

Yu Tian

List of Publications by Year in descending order

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124
papers

3,993
citations

159585
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125
docs citations

125
times ranked

3319
citing authors

#	ARTICLE	IF	CITATIONS
1	Robust scalable reversible strong adhesion by gecko-inspired composite design. <i>Friction</i> , 2022, 10, 1192-1207.	6.4	15
2	Voltage-Assisted Tribofilm Formation of Sulfur- and Phosphorus-Free Organic Molybdenum Additive on Bearing Steel Surfaces in Industrial Base Oils. <i>Tribology Letters</i> , 2022, 70, 1.	2.6	5
3	Potential-Dependent Interfacial Frictional Behavior between Charged Microspheres and Gold in Aqueous Solutions. <i>Journal of Physical Chemistry C</i> , 2022, 126, 4555-4562.	3.1	3
4	Intermolecular and surface forces in atomic-scale manufacturing. <i>International Journal of Extreme Manufacturing</i> , 2022, 4, 022002.	12.7	11
5	Imaging dynamic three-dimensional traction stresses. <i>Science Advances</i> , 2022, 8, eabm0984.	10.3	6
6	Influence of magnetic property of test plates on magneto-rheological behavior. <i>Smart Materials and Structures</i> , 2022, 31, 055015.	3.5	1
7	Photoreological fluids of azobenzene polymers for lubrication regulation. <i>Friction</i> , 2022, 10, 1078-1090.	6.4	7
8	Development of a nanoscale displacement sensor based on the shadow method. <i>Applied Optics</i> , 2022, 61, G9.	1.8	2
9	Delivering quantum dots to lubricants: Current status and prospect. <i>Friction</i> , 2022, 10, 1751-1771.	6.4	9
10	Influence of Adsorption Characteristics of Surfactants Sodium Dodecyl Sulfate and Aerosol ^{OT} on Dynamic Process of Water-Based Lubrication. <i>Lubricants</i> , 2022, 10, 147.	2.9	0
11	On-Line Feedback Control of Sliding Friction of Metals Lubricated by Adsorbed Boundary SDS Films. <i>Lubricants</i> , 2022, 10, 148.	2.9	7
12	Homogeneous interfacial water structure favors realizing a low-friction coefficient state. <i>Journal of Colloid and Interface Science</i> , 2022, 626, 324-333.	9.4	9
13	Quantification/mechanism of interfacial interaction modulated by electric potential in aqueous salt solution. <i>Friction</i> , 2021, 9, 513-523.	6.4	6
14	Synergistic lubricating effect of graphene/ionic liquid composite material used as an additive. <i>Friction</i> , 2021, 9, 1568-1579.	6.4	18
15	Effects of Abrasive Particles on Liquid Superlubricity and Mechanisms for Their Removal. <i>Langmuir</i> , 2021, 37, 3628-3636.	3.5	12
16	A Chemical Potential Equation for Modeling Triboelectrochemical Reactions on Solid ^{Liquid} Interfaces. <i>Frontiers in Chemistry</i> , 2021, 9, 650880.	3.6	6
17	Paper-Like Visual Indicator Films for Harmful Hydrophilic Liquids and Vapors. <i>ACS Applied Polymer Materials</i> , 2021, 3, 4027-4034.	4.4	1
18	Magnesium Silicate Hydroxide ^{MoS₂} ^{Sb₂O₃} Coating Nanomaterials for High-Temperature Superlubricity. <i>ACS Applied Nano Materials</i> , 2021, 4, 7097-7106.	5.0	16

