Wear of polymers

Tribology
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Citation Report

#	Article	IF	Citations
1	Clay exfoliation and organic modification on wear of nylon 6 nanocomposites processed by different routes. Composites Science and Technology, 2005, 65, 2314-2328.	3.8	125
2	Tribology of Unfilled and Filled Polymeric Surfaces in Refrigerant Environment for Compressor Applications. Tribology Letters, 2005, 19, 249-262.	1.2	38
3	Wear debris generation mechanism for polymers studied by nanoscratching. Philosophical Magazine, 2005, 85, 2101-2122.	0.7	11
4	Effects of Lubricants on the Friction and Wear Properties of PTFE and POM. Journal of Tribology, 2005, 127, 766-775.	1.0	7
6	Effects of normal load on single-pass scratching of polymer surfaces. Wear, 2006, 260, 751-765.	1.5	57
7	Effects of microstructure on wear behaviour of wood reinforced polypropylene composite. Wear, 2008, 265, 606-611.	1.5	32
8	Wear and scratch damage in polymer nanocomposites. Tribology and Interface Engineering Series, 2008, 55, 374-399.	0.0	2
9	Tribological applications of polymers and their composites: Past, present and future prospects. Tribology and Interface Engineering Series, 2008, , 1-14.	0.0	39
10	Ionic Liquids Interactions with Materials Surfaces Applications in Tribology and Nanotechnology. Materials Research Society Symposia Proceedings, 2008, 1082, 70201.	0.1	5
11	Wear, friction, and microhardness of a thermal sprayed PET: poly (ethylene terephthalate) coating. Materials Research, 2009, 12, 121-125.	0.6	22
12	Fundamental aspects and recent progress on wear/scratch damage in polymer nanocomposites. Materials Science and Engineering Reports, 2009, 63, 31-80.	14.8	223
13	Wear behaviour of dental enamel at the nanoscale with a sharp and blunt indenter tip. Wear, 2009, 266, 60-68.	1.5	38
14	Third body effects in the wear of polyamide: Micro-mechanisms and wear particles analysis. Wear, 2009, 266, 1013-1020.	1.5	11
15	Modification of an epoxy resin with a fluoroepoxy oligomer for improved mechanical and tribological properties. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2009, 507, 241-251.	2.6	55
16	The fundamentals of biotribology and its application to spine arthroplasty. SAS Journal, 2009, 3, 125-132.	1.3	14
17	Contact stresses: a short survey of models and methods of computations. Archive of Applied Mechanics, 2010, 80, 1407-1428.	1.2	17
18	Tribology of UHMWPE film on air-plasma treated tool steel and the effect of PFPE overcoat. Surface and Coatings Technology, 2010, 204, 1330-1338.	2.2	45
19	Prediction and analysis of sliding wear performance of fused deposition modelling-processed ABS plastic parts. Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology, 2010, 224, 1261-1271.	1.0	23

