Yumiko Nakamura

List of Publications by Year in Descending Order

107 papers	2,337 citations	26 h-index	44 g-index
120 ext. papers	2,505 ext. citations	4.4 avg, IF	4.74 L-index

#	Paper	IF	Citations
107	Unveiling Nanoscale Compositional and Structural Heterogeneities of Highly Textured MgTiH Thin Films. *Inorganic Chemistry*, **2020**, 59, 6800-6807	5.1	3
106	Metallurgical Synthesis of MgFeSi Hydride: Destabilization of MgFeH Nanostructured in Templated MgSi. *Inorganic Chemistry*, **2020**, 59, 2758-2764	5.1	2
105	Hydrogen storage properties of Nb-based solid solution alloys with a BCC structure. *Journal of Alloys and Compounds*, **2020**, 820, 153399	5.7	9
104	Reaction paths via a new transient phase in non-equilibrium hydrogen absorption of LaNi2Co3. *International Journal of Hydrogen Energy*, **2020**, 45, 21655-21665	6.7	4
103	Metal hydride actuator for a rescue jack driven by hydrogen desorption. *International Journal of Hydrogen Energy*, **2019**, 44, 29310-29318	6.7	3
102	Effects of substitutional Mo and Cr on site occupation and diffusion of hydrogen in the □phase vanadium hydride by first principles calculations. *Theoretical Chemistry Accounts*, **2019**, 138, 1	1.9	2
101	Interstitial-atom-induced phase transformation upon hydrogenation in vanadium. *Journal of Alloys and Compounds*, **2018**, 750, 33-41	5.7	5
100	Development of an in situ synchrotron X-ray total scattering setup under pressurized hydrogen gas. *Journal of Applied Crystallography*, **2018**, 51, 796-801	3.8	4
99	Rescue jack system applying hydrogen-absorbing alloys as a pressure source. *International Journal of Hydrogen Energy*, **2018**, 43, 22438-22446	6.7	2
98	Structural Variation of Self-Organized Mg Hydride Nanoclusters in Immiscible Ti Matrix by Hydrogenation. *Inorganic Chemistry*, **2018**, 57, 11831-11838	5.1	11
97	Effect of CO2 on hydrogen absorption in Ti-Zr-Mn-Cr based AB2 type alloys. *Journal of Alloys and Compounds*, **2017**, 705, 507-516	5.7	8
96	Formation of hydride phase and diffusion of hydrogen in the V□H system varied by substitutional Fe. *International Journal of Hydrogen Energy*, **2016**, 41, 6369-6375	6.7	7
95	Effect of dissolved oxygen on hydrogenation of vanadium and hydrogen diffusion in the monohydride phase. *Acta Materialia*, **2016**, 103, 23-29	8.4	5
94	High-Pressure-Hydrogen-Induced Spin Reconfiguration in GdFe2 Observed by 57Fe-Polarized Synchrotron Radiation M□ssbauer Spectroscopy with Nuclear Bragg Monochromator. *Journal of the Physical Society of Japan*, **2016**, 85, 123707	1.5	1
93	Dependence of constituent elements of AB5 type metal hydrides on hydrogenation degradation by CO2 poisoning. *Journal of Alloys and Compounds*, **2015**, 647, 198-203	5.7	10
92	Cost reduction possibilities of vanadium-based solid solutions □Microstructural, thermodynamic, cyclic and environmental effects of ferrovanadium substitution. *Journal of Alloys and Compounds*, **2015**, 648, 1024-1030	5.7	18
91	Melting of Pb Charge Glass and Simultaneous Pb-Cr Charge Transfer in PbCrO3 as the Origin of Volume Collapse. *Journal of the American Chemical Society*, **2015**, 137, 12719-28	16.4	35

90	Compositional Dependence of Hydrogenation Properties in Ti1+y(Fe1−xMnx)1−y (0.2≦x≦0.5, 0≦y≦0.08). *Nippon Kinzoku Gakkaishi/Journal of the Japan Institute of Metals*, **2015**, 79, 112-117	0.4	2
89	Effect of a Quenching Rate on Hydrogen Storage Properties of V0.79Ti0.2Zr0.01. *Nippon Kinzoku Gakkaishi/Journal of the Japan Institute of Metals*, **2015**, 79, 131-136	0.4	
88	Observation of Transient Structural Changes on Hydrogen Absorption Process of LaNi4.75Sn0.25 by Time Resolved X-Ray Diffraction. *Nippon Kinzoku Gakkaishi/Journal of the Japan Institute of Metals*, **2015**, 79, 124-130	0.4	3
