

# CITATION REPORT

List of articles citing

Hydrogen storage in Mg: A most promising material

DOI: 10.1016/j.ijhydene.2009.08.088

International Journal of Hydrogen Energy, 2010, 35, 5133-5144

**Source:** <https://exaly.com/paper-pdf/48309842/citation-report.pdf>

**Version:** 2024-04-10

This report has been generated based on the citations recorded by exaly.com for the above article. For the latest version of this publication list, visit the link given above.

The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

#	Paper	IF	Citations
863	Homogeneity range and crystal structure of Ni substituted Mg <sub>6</sub> (Pd,Ni) complex intermetallic compounds. <b>2010</b> , 71, 1259-1263		7
862	Effect of Mg, Ca, and Zn on stability of LiBH <sub>4</sub> through computational thermodynamics. <i>International Journal of Hydrogen Energy</i> , <b>2010</b> , 35, 6812-6821	6.7	23
861	Improved hydrogen storage behaviours of nanocrystalline and amorphous Mg <sub>2</sub> Ni-type alloy by Mn substitution for Ni. <i>International Journal of Hydrogen Energy</i> , <b>2010</b> , 35, 11966-11974	6.7	16
860	Novel hydrogen storage materials: A review of lightweight complex hydrides. <b>2010</b> , 503, 303-339		352
859	An alternative cobalt oxide-supported platinum catalyst for efficient hydrolysis of sodium borohydride. <b>2011</b> , 21, 11754		32
858	Energy Resources and Systems. <b>2011</b> ,		26
857	Hydrogen Energy. <b>2011</b> , 495-629		1
856	Hydrogen desorption properties of melt-spun and hydrogenated Mg-based alloys using in situ synchrotron X-ray diffraction and TGA. <b>2011</b> , 509, S629-S632		11
855	An investigation on hydrogen storage kinetics of nanocrystalline and amorphous Mg <sub>2</sub> Ni <sub>1-x</sub> Cox (x=0.4) alloy prepared by melt spinning. <b>2011</b> , 509, 2808-2814		19
854	Hydrogen storage properties of bulk nanostructured ZK60 Mg alloy processed by Equal Channel Angular Pressing. <b>2011</b> , 509, S449-S455		74
853	Hydrogen sorption properties of a MgH <sub>2</sub> /0wt.% graphite mixture. <b>2011</b> , 509, S595-S598		24
852	Gaseous and electrochemical hydrogen storage kinetics of nanocrystalline Mg <sub>2</sub> Ni-type alloy prepared by rapid quenching. <b>2011</b> , 509, 5604-5610		17
851	Effects of cyclic hydriding-dehydriding reactions of Mg <sub>2</sub> Ni alloy on the expansion deformation of a metal hydride storage vessel. <b>2011</b> , 509, 7162-7167		27
850	The isothermal section of the La-Al-Mg phase diagram at 400 °C. <b>2011</b> , 19, 671-681		30
849	Crystal structure of the novel Mg <sub>3</sub> MnNi <sub>2</sub> D <sub>3</sub> interstitial deuteride. <b>2011</b> , 19, 1563-1566		7
848	Enhanced hydrogen storage kinetics of nanocrystalline and amorphous Mg <sub>2</sub> N-type alloy by substituting Ni with Co. <b>2011</b> , 21, 2002-2009		8
847	Microstructure and hydrogen storage properties of porous Ni@Mg. <i>International Journal of Hydrogen Energy</i> , <b>2011</b> , 36, 14484-14487	6.7	5

846	Air-stable magnesium nanocomposites provide rapid and high-capacity hydrogen storage without using heavy-metal catalysts. <b>2011</b> , 10, 286-90		488
845	Hydrogen storage measurements in novel Mg-based nanostructured alloys produced via rapid solidification and devitrification. <i>International Journal of Hydrogen Energy</i> , <b>2011</b> , 36, 10787-10796	6.7	75
844	Hydrogen storage properties and microstructure of melt-spun Mg <sub>90</sub> Ni <sub>8</sub> RE <sub>2</sub> (RE = Y, Nd, Gd). <i>International Journal of Hydrogen Energy</i> , <b>2011</b> , 36, 10808-10815	6.7	81
843	Low-temperature cycling of hydrogenation-dehydrogenation of Pd-decorated Mg nanoblades. <i>International Journal of Hydrogen Energy</i> , <b>2011</b> , 36, 11752-11759	6.7	12
842	Modeling and analyzing the hydriding kinetics of Mg/LaNi <sub>5</sub> composites by Chou model. <i>International Journal of Hydrogen Energy</i> , <b>2011</b> , 36, 12892-12901	6.7	26
841	Improvement of hydriding and dehydriding rates of Mg via addition of transition elements Ni, Fe, and Ti. <i>International Journal of Hydrogen Energy</i> , <b>2011</b> , 36, 12932-12938	6.7	14
840	Improvement in the hydrogen storage properties of Mg by mechanical grinding with Ni, Fe and V under H <sub>2</sub> atmosphere. <i>International Journal of Hydrogen Energy</i> , <b>2011</b> , 36, 13587-13594	6.7	39
839	Catalytic effect of Ni, Mg <sub>2</sub> Ni and Mg <sub>2</sub> NiH <sub>4</sub> upon hydrogen desorption from MgH <sub>2</sub> . <i>International Journal of Hydrogen Energy</i> , <b>2011</b> , 36, 13614-13620	6.7	38
838	Ab initio calculations on energetics and electronic structures of cubic Mg <sub>3</sub> MNi <sub>2</sub> (M = Al, Ti, Mn) hydrogen storage alloys. <i>International Journal of Hydrogen Energy</i> , <b>2011</b> , 36, 14477-14483	6.7	16
837	Reversible hydrogen-storage at reduced temperatures in the intermetallic compound Mg <sub>6</sub> (Ni,Pd). <i>International Journal of Hydrogen Energy</i> , <b>2011</b> , 36, 14496-14502	6.7	7
836	Structural and H <sub>2</sub> sorption properties of MgH <sub>2</sub> /10 wt%ZrCrM (M = Cu, Ni) nano-composites. <b>2011</b> , 13, 5719-5726		5
835	Hydrogen storage based on polymeric material. <i>International Journal of Hydrogen Energy</i> , <b>2011</b> , 36, 906269-9068	6.7	18
834	A comparison of hydrogen and methanol production in a thermally coupled membrane reactor for co-current and counter-current flows. <b>2011</b> , 35, 863-882		26
833	Hydrogen Storage in Magnesium Hydride: The Molecular Approach. <b>2011</b> , 123, 4242-4246		41
832	Hydrogen storage in magnesium hydride: the molecular approach. <b>2011</b> , 50, 4156-60		117
831	Enhancement of simultaneous hydrogen production and methanol synthesis in thermally coupled double-membrane reactor. <i>International Journal of Hydrogen Energy</i> , <b>2011</b> , 36, 284-298	6.7	41
830	Microstructure and hydrogen storage properties of melt-spun Mg <sub>90</sub> Ti <sub>8</sub> Ni <sub>2</sub> alloys. <i>International Journal of Hydrogen Energy</i> , <b>2011</b> , 36, 1592-1600	6.7	77
829	Hydrogen storage in MgH <sub>2</sub> coated single walled carbon nanotubes. <i>International Journal of Hydrogen Energy</i> , <b>2011</b> , 36, 3007-3015	6.7	17