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19	Fast Optical-Thermal Responsive Intelligent Glass Realized by Hydrated Poly(N -Isopropylacrylamide) Film. <i>Macromolecular Materials and Engineering</i> , 2021, 306, 2100272.	3.6	0
20	Effect of base oil lubrication properties on magnetorheological fluids. <i>Smart Materials and Structures</i> , 2021, 30, 095011.	3.5	10
21	Light-Controlled Friction by Carboxylic Azobenzene Molecular Self-Assembly Layers. <i>Frontiers in Chemistry</i> , 2021, 9, 707232.	3.6	4
22	Trumpet-shaped controllable adhesive structure for manipulation of millimeter-sized objects. <i>Smart Materials and Structures</i> , 2021, 30, 115003.	3.5	6
23	Friction Contrast of High-Purity Titanium in Microscale. <i>Tribology Letters</i> , 2021, 69, 1.	2.6	0
24	Surface wettability effect on aqueous lubrication: Van der Waals and hydration force competition induced adhesive friction. <i>Journal of Colloid and Interface Science</i> , 2021, 599, 667-675.	9.4	25
25	Load Sharing Design of a Multi-legged Adaptable Gripper With Gecko-Inspired Controllable Adhesion. <i>IEEE Robotics and Automation Letters</i> , 2021, 6, 8482-8489.	5.1	6
26	Magnetic field effect on apparent viscosity reducing of different crude oils at low temperature. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2021, 629, 127372.	4.7	12
27	Superlow Wear Realizable Tribofilms from Lubricant Oil Containing Hydrothermally Synthesized Magnesium Silicate Hydroxide/Carbon Core-Shell Nanoplates. <i>Langmuir</i> , 2021, 37, 240-248.	3.5	7
28	Active Control of Boundary Lubrication of Ceramic Tribo-Pairs in Sodium Dodecyl Sulfate Aqueous Solutions. <i>Tribology Letters</i> , 2021, 69, 1.	2.6	8
29	Environmental atmosphere effect on lubrication performance of gallium-based liquid metal. <i>Tribology International</i> , 2020, 141, 105904.	5.9	16
30	Effects of square micro-pillar array porosity on the liquid motion of near surface layer*. <i>Chinese Physics B</i> , 2020, 29, 024702.	1.4	0
31	Fluffy Polyfluoroalkoxy Layer Produced by Air Plasma Spraying Based on "Grapeshot" Effect. <i>Journal of Thermal Spray Technology</i> , 2020, 29, 462-470.	3.1	4
32	Role of structural stiffness on the loading capacity of fibrillar adhesive composite. <i>Extreme Mechanics Letters</i> , 2020, 41, 101001.	4.1	2
33	Progress in Bioinspired Dry and Wet Gradient Materials from Design Principles to Engineering Applications. <i>IScience</i> , 2020, 23, 101749.	4.1	20
34	Potential-Controlled Boundary Lubrication Using MoS2 Additives in Diethyl Succinate. <i>Tribology Letters</i> , 2020, 68, 1.	2.6	13
35	Macroscale Light-Controlled Lubrication Enabled by Introducing Diarylethene Molecules in a Nanoconfinement. <i>Langmuir</i> , 2020, 36, 5820-5828.	3.5	10
36	Extreme-Pressure Superlubricity of Polymer Solution Enhanced with Hydrated Salt Ions. <i>Langmuir</i> , 2020, 36, 6765-6774.	3.5	17

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37	Functionally Graded Gecko Setae and the Biomimics with Robust Adhesion and Durability. ACS Applied Polymer Materials, 2020, 2, 2658-2666.	4.4	18
38	Diffusion of Nanoparticles with Activated Hopping in Crowded Polymer Solutions. Nano Letters, 2020, 20, 3895-3904.	9.1	34
39	Hydrogen embrittlement of X80 pipeline steel in H ₂ S environment: Effect of hydrogen charging time, hydrogen-trapped state and hydrogen chargingâ€“releasingâ€“recharging cycles. International Journal of Minerals, Metallurgy and Materials, 2020, 27, 63-73.	4.9	29
40	Thinning of glycerol in the presence of multi-walled carbon nanotubes. Journal of Chemical Physics, 2019, 151, 054302.	3.0	2
41	Electric Response of CuS Nanoparticle Lubricant Additives: The Effect of Crystalline and Amorphous Octadecylamine Surfactant Capping Layers. Langmuir, 2019, 35, 15825-15833.	3.5	16
42	Engineering the morphology of TiO ₂ /carbon hybrids via oxidized Ti ₃ C ₂ T _x MXene and associated electrorheological activities. Chemical Engineering Journal, 2019, 378, 122170.	12.7	22
43	Flexible adhesion control by modulating backing stiffness based on jamming of granular materials. Smart Materials and Structures, 2019, 28, 115023.	3.5	21
44	Recent developments in gecko-inspired dry adhesive surfaces from fabrication to application. Surface Topography: Metrology and Properties, 2019, 7, 023001.	1.6	59
45	Role of Interfacial Water and Applied Potential on Friction at Au(111) Surfaces. Frontiers in Mechanical Engineering, 2019, 5, .	1.8	5
46	Vibration and Noise Behaviors During Stickâ€“Slip Friction. Tribology Letters, 2019, 67, 1.	2.6	34
47	Rippled Polymer Surface Generated by Stickâ€“Slip Friction. Langmuir, 2019, 35, 2878-2884.	3.5	26
48	On Lubrication States after a Running-In Process in Aqueous Lubrication. Langmuir, 2019, 35, 15435-15443.	3.5	13
49	A Shadow-Based Nano Scale Precision Force Sensor. IEEE Sensors Journal, 2019, 19, 2072-2078.	4.7	4
50	A novel comb-typed poly(oligo(ethylene glycol) methylether acrylate) as an excellent aqueous lubricant. Journal of Colloid and Interface Science, 2019, 539, 342-350.	9.4	27
51	Contributions of lunate cells and wax crystals to the surface anisotropy of <i>Nepenthes</i> slippery zone. Royal Society Open Science, 2018, 5, 180766.	2.4	8
52	CuS Nanoparticle Additives for Enhanced Ester Lubricant Performance. ACS Applied Nano Materials, 2018, 1, 7060-7065.	5.0	21
53	Scaling magneto-rheology based on Newtonian and non-Newtonian host fluids. Smart Materials and Structures, 2018, 27, 105019.	3.5	5
54	Controlled Adhesion Anisotropy between Two Rectangular Grooved Surfaces. Advanced Materials Interfaces, 2018, 5, 1801268.	3.7	8

