 105, 274-291.	5.9	42
36	Elasticâ€“Plastic Sinusoidal Waviness Contact Under Combined Normal and Tangential Loading. Tribology Letters, 2017, 65, 1.	2.6	16

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37	Elastic Sinusoidal Wavy Surface Contact Under Full Stick Conditions. Tribology Letters, 2017, 65, 1.	2.6	4
38	A Review of Elasticâ€“Plastic Contact Mechanics. Applied Mechanics Reviews, 2017, 69, .	10.1	168
39	Meeting the Contact-Mechanics Challenge. Tribology Letters, 2017, 65, 1.	2.6	232
40	A Finite Element Study of an Elasto-Plastic Disk or Cylindrical Contact Against a Rigid Flat in Plane Stress with Bilinear Hardening. Tribology Letters, 2017, 65, 1.	2.6	28
41	An analysis of generated fractal and measured rough surfaces in regards to their multi-scale structure and fractal dimension. Tribology International, 2017, 105, 94-101.	5.9	72
42	An exploratory study of silver nanoparticle laden lubricants for electrical contacts. , 2017, , .		1
43	Elastic-plastic axisymmetric sinusoidal surface asperity contact. , 2016, , .		2
44	An analysis of generated fractal and measured rough surfaces. , 2016, , .		2
45	Perfectly Elastic Axisymmetric Sinusoidal Surface Asperity Contact. Journal of Tribology, 2016, 138, .	1.9	10
46	Correlation between signalment and the biphasic hyperelastic mechanical properties of equine articular cartilage. Biotribology, 2016, 7, 31-37.	1.9	7
47	Fundamentals and previous experiments of the squeeze film levitation mechanism. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E6906-E6906.	7.1	1
48	A comprehensive study of the elasto-plastic contact of a sphere and a flat. Tribology International, 2016, 93, 78-90.	5.9	79
49	Tribological Performance of Silver Nanoparticleâ€“Enhanced Polyethylene Glycol Lubricants. Tribology Transactions, 2016, 59, 585-592.	2.0	65
50	Predicting the Permanent Deformation After the Impact of a Rod With a Flat Surface. Journal of Tribology, 2015, 137, .	1.9	43
51	A Solution of Rigidâ€“Perfectly Plastic Deep Spherical Indentation Based on Slip-Line Theory. Tribology Letters, 2015, 58, 1.	2.6	36
52	A multi-variable parametric study on the performance of bolted busbar contacts. , 2015, , .		6
53	Elastic Contact Between a Geometrically Anisotropic Bisinusoidal Surface and a Rigid Base. Journal of Tribology, 2015, 137, .	1.9	12
54	Equine Articular Cartilage Stiffness Determination Using Indentation. Journal of Tribology, 2015, 137, .	1.9	4

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55	Molecular scale analysis of dry sliding copper asperities. Applied Nanoscience (Switzerland), 2015, 5, 469-480.	3.1	10
56	Rough surface electrical contact resistance considering scale dependent properties and quantum effects. Journal of Applied Physics, 2015, 117, .	2.5	28
57	Experimental analysis of stable CuO nanoparticle enhanced lubricants. Journal of Experimental Nanoscience, 2015, 10, 1-18.	2.4	111
58	Comment on Åperka, P., I. KÅ™upka, M. Hartl (2014). â€œEvidence of Plug Flow in Rollingâ€“Sliding Elastohydrodynamic Contact.â€•Tribology Letters 54(2): 151â€“160. Tribology Letters, 2014, 56, 407-407.	2.6	1
59	A comparison of the predictions of a multiscale model and optical real area of contact measurements. , 2014, , .		4
60	A third body contact model for particle contaminated electrical contacts. , 2014, , .		11
61	Comparison of equine articular cartilage thickness in various joints. Connective Tissue Research, 2014, 55, 339-347.	2.3	14
62	Three-dimensional modeling of elasto-plastic sinusoidal contact under time dependent deformation due to stress relaxation. Tribology International, 2014, 73, 25-35.	5.9	5
63	The average roughness and fractal dimension of articular cartilage during drying. Scanning, 2014, 36, 368-375.	1.5	10
64	Statistical model of nearly complete elastic rough surface contact. International Journal of Solids and Structures, 2014, 51, 1075-1088.	2.7	47
65	Hydrodynamically Lubricated and Grooved Biomimetic Self-Adapting Surfaces. Journal of Functional Biomaterials, 2014, 5, 78-98.	4.4	2
66	Biomechanical Testing of a Novel Tendon Implant Device for the Repair of Equine Flexor Tendon Lacerations. Veterinary Surgery, 2014, 43, 685-690.	1.0	7
67	The Effect of Nanoparticles on the Real Area of Contact, Friction, and Wear. Journal of Tribology, 2013, 135, .	1.9	90
68	A Comparison of the Predictions of a Finite Element Model and Multiscale Model for a Rough MEMS Electrical Contact. , 2013, , .		6
69	A fractal expansion of a three dimensional elasticâ€“plastic multi-scale rough surface contact model. Tribology International, 2013, 59, 230-239.	5.9	45
70	Predictions of the average surface separation and stiffness between contacting elastic and elasticâ€“plastic sinusoidal surfaces. Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology, 2013, 227, 1376-1385.	1.8	29
71	The effect of nanoparticles on thin film elasto-hydrodynamic lubrication. Applied Physics Letters, 2013, 103, .	3.3	42
72	Contact Mechanics. , 2013, , 93-140.		15

