Yunfeng Zhu

List of Publications by Year
in descending order

110 papers	3,069 citations	126907 33 h-index	197818 49 g-index
110 all docs	110 docs citations	110 times ranked	1309 citing authors

#	Article	IF	Citations
1	An investigation on the structural and electrochemical properties of La0.7Mg0.3(Ni0.85Co0.15)x (x=3.15â€“3.80) hydrogen storage electrode alloys. Journal of Alloys and Compounds, 2003, 351, 228-234.	5.5	146
2	State of the art multi-strategy improvement of Mg-based hydrides for hydrogen storage. Journal of Alloys and Compounds, 2019, 782, 796-823.	5.5	122
3	Metal Hydride Nanoparticles with Ultrahigh Structural Stability and Hydrogen Storage Activity Derived from Microencapsulated Nanoconfinement. Advanced Materials, 2017, 29, 1700760.	21.0	115
4	The effect of Mn substitution for Ni on the structural and electrochemical properties of La0.7Mg0.3Ni2.55âˆ’xCo0.45Mnx hydrogen storage electrode alloys. International Journal of Hydrogen Energy, 2004, 29, 297-305.	7.1	101
5	Nickel-decorated graphene nanoplates for enhanced H₂sorption properties of magnesium hydride at moderate temperatures. Journal of Materials Chemistry A, 2016, 4, 2560-2570.	10.3	98
6	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.	5.1	75
7	Remarkable Synergistic Catalysis of Ni-Doped Ultrafine TiO₂ on Hydrogen Sorption Kinetics of MgH₂. ACS Applied Materials & Interfaces, 2018, 10, 24975-24980.	8.0	71
8	Investigation of the Structural and Electrochemical Properties of Superstoichiometric Ti-Zr-V-Mn-Cr-Ni Hydrogen Storage Alloys. Journal of the Electrochemical Society, 2002, 149, A829.	2.9	60
9	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.	7.1	57
10	Crystal-facet-dependent catalysis of anatase TiO2 on hydrogen storage of MgH2. Journal of Alloys and Compounds, 2020, 822, 153553.	5.5	57
11	Synergistic effect of rGO supported Ni3Fe on hydrogen storage performance of MgH2. International Journal of Hydrogen Energy, 2020, 45, 16622-16633.	7.1	56
12	Efficient catalysis by MgCl2 in hydrogen generation via hydrolysis of Mg-based hydride prepared by hydriding combustion synthesis. Chemical Communications, 2012, 48, 5509.	4.1	54
13	Interface effect in sandwich like Ni/Ti3C2 catalysts on hydrogen storage performance of MgH2. Applied Surface Science, 2021, 564, 150302.	6.1	54
14	Effect of Few-Layer Ti₃C₂T_{<i>x</i>} Supported Nano-Ni via Self-Assembly Reduction on Hydrogen Storage Performance of MgH₂. ACS Applied Materials & Interfaces, 2020, 12, 47684-47694.	8.0	53
15	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.	5.5	52
16	Enhancing hydrogen storage performances of MgH₂ by Ni nano-particles over mesoporous carbon CMK-3. Nanotechnology, 2018, 29, 265705.	2.6	52
17	XRD study of the hydrogenation and dehydrogenation process of the two different phase components in a Tiâ€“V-based multiphase hydrogen storage electrode alloy. Journal of Alloys and Compounds, 2004, 370, 254-260.	5.5	50
18	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.	5.5	49