87	Development of ZrxTi1−xMn0.8V0.2Ni0.9M0.1 (M=Ni, Al, Fe, Cu) Alloys for a Soft Actuator Using Hydrogen Storage Alloys. *Nippon Kinzoku Gakkaishi/Journal of the Japan Institute of Metals*, **2015**, 79, 257-264	0.4	2
86	Enhancement of hydrogen diffusion in the body-centered tetragonal monohydride phase of the V–H system by substitutional Al studied by proton nuclear magnetic resonance. *Acta Materialia*, **2015**, 83, 479-487	8.4	15
85	Hydrogenation of a TiFe-based alloy at high pressures and temperatures. *International Journal of Hydrogen Energy*, **2015**, 40, 3283-3287	6.7	14
84	Synthesis and structural study of Ti-rich Mg–Ti hydrides. *Journal of Alloys and Compounds*, **2014**, 593, 132-136	5.7	13
83	Effect of oxygen on the microstructure and hydrogen storage properties of V–Ti–Cr–Fe quaternary solid solutions. *International Journal of Hydrogen Energy*, **2014**, 39, 20000-20008	6.7	18
82	Degradation Mechanism against Hydrogenation Cycles in Mg2−xPrxNi4(x= 0.6 and 1.0). *Journal of Physical Chemistry C*, **2014**, 118, 6697-6705	3.8	17
81	Reduction and unusual recovery in the reversible hydrogen storage capacity of V1−xTix during hydrogen cycling. *International Journal of Hydrogen Energy*, **2014**, 39, 10546-10551	6.7	11
80	Development of Ti–Zr–Mn Based Hydrogen Storage Alloys for a Soft Actuator. *Materials Transactions*, **2014**, 55, 1168-1174	1.3	5
79	Improving the Cyclic Stability of V–Ti–Mn bcc Alloys Using Interstitial Elements. *Materials Transactions*, **2014**, 55, 1144-1148	1.3	6
78	In situ XRD study of La2Ni7H(x) during hydrogen absorption-desorption. *Inorganic Chemistry*, **2013**, 52, 10105-11	5.1	16
77	Origin of Degradation in the Reversible Hydrogen Storage Capacity of V1−xTix Alloys from the Atomic Pair Distribution Function Analysis. *Journal of Physical Chemistry C*, **2013**, 117, 26543-26550	3.8	36
76	In situ synchrotron 57Fe Mössbauer spectroscopy of RFe2 (R = Y, Gd) hydrides synthesized under ultra-high-pressure hydrogen. *Journal of Alloys and Compounds*, **2013**, 580, S264-S267	5.7	5
75	Crystal structure and local structure of Mg(2-x)Pr(x)Ni4 (x = 0.6 and 1.0) deuteride using in situ neutron total scattering. *Inorganic Chemistry*, **2013**, 52, 7010-9	5.1	23
74	Control of the orientation and photoinduced phase transitions of macrocyclic azobenzene. *Chemistry - A European Journal*, **2013**, 19, 17391-7	4.8	55
73	An in situ Mössbauer study using synchrotron radiation **2013**, 139-142		

72	Effect of Rare Earth Elements and Alloy Composition on Hydrogenation Properties and Crystal Structures of Hydrides in Mg2−xRExNi4. *Journal of Physical Chemistry C*, **2012**, 116, 19156-19163	3.8	29
71	In Situ X-ray Diffraction Study of Phase Transformation of Mg2−xPrxNi4 during Hydrogenation and Dehydrogenation (x = 0.6 and 1.0). *Journal of Physical Chemistry C*, **2012**, 116, 1401-1407	3.8	19
70	Identification of Vacancy Formation Sites in LaNi5Cu During Hydrogenation Using in Situ Coincidence Doppler Broadening Technique. *Journal of Physical Chemistry C*, **2012**, 116, 22238-22244	3.8	3
69	Effect of substitutional Cr on hydrogen diffusion and thermal stability for the BCT monohydride phase of the V–H system studied by 1H NMR. *Journal of Alloys and Compounds*, **2012**, 524, 63-68	5.7	15
68	High-energy C-composite-C-layered manganese-rich cathode materials via controlling Li2MnO3 phase activation for lithium-ion batteries. *Physical Chemistry Chemical Physics*, **2012**, 14, 6584-95	3.6	232
