Liquan Li

List of Publications by Year
in descending order

119	2,982	126708	214527
papers	citations	33 h-index	47 g-index

119	119	119	1326
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	State of the art multi-strategy improvement of Mg-based hydrides for hydrogen storage. Journal of Alloys and Compounds, 2019, 782, 796-823.	2.8	122
2	Metal Hydride Nanoparticles with Ultrahigh Structural Stability and Hydrogen Storage Activity Derived from Microencapsulated Nanoconfinement. Advanced Materials, 2017, 29, 1700760.	11.1	115
3	Nickel-decorated graphene nanoplates for enhanced H₂sorption properties of magnesium hydride at moderate temperatures. Journal of Materials Chemistry A, 2016, 4, 2560-2570.	5.2	98
4	Facile Synthesis of Carbon Supported Nano-Ni Particles with Superior Catalytic Effect on Hydrogen Storage Kinetics of MgH₂. ACS Applied Energy Materials, 2018, 1, 1158-1165.	2.5	75
5	Excellent catalytic activity of a two-dimensional Nb4C3Tx (MXene) on hydrogen storage of MgH2. Applied Surface Science, 2019, 493, 431-440.	3.1	73
6	Remarkable Synergistic Catalysis of Ni-Doped Ultrafine TiO₂ on Hydrogen Sorption Kinetics of MgH₂. ACS Applied Materials & Interfaces, 2018, 10, 24975-24980.	4.0	71
7	Kinetic performance of hydrogen generation enhanced by AlCl3 via hydrolysis of MgH2 prepared by hydriding combustion synthesis. International Journal of Hydrogen Energy, 2018, 43, 10232-10239.	3.8	57
8	Crystal-facet-dependent catalysis of anatase TiO2 on hydrogen storage of MgH2. Journal of Alloys and Compounds, 2020, 822, 153553.	2.8	57
9	Synergistic effect of rGO supported Ni3Fe on hydrogen storage performance of MgH2. International Journal of Hydrogen Energy, 2020, 45, 16622-16633.	3.8	56
10	Efficient catalysis by MgCl2 in hydrogen generation via hydrolysis of Mg-based hydride prepared by hydriding combustion synthesis. Chemical Communications, 2012, 48, 5509.	2.2	54
11	Interface effect in sandwich like Ni/Ti3C2 catalysts on hydrogen storage performance of MgH2. Applied Surface Science, 2021, 564, 150302.	3.1	54
12	Effect of Few-Layer Ti₃C₂T_x Supported Nano-Ni via Self-Assembly Reduction on Hydrogen Storage Performance of MgH₂. ACS Applied Materials & Interfaces, 2020, 12, 47684-47694.	4.0	53
13	Effect of multi-wall carbon nanotubes supported nano-nickel and TiF3 addition on hydrogen storage properties of magnesium hydride. Journal of Alloys and Compounds, 2016, 669, 8-18.	2.8	52
14	Enhancing hydrogen storage performances of MgH₂ by Ni nano-particles over mesoporous carbon CMK-3. Nanotechnology, 2018, 29, 265705.	1.3	52
15	Reaction mechanism of hydriding combustion synthesis of Mg2NiH4. Intermetallics, 1999, 7, 671-677.	1.8	49
16	Controlling nanocrystallization and hydrogen storage property of Mg-based amorphous alloy via a gas-solid reaction. Journal of Alloys and Compounds, 2016, 685, 272-277.	2.8	49
17	Catalytic effect of in situ formed nano-Mg2Ni and Mg2Cu on the hydrogen storage properties of Mg-Y hydride composites. Journal of Alloys and Compounds, 2019, 782, 242-250.	2.8	49
18	Effect of La/Ni ratio on hydrogen storage properties of Mgâ€“Niâ€“La system prepared by hydriding combustion synthesis followed by mechanical milling. International Journal of Hydrogen Energy, 2008, 33, 2970-2974.	3.8	48

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19	Effect of rGO supported NiCu derived from layered double hydroxide on hydrogen sorption kinetics of MgH2. Journal of Alloys and Compounds, 2019, 789, 768-776.	2.8	47