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73	Stochastic Contact Theories: Other Theories Based on the Greenwood-Williamson Model. , 2013, , 3299-3306.		0
74	A Surface Roughness Comparison of Cartilage in Different Types of Synovial Joints. Journal of Biomechanical Engineering, 2012, 134, 021006.	1.3	17
75	The Influence of Thermal Expansion and Plastic Deformation on a Thermo-Electro Mechanical Spherical Asperity Contact. , 2012, , .		11
76	Modeling and Analysis of Vibration-Induced Changes in Connector Resistance of High Power Electrical Connectors for Hybrid Vehicles. Mechanics Based Design of Structures and Machines, 2012, 40, 349-365.	4.7	17
77	Stress Relaxation of Articular Cartilage in Unconfined Compression. , 2012, , .		3
78	A Multiphysics Finite Element Model of a 35A Automotive Connector Including Multiscale Rough Surface Contact. Journal of Electronic Packaging, Transactions of the ASME, 2012, 134, .	1.8	29
79	Fractal terrain generation for vehicle simulation. International Journal of Vehicle Autonomous Systems, 2012, 10, 3.	0.2	3
80	A Closed-Form Multiscale Thermal Contact Resistance Model. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2012, 2, 1158-1171.	2.5	27
81	Evaluation of fractal terrain model for vehicle dynamic simulations. Journal of Terramechanics, 2012, 49, 299-307.	3.1	6
82	An Analysis of Scale Dependent and Quantum Effects on Electrical Contact Resistance between Rough Surfaces. , 2012, , .		5
83	The Fractal Structure of Equine Articular Cartilage. Scanning, 2012, 34, 418-426.	1.5	12
84	Vibration-Induced Changes in the Contact Resistance of High Power Electrical Connectors for Hybrid Vehicles. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2012, 2, 185-193.	2.5	43
85	Growth of Sn Whiskers under Net Compressive and Tensile Stress States. , 2011, , .		7
86	Correlation of Intrinsic Thin Film Stress Evolution and IMC Growth with Whisker Growth. , 2011, , .		4
87	A model for the adhesion of multiscale rough surfaces in MEMS. , 2011, , .		0
88	Measurements of the Static Friction Coefficient Between Tin Surfaces and Comparison to a Theoretical Model. Journal of Tribology, 2011, 133, .	1.9	18
89	Elasto-plastic impact of a rotating link with a massive surface. International Journal of Mechanical Sciences, 2011, 53, 309-315.	6.7	22
90	An electro-mechanical contact analysis of a three-dimensional sinusoidal surface against a rigid flat. Wear, 2011, 270, 914-921.	3.1	9