#	Article	IF	Citations
20	Molecular Simulation of the Frictional Behavior of Polymer-on-Polymer Sliding. Langmuir, 2011, 27, 5891-5898.	1.6	14
21	Tribological characterization of a biocompatible thin film of UHMWPE on Ti6Al4V and the effects of PFPE as top lubricating layer. Journal of the Mechanical Behavior of Biomedical Materials, 2011, 4, 953-960.	1.5	48
22	Thermotropic liquid crystalline polymers as protective coatings for aerospace. Progress in Organic Coatings, 2011, 70, 245-251.	1.9	20
23	Wear processes in polymer implants. , 2012, , 143-163.		2
24	Foamed-metal reinforced material: tribological behaviours of foamed-copper filled with polytetrafluoroethylene and graphite. Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology, 2012, 226, 123-137.	1.0	4
25	Nanomechanical and nanotribological properties of plasma nanotextured superhydrophilic and superhydrophobic polymeric surfaces. Nanotechnology, 2012, 23, 505711.	1.3	31
26	Abrasion Resistance of Polymer Nanocomposites - A Review. , 0, , .		5
27	Micro-scratching of polyethylene terephthalate: Mechanisms of wear debris generation. European Polymer Journal, 2013, 49, 1984-1993.	2.6	5
28	Tribological applications of polymers and their composites â€“ past, present and future prospects. , 2013, , 1-22.		21
29	Static/dynamic friction and wear of some selected polymeric materials for conformal tribo-pairs under boundary lubrication conditions. Friction, 2013, 1, 232-241.	3.4	10
30	Comparison of tribological performance of some neat polymer and polymers composites. Surface Engineering, 2013, 29, 455-461.	1.1	6
31	Mechanical and Tribotechnical Characteristics of Nanocomposites Based on Mixture of Ultrahigh Molecular Weight Polyethylene and Polypropylene. Advanced Materials Research, 2013, 872, 36-44.	0.3	4
32	Material Wear Evaluation using Temperature Controlled Wear Testing. SAE International Journal of Materials and Manufacturing, 0, 6, 339-348.	0.3	1
33	Sliding mechanics of polymers. , 2014, , 37-66.		8
34	The reverse guillotine tribometer for evaluation of sliding wear of additive manufactured fixtures. Rapid Prototyping Journal, 2014, 20, 105-114.	1.6	13
35	Tribological performance of hybrid organo-silicate coatings. Progress in Organic Coatings, 2014, 77, 1037-1044.	1.9	1
36	Prediction of frictional heating and temperature distribution in selective ceramic-reinforced polymer composite. Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology, 2014, 228, 1433-1442.	1.0	3
37	Joint wear simulation. , 2014, , 39-89.		1

#	Article	IF	Citations
39	A Comparing Tribological Study of PBT and PBT with Aramid Fibers, for Block-on-Ring Dry Regime. Applied Mechanics and Materials, 0, 658, 283-288.	0.2	3
40	Effect of processing parameters and graphite content on the tribological behaviour of 3D printed acrylonitrile butadiene styrene. Materialwissenschaft Und Werkstofftechnik, 2015, 46, 1185-1195.	0.5	36
41	Structural and Frictional Performance of Fused Deposition Modelled Acrylonitrile Butadiene Styrene (P430) with a View to Use as Rapid Tooling Material in Sheet Metal Forming. Key Engineering Materials, 0, 639, 325-332.	0.4	8
42	Investigation of the water lubricated tribological behavior of medical grade UHMWPE. Advances in Materials and Processing Technologies, 2015, 1, 109-114.	0.8	6
43	Effect of temperature and atmosphere on the tribological behavior of a polyether ether ketone composite. Friction, 2015, 3, 259-265.	3.4	5
44	The Effect of Adding Calcium Stearate on Wear-resistance of Ultra-high Molecular Weight Polyethylene. Procedia Engineering, 2015, 113, 490-498.	1.2	12
45	Friction of polymer hydrogels studied by resonance shear measurements. Soft Matter, 2015, 11, 6192-6200.	1.2	23
46	Wear rate and fracture toughness of porous particle-filled phenol composites. Composites Part B: Engineering, 2015, 77, 19-26.	5.9	1
47	Effect of surface finishing, temperature and chemical ageing on the tribological behaviour of a polyether ether ketone composite/52100 pair. Wear, 2015, 332-333, 844-854.	1.5	9
48	Seal wear debris characterization for predictive maintenance. Wear, 2015, 330-331, 490-497.	1.5	8
50	Wear/Scratch Damage. Engineering Materials and Processes, 2016, , 207-226.	0.2	0
51	Scale effects in tribological properties of solid-lubricating composites made of ultra-high molecular weight polyethylene filled with calcium stearate particles. IOP Conference Series: Materials Science and Engineering, 2016, 124, 012035.	0.3	3
52	Finite element modeling and experimental validation of single-asperity sliding friction of diamond against reinforced and non-filled polycarbonate. Wear, 2016, 356-357, 77-85.	1.5	14
53	The Effect of Crosslinks on the Sliding Wear of High-Density Polyethylene. Tribology Letters, 2016, 64, 1.	1.2	6
54	Effect of reinforcement forms in selectively reinforced polymer composite: temperature distribution under sliding contact condition. International Journal of Plastics Technology, 2016, 20, 265-278.	2.9	3
55	Novel Experiments Reveal Scratching and Transfer Film Mechanisms in the Sliding of the PEEK/Steel Tribosystem. Tribology Letters, 2016, 63, 1.	1.2	6
56	The tribological behaviour of carbon fibre reinforced polyaryletherketones (PAEKs) through their glass transitions. Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology, 2016, 230, 1183-1196.	1.0	7
57	Correlation of polymer wear-debris generation between microscratching and macroscopic wear. Tribology International, 2016, 93, 202-213.	3.0	9