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55	Peanut shaped titanium oxide micro-particles achieved by cathode plasma electrolysis and their electrorheological characteristics. <i>Smart Materials and Structures</i> , 2018, 27, 115017.	3.5	4
56	Electric Potential-Controlled Interfacial Interaction between Gold and Hydrophilic/Hydrophobic Surfaces in Aqueous Solutions. <i>Journal of Physical Chemistry C</i> , 2018, 122, 22549-22555.	3.1	18
57	Walking of spider on water surface studied from its leg shadows. <i>Chinese Physics B</i> , 2018, 27, 084702.	1.4	3
58	Fluid Property Effects on the Splashing in Teapot Effect. <i>Journal of Physical Chemistry C</i> , 2018, 122, 21411-21417.	3.1	3
59	Propulsion Principles of Water Striders in Sculling Forward through Shadow Method. <i>Journal of Bionic Engineering</i> , 2018, 15, 516-525.	5.0	13
60	Research Progress in Application of 2D Materials in Liquid-Phase Lubrication System. <i>Materials</i> , 2018, 11, 1314.	2.9	44
61	Tribological properties of liquid-metal galinstan as novel additive in lithium grease. <i>Tribology International</i> , 2018, 128, 181-189.	5.9	32
62	Transient adhesion in a non-fully detached contact. <i>Scientific Reports</i> , 2018, 8, 6147.	3.3	15
63	Clumping Stability of Vertical Nanofibers on Surfaces. <i>Langmuir</i> , 2018, 34, 11629-11636.	3.5	4
64	State-of-the-Art of Extreme Pressure Lubrication Realized with the High Thermal Diffusivity of Liquid Metal. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 5638-5644.	8.0	58
65	Friction Contribution to Bioinspired Mushroom-Shaped Dry Adhesives. <i>Advanced Materials Interfaces</i> , 2017, 4, 1700016.	3.7	29
66	Direction- and Salt-Dependent Ionic Current Signatures for DNA Sensing with Asymmetric Nanopores. <i>Biophysical Journal</i> , 2017, 112, 674-682.	0.5	39
67	Discretely Supported Dry Adhesive Film Inspired by Biological Bending Behavior for Enhanced Performance on a Rough Surface. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 7752-7760.	8.0	47
68	Investigation of ultra-low friction between self-mated Si ₃ N ₄ in water after running-in. <i>Tribology International</i> , 2017, 115, 365-369.	5.9	29
69	Frequency-independent viscoelasticity of carbonyl iron particle suspensions under a magnetic field. <i>Smart Materials and Structures</i> , 2017, 26, 054009.	3.5	12
70	Controllable Anisotropic Dry Adhesion in Vacuum: Gecko Inspired Wedged Surface Fabricated with Ultraprecision Diamond Cutting. <i>Advanced Functional Materials</i> , 2017, 27, 1606576.	14.9	95
71	Differences in Tribological Behaviors upon Switching Fixed and Moving Materials of Tribo-pairs including Metal and Polymer. <i>Scientific Reports</i> , 2017, 7, 13041.	3.3	5
72	One-step preparation of TiO ₂ particles with controllable phase and morphology by plasma electrolysis. <i>RSC Advances</i> , 2017, 7, 39824-39832.	3.6	6

