Volodymyr Yartys

List of Publications by Year in descending order

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223 papers	8,432 citations	50244 46 h-index	56687 83 g-index
239 all docs	239 docs citations	239 times ranked	3808 citing authors

#	Article	IF	Citations
1	Materials for hydrogen-based energy storage â€“ past, recent progress and future outlook. Journal of Alloys and Compounds, 2020, 827, 153548.	2.8	518
2	Application of hydrides in hydrogen storage and compression: Achievements, outlook and perspectives. International Journal of Hydrogen Energy, 2019, 44, 7780-7808.	3.8	486
3	Magnesium based materials for hydrogen based energy storage: Past, present and future. International Journal of Hydrogen Energy, 2019, 44, 7809-7859.	3.8	460
4	Metal hydride hydrogen compressors: A review. International Journal of Hydrogen Energy, 2014, 39, 5818-5851.	3.8	361
5	Review of magnesium hydride-based materials: development and optimisation. Applied Physics A: Materials Science and Processing, 2016, 122, 1.	1.1	274
6	The use of metal hydrides in fuel cell applications. Progress in Natural Science: Materials International, 2017, 27, 3-20.	1.8	222
7	Aluminum hydride as a hydrogen and energy storage material: Past, present and future. Journal of Alloys and Compounds, 2011, 509, S517-S528.	2.8	194
8	Metal hydride hydrogen storage and compression systems for energy storage technologies. International Journal of Hydrogen Energy, 2021, 46, 13647-13657.	3.8	193
9	Microstructure and hydrogenation behavior of ball-milled and melt-spun Mgâ€“10Niâ€“2Mm alloys. Journal of Alloys and Compounds, 2008, 466, 176-181.	2.8	153
10	Mg-based compounds for hydrogen and energy storage. Applied Physics A: Materials Science and Processing, 2016, 122, 1.	1.1	146
11	Exploits, advances and challenges benefiting beyond Li-ion battery technologies. Journal of Alloys and Compounds, 2020, 817, 153261.	2.8	144
12	Mg substitution effect on the hydrogenation behaviour, thermodynamic and structural properties of the La2Ni7â€“H(D)2 system. Journal of Solid State Chemistry, 2008, 181, 812-821.	1.4	120
13	Magnesiumâ€“carbon hydrogen storage hybrid materials produced by reactive ball milling in hydrogen. Carbon, 2013, 57, 146-160.	5.4	120
14	LaMg11 with a giant unit cell synthesized by hydrogen metallurgy: Crystal structure and hydrogenation behavior. Acta Materialia, 2010, 58, 2510-2519.	3.8	99
15	Effect of magnesium on the crystal structure and thermodynamics of the La3â^'xMgxNi9 hydrides. Journal of Alloys and Compounds, 2011, 509, S540-S548.	2.8	97
16	In situ synchrotron X-ray diffraction studies of hydrogen desorption and absorption properties of Mg and Mgâ€“Mmâ€“Ni after reactive ball milling in hydrogen. Acta Materialia, 2009, 57, 3989-4000.	3.8	96
17	Desorption characteristics of rare earth (R) hydrides (R=Y, Ce, Pr, Nd, Sm, Gd and Tb) in relation to the HDDR behaviour of Râ€“Fe-based-compounds. Journal of Alloys and Compounds, 1997, 253-254, 128-133.	2.8	92
18	An outstanding effect of graphite in nano-MgH₂â€“TiH₂ on hydrogen storage performance. Journal of Materials Chemistry A, 2018, 6, 10740-10754.	5.2	91

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19	Short hydrogenâ€“hydrogen separations in novel intermetallic hydrides, RE3Ni3In3D4 (RE=La, Ce and Nd). Journal of Alloys and Compounds, 2002, 330-332, 132-140.	2.8	90