828	Hydrogen storage in bulk Mg <sub>92</sub> Ti and Mg <sub>92</sub> stainless steel multilayer composites synthesized via accumulative roll-bonding (ARB). <i>International Journal of Hydrogen Energy</i> , <b>2011</b> , 36, 3022-3036	6.7	55
827	In situ transmission electron microscopy observation of the decomposition of MgH <sub>2</sub> nanofiber. <i>International Journal of Hydrogen Energy</i> , <b>2011</b> , 36, 3600-3605	6.7	23
826	Enhancement of hydrogen production via coupling of MCH dehydrogenation reaction and methanol synthesis process by using thermally coupled heat exchanger reactor. <i>International Journal of Hydrogen Energy</i> , <b>2011</b> , 36, 3371-3383	6.7	25
825	First-principles study on the dehydrogenation properties and mechanism of Al-doped Mg <sub>2</sub> NiH <sub>4</sub> . <i>International Journal of Hydrogen Energy</i> , <b>2011</b> , 36, 5375-5382	6.7	21
824	Simultaneous utilization of two different membranes for intensification of ultrapure hydrogen production from recuperative coupling autothermal multitubular reactor. <i>International Journal of Hydrogen Energy</i> , <b>2011</b> , 36, 7310-7325	6.7	30
823	Study of the diffusion kinetics and mechanism of electrochemical hydriding of Mg <sub>92</sub> Ni <sub>8</sub> alloys. <i>International Journal of Hydrogen Energy</i> , <b>2011</b> , 36, 6689-6697	6.7	10
822	Production of ultrapure hydrogen via utilizing fluidization concept from coupling of methanol and benzene synthesis in a hydrogen-permselective membrane reactor. <i>International Journal of Hydrogen Energy</i> , <b>2011</b> , 36, 6616-6627	6.7	29
821	Kinetics of dehydrogenation of the Mg <sub>92</sub> Ti <sub>8</sub> hydrogen storage system. <i>International Journal of Hydrogen Energy</i> , <b>2011</b> , 36, 8344-8350	6.7	29
820	An investigation on the thermodynamics and kinetics of magnesium hydride decomposition based on isotope effects. <i>International Journal of Hydrogen Energy</i> , <b>2011</b> , 36, 8351-8357	6.7	19
819	Benchmark Quantum Monte Carlo calculation of the enthalpy of formation of MgH <sub>2</sub> . <i>International Journal of Hydrogen Energy</i> , <b>2011</b> , 36, 8388-8391	6.7	4
818	Characterization of graphite catalytic effect in reactively ball-milled MgH <sub>2</sub> /Ti and Mg <sub>92</sub> Ti <sub>8</sub> composites. <i>International Journal of Hydrogen Energy</i> , <b>2011</b> , 36, 9051-9061	6.7	35
817	Role of defect structure on hydrogenation properties of Zr <sub>0.9</sub> Ti <sub>0.1</sub> V <sub>2</sub> alloy. <i>International Journal of Hydrogen Energy</i> , <b>2011</b> , 36, 9318-9323	6.7	22
816	Green nanotechnology of trends in future energy. <b>2011</b> , 5, 76-88		17
815	Synthesis and properties of platinum hydride. <b>2011</b> , 83,		67
814	Enhanced Electrochemical Hydrogen Storage Characteristics of Mg <sub>2</sub> Ni-Type Alloy by Substituting Mg with La. <b>2011</b> , 399-401, 1461-1466		
813	An Investigation on the Gaseous and Electrochemical Hydrogen Storage Kinetics of As-Spun Nanocrystalline Mg <sub>20</sub> Ni <sub>10-x</sub> CO <sub>x</sub> (x=0-4) Alloys. <b>2011</b> , 393-395, 587-592		
812	Enhanced Hydrogen Storage Kinetics of Nanocrystalline and Amorphous Mg <sub>92</sub> Ni <sub>8</sub> -type Alloy by Melt Spinning. <b>2011</b> , 4, 274-287		9
811	Impact of Substitution of M (M=Mn, Cu) for Ni on Hydriding and Dehydriding Kinetics of as-Spun Nanocrystalline and Amorphous Mg <sub>2</sub> Ni-Type Alloys. <b>2012</b> , 608-609, 1347-1350		

810	Electrochemical Characteristics of Melt Spun Nanocrystalline and Amorphous Mg <sub>20</sub> Ni <sub>6</sub> M <sub>4</sub> (M=Co, Cu) Alloys Applied to Ni-MH Battery. <b>2012</b> , 248, 3-8	
809	Hydriding and Dehydriding Kinetics of Nanocrystalline and Amorphous Mg <sub>20</sub> Ni <sub>6</sub> M <sub>4</sub> (M=Cu, Co) Alloys. <b>2012</b> , 512-515, 1389-1394	
808	Progress in Magnesium-Based Hydrogen Storage Materials. <b>2012</b> , 174-177, 1339-1343	1
807	Microstructural and Kinetic Evolution of Fe Doped MgH <sub>2</sub> during H <sub>2</sub> Cycling. <b>2012</b> , 2, 400-411	25
806	Impact of Melt Spinning on Electrochemical Hydrogen Storage Characteristics of Mg <sub>20</sub> Ni <sub>9</sub> M <sub>1</sub> (M=Cu, Co) Alloys. <b>2012</b> , 581-582, 405-409	
805	Recent Advances in Hydrogen Storage Materials. <b>2012</b> , 512-515, 1438-1441	3
804	Electronic Principles of Hydrogen Incorporation and Dynamics in Metal Hydrides. <b>2012</b> , 2, 1261-1282	3
803	Threshold character of temperatures on deuterium thermal desorption in Mg-V composite grown atom-by-atom. <b>2012</b> , 38, 012061	1
802	A TEM based study of the microstructure during room temperature and low temperature hydrogen storage cycling in MgH <sub>2</sub> promoted by NbV. <b>2012</b> , 60, 5646-5661	43
801	Studies on the de/re-hydrogenation characteristics of nanocrystalline MgH <sub>2</sub> admixed with carbon nanofibres. <b>2012</b> , 2, 195-201	8
800	Investigation on Gaseous and Electrochemical Hydrogen Storage Kinetics of As-Quenched Nanocrystalline Mg <sub>2</sub> Ni-type Alloys. <b>2012</b> , 41, 1516-1521	1
799	Synthesis, structural and hydrogenation properties of Mg-rich MgH <sub>2</sub> -TiH <sub>2</sub> nanocomposites prepared by reactive ball milling under hydrogen gas. <b>2012</b> , 14, 1200-11	105
798	Theoretical study of hydrogen dissociation and diffusion on Nb and Ni co-doped Mg(0001): A synergistic effect. <b>2012</b> , 606, L45-L49	21
797	Mg <sub>91</sub> Ni <sub>9</sub> (H <sub>x</sub> ) thin films deposited by magnetron co-sputtering. <b>2012</b> , 527, 76-83	8
796	Synthesis and enhanced hydrogen desorption kinetics of magnesium hydride using hydriding chemical vapor synthesis. <b>2012</b> , 529, 102-107	6
795	Hydrogen sorption kinetics of magnesium hydride enhanced by the addition of Zr 8 Ni 21 alloy. <b>2012</b> , 530, 111-115	40
794	Synergistic effect of Ti and F co-doping on dehydrogenation properties of MgH <sub>2</sub> from first-principles calculations. <b>2012</b> , 538, 205-211	34
793	Room temperature gaseous hydrogen storage properties of Mg-based metallic glasses with ultrahigh Mg contents. <b>2012</b> , 358, 1387-1390	24

