Liuting Zhang

List of Publications by Year
in descending order

63 papers	2,578 citations	159585 30 h-index	197818 49 g-index
63 all docs	63 docs citations	63 times ranked	995 citing authors

#	Article	IF	Citations
1	Novel 1D carbon nanotubes uniformly wrapped nanoscale MgH2 for efficient hydrogen storage cycling performances with extreme high gravimetric and volumetric capacities. Nano Energy, 2019, 61, 540-549.	16.0	124
2	A striking catalytic effect of facile synthesized ZrMn₂ nanoparticles on the de/rehydrogenation properties of MgH₂. Journal of Materials Chemistry A, 2019, 7, 5626-5634.	10.3	118
3	ZIF-67 derived Co@CNTs nanoparticles: Remarkably improved hydrogen storage properties of MgH2 and synergetic catalysis mechanism. International Journal of Hydrogen Energy, 2019, 44, 1059-1069.	7.1	111
4	Facile synthesized Fe nanosheets as superior active catalyst for hydrogen storage in MgH2. International Journal of Hydrogen Energy, 2019, 44, 21955-21964.	7.1	100
5	Recent advances in metastable alloys for hydrogen storage: a review. Rare Metals, 2022, 41, 1797-1817.	7.1	93
6	Enhanced hydrogen storage properties of MgH₂ with numerous hydrogen diffusion channels provided by Na₂Ti₃O₇ nanotubes. Journal of Materials Chemistry A, 2017, 5, 6178-6185.	10.3	89
7	Excellent catalysis of TiO₂ nanosheets with high-surface-energy {001} facets on the hydrogen storage properties of MgH₂. Nanoscale, 2019, 11, 7465-7473.	5.6	89
8	Facile synthesis of Co/Pd supported by few-walled carbon nanotubes as an efficient bidirectional catalyst for improving the low temperature hydrogen storage properties of magnesium hydride. Journal of Materials Chemistry A, 2019, 7, 5277-5287.	10.3	88
9	Superior de/hydrogenation performances of MgH2 catalyzed by 3D flower-like TiO2@C nanostructures. Journal of Energy Chemistry, 2020, 46, 191-198.	12.9	88
10	Two-dimensional vanadium nanosheets as a remarkably effective catalyst for hydrogen storage in MgH2. Rare Metals, 2021, 40, 3195.	7.1	78
11	Enhancing Hydrogen Storage Properties of MgH2 by Transition Metals and Carbon Materials: A Brief Review. Frontiers in Chemistry, 2020, 8, 552.	3.6	76
12	Remarkably Improved Hydrogen Storage Performance of MgH₂ Catalyzed by Multivalence NbH_x Nanoparticles. Journal of Physical Chemistry C, 2015, 119, 8554-8562.	3.1	73
13	Synergistic Catalytic Activity of Porous Rod-like TMTiO₃ (TM = Ni and Co) for Reversible Hydrogen Storage of Magnesium Hydride. Journal of Physical Chemistry C, 2018, 122, 27973-27982.	3.1	61
14	Enhanced hydrogen storage capacity and reversibility of LiBH4 nanoconfined in the densified zeolite-templated carbon with high mechanical stability. Nano Energy, 2015, 15, 244-255.	16.0	58
15	Highly synergetic catalytic mechanism of Ni@g-C3N4 on the superior hydrogen storage performance of Li-Mg-B-H system. Energy Storage Materials, 2018, 13, 199-206.	18.0	58
16	Two-dimensional ZrCo nanosheets as highly effective catalyst for hydrogen storage in MgH2. Journal of Alloys and Compounds, 2019, 805, 295-302.	5.5	57
17	Synergistic catalysis in monodispersed transition metal oxide nanoparticles anchored on amorphous carbon for excellent low-temperature dehydrogenation of magnesium hydride. Materials Today Energy, 2019, 12, 146-154.	4.7	57
18	Remarkable hydrogen desorption properties and mechanisms of the Mg₂FeH₆@MgH₂ coreâ€“shell nanostructure. Journal of Materials Chemistry A, 2015, 3, 5517-5524.	10.3	54