20	Hydrogen storage properties and structure of La1â^'xMgx(Ni1â^'yMny)3 intermetallics and their hydrides. Journal of Alloys and Compounds, 2007, 446-447, 166-172.	2.8	89
21	Double-Bridge Bonding of Aluminium and Hydrogen in the Crystal Structure of Î³-AlH3. Inorganic Chemistry, 2007, 46, 1051-1055.	1.9	89
22	Kinetics of hydrogen evolution from MgH2: Experimental studies, mechanism and modelling. International Journal of Hydrogen Energy, 2010, 35, 9060-9069.	3.8	89
23	Annealing effect on phase composition and electrochemical properties of the Co-free La2MgNi9 anode for Ni-metal hydride batteries. Electrochimica Acta, 2013, 96, 27-33.	2.6	89
24	Hydrogen storage behavior of magnesium catalyzed by nickel-graphene nanocomposites. International Journal of Hydrogen Energy, 2019, 44, 29212-29223.	3.8	87
25	Nanostructured Mgâ€“Mmâ€“Ni hydrogen storage alloy: Structureâ€“properties relationship. Journal of Alloys and Compounds, 2007, 446-447, 114-120.	2.8	79
26	Novel intermetallic hydrides. Journal of Alloys and Compounds, 2006, 408-412, 273-279.	2.8	67
27	Chemical surface modification for the improvement of the hydrogenation kinetics and poisoning resistance of TiFe. Journal of Alloys and Compounds, 2011, 509, S770-S774.	2.8	67
28	Vanadium-based BCC alloys: phase-structural characteristics and hydrogen sorption properties. Journal of Alloys and Compounds, 2005, 404-406, 421-426.	2.8	66
29	Thermal decomposition of AlH3 studied by in situ synchrotron X-ray diffraction and thermal desorption spectroscopy. Journal of Alloys and Compounds, 2007, 446-447, 280-289.	2.8	66
30	Metal hydride hydrogen compression: recent advances and future prospects. Applied Physics A: Materials Science and Processing, 2016, 122, 1.	1.1	63
31	Problem of hydrogen storage and prospective uses of hydrides for hydrogen accumulation. Russian Journal of General Chemistry, 2007, 77, 694-711.	0.3	62
32	Comparative analysis of the efficiencies of hydrogen storage systems utilising solid state H storage materials. Journal of Alloys and Compounds, 2015, 645, S365-S373.	2.8	62
33	Modelling of phase equilibria in metalâ€“hydrogen systems. Journal of Alloys and Compounds, 2003, 356-357, 27-31.	2.8	61
34	Crystal chemistry of RT5H(D)x, RT2H(D)x and RT3H(D)x hydrides based on intermetallic compounds of CaCu5, MgCu2, MgZn2 and PuNi3 structure types. International Journal of Hydrogen Energy, 1982, 7, 957-965.	3.8	60
35	Hydrogen in La₂MgNi₉D₁₃: The Role of Magnesium. Inorganic Chemistry, 2012, 51, 4231-4238.	1.9	60
36	Nanostructured rapidly solidified LaMg11Ni alloy: Microstructure, crystal structure and hydrogenation properties. International Journal of Hydrogen Energy, 2012, 37, 3548-3557.	3.8	58

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37	Influence of intrinsic hydrogenation/dehydrogenation kinetics on the dynamic behaviour of metal hydrides: A semi-empirical model and its verification. International Journal of Hydrogen Energy, 2007, 32, 1041-1049.	3.8	57
38	A concept of combined cooling, heating and power system utilising solar power and based on reversible solid oxide fuel cell and metal hydrides. International Journal of Hydrogen Energy, 2018, 43, 18650-18663.	3.8	57
