

# Shojiro Miyake

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/1251312/publications.pdf>

Version: 2024-02-01

122  
papers

1,495  
citations

361296

20  
h-index

414303

32  
g-index

123  
all docs

123  
docs citations

123  
times ranked

793  
citing authors

#	ARTICLE	IF	CITATIONS
1	Improvement of boundary lubrication properties of diamond-like carbon (DLC) films due to metal addition. Tribology International, 2004, 37, 751-761.	3.0	91
2	Oriented hydrocarbons transferred from a high performance lubricative amorphous C:H:Si film during sliding in a vacuum. Applied Physics Letters, 1990, 56, 1868-1870.	1.5	87
3	Friction and Wear Behavior of Hard Carbon Films. ASLE Transactions, 1987, 30, 121-127.	0.6	86
4	1 nm deep mechanical processing of muscovite mica by atomic force microscopy. Applied Physics Letters, 1995, 67, 2925-2927.	1.5	68
5	Tribological properties of cubic, amorphous and hexagonal boron nitride films. Surface and Coatings Technology, 1991, 49, 406-410.	2.2	56
6	Friction properties of co-sputtered sulfide/DLC solid lubricating films. Surface and Coatings Technology, 2006, 200, 5849-5854.	2.2	51
7	Sliding life enhancement of a WS <sub>2</sub> sputtered film by ion beam mixing. Applied Physics Letters, 1985, 47, 683-685.	1.5	46
8	Atomic-scale wear properties of muscovite mica evaluated by scanning probe microscopy. Applied Physics Letters, 1994, 65, 980-982.	1.5	43
9	Improvement of mechanical properties of nanometer period multilayer films at interfaces of each layer. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2003, 21, 785.	1.6	35
10	Surface morphology and mechanical properties of nanoscale TiAlN/SiN <sub>x</sub> multilayer coating deposited by reactive magnetron sputtering. Surface and Coatings Technology, 2008, 203, 171-179.	2.2	27
11	Fabrication of Silicon Utilizing Mechanochemical Local Oxidation by Diamond Tip Sliding. Japanese Journal of Applied Physics, 2001, 40, L1247-L1249.	0.8	26
12	Low-Friction and Long-Life Solid Lubricant Films Structured of Nanoperiod Tungsten Disulfide and Molybdenum Disulfide Multilayer. Japanese Journal of Applied Physics, 2004, 43, 4338-4343.	0.8	25
13	Solid lubricating fluorine-containing polymer film synthesized by perfluoropolyether sputtering. Thin Solid Films, 1988, 158, 51-60.	0.8	24
14	Nanoprocessing of silicon by mechanochemical reaction using atomic force microscopy and additional potassium hydroxide solution etching. Nanotechnology, 2005, 16, 149-157.	1.3	24
15	CVD diamond, DLC, and c-BN coatings for solid film lubrication. Tribology Letters, 1998, 5, 123-129.	1.2	23
16	Silicon Nanofabrication by Atomic Force Microscopy-Based Mechanical Processing. Journal of Nanotechnology, 2014, 2014, 1-19.	1.5	23
17	Sliding Bearing Lubricated with Ferromagnetic Fluid. ASLE Transactions, 1985, 28, 461-466.	0.6	21
18	Nanomechanical and boundary lubrication properties of titanium carbide and diamond-like carbon nanoperiod multilayer and nanocomposite films. Surface and Coatings Technology, 2013, 221, 124-132.	2.2	21

