

# Yoshinori Sawae

## List of Publications by Year in descending order

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Version: 2024-02-01

82  
papers

663  
citations

567281

15  
h-index

580821

25  
g-index

83  
all docs

83  
docs citations

83  
times ranked

540  
citing authors

#	ARTICLE	IF	CITATIONS
1	Evaluation of a superior lubrication mechanism with biphasic hydrogels for artificial cartilage. Tribology International, 2015, 89, 19-26.	5.9	56
2	Influence of synovia constituents on tribological behaviors of articular cartilage. Friction, 2013, 1, 150-162.	6.4	52
3	Study on Wear Reduction Mechanisms of Artificial Cartilage by Synergistic Protein Boundary Film Formation. JSME International Journal Series C-Mechanical Systems Machine Elements and Manufacturing, 2005, 48, 555-561.	0.3	48
4	Analysis of biphasic lubrication of articular cartilage loaded by cylindrical indenter. Tribology International, 2012, 46, 225-236.	5.9	48
5	Superior lubricity in articular cartilage and artificial hydrogel cartilage. Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology, 2014, 228, 1099-1111.	1.8	43
6	Achieving a Carbon Neutral Future through Advanced Functional Materials and Technologies. Bulletin of the Chemical Society of Japan, 2022, 95, 73-103.	3.2	39
7	Importance of adaptive multimode lubrication mechanism in natural synovial joints. Tribology International, 2017, 113, 306-315.	5.9	33
8	Biphasic and boundary lubrication mechanisms in artificial hydrogel cartilage: A review. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2015, 229, 864-878.	1.8	29
9	Improved wear resistance of functional diamond like carbon coated Ti-6Al-4V alloys in an edge loading conditions. Journal of the Mechanical Behavior of Biomedical Materials, 2016, 59, 586-595.	3.1	29
10	Effects of loading angles on stick-slip dynamics of soft sliders. Extreme Mechanics Letters, 2016, 9, 331-335.	4.1	27
11	Running-in friction of hip joint replacements can be significantly reduced: The effect of surface-textured acetabular cup. Friction, 2020, 8, 1137-1152.	6.4	26
12	Study on the Mechanisms of Wear Reduction of Artificial Cartilage through in Situ Observation on Forming Protein Boundary Film. Tribology Online, 2007, 2, 114-119.	0.9	22
13	Depth-Dependence and Time-Dependence in Mechanical Behaviors of Articular Cartilage in Unconfined Compression Test under Constant Total Deformation. Journal of Biomechanical Science and Engineering, 2008, 3, 209-220.	0.3	21
14	Protective Mechanism of Articular Cartilage to Severe Loading: Roles of Lubricants, Cartilage Surface Layer, Extracellular Matrix and Chondrocyte. JSME International Journal Series C-Mechanical Systems Machine Elements and Manufacturing, 2003, 46, 594-603.	0.3	16
15	Superior lubrication mechanism in poly(vinyl alcohol) hybrid gel as artificial cartilage. Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology, 2017, 231, 1160-1170.	1.8	16
16	Effect of radiation dose on depth-dependent oxidation and wear of shelf-aged gamma-irradiated ultra-high molecular weight polyethylene (UHMWPE). Tribology International, 2015, 89, 78-85.	5.9	14
17	Topology and Toughening of Sparse Elastic Networks. Physical Review Letters, 2020, 124, 068002.	7.8	14
18	Influence of Proteoglycan on Time-Dependent Mechanical Behaviors of Articular Cartilage under Constant Total Compressive Deformation. JSME International Journal Series C-Mechanical Systems Machine Elements and Manufacturing, 2004, 47, 1049-1055.	0.3	13

