Shin-Ichi Orimo

List of Publications by Year
in descending order

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355 papers	20,394 citations	9775 73 h-index	12933 131 g-index
383 all docs	383 docs citations	383 times ranked	7748 citing authors

#	Article	IF	Citations
1	Complex Hydrides for Hydrogen Storage. Chemical Reviews, 2007, 107, 4111-4132.	23.0	1,963
2	Materials for hydrogen-based energy storage â€“ past, recent progress and future outlook. Journal of Alloys and Compounds, 2020, 827, 153548.	2.8	518
3	Correlation between thermodynamical stabilities of metal borohydrides and cation electronegativites: First-principles calculations and experiments. Physical Review B, 2006, 74, .	1.1	465
4	Recent Progress in Metal Borohydrides for Hydrogen Storage. Energies, 2011, 4, 185-214.	1.6	412
5	Dehydriding and rehydriding reactions of. Journal of Alloys and Compounds, 2005, 404-406, 427-430.	2.8	410
6	Lithium superionic conduction in lithium borohydride accompanied by structural transition. Applied Physics Letters, 2007, 91, .	1.5	392
7	Halide-Stabilized LiBH₄, a Room-Temperature Lithium Fast-Ion Conductor. Journal of the American Chemical Society, 2009, 131, 894-895.	6.6	357
8	The renaissance of hydrides as energy materials. Nature Reviews Materials, 2017, 2, .	23.3	349
9	Materials science of Mg-Ni-based new hydrides. Applied Physics A: Materials Science and Processing, 2001, 72, 167-186.	1.1	336
10	Tetrahydroborates as new hydrogen storage materials. Scripta Materialia, 2007, 56, 823-828.	2.6	303
11	Superconductivity in the Metal Rich Li-Pd-B Ternary Boride. Physical Review Letters, 2004, 93, 247004.	2.9	272
12	First-principles study on lithium borohydrideLiBH4. Physical Review B, 2004, 69, .	1.1	270
13	A complex hydride lithium superionic conductor for high-energy-density all-solid-state lithium metal batteries. Nature Communications, 2019, 10, 1081.	5.8	252
14	Sodium superionic conduction in Na₂B₁₂H₁₂. Chemical Communications, 2014, 50, 3750-3752.	2.2	243
15	Unparalleled lithium and sodium superionic conduction in solid electrolytes with large monovalent cage-like anions. Energy and Environmental Science, 2015, 8, 3637-3645.	15.6	235
16	Lithium Fastâ€Ionic Conduction in Complex Hydrides: Review and Prospects. Advanced Energy Materials, 2011, 1, 161-172.	10.2	229
17	Hydrogen in the mechanically prepared nanostructured graphite. Applied Physics Letters, 1999, 75, 3093-3095.	1.5	227
18	Exceptional Superionic Conductivity in Disordered Sodium Decahydroâ€closoâ€decaborate. Advanced Materials, 2014, 26, 7622-7626.	11.1	221