#	ARTICLE	IF	CITATIONS
19	Small-Angle Oscillatory Performance of Solid-Lubricant Film-Coated Ball Bearings for Vacuum Applications. ASLE Transactions, 1987, 30, 248-253.	0.6	20
20	Lubricating performance enhancement of amorphous silicon carbide film by annealing effects and microbeam analyses of the tribological interface. Journal of Applied Physics, 1989, 66, 596-604.	1.1	20
21	Surface morphology and tribological properties of DC sputtered nanoscale multilayered TiAlN/CN <sub>x</sub> coatings. Tribology International, 2014, 73, 36-46.	3.0	20
22	Nanoprocessing of Carbon and Boron Nitride Nanoperiod Multilayer Films. Japanese Journal of Applied Physics, 2003, 42, L322-L325.	0.8	19
23	Tribology of carbon nitride and boron nitride nanoperiod multilayer films and its application to nanoscale processing. Thin Solid Films, 2005, 493, 160-169.	0.8	19
24	Nanotribological properties of perfluoropolyether-coated magnetic disk evaluated by vertical and lateral vibration wear tests. Surface and Coatings Technology, 2006, 200, 6137-6154.	2.2	19
25	Optical properties of cubic boron nitride films made by a reactive ion plating method. Thin Solid Films, 1993, 226, 82-86.	0.8	18
26	Tribological Improvement of Ag Films by Ion Beam Enhanced Deposition. Journal of Tribology, 1988, 110, 64-68.	1.0	17
27	Tribological Behavior of Cubic Boron Nitride Film Sliding Against Diamond. Journal of Tribology, 1995, 117, 629-633.	1.0	17
28	Microtribological properties of B <sub>4</sub> C extremely thin protective films deposited on plasma pretreated magnetic layers. Surface and Coatings Technology, 2005, 195, 214-226.	2.2	17
29	Deposition and tribology of carbon and boron nitride nanoperiod multilayer solid lubricating films. Surface and Coatings Technology, 2007, 202, 1023-1028.	2.2	17
30	Nanoscratch properties of extremely thin diamond-like carbon films. Wear, 2013, 305, 69-77.	1.5	17
31	Nanotribology properties of extremely thin diamond-like carbon films at high temperatures with and without vibration. Wear, 2013, 300, 189-199.	1.5	17
32	Extension of bearing endurance life by ion implantation. Applied Physics Letters, 1986, 49, 779-781.	1.5	16
33	Ultraviolet light irradiation of a radiofrequency plasma applied to fluoropolymer sputtering deposition. Journal of Applied Physics, 1988, 64, 2700-2705.	1.1	16
34	Analytical and experimental investigations for satellite antenna deployment mechanisms. Journal of Spacecraft and Rockets, 1989, 26, 181-187.	1.3	16
35	Mechanical Properties of Extremely Thin B <sub>4</sub> C Protective Layer Deposited With Helium Addition. Japanese Journal of Applied Physics, 2004, 43, 3566-3571.	0.8	16
36	Increase of nanometer-scale wear of polished chemical-vapor-deposited diamond films due to nitrogen ion implantation. Nuclear Instruments & Methods in Physics Research B, 1996, 108, 70-74.	0.6	15

