

Yumiko Nakamura

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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	High-energy composite layered manganese-rich cathode materials via controlling Li ₂ MnO ₃ phase activation for lithium-ion batteries. <i>Physical Chemistry Chemical Physics</i> , 2012 , 14, 6584-95	3.6	232
106	Study of Mg-M (M=Co, Ni and Fe) mixture elaborated by reactive mechanical alloying hydrogen sorption properties. <i>International Journal of Hydrogen Energy</i> , 2000 , 25, 987-996	6.7	184
105	Synthesis of magnesium and titanium hydride via reactive mechanical alloying. <i>Journal of Alloys and Compounds</i> , 2000 , 298, 279-284	5.7	81
104	In-situ X-ray diffraction study on LaNi ₅ and LaNi _{4.75} Al _{0.25} in the initial activation process. <i>Journal of Alloys and Compounds</i> , 2000 , 308, 309-318	5.7	68
103	The crystal structure of LiND ₂ and Mg(ND ₂) ₂ . <i>Journal of Alloys and Compounds</i> , 2007 , 428, 297-301	5.7	67
102	Structural Study of La ₄ MgNi ₁₉ Hydride by In Situ X-ray and Neutron Powder Diffraction. <i>Journal of Physical Chemistry C</i> , 2009 , 113, 5853-5859	3.8	65
101	Development of an energy-domain ⁵⁷ Fe-Mössbauer spectrometer using synchrotron radiation and its application to ultrahigh-pressure studies with a diamond anvil cell. <i>Journal of Synchrotron Radiation</i> , 2009 , 16, 723-9	2.4	60
100	X-ray diffraction peak broadening and lattice strain in LaNi ₅ -based alloys. <i>Journal of Alloys and Compounds</i> , 2000 , 298, 138-145	5.7	57
99	Homogenizing behaviour in a hydrogen-absorbing LaNi _{4.55} Al _{0.45} alloy through annealing and rapid quenching. <i>Journal of Alloys and Compounds</i> , 1994 , 210, 299-303	5.7	57
98	Control of the orientation and photoinduced phase transitions of macrocyclic azobenzene. <i>Chemistry - A European Journal</i> , 2013 , 19, 17391-7	4.8	55
97	Crystal structure of two hydrides formed from a Ti ₂ V ₂ Mn BCC solid solution alloy studied by time-of-flight neutron powder diffraction in NaCl structure and a CaF ₂ structure. <i>Journal of Alloys and Compounds</i> , 2001 , 316, 284-289	5.7	52
96	Synthesis and crystal structure of Sr(2)AlH(7): a new structural type of alkaline earth aluminum hydride. <i>Inorganic Chemistry</i> , 2002 , 41, 6547-9	5.1	49
95	In situ X-ray diffraction study of hydrogen-induced phase decomposition in LaMg ₁₂ and La ₂ Mg ₁₇ . <i>Journal of Alloys and Compounds</i> , 2002 , 333, 103-108	5.7	47
94	Hydriding properties and crystal structure of NaCl-type mono-hydrides formed from Ti ₂ V ₂ Mn BCC solid solutions. <i>Journal of Alloys and Compounds</i> , 2002 , 345, 175-182	5.7	46
93	New alkaline earth aluminum hydride with one-dimensional zigzag chains of [AlH ₆]: synthesis and crystal structure of BaAlH ₅ . <i>Inorganic Chemistry</i> , 2002 , 41, 6941-3	5.1	45
92	New hydride phase with a deformed FCC structure in the Ti ₂ V ₂ Mn solid solution hydrogen system. <i>Journal of Alloys and Compounds</i> , 2000 , 311, 317-321	5.7	41
91	Hydrogen absorbing properties and structures of Ti ₂ Cr ₂ Mo alloys. <i>Journal of Alloys and Compounds</i> , 2003 , 356-357, 452-455	5.7	40