792	Improvement of hydrogen storage characteristics of Mg/Mg <sub>2</sub> Ni by alloying: Beneficial effect of In. <b>2012</b> , 214, 208-215		19
791	Investigation of Electrochemical Hydrogen Storage Kinetics of Melt Spun Nanocrystalline and Amorphous Mg <sub>2</sub> Ni-type Alloy. <b>2012</b> , 41, 565-569		1
790	Effect of rapid solidification on phase structure and hydrogen storage properties of Mg <sub>70</sub> (Ni <sub>0.75</sub> La <sub>0.25</sub> ) <sub>30</sub> alloy. <i>International Journal of Hydrogen Energy</i> , <b>2012</b> , 37, 13178-13184	6.7	22
789	Silage as source of bacteria and electrons for dark fermentative hydrogen production. <i>International Journal of Hydrogen Energy</i> , <b>2012</b> , 37, 15518-15524	6.7	25
788	Dehydrogenation kinetics and modeling studies of MgH <sub>2</sub> enhanced by NbF <sub>5</sub> catalyst using constant pressure thermodynamic forces. <i>International Journal of Hydrogen Energy</i> , <b>2012</b> , 37, 12301-12306	6.7	11
787	Ageing of Mg <sub>70</sub> Ni <sub>30</sub> hydrogen storage alloys. <i>International Journal of Hydrogen Energy</i> , <b>2012</b> , 37, 14257-14264	6.7	9
786	Hydrogen storage properties of Mg <sub>70</sub> Te <sub>30</sub> Ni nanocomposite induced from amorphous precursor with the highest Mg content. <i>International Journal of Hydrogen Energy</i> , <b>2012</b> , 37, 14329-14335	6.7	65
785	NiB nanoparticles: A new nickel-based catalyst for hydrogen storage properties of MgH <sub>2</sub> . <i>International Journal of Hydrogen Energy</i> , <b>2012</b> , 37, 17111-17117	6.7	32
784	Hydrogen storage properties of Mg <sub>2</sub> Ni affected by Cr catalyst. <i>International Journal of Hydrogen Energy</i> , <b>2012</b> , 37, 16013-16017	6.7	24
783	MgH <sub>2</sub> synthesis during reactive mechanical alloying studied by in-situ pressure monitoring. <i>International Journal of Hydrogen Energy</i> , <b>2012</b> , 37, 16844-16851	6.7	10
782	Incorporating differential evolution (DE) optimization strategy to boost hydrogen and DME production rate through a membrane assisted single-step DME heat exchanger reactor. <b>2012</b> , 9, 28-38		20
781	Hydrogen storage properties and phase structures of RMg <sub>2</sub> Ni (R = La, Ce, Pr, Nd) alloys. <b>2012</b> , 177, 1589-1595		21
780	Synthesis and characterization of mesoporous PdPtCr alloy and its influence on the hydrogen kinetics in MgH <sub>2</sub> . <b>2012</b> , 536, S255-S258		6
779	Thermodynamic Properties, Hysteresis Behavior and Stress-Strain Analysis of MgH <sub>2</sub> Thin Films, Studied over a Wide Temperature Range. <b>2012</b> , 2, 710-729		17
778	Dehydrogenation Kinetics and Modeling Studies of MgH <sub>2</sub> Enhanced by Transition Metal Oxide Catalysts Using Constant Pressure Thermodynamic Driving Forces. <b>2012</b> , 2, 219-228		26
777	The Preparation and Hydrogen Storage Performances of Nanocrystalline and Amorphous Mg <sub>2</sub> Ni-Type Alloys. <b>2012</b> ,		
776	A Study on Microstructure and Fabrication of Porous Mg-10Al Alloy. <b>2012</b> , 27, 605-608		8
775	Hydrogen storage properties of a Ni, Fe and Ti-added Mg-based alloy. <b>2012</b> , 18, 279-286		17

774	Phase transition and hydrogen storage properties of melt-spun Mg <sub>3</sub> LaNi <sub>0.1</sub> alloy. <i>International Journal of Hydrogen Energy</i> , <b>2012</b> , 37, 1145-1150	6.7	35
773	Study on the hydrogen desorption mechanism of a Mg <sub>2</sub> Ni composite prepared by SPS. <i>International Journal of Hydrogen Energy</i> , <b>2012</b> , 37, 984-989	6.7	25
772	Hydrogen absorption and optical properties of Pd/Mg thin films prepared by DC magnetron sputtering. <i>International Journal of Hydrogen Energy</i> , <b>2012</b> , 37, 3772-3778	6.7	29
771	C <sub>2</sub> H <sub>2</sub> M (M'=Ti, Li) complex: A possible hydrogen storage material. <i>International Journal of Hydrogen Energy</i> , <b>2012</b> , 37, 3727-3732	6.7	35
770	H <sub>2</sub> adsorption mechanism in Mg modified multi-walled carbon nanotubes for hydrogen storage. <i>International Journal of Hydrogen Energy</i> , <b>2012</b> , 37, 1919-1926	6.7	46
769	Hydrogenation and annealing effect on electrical properties of nanostructured Mg/Mn bilayer thin films. <i>International Journal of Hydrogen Energy</i> , <b>2012</b> , 37, 3786-3791	6.7	3
768	Analysis of the characterization of water produced from proton exchange membrane fuel cell (PEMFC) under different operating thermal conditions. <i>International Journal of Hydrogen Energy</i> , <b>2012</b> , 37, 3890-3896	6.7	13
767	Effect of Cu catalyst on the hydrogenation and thermodynamic properties of Mg <sub>2</sub> Ni. <i>International Journal of Hydrogen Energy</i> , <b>2012</b> , 37, 3755-3760	6.7	35
766	Effect of ball milling on structural and hydrogen storage properties of Mg - x wt% FeTi (x=2 & 5) solid solutions. <i>International Journal of Hydrogen Energy</i> , <b>2012</b> , 37, 3761-3766	6.7	15
765	Stability of transition metals on Mg(0001) surfaces and their effects on hydrogen adsorption. <i>International Journal of Hydrogen Energy</i> , <b>2012</b> , 37, 309-317	6.7	43
764	Effect of microstructure on the phase composition and hydrogen absorption-desorption behaviour of melt-spun Mg-20Ni-8Mn alloys. <i>International Journal of Hydrogen Energy</i> , <b>2012</b> , 37, 1495-1508	6.7	28
763	Conversion of a commercial gasoline vehicle to run bi-fuel (hydrogen-gasoline). <i>International Journal of Hydrogen Energy</i> , <b>2012</b> , 37, 1781-1789	6.7	21
762	Density functional and bonding study of hydrogen and platinum adsorption on B <sub>2</sub> -FeTi (111) slab. <i>International Journal of Hydrogen Energy</i> , <b>2012</b> , 37, 2661-2668	6.7	7
761	Effects of the preparative parameters of hydriding combustion synthesis on the properties of Mg <sub>2</sub> Ni <sub>1-x</sub> as hydrogen storage material. <i>International Journal of Hydrogen Energy</i> , <b>2012</b> , 37, 4238-4245	6.7	11
760	Reversible dehydrogenation of Mg(BH <sub>4</sub> ) <sub>2</sub> LiH composite under moderate conditions. <i>International Journal of Hydrogen Energy</i> , <b>2012</b> , 37, 6776-6783	6.7	20
759	Porous MgH <sub>2</sub> /C composite with fast hydrogen storage kinetics. <i>International Journal of Hydrogen Energy</i> , <b>2012</b> , 37, 8370-8378	6.7	26
758	Direct synthesis of MgH <sub>2</sub> nanofibers from waste Mg. <i>International Journal of Hydrogen Energy</i> , <b>2012</b> , 37, 8379-8387	6.7	12
757	Hydrogen storage in rapidly solidified and crystallized Mg <sub>2</sub> Ni-(Y,La)Pd alloys. <i>International Journal of Hydrogen Energy</i> , <b>2012</b> , 37, 9716-9721	6.7	19