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19	Effects of Lubricant Composition on Adsorption Behavior of Proteins on Rubbing Surface and Stability of Protein Boundary Film. <i>Tribology Online</i> , 2008, 3, 238-242.	0.9	10
20	Evaluation of Wear Property of PVA Hydrogel as Artificial Cartilage and Effect of Protein Film on Wear-Resistant Property. <i>Nippon Kikai Gakkai Ronbunshu, C Hen/Transactions of the Japan Society of Mechanical Engineers, Part C</i> , 2004, 70, 2780-2787.	0.2	9
21	Propagation of Fatigue Cracks in Friction of Brittle Hydrogels. <i>Gels</i> , 2018, 4, 53.	4.5	9
22	The relations between wear behavior and basic material properties of graphene-based materials reinforced ultrahigh molecular weight polyethylene. <i>Polymers for Advanced Technologies</i> , 2021, 32, 4263-4281.	3.2	8
23	Influence of Phospholipid and Protein Constituents on Tribological Properties of Artificial Hydrogel Cartilage Material. <i>Journal of Biomechanical Science and Engineering</i> , 2013, 8, 257-267.	0.3	7
24	The need for polishing and occlusal adjustment of zirconia prostheses for wear on antagonist teeth. <i>Dental Materials Journal</i> , 2021, 40, 650-656.	1.8	7
25	New Experiment System for Sliding Tests in Hydrogen and Surface Analysis with Transfer Vessel. <i>Tribology Online</i> , 2009, 4, 82-87.	0.9	7
26	Transitional behaviour between biphasic lubrication and soft elastohydrodynamic lubrication of poly(vinyl alcohol) hydrogel using microelectromechanical system pressure sensor. <i>Biosurface and Biotribology</i> , 2018, 4, 24-33.	1.5	6
27	Subsonic to Intersonic Transition in Sliding Friction for Soft Solids. <i>Physical Review Letters</i> , 2020, 124, 238001.	7.8	6
28	In Vitro Assessment of the Effect of Implant Position on Biomechanical Behaviors of Implant-Supported Removable Partial Dentures in Kennedy Class II Condition. <i>Materials</i> , 2021, 14, 2145.	2.9	6
29	The effective design of zirconia coping on titanium base in dental implant superstructure. <i>Dental Materials Journal</i> , 2018, 37, 237-243.	1.8	5
30	Evaluation of influence of changes in permeability with aging on friction and biphasic behaviors of artificial hydrogel cartilage. <i>Biotribology</i> , 2021, 26, 100178.	1.9	5
31	EFFECTS OF PHYSIOLOGICAL FACTORS ON WEAR OF UHMWPE FOR JOINT PROSTHESIS. , 2009, , 195-226.		4
32	Finite Element Analyses of Articular Cartilage Models Considering Depth-Dependent Elastic Modulus and Collagen Fiber Network. <i>Journal of Biomechanical Science and Engineering</i> , 2010, 5, 437-448.	0.3	4
33	An estimation of mechanical properties of articular cartilage for biphasic finite element analyses. <i>Journal of Biomechanical Science and Engineering</i> , 2015, 10, 15-00228-15-00228.	0.3	4
34	Influence of Different Counterfaces on Tribological Behaviors of Al <sub>2</sub> O <sub>3</sub> Nanocomposites for Joint Prostheses. <i>Tribology Online</i> , 2009, 4, 127-130.	0.9	3
35	Effects of surface wettability and thermal conductivity on the wear performance of ultrahigh molecular weight polyethylene/graphite and ultrahigh molecular weight polyethylene/graphene oxide composites. <i>Polymers for Advanced Technologies</i> , 2022, 33, 1916-1932.	3.2	3
36	Influence of Ascorbic acid (AsA) Concentration in Culture Medium on Mechanical Property of Regenerated Cartilage. <i>Journal of Environment and Engineering</i> , 2011, 6, 416-425.	0.2	2