90	Strain formation and lattice parameter change in LaNi _{4.75} Sn _{0.25} H system during the initial activation process. <i>Journal of Alloys and Compounds</i> , 2004 , 373, 183-193	5.7	39
89	Lattice expanding behaviour and degradation of LaNi ₅ -based alloys. <i>Journal of Alloys and Compounds</i> , 1998 , 267, 205-210	5.7	37
88	Origin of Degradation in the Reversible Hydrogen Storage Capacity of V _{1-x} Ti _x Alloys from the Atomic Pair Distribution Function Analysis. <i>Journal of Physical Chemistry C</i> , 2013 , 117, 26543-26550	3.8	36
87	Dehydrogenation reaction of LiMgNiH systems studied by in situ synchrotron powder X-ray diffraction and powder neutron diffraction. <i>Journal of Alloys and Compounds</i> , 2008 , 457, 362-367	5.7	36
86	Melting of Pb Charge Glass and Simultaneous Pb-Cr Charge Transfer in PbCrO ₃ as the Origin of Volume Collapse. <i>Journal of the American Chemical Society</i> , 2015 , 137, 12719-28	16.4	35
85	X-ray diffraction peak broadening and degradation in LaNi ₅ -based alloys. <i>International Journal of Hydrogen Energy</i> , 2000 , 25, 531-537	6.7	31
84	Effect of Rare Earth Elements and Alloy Composition on Hydrogenation Properties and Crystal Structures of Hydrides in Mg ₂ RExNi ₄ . <i>Journal of Physical Chemistry C</i> , 2012 , 116, 19156-19163	3.8	29
83	Phase transformation and crystal structure of La(2)Ni(7)H(x) studied by in situ X-ray diffraction. <i>Inorganic Chemistry</i> , 2010 , 49, 8763-8	5.1	28
82	Synthesis and crystal structure of a Pr ₅ Ni ₁₉ superlattice alloy and its hydrogen absorption-desorption property. <i>Inorganic Chemistry</i> , 2011 , 50, 4548-52	5.1	26
81	Lattice defects introduced into LaNi ₅ -based alloys during hydrogen absorption/desorption cycling. <i>Journal of Alloys and Compounds</i> , 2011 , 509, 7498-7503	5.7	25
80	Crystal structure and local structure of Mg(2-x)Pr(x)Ni ₄ (x = 0.6 and 1.0) deuteride using in situ neutron total scattering. <i>Inorganic Chemistry</i> , 2013 , 52, 7010-9	5.1	23
79	Hydrogenation properties of Ti _{1-x} Mn alloys with a BCC structure containing high and low oxygen concentrations. <i>Journal of Alloys and Compounds</i> , 2011 , 509, 1841-1847	5.7	23
78	Stability of LaNi _{5-x} Al _x alloys (x=0~0.5 during hydriding and dehydriding cycling in hydrogen containing O ₂ and H ₂ O). <i>Journal of Alloys and Compounds</i> , 1998 , 268, 207-210	5.7	23
77	Hydrogen-induced phase decomposition of Ba ₇ Al ₁₃ and the crystal structure of Ba ₂ AlH ₇ . <i>Journal of Alloys and Compounds</i> , 2003 , 361, 180-186	5.7	23
76	Influence of annealing on hydrogenation characteristics and microstructure of LaNi _{4.55} Al _{0.45} alloy. <i>Journal of Alloys and Compounds</i> , 1995 , 218, 216-220	5.7	23
75	Insight into the Hydrogenation Properties of Mechanically Alloyed Mg ₅₀ Co ₅₀ from the Local Structure. <i>Journal of Physical Chemistry C</i> , 2011 , 115, 20335-20341	3.8	22
74	A method for designing a hydrogen absorbing LaNi _{5-x} Mn _x Al _y alloy for a chemical refrigeration system. <i>Journal of Alloys and Compounds</i> , 1997 , 252, 83-87	5.7	21
73	Cycle performance of a hydrogen-absorbing La _{0.8} Y _{0.2} Ni _{4.8} Mn _{0.2} Alloy. <i>International Journal of Hydrogen Energy</i> , 1996 , 21, 457-460	6.7	21

