

Naoya Masahashi

List of Publications by Year in descending order

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114
papers

3,359
citations

201674

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114
all docs

114
docs citations

114
times ranked

2715
citing authors

#	ARTICLE	IF	CITATIONS
1	Mechanical properties of porous titanium compacts prepared by powder sintering. Scripta Materialia, 2003, 49, 1197-1202.	5.2	496
2	Effect of Heat Treatment and Sn Content on Superelasticity in Biocompatible TiNbSn Alloys. Materials Transactions, 2002, 43, 2978-2983.	1.2	256
3	Electronic and structural studies of grain boundary strength and fracture in L12 ordered alloys ^{II} . On the effect of third elements in Ni3Al alloy. Acta Metallurgica, 1985, 33, 1259-1269.	2.1	166
4	Dependence of photocatalytic activities upon the structures of Au/Pd bimetallic nanoparticles immobilized on TiO ₂ surface. Applied Catalysis B: Environmental, 2010, 94, 248-253.	20.2	107
5	Mechanical properties of Ni3Al containing C, B and Be. Acta Metallurgica, 1988, 36, 1823-1836.	2.1	102
6	Development of preferred orientation in annealing of Fe ^{3.25} Si in a high magnetic field. Journal of Materials Research, 1998, 13, 457-461.	2.6	100
7	Hydrocarbon Decomposition on a Hydrophilic TiO ₂ Surface by UV Irradiation: Spectral and Quantitative Analysis Using in-Situ XPS Technique. Langmuir, 2009, 25, 11586-11591.	3.5	85
8	Hydrogen embrittlement of pseudobinary L12-type Ni ₃ (Al _{0.4} Mn _{0.6}) intermetallic compound. Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science, 1988, 19, 353-358.	1.4	82
9	Enhanced photocatalytic activity of rutile TiO ₂ prepared by anodic oxidation in a high concentration sulfuric acid electrolyte. Applied Catalysis B: Environmental, 2009, 90, 255-261.	20.2	78
10	Improved ductility and strength of Ni3Al compound by beryllium addition. Scripta Metallurgica, 1986, 20, 1317-1321.	1.2	76
11	Visible light responses of sulfur-doped rutile titanium dioxide photocatalysts fabricated by anodic oxidation. Applied Catalysis B: Environmental, 2009, 91, 152-156.	20.2	76
12	High Temperature Deformation Behavior of Titanium-Aluminide Based Gamma Plus Beta Microduplex Alloy.. ISIJ International, 1991, 31, 728-737.	1.4	75
13	Effect of stress-induced ϵ martensite on Young's modulus of $\text{Ti}_{33.6}\text{Nb}_{44}\text{Sn}$ alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2013, 588, 403-410.	5.6	74
14	Composition dependence of young's modulus in Ti-V, Ti-Nb, and Ti-V-Sn alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2006, 37, 3239-3249.	2.2	72
15	Atomistic defect structures of Ni3Al containing C, B and Be. Acta Metallurgica, 1988, 36, 1815-1822.	2.1	61
16	Electronic and structural studies of grain boundary strength and fracture in L12 ordered alloys ^{III} . On the effect of stoichiometry. Acta Metallurgica, 1987, 35, 381-391.	2.1	59
17	Mechanical properties and microstructures of $\text{Ti}_{25}\text{Nb}_{11}\text{Sn}$ ternary alloy for biomedical applications. Materials Science and Engineering C, 2013, 33, 1629-1635.	7.3	58
18	Preparation of superparamagnetic magnetite nanoparticles by reverse precipitation method: Contribution of sonochemically generated oxidants. Ultrasonics Sonochemistry, 2009, 16, 525-531.	8.2	57