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19	Experimental studies on intermediate compound of LiBH4. Applied Physics Letters, 2006, 89, 021920.	1.5	220
20	Notable hydriding properties of a nanostructured composite material of the Mg2Ni-H system synthesized by reactive mechanical grinding. Acta Materialia, 1997, 45, 331-341.	3.8	217
21	Destabilization of Li-based complex hydrides. Journal of Alloys and Compounds, 2004, 370, 271-275.	2.8	213
22	Dehydriding and rehydriding processes of well-crystallized Mg(BH4)2 accompanying with formation of intermediate compounds. Acta Materialia, 2008, 56, 1342-1347.	3.8	202
23	Hydrogen desorption property of mechanically prepared nanostructured graphite. Journal of Applied Physics, 2001, 90, 1545-1549.	1.1	194
24	Liquidâ€Like Ionic Conduction in Solid Lithium and Sodium Monocarbaâ€closoâ€Ðecaborates Near or at Room Temperature. Advanced Energy Materials, 2016, 6, 1502237.	10.2	190
25	First-principles study on the stability of intermediate compounds ofLiBH4. Physical Review B, 2006, 74, .	1.1	189
26	Complex Hydrides for Electrochemical Energy Storage. Advanced Functional Materials, 2014, 24, 2267-2279.	7.8	184
27	Remarkable hydrogen storage properties in three-layered Pd/Mg/Pd thin films. Journal of Alloys and Compounds, 2002, 330-332, 526-530.	2.8	183
28	Complex Hydrides with (BH₄)^{â^'} and (NH₂)^{â^'} Anions as New Lithium Fast-Ion Conductors. Journal of the American Chemical Society, 2009, 131, 16389-16391.	6.6	183
29	Effects of ball milling and additives on dehydriding behaviors of well-crystallized Mg(BH4)2. Scripta Materialia, 2007, 57, 679-682.	2.6	174
30	Thermodynamical stability of calcium borohydrideCa(BH4)2. Physical Review B, 2006, 74, .	1.1	169
31	Destabilization of LiBH4 by mixing with LiNH2. Applied Physics A: Materials Science and Processing, 2005, 80, 1409-1412.	1.1	161
32	Materials designing of metal borohydrides: Viewpoints from thermodynamical stabilities. Journal of Alloys and Compounds, 2007, 446-447, 315-318.	2.8	159
33	Material properties of MBH4 (). Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2004, 108, 51-53.	1.7	153
34	Reversible dehydrogenation of magnesium borohydride to magnesium triborane in the solid state under moderate conditions. Chemical Communications, 2011, 47, 1330-1332.	2.2	149
35	Stabilizing Superionic-Conducting Structures via Mixed-Anion Solid Solutions of Monocarba-closo-borate Salts. ACS Energy Letters, 2016, 1, 659-664.	8.8	147
36	Structural and hydriding properties of the Mg_Ni_H system with nano- and/or amorphous structures. Acta Materialia, 1997, 45, 2271-2278.	3.8	135

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37	Synthesis and dehydriding studies of Mgâ€“Nâ€“H systems. Journal of Power Sources, 2004, 138, 309-312.	4.0	125
38	Hydrogen storage properties of Mg[BH4]2. Journal of Alloys and Compounds, 2008, 459, 583-588.	2.8	124
39	All-solid-state lithium battery with LiBH4 solid electrolyte. Journal of Power Sources, 2013, 226, 61-64.	4.0	123
40	Thermodynamical stabilities of metal-borohydrides. Journal of Alloys and Compounds, 2007, 446-447, 296-300.	2.8	122
41	Destabilization and enhanced dehydriding reaction of LiNH2: an electronic structure viewpoint. Applied Physics A: Materials Science and Processing, 2004, 79, 1765-1767.	1.1	119
42	Extending the applicability of the Goldschmidt tolerance factor to arbitrary ionic compounds. Scientific Reports, 2016, 6, 23592.	1.6	119
43	In situ study of hydridingâ€“dehydriding properties in some Pd/Mg thin films with different degree of Mg crystallization. Journal of Alloys and Compounds, 1999, 293-295, 484-489.	2.8	116
44	Stable Interface Formation between TiS₂ and LiBH₄ in Bulk-Type All-Solid-State Lithium Batteries. Chemistry of Materials, 2015, 27, 5407-5416.	3.2	116
45	Development of bulk-type all-solid-state lithium-sulfur battery using LiBH4 electrolyte. Applied Physics Letters, 2014, 105, .	1.5	113
46	Correlation between hydrogen storage properties and structural characteristics in mechanically milled magnesium hydride MgH2. Journal of Alloys and Compounds, 2004, 366, 269-273.	2.8	112
47	Effects of nanometer-scale structure on hydriding properties of Mgî—¸Ni alloys: a review. Intermetallics, 1998, 6, 185-192.	1.8	111
48	Hydriding properties of the Mg2Ni-H system synthesized by reactive mechanical grinding. Journal of Alloys and Compounds, 1996, 232, L16-L19.	2.8	110
49	Hydrogen density in nanostructured carbon, metals and complex materials. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2004, 108, 9-18.	1.7	108
50	Structural and hydriding properties of MgYNi4:. Journal of Alloys and Compounds, 2000, 309, L1-L4.	2.8	107
51	Formation of an intermediate compound with a B12H12cluster: experimental and theoretical studies on magnesium borohydride Mg(BH4)2. Nanotechnology, 2009, 20, 204013.	1.3	104
52	Reversible hydrogen-storage functions for mixtures of Li3N and Mg3N2. Applied Physics A: Materials Science and Processing, 2005, 80, 1-3.	1.1	103
53	Hydrogen in mechanically prepared nanostructured h-BN: a critical comparison with that in nanostructured graphite. Applied Physics Letters, 2002, 80, 318-320.	1.5	99
54	Hydrogen storage capability of MgNi2 processed by high pressure torsion. Scripta Materialia, 2007, 57, 751-753.	2.6	99