20	Effect of multi-wall carbon nanotubes supported palladium addition on hydrogen storage properties of magnesium hydride. International Journal of Hydrogen Energy, 2014, 39, 10184-10194.	3.8	46
21	Hydrogen storage properties of Mgâ€“Niâ€“Cu prepared by hydriding combustion synthesis and mechanical milling (HCS+MM). International Journal of Hydrogen Energy, 2009, 34, 2654-2660.	3.8	45
22	Effects of two-dimension MXene Ti3C2 on hydrogen storage performances of MgH2-LiAlH4 composite. Chemical Physics, 2019, 522, 178-187.	0.9	45
23	Significantly improved electrochemical hydrogen storage properties of magnesium nickel hydride modified with nano-nickel. Journal of Power Sources, 2015, 280, 132-140.	4.0	43
24	Enhanced electrochemical hydrogen storage properties of Mg2NiH4 by coating with nano-nickel. International Journal of Hydrogen Energy, 2015, 40, 13949-13956.	3.8	43
25	Controllable fabrication of Ni-based catalysts and their enhancement on desorption properties of MgH2. Journal of Alloys and Compounds, 2017, 715, 329-336.	2.8	43
26	Catalysis derived from flower-like Ni MOF towards the hydrogen storage performance of magnesium hydride. International Journal of Hydrogen Energy, 2022, 47, 9346-9356.	3.8	41
27	Structural and electrochemical hydrogen storage properties of Mg2Ni-based alloys. Journal of Alloys and Compounds, 2011, 509, 5309-5314.	2.8	40
28	Ultra-fine TiO2 nanoparticles supported on three-dimensionally ordered macroporous structure for improving the hydrogen storage performance of MgH2. Applied Surface Science, 2022, 585, 152561.	3.1	39
29	Hydrogen storage alloy of Mg2NiH4 hydride produced by hydriding combustion synthesis from powder of mixture metal. Journal of Alloys and Compounds, 2000, 308, 98-103.	2.8	38
30	Remarkable synergistic effects of Mg2NiH4 and transition metal carbides (TiC, ZrC, WC) on enhancing the hydrogen storage properties of MgH2. International Journal of Hydrogen Energy, 2020, 45, 6765-6779.	3.8	38
31	Hydrogen storage properties of Mgâ€“Niâ€“C system hydrogen storage materials prepared by hydriding combustion synthesis and mechanical milling. International Journal of Hydrogen Energy, 2010, 35, 6350-6355.	3.8	34
32	Boosting low-temperature de/re-hydrogenation performances of MgH2 with Pd-Ni bimetallic nanoparticles supported by mesoporous carbon. International Journal of Hydrogen Energy, 2019, 44, 10777-10787.	3.8	34
33	Excellent catalytic effects of multi-walled carbon nanotube supported titania on hydrogen storage of a Mgâ€“Ni alloy. Chemical Communications, 2015, 51, 2368-2371.	2.2	33
34	Enhancing hydrogen storage properties of MgH2 by core-shell CoNi@C. Journal of Alloys and Compounds, 2021, 862, 158004.	2.8	33
35	Hydrogen storage properties of Mg100â^'xNix (x=5, 11.3, 20, 25) composites prepared by hydriding combustion synthesis followed by mechanical milling (HCS+MM). Intermetallics, 2007, 15, 1582-1588.	1.8	32
36	Mechanism of the high activity of Mg2NiH4Mg2NiH4 produced by hydriding combustion synthesis based on the analysis of phase composition, particle characteristic and grain size. International Journal of Hydrogen Energy, 2007, 32, 2455-2460.	3.8	32

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37	Highly efficient bimetal synergetic catalysis by a multi-wall carbon nanotube supported palladium and nickel catalyst for the hydrogen storage of magnesium hydride. Chemical Communications, 2014, 50, 6641-6644.	2.2	32
38	Superior hydrogenation properties in a Mg65Ce10Ni20Cu5 nanoglass processed by melt-spinning followed by high-pressure torsion. Scripta Materialia, 2018, 152, 137-140.	2.6	32
