Masahiko Demura

List of Publications by Year
in descending order

106	1,388	361388 20	434170 31
papers	citations	h-index	g-index

108	108	108	926
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Pattern recognition with machine learning on optical microscopy images of typical metallurgical microstructures. Scientific Reports, 2018, 8, 2078.	3.3	107
2	Spontaneous catalytic activation of Ni3Al thin foils in methanol decomposition. Journal of Catalysis, 2006, 243, 99-107.	6.2	63
3	Fabrication of Ni3Al thin foil by cold-rolling. Intermetallics, 2001, 9, 157-167.	3.9	62
4	Fabrication of thin Ni3Al foils by cold rolling. Scripta Materialia, 2002, 47, 267-272.	5.2	53
5	Catalytic Properties of Ni3Al Foils for Methanol Decomposition. Catalysis Letters, 2006, 106, 71-75.	2.6	47
6	Catalytic properties of alkali-leached Ni3Al for hydrogen production from methanol. Intermetallics, 2005, 13, 151-155.	3.9	46
7	Catalytic Properties of Ni₃Al Intermetallics for Methanol Decomposition. Materials Transactions, 2004, 45, 3177-3179.	1.2	45
8	Catalytic stability of Ni3Al powder for methane steam reforming. Applied Catalysis B: Environmental, 2008, 80, 15-23.	20.2	35
9	Stress response by the strain-rate change in a binary stoichiometric Ni3Al single crystal. Philosophical Magazine Letters, 1997, 75, 143-148.	1.2	31
10	Mechanical behaviour of Î£3 boundaries in Ni3Al. Acta Materialia, 2003, 51, 2505-2515.	7.9	31
11	Micropillar compression deformation of single crystals of Co3(Al,W) with the L12 structure. Scripta Materialia, 2016, 121, 28-31.	5.2	29
12	Catalytic activity of atomized Ni3Al powder for hydrogen generation by methane steam reforming. Catalysis Letters, 2006, 112, 31-36.	2.6	28
13	Automatic steel labeling on certain microstructural constituents with image processing and machine learning tools. Science and Technology of Advanced Materials, 2019, 20, 532-542.	6.1	27
14	Room-temperature mechanical properties of cold-rolled thin foils of binary, stoichiometric Ni3Al. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2002, 33, 2607-2613.	2.2	26
15	An athermal deformation model of the yield stress anomaly in Ni3Al. Intermetallics, 2007, 15, 1322-1331.	3.9	26
16	Effect of Al-rich off-stoichiometry on the yield stress of binary Ni3Al single crystals. Acta Materialia, 1998, 46, 2695-2703.	7.9	25
17	Catalytic properties of pure Ni honeycomb catalysts for methane steam reforming. Applied Catalysis A: General, 2015, 507, 162-168.	4.3	25
18	Catalytic activity improvement of Ni3Al foils for methanol decomposition by oxidationâ€“reduction pretreatment. Applied Catalysis A: General, 2011, 398, 161-167.	4.3	24

#	Article	IF	Citations
19	Fabrication of thin foils of binary Niâ€“Al Î³/Î³â€² two-phase alloys by cold rolling. Intermetallics, 2002, 10, 255-262.	3.9	23
20	Catalytic properties of Ni-Fe-Mg alloy nanoparticle catalysts for methanol decomposition. Catalysis Today, 2017, 281, 669-676.	4.4	23
21	Characterization of Surface Structure Evolution in Ni₃Al Foil Catalysts by Hard X-ray Photoelectron Spectroscopy. Journal of Physical Chemistry C, 2010, 114, 6047-6053.	3.1	22
22	SIP-Materials Integration Projects. Materials Transactions, 2020, 61, 2041-2046.	1.2	22
23	Effect of alkali leaching on the surface structure of Ni3Al catalyst. Applied Surface Science, 2008, 254, 5413-5420.	6.1	21
24	Selective dissolution of the Î³ phase in a binary Ni(Î³)/Ni3Al(Î³â€²) two-phase alloy. Corrosion Science, 2010, 52, 3820-3825.	6.6	21
25	Orientation dependence of texture evolution in cold-rolled Ni3Al single crystals. Philosophical Magazine, 2003, 83, 3029-3046.	1.6	20
26	Ductility of cold-rolled and recrystallized Ni3Al foils. Journal of Materials Research, 2005, 20, 1054-1062.	2.6	20
27	Effects of steam addition on the spontaneous activation in Ni3Al foil catalysts during methanol decomposition. Journal of Molecular Catalysis A, 2009, 307, 21-28.	4.8	20
28	Enhanced catalytic activity of Ni3Al foils towards methane steam reforming by water vapor and hydrogen pretreatments. International Journal of Hydrogen Energy, 2016, 41, 7352-7362.	7.1	20
29	Compliance to Schmid's law in the stress anomaly regime of binary stoichiometric Ni3Al. Acta Materialia, 1999, 47, 3441-3446.	7.9	19
30	Catalytic performance of Niâ€“Al nanoparticles fabricated by arc plasma evaporation for methanol decomposition. International Journal of Hydrogen Energy, 2014, 39, 13156-13163.	7.1	19
31	Detection and location of microdefects during selective laser melting by wireless acoustic emission measurement. Additive Manufacturing, 2021, 40, 101915.	3.0	18
32	Application of electron backscatter diffraction (EBSD) to quasicrystal-containing microstructures in the Mg-Cd-Yb system. Acta Materialia, 2016, 119, 193-202.	7.9	16
33	Effect of directional growth-rate on the mechanical properties of Ni3Al. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1997, 239-240, 324-329.	5.6	15
34	Single crystal growth and characterization of binary stoichiometric and Al-rich Ni3Al. Journal of Crystal Growth, 1998, 186, 624-628.	1.5	14
35	Comparison of field-cooled, zero-field-cooled, and thermoremanent magnetization in nanomagnet, random magnet, and bulk ferromagnet. Journal of Magnetism and Magnetic Materials, 2007, 316, e535-e537.	2.3	14
36	Spontaneous activation behavior of Ni3Sn, an intermetallic catalyst, for hydrogen production via methanol decomposition. International Journal of Hydrogen Energy, 2015, 40, 12663-12673.	7.1	14

