Shintaro Itoh

List of Publications by Year
in descending order

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		759233	794594
75	464	12	19
papers	citations	h-index	g-index

76	76	76	285
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Surfactant Adsorption on Single-Crystal Silicon Surfaces in TMAH Solution: Orientation-Dependent Adsorption Detected by In Situ Infrared Spectroscopy. Journal of Microelectromechanical Systems, 2009, 18, 1345-1356.	2.5	57
2	Fiber Wobbling Method for Dynamic Viscoelastic Measurement of Liquid Lubricant Confined in Molecularly Narrow Gaps. Tribology Letters, 2008, 30, 177-189.	2.6	49
3	Enhanced viscoelasticity of polyalphaolefins confined and sheared in submicron-to-nanometer-sized gap range and its dependence on shear rate and temperature. Tribology International, 2018, 120, 210-217.	5.9	21
4	Shear Thinning of Nanometer-Thick Liquid Lubricant Films Measured at High Shear Rates. Tribology Letters, 2014, 53, 555-567.	2.6	19
5	Structure-based coarse-graining for inhomogeneous liquid polymer systems. Journal of Chemical Physics, 2013, 139, 054901.	3.0	17
6	Shear thinning behavior of nanometer-thick perfluoropolyether films confined between corrugated solid surfaces: a coarse-grained molecular dynamics study. Tribology International, 2016, 93, 163-171.	5.9	17
7	ReaxFF Reactive Molecular Dynamics Simulations of Mechano-Chemical Decomposition of Perfluoropolyether Lubricants in Heat-Assisted Magnetic Recording. Journal of Physical Chemistry C, 2020, 124, 22496-22505.	3.1	17
8	Spreading Properties of Monolayer Lubricant Films: Effect of Bonded Molecules. IEEE Transactions on Magnetics, 2009, 45, 5055-5060.	2.1	16
9	Influence of surface roughness and coating on the friction properties of nanometer-thick liquid lubricant films. Wear, 2014, 319, 56-61.	3.1	16
10	An electrostatic actuator for dual-axis micro-mechanical probe on friction force microscope. Sensors and Actuators A: Physical, 2012, 175, 94-100.	4.1	15
11	Motion Picture Imaging of a Nanometer-Thick Liquid Film Dewetting by Ellipsometric Microscopy with a Submicrometer Lateral Resolution. Langmuir, 2008, 24, 11645-11650.	3.5	14
12	Control of Wettability of Molecularly Thin Liquid Films by Nanostructures. Langmuir, 2008, 24, 2921-2928.	3.5	12
13	Diffusive motion of molecules in submonolayer liquid films on a solid surface. Physical Review E, 2005, 72, 061602.	2.1	11
14	Simultaneously Measuring Lateral and Vertical Forces with Accurate Gap Control for Clarifying Lubrication Phenomena at Nanometer Gap. Tribology Letters, 2010, 37, 497-505.	2.6	10
15	Anisotropic Shear Viscosity of Photoaligned Liquid Crystal Confined in Submicrometer-to-Nanometer-Scale Gap Widths Revealed with Simultaneously Measured Molecular Orientation. Langmuir, 2015, 31, 11360-11369.	3.5	10
16	Detection of Asperity Contact for Precise Gap Determination in Thin-Film Nanorheometry. Tribology Letters, 2013, 49, 1-10.	2.6	9
17	Measurement of nanometer-thick lubricating films using ellipsometric microscopy. Tribology International, 2018, 122, 8-14.	5.9	9
18	Effect of Ultraviolet Irradiation on Adhesion of Nanometer-Thick Lubricant Films Coated on Magnetic Disk Surfaces. IEEE Transactions on Magnetics, 2011, 47, 94-99.	2.1	8