39	Effect of synthesis temperature on the purity of product in hydriding combustion synthesis of Mg2NiH4. Journal of Alloys and Compounds, 2002, 345, 189-195.	2.8	31
40	Structure and hydrogenation properties of nanocrystalline Mg2Ni prepared by hydriding combustion synthesis and mechanical milling. Journal of Alloys and Compounds, 2008, 455, 197-202.	2.8	30
41	Controllable hydrogen generation behavior by hydrolysis of MgH2-based materials. Journal of Power Sources, 2021, 494, 229726.	4.0	29
42	Hydriding and dehydriding properties of nanostructured Mg2Ni alloy prepared by the process of hydriding combustion synthesis and subsequent mechanical grinding. Journal of Alloys and Compounds, 2006, 425, 235-238.	2.8	28
43	Alkaline poly(vinyl alcohol)/poly(acrylic acid) polymer electrolyte membrane for Ni-MH battery application. Ionics, 2015, 21, 141-148.	1.2	27
44	Enhanced hydrogen generation via hydrolysis of Mgâ€“Mg2NiH4 system. Journal of Power Sources, 2020, 476, 228499.	4.0	27
45	Synergistic hydrogen desorption of HCS MgH2Â+ÂLiAlH4 composite. Energy, 2013, 55, 933-938.	4.5	25
46	Catalytic effect of sandwich-like Ti₃C₂/TiO₂(A)-C on hydrogen storage performance of MgH₂. Nanotechnology, 2020, 31, 115404.	1.3	25
47	Enhanced hydriding kinetics of Mg-10Âat% Al composite by forming Al 12 Mg 17 during hydriding combustion synthesis. Journal of Alloys and Compounds, 2017, 712, 44-49.	2.8	24
48	Hydriding characteristics of Mg2NiMg2Ni prepared by mechanical milling of the product of hydriding combustion synthesis. International Journal of Hydrogen Energy, 2007, 32, 2450-2454.	3.8	23
49	Effect of hydrogen pressure on the combustion synthesis of Mg2NiH4. Intermetallics, 1999, 7, 201-205.	1.8	22
50	Hydriding and dehydriding behavior of the product in hydriding combustion synthesis of Mg2NiH4. Journal of Alloys and Compounds, 1999, 287, 98-103.	2.8	22
51	Characterization of hydrogen storage properties of Mg-30wt.% Ti1.0V1.1Mn0.9 composite. Journal of Alloys and Compounds, 2006, 424, 382-387.	2.8	21
52	Hydrogenation properties of five-component Mg60Ce10Ni20Cu5X5 (X= Co, Zn) metallic glasses. Intermetallics, 2019, 108, 94-99.	1.8	21
53	Catalytic mechanism of Nb2O5 and NbF5 on the dehydriding property of Mg95Ni5 prepared by hydriding combustion synthesis and mechanical milling. International Journal of Hydrogen Energy, 2009, 34, 7707-7713.	3.8	20
54	Vacancyâ€Mediated Hydrogen Spillover Improving Hydrogen Storage Properties and Air Stability of Metal Hydrides. Small, 2021, 17, e2100852.	5.2	20

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55	Pressure-Composition-Temperature Properties of Hydriding Combustion-Synthesized Mg₂NiH₄. Materials Transactions, 2002, 43, 1100-1104.	0.4	19
56	Hydrogen storage properties of Mgâ€“Niâ€“Fe composites prepared by hydriding combustion synthesis and mechanical milling. Journal of Alloys and Compounds, 2012, 520, 207-212.	2.8	19
57	Cobalt ion intercalated MnO2/C as air cathode catalyst for rechargeable aluminumâ€“air battery. Journal of Alloys and Compounds, 2020, 824, 153950.	2.8	19
58	Structures and hydrogen storage properties of Mg95Ni5 composite prepared by hydriding combustion synthesis and mechanical milling. Materials Chemistry and Physics, 2008, 112, 218-222.	2.0	18
59	Superior hydrogen storage properties of Mg95Ni5Â+Â10Âwt.% nanosized Zr0.7Ti0.3Mn2Â+Â3Âwt.% MWCNT prepared by hydriding combustion synthesis followed by mechanical milling (HCSÂ+ÂMM). International Journal of Hydrogen Energy, 2012, 37, 17146-17152.	3.8	18