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91	An investigation of the damping effects of various gas environments on a vibratory MEMS device. Tribology International, 2011, 44, 125-133.	5.9	17
92	On the Modeling of Elastic Contact between Rough Surfaces. Tribology Transactions, 2011, 54, 300-314.	2.0	106
93	A Scale Dependent Simulation of Liquid Lubricated Textured Surfaces. Journal of Tribology, 2010, 132, .	1.9	2
94	Predicting the coefficient of restitution of impacting elastic-perfectly plastic spheres. Nonlinear Dynamics, 2010, 60, 217-229.	5.2	147
95	Surface separation and contact resistance considering sinusoidal elasticâ€“plastic multi-scale rough surface contact. Wear, 2010, 268, 190-201.	3.1	89
96	Asperity creep under constant force boundary conditions. Wear, 2010, 268, 1285-1294.	3.1	11
97	Nanoindentation modeling of a nanodot-patterned surface on a deformable substrate. International Journal of Solids and Structures, 2010, 47, 3203-3213.	2.7	2
98	An Analytical Solution to an Archard-Type Fractal Rough Surface Contact Model. Tribology Transactions, 2010, 53, 543-553.	2.0	77
99	A Multi-Physics Finite Element Analysis of Round Pin High Power Connectors. , 2010, , .		11
100	A Multi-Physics Finite Element Model of a 35A Automotive Connector Including Multiscale Rough Surface Contact. , 2010, , .		7
101	The Influence of Particulate Contaminants on Vibration-Induced Fretting Degradation in Electrical Connectors. , 2010, , .		7
102	Experimental Study of the Vibration-Induced Fretting of Silver-Plated High Power Automotive Connectors. , 2010, , .		4
103	A Study of Real Area of Contact for Tire/Road Interface. , 2009, , .		0
104	Reliability and life study of hydraulic solenoid valve. Part 1: A multi-physics finite element model. Engineering Failure Analysis, 2009, 16, 874-887.	4.0	64
105	Reliability and life study of hydraulic solenoid valve. Part 2: Experimental study. Engineering Failure Analysis, 2009, 16, 944-963.	4.0	61
106	A Simplified Model of Multiscale Electrical Contact Resistance and Comparison to Existing Closed Form Models. , 2009, , .		16
107	A Semi-Analytical Model of Contact Resistance from Sinusoidal Asperity or Wavy Surface Contact. , 2009, , .		1
108	A model for the liquid-mediated collapse of 2-D rough surfaces. Wear, 2009, 267, 1436-1445.	3.1	8

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109	Nanoindentation of a Deformable Substrate Covered by Patterned Nanodot Asperities. , 2009, , .		0
110	An FFT Deterministic Simulation of Elastic Rough Surfaces in Three-Dimensional Contact and Model Analysis. , 2009, , .		0
111	Influence of Quantifiable Extrinsic Stresses on Tin Whisker Growth. , 2009, , .		3
112	Multiscale Terrain Characterization Using Fourier and Wavelet Transforms for Unmanned Ground Vehicles. , 2009, , .		2
113	Analytical Results for the Resolution-Dependent Progression of Contact Area in a Multi-Scale Contact Model. , 2009, , .		0
114	Impact of a Compound Pendulum With a Surface Using a Nonlinear Contact Force. , 2009, , .		0
115	Effects of Lattice Orientation and Size on Molecular Asperity Contact Models. , 2009, , .		0
116	An Investigation of the Damping Effects of Various Gas Environments on a Vibratory MEMS Device. , 2009, , .		0
117	Electrical Contact Resistance Considering Multi-Scale Roughness. , 2008, , .		12
118	A Multi-Physics Finite Element Model of an Electrical Connector Considering Rough Surface Contact. , 2008, , .		23
119	The Thermoelastic Behavior of Thrust Washer Bearings Considering Mixed Lubrication, Asperity Contact, and Thermoviscous Effects. Tribology Transactions, 2008, 51, 19-32.	2.0	26
120	A Study of the Average Real Contact Pressure Between Rough Surfaces. , 2008, , .		2
121	A Multiscale Model of Thermal Contact Resistance Between Rough Surfaces. Journal of Heat Transfer, 2008, 130, .	2.1	48
122	Experimental and Analytical Investigation of a Dynamic Gas Squeeze Film Bearing Including Asperity Contact Effects. Tribology Transactions, 2008, 51, 57-67.	2.0	12
123	Self-Adapting Microscale Surface Grooves for Hydrodynamic Lubrication. Tribology Transactions, 2008, 52, 1-11.	2.0	14
124	A Study of Plastic Deformation of Heavily Loaded Spherical Surfaces. , 2008, , .		0
125	Nanoindentation on a Ni Nanodot-Patterned Surface. , 2008, , .		0
126	Multiscale Prediction of the Surface Separation Between Rough Surfaces. , 2008, , .		0