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55	Stabilization of lithium superionic conduction phase and enhancement of conductivity of LiBH4 by LiCl addition. Applied Physics Letters. 2009. 94.	1.5	96
56	Experimental and computational studies on solvent-free rare-earth metal borohydrides<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"		

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73	Location of deuterium atoms absorbed in nanocrystalline graphite prepared by mechanical alloying. Journal of Alloys and Compounds, 2001, 327, 224-229.	2.8	74
74	Development of metal borohydrides for hydrogen storage. Journal of Physics and Chemistry of Solids, 2008, 69, 2292-2296.	1.9	73
75	Effect of Hydrogen Absorption on Superconductivity in YBa2Cu3O6.91and GdBa2Cu3O6.89. Japanese Journal of Applied Physics, 1988, 27, L525-L528.	0.8	71
76	Fast sodium ionic conduction in Na2B10H10-Na2B12H12 pseudo-binary complex hydride and application to a bulk-type all-solid-state battery. Applied Physics Letters, 2017, 110, .	1.5	71
77	First-principles study on copper-substituted lithium borohydride, (Li1â^'xCux)BH4. Journal of Alloys and Compounds, 2005, 404-406, 140-143.	2.8	67
78	Site occupancy of interstitial deuterium atoms in face-centred cubic iron. Nature Communications, 2014, 5, 5063.	5.8	67
79	Reversible hydriding and dehydriding reactions of perovskite-type hydride NaMgH3. Scripta Materialia, 2005, 53, 319-322.	2.6	66
80	Hydrogen storage properties of Liâ€“Mgâ€“Nâ€“H systems. Journal of Alloys and Compounds, 2005, 404-406, 396-398.	2.8	66
81	Structural and dehydriding properties of Ca(BH4)2. Applied Physics A: Materials Science and Processing, 2008, 92, 601-605.	1.1	66
82	Sodium ionic conduction in complex hydrides with [BH4]â^' and [NH2]â^' anions. Applied Physics Letters, 2012, 100, .	1.5	66
83	Fast Lithium-Ion Conduction in Atom-Deficient closo-Type Complex Hydride Solid Electrolytes. Chemistry of Materials, 2018, 30, 386-391.	3.2	66
84	Hydrogen storage properties in nano-structured magnesium- and carbon-related materials. Physica B: Condensed Matter, 2003, 328, 77-80.	1.3	65
85	Effect of Heat Treatment on the Lithium Ion Conduction of the LiBH₄â€“LiI Solid Solution. Journal of Physical Chemistry C, 2013, 117, 3249-3257.	1.5	65
86	Formation of Intermediate Compound Li₂B₁₂H₁₂ during the Dehydrogenation Process of the LiBH₄â€“MgH₂ System. Journal of Physical Chemistry C, 2011, 115, 19419-19423.	1.5	64
87	Rotational Motion in LiBH₄/LiI Solid Solutions. Journal of Physical Chemistry A, 2011, 115, 5329-5334.	1.1	64
88	Magnesium Borohydride Ammonia Borane as a Magnesium Ionic Conductor. ACS Applied Energy Materials, 2020, 3, 3174-3179.	2.5	64
89	Hydrogen Absorption and Desorption by the Liâ^'Alâ^'Nâ^'H System. Journal of Physical Chemistry B, 2006, 110, 9632-9636.	1.2	63
90	Dehydriding reaction of metal hydrides and alkali borohydrides enhanced by microwave irradiation. Applied Physics Letters, 2006, 88, 112104.	1.5	63