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37	Prediction of Creep Rupture Time Using Constitutive Laws and Damage Rules in 9Crâ€“1Moâ€“Vâ€“Nb Steel Welds. Materials Transactions, 2019, 60, 213-221.	1.2	14
38	Characterization of crystallographic texture in plasma-sprayed splats by electron-backscattered diffraction. Surface and Coatings Technology, 2010, 204, 3614-3618.	4.8	13
39	Microstructure and electrochemical properties of the HT-LiCoO₂/La_{2/3â€“x}Li_{3x}TiO₃ solid electrolyte interfaces. Journal of Materials Research, 2010, 25, 1583-1587.	2.6	13
40	Catalytic Performance of Ni3Sn and Ni3Sn2 for Hydrogen Production from Methanol Decomposition. Catalysis Letters, 2014, 144, 843-849.	2.6	13
41	Fabrication of Niâ€“Al nanoparticles via vacuum arc plasma evaporation and their catalytic properties for CO oxidation. Applied Catalysis A: General, 2014, 478, 165-174.	4.3	12
42	Materials Integration for Accelerating Research and Development of Structural Materials. Materials Transactions, 2021, 62, 1669-1672.	1.2	12
43	Microstructure and Texture Evolution during Cold Rolling and Recrystallization of Ni₃Al Single Crystals. Defect and Diffusion Forum, 2004, 233-234, 37-48.	0.4	11
44	Estimation of PTCR effect in single grain boundary of Nb-doped BaTiO3. Journal of Materials Science Letters, 1996, 15, 537-538.	0.5	10
45	Compressive flow stress of a binary stoichiometric Ni3Al single crystal. Scripta Materialia, 1997, 37, 1777-1782.	5.2	10
46	Grain-boundary fracture strength in Ni₃Al bicrystals. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 2002, 82, 1541-1557.	0.6	10
47	Texture Development of Ni₃Al Thin Foils during Recrystallization and Grain Growth. Materials Science Forum, 2004, 467-470, 447-452.	0.3	10
48	Textures and mechanical properties in rare-earth free quasicrystal reinforced Mgâ€“Znâ€“Zr alloys prepared by extrusion. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2011, 528, 5871-5874.	5.6	10
49	Initial oxidation behavior of Ni 3 Al (210) surface induced by supersonic oxygen molecular beam at room temperature. Applied Surface Science, 2017, 391, 18-23.	6.1	10
50	Data-based selection of creep constitutive models for high-Cr heat-resistant steel. Science and Technology of Advanced Materials, 2020, 21, 219-228.	6.1	10
51	Tensile and bending deformation of Ni3Al heavily cold-rolled foil. Intermetallics, 2005, 13, 608-614.	3.9	9
52	A universal Bayesian inference framework for complicated creep constitutive equations. Scientific Reports, 2020, 10, 10437.	3.3	9
53	Catalytic Activity of Pre-Activated Ni3Al Foil Catalysts for Hydrogen Production from Methanol under Steam Addition. Catalysis Letters, 2010, 134, 258-263.	2.6	8
54	Damage Model Determination for Predicting Creep Rupture Time of 2 1/4Crâ€“1Mo Steel Weld Joints. Materials Transactions, 2021, 62, 1013-1022.	1.2	8