60	Ionic conductivities of lithium borohydride-lithium nitride composites. Solid State Ionics, 2017, 304, 150-155.	1.3	18
61	Air-stable magnesium nickel hydride with autocatalytic and self-protective effect for reversible hydrogen storage. Nano Research, 2022, 15, 2130-2137.	5.8	18
62	Synergistic effect of TiH2 and air exposure on enhancing hydrogen storage performance of Mg2NiH4. Chemical Engineering Journal, 2022, 433, 134489.	6.6	18
63	Electrochemical properties of Mg-based hydrogen storage alloys prepared by hydriding combustion synthesis and subsequent mechanical milling (HCS+MM). International Journal of Hydrogen Energy, 2008, 33, 2965-2969.	3.8	17
64	Magnesium Nanoparticles With Pd Decoration for Hydrogen Storage. Frontiers in Chemistry, 2019, 7, 949.	1.8	17
65	Electrochemical hydrogen storage properties of Mg2â^'xAlxNi (xÂ=Â0, 0.3, 0.5, 0.7) prepared by hydriding combustion synthesis and mechanical milling. International Journal of Hydrogen Energy, 2012, 37, 18140-18147.	3.8	16
66	Remarkable hydrogen storage properties at low temperature of Mgâ€“Ni composites prepared by hydriding combustion synthesis and mechanical milling. RSC Advances, 2015, 5, 63202-63208.	1.7	16
67	Phase transformation, kinetics and thermodynamics during the combustion synthesis of Mg2Al3 alloy. Journal of Alloys and Compounds, 2015, 628, 257-262.	2.8	15
68	The hydrogen storage performance of a 4MgH2LiAlH4TiH2 composite system. Journal of Alloys and Compounds, 2016, 676, 557-564.	2.8	15
69	Structural and hydriding/dehydriding properties of Mgâ€“Laâ€“Ni-based composites. Journal of Alloys and Compounds, 2009, 477, 440-444.	2.8	14
70	Effect of partial substitution of Ti for Al on the phase structure and electrochemical hydrogen storage properties of Mg3AlNi2 alloy. Journal of Alloys and Compounds, 2018, 746, 421-427.	2.8	14
71	Electrochemical hydrogen storage properties of Mg 100â^'x Ni x produced by hydriding combustion synthesis and mechanical milling. Progress in Natural Science: Materials International, 2017, 27, 144-148.	1.8	13
72	Study on xLiBH4-NaBH4 (xÂ=Â1.6, 2.3, and 4) composites with enhanced lithium ionic conductivity. Journal of Alloys and Compounds, 2017, 729, 936-941.	2.8	13

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73	Improved dehydriding property of polyvinylpyrrolidone coated Mg-Ni hydrogen storage nano-composite prepared by hydriding combustion synthesis and wet mechanical milling. Progress in Natural Science: Materials International, 2018, 28, 7-14.	1.8	13
74	Improved Hydrogen Absorption/Desorption Properties of MgH₂ by Coâ€“Catalyzing of YH₂ and Co@C. ChemistrySelect, 2019, 4, 7709-7714.	0.7	13
75	Ultrahigh rate capability and long cycling stability of dual-ion batteries enabled by TiO₂ microspheres with abundant oxygen vacancies. Chemical Communications, 2020, 56, 8039-8042.	2.2	13
76	Nano-inducement of Ni for low-temperature dominant dehydrogenation of Mgâ€“Al alloy prepared by HCS+MM. Journal of Alloys and Compounds, 2020, 819, 153020.	2.8	12
77	One-step self-assembly of TiO2/MXene heterostructures for improving the hydrogen storage performance of magnesium hydride. Journal of Alloys and Compounds, 2022, 895, 162635.	2.8	12
78	Hydriding combustion synthesis of Mgâ€“CaNi5 composites. Journal of Alloys and Compounds, 2008, 458, 394-397.	2.8	11
79	Synergistic hydrogen desorption properties of the 4LiAlH4Â+ÂMg2NiH4 composite. Journal of Alloys and Compounds, 2017, 697, 80-85.	2.8	11