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91	Pseudo-binary electrolyte, LiBH₄â€“LiCl, for bulk-type all-solid-state lithium-sulfur battery. Nanotechnology, 2015, 26, 254001.	1.3	63
92	Sodium and magnesium ionic conduction in complex hydrides. Journal of Alloys and Compounds, 2013, 580, S98-S101.	2.8	61
93	Hydrogen in Nanostructured, Carbon-Related, and Metallic Materials. MRS Bulletin, 2002, 27, 705-711.	1.7	58
94	Surface changes on AlH3 during the hydrogen desorption. Applied Physics Letters, 2010, 96, .	1.5	58
95	Hydrogen interaction with carbon nanostructures: current situation and future prospects. Journal of Alloys and Compounds, 2003, 356-357, 716-719.	2.8	57
96	Unexpected dehydrogenation behavior of LiBH4/Mg(BH4)2 mixture associated with the in situ formation of dual-cation borohydride. Journal of Alloys and Compounds, 2010, 491, L1-L4.	2.8	57
97	Room temperature lithium fast-ion conduction and phase relationship of LiI stabilized LiBH4. Solid State Ionics, 2011, 192, 143-147.	1.3	57
98	Investigation of shielding material properties for effective space radiation protection. Life Sciences in Space Research, 2020, 26, 69-76.	1.2	57
99	Hydriding properties of the MgNi-based systems. Journal of Alloys and Compounds, 1999, 293-295, 437-442.	2.8	55
100	Recent progress in hydrogen-rich materials from the perspective of bonding flexibility of hydrogen. Scripta Materialia, 2015, 109, 1-5.	2.6	55
101	Cooperative hydriding properties in a nanostructured Mg2Niâ€“H system. Journal of Alloys and Compounds, 1997, 253-254, 80-83.	2.8	54
102	Selective Reversible Hydrogenation of Mg(B₃H₈)₂/MgH₂ to Mg(BH₄)₂: Pathway to Reversible Borane-Based Hydrogen Storage?. Inorganic Chemistry, 2015, 54, 4120-4125.	1.9	53
103	Dehydriding reaction of AlH₃:in situmicroscopic observations combined with thermal and surface analyses. Nanotechnology, 2009, 20, 204004.	1.3	52
104	Breaking the passivationâ€”the road to a solvent free borohydride synthesis. Physical Chemistry Chemical Physics, 2010, 12, 10919.	1.3	52
105	Dehydriding reaction of Mg(NH2)2â€“LiH system under hydrogen pressure. Journal of Alloys and Compounds, 2007, 428, 307-311.	2.8	50
106	Dehydriding and rehydriding properties of yttrium borohydride Y(BH4)3 prepared by liquid-phase synthesis. International Journal of Hydrogen Energy, 2009, 34, 5732-5736.	3.8	48
107	Complex hydrides as room-temperature solid electrolytes for rechargeable batteries. Applied Physics A: Materials Science and Processing, 2016, 122, 1.	1.1	48
108	Optical transmission of magnesium hydride thin film with characteristic nanostructure. Journal of Alloys and Compounds, 2002, 330-332, 352-356.	2.8	47