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73	Ionic Current-Based Mapping of Short Sequence Motifs in Single DNA Molecules Using Solid-State Nanopores. <i>Nano Letters</i> , 2017, 17, 5199-5205.	9.1	56
74	Viscous Force Retards Initial Droplet Spreading. <i>Journal of Physical Chemistry C</i> , 2017, 121, 22054-22059.	3.1	13
75	Cactus-like double-shell structured SiO ₂ @TiO ₂ microspheres: Fabrication, electrorheological performances and microwave absorption. <i>Journal of Industrial and Engineering Chemistry</i> , 2017, 56, 203-211.	5.8	28
76	Enhanced Adhesion of Mosquitoes to Rough Surfaces. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 24373-24380.	8.0	17
77	Stick-slip behaviours of water lubrication polymer materials under low speed conditions. <i>Tribology International</i> , 2017, 106, 55-61.	5.9	91
78	Dynamic Viscoelasticity of Electrorheological Fluids Under Enhanced Electric Field. <i>Current Smart Materials</i> , 2017, 2, .	0.5	0
79	Adhesion and Detachment Mechanisms between Polymer and Solid Substrate Surfaces: Using Polystyrene-“Mica as a Model System. <i>Macromolecules</i> , 2016, 49, 5223-5231.	4.8	54
80	Three-dimensional topographies of water surface dimples formed by superhydrophobic water strider legs. <i>Applied Physics Letters</i> , 2016, 109, .	3.3	23
81	Progresses on the theory and application of quartz crystal microbalance. <i>Applied Physics Reviews</i> , 2016, 3, 031106.	11.3	58
82	Ultralow friction between cemented carbide and graphite in water using three-step ring-on-ring friction test. <i>Wear</i> , 2016, 352-353, 54-64.	3.1	18
83	Elegant Shadow Making Tiny Force Visible for Water-Walking Arthropods and Updated Archimedes’s Principle. <i>Langmuir</i> , 2016, 32, 10522-10528.	3.5	29
84	Soluble, Exfoliated Two-Dimensional Nanosheets as Excellent Aqueous Lubricants. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 32440-32449.	8.0	88
85	Effect of Surface Roughness on the Stick-slip Behavior of Magnetic Field Controlled-dipolar Suspensions in Simple Linear Shear Mode. <i>MATEC Web of Conferences</i> , 2016, 67, 03032.	0.2	1
86	Probing Non-Gaussianity in Confined Diffusion of Nanoparticles. <i>Journal of Physical Chemistry Letters</i> , 2016, 7, 514-519.	4.6	84
87	Adhesion and friction of an isolated gecko setal array: The effects of substrates and relative humidity. <i>Biosurface and Biotribology</i> , 2015, 1, 42-49.	1.5	18
88	Flexible Control and Coupling of Adhesion and Friction of Gecko Setal Array During Sliding. <i>Tribology Online</i> , 2015, 10, 106-114.	0.9	9
89	Stick-slip behavior of magnetorheological fluids in simple linear shearing mode. <i>Rheologica Acta</i> , 2015, 54, 859-867.	2.4	12
90	Shear history effect of magnetorheological fluids. <i>Smart Materials and Structures</i> , 2015, 24, 105030.	3.5	17