72	Reversible Vacancy Formation and Recovery during Dehydrogenation/Hydrogenation Cycling of Ti-Doped NaAlH ₄ . <i>Journal of Physical Chemistry C</i> , 2010 , 114, 6869-6873	3.8	20
71	The nanostructure and hydrogenation reaction of Mg ₅₀ Co ₅₀ BCC alloy prepared by ball-milling. <i>Nanotechnology</i> , 2009 , 20, 204015	3.4	20
70	Hydrogen isotope effects in Ti _{1.0} Mn _{0.9} V _{1.1} and Ti _{1.0} Cr _{1.5} V _{1.7} alloys. <i>Journal of Alloys and Compounds</i> , 2000 , 297, 253-260	5.7	20
69	In Situ X-ray Diffraction Study of Phase Transformation of Mg _{2-x} Pr _x Ni ₄ during Hydrogenation and Dehydrogenation (x = 0.6 and 1.0). <i>Journal of Physical Chemistry C</i> , 2012 , 116, 1401-1407	3.8	19
68	Microstructure of Ti _{1-x} Mn _x BCC alloys before and after hydrogen absorption/desorption. <i>Journal of Alloys and Compounds</i> , 2011 , 509, 4352-4356	5.7	19
67	Effect of substitutional Mo on diffusion and site occupation of hydrogen in the BCT monohydride phase of V _{1-x} system studied by ¹ H NMR. <i>Journal of Alloys and Compounds</i> , 2010 , 507, 399-404	5.7	19
66	Cost reduction possibilities of vanadium-based solid solutions [Microstructural, thermodynamic, cyclic and environmental effects of ferrovanadium substitution. <i>Journal of Alloys and Compounds</i> , 2015 , 648, 1024-1030	5.7	18
65	Effect of oxygen on the microstructure and hydrogen storage properties of V _{1-x} Ti _x Cr _{1-x} Be quaternary solid solutions. <i>International Journal of Hydrogen Energy</i> , 2014 , 39, 20000-20008	6.7	18
64	Hydrogen absorption kinetics of magnesium fiber prepared by vapor deposition. <i>International Journal of Hydrogen Energy</i> , 2011 , 36, 14488-14495	6.7	18
63	Hydrogenation Properties of Ternary Intermetallic Compounds Mg _{2-x} Pr _x Ni ₄ . <i>Materials Transactions</i> , 2012 , 53, 513-517	1.3	18
62	Characterization of Al _{1-x} Ti _x phases in cycled TiF ₃ -enhanced Na ₂ LiAlH ₆ . <i>Journal of Alloys and Compounds</i> , 2006 , 416, 274-278	5.7	18
61	Degradation Mechanism against Hydrogenation Cycles in Mg _{2-x} Pr _x Ni ₄ (x= 0.6 and 1.0). <i>Journal of Physical Chemistry C</i> , 2014 , 118, 6697-6705	3.8	17
60	In situ XRD study of La ₂ Ni ₇ H(x) during hydrogen absorption-desorption. <i>Inorganic Chemistry</i> , 2013 , 52, 10105-11	5.1	16
59	Local Structural Evolution of Mechanically Alloyed Mg ₅₀ Co ₅₀ Using Atomic Pair Distribution Function Analysis. <i>Journal of Physical Chemistry C</i> , 2011 , 115, 7723-7728	3.8	16
58	Enhancement of hydrogen diffusion in the body-centered tetragonal monohydride phase of the V _{1-x} system by substitutional Al studied by proton nuclear magnetic resonance. <i>Acta Materialia</i> , 2015 , 83, 479-487	8.4	15
57	Effect of substitutional Cr on hydrogen diffusion and thermal stability for the BCT monohydride phase of the V _{1-x} system studied by ¹ H NMR. <i>Journal of Alloys and Compounds</i> , 2012 , 524, 63-68	5.7	15
56	Hydrogenation of a TiFe-based alloy at high pressures and temperatures. <i>International Journal of Hydrogen Energy</i> , 2015 , 40, 3283-3287	6.7	14