756	Alloying of Mg/Mg <sub>2</sub> Ni eutectic by chosen non-hydride forming elements: Relation between segregation of the third element and hydride storage capacity. <b>2012</b> , 197, 116-120		12
755	Electrochemical hydrogen storage performance of Mg <sub>2</sub> Al <sub>x</sub> Ni thin films. <b>2012</b> , 198, 383-388		13
754	Investigations on hydrogen storage properties of Mg <sub>2</sub> Ni+xwt% LaMg <sub>2</sub> Ni (x=0, 10, 20, 30) composites. <b>2012</b> , 190, 68-72		11
753	Green nanotechnology of trends in future energy: a review. <b>2012</b> , 36, 1-17		85
752	Accelerated hydrogen desorption from MgH <sub>2</sub> by high-energy ball-milling with Al <sub>2</sub> O <sub>3</sub> . <b>2012</b> , 47, 3577-3584		8
751	Hydrogen storage properties of Mg <sub>2</sub> Ni nanoparticles. <i>International Journal of Hydrogen Energy</i> , <b>2013</b> , 38, 12207-12212	6.7	24
750	Hydrogen storage: beyond conventional methods. <b>2013</b> , 49, 8735-51		355
749	Hydrogen Storage Materials. <b>2013</b> , 377-405		4
748	In operando study of TiVCr additive in MgH <sub>2</sub> composites. <i>International Journal of Hydrogen Energy</i> , <b>2013</b> , 38, 11937-11945	6.7	12
747	Synthesis of Mg <sub>2</sub> Cu nanoparticles on carbon supports with enhanced hydrogen sorption kinetics. <i>Journal of Materials Chemistry A</i> , <b>2013</b> , 1, 9983	13	18
746	Enhancement of Hydrogen Production and Carbon Dioxide Capturing in a Novel Methane Steam Reformer Coupled with Chemical Looping Combustion and Assisted by Hydrogen Perm-Selective Membranes. <b>2013</b> , 27, 5359-5372		29
745	Effects of SnO <sub>2</sub> on hydrogen desorption of MgH <sub>2</sub> . <i>International Journal of Hydrogen Energy</i> , <b>2013</b> , 38, 4664-4669	6.7	23
744	Comparative Study on Simultaneous Production of Methanol, Hydrogen, and DME Using a Novel Integrated Thermally Double-Coupled Reactor. <b>2013</b> , 27, 1982-1993		14
743	City blood: A visionary infrastructure solution for household energy provision through water distribution networks. <b>2013</b> , 61, 98-107		4
742	Strain effect on structural and dehydrogenation properties of MgH <sub>2</sub> hydride from first-principles calculations. <i>International Journal of Hydrogen Energy</i> , <b>2013</b> , 38, 3661-3669	6.7	28
741	Phase structure and hydrogen storage properties of REMg <sub>8.35</sub> Ni <sub>2.18</sub> Al <sub>0.21</sub> (RE=La, Ce, Pr, and Nd) hydrogen storage alloys. <b>2013</b> , 31, 784-789		6
740	Different effects of temperature on supramolecular protein and non-protein materials in hydrogen storage. <i>International Journal of Hydrogen Energy</i> , <b>2013</b> , 38, 991-998	6.7	2
739	Electrochemical hydriding of Mg <sub>2</sub> NiMm (Mm='mischmetal') alloys as an effective method for hydrogen storage. <i>International Journal of Hydrogen Energy</i> , <b>2013</b> , 38, 3030-3040	6.7	8



738	Electrochemical hydriding performance of Mg-TM-Mm (TM=transition metals, Mm=mischmetal) alloys for hydrogen storage. <b>2013</b> , 23, 2047-2059		8
737	First-principles study of structural, electronic and thermodynamic properties of EuMg <sub>2</sub> and EuMg <sub>2</sub> H <sub>6</sub> . <b>2013</b> , 198, 399-406		3
736	Hydrogenation behavior of high-energy ball milled amorphous Mg <sub>2</sub> Ni catalyzed by multi-walled carbon nanotubes. <i>International Journal of Hydrogen Energy</i> , <b>2013</b> , 38, 16168-16176	6.7	14
735	Review of hydrogen storage techniques for on board vehicle applications. <i>International Journal of Hydrogen Energy</i> , <b>2013</b> , 38, 14595-14617	6.7	495
734	Improved Hydrogen Storage Performance of MgH <sub>2</sub> -AlH <sub>3</sub> Composite by Addition of MnFe <sub>2</sub> O <sub>4</sub> . <b>2013</b> , 117, 26940-26947		26
733	High-pressure synthesis and characterization of iridium trihydride. <b>2013</b> , 111, 215503		63
732	Enhanced reversible hydrogen storage properties of a Mg-Ti ternary solid solution. <i>International Journal of Hydrogen Energy</i> , <b>2013</b> , 38, 10912-10918	6.7	57
731	Semiconducting ground-state of three polymorphs of Mg <sub>2</sub> NiH <sub>4</sub> from first-principles calculations. <i>International Journal of Hydrogen Energy</i> , <b>2013</b> , 38, 16471-16476	6.7	7
730	Role of nanoconfinement on hydrogen sorption properties of metal nanoparticles hybrids. <b>2013</b> , 439, 117-130		72
729	Catalytic Application of Carbon-based Nanostructured Materials on Hydrogen Sorption Behavior of Light Metal Hydrides. <b>2013</b> , 129-171		1
728	Remarkable enhancement in dehydrogenation of MgH <sub>2</sub> by a nano-coating of multi-valence Ti-based catalysts. <i>Journal of Materials Chemistry A</i> , <b>2013</b> , 1, 5603	13	164
727	Beneficial effect of carbon on hydrogen desorption kinetics from Mg-Ni alloy. <b>2013</b> , 546, 129-137		14
726	Effect of Nd content on electrochemical performances of nanocrystalline and amorphous (Mg <sub>24</sub> Ni <sub>10</sub> Cu <sub>2</sub> ) <sub>100-x</sub> Ndx (x=0-20) alloys prepared by melt spinning. <b>2013</b> , 23, 3668-3676		15
725	MgH <sub>2</sub> as dopant for improved activation of commercial Mg ingot. <b>2013</b> , 575, 364-369		18
724	Excellent hydrolysis performances of Mg <sub>3</sub> RE hydrides. <i>International Journal of Hydrogen Energy</i> , <b>2013</b> , 38, 2973-2978	6.7	99
723	A comparative study for synthesis methods of nano-structured (9Ni <sub>2</sub> Mg <sub>3</sub> ) alloy catalysts and effect of the produced alloy on hydrogen desorption properties of MgH <sub>2</sub> . <i>International Journal of Hydrogen Energy</i> , <b>2013</b> , 38, 16090-16097	6.7	15
722	Microstructure and hydrogenation kinetics of Mg <sub>2</sub> Ni-based alloys with addition of Nd, Zn and Ti. <b>2013</b> , 23, 3677-3684		11
721	Effects of nano size mischmetal and its oxide on improving the hydrogen sorption behaviour of MgH <sub>2</sub> . <i>International Journal of Hydrogen Energy</i> , <b>2013</b> , 38, 7353-7362	6.7	102