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55	Stoichiometric effect on the strain-rate dependence of flow stress in binary Ni3Al. Intermetallics, 2000, 8, 1005-1011.	3.9	7
56	Tensile properties and cold rolling of binary Niâ€“Al Î³/Î³â€² two-phase single crystals. Intermetallics, 2008, 16, 1317-1324.	3.9	7
57	Catalytic Properties of Cold-Rolled Ni₃(Si,Ti) Intermetallic Foils for Methanol Decomposition. Materials Transactions, 2010, 51, 1002-1010.	1.2	7
58	Data-Driven Approaches in Materials & Process Researches. Journal of Smart Processing, 2021, 10, 78-84.	0.1	7
59	Structure and yield strength of directionally solidified Ni3Al intermetallic premelted with MoSi2 phase. Intermetallics, 1999, 7, 109-114.	3.9	6
60	Crystallographic Orientation Analysis of Fatigue Crack Initiation Site Formed at Cryogenic Temperatures in Ti-5Al-2.5Sn ELI Forged Alloy. Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A, 2008, 74, 329-334.	0.2	6
61	Effect of water vapor and hydrogen treatments on the surface structure of Ni 3 Al foil. Applied Surface Science, 2014, 315, 475-480.	6.1	6
62	Fabrication of large-grained binary stoichiometric Ni3Al. Scripta Materialia, 1998, 40, 63-69.	5.2	5
63	Catalytic Properties of Ni₃Al for Hydrogen Production Reactions. Materials Science Forum, 2005, 475-479, 755-758.	0.3	5
64	Texture Memory Effect in Heavily Cold-Rolled Ni₃Al Single Crystals. Materials Science Forum, 0, 539-543, 1513-1518.	0.3	5
65	Texture memory effect in heavily cold-rolled Ni3Al single crystals. Acta Materialia, 2007, 55, 1779-1789.	7.9	5
66	Grain-boundary fracture strength in Ni 3 Al bicrystals. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 2002, 82, 1541-1557.	0.6	4
67	Notch sensitivity of heavily cold-rolled Ni3Al foils. Scripta Materialia, 2005, 53, 1339-1343.	5.2	4
68	Laser Spot Welding of Cold-Rolled Boron-Free Ni3Al Foils. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2007, 38, 1041-1047.	2.2	4
69	Catalytic Properties of Ni₃Fe Foil for Hydrogen Production from Methanol. Materials Science Forum, 0, 706-709, 1052-1057.	0.3	4
70	Descriptor extraction on inherent creep strength of carbon steel by exhaustive search. Science and Technology of Advanced Materials Methods, 2021, 1, 98-108.	1.3	4
71	Experimental design for the highly accurate prediction of material properties using descriptors obtained by measurement. Science and Technology of Advanced Materials Methods, 2021, 1, 152-161.	1.3	4
72	Anisotropy in Cold Rolling of Single Crystalline Ni₃-Al-Base Intermetallic Alloys. Materials Science Forum, 2005, 495-497, 737-742.	0.3	3

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73	Synthesis of Ni-Al Intermetallic Nanoparticle Catalysts by Vacuum Arc Plasma Evaporation. Materials Science Forum, 2010, 654-656, 2907-2910.	0.3	3
74	Catalytic Properties of Ni₃Al Foils for Hydrogen Production. Advanced Materials Research, 2011, 306-307, 130-133.	0.3	3
75	Development of Laser Welding Methods for Cold-Rolled Thin Foils of Ni₃Al Alloys. Nippon Kinzoku Gakkaishi/Journal of the Japan Institute of Metals, 2003, 67, 185-188.	0.4	3
76	Mechanical Properties of Cold-Rolled Ni₃Al Thin Foils. Materials Science Forum, 2003, 426-432, 1727-1732.	0.3	2
77	Microstructures in Cold-Rolled Ni3Al Single Crystals. Materials Research Society Symposia Proceedings, 2004, 842, 281.	0.1	2
78	Catalytic Activity of Oxidation-Reduction Pre-Treated Ni₃Al for Methane Steam Reforming. Advanced Materials Research, 0, 89-91, 645-650.	0.3	2
79	Catalytic Properties of Ni-Al Intermetallic Nanoparticles Fabricated by Thermal Plasma Process. Materials Science Forum, 0, 783-786, 2040-2045.	0.3	2
80	High-cycle fatigue behavior of Ti-5Al-2.5Sn ELI alloy forging at low temperatures. , 2014, , .		2
81	Plane Strain Compression of Single Crystalline Ni₃Al-Base Intermetallic Compounds. Materials Science Forum, 2005, 495-497, 767-774.	0.3	1
82	Texture Development during Recrystallization and Grain Growth in Heavily Cold-rolled Intermetallics. Materia Japan, 2009, 48, 452-457.	0.1	1
83	Evolution of Surface Morphology in Ni(Î³)/Ni₃Al(Î³Â´) Two-Phase Foil during Electrochemical Etching. Advanced Materials Research, 0, 89-91, 331-336.	0.3	1
84	Slip System Analysis in the Cold Rolling of a Ni₃Al Single Crystal. Materials Science Forum, 0, 783-786, 1111-1116.	0.3	1
85	Aging and rejuvenation in a ferromagnetic Ni3Al. European Physical Journal B, 2015, 88, 1.	1.5	1
86	Catalytic properties of Ni₃Al/Ni two-phase alloy foils for methane steam reforming. Transactions of the Materials Research Society of Japan, 2008, 33, 1105-1108.	0.2	1
87	Effect of surface pretreatment on the catalytic activity of atomized Ni3Al powder for methane steam reforming. Transactions of the Materials Research Society of Japan, 2007, 32, 971-974.	0.2	1
88	æœ—™é—‹ç™ºã«ãŠã‘ã‚‹Alãƒ»ãƒ‡ãƒ¼ã‚¿ãƒ™ãƒ¼ã‚¹æ´»ç”¨ã«å‘ã‘ãŸå•–ã‚Šçµ„ã¿. Materia Japan, 2019, 58, 155-155.	0.1	1
89	Creep Life Predictions by Machine Learning Methods for Ferritic Heat Resistant Steels. Tetsu-To-Hagane/Journal of the Iron and Steel Institute of Japan, 2022, 108, 424-437.	0.4	1
90	Ni3Al Thin Foil by Cold Rolling. Materials Research Society Symposia Proceedings, 2000, 646, 288.	0.1	0