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19	Degradation of hydrogen absorbing capacity in cyclically hydrogenated TiMn ₂ . <i>Acta Materialia</i> , 2001, 49, 927-935.	7.9	55
20	Fabrication of a high-performance hip prosthetic stem using β -Ti-33.6Nb-4Sn. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2014, 30, 140-149.	3.1	41
21	Microstructure and superhydrophilicity of anodic TiO ₂ films on pure titanium. <i>Thin Solid Films</i> , 2008, 516, 7488-7496.	1.8	38
22	Microstructures and bond strengths of plasma-sprayed hydroxyapatite coatings on porous titanium substrates. <i>Journal of Materials Science: Materials in Medicine</i> , 2005, 16, 635-640.	3.6	36
23	In-vitro biomechanical evaluation of stress shielding and initial stability of a low-modulus hip stem made of β type Ti-33.6Nb-4Sn alloy. <i>Medical Engineering and Physics</i> , 2014, 36, 1665-1671.	1.7	35
24	Effect of composition on hydrogen absorbing properties in binary TiMn ₂ based alloys. <i>Journal of Alloys and Compounds</i> , 2003, 352, 210-217.	5.5	34
25	Photo-induced properties of anodic oxide films on Ti6Al4V. <i>Thin Solid Films</i> , 2012, 520, 4956-4964.	1.8	30
26	Effect of swaging on Young's modulus of β -Ti-33.6Nb-4Sn alloy. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2014, 32, 310-320.	3.1	30
27	The phase stability of gamma titanium aluminides with the β phase. <i>Scripta Metallurgica Et Materialia</i> , 1992, 27, 1079-1084.	1.0	28
28	Defect Control in Nitrogen Doped Czochralski Silicon Crystals. <i>Solid State Phenomena</i> , 1999, 69-70, 161-166.	0.3	28
29	Sonochemical immobilization of noble metal nanoparticles on the surface of maghemite: Mechanism and morphological control of the products. <i>Ultrasonics Sonochemistry</i> , 2008, 15, 875-880.	8.2	27
30	Visible light response of nitrogen and sulfur co-doped TiO ₂ photocatalysts fabricated by anodic oxidation. <i>Catalysis Today</i> , 2011, 164, 399-403.	4.4	26
31	Fracture toughness of gamma-base titanium aluminides. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 1995, 26, 305-313.	2.2	25
32	Effect of Composition on the Strength and Electrical Conductivity of Cu-Ti Binary Alloy Wires Fabricated by Aging and Intense Drawing. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2019, 50, 1389-1396.	2.2	24
33	Apatite Formation and Biocompatibility of a Low Young's Modulus Ti-Nb-Sn Alloy Treated with Anodic Oxidation and Hot Water. <i>PLoS ONE</i> , 2016, 11, e0150081.	2.5	23
34	Improved Osseointegration of a TiNbSn Alloy with a Low Young's Modulus Treated with Anodic Oxidation. <i>Scientific Reports</i> , 2019, 9, 13985.	3.3	23
35	Superhydrophilicity and XPS study of boron-doped TiO ₂ . <i>Applied Surface Science</i> , 2008, 254, 7056-7060.	6.1	22
36	High Strength and High Electrical Conductivity Cu-Ti Alloy Wires Fabricated by Aging and Severe Drawing. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2018, 49, 4956-4965.	2.2	22