67	An in situ Mössbauer study using synchrotron radiation. *Hyperfine Interactions*, **2012**, 204, 139-142	0.8	2
66	Variation in the ratio of Mg2Co and MgCo2 in amorphous-like mechanically alloyed MgxCo100−x using atomic pair distribution function analysis. *Zeitschrift Für Kristallographie*, **2012**, 227, 299-303		9
65	Hydrogenation Properties of Ternary Intermetallic Compounds Mg2−xPrxNi4. *Materials Transactions*, **2012**, 53, 513-517	1.3	18
64	Structural Studies of Hydrogen Storage Alloys using X-ray/Neutron Diffraction and Total Scattering. *Materials Research Society Symposia Proceedings*, **2011**, 1334, 20601		
63	In situ atomic force microscopy observation of hydrogen absorption/desorption by Palladium thin film. *Applied Surface Science*, **2011**, 258, 1456-1459	6.7	5
62	Hydrogenation properties of Ti–V–Mn alloys with a BCC structure containing high and low oxygen concentrations. *Journal of Alloys and Compounds*, **2011**, 509, 1841-1847	5.7	23
61	Microstructure of Ti–V–Mn BCC alloys before and after hydrogen absorption–desorption. *Journal of Alloys and Compounds*, **2011**, 509, 4352-4356	5.7	19
60	Lattice defects introduced into LaNi5-based alloys during hydrogen absorption/desorption cycling. *Journal of Alloys and Compounds*, **2011**, 509, 7498-7503	5.7	25
59	Decomposition of Magnesium Hydride Fiber Observed Using TEM and In-Situ AFM. *Materials Transactions*, **2011**, 52, 481-485	1.3	2
58	Hydrogen Vibrational Excitation Spectra of CaF2-Type Metal Hydrides Synthesized from Ti-Based BCC Solid Solution Alloys. *Materials Transactions*, **2011**, 52, 591-594	1.3	1
57	Phase Transformation and Lattice-Strain Formation in Ti1.0V1.1Mn0.9 during First Absorption and Desorption. *Materials Transactions*, **2011**, 52, 586-590	1.3	4
56	Hydrogen absorption kinetics of magnesium fiber prepared by vapor deposition. *International Journal of Hydrogen Energy*, **2011**, 36, 14488-14495	6.7	18
55	Synthesis and crystal structure of a Pr5Ni19 superlattice alloy and its hydrogen absorption-desorption property. *Inorganic Chemistry*, **2011**, 50, 4548-52	5.1	26

54	Local Structural Evolution of Mechanically Alloyed Mg50Co50Using Atomic Pair Distribution Function Analysis. *Journal of Physical Chemistry C*, **2011**, 115, 7723-7728	3.8	16
53	Insight into the Hydrogenation Properties of Mechanically Alloyed Mg50Co50 from the Local Structure. *Journal of Physical Chemistry C*, **2011**, 115, 20335-20341	3.8	22
52	Reversible Vacancy Formation and Recovery during Dehydrogenation□Hydrogenation Cycling of Ti-Doped NaAlH4. *Journal of Physical Chemistry C*, **2010**, 114, 6869-6873	3.8	20
51	Phase transformation and crystal structure of La(2)Ni(7)H(x) studied by in situ X-ray diffraction. *Inorganic Chemistry*, **2010**, 49, 8763-8	5.1	28
50	Controlled shape of magnesium hydride synthesized by chemical vapor deposition. *Journal of Alloys and Compounds*, **2010**, 507, 502-507	5.7	12
49	Effect of substitutional Mo on diffusion and site occupation of hydrogen in the BCT monohydride phase of V□H system studied by 1H NMR. *Journal of Alloys and Compounds*, **2010**, 507, 399-404	5.7	19
48	The nanostructure and hydrogenation reaction of Mg50Co50 BCC alloy prepared by ball-milling. *Nanotechnology*, **2009**, 20, 204015	3.4	20
47	Distribution of hydrogen in metal hydrides studied by in situ powder neutron diffraction. *Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*, **2009**, 600, 297-300	1.2	12
46	Development of an energy-domain 57Fe-M□ssbauer spectrometer using synchrotron radiation and its application to ultrahigh-pressure studies with a diamond anvil cell. *Journal of Synchrotron Radiation*, **2009**, 16, 723-9	2.4	60