7 <sup>20</sup>	Dispersion of niquel on the microstructure in magnesium based alloys for hydrogen storage. <b>2013</b> , 1, 292-296		8
7 <sup>19</sup>	Hydrogen absorption study of high-energy reactive ball milled Mg composites with palladium additives. <b>2013</b> , 580, S144-S148		12
7 <sup>18</sup>	Study on glass-forming ability and hydrogen storage properties of amorphous Mg <sub>60</sub> Ni <sub>30</sub> La <sub>10</sub> Co <sub>x</sub> (x=0, 4) alloys. <b>2013</b> , 86, 200-205		4
7 <sup>17</sup>	Effect of LiBH <sub>4</sub> on hydrogen storage property of MgH <sub>2</sub> . <i>International Journal of Hydrogen Energy</i> , <b>2013</b> , 38, 10461-10469	6.7	18
7 <sup>16</sup>	Dual-tuning effect of In on the thermodynamic and kinetic properties of Mg <sub>2</sub> Ni dehydrogenation. <i>International Journal of Hydrogen Energy</i> , <b>2013</b> , 38, 8881-8887	6.7	17 <sup>0</sup>
7 <sup>15</sup>	Effect of different sized CeO <sub>2</sub> nano particles on decomposition and hydrogen absorption kinetics of magnesium hydride. <i>International Journal of Hydrogen Energy</i> , <b>2013</b> , 38, 6221-6225	6.7	37
7 <sup>14</sup>	A study of Parylene coated Pd/Mg nanoblades for reversible hydrogen storage. <i>International Journal of Hydrogen Energy</i> , <b>2013</b> , 38, 5019-5029	6.7	5
7 <sup>13</sup>	Hydrogen absorption/desorption behavior of Mg <sub>50</sub> La <sub>20</sub> Ni <sub>30</sub> bulk metallic glass. <i>International Journal of Hydrogen Energy</i> , <b>2013</b> , 38, 4670-4674	6.7	5
7 <sup>12</sup>	Synergetic catalytic effect of MWCNTs and TiF <sub>3</sub> on hydrogenation properties of nanocrystalline Mg-10wt%Ni alloys. <i>International Journal of Hydrogen Energy</i> , <b>2013</b> , 38, 12904-12911	6.7	17
7 <sup>11</sup>	Study on LaMg based ternary system for hydrogen storage. <b>2013</b> , 580, S159-S162		15
7 <sup>10</sup>	Development of Mg based hydrogen absorbing alloys prepared by mechanical alloying. <b>2013</b> , 580, S259-S263		2
7 <sup>09</sup>	Excellent hydrogen sorption kinetics of thick MgPd films under mild conditions by tailoring their structures. <b>2013</b> , 3, 4167		24
7 <sup>08</sup>	Hydrogen storage properties and thermal stability of amorphous Mg <sub>70</sub> (RE <sub>25</sub> Ni <sub>75</sub> ) <sub>30</sub> alloys. <b>2013</b> , 563, 1-5		12
7 <sup>07</sup>	Effect of Ti Intermetallic Catalysts on Hydrogen Storage Properties of Magnesium Hydride. <b>2013</b> , 117, 12973-12980		112
7 <sup>06</sup>	MgH <sub>2</sub> dehydrogenation properties improved by MnFe <sub>2</sub> O <sub>4</sub> nanoparticles. <b>2013</b> , 239, 201-206		58
7 <sup>05</sup>	Improving hydrogen storage properties of MgH <sub>2</sub> by addition of alkali hydroxides. <i>International Journal of Hydrogen Energy</i> , <b>2013</b> , 38, 10932-10938	6.7	16
7 <sup>04</sup>	Kinetic Enhancement in the Sorption Properties by Forming Mg wt % ZrCrCu Composites. <b>2013</b> , 117, 11953-11959		8
7 <sup>03</sup>	Study on hydrogen storage properties of Mg nanoparticles confined in carbon aerogels. <i>International Journal of Hydrogen Energy</i> , <b>2013</b> , 38, 5302-5308	6.7	57

702	Studies on de/rehydrogenation characteristics of nanocrystalline MgH <sub>2</sub> co-catalyzed with Ti, Fe and Ni. <i>International Journal of Hydrogen Energy</i> , <b>2013</b> , 38, 2778-2784	6.7	90
701	Microstructure and morphology changes in MgH <sub>2</sub> /expanded natural graphite pellets upon hydrogen cycling. <i>International Journal of Hydrogen Energy</i> , <b>2013</b> , 38, 1918-1924	6.7	19
700	Well-defined molecular magnesium hydride clusters: relationship between size and hydrogen-elimination temperature. <b>2013</b> , 19, 8478-89		59
699	Magnesium-carbon hydrogen storage hybrid materials produced by reactive ball milling in hydrogen. <b>2013</b> , 57, 146-160		94
698	Phase equilibria in the Mg-Ti-Ni system at 500 °C and hydrogenation properties of selected alloys. <b>2013</b> , 32, 167-175		12
697	First-Principles Studies on Hydrogen Desorption Mechanism of Mg <sub>n</sub> H <sub>2n</sub> (n = 3, 4). <b>2013</b> , 117, 8099-8104		6
696	Gaseous and electrochemical hydrogen storage kinetics of as-quenched nanocrystalline and amorphous Mg <sub>2</sub> Ni-type alloys. <b>2013</b> , 28, 604-611		3
695	Density functional theory calculations of hydrogen adsorption on Ti-, Zn-, Zr-, Al-, and N-doped and intrinsic graphene sheets. <i>International Journal of Hydrogen Energy</i> , <b>2013</b> , 38, 14269-14275	6.7	66
694	Thermodynamic and kinetic destabilization of magnesium hydride using Mg-In solid solution alloys. <b>2013</b> , 135, 10982-5		83
693	Production of hydrogen and methanol enhancement via a novel optimized thermally coupled two-membrane reactor. <b>2013</b> , 37, 105-120		16
692	Preparation and Hydrogen Storage Kinetics of Nanocrystalline and Amorphous Mg <sub>2</sub> Ni-Type Alloys. <b>2013</b> , 275-277, 1929-1933		
691	First-Principles Studies on the Structures and Properties of Ti- and Zn-Substituted Mg <sub>2</sub> Ni Hydrogen Storage Alloys and their Hydrides. <b>2013</b> , 743-744, 44-52		6
690	NbF <sub>5</sub> and CrF <sub>3</sub> Catalysts Effects on Synthesis and Hydrogen Storage Performance of Mg-Ni-NiO Composites. <b>2013</b> , 681, 31-37		1
689	SIMULATION OF HYDROGEN ADSORPTION IN MOLECULAR SIEVES. <b>2013</b> , 27, 1350143		3
688	WITHDRAWN: Carbon nanomaterials as catalysts for hydrogen uptake and release by nanocrystalline MgH <sub>2</sub> . <b>2013</b> ,		1
687	Research progress in Mg-based hydrogen storage alloys. <b>2014</b> , 33, 499-510		34
686	Hydrogenated Microstructure and Its Hydrogenation Properties: A Density Functional Theory Study. <b>2014</b> , 2014, 1-7		1
685	Comparison of hydrogen elimination from molecular zinc and magnesium hydride clusters. <b>2014</b> , 20, 11204-13		18

684	Heterobimetallic s-block hydrides by bond metathesis. <b>2014</b> , 20, 9871-4		32
683	Electrochemical Performance of Nanocrystalline and Amorphous Mg <sub>2</sub> Ni-Cu-Based Mg <sub>2</sub> Ni-type Alloy Electrodes Used in Ni-MH Batteries. <b>2014</b> , 27, 1088-1098		6
682	Catalytic modification in dehydrogenation properties of KSiH <sub>3</sub> . <b>2014</b> , 16, 26163-7		13
681	Ni-doping effect of Mg(0001) surface to use it as a hydrogen storage material. <b>2014</b> , 609, 93-99		10
680	Effect of LiH on hydrogen storage property of MgH <sub>2</sub> . <i>International Journal of Hydrogen Energy</i> , <b>2014</b> , 39, 13622-13627	6.7	35
679	Synchrotron EXAFS studies of Ti-doped Mg <sub>2</sub> Ni alloy on the cycling behavior. <i>International Journal of Hydrogen Energy</i> , <b>2014</b> , 39, 13824-13831	6.7	3
678	Microstructure and tailoring hydrogenation performance of Y-doped Mg <sub>2</sub> Ni alloys. <b>2014</b> , 245, 808-815		30
677	Activation energy in the thermal decomposition of MgH <sub>2</sub> powders by coupled TG/MS measurements. <b>2014</b> , 116, 865-874		2
676	Activation energy in the thermal decomposition of MgH <sub>2</sub> powders by coupled TG/MS measurements. <b>2014</b> , 116, 225-240		9
675	Superior electrochemical hydrogen storage properties of binary Mg <sub>2</sub> thin films. <i>International Journal of Hydrogen Energy</i> , <b>2014</b> , 39, 4373-4379	6.7	7
674	Harnessing power from sea water using nano material as photocatalyst and solar energy as light source: the role of hydrocarbon as dual agent. <b>2014</b> , 38, 249-253		7
673	Methane dry reformer by application of chemical looping combustion via Mn-based oxygen carrier for heat supplying and carbon dioxide providing. <b>2014</b> , 79, 69-79		6
672	Effects of Ti-based catalysts and synergistic effect of SWCNTs-TiF <sub>3</sub> on hydrogen uptake and release from MgH <sub>2</sub> . <i>International Journal of Hydrogen Energy</i> , <b>2014</b> , 39, 14255-14261	6.7	40
671	Effect of carbon from anthracite coal on decomposition kinetics of magnesium hydride. <b>2014</b> , 592, 231-237		12
670	Electronic structure and crystal phase stability of palladium hydrides. <b>2014</b> , 116, 173706		32
669	Effect of TiMn <sub>1.5</sub> alloying on the structure, hydrogen storage properties and electrochemical properties of LaNi <sub>3.8</sub> Co <sub>1.1</sub> Mn <sub>0.1</sub> hydrogen storage alloys. <b>2014</b> , 50, 953-958		0
668	Hydrogen desorption performance of high-energy ball milled Mg <sub>2</sub> Ni <sub>4</sub> catalyzed by multi-walled carbon nanotubes coupling with TiF <sub>3</sub> . <i>International Journal of Hydrogen Energy</i> , <b>2014</b> , 39, 19672-19681	6.7	41
667	Promising electrochemical hydrogen storage properties of thick Mg-Pd films obtained by insertion of thin Ti interlayers. <b>2014</b> , 16, 3001-6		14

