

# Akio Yonezu

## List of Publications by Year in descending order

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111  
papers

1,055  
citations

430442

18  
h-index

552369

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111  
all docs

111  
docs citations

111  
times ranked

950  
citing authors

#	ARTICLE	IF	CITATIONS
1	Moisture-Driven CO <sub>2</sub> Sorbents. <i>Joule</i> , 2020, 4, 1823-1837.	11.7	65
2	Size effect on fracture toughness of freestanding copper nano-films. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2011, 528, 8120-8127.	2.6	57
3	A simple method to evaluate anisotropic plastic properties based on dimensionless function of single spherical indentation – Application to SiC whisker-reinforced aluminum alloy. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2010, 527, 7646-7657.	2.6	47
4	On radial crack and half-penny crack induced by Vickers indentation. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2008, 464, 2967-2984.	1.0	33
5	Strength of self-organized TiO <sub>2</sub> nanotube arrays. <i>Acta Materialia</i> , 2010, 58, 4956-4967.	3.8	33
6	Fracture observation of polycrystalline diamond film under indentation test. <i>Diamond and Related Materials</i> , 2004, 13, 2024-2030.	1.8	29
7	Monitoring of stress corrosion cracking in stainless steel weldments by acoustic and electrochemical measurements. <i>Measurement Science and Technology</i> , 2006, 17, 2447-2454.	1.4	27
8	Estimation of the anisotropic plastic property using single spherical indentation – An FEM study. <i>Computational Materials Science</i> , 2009, 47, 611-619.	1.4	27
9	Quantitative evaluation of adhesion quality of surface coating by using pulse laser-induced ultrasonic waves. <i>Surface and Coatings Technology</i> , 2016, 286, 231-238.	2.2	26
10	Indentation induced lateral crack in ceramics with surface hardening. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2009, 507, 226-235.	2.6	25
11	Spherical indentation method for measuring local mechanical properties of welded stainless steel at high temperature. <i>Materials &amp; Design</i> , 2013, 52, 812-820.	5.1	24
12	Mechanism of hydrogen embrittlement cracking produced by residual stress from indentation impression. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2015, 624, 52-61.	2.6	24
13	The effect of thickness on the steady-state creep properties of freestanding aluminum nano-films. <i>Acta Materialia</i> , 2012, 60, 4438-4447.	3.8	23
14	Analysis on spiral crack in thick diamond-like carbon film subjected to spherical contact loading. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2008, 496, 67-76.	2.6	22
15	Contact fracture mechanism of electroplated Ni–P coating upon stainless steel substrate. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2013, 563, 184-192.	2.6	20
16	An experimental methodology for characterizing fracture of hard thin films under cyclic contact loading. <i>Thin Solid Films</i> , 2010, 518, 2082-2089.	0.8	19
17	A Method to Estimate Residual Stress in Austenitic Stainless Steel Using a Microindentation Test. <i>Journal of Materials Engineering and Performance</i> , 2015, 24, 362-372.	1.2	19
18	Molecular deformation mechanism of polycarbonate during nano-indentation: Molecular dynamics simulation and experimentation. <i>Polymer</i> , 2019, 173, 80-87.	1.8	19