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19	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.	5.5	49
20	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.	7.1	48
21	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.	5.5	47
22	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.	7.1	46
23	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.	7.1	45
24	Effects of two-dimension MXene Ti3C2 on hydrogen storage performances of MgH2-LiAlH4 composite. Chemical Physics, 2019, 522, 178-187.	1.9	45
25	Significantly improved electrochemical hydrogen storage properties of magnesium nickel hydride modified with nano-nickel. Journal of Power Sources, 2015, 280, 132-140.	7.8	43
26	Controllable fabrication of Ni-based catalysts and their enhancement on desorption properties of MgH2. Journal of Alloys and Compounds, 2017, 715, 329-336.	5.5	43
27	Catalysis derived from flower-like Ni MOF towards the hydrogen storage performance of magnesium hydride. International Journal of Hydrogen Energy, 2022, 47, 9346-9356.	7.1	41
28	Structural and electrochemical hydrogen storage properties of Mg2Ni-based alloys. Journal of Alloys and Compounds, 2011, 509, 5309-5314.	5.5	40
29	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.	6.1	39
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.	7.1	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.	7.1	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.	7.1	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.	4.1	33
34	Enhancing hydrogen storage properties of MgH2 by core-shell CoNi@C. Journal of Alloys and Compounds, 2021, 862, 158004.	5.5	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.	3.9	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.	7.1	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.	4.1	32
38	Superior hydrogenation properties in a Mg65Ce10Ni20Cu5 nanoglass processed by melt-spinning followed by high-pressure torsion. Scripta Materialia, 2018, 152, 137-140.	5.2	32
39	VS4 anchored on Ti3C2 MXene as a high-performance cathode material for magnesium ion battery. Journal of Power Sources, 2022, 518, 230731.	7.8	32
40	in-situ formed Pt nano-clusters serving as destabilization-catalysis bi-functional additive for MgH2. Chemical Engineering Journal, 2022, 435, 135050.	12.7	31
41	A study on improving the cycling stability of (Ti0.8Zr0.2)(V0.533Mn0.107Cr0.16Ni0.2)4 hydrogen storage electrode alloy by means of annealing treatment. Journal of Alloys and Compounds, 2003, 348, 301-308.	5.5	30
42	Structure and hydrogenation properties of nanocrystalline Mg2Ni prepared by hydriding combustion synthesis and mechanical milling. Journal of Alloys and Compounds, 2008, 455, 197-202.	5.5	30
43	Controllable hydrogen generation behavior by hydrolysis of MgH2-based materials. Journal of Power Sources, 2021, 494, 229726.	7.8	29
44	Alkaline poly(vinyl alcohol)/poly(acrylic acid) polymer electrolyte membrane for Ni-MH battery application. Ionics, 2015, 21, 141-148.	2.4	27
45	Enhanced hydrogen generation via hydrolysis of Mgâ€“Mg2NiH4 system. Journal of Power Sources, 2020, 476, 228499.	7.8	27
46	Synergistic hydrogen desorption of HCS MgH2Â+ÂLiAlH4 composite. Energy, 2013, 55, 933-938.	8.8	25
47	Catalytic effect of sandwich-like Ti₃C₂/TiO₂(A)-C on hydrogen storage performance of MgH₂. Nanotechnology, 2020, 31, 115404.	2.6	25
48	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.	5.5	24
49	Characterization of hydrogen storage properties of Mg-30wt.% Ti1.0V1.1Mn0.9 composite. Journal of Alloys and Compounds, 2006, 424, 382-387.	5.5	21
50	Hydrogenation properties of five-component Mg60Ce10Ni20Cu5X5 (X= Co, Zn) metallic glasses. Intermetallics, 2019, 108, 94-99.	3.9	21
51	A study on improving the cycling stability of (Ti0.8Zr0.2)(V0.533Mn0.107Cr0.16Ni0.2)4 hydrogen storage electrode alloy by means of annealing treatment:. Journal of Alloys and Compounds, 2002, 347, 279-284.	5.5	20
52	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.	7.1	20
53	Vacancyâ€Mediated Hydrogen Spillover Improving Hydrogen Storage Properties and Air Stability of Metal Hydrides. Small, 2021, 17, e2100852.	10.0	20
54	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.	5.5	19

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55	Cobalt ion intercalated MnO2/C as air cathode catalyst for rechargeable aluminumâ€“air battery. Journal of Alloys and Compounds, 2020, 824, 153950.	5.5	19
56	Structural and electrochemical properties of hydrogen storage alloys Ti0.8Zr0.2V2.7Mn0.5Cr0.8Nix (x) Tj ETQq0 0 0 rgBT /Overlock 10 T	5.5	18
57	Structures and hydrogen storage properties of Mg95Ni5 composite prepared by hydriding combustion synthesis and mechanical milling. Materials Chemistry and Physics, 2008, 112, 218-222.	4.0	18
58	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.	7.1	18
59	Air-stable magnesium nickel hydride with autocatalytic and self-protective effect for reversible hydrogen storage. Nano Research, 2022, 15, 2130-2137.	10.4	18
60	Synergistic effect of TiH2 and air exposure on enhancing hydrogen storage performance of Mg2NiH4. Chemical Engineering Journal, 2022, 433, 134489.	12.7	18
61	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.	7.1	17
62	Magnesium Nanoparticles With Pd Decoration for Hydrogen Storage. Frontiers in Chemistry, 2019, 7, 949.	3.6	17
63	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.	7.1	16
64	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.	3.6	16
65	Phase transformation, kinetics and thermodynamics during the combustion synthesis of Mg2Al3 alloy. Journal of Alloys and Compounds, 2015, 628, 257-262.	5.5	15
66	The hydrogen storage performance of a 4MgH2LiAlH4TiH2 composite system. Journal of Alloys and Compounds, 2016, 676, 557-564.	5.5	15
67	Structural and hydriding/dehydriding properties of Mgâ€“Laâ€“Ni-based composites. Journal of Alloys and Compounds, 2009, 477, 440-444.	5.5	14
68	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.	5.5	14
69	Effect of rapid solidification on the structural and electrochemical properties of the Tiâ€“V-based hydrogen storage electrode alloy. Journal of Alloys and Compounds, 2008, 463, 528-532.	5.5	13
70	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.	4.4	13
71	Improved Hydrogen Absorption/Desorption Properties of MgH₂ by Coâ€“Catalyzing of YH₂ and Co@C. ChemistrySelect, 2019, 4, 7709-7714.	1.5	13
72	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.	4.1	13