39	Nanostructured rapidly solidified LaMg11Ni alloy. II. In situ synchrotron X-ray diffraction studies of hydrogen absorptionâ€“desorption behaviours. International Journal of Hydrogen Energy, 2012, 37, 5710-5722.	3.8	56
40	Recent progress on hydrogen generation from the hydrolysis of light metals and hydrides. Journal of Alloys and Compounds, 2022, 910, 164831.	2.8	52
41	Microstructural optimization of LaMg12 alloy for hydrogen storage. Journal of Alloys and Compounds, 2011, 509, S633-S639.	2.8	50
42	Surface-modified advanced hydrogen storage alloys for hydrogen separation and purification. Journal of Alloys and Compounds, 2011, 509, S555-S561.	2.8	49
43	Metal hydrides as negative electrode materials for Niâ€“MH batteries. Applied Physics A: Materials Science and Processing, 2016, 122, 1.	1.1	49
44	Effect of magnesium content and quenching rate on the phase structure and composition of rapidly solidified La2MgNi9 metal hydride battery electrode alloy. Journal of Alloys and Compounds, 2013, 555, 201-208.	2.8	48
45	Structureâ€“properties relationship in RE3â˜Mg Ni9H10â€“13 (RE = La,Pr,Nd) hydrides for energy storage. Journal of Alloys and Compounds, 2015, 645, S412-S418.	2.8	48
46	Short hydrogen-hydrogen separation inRNiInH1.333(R=La,Ce, Nd). Physical Review B, 2003, 67, .	1.1	47
47	Study of hydrogen storage and electrochemical properties of AB2-type Ti0.15Zr0.85La0.03Ni1.2Mn0.7V0.12Fe0.12 alloy. Journal of Alloys and Compounds, 2019, 793, 564-575.	2.8	46
48	Full-cell hydride-based solid-state Li batteries for energy storage. International Journal of Hydrogen Energy, 2019, 44, 7875-7887.	3.8	46
49	Unusual effects on hydrogenation: anomalous expansion and volume contraction. Journal of Alloys and Compounds, 2003, 356-357, 109-113.	2.8	44
50	Microstructure and novel hydrogen storage properties of melt-spun Mgâ€“Niâ€“Mm alloys. Journal of Alloys and Compounds, 2009, 477, 262-266.	2.8	43
51	Hexagonal LaNiSnD2 with a filled ZrBeSi-type structure. Journal of Alloys and Compounds, 2002, 330-332, 141-145.	2.8	40
52	Modelling and experimental results of heat transfer in a metal hydride store during hydrogen charge and discharge. International Journal of Hydrogen Energy, 2009, 34, 5121-5130.	3.8	40
53	Laves type intermetallic compounds as hydrogen storage materials: A review. Journal of Alloys and Compounds, 2022, 916, 165219.	2.8	40
54	Hydrogen absorptionâ€“desorption, crystal structure and magnetism in RENiAl intermetallic compounds and their hydrides. Journal of Alloys and Compounds, 1997, 253-254, 343-346.	2.8	37

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55	Nanostructured hydrogen storage materials prepared by high-energy reactive ball milling of magnesium and ferrovanadium. International Journal of Hydrogen Energy, 2019, 44, 6687-6701.	3.8	37
56	Kinetics of hydrogen desorption from the powders of metal hydrides. Journal of Alloys and Compounds, 2005, 404-406, 312-316.	2.8	36
57	Crystal chemistry and thermodynamic properties of anisotropic Ce2Ni7H4.7 hydride. Journal of Solid State Chemistry, 2007, 180, 2566-2576.	1.4	35
58	Nanostructured surface coatings for the improvement of AB₅-type hydrogen storage intermetallics. International Journal of Energy Research, 2009, 33, 1171-1179.	2.2	35
59	Phase-structural transformations in a metal hydride battery anode La1.5Nd0.5MgNi9 alloy and its electrochemical performance. International Journal of Hydrogen Energy, 2016, 41, 9954-9967.	3.8	35