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19	Evaluation of threshold stress intensity factor of hydrogen embrittlement cracking by indentation testing. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2012, 531, 147-154.	2.6	18
20	Characterization of fatigue crack growth of concrete mortar under cyclic indentation loading. <i>Engineering Failure Analysis</i> , 2018, 83, 156-166.	1.8	18
21	An indentation fatigue strength law. <i>Philosophical Magazine Letters</i> , 2010, 90, 313-322.	0.5	17
22	Experimental and numerical investigations of the anisotropic deformation behavior of low-density polymeric foams. <i>Polymer Testing</i> , 2017, 63, 605-613.	2.3	17
23	Advanced indentation technique for strength evaluation of hard thin films. <i>Science and Technology of Advanced Materials</i> , 2006, 7, 97-103.	2.8	16
24	On the mechanism of intergranular stress corrosion cracking of sensitized stainless steel in tetrathionate solution. <i>Journal of Materials Science</i> , 2013, 48, 2447-2453.	1.7	16
25	Characterization of the compressive deformation behavior with strain rate effect of low-density polymeric foams. <i>Polymer Testing</i> , 2016, 50, 1-8.	2.3	16
26	Water Drop Erosion on Turbine Blades: Numerical Framework and Applications. <i>Materials Transactions</i> , 2008, 49, 1606-1615.	0.4	15
27	Indentation creep surface morphology of nickel-based single crystal superalloys. <i>Computational Materials Science</i> , 2009, 46, 275-285.	1.4	15
28	An indentation method for evaluating the residual stress of polymeric materials: Equi-biaxial and non-equi-biaxial residual stress states. <i>Polymer Testing</i> , 2018, 70, 378-388.	2.3	15
29	Deformation modeling of polyvinylidene difluoride (PVDF) symmetrical microfiltration hollow-fiber (HF) membrane. <i>Journal of Membrane Science</i> , 2016, 497, 421-429.	4.1	14
30	Molecular origins of elastoplastic behavior of polycarbonate under tension: A coarse-grained molecular dynamics approach. <i>Computational Materials Science</i> , 2018, 145, 306-319.	1.4	14
31	Hydrogen effect on fracture toughness of thin film/substrate interfaces. <i>Engineering Fracture Mechanics</i> , 2010, 77, 803-818.	2.0	13
32	Micro-scale damage characterization in porous ceramics by an acoustic emission technique. <i>Ceramics International</i> , 2014, 40, 9859-9866.	2.3	13
33	On compressive deformation behavior of hollow-strut cellular materials. <i>Materials and Design</i> , 2016, 105, 1-8.	3.3	13
34	On hydrogen-induced Vickers indentation cracking in high-strength steel. <i>Mechanics Research Communications</i> , 2010, 37, 230-234.	1.0	12
35	Evaluation of elastoplastic properties and fracture strength of thick diamond like carbon film by indentation. <i>Diamond and Related Materials</i> , 2010, 19, 40-49.	1.8	11
36	Interface strength of structured nanocolumns grown by glancing angle deposition. <i>Engineering Fracture Mechanics</i> , 2011, 78, 2800-2808.	2.0	11

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37	Failure assessment of a hard brittle coating on a ductile substrate subjected to cyclic contact loading. <i>Engineering Failure Analysis</i> , 2015, 57, 118-128.	1.8	11
38	Frictional Anisotropy of Oblique Nanocolumn Arrays Grown by Glancing Angle Deposition. <i>Tribology Letters</i> , 2011, 44, 259-268.	1.2	10
39	Measurement of Interfacial Fracture Toughness of Surface Coatings Using Pulsed-Laser-Induced Ultrasonic Waves. <i>Journal of Nondestructive Evaluation</i> , 2018, 37, 1.	1.1	10
40	Evaluation of adhesion durability of Ni-P coating using repeated Laser Shock Adhesion Test. <i>Surface and Coatings Technology</i> , 2020, 396, 125953.	2.2	10
41	ESTIMATION OF ANISOTROPIC PLASTIC PROPERTIES OF ENGINEERING STEELS FROM SPHERICAL IMPRESSIONS. <i>International Journal of Applied Mechanics</i> , 2010, 02, 355-379.	1.3	9
42	Indentation failure of polymeric membrane with anisotropic pore structures. <i>Engineering Failure Analysis</i> , 2020, 115, 104620.	1.8	9
43	Evaluations of Elasto-Plastic Properties and Fracture Strength Using Indentation Technique. <i>Key Engineering Materials</i> , 2007, 353-358, 2223-2226.	0.4	8
44	Probing out-of-plane anisotropic plasticity using spherical indentation: A numerical approach. <i>Computational Materials Science</i> , 2013, 79, 336-344.	1.4	8
45	Prediction of viscoplastic properties of polymeric materials using sharp indentation. <i>Computational Materials Science</i> , 2015, 110, 321-330.	1.4	8
46	Prediction of Asymmetric Yield Strengths of Polymeric Materials at Tension and Compression Using Spherical Indentation. <i>Journal of Engineering Materials and Technology, Transactions of the ASME</i> , 2017, 139, .	0.8	8
47	Creep deformation behavior of polymer materials with a 3D random pore structure: Experimental investigation and FEM modeling. <i>Polymer Testing</i> , 2019, 80, 106097.	2.3	7
48	Deformation modeling of polyamide 6 and the effect of water content using molecular dynamics simulation. <i>Journal of Polymer Research</i> , 2019, 26, 1.	1.2	7
49	Acoustic Emission and Potential Fluctuation During Chloride SCC with Oxide in Its Surface. <i>Zairyo/Journal of the Society of Materials Science, Japan</i> , 2006, 55, 211-217.	0.1	7
50	Detection of External Stress Corrosion Cracking by Acoustic Emission. <i>Zairyo To Kankyo/ Corrosion Engineering</i> , 2005, 54, 329-336.	0.0	6
51	Creation of freestanding wrinkled nano-films with desired deformation properties by controlling the surface morphology of a sacrificial layer. <i>Journal of Applied Physics</i> , 2013, 113, .	1.1	6
52	On the surface hydrophilization of a blended polysulfone membrane: atomic force microscopy measurement and molecular dynamics simulation. <i>Surface Topography: Metrology and Properties</i> , 2019, 7, 035003.	0.9	6
53	FEM simulation of polymeric foam with random pore structure: Uniaxial compression with loading rate effect. <i>Polymer Testing</i> , 2020, 82, 106303.	2.3	6
54	On the cyclic fatigue of adhesively bonded aluminium: Experiments and molecular dynamics simulation. <i>International Journal of Adhesion and Adhesives</i> , 2021, 107, 102848.	1.4	6