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37	Low Young's modulus of cold groove-rolled β_2 Ti-4Nb-3Sn alloys for orthopedic applications. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2021, 802, 140645.	5.6	22
38	Laminates based on an iron aluminide intermetallic alloy and a CrMo steel. <i>Intermetallics</i> , 2005, 13, 717-726.	3.9	21
39	A new concept of hip joint stem and its fabrication using metastable TiNbSn alloy. <i>Journal of Alloys and Compounds</i> , 2012, 536, S582-S585.	5.5	21
40	Microstructure and properties of iron aluminum alloy/CrMo steel composite prepared by clad rolling. <i>Journal of Alloys and Compounds</i> , 2004, 379, 272-279.	5.5	20
41	Corrosion behavior of iron-aluminum alloys and its composite steel in sulfuric acid. <i>Corrosion Science</i> , 2006, 48, 829-839.	6.6	20
42	Fabrication of bulk anatase TiO ₂ by the spark plasma sintering method. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2007, 452-453, 721-726.	5.6	20
43	Structural and characteristic variation of anodic oxide on pure Ti with anodization duration. <i>Applied Surface Science</i> , 2013, 283, 1018-1023.	6.1	20
44	Photo-induced characteristics of a Ti-4Nb-3Sn biometallic alloy with low Young's modulus. <i>Thin Solid Films</i> , 2010, 519, 276-283.	1.8	19
45	Microstructure and Oxidation Behavior of Low Pressure Plasma Sprayed Iron Aluminides. <i>ISIJ International</i> , 2001, 41, 1010-1017.	1.4	17
46	X-ray photoelectron spectroscopic study of ordered stoichiometric FeAl fractured in situ. <i>Journal of Alloys and Compounds</i> , 2006, 413, 239-243.	5.5	16
47	Fabrication of iron aluminum alloy/steel laminate by clad rolling. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2006, 37, 1665-1673.	2.2	16
48	Photocatalytic Activities and Crystal Structures of Titanium Dioxide by Anodization: Their Dependence upon Current Density. <i>Materials Transactions</i> , 2010, 51, 1443-1448.	1.2	16
49	Angle resolved XPS studies on an anodic oxide formed on Ti-4Nb-3Sn alloy and the photo-induced change in carbon contaminants adsorbed on its surface. <i>Applied Surface Science</i> , 2012, 258, 6052-6055.	6.1	16
50	Fabrication of visible-light-responsive titanium dioxide layer on titanium using anodic oxidization in nitric acid. <i>Applied Surface Science</i> , 2013, 270, 513-518.	6.1	16
51	Effects of intramedullary nails composed of a new β_2 -type Ti-4Nb-3Sn alloy with low Young's modulus on fracture healing in mouse tibiae. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2018, 106, 2841-2848.	3.4	16
52	Bioactive TiNbSn alloy prepared by anodization in sulfuric acid electrolytes. <i>Materials Science and Engineering C</i> , 2019, 98, 753-763.	7.3	16
53	High-temperature strength and ductility of L12-type Ni ₃ Al-Ni ₃ Mn intermetallic compound. <i>Journal of Materials Science</i> , 1987, 22, 2599-2608.	3.7	15
54	High temperature strength and ductility of recrystallized Ni ₃ Al-Ni ₃ Mn alloys. <i>Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science</i> , 1988, 19, 345-352.	1.4	15

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55	Physical and mechanical properties in Ni ₃ Al with and without boron. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 1997, 223, 42-53.	5.6	15
56	Hydrogenation-induced fragmentation in Ta-Ni alloy. <i>Journal of Alloys and Compounds</i> , 2003, 359, 236-243.	5.5	15
57	Microstructural characterization of twin-roll cast gamma titanium aluminide sheets. <i>ISIJ International</i> , 1991, 31, 289-297.	1.4	15
58	Ternary Alloying of Gamma Titanium-Aluminides for Hot-Workability. <i>Materials Research Society Symposia Proceedings</i> , 1990, 213, 795.	0.1	14
59	Composition dependence of hydrogen absorbing properties in melt quenched and annealed TiMn ₂ based alloys. <i>Journal of Alloys and Compounds</i> , 2004, 379, 290-297.	5.5	14
60	Fabrication of a TiO ₂ photocatalyst by anodic oxidation of Ti in an acetic acid electrolyte. <i>Surface and Coatings Technology</i> , 2014, 240, 226-232.	4.8	14
61	Superhydrophilicity of Rutile TiO ₂ Prepared by Anodic Oxidation in High Concentration Sulfuric Acid Electrolyte. <i>Chemistry Letters</i> , 2008, 37, 1126-1127.	1.3	13
62	High-temperature strength and fracture toughness in β -phase titanium aluminides. <i>Journal of Materials Science</i> , 1993, 28, 6631-6638.	3.7	12
63	Multiple cracking of tantalum by hydrogenation. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2003, 34, 685-690.	2.2	12
64	Magnetically Retrievable Palladium/Maghemite Nanocomposite Catalysts Prepared by Sonochemical Reduction Method. <i>Chemistry Letters</i> , 2008, 37, 922-923.	1.3	12
65	Study of bioactivity on a TiNbSn alloy surface. <i>Thin Solid Films</i> , 2017, 639, 22-28.	1.8	12
66	Effects of elastic intramedullary nails composed of low Young's modulus Ti-Nb-Sn alloy on healing of tibial osteotomies in rabbits. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2019, 107, 700-707.	3.4	12
67	Microstructure and phase stability of TiAl-W ternary alloy. <i>Intermetallics</i> , 2003, 11, 807-816.	3.9	11
68	Effect of structural changes on degradation of hydrogen absorbing capacity in cyclically hydrogenated TiMn ₂ based alloys. <i>Journal of Alloys and Compounds</i> , 2004, 376, 232-240.	5.5	11
69	Fabrication and Mechanical Properties of Porous Co-Cr-Mo Alloy Compacts without Ni Addition. <i>Materials Transactions</i> , 2006, 47, 283-286.	1.2	11
70	Fracture properties of β -base TiAl alloys with lamellar microstructure at room temperature. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 1994, 184, 37-44.	5.6	10
71	Improvement of Oxidation Resistance of an Fe-Mn-Si-Cr Shape Memory Alloy by Annealing under Vacuum. <i>Materials Transactions</i> , 2005, 46, 1745-1748.	1.2	10
72	Photoactivity of an anodized biocompatible TiNbSn alloy prepared in sodium tartrate/hydrogen peroxide aqueous solution. <i>Applied Surface Science</i> , 2021, 543, 148829.	6.1	10