60	Kinetics and mechanism of MgH2 hydrolysis in MgCl2 solutions. International Journal of Hydrogen Energy, 2021, 46, 40278-40293.	3.8	35
61	Hydrides of the RNiIn (R=La, Ce, Nd) intermetallic compounds: crystallographic characterisation and thermal stability. Journal of Alloys and Compounds, 1999, 284, 256-261.	2.8	34
62	Hydrides of Laves type Tiâ€“Zr alloys with enhanced H storage capacity as advanced metal hydride battery anodes. Journal of Alloys and Compounds, 2020, 828, 154354.	2.8	34
63	HYDRIDE4MOBILITY: An EU HORIZON 2020 project on hydrogen powered fuel cell utility vehicles using metal hydrides in hydrogen storage and refuelling systems. International Journal of Hydrogen Energy, 2021, 46, 35896-35909.	3.8	34
64	Hydrogen sorption properties of arc generated single-wall carbon nanotubes. Journal of Alloys and Compounds, 2003, 356-357, 510-514.	2.8	33
65	Influence of aminosilane surface functionalization of rare earth hydride-forming alloys on palladium treatment by electroless deposition and hydrogen sorption kinetics of composite materials. Materials Chemistry and Physics, 2009, 115, 136-141.	2.0	32
66	Neutron diffraction studies of Zr-containing intermetallic hydrides with ordered hydrogen sublattice. I. Crystal structure of Zr2FeD5. Journal of Alloys and Compounds, 1998, 274, 217-221.	2.8	31
67	Hydrogen induced antiferromagnetism in the Kondo semimetal CeNiSn. Journal of Alloys and Compounds, 2003, 359, 62-65.	2.8	31
68	Effect of microstructure on the phase composition and hydrogen absorption-desorption behaviour of melt-spun Mg-20Ni-8Mm alloys. International Journal of Hydrogen Energy, 2012, 37, 1495-1508.	3.8	31
69	Influence of Cr on the hydrogen storage properties of Ti-rich Tiâ€“Vâ€“Cr alloys. International Journal of Hydrogen Energy, 2012, 37, 7624-7628.	3.8	31
70	Mechanistic and Kinetic Study of the Electrochemical Charge and Discharge of La2MgNi9 by in Situ Powder Neutron Diffraction. Journal of Physical Chemistry C, 2014, 118, 12162-12169.	1.5	31
71	Hydrogenation behaviour, neutron diffraction studies and microstructural characterisation of boron oxide-doped Zrâ€“V alloys. Journal of Alloys and Compounds, 1999, 293-295, 93-100.	2.8	30
72	Deuterofullerene C60D24 studied by XRD, IR and XPS. Journal of Alloys and Compounds, 2001, 314, 296-300.	2.8	30

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73	The effect of solidification rate on microstructural evolution of a melt-spun Mgâ€“20Niâ€“8Mm hydrogen storage alloy. Journal of Alloys and Compounds, 2007, 446-447, 178-182.	2.8	30
74	Microstructural evolution and improved hydrogenationâ€“dehydrogenation kinetics of nanostructured melt-spun Mgâ€“Niâ€“Mm alloys. Journal of Alloys and Compounds, 2011, 509, S640-S645.	2.8	30
75	Synthesis of carbon nanostructures by arc evaporation of graphite rods with Coâ€“Ni and YNi2 catalysts. Carbon, 2003, 41, 1357-1364.	5.4	29
76	Structural studies of deuterides of yttrium carbide. Journal of Alloys and Compounds, 2003, 351, 151-157.	2.8	29
77	In situ neutron powder diffraction study of phase-structural transformations in the Laâ€“Mgâ€“Ni battery anode alloy. Journal of Alloys and Compounds, 2016, 670, 210-216.	2.8	29