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55	Fracture Mechanism Analysis and Strength Evaluation of Ceramic Thin Film during Indentation Testing. <i>Zairyo/Journal of the Society of Materials Science, Japan</i> , 2005, 54, 1030-1035.	0.1	6
56	Detection of Stress Corrosion Cracking of Type 304 Stainless Steel Using Acoustic Emission and Corrosion Potential Fluctuation. <i>Advanced Materials Research</i> , 2006, 13-14, 243-250.	0.3	5
57	Evaluation of incipient plasticity from interfaces between ultra-thin gold films and compliant substrates. <i>Thin Solid Films</i> , 2010, 518, 5249-5256.	0.8	5
58	Evaluation of critical strain for crack nucleation of magnesium di-boride superconductor using indentation method. <i>Materials Chemistry and Physics</i> , 2011, 125, 528-535.	2.0	5
59	Tensile deformation of polytetrafluoroethylene hollow fiber membranes used for water purification. <i>Water Science and Technology</i> , 2014, 70, 1244-1250.	1.2	5
60	Evaluation of Elastoplasticity-Dependent Creep Property of Magnesium Alloy With Indentation Method: A Reverse Numerical Algorithm and Experimental Validation. <i>Journal of Engineering Materials and Technology, Transactions of the ASME</i> , 2017, 139, .	0.8	5
61	Strain-Guided Oxidative Nanoperforation on Graphene. <i>Small</i> , 2019, 15, e1903213.	5.2	5
62	Characterization of creep deformation behavior of porous polymer membrane under Small-Punch test. <i>Engineering Failure Analysis</i> , 2022, 135, 106149.	1.8	5
63	Realization of freestanding wrinkled thin films with flexible deformability. <i>Applied Physics Letters</i> , 2011, 98, 041908.	1.5	4
64	Fabrication and mechanical properties of column-particle nanocomposites by multiscale shape-assisted self-assembly. <i>Journal Physics D: Applied Physics</i> , 2012, 45, 025302.	1.3	4
65	Estimation of microstructural plastic property of die-cast Mg alloy (AZ91D) with an elevated temperature indentation. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2014, 616, 63-70.	2.6	4
66	Nonlinear Creep Deformation of Polycarbonate at High Stress Level: Experimental Investigation and Finite Element Modeling. <i>Journal of Materials Engineering and Performance</i> , 2019, 28, 1612-1617.	1.2	4
67	Surface buckling delamination patterns of film on soft spherical substrates. <i>Soft Matter</i> , 2020, 16, 3952-3961.	1.2	4
68	Evaluation of crack propagation behavior of porous polymer membranes. <i>Polymer Testing</i> , 2021, 96, 107124.	2.3	4
69	Development of biaxial tensile testing for porous polymer membranes. <i>Polymer Testing</i> , 2022, 106, 107440.	2.3	4
70	An algorithm to determine the plastic properties of materials based on the loading data in single sharp indentation. <i>Materials Research Society Symposia Proceedings</i> , 2007, 1049, 1.	0.1	3
71	Measurement of Fracture Strength of Diamond Film Using AE and Corrosion Potential Fluctuation During Indentation Test. <i>Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A</i> , 2007, 73, 57-65.	0.2	3
72	Development of Fatigue Crack Propagation Technique for Freestanding Nano-Films. <i>Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A</i> , 2012, 78, 808-816.	0.2	3