666	Effect of Co substitution for La on hydrogen storage properties and thermal stabilities of amorphous Mg <sub>60</sub> Ni <sub>30</sub> La <sub>10</sub> Co <sub>x</sub> (x = 0, 2 and 4) alloys prepared by melt spinning. <b>2014</b> , 30, 176-182		4
665	Effects of carbon nanotubes on the dehydrogenation behavior of magnesium hydride at relatively low temperatures. <i>Journal of Materials Chemistry A</i> , <b>2014</b> , 2, 16369-16372	13	17
664	Influence of K <sub>2</sub> TiF <sub>6</sub> additive on the hydrogen sorption properties of MgH <sub>2</sub> . <i>International Journal of Hydrogen Energy</i> , <b>2014</b> , 39, 15563-15569	6.7	41
663	Simultaneous production of methanol, DME and hydrogen in a thermally double coupled reactor with different endothermic reactions: Application of cyclohexane, methylcyclohexane and decalin dehydrogenation reactions. <b>2014</b> , 19, 324-336		8
662	Hydrogen Storage Properties of Magnesium Hydride with V-Based Additives. <b>2014</b> , 118, 21778-21784		27
661	Effect of Cr substitution by Ni on the cycling stability of Mg <sub>2</sub> Ni alloy using EXAFS. <i>International Journal of Hydrogen Energy</i> , <b>2014</b> , 39, 14858-14867	6.7	7
660	Hydrogen Storage Properties of a Mg <sub>90</sub> Ni Nanocomposite Coprecipitated from Solution. <b>2014</b> , 118, 18401-18411		56
659	Significantly improved dehydrogenation of ball-milled MgH <sub>2</sub> doped with CoFe <sub>2</sub> O <sub>4</sub> nanoparticles. <b>2014</b> , 268, 778-786		39
658	Symbiotic CeH <sub>2.73</sub> /CeO <sub>2</sub> catalyst: A novel hydrogen pump. <b>2014</b> , 9, 80-87		115
657	Reversible de-/hydriding characteristics of a novel Mg <sub>18</sub> In <sub>1</sub> Ni <sub>3</sub> alloy. <i>International Journal of Hydrogen Energy</i> , <b>2014</b> , 39, 14033-14038	6.7	13
656	Li-decorated double vacancy graphene for hydrogen storage application: A first principles study. <i>International Journal of Hydrogen Energy</i> , <b>2014</b> , 39, 11016-11026	6.7	86
655	Effect of Cu content on structure, hydrogen storage properties and electrode performance of LaNi <sub>4.1-x</sub> Co <sub>0.6</sub> Mn <sub>0.3</sub> Cu <sub>x</sub> alloys. <b>2014</b> , 18, 2563-2572		2
654	Influences of substituting Ni with M (M=Cu, Co, Mn) on gaseous and electrochemical hydrogen storage kinetics of Mg <sub>20</sub> Ni <sub>10</sub> alloys. <b>2014</b> , 21, 1705-1713		3
653	NbCl <sub>5</sub> and CrCl <sub>3</sub> catalysts effect on synthesis and hydrogen storage performance of Mg <sub>90</sub> Ni <sub>10</sub> O composites. <b>2014</b> , 37, 77-82		3
652	Ab-initio calculations of the elastic and finite-temperature thermodynamic properties of niobium- and magnesium hydrides. <i>International Journal of Hydrogen Energy</i> , <b>2014</b> , 39, 15530-15539	6.7	8
651	A systematic first-principles study of surface energies, surface relaxation and Friedel oscillation of magnesium surfaces. <b>2014</b> , 47, 115305		29
650	First-principles study of hydrogen dissociation and diffusion on transition metal-doped Mg(0 0 0 1) surfaces. <b>2014</b> , 305, 40-45		20
649	Composite materials of melt-spun Mg <sub>90</sub> Ni <sub>10</sub> and graphite: Microstructural changes during cyclic hydrogenation and the impact on gas and heat transport characteristics. <i>International Journal of Hydrogen Energy</i> , <b>2014</b> , 39, 8331-8339	6.7	10

648	The application of Pettifor structure maps to binary metal hydrides. <i>International Journal of Hydrogen Energy</i> , <b>2014</b> , 39, 398-405	6.7	10
647	Effect of microwave irradiation on the hydrogen desorption properties of MgH <sub>2</sub> /LiBH <sub>4</sub> composite. <b>2014</b> , 597, 136-141		8
646	Kinetics of isothermal hydrogenation of magnesium with TiH <sub>2</sub> additive. <i>International Journal of Hydrogen Energy</i> , <b>2014</b> , 39, 7373-7381	6.7	28
645	Enhanced hydrogen storage properties of 4MgH <sub>2</sub> + LiAlH <sub>4</sub> composite system by doping with Fe <sub>2</sub> O <sub>3</sub> nanopowder. <i>International Journal of Hydrogen Energy</i> , <b>2014</b> , 39, 7834-7841	6.7	35
644	In situ X-ray diffraction study of dehydrogenation of MgH <sub>2</sub> with Ti-based additives. <i>International Journal of Hydrogen Energy</i> , <b>2014</b> , 39, 5868-5873	6.7	28
643	Magnesium based metal hydride reactor incorporating helical coil heat exchanger: Simulation study and optimal design. <b>2014</b> , 130, 712-722		74
642	Enhanced dehydrogenation of hydrazine bisborane for hydrogen storage. <b>2014</b> , 143, 1055-1060		6
641	SANS characterization of porous magnesium for hydrogen storage. <i>International Journal of Hydrogen Energy</i> , <b>2014</b> , 39, 8321-8330	6.7	2
640	Thermodynamic Destabilization of Magnesium Hydride Using Mg-Based Solid Solution Alloys. <b>2014</b> , 118, 11526-11535		44
639	Fully Reversible De/hydriding of Mg Base Solid Solutions with Reduced Reaction Enthalpy and Enhanced Kinetics. <b>2014</b> , 118, 12087-12096		37
638	The Effect of Nickel and Graphite on the Hydrogen Storage Ability of Magnesium in the First Cycle. <b>2014</b> , 2, 570-573		4
637	Improved electrochemical hydrogen storage properties of Mg-Y thin films as a function of substrate temperature. <b>2014</b> , 23, 287-290		2
636	Hydrogen absorption and desorption in the Mg <sub>2</sub> Ag system. <b>2014</b> , 611, 202-209		17
635	Hydrogen storage properties of 2MgBe after the combined processes of hot extrusion and cold rolling. <b>2014</b> , 586, S409-S412		12
634	Catalytic Effect of Multi-Wall Carbon Nanotubes Supported Nickel on Hydrogen Storage Properties of Mg <sub>99</sub> Ni Prepared by Hydriding Combustion Synthesis. <b>2014</b> , 55, 1149-1155		5
633	Micro/Nano-Structural Transition and Hydrogen Absorption Mechanism in Mg/Cu Super-Laminate Composites. <b>2014</b> , 55, 1122-1128		8
632	XAFS and XPS study of hydro-/dehydrogenation reaction of MgPd nanoparticles. <b>2014</b> , 46, 1143-1146		3
631	Microstructure and improved hydrogen storage properties of Mg based alloy powders prepared by modified milling method. <b>2014</b> , 57, 45-53		8