80	Effect of Al* generated in situ in hydriding on the dehydriding properties of Mg-Al alloys prepared by hydriding combustion synthesis and mechanical milling. Journal of Alloys and Compounds, 2018, 750, 490-498.	2.8	11
81	LiBH4-NaX (X=Cl, I) composites with enhanced lithium ionic conductivity. Journal of Alloys and Compounds, 2018, 764, 307-313.	2.8	11
82	Combustion synthesis of Mg-based hydrogen storage alloy Mg17Al12. Advanced Powder Technology, 2013, 24, 643-646.	2.0	10
83	Improved hydrogen storage properties of Ti-doped Mg₉₅Ni₅ powder produced by hydriding combustion synthesis. Journal of Materials Research, 2015, 30, 967-972.	1.2	10
84	Synergistically tuned hydrogen storage thermodynamics and kinetics of Mg-Al alloys by Cu formed in situ mechanochemically. Journal of Alloys and Compounds, 2019, 806, 370-377.	2.8	10
85	Facet-dependent catalytic activity of two-dimensional Ti3C2Tx MXene on hydrogen storage performance of MgH2. Journal of Magnesium and Alloys, 2023, 11, 3724-3735.	5.5	10
86	Enhanced hydrogen storage performance of magnesium hydride with incompletely etched Ti3C2Tx: The nonnegligible role of Al. Applied Surface Science, 2022, 600, 154140.	3.1	10
87	Synergistic Catalytic Mechanism between Ni and Carbon Aerogel for Dehydrogenation of Mg-Based Hydrides. Energy & Fuels, 2020, 34, 10232-10240.	2.5	9
88	Enhanced hydrogen sorption kinetics of MgH2 catalyzed by a novel layered Ni/Al2O3 hybrid. Journal of Alloys and Compounds, 2022, 895, 162682.	2.8	9
89	Electrochemical properties of Mg-based hydrogen storage materials modified with carbonaceous materials prepared by hydriding combustion synthesis and subsequent mechanical milling (HCSÂ+ÂMM). International Journal of Hydrogen Energy, 2010, 35, 9653-9660.	3.8	8
90	Effect of SiC on hydrogen storage properties of Mg95Ni5 prepared by hydriding combustion synthesis and mechanical milling. Journal of Alloys and Compounds, 2012, 539, 215-220.	2.8	8

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91	The ionic conductivities, stabilities and ionic mobilities of xLiBH4-Li2NH (xÂ=Â1, 2, 4) composites as fast ion conductor. Journal of Alloys and Compounds, 2017, 695, 2894-2901.	2.8	8
92	The lithium ionic conductivity of 2LiBH4-MgH2 composite as solid electrolyte. Inorganic Chemistry Communication, 2017, 83, 62-65.	1.8	8
93	Influence of Sn, Cd, and Si addition on the electrochemical performance of Alâ€“Znâ€“In sacrificial anodes. Materials and Corrosion - Werkstoffe Und Korrosion, 2020, 71, 585-592.	0.8	8
94	Effect of pH on the structural characteristics of in situ synthesized Ni-incorporated SBA-15 magnetic composites. Research on Chemical Intermediates, 2014, 40, 385-397.	1.3	7
95	Surface modification of Mg3MnNi2 hydrogen storage electrode alloy with polyaniline. International Journal of Hydrogen Energy, 2017, 42, 14220-14226.	3.8	7
96	Hydrogen storage performances and reaction mechanism of non-stoichiometric compound Li1.3Na1.7AlH6 doped with Ti3C2. Chemical Physics, 2018, 513, 135-140.	0.9	7
97	Enhanced dehydrogenation properties of LiAlH4â€“Mg2NiH4 nanocomposites via doping Ti-based catalysts. Materials Research Express, 2019, 6, 075067.	0.8	7
98	Effect of Si substitution for Al on the structural and hydrogenation properties of the Zintl phase alloy SrAl2. Journal of Alloys and Compounds, 2009, 485, 439-443.	2.8	6
99	The electrochemical hydrogen storage properties of Mg67â˜Pd Co33 (x=1, 3, 5, 7) electrodes with BCC phase. Journal of Alloys and Compounds, 2016, 662, 396-403.	2.8	6