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19	Enhanced hydridingâ€“dehydriding performance of 2LiBH4â€“MgH2 composite by the catalytic effects of transition metal chlorides. Journal of Materials Chemistry, 2012, 22, 20764.	6.7	53
20	Enhanced hydrogen storage properties of MgH2 by the synergetic catalysis of Zr0.4Ti0.6Co nanosheets and carbon nanotubes. Applied Surface Science, 2020, 504, 144465.	6.1	47
21	The remarkably improved hydrogen storage performance of MgH₂by the synergetic effect of an FeNi/rGO nanocomposite. Dalton Transactions, 2020, 49, 4146-4154.	3.3	46
22	Effects of NbF5 addition on the de/rehydrogenation properties of 2LiBH4/MgH2 hydrogen storage system. International Journal of Hydrogen Energy, 2012, 37, 13147-13154.	7.1	45
23	Superior catalytic effects of FeCo nanosheets on MgH₂ for hydrogen storage. Dalton Transactions, 2019, 48, 12699-12706.	3.3	43
24	Size effect on hydrogen storage properties of NaAlH4 confined in uniform porous carbons. Nano Energy, 2013, 2, 995-1003.	16.0	38
25	Enhanced hydrogen storage properties of Mg by the synergistic effect of grain refinement and NiTiO3 nanoparticles. Journal of Magnesium and Alloys, 2022, 10, 3542-3552.	11.9	38
26	A new strategy for remarkably improving anti-disproportionation performance and cycling stabilities of ZrCo-based hydrogen isotope storage alloys by Cu substitution and controlling cutoff desorption pressure. International Journal of Hydrogen Energy, 2019, 44, 28242-28251.	7.1	36
27	Excellent catalysis of Mn₃O₄ nanoparticles on the hydrogen storage properties of MgH₂: an experimental and theoretical study. Nanoscale Advances, 2020, 2, 1666-1675.	4.6	35
28	Enhanced low temperature hydrogen desorption properties and mechanism of Mg(BH4)2 composited with 2D MXene. International Journal of Hydrogen Energy, 2019, 44, 24292-24300.	7.1	34
29	An in-depth study on the thermodynamics and kinetics of disproportionation behavior in ZrCoâ€“H systems. Journal of Materials Chemistry A, 2020, 8, 9322-9330.	10.3	34
30	Development of Ti-Zr-Mn-Cr-V based alloys for high-density hydrogen storage. Journal of Alloys and Compounds, 2021, 875, 160035.	5.5	32
31	Mn nanoparticles enhanced dehydrogenation and hydrogenation kinetics of MgH2 for hydrogen storage. Transactions of Nonferrous Metals Society of China, 2021, 31, 3469-3477.	4.2	31
32	Highly dispersed metal nanoparticles on TiO2 acted as nano redox reactor and its synergistic catalysis on the hydrogen storage properties of magnesium hydride. International Journal of Hydrogen Energy, 2019, 44, 15100-15109.	7.1	29
33	Metal organic framework supported niobium pentoxide nanoparticles with exceptional catalytic effect on hydrogen storage behavior of MgH2. Green Energy and Environment, 2023, 8, 589-600.	8.7	29
34	Dehydriding properties of Î³-AlH3. International Journal of Hydrogen Energy, 2013, 38, 10851-10856.	7.1	28
35	Facile synthesis of bowl-like 3D Mg(BH₄)₂â€“NaBH₄â€“fluorographene composite with unexpected superior dehydrogenation performances. Journal of Materials Chemistry A, 2017, 5, 9723-9732.	10.3	28
36	In-situ synthesis of amorphous Mg(BH4)2 and chloride composite modified by NbF5 for superior reversible hydrogen storage properties. International Journal of Hydrogen Energy, 2020, 45, 2044-2053.	7.1	28