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109	Impact of severe plastic deformation on microstructure and hydrogen storage of titanium-iron-manganese intermetallics. Scripta Materialia, 2016, 124, 108-111.	2.6	47
110	Lithium-ion conduction in complex hydrides LiAlH4 and Li3AlH6. Journal of Applied Physics, 2010, 107, .	1.1	46
111	Synthesis and Lithium Fast-Ion Conductivity of a New Complex Hydride Li₃(NH₂)₂I with Double-Layered Structure. Chemistry of Materials, 2010, 22, 2702-2704.	3.2	46
112	Full-cell hydride-based solid-state Li batteries for energy storage. International Journal of Hydrogen Energy, 2019, 44, 7875-7887.	3.8	46
113	Remarkable Hydrogen Storage, Structural and Optical Properties in Multi-layered Pd/Mg Thin Films. Materials Transactions, 2002, 43, 2721-2727.	0.4	45
114	Formation ability of the perovskite-type structure in LixNa1â^'xMgH3 (x=0, 0.5 and 1.0). Acta Materialia, 2005, 53, 3453-3457.	3.8	45
115	Enhancement of superconductivity in Bi2Sr2CaCu2O8+Î´. Physica C: Superconductivity and Its Applications, 1989, 157, 263-266.	0.6	44
116	Diffuse and doubly split atom occupation in hexagonal LiBH4. Applied Physics Letters, 2009, 95, .	1.5	43
117	Bulk-Type All-Solid-State Lithium Batteries Using Complex Hydrides Containing Cluster-Anions. Materials Transactions, 2016, 57, 1639-1644.	0.4	43
118	Hydriding properties of a nano-/amorphous-structured Mgâ€“Niâ€“H system. Journal of Alloys and Compounds, 1997, 253-254, 94-97.	2.8	41
119	Hydrogen in nanostructured vanadium-hydrogen systems. Physical Review B, 2001, 63, .	1.1	41
120	Interfacial stability between LiBH4-based complex hydride solid electrolytes and Li metal anode for all-solid-state Li batteries. Journal of Power Sources, 2019, 436, 226821.	4.0	41
121	Guidelines for Developing Amide-Based Hydrogen Storage Materials. Materials Transactions, 2005, 46, 2093-2097.	0.4	40
122	Dehydriding process of Î±-AlH3 observed by transmission electron microscopy and electron energy-loss spectroscopy. Journal of Applied Physics, 2009, 105, .	1.1	40
123	Fast lithium-ionic conduction in a new complex hydrideâ€“sulphide crystalline phase. Chemical Communications, 2016, 52, 564-566.	2.2	40
124	Thermodynamical stability and electronic structure of a perovskite-type hydride, NaMgH3. Journal of Alloys and Compounds, 2007, 446-447, 162-165.	2.8	39
125	Comparison of Anion Reorientational Dynamics in MCB₉H₁₀ and M₂B₁₀H₁₀ (M = Li, Na) via Nuclear Magnetic Resonance and Quasielastic Neutron Scattering Studies. Journal of Physical Chemistry C, 2017, 121, 1000-1012.	1.5	39
126	Superconductivity of the hydrogen-rich metal hydride <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi mathvariant="normal">L</mml:mi><mml:msub><mml:mi mathvariant="normal">i</mml:mi><mml:mn>5</mml:mn></mml:msub><mml:mi>Mo</mml:mi><mml:msub><mml:mi mathvariant="normal">H</mml:mi><mml:mn>11</mml:mn></mml:msub></mml:mrow></mml:math> under high pressure. Physical Review B, 2019, 99, .	1.1	39

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127	Synthesis and Hydrogen Storage Properties of a Single-Phase Magnesium Borohydride Mg(BH₄)₂. Materials Transactions, 2008, 49, 2224-2228.	0.4	38
128	True Boundary for the Formation of Homoleptic Transitionâ€Metal Hydride Complexes. Angewandte Chemie - International Edition, 2015, 54, 5650-5653.	7.2	38
129	Room temperature operation of all-solid-state battery using a closo-type complex hydride solid electrolyte and a LiCoO2 cathode by interfacial modification. Journal of Energy Chemistry, 2020, 43, 47-51.	7.1	38
130	Monocarborane cluster as a stable fluorine-free calcium battery electrolyte. Scientific Reports, 2021, 11, 7563.	1.6	38
131	Structural and hydriding properties of (Mg1â^'xAlx)Niâ€“H(D) with amorphous or CsCl-type cubic structure (x=0â€“0.5). Acta Materialia, 1998, 46, 4519-4525.	3.8	37
132	Magnetization measurements on Li[sub 2]Pd[sub 3]B superconductor. Applied Physics Letters, 2004, 85, 4433.	1.5	36
133	First-principles study on thermodynamical stability of metal borohydrides: Aluminum borohydride Al(BH4)3. Journal of Alloys and Compounds, 2007, 446-447, 310-314.	2.8	36
134	Effect of the surface oxidation of LiBH4 on the hydrogen desorption mechanism. Physical Chemistry Chemical Physics, 2010, 12, 10950.	1.3	36
135	Thermal stabilities of amorphous Mg(Ni1â^'xTx) (Tî—»3d transition metals; x=0, 0.2, 0.4 and 0.5). Journal of Alloys and Compounds, 1997, 260, 143-146.	2.8	35
136	Synthesis and dehydrogenation of M(AlH4)2 (M=Mg, Ca). Journal of Alloys and Compounds, 2007, 446-447, 237-241.	2.8	35
137	Formation and Hydrogen Storage Properties of Dual-Cation (Li, Ca) Borohydride. Journal of Physical Chemistry C, 2010, 114, 22736-22741.	1.5	35
138	Thermodynamical Stability of Complex Transition Metal Hydrides M₂FeH₆. Journal of Physical Chemistry C, 2013, 117, 8014-8019.	1.5	35
139	Lithium ionic conduction in composites of Li(BH4)0.75I0.25 and amorphous 0.75Li2SÂ·0.25P2S5 for battery applications. Electrochimica Acta, 2018, 278, 332-339.	2.6	35
140	Reactive mechanical grinding of ZrNi under various partial pressures of hydrogen. Journal of Alloys and Compounds, 1995, 217, 287-294.	2.8	34
141	Cobalt- and copper-substitution effects on thermal stabilities and hydriding properties of amorphous MgNi. Journal of Alloys and Compounds, 1998, 280, 279-283.	2.8	33
142	Formation process of perovskite-type hydride LiNiH3: In situ synchrotron radiation X-ray diffraction study. Applied Physics Letters, 2013, 102, .	1.5	33
143	Carbonâ€Rich Active Materials with Macrocyclic Nanochannels for Highâ€Capacity Negative Electrodes in Allâ€Solidâ€State Lithium Rechargeable Batteries. Small, 2016, 12, 3381-3387.	5.2	33
144	Sodium-ion conduction in complex hydrides NaAlH4 and Na3AlH6. Journal of Applied Physics, 2012, 111, .	1.1	32