45	Structural Study of La4MgNi19 Hydride by In Situ X-ray and Neutron Powder Diffraction. *Journal of Physical Chemistry C*, **2009**, 113, 5853-5859	3.8	65
44	Behavior of vacancy formation and recovery during hydrogenation cycles in LaNi4.93Sn0.27. *Journal of Alloys and Compounds*, **2009**, 477, 205-211	5.7	13
43	Dehydrogenation reaction of Li□Mg□N□H systems studied by in situ synchrotron powder X-ray diffraction and powder neutron diffraction. *Journal of Alloys and Compounds*, **2008**, 457, 362-367	5.7	36
42	Investigations on the Formation and Decomposition Behaviors of BaAlH5 and Ba2AlH7. *Journal of Physical Chemistry C*, **2008**, 112, 17423-17426	3.8	5
41	The crystal structure of LiND2 and Mg(ND2)2. *Journal of Alloys and Compounds*, **2007**, 428, 297-301	5.7	67
40	Variation of hydrogen occupation in LaNi4.78Sn0.22Dx along the P□ isotherms studied by in situ neutron powder diffraction. *Journal of Alloys and Compounds*, **2007**, 431, 148-154	5.7	13
39	EXAFS study of LaNi5 and LaNi4.5Al0.5. *Journal of Alloys and Compounds*, **2007**, 433, 33-36	5.7	7
38	Phase transformation in La(CoxNi5□x)□H systems (x = 2, 3, 5) studied by in situ X-ray diffraction. *Journal of Alloys and Compounds*, **2006**, 413, 54-62	5.7	14
37	Characterization of Al□Ti phases in cycled TiF3-enhanced Na2LiAlH6. *Journal of Alloys and Compounds*, **2006**, 416, 274-278	5.7	18

36	Phase transformation in hydrogenation and dehydrogenation of LaCo5AlxH2 (x=0, 0.25) systems. *Journal of Alloys and Compounds*, **2006**, 425, 424-428	5.7	2
35	Lattice Defect Behavior of LaNi4.97Sn0.27 during Hydrogenation Cycles. *Materials Transactions*, **2006**, 47, 1875-1877	1.3	1
34	Average and Local Structures in Hydrogen Absorbing Ti–Cr–Mo Alloy. *Materials Transactions*, **2006**, 47, 271-274	1.3	8
33	Hydrogen absorption desorption properties and crystal structure analysis of TiCrMo alloys. *Journal of Alloys and Compounds*, **2005**, 404-406, 99-102	5.7	12
32	The observation of the lattice defect formation during the hydrogenation and dehydrogenation in La(Ni,Sn)5 by in-situ positron lifetime measurement. *Materials Research Society Symposia Proceedings*, **2005**, 885, 1		1
31	??????????????????????. *Electrochemistry*, **2005**, 73, 88-92	1.2	
30	In situ X-ray and neutron powder diffraction study of LaNi5-xSnx-H systems. *Materials Research Society Symposia Proceedings*, **2004**, 837, 19		1
29	Nano scale structure such as nano-size crystallites and defects can be found in conventional hydrogen absorbing alloys. *Materials Science and Engineering B: Solid-State Materials for Advanced Technology*, **2004**, 108, 60-66	3.1	3
28	Strain formation and lattice parameter change in LaNi4.75Sn0.25H system during the initial activation process. *Journal of Alloys and Compounds*, **2004**, 373, 183-193	5.7	39
27	Crystal structure and hydrogen occupation of LaNi4.9Al0.1Dx (5.0 x 6.1) on the desorption isotherm studied by in situ neutron powder diffraction. *Journal of Alloys and Compounds*, **2004**, 384, 195-202	5.7	12
26	Hydrogen absorbing properties and structures of TiCrMo alloys. *Journal of Alloys and Compounds*, **2003**, 356-357, 452-455	5.7	40
25	Hydrogen-induced phase decomposition of Ba7Al13 and the crystal structure of Ba2AlH7. *Journal of Alloys and Compounds*, **2003**, 361, 180-186	5.7	23
24	Crystal structural studies of AB5-type, BCC and Zintl phase hydrogen absorbing alloys. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2002**, 329-331, 321-324	5.3	4
23	Defects Formation in LaNi5-based Alloys Investigated by In-situ X-ray Diffraction. *Materials Research Society Symposia Proceedings*, **2002**, 753, 1		2