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58	Developments of rubber material wear in conveyer belt system. Tribology International, 2017, 111, 148-158.	3.0	49
59	Comparative Study on the Wear Behaviour of Two High-Temperature-Resistant Polymers. Tribology Letters, 2017, 65, 1.	1.2	17
60	Phase shifting-based debris effect detection in USV-assisted AFM nanomachining. Applied Surface Science, 2017, 413, 317-326.	3.1	10
61	Raman spectroscopy of biomedical polyethylenes. Acta Biomaterialia, 2017, 55, 28-99.	4.1	25
62	Sustained drug release from surface modified UHMWPE for acetabular cup lining in total hip implant. Materials Science and Engineering C, 2017, 77, 649-661.	3.8	22
63	Improvement in abrasive wear resistance of metallocenic polypropylenes by adding siloxane based polymers. Materials Chemistry and Physics, 2017, 188, 100-108.	2.0	6
64	High temperature tribological properties of polybenzimidazole (PBI). Polymer, 2017, 128, 159-168.	1.8	21
65	Tribological Characteristics of Green Biocomposites. Green Energy and Technology, 2017, , 149-179.	0.4	10
66	Polybenzoxazine-Based Self-Lubricating and Friction Materials. , 2017, , 945-974.		3
67	Evaluation of parameters affecting adhesive strength of high build epoxy coatings on textured and plasma treated metallic substrates. Journal of Adhesion Science and Technology, 2018, 32, 407-428.	1.4	4
68	Contact mechanics of isotactic polypropylene: Effect of pre-stretch on the frictional response. Wear, 2018, 398-399, 183-190.	1.5	12
69	Tribological characterization of modified polymeric blends. Procedia Structural Integrity, 2018, 8, 239-255.	0.3	10
70	Thin-Film and Marginal Lubrication of Polyetherketoneâ€“Steel Sliding Contacts at High Temperature and High Speed. Tribology Transactions, 2018, 61, 793-807.	1.1	0
71	Integration of graphene in poly(lactic) acid by 3D printing to develop creep and wearâ€resistant hierarchical nanocomposites. Polymer Composites, 2018, 39, 3877-3888.	2.3	106
72	An Analytical Model of Mechanistic Wear of Polymers. Journal of Tribology, 2018, 140, .	1.0	6
73	Mechanical and Unlubricated Sliding Wear Properties of Nitrile Rubber Reinforced with Micro Glass Flake. Polymers, 2018, 10, 705.	2.0	7
74	Erosion and heating of polyurea under cavitating jets. Wear, 2018, 414-415, 262-274.	1.5	14
75	Contact mechanics of high-density polyethylene: Effect of pre-stretch on the frictional response and the onset of wear. Wear, 2018, 410-411, 142-148.	1.5	6