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145	Formation of novel transition metal hydride complexes with ninefold hydrogen coordination. Scientific Reports, 2017, 7, 44253.	1.6	32
146	Effects of microwave irradiation on the dehydriding reaction of the composites of lithium borohydride and microwave absorber. Applied Physics Letters, 2007, 90, 232907.	1.5	31
147	Li4FeH6: Iron-containing complex hydride with high gravimetric hydrogen density. APL Materials, 2014, 2, .	2.2	31
148	Hexagonal Close-packed Iron Hydride behind the Conventional Phase Diagram. Scientific Reports, 2019, 9, 12290.	1.6	31
149	Structural observation of nano-structured and amorphous hydrogen storage materials by neutron diffraction. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2004, 108, 105-113.	1.7	30
150	Perovskite-type hydrides â€“ synthesis, structures and properties. International Journal of Materials Research, 2008, 99, 471-479.	0.1	30
151	Surface and bulk reactions in borohydrides and amides. Energy and Environmental Science, 2012, 5, 6823.	15.6	30
152	Hydrogen diffusion in metallic and nanostructured materials. Physica B: Condensed Matter, 2003, 328, 81-89.	1.3	29
153	Hydrogen in mechanically milled amorphous boron. Journal of Alloys and Compounds, 2003, 350, 218-221.	2.8	29
154	Formation Process of [B₁₂H₁₂]^{2−} from [BH₄][−] during the Dehydrogenation Reaction of Mg(BH₄)₂. Materials Transactions, 2011, 52, 1443-1446.	0.4	29
155	Magnesium- and intermetallic alloys-based hydrides for energy storage: modelling, synthesis and properties. Progress in Energy, 2022, 4, 032007.	4.6	29
156	The local structure of hydrogen storage nanocrystalline graphite by neutron scattering. Journal of Alloys and Compounds, 2003, 356-357, 608-611.	2.8	28
157	NMR studies of hydrogen motion in nanostructured hydrogenâ€“graphite systems. Journal of Alloys and Compounds, 2003, 356-357, 617-621.	2.8	28
158	Raman Scattering and Infrared Absorption Investigation of Hydrogen Configuration State in Mechanically Milled Graphite under H2Gas Atmosphere. Journal of the Physical Society of Japan, 2004, 73, 553-555.	0.7	28
159	Magnetic Phase Transition of MnBi under High Magnetic Fields and High Temperature. Materials Transactions, 2007, 48, 2414-2418.	0.4	28
160	Formation region and hydrogen storage abilities of perovskite-type hydrides. Progress in Solid State Chemistry, 2007, 35, 329-337.	3.9	28
161	Crystal structure and charge density analysis of Ca(BH4)2. Journal of Alloys and Compounds, 2010, 491, 57-62.	2.8	28
162	Magnesium ion dynamics in Mg(BH₄)_{2(1â^'x)}X_{2x}(X = Cl or) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 1366-1370.	1.7	28