55	Phase transformation in La(Co _x Ni _{5-x}) ₂ systems (x = 2, 3, 5) studied by in situ X-ray diffraction. <i>Journal of Alloys and Compounds</i> , 2006 , 413, 54-62	5.7	14

54	Synthesis and structural study of Ti-rich Mg _{1-x} Ti hydrides. <i>Journal of Alloys and Compounds</i> , 2014 , 593, 132-136	5-7	13
53	Behavior of vacancy formation and recovery during hydrogenation cycles in LaNi _{4.93} Sn _{0.27} . <i>Journal of Alloys and Compounds</i> , 2009 , 477, 205-211	5-7	13
52	Variation of hydrogen occupation in LaNi _{4.78} Sn _{0.22} D _x along the P-T isotherms studied by in situ neutron powder diffraction. <i>Journal of Alloys and Compounds</i> , 2007 , 431, 148-154	5-7	13
51	Controlled shape of magnesium hydride synthesized by chemical vapor deposition. <i>Journal of Alloys and Compounds</i> , 2010 , 507, 502-507	5-7	12
50	Distribution of hydrogen in metal hydrides studied by in situ powder neutron diffraction. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2009 , 600, 297-300	1-2	12
49	Hydrogen absorption-desorption properties and crystal structure analysis of Ti _{1-x} Mo alloys. <i>Journal of Alloys and Compounds</i> , 2005 , 404-406, 99-102	5-7	12
48	Crystal structure and hydrogen occupation of LaNi _{4.9} Al _{0.1} D _x (5.0 ≤ x ≤ 6.1) on the desorption isotherm studied by in situ neutron powder diffraction. <i>Journal of Alloys and Compounds</i> , 2004 , 384, 195-202	5-7	12
47	Reduction and unusual recovery in the reversible hydrogen storage capacity of V _{1-x} Ti _x during hydrogen cycling. <i>International Journal of Hydrogen Energy</i> , 2014 , 39, 10546-10551	6-7	11
46	Structural Variation of Self-Organized Mg Hydride Nanoclusters in Immiscible Ti Matrix by Hydrogenation. <i>Inorganic Chemistry</i> , 2018 , 57, 11831-11838	5-1	11
45	Dependence of constituent elements of AB ₅ type metal hydrides on hydrogenation degradation by CO ₂ poisoning. <i>Journal of Alloys and Compounds</i> , 2015 , 647, 198-203	5-7	10
44	Variation in the ratio of Mg ₂ Co and MgCo ₂ in amorphous-like mechanically alloyed Mg _x Co _{100-x} using atomic pair distribution function analysis. <i>Zeitschrift für Kristallographie</i> , 2012 , 227, 299-303		9
43	Hydrogenation properties and crystal structures of Ti _{1-x} Ni _x -V BCC solid solution alloys. <i>Metals and Materials International</i> , 2001 , 7, 165-168	2-4	9
42	Hydrogen storage properties of Nb-based solid solution alloys with a BCC structure. <i>Journal of Alloys and Compounds</i> , 2020 , 820, 153399	5-7	9
41	Effect of CO ₂ on hydrogen absorption in Ti-Zr-Mn-Cr based AB ₂ type alloys. <i>Journal of Alloys and Compounds</i> , 2017 , 705, 507-516	5-7	8
40	Average and Local Structures in Hydrogen Absorbing Ti-Cr-Mo Alloy. <i>Materials Transactions</i> , 2006 , 47, 271-274	1-3	8
39	Formation of hydride phase and diffusion of hydrogen in the V-Fe system varied by substitutional Fe. <i>International Journal of Hydrogen Energy</i> , 2016 , 41, 6369-6375	6-7	7
38	EXAFS study of LaNi ₅ and LaNi _{4.5} Al _{0.5} . <i>Journal of Alloys and Compounds</i> , 2007 , 433, 33-36	5-7	7
