Hai-Zhen Liu

List of Publications by Year
in descending order

50 papers	1,679 citations	218677 26 h-index	289244 40 g-index
50 all docs	50 docs citations	50 times ranked	725 citing authors

#	Article	IF	Citations
1	Combinations of V₂C and Ti₃C₂ MXenes for Boosting the Hydrogen Storage Performances of MgH₂. ACS Applied Materials & Interfaces, 2021, 13, 13235-13247.	8.0	111
2	Recent advances in metastable alloys for hydrogen storage: a review. Rare Metals, 2022, 41, 1797-1817.	7.1	93
3	Hydrogen generation from the hydrolysis of Mg powder ball-milled with AlCl3. Energy, 2013, 53, 147-152.	8.8	90
4	Hydrogen Desorption Properties of the MgH₂â€“AlH₃ Composites. Journal of Physical Chemistry C, 2014, 118, 37-45.	3.1	74
5	Improved hydrogen storage properties of MgH2 by ball milling with AlH3: preparations, de/rehydriding properties, and reaction mechanisms. Journal of Materials Chemistry A, 2013, 1, 12527.	10.3	70
6	Study on catalytic effect and mechanism of MOF (MOF = ZIF-8, ZIF-67, MOF-74) on hydrogen storage properties of magnesium. International Journal of Hydrogen Energy, 2019, 44, 28863-28873.	7.1	62
7	Effects of nano-composites (FeB, FeB/CNTs) on hydrogen storage properties of MgH2. Journal of Power Sources, 2019, 438, 227006.	7.8	57
8	Aluminum hydride for solid-state hydrogen storage: Structure, synthesis, thermodynamics, kinetics, and regeneration. Journal of Energy Chemistry, 2021, 52, 428-440.	12.9	57
9	Two-dimensional vanadium carbide for simultaneously tailoring the hydrogen sorption thermodynamics and kinetics of magnesium hydride. Journal of Magnesium and Alloys, 2022, 10, 1051-1065.	11.9	55
10	Cycling hydrogen desorption properties and microstructures of MgH2â€“AlH3â€“NbF5 hydrogen storage materials. Rare Metals, 2021, 40, 1003-1007.	7.1	50
11	Improved hydrogen generation from the hydrolysis of aluminum ball milled with hydride. Energy, 2014, 72, 421-426.	8.8	48
12	Improved hydrogen desorption properties of LiBH4 by AlH3 addition. International Journal of Hydrogen Energy, 2016, 41, 22118-22127.	7.1	48
13	A 70ÂMPa hydrogen-compression system using metal hydrides. International Journal of Hydrogen Energy, 2011, 36, 9079-9085.	7.1	47
14	Roles of in situ-formed NbN and Nb2O5 from N-doped Nb2C MXene in regulating the re/hydrogenation and cycling performance of magnesium hydride. Chemical Engineering Journal, 2022, 431, 133985.	12.7	47
15	Hydrogen storage properties of nano-CoB/CNTs catalyzed MgH2. Journal of Alloys and Compounds, 2018, 735, 635-642.	5.5	45
16	Investigation on the improved hydrolysis of aluminumâ€“calcium hydride-salt mixture elaborated by ball milling. Energy, 2015, 84, 714-721.	8.8	44
17	Hydrogen generation from Mgâ€“LiBH4 hydrolysis improved by AlCl3 addition. Energy, 2014, 68, 548-554.	8.8	43
18	In situ incorporation of highly dispersed nickel and vanadium trioxide nanoparticles in nanoporous carbon for the hydrogen storage performance enhancement of magnesium hydride. Chemical Engineering Journal, 2022, 446, 137261.	12.7	42