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37	Biomimetic artificial cartilage: fibre reinforcement of PVA hydrogel to promote biphasic lubrication mechanism. Biosurface and Biotribology, 2019, 5, 13-19.	1.5	2
38	On/off switching of adhesion in gecko inspired adhesives. Biosurface and Biotribology, 2021, 7, 83-89.	1.5	2
39	OS2-1-3 IN SITU OBSERVATION OF FORMING BOUNDARY FILM COMPOSED OF SYNOVIA CONSTITUENTS ON RUBBING SURFACE OF ARTIFICIAL CARTILAGE MATERIAL. The Abstracts of ATEM International Conference on Advanced Technology in Experimental Mechanics Asian Conference on Experimental Mechanics, 2007, 2007.6. OS2-1-3-1- OS2-1-3-5.	0.0	2
40	Tribological Characteristics of Al <sub>2</sub> O <sub>3</sub> Nanocomposites for Joint Prostheses. Journal of Biomechanical Science and Engineering, 2008, 3, 356-367.	0.3	1
41	Influence of Elastic Recovery of Machining Surface Asperities on the Contact Stress and Plastic Strain of Polyethylene Tibial Insert in Virgin Knee Prosthesis. Tribology Online, 2016, 11, 320-325.	0.9	1
42	Relationship between dynamic stress field and ECM production in regenerated cartilage tissue. , 2016, , .		1
43	GS8-4 Effect of eluted poly (vinyl alcohol) (PVA) molecules in water lubricant on total wear amount of PVA hydrogel(GS8: Artificial Organs and Biomaterials). The Proceedings of the Asian Pacific Conference on Biomechanics Emerging Science and Technology in Biomechanics, 2015, 2015.8, 201.	0.0	1
44	Wear of UHMWPE for Joint Prosthesis. , 2018, , 81-109.		1
45	Development of Forearm Models Based on Human Musculoskeletal System. Journal of Biomechanical Science and Engineering, 2009, 4, 153-164.	0.3	0
46	Bio-inspired Tribology. Nippon Gomu Kyokaishi, 2015, 88, 55-59.	0.0	0
47	Influence of microscopic machining grooves on the wear behavior of UHMWPE tibial insert in virgin knee prosthesis. Transactions of the Materials Research Society of Japan, 2015, 40, 129-132.	0.2	0
48	F-0923 Contact Analysis of UHMWPE Tibial Component based on Geometrical Measurement for Retrieved Knee Prosthesis. The Proceedings of the JSME Annual Meeting, 2001, IV.01.1, 71-72.	0.0	0
49	Influence of Screw Holes in Tibial Tray on Wear of UHMWPE in Knee Prosthesis. The Proceedings of the JSME Annual Meeting, 2002, 2002.1, 65-66.	0.0	0
50	A Study on Cold Flow of UHMWPE in Knee Prosthesis. The Proceedings of the Bioengineering Conference Annual Meeting of BED/JSME, 2003, 2003.15, 259-260.	0.0	0
51	Evaluation of wear characteristics of ultra-high molecular weight polyethylene for artificial joint prosthesis and effect of gamma irradiation(Orthopaedic Biomechanics). The Proceedings of the Asian Pacific Conference on Biomechanics Emerging Science and Technology in Biomechanics, 2004, 2004.1, 169-170.	0.0	0
52	Time-dependent and Depth-dependent Deformation of Biphasic Articular Cartilage under Constant Total Compressive Deflection(Micro- and Nano-biomechanics). The Proceedings of the Asian Pacific Conference on Biomechanics Emerging Science and Technology in Biomechanics, 2004, 2004.1, 213-214.	0.0	0
53	Influence of Initial Cell Density on Mechanical Property of Cultured Chondrocytes-Agarose Construct(Micro- and Nano-biomechanics). The Proceedings of the Asian Pacific Conference on Biomechanics Emerging Science and Technology in Biomechanics, 2004, 2004.1, 217-218.	0.0	0
54	A Development of Joint Mechanism of Robot Arm Based on Human Shoulder Morphology(Musculo-Skeletal Mechanics). The Proceedings of the Asian Pacific Conference on Biomechanics Emerging Science and Technology in Biomechanics, 2004, 2004.1, 151-152.	0.0	0