630	Reversible hydrogen storage and phase transformation with altered desorption pressure in Mg90In5Cd5 ternary alloy. <b>2015</b> , 645, S103-S106		12
629	References. <b>2015</b> , 457-546		
628	Materials for Hydrogen Storage. <b>2015</b> , 1-19		1
627	Hydrogen absorption-desorption properties of Mg/Fe multi-layer film with PLD. <b>2015</b> , 81, 14-00427-14-00427	1	
626	Hydrogen storage performances of LaMg11Ni +xwt% Ni (x= 100, 200) alloys prepared by mechanical milling. <b>2015</b> , 645, S438-S445		6
625	Diskrete Magnesiumhydrid-Aggregate: ein kationischer Mg13H18-Cluster, stabilisiert durch einen NNNN-Makrocyclus. <b>2015</b> , 127, 4188-4191		19
624	The Search for Hydrogen Stores on a Large Scale; A Straightforward and Automated Open Database Analysis as a First Sweep for Candidate Materials. <b>2015</b> , 5, 617-633		4
623	Contamination Effects on Improving the Hydrogenation/Dehydrogenation Kinetics of Binary Magnesium Hydride/Titanium Carbide Systems Prepared by Reactive Ball Milling. <b>2015</b> , 8, 6880-6892		13
622	Effect of Magnesium Fluoride on Hydrogenation Properties of Magnesium Hydride. <b>2015</b> , 8, 12546-12556		16
621	Dehydrogenation behavior and microstructure evolution of hydrogenated magnesium-rich yttrium melt-spun ribbons. <b>2015</b> , 5, 54258-54265		16
620	Electrochemical hydrogen-storage performance of Mg20Y x Ni10 (x = 0-1) alloys prepared by mechanical milling. <b>2015</b> , 45, 931-941		8
619	Strain tuned dehydrogenation thermodynamics of magnesium based hydride: A first principle study. <b>2015</b> , 105, 71-74		5
618	Hydrogen generation from waste Mg based material in various saline solutions (NiCl 2 , CoCl 2 , CuCl 2 , FeCl 3 , MnCl 2 ). <i>International Journal of Hydrogen Energy</i> , <b>2015</b> , 40, 7483-7489	6.7	39
617	Microstructure and electrochemical hydrogenation/dehydrogenation performance of melt-spun La-doped Mg2Ni alloys. <b>2015</b> , 106, 163-174		22
616	Mechanically induced gas-solid reaction for synthesizing of hydrogen storage metal hydrides. <b>2015</b> , 202-227		
615	Heterogeneous and homogenous catalysts for hydrogen generation by hydrolysis of aqueous sodium borohydride (NaBH4) solutions. <b>2015</b> , 3, 174-188		140
614	Hydrogen production by the hydrolysis of milled waste magnesium scraps in nickel chloride solutions and nickel chloride added in Marmara Sea and Aegean Sea Water. <i>International Journal of Hydrogen Energy</i> , <b>2015</b> , 40, 16169-16177	6.7	23
613	Superior catalytic effect of nanocrystalline big-cube Zr2Ni metastable phase for improving the hydrogen sorption/desorption kinetics and cyclability of MgH2 powders. <b>2015</b> , 91, 274-282		30



612	Formation of metastable phases in magnesium-titanium system by high-pressure torsion and their hydrogen storage performance. <b>2015</b> , 99, 150-156		52
611	Electrochemical properties of nanocrystalline and amorphous Mg-Y-Ni alloys applied to Ni-MH battery. <b>2015</b> , 25, 3736-3746		6
610	Effect of transition metals on ball-milled MmNi <sub>5</sub> hydrogen storage alloy. <b>2015</b> , 4, 1		8
609	Effect of ball-milling duration and dehydrogenation on the morphology, microstructure and catalyst dispersion in Ni-catalyzed MgH <sub>2</sub> hydrogen storage materials. <b>2015</b> , 86, 55-68		110
608	Cyclic Dehydrogenation(Re)Hydrogenation with Hydrogen-Storage Materials: An Overview. <b>2015</b> , 3, 100-117		22
607	Theoretical exploration of MgH <sub>2</sub> and graphene nano-flakes in cyclohexane: proposing a new perspective toward functional hydrogen storage material. <b>2015</b> , 51, 2429-32		15
606	Enhanced joint catalysis of YH <sub>2</sub> /Y <sub>2</sub> O <sub>3</sub> on dehydrogenation of MgH <sub>2</sub> . <b>2015</b> , 645, S209-S212		6
605	Synthesis and Hydrogen Desorption Properties of Mg <sub>1.7</sub> Al <sub>0.15</sub> Ti <sub>0.15</sub> Ni-CNT Nanocomposite Powder. <b>2015</b> , 24, 1100-1106		2
604	Effect of mechanical grinding on the electrochemical hydrogen storage properties of Mg-Ni <sub>2</sub> alloy. <b>2015</b> , 19, 1187-1195		12
603	Discrete magnesium hydride aggregates: a cationic Mg <sub>13</sub> H <sub>18</sub> cluster stabilized by NNNN-type macrocycles. <b>2015</b> , 54, 4115-8		42
602	Effect of ZrCrCo alloy on hydrogen storage properties of Mg. <b>2015</b> , 645, S518-S523		23
601	Effect of mechanically-induced solid-state doping time on the morphology and hydrogenation cyclability of MgH <sub>2</sub> /7 Mn <sub>3.6</sub> Ti <sub>2.4</sub> nanocomposite powders. <i>International Journal of Hydrogen Energy</i> , <b>2015</b> , 40, 10139-10149	6.7	26
600	Hydrogen storage property of materials composed of Mg nanoparticles and Ni nanoparticles fabricated by gas evaporation method. <i>International Journal of Hydrogen Energy</i> , <b>2015</b> , 40, 11890-11894	6.7	18
599	A new solid material for hydrogen storage. <i>International Journal of Hydrogen Energy</i> , <b>2015</b> , 40, 10502-10507	6.7	12
598	Optimization of the La substitution by Mg in the La <sub>2</sub> Ni <sub>7</sub> hydride-forming system for use as negative electrode in Ni-MH battery. <i>International Journal of Hydrogen Energy</i> , <b>2015</b> , 40, 17017-17020	6.7	15
597	Enhanced hydrogen storage properties of a Mg <sub>2</sub> Ag alloy with solid dissolution of indium: a comparative study. <i>Journal of Materials Chemistry A</i> , <b>2015</b> , 3, 8581-8589	13	40
596	Enhanced Hydrogen Generation Properties of MgH <sub>2</sub> -Based Hydrides by Breaking the Magnesium Hydroxide Passivation Layer. <b>2015</b> , 8, 4237-4252		68
595	Novel Zn <sub>2</sub> V <sub>2</sub> O <sub>7</sub> hierarchical nanostructures: Optical and hydrogen storage properties. <i>International Journal of Hydrogen Energy</i> , <b>2015</b> , 40, 9359-9364	6.7	21

