Osamu Takakuwa

List of Publications by Year
in descending order

62 papers	1,301 citations	304368 22 h-index	360668 35 g-index
62 all docs	62 docs citations	62 times ranked	574 citing authors

#	Article	IF	Citations
1	Fatigue crack-growth retardation after overloading in gaseous hydrogen: Revisiting the effect of hydrogen on crack-tip plastic-zone development. Materials Letters, 2022, 308, 131115.	1.3	2
2	Effects of Ni Concentration and Aging Heat Treatment on the Hydrogen Embrittlement Behavior of Precipitation-Hardened High-Mn Austenitic Steel. Tetsu-To-Hagane/Journal of the Iron and Steel Institute of Japan, 2022, 108, 156-172.	0.1	0
3	Criteria for hydrogen-assisted crack initiation in Ni-based superalloy 718. Acta Materialia, 2022, 229, 117789.	3.8	16
4	Internal and External Hydrogen-related Loss of Ductility in a Ni-based Superalloy 718 and Its Temperature Dependence. Tetsu-To-Hagane/Journal of the Iron and Steel Institute of Japan, 2021, 107, .	0.1	1
5	3D short fatigue crack closure behavior in Ti-6Al-4V alloy investigated using in-situ high resolution synchrotron X-ray tomography. Engineering Fracture Mechanics, 2021, 249, 107755.	2.0	12
6	Hydrogen, as an alloying element, enables a greater strength-ductility balance in an Fe-Cr-Ni-based, stable austenitic stainless steel. Acta Materialia, 2020, 199, 181-192.	3.8	44
7	A mechanism behind hydrogen-assisted fatigue crack growth in ferrite-pearlite steel focusing on its behavior in gaseous environment at elevated temperature. Corrosion Science, 2020, 168, 108558.	3.0	23
8	Hydrogen-assisted fatigue crack-propagation in a Ni-based superalloy 718, revealed via crack-path crystallography and deformation microstructures. Corrosion Science, 2020, 174, 108814.	3.0	24
9	Defect tolerance and hydrogen susceptibility of the fatigue limit of an additively manufactured Ni-based superalloy 718. International Journal of Fatigue, 2020, 139, 105740.	2.8	24
10	Hydrogen-assisted, intergranular, fatigue crack-growth in ferritic iron: Influences of hydrogen-gas pressure and temperature variation. International Journal of Fatigue, 2020, 140, 105806.	2.8	28
11	Comparative study of hydrogen-induced intergranular fracture behavior in Ni and Cuâ€"Ni alloy at ambient and cryogenic temperatures. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 766, 138349.	2.6	30
12	Simulation of the effect of internal pressure on the integrity of hydrogen pre-charged BCC and FCC steels in SSRT test conditions. Engineering Fracture Mechanics, 2019, 216, 106505.	2.0	5
13	Role of Hydrogen-Charging on Nucleation and Growth of Ductile Damage in Austenitic Stainless Steels. Materials, 2019, 12, 1426.	1.3	8
14	Hydrogen-assisted crack propagation in Î±-iron during elasto-plastic fracture toughness tests. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 756, 396-404.	2.6	19
15	Effect of defects on the fatigue limit of Niâ€based superalloy 718 with different grain sizes. Fatigue and Fracture of Engineering Materials and Structures, 2019, 42, 1203-1213.	1.7	32
16	Pronounced transition of crack initiation and propagation modes in the hydrogen-related failure of a Ni-based superalloy 718 under internal and external hydrogen conditions. Corrosion Science, 2019, 161, 108186.	3.0	45
17	Effect of defects and hydrogen on the fatigue limit of Ni-based superalloy 718. Procedia Structural Integrity, 2019, 19, 312-319.	0.3	1
18	Hydrogen-induced ductility loss of precipitation-strengthened Fe-Ni-Cr-based superalloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 739, 335-342.	2.6	30