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55	Effect of Protein Boundary Film on Wear Reduction of Artificial Cartilage(Orthopaedic) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 74 and Technology in Biomechanics, 2004, 2004.1, 173-174.	0.0	0
56	P-24 DEVELOPMENT OF AN ARM MODEL WITH A BIONIC ELBOW JOINT. The Proceedings of the Asian Pacific Conference on Biomechanics Emerging Science and Technology in Biomechanics, 2007, 2007.3, S112.	0.0	0
57	ROLES OF ADSORBED FILM IN HYDRATION LUBRICATION FOR ARTICULAR CARTILAGE(1A1 Micro & Nano) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 74 and Technology in Biomechanics, 2007, 2007.3, S7.	0.0	0
58	OS7-3-1 Cyclic loading test of dental implant with mastication simulator. The Abstracts of ATEM International Conference on Advanced Technology in Experimental Mechanics Asian Conference on Experimental Mechanics, 2007, 2007.6, _OS7-3-1-1-_OS7-3-1-4.	0.0	0
59	FINITE ELEMENT ANALYSIS OF CARTILAGE CONSIDERING THE DEPTH DEPENDENCE AND TIME DEPENDENCE OF YOUNG'S MODULUS UNDER CONSTANT TOTAL COMPRESSIVE DEFORMATION(1E1 Computational) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 74 and Technology in Biomechanics, 2007, 2007.3, S79.	0.0	0
60	OS2-1-5 Experimental characterization of regenerated cartilage model cultured under cyclic compression. The Abstracts of ATEM International Conference on Advanced Technology in Experimental Mechanics Asian Conference on Experimental Mechanics, 2007, 2007.6, _OS2-1-5-1-_OS2-1-5-6.	0.0	0
61	746 The difference between confined and unconfined compression of articular cartilage using microscopic testing machine. The Proceedings of the JSME Annual Meeting, 2008, 2008.5, 7-8.	0.0	0
62	1P1-D02 Development of the shoulder robotic orthosis for stroke rehabilitation. The Proceedings of JSME Annual Conference on Robotics and Mechatronics (Robomec), 2008, 2008, _1P1-D02_1-_1P1-D02_4.	0.0	0
63	418 Three-dimensional finite element modeling and stress analysis of overdentures using dental implants. The Proceedings of the Bioengineering Conference Annual Meeting of BED/JSME, 2008, 2007.20, 157-158.	0.0	0
64	640 Development of the shoulder robotic orthosis for stroke rehabilitation. The Proceedings of the Bioengineering Conference Annual Meeting of BED/JSME, 2008, 2007.20, 439-440.	0.0	0
65	Biomechanical Aspects of Natural Articular Cartilage and Regenerated Cartilage. , 2008, , .		0
66	J42 Effects of cyclic shear loading on mechanical characteristics of tissue-engineered cartilage. The Proceedings of Conference of Kyushu Branch, 2009, 2009.62, 315-316.	0.0	0
67	J31 Friction and wear properties of Surface-engineered metal-on-metal bearings. The Proceedings of Conference of Kyushu Branch, 2009, 2009.62, 303-304.	0.0	0
68	0917 Development of Robotic Orthosis and Kinesiologic Measurement for Stroke Rehabilitation. The Proceedings of the Bioengineering Conference Annual Meeting of BED/JSME, 2010, 2009.22, 159.	0.0	0
69	S1105-2-3 Effect of hydrogen environment on friction and wear of PTFE. The Proceedings of the JSME Annual Meeting, 2010, 2010.4, 193-194.	0.0	0
70	2P2-G06 Analysis of reach-to-grasp task using the robotic orthosis for stroke rehabilitation(Welfare) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 74 Mechatronics (Robomec), 2011, 2011, _2P2-G06_1-_2P2-G06_2.	0.0	0
71	7F33 Effect of compressive loading culture on the tissue formation of synovium-derived cells and chondrocytes. The Proceedings of the Bioengineering Conference Annual Meeting of BED/JSME, 2012, 2012.24, _7F33-1-_7F33-2_.	0.0	0
72	S022012 Influence of phospholipid and proteins on friction and wear behavior of artificial hydrogel cartilage. The Proceedings of Mechanical Engineering Congress Japan, 2012, 2012, _S022012-1-_S022012-5.	0.0	0

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73	7F32 Influence of friction loading on tissue formation by chondrocyte.. The Proceedings of the Bioengineering Conference Annual Meeting of BED//SME, 2012, 2012.24, _7F32-1_-_7F32-2_.	0.0	0
74	A11 Effect of lipid on wear and friction of Ultra-High Molecular Weight Polyethylene. The Proceedings of Conference of Kyushu Branch, 2012, 2012, 1-2.	0.0	0
75	B114 Influence of the traction loads on the distribution of the ECM in regenerated cartilage tissue model surface. The Proceedings of the JSME Conference on Frontiers in Bioengineering, 2014, 2014.25, 55-56.	0.0	0
76	2F15 Influence of the traction loads on ECM production in regenerated cartilage tissue. The Proceedings of the Bioengineering Conference Annual Meeting of BED//SME, 2014, 2014.26, 485-486.	0.0	0
77	2F14 Effect of cyclic mechanical stimulation on viability of chondrocyte in regenerated-cartilage tissue model. The Proceedings of the Bioengineering Conference Annual Meeting of BED//SME, 2014, 2014.26, 483-484.	0.0	0
78	PS7-10 ECM production in chondrocyte-agarose construct cultured under traction loading(PS7:) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 5 Biomechanics Emerging Science and Technology in Biomechanics, 2015, 2015.8, 346.	0.0	0
79	1A44 Joint prostheses with artificial hydrogel cartilage with superior lubricity based on bionic design. The Proceedings of the Bioengineering Conference Annual Meeting of BED//SME, 2015, 2015.27, 45-46.	0.0	0
80	1A45 Evaluation of biphasic lubrication of artificial cartilage using MEMS pressure sensor. The Proceedings of the Bioengineering Conference Annual Meeting of BED//SME, 2015, 2015.27, 47-48.	0.0	0
81	904 Mechanical Design Considerations for Zirconia-Abutments of Dental Implant. The Proceedings of Conference of Kyushu Branch, 2015, 2015.68, 359-360.	0.0	0
82	Occurrence prediction of snap-through buckling in coupled arch structures. The Proceedings of Conference of Kyushu Branch, 2017, 2017.70, 807.	0.0	0