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73	Unconventional localization prior to wrinkles and controllable surface patterns of film/substrate bilayers through patterned cavities. <i>Extreme Mechanics Letters</i> , 2018, 25, 66-70.	2.0	3
74	Interfacial Strength Evaluation of Oxide Films on Carbon Steel by Using the Laser Shock Adhesion Test. <i>Journal of Materials Engineering and Performance</i> , 2019, 28, 4762-4773.	1.2	3
75	Repeated Laser Shock-Wave Adhesion Test for Metallic Coatings: Adhesion Durability and Its Mechanism Studied by Molecular Dynamics Simulation. <i>Coatings</i> , 2021, 11, 291.	1.2	3
76	Fracture Mechanism of Diamond Like Carbon (DLC) Film Subjected to Contact Loading. <i>Zairyo/Journal of the Society of Materials Science, Japan</i> , 2008, 57, 474-480.	0.1	3
77	Evaluation of Fatigue Strength and Damage in Toughened Silicon Nitride by Load Increasing Test.. <i>Journal of the Ceramic Society of Japan</i> , 2000, 108, 842-847.	1.3	2
78	Hybrid Method for the Evaluation of Mechanical Properties of Hard Film Deposited on Soft Substrate. <i>Zairyo To Kankyo/ Corrosion Engineering</i> , 2005, 54, 532-537.	0.0	2
79	Simultaneous Monitoring of Acoustic Emission and Corrosion Potential Fluctuation for Mechanistic Study of Chloride Stress Corrosion Cracking. <i>Key Engineering Materials</i> , 2006, 321-323, 254-259.	0.4	2
80	Characterization of Hydrogen-Induced Contact Fracture in High-Strength Steel. <i>Journal of Engineering Materials and Technology, Transactions of the ASME</i> , 2015, 137, .	0.8	2
81	Tunable surface morphology via patterned cavities in soft materials. <i>Physical Review E</i> , 2018, 98, .	0.8	2
82	Development of Adhesion Durability Evaluation of Surface Coatings Using Repeated Laser Shock-wave Adhesion Test. <i>Journal of Nondestructive Evaluation</i> , 2020, 39, 1.	1.1	2
83	Mechanical Properties and Fracture of Titanium Hydrides. <i>Zairyo To Kankyo/ Corrosion Engineering</i> , 2006, 55, 205-211.	0.0	2
84	Corrosion Monitoring of Tank Floor Plates by Acoustic Emission. <i>Zairyo To Kankyo/ Corrosion Engineering</i> , 2006, 55, 406-412.	0.0	1
85	Evaluation Method of Local Mechanical Properties Using Micro Tensile Testing and Its Application to Cold-Worked Materials. <i>Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A</i> , 2010, 76, 493-499.	0.2	1
86	Prediction of Residual Life of Low-Cycle Fatigue in Austenitic Stainless Steel Based on Indentation Test. <i>Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A</i> , 2011, 77, 1859-1870.	0.2	1
87	Fracture characterization of inhomogeneous wrinkled metallic films deposited on soft substrates. <i>Journal Physics D: Applied Physics</i> , 2017, 50, 495301.	1.3	1
88	Characterization of the surface degraded layer of polymers using an indentation method. <i>Materials Today Communications</i> , 2021, 26, 101873.	0.9	1
89	Mechanism of Environmental Assisted Cracking of a Duplex Stainless Steel in 35% MgCl <sub>2</sub> Solution. <i>Zairyo To Kankyo/ Corrosion Engineering</i> , 2006, 55, 364-370.	0.0	1
90	OS2208 Evaluation of Susceptibility to Hydrogen Embrittlement Cracking in High Strength Steel using Indentation Test. <i>The Proceedings of the Materials and Mechanics Conference</i> , 2011, 2011, _OS2208-1_-_OS2208-3_.	0.0	0