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73	Wear resistance of surface-modified TiNbSn alloy. <i>Journal of Materials Science</i> , 2021, 56, 14333-14347.	3.7	10
74	Effect of Pressure Application by HIP on Microstructure Evolution during Diffusion Bonding. <i>Materials Transactions</i> , 2005, 46, 1651-1655.	1.2	9
75	Electroforming of oxide-nanoparticle-reinforced copper-matrix composite. <i>Journal of Materials Research</i> , 2015, 30, 521-527.	2.6	9
76	$\hat{\Gamma}^2$ -type TiNbSn Alloy Plates With Low Young Modulus Accelerates Osteosynthesis in Rabbit Tibiae. <i>Clinical Orthopaedics and Related Research</i> , 2022, 480, 1817-1832.	1.5	9
77	Fracture behavior of niobium by hydrogenation and its application for fine powder fabrication. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2006, 37, 1301-1309.	2.2	8
78	Fabrication of a High Performance Ti Alloy Implant for an Artificial Hip Joint. <i>Materials Science Forum</i> , 2009, 620-622, 591-594.	0.3	8
79	Mechanical properties of anodized TiNbSn alloy for biomedical applications. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2021, 825, 141898.	5.6	8
80	Acceleration of Fracture Healing in Mouse Tibiae Using Intramedullary Nails Composed of $\hat{\Gamma}^2$ -Type TiNbSn Alloy with Low Young's Modulus. <i>Tohoku Journal of Experimental Medicine</i> , 2021, 255, 135-142.	1.2	8
81	Antibacterial Activity of an Anodized TiNbSn Alloy Prepared in Sodium Tartrate Electrolyte. <i>Frontiers in Bioengineering and Biotechnology</i> , 2022, 10, 883335.	4.1	8
82	APFIM study of $\hat{\Gamma}^2$ and $\hat{\Gamma}^3$ microduplex TiAl intermetallic alloy. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 1997, 223, 29-35.	5.6	7
83	Diffusion Bonding Associated with Phase Transformation in (γ + β) Micro-duplex Titanium Aluminides. <i>Materials Transactions</i> , 2001, 42, 1028-1034.	1.2	7
84	Mechanical Properties of Porous Titanium Compacts Reinforced by UHMWPE. <i>Materials Science Forum</i> , 2007, 539-543, 1033-1037.	0.3	7
85	Solid-state bonding of alloy-designed Cu-Zn brass and steel associated with phase transformation by spark plasma sintering. <i>Journal of Materials Science</i> , 2013, 48, 5801-5809.	3.7	7
86	Flexural strength, fracture toughness and fatigue crack growth behaviour of chromium alloyed β -base TiAl. <i>Journal of Materials Science</i> , 1994, 29, 5199-5206.	3.7	6
87	Microstructure control and ductility in Ni ₃ Al polycrystals. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 1997, 239-240, 309-316.	5.6	6
88	Microstructure Evolution Mechanism in Iron Aluminides/CrMo Steel Composite Prepared by Solid State Bonding. <i>ISIJ International</i> , 2004, 44, 878-885.	1.4	6
89	Effect of isothermal forging on the fracture properties of binary $\hat{\Gamma}^3$ -base titanium aluminides at room temperature. <i>Scripta Metallurgica Et Materialia</i> , 1994, 31, 215-220.	1.0	5
90	Effect of pressure application on microstructure evolution in a composite of Fe-Al alloy and CrMo steel. <i>Journal of Alloys and Compounds</i> , 2006, 413, 281-288.	5.5	5