#	ARTICLE	IF	CITATIONS
37	Laser-assisted thermochemical processing of diamond. Applied Physics Letters, 1994, 64, 387-389.	1.5	14
38	Mechanical Nanoprocessing of Layered Crystal Structure Materials by Atomic Force Microscopy. Japanese Journal of Applied Physics, 2002, 41, 5706-5712.	0.8	14
39	Increase and Decrease of Etching Rate of Silicon due to Diamond Tip Sliding by Changing Scanning Density. Japanese Journal of Applied Physics, 2002, 41, L1116-L1119.	0.8	14
40	Amplitude Dependence of the Lateral-Vibration Wear Test for Perpendicular Recording Magnetic Disks Treated by Heat Curing. Japanese Journal of Applied Physics, 2005, 44, 3209-3217.	0.8	14
41	Boundary Lubrication Characteristic of Metal-Containing Diamond-Like Carbon (DLC) Films with Poly Alpha Olefin (PAO) Lubricant. Tribology Online, 2008, 3, 310-315.	0.2	14
42	Boundary Lubrication Properties of Nanoperiod Solid Lubricant Multilayer Films Composed of Diamond-Like Carbon and Gold Layers. Tribology Letters, 2012, 46, 1-9.	1.2	14
43	Regression Analysis of the Effect of Bias Voltage on Nano- and Macrotribological Properties of Diamond-Like Carbon Films Deposited by a Filtered Cathodic Vacuum Arc Ion-Plating Method. Journal of Nanomaterials, 2014, 2014, 1-13.	1.5	14
44	Effects of N+ ion implantation into cubic BN film for tribological usages. Surface and Coatings Technology, 1993, 62, 558-563.	2.2	13
45	Nanoprocessing of layered crystalline materials by atomic force microscopy. Nanoscale Research Letters, 2015, 10, 123.	3.1	13
46	Friction properties of surface-modified polished chemical-vapor-deposited diamond films under boundary lubrication with water and poly-alpha olefin. Tribology International, 2016, 102, 287-296.	3.0	13
47	Friction Durability of Extremely Thin Diamond-Like Carbon Films at High Temperature. Materials, 2017, 10, 159.	1.3	12
48	Nanometer-scale Mechanical Processing of Muscovite Mica by Atomic Force Microscope.. Journal of the Japan Society for Precision Engineering, 1997, 63, 426-430.	0.0	11
49	Nanoprocessing and evaluation of carbon and boron nitride nanoperiod multilayer films by lateral force modulation method. Surface and Interface Analysis, 2006, 38, 873-878.	0.8	11
50	Microprotuberance Processing of Silicon by Diamond Tip Scanning.. Journal of the Japan Society for Precision Engineering, 1999, 65, 1788-1792.	0.0	10
51	High lubrication performance of tribologically oriented fluoropolymer molecules analyzed by polarized infrared microspectroscopy. Journal of Applied Physics, 1990, 67, 4083-4089.	1.1	9
52	Modification of nanometer scale wear of nitrogen-containing carbon films due to ion implantation. Nuclear Instruments & Methods in Physics Research B, 1997, 122, 643-649.	0.6	9
53	Lubricant Supply from Crystal Boundaries of Perpendicular Magnetic Disk Evaluated by Lateral Modulation Friction Force Microscopy. Japanese Journal of Applied Physics, 2004, 43, L1469-L1471.	0.8	9
54	Lubricant State Evaluation of Ultraviolet-Irradiated Magnetic Disk Using Lateral Friction Force Modulation Microscopy with Electric Current Distribution. Japanese Journal of Applied Physics, 2005, 44, L299-L302.	0.8	9