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19	Is the trend of Stribeck curves followed by nano-lubrication with molecularly thin liquid lubricant films?. Tribology International, 2018, 119, 82-87.	5.9	8
20	Simultaneous in situ measurements of contact behavior and friction to understand the mechanism of lubrication with nanometer-thick liquid lubricant films. Tribology International, 2018, 127, 138-146.	5.9	8
21	Opposing effects of confinement and confinement-induced shear-thinning on viscoelastic properties of liquid lubricant in nanometer-scale gaps. Tribology International, 2011, 44, 1333-1339.	5.9	7
22	Adhesion Properties of Monolayer Lubricant Films Coated on Magnetic Disk Surfaces: Contributions of Mobile and Bonded Molecules. IEEE Transactions on Magnetics, 2012, 48, 4269-4272.	2.1	7
23	Experimental study of application of molecules with a cyclic head group containing a free radical as organic friction modifiers. Journal of Advanced Mechanical Design, Systems and Manufacturing, 2020, 14, JAMDSM0044-JAMDSM0044.	0.7	7
24	Real-Time Visualization of a Shearing Nanometer-Thick Lubricant Film by Two-Stage Imaging Ellipsometric Microscopy. IEEE Transactions on Magnetics, 2011, 47, 3441-3444.	2.1	6
25	Adhesion Properties of Nanometer-Thick Perfluoropolyether Films Confined Between Solid Surfaces: A Coarse-Grained Molecular Dynamics Study. Tribology Letters, 2013, 51, 479-487.	2.6	6
26	Friction measurements of nanometer-thick lubricant films using ultra-smooth sliding pins treated with gas cluster ion beam. Applied Surface Science, 2013, 280, 619-625.	6.1	6
27	Contributions of Mobile and Bonded Molecules to Dynamic Friction of Nanometer-Thick Perfluoropolyether Films Coated on Magnetic Disk Surfaces. Tribology Letters, 2014, 54, 237-247.	2.6	6
28	Coarse-Grained Molecular Dynamic Simulations of Nanometer-Thick Polar Lubricant Films Sheared Between Solid Surfaces With Random Roughness. IEEE Transactions on Magnetics, 2015, 51, 1-4.	2.1	5
29	Separation of large DNA molecules by size exclusion chromatography-based microchip with on-chip concentration structure. Japanese Journal of Applied Physics, 2016, 55, 06GN01.	1.5	5
30	Measurement of viscoelasticity of UV photoresist used for nanoimprint lithography under confinement in nanometer-sized gaps. Japanese Journal of Applied Physics, 2017, 56, 06GL02.	1.5	5
31	Measurement of Nanorheological Properties of Molecularly Thin Confined Lubricant Film Using Fiber Wobbling Method. Nippon Kikai Gakkai Ronbunshu, C Hen/Transactions of the Japan Society of Mechanical Engineers, Part C, 2004, 70, 841-848.	0.2	4
32	Nonuniform Distribution of Molecularly Thin Lubricant Caused by Inhomogeneous Buried Layers of Discrete Track Media. IEEE Transactions on Magnetics, 2008, 44, 3663-3666.	2.1	4
33	A New Method for Measuring Normal Forces with Accurate Gap Control Using a Microfabricated Quartz Resonator for Lubrication at Nanometer Gaps. Tribology Letters, 2011, 43, 121-128.	2.6	4
34	Simultaneous Measurement of Film Deformation and Friction Force During Shearing of Molecularly Thin Lubricants. IEEE Transactions on Magnetics, 2012, 48, 4455-4458.	2.1	4
35	Measured Viscous and Dry Friction Forces in Nanometer-Thick Lubricant Film by Friction Force Microscopy with Micromechanical Probe. Tribology Letters, 2012, 48, 201-208.	2.6	4
36	Extension of measurement range of lubrication gap shape using vertical-objective-type ellipsometric microscopy with two compensator angles. Tribology International, 2020, 142, 105980.	5.9	4

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37	Effect of transverse dissipative particle dynamics on dynamic properties of nanometer-thick liquid films on solid surfaces. Molecular Simulation, 2020, 46, 1281-1290.	2.0	4
38	Displacement Measurement for High Speed Tribological Measurement Using Oscillating Optical Fiber Probe. Journal of Advanced Mechanical Design, Systems and Manufacturing, 2010, 4, 2-14.	0.7	3
39	Development of a Ball-Suspension Assembly for Measuring Speed-Dependent Friction Characteristics of Thin Lubricant Films Coated on Magnetic Disks. IEEE Transactions on Magnetics, 2014, 50, 1-4.	2.1	3
40	Fabrication of free-standing subwavelength metalâ€“insulatorâ€“metal gratings using high-aspect-ratio nanoimprint techniques. Japanese Journal of Applied Physics, 2016, 55, 06GP20.	1.5	3
41	Adsorbed surfactant thickness on: A Si wafer dominating etching properties of TMAH solution. , 2009, , .		2
42	Coarse-grained molecular dynamics simulations of adhesion on UV-patterned nanometer-thick liquid lubricant films. , 2010, , .		2
43	Nanorheometry of Molecularly Thin Liquid Lubricant Films Coated on Magnetic Disks. Advances in Tribology, 2012, 2012, 1-12.	2.1	2
44	High-Speed Friction Measurements for a Molecularly Thin Lubricant Film Using a Fiber Wobbling Method. IEEE Transactions on Magnetics, 2012, 48, 4467-4470.	2.1	2
45	Effect of Chemically Adsorbed Molecules on the Viscous Friction of Nanometer-Thick Liquid Lubricant Films Coated on a Diamond-Like Carbon Surface. Tribology Letters, 2015, 60, 1.	2.6	2
46	Molecular dynamics simulations of diffusion of submonolayer polar liquid lubricant films on solid surfaces. Microsystem Technologies, 2016, 22, 1285-1290.	2.0	2
47	Optimization of applied voltages for on-chip concentration of DNA using nanoslit. Japanese Journal of Applied Physics, 2017, 56, 127001.	1.5	2
48	Optimizing on-chip concentration of DNA molecules against a nanoslit barrier. Microfluidics and Nanofluidics, 2020, 24, 1.	2.2	2
49	Detection of the Asperity Contact Between Sliding Surfaces by Monitoring the Excitation of Resonant Oscillation Using the Fiber Wobbling Method. , 2007, , .		2
50	Temperature Dependence of the Viscoelastic Properties of a Confined Liquid Polymer Measured by Using an Oscillating Optical Fiber Probe. Japanese Journal of Applied Physics, 2010, 49, 08LB13.	1.5	1
51	Lateral-deflection-controlled friction force microscopy. Journal of Applied Physics, 2014, 116, 084311.	2.5	1
52	Effect of Bonded Molecules on Replenishment of Lubricant-Depleted Area Created by Sliding on Molecularly Thin Lubricant Film. IEEE Transactions on Magnetics, 2015, 51, 1-4.	2.1	1
53	Separation of large DNA molecules by applying pulsed electric field to size exclusion chromatography-based microchip. Japanese Journal of Applied Physics, 2018, 57, 027002.	1.5	1
54	Super-localization of individual fluorophores along a DNA strand in a microchannel. Applied Physics Letters, 2021, 119, 023701.	3.3	1