78	Comparison of C14- and C15-Predomiated AB2 Metal Hydride Alloys for Electrochemical Applications. Batteries, 2017, 3, 22.	2.1	29
79	Electrochemical studies and phase-structural characterization of a high-capacity La-doped AB2 Laves type alloy and its hydride. Journal of Power Sources, 2019, 418, 193-201.	4.0	29
80	Magnesium- and intermetallic alloys-based hydrides for energy storage: modelling, synthesis and properties. Progress in Energy, 2022, 4, 032007.	4.6	29
81	Structural Chemistry of Hydrides of Intermetallic Compounds. Russian Chemical Reviews, 1983, 52, 299-317.	2.5	27
82	Oxygen-, Boron- and Nitrogen-Containing Zirconium-Vanadium Alloys as Hydrogen Getters with Enhanced Properties*. Zeitschrift Fur Physikalische Chemie, 1994, 183, 485-489.	1.4	27
83	Hydrogen diffusion in La1.5Nd0.5MgNi9 alloy electrodes of the Ni/MH battery. Journal of Alloys and Compounds, 2015, 645, S288-S291.	2.8	27
84	Hydrogen Generation by the Hydrolysis of MgH2. Materials Science, 2020, 56, 1-14.	0.3	27
85	Neutron diffraction studies of Zr-containing intermetallic hydrides with ordered hydrogen sublattice. II. Orthorhombic Zr3FeD6.7 with filled Re3B-type structure. Journal of Alloys and Compounds, 1998, 278, 252-259.	2.8	26
86	Phase-structural characteristics of (Ti1â^'xZrx)4Ni2O0.3 alloys and their hydrogen gas and electrochemical absorptionâ€“desorption properties. Journal of Alloys and Compounds, 2001, 314, 124-131.	2.8	26
87	Metallic and complex hydride-based electrochemical storage of energy. Progress in Energy, 2022, 4, 032001.	4.6	26
88	(Hf,Zr)2Fe and Zr4Fe2O0.6 compounds and their hydrides: phase equilibria, crystal structure and magnetic properties. Journal of Alloys and Compounds, 1998, 265, 6-14.	2.8	25
89	Combustion-type hydrogenation of nanostructured Mg-based composites for hydrogen storage. International Journal of Energy Research, 2009, 33, 1114-1125.	2.2	24
90	Hydrogen-assisted phase transition in a trihydride MgNi2H3 synthesized at high H2 pressures: Thermodynamics, crystallographic and electronic structures. Acta Materialia, 2015, 82, 316-327.	3.8	24

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91	Metal hydride â€“ Graphene composites for hydrogen based energy storage. Journal of Alloys and Compounds, 2022, 896, 162881.	2.8	24
92	Crystal structure of TbNiSiD1.78. Journal of Alloys and Compounds, 2001, 322, 160-165.	2.8	23
93	The effects of rapid solidification on microstructure and hydrogen sorption properties of binary BCC Tiâ€“V alloys. Journal of Alloys and Compounds, 2014, 582, 540-546.	2.8	23
94	Magnetic properties and crystal structure of HoNiAl and UNiAl hydrides. Journal of Applied Physics, 2000, 87, 6815-6817.	1.1	22
95	Sn-containing (La,Mm)Ni5â^'Sn H5â^'6 intermetallic hydrides: thermodynamic, structural and kinetic properties. Journal of Alloys and Compounds, 2003, 356-357, 773-778.	2.8	22
96	Crystal chemistry and metal-hydrogen bonding in anisotropic and interstitial hydrides of intermetallics of rare earth (R) and transition metals (T), RT₃ and R₂T₇. Zeitschrift FÃ¼r Kristallographie, 2008, 223, 674-689.	1.1	22
97	In operando neutron diffraction study of LaNdMgNi9H13 as a metal hydride battery anode. Journal of Power Sources, 2017, 343, 502-512.	4.0	22
98	Study of hydrogen storage properties of oxygen modified Ti- based AB2 type metal hydride alloy. International Journal of Hydrogen Energy, 2021, 46, 13658-13663.	3.8	22