37	Characteristics of a hydrogen-absorbing alloy developed for a portable fuel cell. <i>Journal of Alloys and Compounds</i> , 1995 , 231, 898-902	5-7	7

36	Improving the Cyclic Stability of V–Ti–Mn bcc Alloys Using Interstitial Elements. <i>Materials Transactions</i> , 2014 , 55, 1144-1148	1.3	6
35	Interstitial-atom-induced phase transformation upon hydrogenation in vanadium. <i>Journal of Alloys and Compounds</i> , 2018 , 750, 33-41	5.7	5
34	Effect of dissolved oxygen on hydrogenation of vanadium and hydrogen diffusion in the monohydride phase. <i>Acta Materialia</i> , 2016 , 103, 23-29	8.4	5
33	Development of Ti–Zr–Mn Based Hydrogen Storage Alloys for a Soft Actuator. <i>Materials Transactions</i> , 2014 , 55, 1168-1174	1.3	5
32	In situ synchrotron ⁵⁷ Fe Mössbauer spectroscopy of RFe ₂ (R = Y, Gd) hydrides synthesized under ultra-high-pressure hydrogen. <i>Journal of Alloys and Compounds</i> , 2013 , 580, S264-S267	5.7	5
31	In situ atomic force microscopy observation of hydrogen absorption/desorption by Palladium thin film. <i>Applied Surface Science</i> , 2011 , 258, 1456-1459	6.7	5
30	Investigations on the Formation and Decomposition Behaviors of BaAlH ₅ and Ba ₂ AlH ₇ . <i>Journal of Physical Chemistry C</i> , 2008 , 112, 17423-17426	3.8	5
29	Phase Transformation and Lattice-Strain Formation in Ti _{1.0} V _{1.1} Mn _{0.9} during First Absorption and Desorption. <i>Materials Transactions</i> , 2011 , 52, 586-590	1.3	4
28	Crystal structural studies of AB ₅ -type, BCC and Zintl phase hydrogen absorbing alloys. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2002 , 329-331, 321-324	5.3	4
27	Reaction paths via a new transient phase in non-equilibrium hydrogen absorption of LaNi ₂ Co ₃ . <i>International Journal of Hydrogen Energy</i> , 2020 , 45, 21655-21665	6.7	4
26	Development of an in situ synchrotron X-ray total scattering setup under pressurized hydrogen gas. <i>Journal of Applied Crystallography</i> , 2018 , 51, 796-801	3.8	4
25	Unveiling Nanoscale Compositional and Structural Heterogeneities of Highly Textured MgTiH Thin Films. <i>Inorganic Chemistry</i> , 2020 , 59, 6800-6807	5.1	3
24	Metal hydride actuator for a rescue jack driven by hydrogen desorption. <i>International Journal of Hydrogen Energy</i> , 2019 , 44, 29310-29318	6.7	3
23	Observation of Transient Structural Changes on Hydrogen Absorption Process of LaNi _{4.75} Sn _{0.25} by Time Resolved X-Ray Diffraction. <i>Nippon Kinzoku Gakkaishi/Journal of the Japan Institute of Metals</i> , 2015 , 79, 124-130	0.4	3
22	Identification of Vacancy Formation Sites in LaNi ₅ Cu During Hydrogenation Using in Situ Coincidence Doppler Broadening Technique. <i>Journal of Physical Chemistry C</i> , 2012 , 116, 22238-22244	3.8	3
21	Nano scale structure such as nano-size crystallites and defects can be found in conventional hydrogen absorbing alloys. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2004 , 108, 60-66	3.1	3
20	Metallurgical Synthesis of MgFeSi Hydride: Destabilization of MgFeH Nanostructured in Templated MgSi. <i>Inorganic Chemistry</i> , 2020 , 59, 2758-2764	5.1	2
19	Compositional Dependence of Hydrogenation Properties in Ti _{1+y} (Fe _{1-x} Mn _x) _{1-y} (0.2 ≤ x ≤ 0.5, 0 ≤ y ≤ 0.08). <i>Nippon Kinzoku Gakkaishi/Journal of the Japan Institute of Metals</i> , 2015 , 79, 112-117	0.4	2