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127	A Molecular Model of Asperity Contact and Comparison to Continuum Based Models. , 2008, , .		0
128	Discussion: â€œExperimental Investigation of Fully Plastic Contact of a Sphere Against a Hard Flatâ€• (Jamari, J., and Schipper, D. J., 2006, ASME J. Tribol., 128, pp. 230â€“235). Journal of Tribology, 2007, 129, 700-700.	1.9	4
129	Electrical Contact Resistance Theory for Anisotropic Conductive Films Considering Electron Tunneling and Particle Flattening. IEEE Transactions on Components and Packaging Technologies, 2007, 30, 59-66.	1.3	23
130	Laterally actuated multicontact MEMS relay fabricated using MetalMUMPS process: experimental characterization and multiscale contact modeling. Journal of Micro/ Nanolithography, MEMS, and MOEMS, 2007, 6, 023009.	0.9	19
131	An experimental investigation of various materials on thrust washer bearing operation. Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology, 2007, 221, 761-770.	1.8	2
132	An Analysis of Three-Dimensional Elasto-Plastic Sinusoidal Contact. , 2007, , 509.		0
133	The Effect of Initial Connector Insertions on Electrical Contact Resistance. , 2007, , .		10
134	An analysis of elasto-plastic sliding spherical asperity interaction. Wear, 2007, 262, 210-219.	3.1	66
135	An analysis of three-dimensional elasto-plastic sinusoidal contact. Tribology Letters, 2007, 27, 31-43.	2.6	63
136	Critical Conditions for Liquid Mediated Collapse of Two-Dimensional Rough Surfaces. , 2007, , .		0
137	Surface Separation and Contact Resistance Considering Elasto-Plastic Multi-Scale Rough Surface Contact. , 2007, , .		0
138	The Behavior of Thrust Washer Bearings Considering Mixed Lubrication and Asperity Contact. Tribology Transactions, 2006, 49, 233-247.	2.0	26
139	An Analysis of Elasto-Plastic Sliding Spherical Asperity Interaction. , 2006, , 1517.		1
140	The Effect of Scale-Dependent Hardness on Elasto-Plastic Asperity Contact between Rough Surfaces. Tribology Transactions, 2006, 49, 135-150.	2.0	35
141	Predicting the Coefficient of Restitution of Impacting Elastic-Perfectly Plastic Spheres. , 2006, , 1449.		3
142	A multi-scale model for contact between rough surfaces. Wear, 2006, 261, 1337-1347.	3.1	213
143	A statistical model of elasto-plastic asperity contact between rough surfaces. Tribology International, 2006, 39, 906-914.	5.9	229
144	A Comparison of Contact Modeling Utilizing Statistical and Fractal Approaches. Journal of Tribology, 2006, 128, 213-217.	1.9	82

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145	A Comparison of Flattening and Indentation Approaches for Contact Mechanics Modeling of Single Asperity Contacts. Journal of Tribology, 2006, 128, 209-212.	1.9	70
146	Study of the electrical contact resistance of multi-contact MEMS relays fabricated using the MetalMUMPs process. Journal of Micromechanics and Microengineering, 2006, 16, 1189-1194.	2.6	55
147	Experimental Investigation of Thermal and Hydrodynamic Effects on Radially Grooved Thrust Washer Bearings. Tribology Transactions, 2006, 49, 192-201.	2.0	12
148	Experimental and theoretical investigation of contact resistance and reliability of lateral contact type ohmic MEMS relays. , 2006, 6111, 142.		8
149	Predicting Electrical Contact Resistance Theory for Anisotropic Conductive Films Considering Electron Tunneling and Particle Flattening. , 2006, , .		0
150	Multiscale Contact Resistance Modeling of Ohmic MEMS Relays. , 2006, , .		1
151	Self Adapting Mechanical Step Bearings for Variations in Load. Tribology Letters, 2005, 20, 11-20.	2.6	10
152	A Multi-Scale Model for Contact Between Rough Surfaces. , 2005, , 313.		1
153	Elasto-Plastic Hemispherical Contact Models for Various Mechanical Properties. , 2005, , 227.		1
154	The Thermoelastic Behavior of Thrust Washer Bearings Considering Boundary Lubrication and Asperity Contact. , 2005, , 39.		0
155	A Finite Element Study of the Residual Stress and Deformation in Hemispherical Contacts. Journal of Tribology, 2005, 127, 484-493.	1.9	93
156	A Finite Element Study of Elasto-Plastic Hemispherical Contact Against a Rigid Flat. Journal of Tribology, 2005, 127, 343-354.	1.9	527
157	A Comparison of Elastic Contact Modeling Utilizing Statistical and Fractal Approaches. , 2005, , .		3
158	Self Adapting Mechanical Step Bearings for Variations in Load. , 2005, , .		0
159	Experimental Analysis of the Wear, Life and Behavior of PTFE Coated Thrust Washer Bearings Under Non-Axisymmetric Loading. Tribology Transactions, 2003, 46, 600-607.	2.0	10
160	A Finite Element Study of Elasto-Plastic Hemispherical Contact. , 2003, , 65.		22
161	Study of the Tribological Behavior of a Thrust Washer Bearing. Tribology Transactions, 2001, 44, 504-508.	2.0	20
162	Biomimetic Model of Articular Cartilage Based on <i>In Vitro</i> Experiments. Journal of Biomimetics, Biomaterials and Biomedical Engineering, 0, 21, 75-91.	0.5	9

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163	A Comparison of Friction Measurements of Intact Articular Cartilage in Contact with Cartilage, Glass, and Metal. Journal of Biomimetics, Biomaterials and Biomedical Engineering, 0, 41, 23-35.	0.5	7