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19	The Ductility Loss Mechanism of a Precipitation-hardened Iron-based Superalloy A286 with Internal Hydrogen. The Proceedings of the Materials and Mechanics Conference, 2019, 2019, OS0609.	0.0	0
20	Hydrogen-assisted fatigue crack propagation in a pure BCC iron. Part I: Intergranular crack propagation at relatively low stress intensities. MATEC Web of Conferences, 2018, 165, 03011.	0.1	6
21	Assessment of the contribution of internal pressure to the structural damage in a hydrogen-charged Type 316L austenitic stainless steel during slow strain rate tensile test. Procedia Structural Integrity, 2018, 13, 1615-1619.	0.3	1
22	Hydrogen-assisted fatigue crack propagation in a pure BCC iron. Part II: Accelerated regime manifested by quasi-cleavage fracture at relatively high stress intensity range values. MATEC Web of Conferences, 2018, 165, 03010.	0.1	7
23	Interpretation of hydrogen-assisted fatigue crack propagation in BCC iron based on dislocation structure evolution around the crack wake. Acta Materialia, 2018, 156, 245-253.	3.8	88
24	The roles of internal and external hydrogen in the deformation and fracture processes at the fatigue crack tip zone of metastable austenitic stainless steels. Scripta Materialia, 2018, 157, 95-99.	2.6	45
25	The role of intergranular fracture on hydrogen-assisted fatigue crack propagation in pure iron at a low stress intensity range. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 733, 316-328.	2.6	53
26	Peculiar temperature dependence of hydrogen-enhanced fatigue crack growth of low-carbon steel in gaseous hydrogen. Scripta Materialia, 2018, 154, 101-105.	2.6	22
27	Hydrogen diffusivity and tensile-ductility loss of solution-treated austenitic stainless steels with external and internal hydrogen. International Journal of Hydrogen Energy, 2017, 42, 13289-13299.	3.8	89
28	Hydrogen-enhanced fatigue crack growth in steels and its frequency dependence. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2017, 375, 20160412.	1.6	17
29	Comprehensive Understanding of Ductility Loss Mechanisms in Various Steels with External and Internal Hydrogen. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2017, 48, 5717-5732.	1.1	37
30	Multi-scale observation of hydrogen-induced, localized plastic deformation in fatigue-crack propagation in a pure iron. Scripta Materialia, 2017, 140, 13-17.	2.6	68
31	Hydrogen-Assisted Degradation of High-Strength Stainless Steel With a Newly Developed Aluminum-Based Coating in High-Pressure Hydrogen Gas Environment. , 2017, , .		0
32	Recent Progress on Interpretation of Tensile Ductility Loss for Various Austenitic Stainless Steels With External and Internal Hydrogen. , 2017, , .		0
33	Enhancing the durability of spinal implant fixture applications made of Ti-6Al-4V ELI by means of cavitation peening. International Journal of Fatigue, 2016, 92, 360-367.	2.8	8
34	Using cavitation peening to enhance the fatigue strength of duralumin plate containing a hole with rounded edges. Surface and Coatings Technology, 2016, 307, 200-205.	2.2	18
35	Experimental verification of the hydrogen concentration around a crack tip using spot X-ray diffraction. International Journal of Hydrogen Energy, 2016, 41, 23188-23195.	3.8	6
36	Suppression of hydrogen invasion into austenitic stainless steel by means of cavitation peening. Transactions of the JSME (in Japanese), 2015, 81, 14-00638-14-00638.	0.1	2