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91	Mechanical Properties-Graded Ti Alloy Implants for Orthopedic Applications. Materials Science Forum, 2009, 631-632, 205-210.	0.3	5
92	Fabrication of Antibacterial Photocatalytic Titanium Foil by Anodic Oxidation. Chemistry Letters, 2015, 44, 277-278.	1.3	5
93	Local structure of vanadium in Ti-6Al-4V alloy anodized in acetic acid aqueous solution and its contribution to visible light response in photocatalysis. Applied Catalysis B: Environmental, 2015, 162, 180-186.	20.2	5
94	Photo-induced properties of anodic oxide on Ti-Pd alloy prepared in acetic acid electrolyte. Journal of Alloys and Compounds, 2016, 669, 91-100.	5.5	5
95	Formation Mechanism of Noble Metal Nanoparticles in Aqueous Solution by Solution Plasma. Science of Advanced Materials, 2014, 6, 1569-1572.	0.7	5
96	Hydrogen pulverization of refractory metals, alloys and intermetallics. Metals and Materials International, 2004, 10, 45-53.	3.4	4
97	Diffusion Bonding Enhanced by Phase Transformation in Micro-duplex Titanium Aluminides. Materials Transactions, JIM, 2000, 41, 429-436.	0.9	3
98	Fabrications and Corrosion Resistance of Iron-Aluminum Alloy/High Carbon Steel Composites Prepared by Clad Rolling. Materials Science Forum, 2005, 502, 379-384.	0.3	3
99	Effects of Ultrasonic Irradiation on Preparation of Titanium Dioxide Photocatalyst by Anodic Oxidation Method. Materials Transactions, 2009, 50, 2182-2186.	1.2	3
100	Catalytic activities of sonochemically prepared Au-core/Pd-shell-structured bimetallic nanoparticles immobilised on TiO ₂ and its dependence on Pd-shell thickness. Journal of Experimental Nanoscience, 2015, 10, 235-247.	2.4	3
101	Lattice location of B atoms in Ni _{0.75} Al _{0.15} Ti _{0.10} intermetallic compounds as observed by the channeling method. Nuclear Instruments & Methods in Physics Research B, 1990, 45, 471-475.	1.4	2
102	Fabrication and Corrosion Properties of Iron Aluminum Alloy/Steel Laminated Composite Prepared by Clad Rolling. Materials Science Forum, 0, 539-543, 866-871.	0.3	2
103	Visible Light Responsive TiO ₂ Photocatalyst Prepared by Anodization of Ti-6Al-4V Alloy. Chemistry Letters, 2012, 41, 544-545.	1.3	2
104	The Microchemistry Studies of Ductile Li ₂ Ni-Based Intermetallics. Materials Research Society Symposia Proceedings, 1994, 364, 749.	0.1	1
105	Microstructure and bonding properties of diffusion-bonded composite comprising an Fe-Al alloy and carbon steel. Journal of Materials Science, 2006, 41, 1691-1696.	3.7	1
106	Corrosion Behavior of Pre-Treated Fe-Al Alloys in Aqueous Acid Solutions. Solid State Phenomena, 2007, 127, 233-238.	0.3	1
107	Microstructural Observation of Ordered β -Ta ₂ H in Hydrogenated Tantalum. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2007, 38, 956-963.	2.2	1
108	Fabrication of Titanium Dioxide Photocatalysts by Anodic Oxidation. Materia Japan, 2010, 49, 55-61.	0.1	1

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109	Dielectric properties of anodic oxide film on Nb solid solution/Nb ₂ N two phase alloys. Thin Solid Films, 2010, 519, 719-724.	1.8	1
110	Fabrication of Photocatalyst by Anodization of Titanium Alloy. Journal of Smart Processing, 2013, 2, 320-325.	0.1	1
111	Hydrogen Pulverization in Intermetallic-based Alloys. Materials Research Society Symposia Proceedings, 2000, 646, 312.	0.1	0
112	Fracture Behaviors of Niobium Alloys by Hydrogenation and its Application for Fine Powder Fabrication. Materials Science Forum, 2007, 539-543, 2719-2724.	0.3	0
113	Development of Orthodontic Devices Made by Ni-free Ti Alloys. Materia Japan, 2010, 49, 119-121.	0.1	0
114	Production of Tantalum Powder by Hydrogenation Process. Hosokawa Powder Technology Foundation ANNUAL REPORT, 2004, 12, 124-130.	0.0	0