99	Modelling of metal hydride hydrogen compressors from thermodynamics of hydrogen â€“ Metal interactions viewpoint: Part I. Assessment of the performance of metal hydride materials. International Journal of Hydrogen Energy, 2021, 46, 2330-2338.	3.8	22
100	Hydrogenation of fullerenes C60 and C70 in the presence of hydride-forming metals and intermetallic compounds. Journal of Alloys and Compounds, 1997, 253-254, 25-28.	2.8	21
101	In operando neutron diffraction study of a commercial graphite/(Ni, Mn, Co) oxide-based multi-component lithium ion battery. Journal of Power Sources, 2016, 326, 93-103.	4.0	21
102	Modeling of the hydrogen sorption kinetics in an AB2 laves type metal hydride alloy. Journal of Alloys and Compounds, 2022, 893, 162135.	2.8	20
103	Anisotropic hydrogen decrepitation and corrosion behaviour in NdFeB magnets. Journal of Alloys and Compounds, 1994, 206, L7-L10.	2.8	19
104	Crystal structure of Th2Al deuterides. Journal of Alloys and Compounds, 2000, 309, 154-164.	2.8	19
105	An Overview of Hydrogen Storage Methods. NATO Science Series Series II, Mathematics, Physics and Chemistry, 2004, , 75-104.	0.1	19
106	Selective hydrogen absorption from gaseous mixtures by BCC Ti-V alloys. International Journal of Hydrogen Energy, 2012, 37, 4127-4138.	3.8	19
107	Nanostructured magnesium silicide Mg2Si and its electrochemical performance as an anode of a lithium ion battery. Journal of Alloys and Compounds, 2017, 718, 478-491.	2.8	19
108	Ce-valence state and hydrogen-induced volume effects in Ce-based intermetallic compounds and their hydrides. Journal of Alloys and Compounds, 2005, 404-406, 144-149.	2.8	18

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109	RNiAl hydrides and their magnetic properties. Journal of Alloys and Compounds, 1997, 262-263, 206-210.	2.8	17
110	Hydrogen sorption properties of intermetallic TbNiAl and crystal structure of TbNiAlD1.1. Journal of Alloys and Compounds, 1998, 279, L4-L7.	2.8	17
111	Oxide-modified Zrî—¸Fe alloys: thermodynamic calculations, X-ray analysis and hydrogen absorption properties. Journal of Alloys and Compounds, 1995, 219, 38-40.	2.8	16
112	Hydrogen absorption and phase structural characteristics of oxygen-containing Zrî—¸V alloys substituted by Hf, Ti, Nb, Fe. Journal of Alloys and Compounds, 1995, 219, 34-37.	2.8	16
113	Hydrogen ordering and H-induced phase transformations in Zr-based intermetallic hydrides. Journal of Alloys and Compounds, 1999, 293-295, 74-87.	2.8	16
114	Orthorhombic NdNiSnD with filled TiNiSi-type structure. Journal of Alloys and Compounds, 2002, 336, 181-186.	2.8	16
115	200 NL H2 hydrogen storage tank using MgH2â€“TiH2â€“C nanocomposite as H storage material. International Journal of Hydrogen Energy, 2021, 46, 19046-19059.	3.8	16
116	Application of Metal Hydrides in Hydrogen Ion Sources*. Zeitschrift Fur Physikalische Chemie, 1994, 183, 479-483.	1.4	15
117	Further studies of anisotropic hydrogen decrepitation in Nd16Fe76B8 sintered magnets. Journal of Alloys and Compounds, 1996, 239, 50-54.	2.8	15
118	Further studies of hydrogenation, disproportionation, desorption and recombination processes in a Nd5Fe2B6 boride. Journal of Alloys and Compounds, 1997, 253-254, 134-139.	2.8	15