100	Effects of VF 4 on the hydriding cycling at 373ÂK and dehydriding of Mg 99 Ni prepared by hydriding combustion synthesis and mechanical milling (HCS+MM). Journal of Alloys and Compounds, 2017, 698, 913-920.	2.8	6
101	High ionic conductivities of composites of Li4(BH4)3I with two-dimensional MoS2 at room temperature. Journal of Alloys and Compounds, 2020, 815, 152353.	2.8	6
102	Catalytic effect of micro/nano-Ni on dehydrogenation performance of Mg90Al10 during air exposure. Applied Surface Science, 2022, 595, 153569.	3.1	6
103	Hydrogen storage properties of the Zintl phase alloy SrAl2 doped with TiF3. Journal of Alloys and Compounds, 2010, 492, 277-281.	2.8	5
104	Direct synthesis of Nd3+ doped mesoporous TiO2 and investigation of its photocatalytic performance. Journal of Sol-Gel Science and Technology, 2012, 64, 564-570.	1.1	5
105	Catalytic Effect of Multi-Wall Carbon Nanotubes Supported Nickel on Hydrogen Storage Properties of Mg₉₉Ni Prepared by Hydriding Combustion Synthesis. Materials Transactions, 2014, 55, 1149-1155.	0.4	5
106	Ternary LiBH4-NaBH4-MgH2 composite as fast ionic conductor. Solid State Ionics, 2018, 324, 109-113.	1.3	5
107	Growth restriction of <scp> Co ₃ O ₄ </scp> nanoparticles by <scp> Î±â€MnO ₂ </scp> nanorods as air cathode catalyst for rechargeable aluminumâ€air battery. International Journal of Energy Research, 2022, 46, 11174-11184.	2.2	5
108	Significantly improved hydrogen storage properties of Mg90Al10 catalyzed by TiF3. Journal of Alloys and Compounds, 2022, 908, 164581.	2.8	5

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109	Structural and hydrogenation properties of SrAl2â^'xNix alloys. International Journal of Hydrogen Energy, 2008, 33, 7498-7504.	3.8	4
110	Electrochemical properties of Mg3MnNi2-x% polymethyl methacrylate-multiwalled carbon nanotubes (PMMA-MWCNTs) (xÂ=Â25, 50, 75, 100). Journal of Materials Science, 2018, 53, 6033-6041.	1.7	4
111	Electrochemical Performance of Al-1Zn-0.1In-0.1Sn-0.5Mg-xMn (x = 0, 0.1, 0.2, 0.3) Alloys Used as the Anode of an Al-Air Battery. Processes, 2022, 10, 420.	1.3	4
112	Improvement effect of reversible solid solutions Mg2Ni(Cu)/ Mg2Ni(Cu)H4 on hydrogen storage performance of MgH2. Journal of Magnesium and Alloys, 2024, 12, 197-208.	5.5	4
113	Purity of MgH2 Improved by the Process of Pre-milling Assisted Hydriding of Mg Powder under a Hydrogen Pressure of 0.5 MPa. Russian Journal of Physical Chemistry A, 2019, 93, 665-673.	0.1	3
114	Electrochemical hydrogen storage properties ofÂMg Al Mn Ni quaternary alloys. International Journal of Hydrogen Energy, 2019, 44, 8384-8391.	3.8	3
115	Mechanism of improving hydrogenation of Mg by in-situ formation of Al* in hydriding combustion synthesis. Journal of Alloys and Compounds, 2022, 911, 164969.	2.8	3
116	Supra Hydrolytic Catalysis of Ni₃Fe/rGO for Hydrogen Generation. Advanced Science, 2022, 9, e2201428.	5.6	3
117	Effect of surface oxidation on the hydriding and dehydriding of Mg2Ni alloy produced by hydriding combustion synthesis. Journal of Materials Science, 2007, 42, 9725-9729.	1.7	2
118	An exciting synergistic effect: realizing large-sized MgH2 dehydrogenation at lowered temperatures by locally assembling a heterophase composite. Materials Today Energy, 2019, 14, 100345.	2.5	2
119	Preparations and de/re-hydrogenation properties of LixNa3-xAlH6 (x=0.9â€“1.3) non-stoichiometric compounds. Journal of Alloys and Compounds, 2017, 729, 648-654.	2.8	1