22	Crystal Structure and Morphology of Hydrogen Absorbing Alloys with BCC Structure. *Materials Research Society Symposia Proceedings*, **2002**, 753, 1		
21	New alkaline earth aluminum hydride with one-dimensional zigzag chains of [AlH6]: synthesis and crystal structure of BaAlH5. *Inorganic Chemistry*, **2002**, 41, 6941-3	5.1	45
20	Synthesis and crystal structure of Sr(2)AlH(7): a new structural type of alkaline earth aluminum hydride. *Inorganic Chemistry*, **2002**, 41, 6547-9	5.1	49
19	In situ X-ray diffraction study of hydrogen-induced phase decomposition in LaMg12 and La2Mg17. *Journal of Alloys and Compounds*, **2002**, 333, 103-108	5.7	47

18	Hydriding properties and crystal structure of NaCl-type mono-hydrides formed from TiVMn BCC solid solutions. *Journal of Alloys and Compounds*, **2002**, 345, 175-182	5.7	46
17	Hydrogenation properties and crystal structures of TiMn-V BCC solid solution alloys. *Metals and Materials International*, **2001**, 7, 165-168	2.4	9
16	Crystal structure of two hydrides formed from a TiVMn BCC solid solution alloy studied by time-of-flight neutron powder diffraction a NaCl structure and a CaF2 structure. *Journal of Alloys and Compounds*, **2001**, 316, 284-289	5.7	52
15	Study of Mg-M (M=Co, Ni and Fe) mixture elaborated by reactive mechanical alloying hydrogen sorption properties. *International Journal of Hydrogen Energy*, **2000**, 25, 987-996	6.7	184
14	X-ray diffraction peak broadening and degradation in LaNi5-based alloys. *International Journal of Hydrogen Energy*, **2000**, 25, 531-537	6.7	31
13	In-situ X-ray diffraction study on LaNi5 and LaNi4.75Al0.25 in the initial activation process. *Journal of Alloys and Compounds*, **2000**, 308, 309-318	5.7	68
12	New hydride phase with a deformed FCC structure in the TiVMn solid solutionhydrogen system. *Journal of Alloys and Compounds*, **2000**, 311, 317-321	5.7	41
11	Hydrogen isotope effects in Ti1.0Mn0.9V1.1 and Ti1.0Cr1.5V1.7 alloys. *Journal of Alloys and Compounds*, **2000**, 297, 253-260	5.7	20
10	X-ray diffraction peak broadening and lattice strain in LaNi5-based alloys. *Journal of Alloys and Compounds*, **2000**, 298, 138-145	5.7	57
9	Synthesis of magnesium and titanium hydride via reactive mechanical alloying. *Journal of Alloys and Compounds*, **2000**, 298, 279-284	5.7	81
8	Stability of LaNi5 Alx alloys (x=0~0.5 during hydriding and dehydriding cycling in hydrogen containing O2 and H2O. *Journal of Alloys and Compounds*, **1998**, 268, 207-210	5.7	23
7	Lattice expanding behaviour and degradation of LaNi5-based alloys. *Journal of Alloys and Compounds*, **1998**, 267, 205-210	5.7	37
6	A method for designing a hydrogen absorbing LaNi5MnxAly alloy for a chemical refrigeration system. *Journal of Alloys and Compounds*, **1997**, 252, 83-87	5.7	21
5	Cycle performance of a hydrogen-absorbing La0.8 Y0.2 Ni4.8 Mn0.2 Alloy. *International Journal of Hydrogen Energy*, **1996**, 21, 457-460	6.7	21
4	Characteristics of a hydrogen-absorbing alloy developed for a portable fuel cell. *Journal of Alloys and Compounds*, **1995**, 231, 898-902	5.7	7
3	Influence of annealing on hydrogenation characteristics and microstructure of LaNi4.55Al0.45 alloy. *Journal of Alloys and Compounds*, **1995**, 218, 216-220	5.7	23
2	Homogenizing behaviour in a hydrogen-absorbing LaNi4.55Al0.45 alloy through annealing and rapid quenching. *Journal of Alloys and Compounds*, **1994**, 210, 299-303	5.7	57
1	Homogenizing Behaviour and Pressure-Composition Isotherms of Hydrogen in LaNi4.55Al0.45 Alloy during Annealing. *Nippon Kinzoku Gakkaishi/Journal of the Japan Institute of Metals*, **1993**, 57, 1465-1470	0.4	1