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91	Adhesion Strength of Al/Epoxy Resin Interface over a Wide Range of Loading Rates. EPJ Web of Conferences, 2021, 250, 01003.	0.1	0
92	Fatigue Strength and Fracture Mechanisms of Porous Ceramics. Zairyo/Journal of the Society of Materials Science, Japan, 2002, 51, 116-121.	0.1	0
93	2020 Hydrogen Effects on Nano Plastic Deformation in High Strength Steel under Nanoindentation. The Proceedings of the JSME Annual Meeting, 2007, 2007.1, 91-92.	0.0	0
94	2236 Evaluation of Anisotropy of Plastic Working using Micro Tensile Specimens. The Proceedings of the JSME Annual Meeting, 2007, 2007.1, 301-302.	0.0	0
95	1132 Evaluation of Local Mechanical Properties of Cold-worked Material using Indentation and Micro Tensile tests. The Proceedings of the JSME Annual Meeting, 2008, 2008.1, 81-82.	0.0	0
96	Classification of Corrosion-AEs Form Noises for Corrosion Inspection of Oil Storage Tank Floor Plate. Zairyo/Journal of the Society of Materials Science, Japan, 2008, 57, 1101-1107.	0.1	0
97	OS0517 On hydrogen embrittlement cracking in high strength steel subjected to local contact loading. The Proceedings of the Materials and Mechanics Conference, 2009, 2009, 609-611.	0.0	0
98	OS12-4-2 Fatigue crack propagation in freestanding copper nano-films. The Abstracts of ATEM International Conference on Advanced Technology in Experimental Mechanics Asian Conference on Experimental Mechanics, 2011, 2011.10, _OS12-4-2.	0.0	0
99	OS06-1-1 Interface Fracture of Titanium Oblique Nanocolumns Grown by Glancing Angle Deposition. The Abstracts of ATEM International Conference on Advanced Technology in Experimental Mechanics Asian Conference on Experimental Mechanics, 2011, 2011.10, _OS06-1-1.	0.0	0
100	OS18-2-1 Indentation Method to Characterize Degradation of High-strength Steel in Hydrogen Environment. The Abstracts of ATEM International Conference on Advanced Technology in Experimental Mechanics Asian Conference on Experimental Mechanics, 2011, 2011.10, _OS18-2-1.	0.0	0
101	Corrosion Fatigue Properties of High-Strength Cold-Rolled Eutectoid Steel in Deionized Water. Zairyo/Journal of the Society of Materials Science, Japan, 2011, 60, 1023-1030.	0.1	0
102	OS06-2-1 Fabrication and mechanical property of freestanding flexible thin films with wrinkled structure. The Abstracts of ATEM International Conference on Advanced Technology in Experimental Mechanics Asian Conference on Experimental Mechanics, 2011, 2011.10, _OS06-2-1.	0.0	0
103	OS4-16 Finite Element Modeling of Porous Polymer Membrane under Tensile Loading(3D/4D image-based) Tj ETQq1 1 0.784314 rgBT The Abstracts of ATEM International Conference on Advanced Technology in Experimental Mechanics Asian Conference on Experimental Mechanics, 2015, 2015.14, 58.	0.0	0
104	OS4-17 Observation of Compressive Deformation Behavior of Micro-porous Materials by X-ray CT Imaging(3D/4D image-based analyses and simulations 5,OS4 3D/4D image-based analyses and) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 22 Technology in Experimental Mechanics Asian Conference on Experimental Mechanics, 2015, 2015.14, 59.	0.0	0
105	My Resent Research. Zairyo/Journal of the Society of Materials Science, Japan, 2016, 65, 694.	0.1	0
106	Hydrogen Embrittlement Cracking Produced by Indentation Test. , 2018, , 1-25.		0
107	Strain Rate Dependency of Fracture Toughness of Al/Epoxy Resin Interface. The Abstracts of ATEM International Conference on Advanced Technology in Experimental Mechanics Asian Conference on Experimental Mechanics, 2019, 2019, 1009B0945.	0.0	0
108	Evaluation of weathering degradation of polymer using indentation method. The Proceedings of Mechanical Engineering Congress Japan, 2019, 2019, J04217.	0.0	0

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109	Manufacturing of Nano-porous Graphene. The Proceedings of Mechanical Engineering Congress Japan, 2019, 2019, J02346.	0.0	0
110	Strain-guided Nano Perforation on 2D materials. The Abstracts of ATEM International Conference on Advanced Technology in Experimental Mechanics Asian Conference on Experimental Mechanics, 2019, 2019, 1010C1200.	0.0	0
111	Hydrogen Embrittlement Cracking Produced by Indentation Test. , 2019, , 289-313.		0