18	Development of $Zr_{x}Ti_{1-x}Mn_{0.8}V_{0.2}Ni_{0.9}M_{0.1}$ (M=Ni, Al, Fe, Cu) Alloys for a Soft Actuator Using Hydrogen Storage Alloys. <i>Nippon Kinzoku Gakkaishi/Journal of the Japan Institute of Metals</i> , 2015 , 79, 257-264	0.4	2
17	An in situ Mössbauer study using synchrotron radiation. <i>Hyperfine Interactions</i> , 2012 , 204, 139-142	0.8	2
16	Decomposition of Magnesium Hydride Fiber Observed Using TEM and In-Situ AFM. <i>Materials Transactions</i> , 2011 , 52, 481-485	1.3	2
15	Phase transformation in hydrogenation and dehydrogenation of $LaCo_{5-x}Al_xH_2$ ($x=0, 0.25$) systems. <i>Journal of Alloys and Compounds</i> , 2006 , 425, 424-428	5.7	2
14	Defects Formation in LaNi ₅ -based Alloys Investigated by In-situ X-ray Diffraction. <i>Materials Research Society Symposia Proceedings</i> , 2002 , 753, 1		2
13	Effects of substitutional Mo and Cr on site occupation and diffusion of hydrogen in the β -phase vanadium hydride by first principles calculations. <i>Theoretical Chemistry Accounts</i> , 2019 , 138, 1	1.9	2
12	Rescue jack system applying hydrogen-absorbing alloys as a pressure source. <i>International Journal of Hydrogen Energy</i> , 2018 , 43, 22438-22446	6.7	2
11	Hydrogen Vibrational Excitation Spectra of CaF ₂ -Type Metal Hydrides Synthesized from Ti-Based BCC Solid Solution Alloys. <i>Materials Transactions</i> , 2011 , 52, 591-594	1.3	1
10	Lattice Defect Behavior of LaNi _{4.97} Sn _{0.27} during Hydrogenation Cycles. <i>Materials Transactions</i> , 2006 , 47, 1875-1877	1.3	1
9	In situ X-ray and neutron powder diffraction study of LaNi _{5-x} Sn _x -H systems. <i>Materials Research Society Symposia Proceedings</i> , 2004 , 837, 19		1
8	The observation of the lattice defect formation during the hydrogenation and dehydrogenation in La(Ni,Sn) ₅ by in-situ positron lifetime measurement. <i>Materials Research Society Symposia Proceedings</i> , 2005 , 885, 1		1
7	Homogenizing Behaviour and Pressure-Composition Isotherms of Hydrogen in LaNi _{4.55} Al _{0.45} Alloy during Annealing. <i>Nippon Kinzoku Gakkaishi/Journal of the Japan Institute of Metals</i> , 1993 , 57, 1465-1470	0.4	1
6	High-Pressure-Hydrogen-Induced Spin Reconfiguration in GdFe ₂ Observed by ⁵⁷ Fe-Polarized Synchrotron Radiation Mössbauer Spectroscopy with Nuclear Bragg Monochromator. <i>Journal of the Physical Society of Japan</i> , 2016 , 85, 123707	1.5	1
5	Effect of a Quenching Rate on Hydrogen Storage Properties of V _{0.79} Ti _{0.22} Zr _{0.01} . <i>Nippon Kinzoku Gakkaishi/Journal of the Japan Institute of Metals</i> , 2015 , 79, 131-136	0.4	
4	Structural Studies of Hydrogen Storage Alloys using X-ray/Neutron Diffraction and Total Scattering. <i>Materials Research Society Symposia Proceedings</i> , 2011 , 1334, 20601		
3	Crystal Structure and Morphology of Hydrogen Absorbing Alloys with BCC Structure. <i>Materials Research Society Symposia Proceedings</i> , 2002 , 753, 1		
2	?????????????????????. <i>Electrochemistry</i> , 2005 , 73, 88-92	1.2	
1	An in situ Mössbauer study using synchrotron radiation 2013 , 139-142		