119	Neutron diffraction studies of Zr-containing intermetallic hydrides with ordered hydrogen sublattice,. Journal of Alloys and Compounds, 1999, 287, 189-194.	2.8	15
120	Neutron diffraction studies of Zr-containing intermetallic hydrides with ordered hydrogen sublattice.. Journal of Alloys and Compounds, 2000, 296, 312-316.	2.8	15
121	Hydrogen absorptionâ€“desorption characteristics of the LaNi5Sn intermetallic compound. Journal of Alloys and Compounds, 2004, 373, 161-166.	2.8	15
122	Applications of Zrâ€“V hydrogen getters in vacuum-plasma devices: Phase-structural and hydrogen sorption characteristics. Journal of Alloys and Compounds, 2005, 404-406, 724-727.	2.8	15
123	Non-isothermal kinetics and in situ SR XRD studies of hydrogen desorption from dihydrides of binary Tiâ€“V alloys. International Journal of Hydrogen Energy, 2013, 38, 14704-14714.	3.8	15
124	Effect of Mg content in the La3-xMgxNi9 battery anode alloys on the structural, hydrogen storage and electrochemical properties. Journal of Alloys and Compounds, 2021, 856, 157443.	2.8	15
125	The use of metal hydride powder blending in the production of NdFeB-type magnets. International Journal of Hydrogen Energy, 2001, 26, 441-448.	3.8	14
126	Hydrogenation and microstructural study of melt-spun Ti0.8V0.2. Journal of Alloys and Compounds, 2011, 509, S775-S778.	2.8	14

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127	LaNi5-Assisted Hydrogenation of MgNi2 in the Hybrid Structures of La1.09Mg1.91Ni9D9.5 and La0.91Mg2.09Ni9D9.4. Energies, 2015, 8, 3198-3211.	1.6	14
128	Research and development of hydrogen carrier based solutions for hydrogen compression and storage. Progress in Energy, 2022, 4, 042005.	4.6	14
129	In situ powder neutron diffraction study of LaNiInD1.63 with short Dâ€¦D distances. Journal of Alloys and Compounds, 2003, 356-357, 65-68.	2.8	13
130	Synchrotron diffraction studies and thermodynamics of hydrogen absorptionâ€“desorption processes in La0.5Ce0.5Ni4Co. Journal of Alloys and Compounds, 2011, 509, S844-S848.	2.8	13
131	High pressure in situ diffraction studies of metalâ€“hydrogen systems. Journal of Alloys and Compounds, 2011, 509, S817-S822.	2.8	13
132	Modeling of metal hydride battery anodes at high discharge current densities and constant discharge currents. Electrochimica Acta, 2014, 147, 73-81.	2.6	13
133	Structure and chemical bonding in MgNi2H3 from combined high resolution synchrotron and neutron diffraction studies and ab initio electronic structure calculations. Acta Materialia, 2015, 98, 416-422.	3.8	13
134	Cell Performance Comparison between C14- and C15-Predomiated AB2 Metal Hydride Alloys. Batteries, 2017, 3, 29.	2.1	13
135	Studies of Zr-based C15 type metal hydride battery anode alloys prepared by rapid solidification. Journal of Alloys and Compounds, 2019, 804, 527-537.	2.8	13
136	Thermal desorption spectroscopy studies of hydrogen desorption from rare earth metal trihydrides REH3 (RE=Dy, Ho, Er). Journal of Alloys and Compounds, 2020, 842, 155530.	2.8	13
137	Hydrogenation behaviour and structure of R5Fe2B6 (R=Ce, Pr, Nd, Sm, Gd and Tb) borides. Journal of Alloys and Compounds, 1997, 252, 201-208.	2.8	12
138	Crystal and magnetic structure of TbNiAl-based deuterides, TbNiAlD0.30 and TbNiAlD1.04, studied by neutron diffraction and synchrotron radiation. Journal of Alloys and Compounds, 1999, 293-295, 178-184.	2.8	12