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37	Preventing hydrogen embrittlement in stainless steel by means of compressive stress induced by cavitation peening. Journal of Engineering, 2015, 2015, 106-109.	0.6	2
38	Suppression of Fatigue Crack Propagation of Duralumin by Cavitation Peening. Journal of Engineering, 2015, 2015, 126-128.	0.6	2
39	Effect of Indentation Load on Vickers Hardness of Austenitic Stainless Steel After Hydrogen Charging. , 2014, , .		2
40	Increase in the local yield stress near surface of austenitic stainless steel due to invasion by hydrogen. International Journal of Hydrogen Energy, 2014, 39, 6095-6103.	3.8	31
41	Effect of load current density during the production of Cu2O/Cu solar cells by anodic oxidation on film quality and output power. Solid-State Electronics, 2014, 91, 130-136.	0.8	0
42	Evaluation of fatigue crack propagation in surface modification layer by a load-controlled plate bending fatigue tester. Transactions of the JSME (in Japanese), 2014, 80, SMM0022-SMM0022.	0.1	6
43	Effect of Nozzle Geometry on Aggressivity of Cavitating Jet for Cavitation Erosion Test and Applications. Fluid Mechanics and Its Applications, 2014, , 283-302.	0.1	1
44	Improvement of Mechanical Properties of Dental Materials by Shot Peening. Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A, 2013, 79, 1019-1029.	0.2	0
45	An Indicator for the Suppression of Fatigue Crack Growth by Hybrid Peening. Journal of Solid Mechanics and Materials Engineering, 2013, 7, 357-371.	0.5	12
46	Optimizing the Conditions for Residual Stress Measurement Using a Two-Dimensional XRD Method with Specimen Oscillation. Advances in Materials Physics and Chemistry, 2013, 03, 8-18.	0.3	24
47	Similarity Law on Shedding Frequency of Cavitation Cloud Induced by a Cavitating Jet. Journal of Fluid Science and Technology, 2012, 7, 405-420.	0.2	32
48	Optimum Injection Pressure of a Cavitating Jet for Introducing Compressive Residual Stress into Stainless Steel. Journal of Power and Energy Systems, 2012, 6, 63-75.	0.5	17
49	Development of peening technique using recirculating shot accelerated by water jet. Materials Science and Technology, 2012, 28, 234-239.	0.8	32
50	The effect of scanning pitch of nozzle for a cavitating jet during overlapping peening treatment. Surface and Coatings Technology, 2012, 206, 4756-4762.	2.2	12
51	Effect of the impact energy of various peening techniques on the induced plastic deformation region. Journal of Materials Processing Technology, 2012, 212, 1998-2006.	3.1	29
52	Suppression of hydrogen-assisted fatigue crack growth in austenitic stainless steel by cavitation peening. International Journal of Hydrogen Energy, 2012, 37, 5268-5276.	3.8	69
53	Numerical simulation of the effects of residual stress on the concentration of hydrogen around a crack tip. Surface and Coatings Technology, 2012, 206, 2892-2898.	2.2	55
54	Using an indentation test to evaluate the effect of cavitation peening on the invasion of the surface of austenitic stainless steel by hydrogen. Surface and Coatings Technology, 2012, 206, 3747-3750.	2.2	19

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55	Estimation of the depth of surface modification layer induced by cavitation peening. Journal of Materials Processing Technology, 2012, 212, 1716-1722.	3.1	13
56	Technique for partially strengthening electrical steel sheet of IPM motor using cavitation peening. Materials Science and Technology, 2011, 27, 1422-1426.	0.8	10
57	Suppression of fatigue crack propagation with hydrogen embrittlement in stainless steel by cavitation peening. Strength, Fracture and Complexity, 2011, 7, 79-85.	0.2	14
58	Enhancing the Aggressive Strength of a Cavitating Jet and Its Practical Application. Journal of Fluid Science and Technology, 2011, 6, 510-521.	0.2	27
59	Introduction of compressive residual stress into stainless steel by employing a cavitating jet in air. Surface and Coatings Technology, 2011, 205, 3167-3174.	2.2	75
60	Evaluation of Yield Stress Distribution in the Surface Layer and Fatigue Properties of the Stainless Steel Modified by Cavitation Peening. Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A, 2010, 76, 1367-1372.	0.2	5
61	Suppression of Fatigue Crack Growth in Austenite Stainless Steel by Cavitation Peening. Key Engineering Materials, 0, 452-453, 641-644.	0.4	1
62	Effect of Hydrogen on the Micro- and Macro-Strain near the Surface of Austenitic Stainless Steel. Advanced Materials Research, 0, 936, 1298-1302.	0.3	0