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19	Synergistically thermodynamic and kinetic tailoring of the hydrogen desorption properties of MgH₂ by co-addition of AlH₃ and CeF₃. RSC Advances, 2015, 5, 22091-22096.	3.6	41
20	Catalytic enhanced hydrogen storage properties of Mg-based alloy by the addition of reduced graphene oxide supported V2O3 nanocomposite. Journal of Alloys and Compounds, 2019, 802, 660-667.	5.5	39
21	Effect of salts addition on the hydrogen generation of Alâ€“LiH composite elaborated by ball milling. Energy, 2015, 89, 907-913.	8.8	35
22	Development of a gaseous and solid-state hybrid system for stationary hydrogen energy storage. Green Energy and Environment, 2021, 6, 528-537.	8.7	35
23	Microstructures and Hydrogen Desorption Properties of the MgH₂â€“AlH₃ Composite with NbF₅ Addition. Journal of Physical Chemistry C, 2014, 118, 18908-18916.	3.1	30
24	Synthetical catalysis of nickel and graphene on enhanced hydrogen storage properties of magnesium. International Journal of Hydrogen Energy, 2019, 44, 24849-24855.	7.1	29
25	Dehydriding properties of Î³-AlH3. International Journal of Hydrogen Energy, 2013, 38, 10851-10856.	7.1	28
26	Enhanced hydrogen desorption/absorption properties of magnesium hydride with CeF3@Gn. International Journal of Hydrogen Energy, 2020, 45, 4754-4764.	7.1	26
27	CNTs decorated with CoFeB as a dopant to remarkably improve the dehydrogenation/rehydrogenation performance and cyclic stability of MgH2. International Journal of Hydrogen Energy, 2020, 45, 28964-28973.	7.1	26
28	Facile synthesis of a Ni3S2@C composite using cation exchange resin as an efficient catalyst to improve the kinetic properties of MgH2. Journal of Magnesium and Alloys, 2022, 10, 3628-3640.	11.9	25
29	Exploration of hydrogen generation from an Mgâ€“LiBH4 system improved by NiCl2 addition. Journal of Power Sources, 2014, 251, 459-465.	7.8	24
30	Improved hydrogen storage properties of LiBH4 confined with activated charcoal by ball milling. Rare Metals, 2019, 38, 321-326.	7.1	21
31	MoSe2 hollow nanospheres decorated with FeNi3 nanoparticles for enhancing the hydrogen storage properties of MgH2. Journal of Alloys and Compounds, 2020, 830, 154631.	5.5	21
32	Study on hydrogen generation from the hydrolysis of a ball milled aluminum/calcium hydride composite. RSC Advances, 2015, 5, 60460-60466.	3.6	20
33	Hydrogen storage properties of activated carbon confined LiBH4 doped with CeF3 as catalyst. International Journal of Hydrogen Energy, 2017, 42, 23010-23017.	7.1	19
34	Hydrogen desorption behaviors of Î³-AlH 3 : Diverse decomposition mechanisms for the outer layer and the inner part of Î³-AlH 3 particle. International Journal of Hydrogen Energy, 2017, 42, 25310-25315.	7.1	18
35	Hydrogen desorption kinetics of the destabilized LiBH 4 AlH 3 composites. International Journal of Hydrogen Energy, 2017, 42, 22358-22365.	7.1	17
36	Hydrogen storage properties of Nb-compounds-catalyzed LiBH4â€“MgH2. Rare Metals, 2017, 36, 723-728.	7.1	16

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37	Synergistic catalytic effects of ZIF-67 and transition metals (Ni, Cu, Pd, and Nb) on hydrogen storage properties of magnesium. International Journal of Hydrogen Energy, 2020, 45, 13376-13386.	7.1	16
38	Facile and low-cost synthesis of carbon-supported manganese monoxide nanocomposites and evaluation of their superior catalytic effect toward magnesium hydride. Journal of Alloys and Compounds, 2021, 887, 161380.	5.5	16
39	Enhanced hydrogen storage properties of 2LiBH4-LiAlH4 nanoconfined in resorcinol formaldehyde carbon aerogel. Journal of Alloys and Compounds, 2017, 726, 525-531.	5.5	15
40	Enhanced Hydrogen Storage Properties of MgH2 Using a Ni and TiO2 Co-Doped Reduced Graphene Oxide Nanocomposite as a Catalyst. Frontiers in Chemistry, 2020, 8, 207.	3.6	15
41	Enhanced electrochemical and hydrogen storage properties of Laâ€“Mgâ€“Ni-based alloy electrode using a Ni and N co-doped reduced graphene oxide nanocomposite as a catalyst. International Journal of Hydrogen Energy, 2019, 44, 25840-25849.	7.1	12
42	Enhanced dehydrogenation kinetic properties and hydrogen storage reversibility of LiBH4 confined in activated charcoal. Transactions of Nonferrous Metals Society of China, 2018, 28, 1618-1625.	4.2	11
43	Wet Chemical Synthesis of Non-solvated Rod-Like Î±'-AlH3 as a Hydrogen Storage Material. Frontiers in Chemistry, 2019, 7, 892.	3.6	11
44	Cerium hydride generated during ball milling and enhanced by graphene for tailoring hydrogen sorption properties of sodium alanate. International Journal of Hydrogen Energy, 2021, 46, 4168-4180.	7.1	8
45	Multi-Role Surface Modification of Single-Crystalline Nickel-Rich Lithium Nickel Cobalt Manganese Oxides Cathodes with WO3 to Improve Performance for Lithium-Ion Batteries. Nanomaterials, 2022, 12, 1324.	4.1	8
46	Effects of vanadium, vanadium carbide, and vanadium oxide catalysts on hydrogenation of Mg17Al12 (110) surface: A first principles study. International Journal of Hydrogen Energy, 2020, 45, 28078-28086.	7.1	5
47	Function-Based Architecture Design for Next-Generation Automotive Brake Controls. SAE International Journal of Passenger Cars - Mechanical Systems, 0, 9, 135-142.	0.4	4
48	The Dehydrogenation Mechanism and Cycling Property of MgH 2 ÂModified by CoB/CNTs Addition. ChemistrySelect, 2019, 4, 9934-9939.	1.5	4
49	Effects of transition metal Ti and its compounds on hydrogen adsorption performance of Mg17Al12. International Journal of Hydrogen Energy, 2022, 47, 13900-13910.	7.1	1
50	Co-Addition of Mg2Si and Graphene for Synergistically Improving the Hydrogen Storage Properties of Mgâ˜Li Alloy. Frontiers in Chemistry, 2021, 9, 775537.	3.6	0