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37	Fluorographene nanosheets enhanced hydrogen absorption and desorption performances of magnesium hydride. International Journal of Hydrogen Energy, 2014, 39, 12715-12726.	7.1	26
38	Practical development and challenges of garnet-structured Li7La3Zr2O12 electrolytes for all-solid-state lithium-ion batteries: A review. International Journal of Minerals, Metallurgy and Materials, 2021, 28, 1565-1583.	4.9	26
39	Realizing Hydrogen De/Absorption Under Low Temperature for MgH2 by Doping Mn-Based Catalysts. Nanomaterials, 2020, 10, 1745.	4.1	25
40	Superior catalytic effect of facile synthesized LaNi4.5Mn0.5 submicro-particles on the hydrogen storage properties of MgH2. Journal of Alloys and Compounds, 2020, 844, 156069.	5.5	25
41	Insights into 2D graphene-like TiO2 (B) nanosheets as highly efficient catalyst for improved low-temperature hydrogen storage properties of MgH2. Materials Today Energy, 2020, 16, 100411.	4.7	25
42	Enhanced hydrogen storage properties of high-loading nanoconfined LiBH4â€“Mg(BH4)2 composites with porous hollow carbon nanospheres. International Journal of Hydrogen Energy, 2021, 46, 852-864.	7.1	25
43	Constructing graphene nanosheet-supported FeOOH nanodots for hydrogen storage of MgH2. International Journal of Minerals, Metallurgy and Materials, 2022, 29, 1464-1473.	4.9	23
44	Remarkable enhancement in dehydrogenation properties of Mg(BH4)2 modified by the synergetic effect of fluorographite and LiBH4. International Journal of Hydrogen Energy, 2015, 40, 14163-14172.	7.1	22
45	Fast hydrogen release under moderate conditions from NaBH₄ destabilized by fluorographite. RSC Advances, 2013, 4, 2550-2556.	3.6	21
46	Remarkably improved hydrogen storage properties of carbon layers covered nanocrystalline Mg with certain air stability. International Journal of Hydrogen Energy, 2020, 45, 28134-28143.	7.1	20
47	The dehydrogenation kinetics and reversibility improvements of Mg(BH4)2 doped with Ti nano-particles under mild conditions. International Journal of Hydrogen Energy, 2021, 46, 23737-23747.	7.1	20
48	Superior dehydrogenation performance of nanoscale lithium borohydride modified with fluorographite. International Journal of Hydrogen Energy, 2014, 39, 896-904.	7.1	19
49	Superior catalysis of NbN nanoparticles with intrinsic multiple valence on reversible hydrogen storage properties of magnesium hydride. International Journal of Hydrogen Energy, 2021, 46, 814-822.	7.1	19
50	0D/1D/2D Co@Co2Mo3O8 nanocomposite constructed by mutual-supported Co2Mo3O8 nanosheet and Co nanoparticle: Synthesis and enhanced hydrolytic dehydrogenation of ammonia borane. Chemical Engineering Journal, 2022, 431, 133697.	12.7	19
51	LiAlH₄ as a â€œMicrolighterâ€•on the Fluorographite Surface Triggering the Dehydrogenation of Mg(BH₄)₂: Toward More than 7 wt % Hydrogen Release below 70 Â°C. ACS Applied Energy Materials, 2020, 3, 3033-3041.	5.1	18
52	Improved reversible dehydrogenation properties of Mg(BH4)2 catalyzed by dual-cation transition metal fluorides K2TiF6 and K2NbF7. Chemical Engineering Journal, 2021, 412, 128738.	12.7	15
53	The effect of different Co phase structure (FCC/HCP) on the catalytic action towards the hydrogen storage performance of MgH2. Chinese Journal of Chemical Engineering, 2022, 43, 343-352.	3.5	15
54	Construction of carbon covered Mg2NiH4 nanocrystalline for hydrogen storage. Journal of Alloys and Compounds, 2022, 905, 164169.	5.5	15

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55	Enhanced reversible hydrogen desorption properties and mechanism of Mg(BH4)2-AlH3-LiH composite. Journal of Alloys and Compounds, 2018, 762, 548-554.	5.5	14
56	Enhanced hydrogen storage properties of a dual-cation (Li⁺, Mg²⁺) borohydride and its dehydrogenation mechanism. RSC Advances, 2017, 7, 36852-36859.	3.6	11
57	A new strategy to remarkably improve the low-temperature reversible hydrogen desorption performances of LiBH4 by compositing with fluorographene. International Journal of Hydrogen Energy, 2017, 42, 20046-20055.	7.1	11
58	Catalytic Effect of Facile Synthesized TiH1.971 Nanoparticles on the Hydrogen Storage Properties of MgH2. Nanomaterials, 2019, 9, 1370.	4.1	11
59	Ultra-fast dehydrogenation behavior at low temperature of LiAlH4 modified by fluorographite. International Journal of Hydrogen Energy, 2020, 45, 28123-28133.	7.1	9
60	A Novel Liâ€“Caâ€“Bâ€“H Complex Borohydride: Its Synthesis and Hydrogen Storage Properties. Journal of Physical Chemistry C, 2011, 115, 19986-19993.	3.1	7
61	Enabling easy and efficient hydrogen release below 80ÂÂ°C from NaBH4 with multi-hydroxyl xylitol. International Journal of Hydrogen Energy, 2021, 46, 28156-28165.	7.1	7
62	Improved hydrogen storage properties of MgH2 by the addition of TiCN and its catalytic mechanism. SN Applied Sciences, 2019, 1, 1.	2.9	3
63	Effect of Different Amounts of TiF3 on the Reversible Hydrogen Storage Properties of 2LiBH4â€“Li3AlH6 Composite. Frontiers in Chemistry, 2021, 9, 693302.	3.6	1