#	Article	IF	Citations
76	Wear resistant all-PE single-component composites via 1D nanostructure formation during melt processing. Polymer, 2018, 151, 47-55.	1.8	20
77	Deformation of contacting interface between polymer hydrogel and silica sphere studied by resonance shear measurement. Journal of Chemical Physics, 2018, 149, 163327.	1.2	10
78	Material Characterization and Influence of Sliding Speed and Pressure on Friction and Wear Behavior of Self-Lubricating Bearing Materials for Hydropower Applications. Lubricants, 2018, 6, 39.	1.2	18
79	A new test method to simulate low-severity wear conditions experienced by rubber tire materials. Wear, 2018, 410-411, 72-82.	1.5	14
80	Sliding wear and friction characteristics of polymer nanocomposite PAEK-PDMS with nano-hydroxyapatite and nano-carbon fibres as fillers. Journal of the Mechanical Behavior of Biomedical Materials, 2018, 86, 23-32.	1.5	26
81	Optimizing tribological, tensile & in-vitro biofunctional properties of UHMWPE based nanocomposites with simultaneous incorporation of graphene nanoplatelets (GNP) & hydroxyapatite (HAp) via a facile approach for biomedical applications. Composites Part B: Engineering, 2019, 175, 107181.	5.9	35
82	Correlation of Tribological Behavior and Fatigue Properties of Filled and Unfilled TPUs. Lubricants, 2019, 7, 60.	1.2	5
83	Friction hysteresis and subsequent wear mechanism of clay-based phenolic composites under cyclic load. Materials Today: Proceedings, 2019, 19, 196-204.	0.9	8
84	Temperature dependent two-body abrasive wear of polycarbonate surfaces. Wear, 2019, 440-441, 203089.	1.5	0
85	Comparative study on the efficacy of the UHMWPE surface modification by chemical etching and electrostatic spraying method for drug release by orthopedic implants. Materials Science and Engineering C, 2019, 105, 110117.	3.8	12
86	Sliding friction on particle filled epoxy: Developing a quantitative model for complex coatings. Wear, 2019, 418-419, 111-122.	1.5	4
87	Tribological behavior of UHMWPE matrix composites reinforced with PTFE particles and aramid fibers. Composites Part B: Engineering, 2019, 173, 106949.	5.9	48
88	Effect of reciprocating and unidirectional sliding motion on the friction and wear of phenolic resin based composite. Industrial Lubrication and Tribology, 2019, 71, 573-577.	0.6	7
89	Friction and wear behavior of PTFE coatings modified with poly (methyl methacrylate). Composites Part B: Engineering, 2019, 172, 316-322.	5.9	47
90	Experimental Investigation on Friction and Wear Behavior of the Vertical Spindle and V-belt of a Cotton Picker. Materials, 2019, 12, 773.	1.3	10
91	Experimental Analysis and Wear Prediction Model for Unfilled Polymerâ€“Polymer Sliding Contacts. Tribology Transactions, 2019, 62, 176-188.	1.1	12
92	Tribological Response of PEEK to Temperature Induced by Frictional and External Heating. Tribology Letters, 2019, 67, 1.	1.2	22
93	Suitability of developed composite materials for meniscal replacement: Mechanical, friction and wear evaluation. Journal of the Mechanical Behavior of Biomedical Materials, 2019, 89, 217-226.	1.5	5

#	Article	IF	Citations
94	Modeling and prediction of fatigue life of robotic components in intelligent manufacturing. Journal of Intelligent Manufacturing, 2019, 30, 2575-2585.	4.4	10
95	Effect of organic friction modifiers on lubrication of PEEK-steel contact. Tribology International, 2020, 151, 106513.	3.0	16
96	Frictional characteristics of Fusion Deposition Modeling (FDM) manufactured surfaces. Rapid Prototyping Journal, 2020, 26, 1095-1102.	1.6	14
97	Tribological Characteristic of a Ring Seal with Graphite Filler. Materials, 2020, 13, 311.	1.3	14
98	Friction and wear of two polyethylenes under different tribological contact conditions. Polymers and Polymer Composites, 2021, 29, 393-404.	1.0	4
99	Micromechanical performance of high-density polyethylene: Experimental and modeling approaches for HDPE and its alumina-nanocomposites. Polymer Testing, 2021, 93, 106936.	2.3	8
100	An investigation into the influence of tribological parameters on the operation of sliding triboelectric nanogenerators. Tribology International, 2021, 155, 106778.	3.0	11
101	Tribology of Polymer Blends PBT + PTFE. Materials, 2021, 14, 997.	1.3	1
102	A review on tribo-mechanical properties of micro- and nanoparticulate-filled nylon composites. Journal of Polymer Engineering, 2021, 41, 339-355.	0.6	16
103	Wax-oil lubricants to reduce the shear between skin and PPE. Scientific Reports, 2021, 11, 11537.	1.6	8
104	A Comprehensive Investigation on 3D Printing of Polyamide 11 and Thermoplastic Polyurethane via Multi Jet Fusion. Polymers, 2021, 13, 2139.	2.0	22
105	Effects of reinforcements and <scp>gammaâ€irradiation</scp> on wear performance of <scp>ultraâ€high</scp> molecular weight polyethylene as acetabular cup liner in <scp>hipâ€joint</scp> arthroplasty: A review. Journal of Applied Polymer Science, 2021, 138, 51275.	1.3	16
106	Influence of Solid Lubricant Addition on Friction and Wear Response of 3D Printed Polymer Composites. Polymers, 2021, 13, 2905.	2.0	18
107	Tribological behaviour and transfer layer development of self-lubricating polymer composite bearing materials under long duration dry sliding against stainless steel. Wear, 2021, 484-485, 204027.	1.5	23
108	Tribological performances and self-lubricating mechanism of monomer casting nylon-6 composite coatings containing lube base oil-loaded microcapsules. Progress in Organic Coatings, 2021, 160, 106528.	1.9	3
109	Mechanism of oil-lubrication of PEEK and its composites with steel counterparts. Wear, 2021, 486-487, 204085.	1.5	9
110	Direct transformation of industrial vegetable waste into bioplastic composites intended for agricultural mulch films. Green Chemistry, 2021, 23, 5956-5971.	4.6	25
111	Nanowear of Polymers. Nanoscience and Technology, 2015, , 545-587.	1.5	3