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163	Effect of mechanical grinding under Ar and H2 atmospheres on structural and hydriding properties in LaNi5. Journal of Alloys and Compounds, 2002, 330-332, 747-751.	2.8	27
164	Neutronics assessment of advanced shield materials using metal hydride and borohydride for fusion reactors. Fusion Engineering and Design, 2006, 81, 1285-1290.	1.0	27
165	Comparative study on the reversibility of pure metal borohydrides. Journal of Alloys and Compounds, 2013, 580, S292-S295.	2.8	27
166	Complex Hydride Solid Electrolytes of the Li(CB₉H₁₀)â€“Li(CB₁₁H₁₂) Quasi-Binary System: Relationship between the Solid Solution and Phase Transition, and the Electrochemical Properties. ACS Applied Energy Materials, 2020, 3, 4831-4839.	2.5	27
167	Neutron Holography Measurement Using Multi Array Detector. Japanese Journal of Applied Physics, 2008, 47, 2291.	0.8	26
168	Syntheses, crystal structures, and thermal analyses of solvent-free Ca(AlD4)2 and CaAlD5. Journal of Alloys and Compounds, 2009, 487, 472-478.	2.8	26
169	Metallic and complex hydride-based electrochemical storage of energy. Progress in Energy, 2022, 4, 032001.	4.6	26
170	Hydrogen intercalation in some superconducting copper oxides. Physica C: Superconductivity and Its Applications, 1989, 162-164, 65-66.	0.6	25
171	Synthesis of fine composite particles for hydrogen storage, starting from Mg-YNi2 mixture. Journal of Alloys and Compounds, 1994, 210, 37-43.	2.8	25
172	Formation of perovskite-type hydrides and thermal desorption processes in Caâ€“Tâ€“H (T=3d transition) Tj ETQq0 0 0 rgBT /Overlock 1	2.6	25
173	Microstructural analyses of all-solid-state Liâ€“S batteries using LiBH4-based solid electrolyte for prolonged cycle performance. Journal of Energy Chemistry, 2020, 50, 424-429.	7.1	25
174	New composite materials for hydrogen storage using magnesium as a binder. Journal of the Less Common Metals, 1991, 175, 243-257.	0.9	24
175	Enhanced tunability of thermodynamic stability of complex hydrides by the incorporation of Hâ€“ anions. Applied Physics Letters, 2014, 104, .	1.5	24
176	Complex hydrides as thermal energy storage materials: characterisation and thermal decomposition of Na2Mg2NiH6. Journal of Materials Chemistry A, 2018, 6, 9099-9108.	5.2	24
177	Dehydriding and rehydriding properties of Mg(NH2)2â€“LiH systems. Journal of Alloys and Compounds, 2007, 446-447, 328-331.	2.8	23
178	Differential Scanning Calorimetry Measurements of Magnesium Borohydride Mg(BH₄)₂. Materials Transactions, 2008, 49, 2751-2752.	0.4	23
179	Formation of an Feâ€“H complex anion in YFe₂: adjustment of imbalanced charge by using additional Li as an electron donor. RSC Advances, 2013, 3, 1013-1016.	1.7	23
180	Synthesis and crystal structure analysis of complex hydride Mg(BH4)(NH2). International Journal of Hydrogen Energy, 2013, 38, 6730-6735.	3.8	23

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181	Pseudo-ternary LiBH₄Â·LiClÂ·P₂S₅ system as structurally disordered bulk electrolyte for all-solid-state lithium batteries. Physical Chemistry Chemical Physics, 2020, 22, 13872-13879.	1.3	23
182	Hydrogen storage in complex hydrides: past activities and new trends. Progress in Energy, 2022, 4, 032009.	4.6	23
183	Hydriding properties of ordered-/disordered-Mg-based ternary Laves phase structures. Journal of Alloys and Compounds, 2003, 356-357, 429-432.	2.8	22
184	Size distribution of precipitated Ni clusters on the surface of an alkaline-treated LaNi5-based alloy. Acta Materialia, 2007, 55, 481-485.	3.8	22
185	First-principles studies of complex hydride YMn2H6 and its synthesis from metal hydride YMn2H4.5. Applied Physics Letters, 2011, 98, 221908.	1.5	22
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