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55	Validation of correction method for gap shape measurement by vertical-objective-type ellipsometric microscopy with rotating-compensator ellipsometry. Journal of Advanced Mechanical Design, Systems and Manufacturing, 2019, 13, JAMDSM0025-JAMDSM0025.	0.7	1
56	Molecular Conformation and Spreading Mechanism of Monolayer PFPE Lubricant Film. Nippon Kikai Gakkai Ronbunshu, C Hen/Transactions of the Japan Society of Mechanical Engineers, Part C, 2005, 71, 3254-3261.	0.2	0
57	Dynamic Viscoelastic Properties of Confined Polymer Liquids Under Oscillatory Shear Flow. , 2007, , .		0
58	Frequency Dependence of Viscoelasticity of Liquid Lubricant Confined in Nanometer-Scale Gaps. Nippon Kikai Gakkai Ronbunshu, C Hen/Transactions of the Japan Society of Mechanical Engineers, Part C, 2008, 74, 961-969.	0.2	0
59	Dynamic Viscoelastic Measurement of Monolayer Lubricant Films Using an Oscillating Optical Fiber Probe(Mechanical Systems). Nippon Kikai Gakkai Ronbunshu, C Hen/Transactions of the Japan Society of Mechanical Engineers, Part C, 2010, 76, 1716-1727.	0.2	0
60	Coarse-Grained Molecular Dynamics Simulations of UV Patterning of Nanometer-Thick Liquid Lubricant Films(Machine Elements, Design and Manufacturing). Nippon Kikai Gakkai Ronbunshu, C Hen/Transactions of the Japan Society of Mechanical Engineers, Part C, 2010, 76, 1819-1826.	0.2	0
61	Measurement of Lateral and Vertical Forces with Accurate Gap Control for Clarifying Nano-Lubrication Phenomena(Machine Elements, Design and Manufacturing). Nippon Kikai Gakkai Ronbunshu, C Hen/Transactions of the Japan Society of Mechanical Engineers, Part C, 2010, 76, 717-726.	0.2	0
62	Finite element analysis on crosstalk effect of dual-axis micro-mechanical probe for friction force microscope. , 2010, , .		0
63	Vertical-objective-based ellipsometric microscope for backside illuminated real-time visualization of nm-thick lubricant films. , 2011, , .		0
64	Numerical model for DNA size separation using nanostructured matrix. , 2012, , .		0
65	Design principle of micromechanical probe with an electrostatic actuator for friction force microscopy. Microsystem Technologies, 2013, 19, 1567-1572.	2.0	0
66	Surface functionalization by fine ultraviolet-patterning of nanometer-thick liquid lubricant films. Applied Surface Science, 2014, 320, 102-111.	6.1	0
67	Reduction of viscous friction by photoaligned liquid crystals at interface. , 2015, , .		0
68	Atmospheric vapor phase deposition of nanometer-thick anti-stiction fluoropolymer coatings for silicon surfaces. Japanese Journal of Applied Physics, 2016, 55, 06GP10.	1.5	0
69	Design principle of micro-mechanical probe for lateral-deflection-controlled friction force microscopy. Microsystem Technologies, 2016, 22, 1181-1188.	2.0	0
70	Measurement of Temperature Dependence of Lubricant Viscosity in Nano Gaps by Fiber Wobbling Method Combined With Laser Heating. , 2018, , .		0
71	MEMS-Based Micro Probe Incorporating Electrostatic Actuator Towards Friction Force Microscopy With Accurate Gap Control. , 2018, , .		0
72	Possibility of Mechano-Chemical Decomposition of Perfluoropolyether Lubricants in Heat-Assisted Magnetic Recording: A Molecular Dynamics Study. , 2018, , .		0

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73	Coarse-Grained Molecular Dynamics Simulation of Fatty Acid Additives in Lubricating Oil Sheared by Corrugated Solid Surfaces. , 2018, , .		0
74	Simultaneous Measurements of Friction Forces and Contact Areas During Shearing of Nanometer-Thick Liquid Lubricant Films. , 2012, , .		0
75	Measurement of escape time of concentrated DNA molecules in front of a nanogap. Applied Physics Express, 2021, 14, 015001.	2.4	0