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112	Polymeric Solid Lubricant Transfer Films: Relating Quality to Wear Performance. , 2018, , 155-180.		5
113	Introduction of Automotive Tribology. Energy, Environment, and Sustainability, 2019, , 3-13.	0.6	4
114	Influence of Graphite on Tribological Properties of Hexagonal Boron Nitride Hybrid/Polyimide Composites in Wide Temperature Range. Journal of Tribology, 2018, 140, .	1.0	9
115	Experimental Analysis of Dry Sliding Friction and Wear Behavior of OMMT Nanoclay Added EVA/HDPE/MA-g-PE Compatibilized Polymer Blends with Parametric Study of Influencing Factors. Journal of Testing and Evaluation, 2020, 48, 20170611.	0.4	2
116	A Comparative Study of Novel Tribological Response of Hybrid Epoxy Composites Reinforced by MWCNT/ Graphene/Nanodiamond. Journal of Surface Science and Technology, 0, , 36-44.	0.3	3
117	Tax policy developments, donor inflows and economic growth in Malawi. Journal of Economics and International Finance, 2012, 4, .	0.2	0
118	EFFECT OF TEMPERATURE AND ATMOSPHERE ON THE TRIBOLOGICAL BEHAVIOUR OF HIGH TRIBOLOGICAL PERFORMANCE PEEK (POLYETHER ETHER KETONE) COMPOSITE. , 0, , .		0
119	Tribological Performance of Medical Grade UHMWPE Polymer at Egg Albumen Lubricated Condition. Manufacturing Science and Technology, 2015, 3, 106-110.	0.1	0
120	Improved Test Method for Tribological Evaluation of High Performance Plastics. SAE International Journal of Advances and Current Practices in Mobility, 0, 1, 569-577.	2.0	1
122	Tribological Behavior of Ultra-High Molecular Weight Polyethylene Polymer with Artificial Neural Network Modeling. Kocaeli Journal of Science and Engineering, 0, , .	0.3	0
123	Evaluation of Tribological and Mechanical Properties of Carbon Steel with Fluoroligomeric Film at Piezoelectric Actuator Contact. Coatings, 2022, 12, 463.	1.2	2
124	Investigating the Influence of Friction and Material Wear on Triboelectric Charge Transfer in Metalâ€“Polymer Contacts. Tribology Letters, 2022, 70, 1.	1.2	9
128	Output optimization of biodegradable triboelectric nanogenerators. Nano Energy, 2022, 103, 107811.	8.2	24
129	General Background. SpringerBriefs in Applied Sciences and Technology, 2022, , 5-21.	0.2	0
130	Comparative Study of Friction and Wear Performance of PEK, PEEK and PEKK Binders in Tribological Coatings. Polymers, 2022, 14, 4008.	2.0	6
131	Frontiers in Multi-functional Biomaterials for Hip Joint Application. Indian Institute of Metals Series, 2023, , 123-136.	0.2	0
132	Introduction: A journey to the tribological behavior of polymeric materials. , 2023, , 1-16.		0
133	Multi-length scale strengthening and cytocompatibility of ultra high molecular weight polyethylene bio-composites by functionalized carbon nanotube and hydroxyapatite reinforcement. Journal of the Mechanical Behavior of Biomedical Materials, 2023, 140, 105694.	1.5	1

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