#	ARTICLE	IF	CITATIONS
55	Deposition and tribological properties of multilayer and mixed films composed of gold and polytetrafluoroethylene. <i>Thin Solid Films</i> , 2013, 527, 210-221.	0.8	8
56	Evaluation of protuberance and groove formation in extremely thin DLC films on Si substrates due to diamond tip sliding by atomic force microscopy. <i>Wear</i> , 2014, 318, 135-144.	1.5	8
57	Crystallinity and hardness of B-implanted Fe. <i>Applied Physics Letters</i> , 1988, 52, 1469-1471.	1.5	7
58	Optical emission studies on the interaction between halogenated carbon species and noble gas during fluoropolymer sputtering. <i>Journal of Applied Physics</i> , 1989, 65, 4639-4645.	1.1	7
59	Surface microanalytical study on the tribological interface between the sputtered fluoropolymer film and a sliding ball. <i>Journal of Applied Physics</i> , 1989, 65, 767-774.	1.1	7
60	Magnetic condensation of a photoexcited plasma during fluoropolymer sputtering. <i>Journal of Applied Physics</i> , 1990, 67, 2093-2099.	1.1	7
61	Mechanical Processing of Standard Rulers with One-Nanometer Depth of Muscovite Mica Using an Atomic Force Microscope.. <i>Journal of the Japan Society for Precision Engineering</i> , 1999, 65, 570-574.	0.0	7
62	Low friction wear resistant electroconductive gold and silver nanoperiod multilayer solid lubricant films. <i>Tribology - Materials, Surfaces and Interfaces</i> , 2011, 5, 114-120.	0.6	7
63	Effect of High Energy Ion Bombardment on the Tribological Properties of WS <sub>2</sub> Sputtered Films. <i>Journal of Tribology</i> , 1988, 110, 621-627.	1.0	6
64	Oxidativ wear in boron-implanted Fe. <i>Nuclear Instruments &amp; Methods in Physics Research B</i> , 1989, 39, 540-543.	0.6	6
65	Nanometer Scale Protuberance and Groove Processing of Silicon by Mechano-chemical Action and Its Application of Etching Mask.. <i>Journal of the Japan Society for Precision Engineering</i> , 2002, 68, 695-699.	0.0	6
66	Nanometer Scale Mechanical Properties of DLC Films Deposited by Filtered Cathodic Vadilum Arc Ion-plating Method (FCVA). <i>Hyomen Gijutsu/Journal of the Surface Finishing Society of Japan</i> , 2004, 55, 669-676.	0.1	6
67	Deposition and Tribology of Carbon and Boron Nitride Super Lattice Solid Lubricant Films. <i>JSME International Journal Series C-Mechanical Systems Machine Elements and Manufacturing</i> , 2004, 47, 377-383.	0.3	6
68	Deposition and Tribology of Electroconductive and Wear-Resistant Nanocomposite Solid Lubricant Films Composed of Carbon and Silver or Gold. <i>Tribology Letters</i> , 2016, 61, 1.	1.2	6
69	Tribological behavior of C-F bonds in plasma-synthesized fluoropolymers analyzed by polarized infrared microspectroscopy. <i>Journal of Applied Physics</i> , 1991, 70, 2618-2622.	1.1	5
70	Deposition technique and tribological properties of cubic BN. <i>Vacuum</i> , 1994, 45, 1009-1011.	1.6	5
71	Boundary Lubrication Properties of Diamond and Surface-Modified Diamond Films With Various Water Solutions. <i>Tribology Series</i> , 2000, 38, 559-568.	0.1	5
72	Frictional behavior of cubic BN films sliding against DLC. <i>Tribology International</i> , 2004, 37, 923-927.	3.0	5

#	ARTICLE	IF	CITATIONS
73	Nanofabrication by mechanical and electrical processes using electrically conductive diamond tip. Journal of Vacuum Science & Technology B, 2008, 26, 1660.	1.3	5
74	ãfŠãfŽã“æœŸç©â±è†œã®æ’©è€—ç%°1æ€Šã,æ’ç”ã—ãŸãfŠãfŽãŠã·æŠ€è¡“ã®é—ç™º. Journal of the Japan Society for Precision Engi	0.1	1
75	Characteristics of a Ferromagnetic Linear Vacuum Seal. ASLE Transactions, 1985, 28, 358-363.	0.6	4
76	Effects of target temperature on crystallinity and hardness of B+â€ implanted Fe. Journal of Applied Physics, 1988, 64, 6241-6245.	1.1	4
77	Amorphous C:Si:F(Cl):Na film with metal-like conductivity. Synthetic Metals, 1992, 46, 93-104.	2.1	4
78	Dependence of the friction durability of extremely thin diamond-like carbon films on film thickness. Wear, 2016, 356-357, 66-76.	1.5	4
79	Dust Generation Properties of Solid Lubricant Film Coated and Perfluoropolyether Lubricated Ball Bearings. Journal of Tribology, 2000, 122, 796-802.	1.0	3
80	Surface Modification of Magnetic Recording Layer by Low Energy Beam Irradiation.. Hyomen Gijutsu/Journal of the Surface Finishing Society of Japan, 2002, 53, 939-944.	0.1	3
81	Dynamic Deformation Properties of the PFPE Coated Hard Disk Evaluated by Force Modulation Method. Hyomen Gijutsu/Journal of the Surface Finishing Society of Japan, 2003, 54, 471-476.	0.1	3
82	Micro-tribological properties of heat treated hard disk evaluated by force modulation method. Microsystem Technologies, 2005, 11, 1138-1145.	1.2	3
83	Realization of Nanometer-scale Processing by Fluorocarbon Plasma Treatment of Polycarbonate and Its Potential Application to High-Density Memory. IEEJ Transactions on Sensors and Micromachines, 2001, 121, 564-570.	0.0	3
84	ã¼®ç²’ãf€ã,ãfãfçãf³ãf%çŸã«ã,ã,ã,ãfã,ãf³ã,ã,ãfã®æ€ç”ã%Š. Journal of the Japan Society of Precision Engineering, 1982	0.0	0
85	Trend of Diamondlike-carbon Film. Shinku/Journal of the Vacuum Society of Japan, 2004, 47, 811-819.	0.2	3
86	Dry Cleaning of Si Surface Contamination by Reactive Sputter Etching. Japanese Journal of Applied Physics, 1982, 21, 529-533.	0.8	2
87	Applications of magnetic fluid seals to vacuum.. Shinku/Journal of the Vacuum Society of Japan, 1985, 28, 483-493.	0.2	2
88	Deposition and Microtribology of Carbon Nitride and Boron Nitride Super Lattice Films.. Nippon Kikai Gakkai Ronbunshu, C Hen/Transactions of the Japan Society of Mechanical Engineers, Part C, 1999, 65, 4496-4501.	0.2	2
89	Nano Protuberance and Groove Processing of Silicon by Diamond Tip Sliding. IEEJ Transactions on Sensors and Micromachines, 2000, 120, 350-356.	0.0	2
90	Influence on Microstructure of BCN Films by Thermal Annealing in Air. Hyomen Gijutsu/Journal of the Surface Finishing Society of Japan, 2006, 57, 722-726.	0.1	2