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73	Kinetics and electrochemical characteristics of Mg2NiH4-x wt.% MmNi3.8Co0.75Mn0.4Al0.2 (xÂ=Â5, 10, 20,) Tj ETQq1 1 0.784314 rgBT	7.1	12
74	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.	5.5	12
75	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.	5.5	12
76	Hydriding combustion synthesis of Mgâ€“CaNi5 composites. Journal of Alloys and Compounds, 2008, 458, 394-397.	5.5	11
77	Synergistic hydrogen desorption properties of the 4LiAlH4Â+ÂMg2NiH4 composite. Journal of Alloys and Compounds, 2017, 697, 80-85.	5.5	11
78	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.	5.5	11
79	NiSe2/Ti3C2 as a promising cathode material for rechargeable dual Mg/Li-ion battery. Materials Letters, 2021, 283, 128721.	2.6	11
80	Combustion synthesis of Mg-based hydrogen storage alloy Mg17Al12. Advanced Powder Technology, 2013, 24, 643-646.	4.1	10
81	The effects of Pd and/or Zr additives on the structures and cyclic stabilities of Mg50Ni50-based electrode alloys. International Journal of Hydrogen Energy, 2015, 40, 2768-2774.	7.1	10
82	Improved hydrogen storage properties of Ti-doped Mg₉₅Ni₅ powder produced by hydriding combustion synthesis. Journal of Materials Research, 2015, 30, 967-972.	2.6	10
83	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.	5.5	10
84	Facet-dependent catalytic activity of two-dimensional Ti3C2Tx MXene on hydrogen storage performance of MgH2. Journal of Magnesium and Alloys, 2023, 11, 3724-3735.	11.9	10
85	Enhanced hydrogen storage performance of magnesium hydride with incompletely etched Ti3C2Tx: The nonnegligible role of Al. Applied Surface Science, 2022, 600, 154140.	6.1	10
86	The electrochemical hydrogen storage performances of Mg x Co 100â€“x (xÂ=Â40, 45, 50, 55, 60, 63) body-centered cubic alloys and their Pd-doped system. International Journal of Hydrogen Energy, 2016, 41, 1089-1097.	7.1	9
87	Synergistic Catalytic Mechanism between Ni and Carbon Aerogel for Dehydrogenation of Mg-Based Hydrides. Energy & Fuels, 2020, 34, 10232-10240.	5.1	9
88	Enhanced hydrogen sorption kinetics of MgH2 catalyzed by a novel layered Ni/Al2O3 hybrid. Journal of Alloys and Compounds, 2022, 895, 162682.	5.5	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.	7.1	8
90	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.	1.5	8

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91	Hydrogen storage performances and reaction mechanism of non-stoichiometric compound Li1.3Na1.7AlH6 doped with Ti3C2. Chemical Physics, 2018, 513, 135-140.	1.9	7
92	Enhanced dehydrogenation properties of LiAlH4â€“Mg2NiH4 nanocomposites via doping Ti-based catalysts. Materials Research Express, 2019, 6, 075067.	1.6	7
93	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.	5.5	6
94	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.	5.5	6
95	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.	5.5	6
96	Catalytic effect of micro/nano-Ni on dehydrogenation performance of Mg90Al10 during air exposure. Applied Surface Science, 2022, 595, 153569.	6.1	6
97	Effects of metal additive on electrochemical performances of Mg-based hydrogen storage materials prepared by hydriding combustion synthesis and subsequent mechanical milling (HCS+MM). International Journal of Hydrogen Energy, 2010, 35, 8241-8246.	7.1	5
98	Hydrogen storage properties of the Zintl phase alloy SrAl2 doped with TiF3. Journal of Alloys and Compounds, 2010, 492, 277-281.	5.5	5
99	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.	1.2	5
100	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.	4.5	5
101	Significantly improved hydrogen storage properties of Mg90Al10 catalyzed by TiF3. Journal of Alloys and Compounds, 2022, 908, 164581.	5.5	5
102	Structural and hydrogenation properties of SrAl2â^'xNix alloys. International Journal of Hydrogen Energy, 2008, 33, 7498-7504.	7.1	4
103	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.	3.7	4
104	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.	2.8	4
105	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.	11.9	4
106	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.	0.6	3
107	Mechanism of improving hydrogenation of Mg by in-situ formation of Al* in hydriding combustion synthesis. Journal of Alloys and Compounds, 2022, 911, 164969.	5.5	3
108	Supra Hydrolytic Catalysis of Ni₃Fe/rGO for Hydrogen Generation. Advanced Science, 2022, 9, e2201428.	11.2	3

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109	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.	3.7	2
110	An exciting synergistic effect: realizing large-sized MgH2 dehydrogenation at lowered temperatures by locally assembling a heterophase composite. Materials Today Energy, 2019, 14, 100345.	4.7	2