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91	Orientation Dependence of the Texture Evolution in Cold-Rolled Thin Foils of Ni3Al Single Crystals. Materials Research Society Symposia Proceedings, 2002, 753, 1.	0.1	0
92	Bending Ductility of Heavily Cold-Rolled Ni3Al Thin Foils. Materials Research Society Symposia Proceedings, 2002, 753, 1.	0.1	0
93	Microstructures and Tensile Properties of Cold-rolled Thin Foils of Binary Ni-Al Î³/Î³' Alloys. Materials Research Society Symposia Proceedings, 2002, 753, 1.	0.1	0
94	Characterization and Catalytic Properties of Ni3Al for Hydrogen Production from Methanol. Materials Research Society Symposia Proceedings, 2004, 842, 191.	0.1	0
95	Effect of Heat Treatment on the Ductility of Ni(Î³)/Ni3Al(Î³') Two-phase Alloy Foils. Materials Research Society Symposia Proceedings, 2006, 980, 30.	0.1	0
96	Texture Memory Effect During Heat Treatment in the Heavily Cold Rolled Ni3Al Foils. Materials Research Society Symposia Proceedings, 2006, 980, 9.	0.1	0
97	Nucleation Mechanism of 40Ëš<111> Rotated Grains during Recrystallization in Heavily Cold-Rolled Ni₃Al Single Crystals. Materials Science Forum, 2007, 558-559, 183-188.	0.3	0
98	Catalytic Property of Chemically Pretreated Ni3Al/Ni Two-phase Alloy Foils for Methane Steam Reforming. Materials Research Society Symposia Proceedings, 2008, 1128, 53401.	0.1	0
99	HIGH-CYCLE FATIGUE PROPERTIES AND FATIGUE CRACK INITIATION BEHAVIOR OF Ti-5%Al-2.5%Sn ELI ALLOY AT CRYOGENIC TEMPERATURES. AIP Conference Proceedings, 2008, , .	0.4	0
100	Surface structure modification of Ni3Al foil catalysts by oxidation-reduction treatment. Materials Research Society Symposia Proceedings, 2008, 1128, 53601.	0.1	0
101	Recrystallization Textures in Heavily Cold-Rolled Ni₃Al Based Single Crystals. Materials Science Forum, 2010, 638-642, 1288-1293.	0.3	0
102	Texture and Ductility of Ni₃Al Foils. Advanced Materials Research, 2011, 306-307, 116-119.	0.3	0
103	Catalytic Properties of TiNi Foils for Methanol Decomposition. Advanced Materials Research, 0, 409, 307-312.	0.3	0
104	Improvement of Catalytic Activity of Atomized Ni₃Al Powder for Methanol Decomposition by Surface Chemical Treatments. Materials Science Forum, 2013, 750, 68-71.	0.3	0
105	Development of Intermetallic Ni₃Al Thin Foils by Heavy Cold Rolling. Journal of the Japan Society for Technology of Plasticity, 2006, 47, 1219-1220.	0.3	0
106	Preface to Special Issue on SIP Materials Integration Project. Materia Japan, 2019, 58, 488-488.	0.1	0