#	ARTICLE	IF	CITATIONS
109	Nano- and Macrotribological Properties of Nanoperiod Multilayer Films Deposited by Bias Sputtering. Journal of Nanotechnology, 2012, 2012, 1-16.	1.5	0
110	Repeatable change in electrical resistance of Si surface by mechanical and electrical nanoprocessing. Nanoscale Research Letters, 2014, 9, 455.	3.1	0
111	Tribology of Thin Films. Hyomen Gijutsu/Journal of the Surface Finishing Society of Japan, 2015, 66, 390-396.	0.1	0
112	Creation of Solid Lubricant Films by Nanostructure Control. Journal of the Vacuum Society of Japan, 2015, 58, 203-208.	0.3	0
113	Improving the Friction Durability of Magnetic Head-Disk Interfaces by Thin Lubricant Films. Journal of Nanomaterials, 2016, 2016, 1-15.	1.5	0
114	Mechanical Nanoprocessing and Nanoviscoelasticity of Surface- Modified Polycarbonate. , 2017, , .		0
115	Surface Morphology and Tribological Properties of Nanoscale (Ti, Al, Si, C)N Multilayer Coatings Deposited by Reactive Magnetron Sputtering. , 2018, , .		0
116	Evaluation of Friction Durability of Extremely Thin Diamond-Like Carbon Films by Statistical Cluster and Regression Analyses of Friction Coefficient. Tribology Online, 2021, 16, 113-124.	0.2	0
117	Shinku/Journal of the Vacuum Society of Japan, 2017, 50, 1-10.		0
118	P-MNS-02 VIBRATION PROCESSING AND PROCESSED SURFACE EVALUATION OF NANOPERIOD MULTILAYER FILMS BY ATOMIC FORCE MICROSCOPY(Micro/Nanosystem Science and Technology,Technical Program) Tj ETQq0 0 0 rgBT /Overlock 10 Information and Precision Equipment IIP/ISPS Joint. MIPE, 2009, 2009, 419-420.		0
119	Evaluation of Nanomechanical Properties of Diamond-like Carbon Films. Journal of Surface Analysis (Online), 2013, 20, 8-17.	0.1	0
120	State of the art of surface modification processing.. Journal of the Japan Society for Precision Engineering, 1987, 53, 1503-1506.	0.0	0
121	Bearing for clean circumstances.. Journal of the Japan Society for Precision Engineering, 1991, 57, 599-604.	0.0	0
122	Ultra-solid-lubrication. Extremely Low Friction Properties of Super Hard Films.. Journal of the Japan Society for Precision Engineering, 1995, 61, 187-192.	0.0	0