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91	A glimpse of superb tribological designs in nature. <i>Biotribology</i> , 2015, 1-2, 11-23.	1.9	31
92	Nanorheology of liquid crystal thin films confined between interfaces with anisotropic molecular orientations. <i>Microfluidics and Nanofluidics</i> , 2015, 18, 1131-1138.	2.2	7
93	Nanofibers: Clumping Criteria of Vertical Nanofibers on Surfaces (<i>Adv. Mater. Interfaces</i> 5/2015). <i>Advanced Materials Interfaces</i> , 2015, 2, .	3.7	1
94	Rectangle-capped and tilted micropillar array for enhanced anisotropic anti-shearing in biomimetic adhesion. <i>Journal of the Royal Society Interface</i> , 2015, 12, 20150090.	3.4	26
95	Effect of concentration and addition of ions on the adsorption of sodium dodecyl sulfate on stainless steel surface in aqueous solutions. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2015, 484, 408-415.	4.7	29
96	Modeling the response of a quartz crystal microbalance under nanoscale confinement and slip boundary conditions. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 7224-7231.	2.8	13
97	Robust self-cleaning and micromanipulation capabilities of gecko spatulae and their bio-mimics. <i>Nature Communications</i> , 2015, 6, 8949.	12.8	124
98	Effects of pH on shear thinning and thickening behaviors of fumed silica suspensions. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2015, 464, 1-7.	4.7	31
99	Effect of Imidazolium Ionic Liquid Additives on Lubrication Performance of Propylene Carbonate under Different Electrical Potentials. <i>Tribology Letters</i> , 2014, 56, 161-169.	2.6	42
100	Biomimetic Bidirectional Switchable Adhesive Inspired by the Gecko. <i>Advanced Functional Materials</i> , 2014, 24, 574-579.	14.9	86
101	Potential-Controlled Boundary Lubrication of Stainless Steels in Non-aqueous Sodium Dodecyl Sulfate Solutions. <i>Tribology Letters</i> , 2014, 53, 17-26.	2.6	29
102	Unexpected shear strength change in magnetorheological fluids. <i>APL Materials</i> , 2014, 2, 096102.	5.1	6
103	Recent advances in gecko adhesion and friction mechanisms and development of gecko-inspired dry adhesive surfaces. <i>Friction</i> , 2013, 1, 114-129.	6.4	137
104	Controllable Interfacial Adhesion Applied to Transfer Light and Fragile Objects by Using Gecko Inspired Mushroom-Shaped Pillar Surface. <i>ACS Applied Materials & Interfaces</i> , 2013, 5, 10137-10144.	8.0	86
105	Boundary layer viscosity of CNT-doped liquid crystals: effects of phase behavior. <i>Rheologica Acta</i> , 2013, 52, 939-947.	2.4	12
106	Bridging nanocontacts to macroscale gecko adhesion by sliding soft lamellar skin supported setal array. <i>Scientific Reports</i> , 2013, 3, 1382.	3.3	45
107	Anisotropic interfacial friction of inclined multiwall carbon nanotube array surface. <i>Carbon</i> , 2012, 50, 5372-5379.	10.3	24
108	Anti-electroviscous effect of near-surface 5CB liquid crystal and its boundary lubrication property. <i>Rheologica Acta</i> , 2012, 51, 267-277.	2.4	13

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109	Tribological properties of oleic acid-modified graphene as lubricant oil additives. <i>Journal Physics D: Applied Physics</i> , 2011, 44, 205303.	2.8	232
110	The Extended Peel Zone Model: Effect of Peeling Velocity. <i>Journal of Adhesion</i> , 2011, 87, 1045-1058.	3.0	22
111	An experimental study on the normal stress of magnetorheological fluids. <i>Smart Materials and Structures</i> , 2011, 20, 085012.	3.5	37
112	Structure Parameter of Electrorheological Fluids in Shear Flow. <i>Langmuir</i> , 2011, 27, 5814-5823.	3.5	67
113	Reversible shear thickening at low shear rates of electrorheological fluids under electric fields. <i>Physical Review E</i> , 2011, 83, 011401.	2.1	39
114	Response Characteristics of the Potential-Controlled Friction of ZrO ₂ /Stainless Steel Tribopairs in Sodium Dodecyl Sulfate Aqueous Solutions. <i>Tribology Letters</i> , 2010, 38, 169-178.	2.6	30
115	A shear thickening phenomenon in magnetic field controlled-dipolar suspensions. <i>Applied Physics Letters</i> , 2010, 97, .	3.3	68
116	Friction at the Liquid/Liquid Interface of Two Immiscible Polymer Films. <i>Langmuir</i> , 2009, 25, 4954-4964.	3.5	30
117	Gecko adhesion pad: a smart surface?. <i>Journal of Physics Condensed Matter</i> , 2009, 21, 464132.	1.8	72
118	Frictional Adhesion of Patterned Surfaces and Implications for Gecko and Biomimetic Systems. <i>Langmuir</i> , 2009, 25, 7486-7495.	3.5	75
119	Adhesion and Friction Force Coupling of Gecko Setal Arrays: Implications for Structured Adhesive Surfaces. <i>Langmuir</i> , 2008, 24, 1517-1524.	3.5	106
120	Peel-Zone Model of Tape Peeling Based on the Gecko Adhesive System. <i>Journal of Adhesion</i> , 2007, 83, 383-401.	3.0	159
121	Transient filamentous network structure of a colloidal suspension excited by stepwise electric fields. <i>Physical Review E</i> , 2007, 75, 011409.	2.1	6
122	Transient surface patterns during adhesion and coalescence of thin liquid films. <i>Soft Matter</i> , 2007, 3, 88-93.	2.7	26
123	Transient Interfacial Patterns and Instabilities Associated with Liquid Film Adhesion and Spreading. <i>Langmuir</i> , 2007, 23, 6126-6135.	3.5	17
124	Adhesion and friction in gecko toe attachment and detachment. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2006, 103, 19320-19325.	7.1	546