139	In situ SR-XRD studies of hydrogen absorptionâ€“desorption in LaNi4.7Sn0.3. Journal of Alloys and Compounds, 2005, 404-406, 604-608.	2.8	12
140	Metallography and hydrogenation behaviour of the alloy Mg-72mass%â€“Ni-20mass%â€“La-8mass%. Journal of Alloys and Compounds, 2007, 446-447, 183-187.	2.8	12
141	High temperature hydrogenation of Tiâ€“V alloys: The effect of cycling and carbon monoxide on the bulk and surface properties. International Journal of Hydrogen Energy, 2016, 41, 1699-1710.	3.8	12
142	Modelling of metal hydride hydrogen compressors from thermodynamics of hydrogen â€“ Metal interactions viewpoint: Part II. Assessment of the performance of metal hydride compressors. International Journal of Hydrogen Energy, 2021, 46, 2339-2350.	3.8	12
143	Hydrogen-induced phase and magnetic transformations in Nd1.1Fe4B4. Journal of Magnetism and Magnetic Materials, 1996, 157-158, 119-120.	1.0	11
144	Thermodynamic properties of the RENiIn hydrides with RE=La, Ce, Pr and Nd. Journal of Alloys and Compounds, 2005, 397, 99-103.	2.8	11

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145	Powder neutron diffraction study of Nd6Fe13GaD12.3 with a filled Nd6Fe13Si-type structure. Journal of Alloys and Compounds, 2000, 312, 158-164.	2.8	10
146	Desorption behaviour of hydrogen in the LaNi4.7Sn0.3-H system. Journal of Alloys and Compounds, 2005, 396, 197-201.	2.8	10
147	The Effect of Thermal Treatment on the Hydrogenâ€Storage Properties of PIMâ€1. ChemPhysChem, 2019, 20, 1613-1623.	1.0	10
148	Control strategy of a fuel-cell power module for electric forklift. International Journal of Hydrogen Energy, 2021, 46, 35938-35948.	3.8	10
149	Hydrogen Interaction with Intermetallic Compounds of Rare Earth Metals, Cobalt and Nickel with Aluminium, Gallium and Indium*. Zeitschrift Fur Physikalische Chemie, 1993, 179, 275-279.	1.4	9
150	Zr4Al3D2.68 and Zr3Al2D2.26: new Zr-containing intermetallic hydrides with ordered hydrogen sublattice. Journal of Alloys and Compounds, 2003, 356-357, 91-95.	2.8	9
151	Crystallographic and magnetic structure of Pr6Fe13AuD. Journal of Alloys and Compounds, 2003, 356-357, 142-146.	2.8	9
152	Structural studies of the deuterides of carbon containing yttrium alloys. Journal of Alloys and Compounds, 2003, 356-357, 475-479.	2.8	9
153	MÃ¶ssbauer study of the RENiSnD (RE: Pr, Nd) monodeuterides. Journal of Alloys and Compounds, 2004, 366, 81-85.	2.8	9
154	Microstructural evolution of melt-spun Mg-10Ni-2Mm hydrogen storage alloy. Transactions of Nonferrous Metals Society of China, 2011, 21, 121-126.	1.7	9
155	The electrochemical performance of melt-spun C14-Laves type Ti Zr-based alloy. International Journal of Hydrogen Energy, 2020, 45, 1297-1303.	3.8	9
156	Effects of Ti substitution for Zr on the electrochemical characteristics and structure of AB2-type Laves-phase alloys as metal hydride anodes. Journal of Alloys and Compounds, 2021, 889, 161655.	2.8	9
157	Thermodynamics and crystal chemistry of the RE2MgNi9H12-13 (RE = La and Nd) hydrides. Chemistry of Metals and Alloys, 2014, 7, 1-8.	0.2	9
158	Lattice dynamics of high-pressure hydrides studied by inelastic neutron scattering. Journal of Alloys and Compounds, 2022, 905, 164208.	2.8	9
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