594	Facile synthesis of a genuinely alkane-soluble but isolable lithium hydride transfer reagent. <b>2015</b> , 51, 5452-5		36
593	Improved hydrogen storage properties of MgH <sub>2</sub> by addition of Co <sub>2</sub> NiO nanoparticles. <b>2015</b> , 5, 60983-60989		57
592	Phase Stability in Mechanically Alloyed Mg <sub>2</sub> Ni System Studied by Experiments and Thermodynamic Calculations. <b>2015</b> , 28, 1002-1007		4
591	Using autofrettage technology to decrease stresses in a girth welded joint of a high pressure hydrogen tank. <i>International Journal of Hydrogen Energy</i> , <b>2015</b> , 40, 8110-8121	6.7	6
590	MgH <sub>2</sub> /rFe <sub>2</sub> H <sub>x</sub> nanocomposites for improved hydrogen storage characteristics of MgH <sub>2</sub> . <i>International Journal of Hydrogen Energy</i> , <b>2015</b> , 40, 11506-11513	6.7	44
589	The annealing influence on the microstructure and performance of Au@Ni core-shell bimetal as the cathode of low-temperature solid oxide fuel cells. <i>International Journal of Hydrogen Energy</i> , <b>2015</b> , 40, 4980-4988	6.7	5
588	Effect of Ni content on microstructural evolution and hydrogen storage properties of Mg <sub>2</sub> Ni <sub>1-x</sub> La <sub>x</sub> (x= 5, 10, 15, 20 at.%) alloys. <b>2015</b> , 641, 176-180		24
587	Significance of grain boundaries and stacking faults on hydrogen storage properties of Mg <sub>2</sub> Ni intermetallics processed by high-pressure torsion. <b>2015</b> , 92, 46-54		88
586	Hydrogen generation by hydrolysis of MgH <sub>2</sub> and enhanced kinetics performance of ammonium chloride introducing. <i>International Journal of Hydrogen Energy</i> , <b>2015</b> , 40, 6145-6150	6.7	142
585	Study of MgH <sub>2</sub> +NbF <sub>5</sub> mixtures: Formation of MgH <sub>2</sub> /NbF <sub>5</sub> solid solutions and interaction with hydrogen. <i>International Journal of Hydrogen Energy</i> , <b>2015</b> , 40, 4585-4596	6.7	20
584	Hydrogen diffusion in MgH <sub>2</sub> doped with Ti, Mn and Fe. <b>2015</b> , 5, 34894-34899		17
583	Crystalline structure, energy calculation and dehydrogenation thermodynamics of magnesium hydride from reactive milling. <i>International Journal of Hydrogen Energy</i> , <b>2015</b> , 40, 11484-11490	6.7	18
582	Two alternative approaches to access mixed hydride-amido zinc complexes: synthetic, structural and solution implications. <b>2015</b> , 44, 8169-77		13
581	Effects of single- and co-substitution of Ti on dehydrogenation of Mg <sub>2</sub> NiH <sub>4</sub> : A first-principles study. <b>2015</b> , 103, 45-51		9
580	Silica aerogel-supported cobalt nanocomposites as efficient catalysts toward hydrogen generation from aqueous ammonia borane. <b>2015</b> , 5, 13985-13992		22
579	Exploring N-Rich Phases in Li(x)N(y) Clusters for Hydrogen Storage at Nanoscale. <b>2015</b> , 6, 3726-30		10
578	Stability of Catalyzed Magnesium Hydride Nanocrystalline During Hydrogen Cycling. Part I: Kinetic Analysis. <b>2015</b> , 119, 22261-22271		36
577	Hydrogen storage of binary nanoparticles composed of Mg and Pd. <i>International Journal of Hydrogen Energy</i> , <b>2015</b> , 40, 11895-11901	6.7	11

576	Development of a Mg-based hydrogen-storage material by addition of Ni and NbF <sub>5</sub> via milling under hydrogen. <i>International Journal of Hydrogen Energy</i> , <b>2015</b> , 40, 11908-11916	6.7	25
575	Positive and Negative Effects of Carbon Nanotubes on the Hydrogen Sorption Kinetics of Magnesium. <b>2015</b> , 119, 25282-25290		24
574	Effect of the temperature on electrode performance of the as cast La <sub>0.7</sub> Mg <sub>0.3</sub> (NiMnCo) <sub>3.5</sub> alloy. <b>2015</b> , 51, 638-644		
573	Stress effects on the kinetics of hydrogen adsorption in a spherical particle: An analytical model. <i>International Journal of Hydrogen Energy</i> , <b>2015</b> , 40, 17009-17016	6.7	5
572	Influence of thermal process on particle size distribution of ultrafine magnesium powder prepared by inert gas condensation method. <b>2015</b> , 286, 16-21		5
571	Magnesium as Novel Material for Active Plasmonics in the Visible Wavelength Range. <b>2015</b> , 15, 7949-55		131
570	Two dimetallocenes with vanadium and chromium: Electronic structures and their promising application in hydrogen storage. <i>International Journal of Hydrogen Energy</i> , <b>2015</b> , 40, 12047-12056	6.7	11
569	Study on hydrogen storage properties of MgX (X = Fe, Co, V) nano-composites co-precipitated from solution. <b>2015</b> , 5, 7687-7696		25
568	An experimental survey of additives for improving dehydrogenation properties of magnesium hydride. <b>2015</b> , 278, 38-42		37
567	Adsorption and Dissociation of H <sub>2</sub> on B <sub>n</sub> and MgB <sub>n</sub> (n = 2-7) Clusters: A DFT Investigation. <b>2015</b> , 26, 983-999		8
566	Dehydrogenation thermodynamics of magnesium hydride doped with transition metals: Experimental and theoretical studies. <b>2015</b> , 98, 211-219		26
565	Realizing nano-confinement of magnesium for hydrogen storage using vapour transport deposition. <b>2016</b> , 35, 401-407		17
564	Effect of Alloying Elements in Melt Spun Mg-alloys for Hydrogen Storage. <b>2016</b> , 19, 20-26		
563	The survey of key technologies in hydrogen energy storage. <i>International Journal of Hydrogen Energy</i> , <b>2016</b> , 41, 14535-14552	6.7	368
562	A review on the current progress of metal hydrides material for solid-state hydrogen storage applications. <i>International Journal of Hydrogen Energy</i> , <b>2016</b> , 41, 12108-12126	6.7	478
561	Hydrogen storage properties of Mg-based multilayer films. <b>2016</b> , 3, 16-00228-16-00228		1
560	Magnesium hydride film formation using subatmospheric pressure H <sub>2</sub> plasma at low temperature. <b>2016</b> , 34, 04J103		2
559	Destabilization of lithium hydride by the substitution of group 14 elements: A review. <i>International Journal of Hydrogen Energy</i> , <b>2016</b> , 41, 5969-5978	6.7	18

558	The hydrogen storage performance of a 4MgH <sub>2</sub> LiAlH <sub>4</sub> TiH <sub>2</sub> composite system. <b>2016</b> , 676, 557-564		14
557	Role of interlayer spacing and functional group on the hydrogen storage properties of graphene oxide and reduced graphene oxide. <i>International Journal of Hydrogen Energy</i> , <b>2016</b> , 41, 9454-9461	6.7	64
556	Enhancement in dehydriding performance of magnesium hydride by iron incorporation: A combined experimental and theoretical investigation. <b>2016</b> , 322, 179-186		25
555	Activation of titanium-vanadium alloy for hydrogen storage by introduction of nanograins and edge dislocations using high-pressure torsion. <i>International Journal of Hydrogen Energy</i> , <b>2016</b> , 41, 8917-8924	6.7	34
554	Characterization of a nanocrystalline Mg <sub>91</sub> Ni alloy processed by high-pressure torsion during hydrogenation and dehydrogenation. <i>International Journal of Hydrogen Energy</i> , <b>2016</b> , 41, 9803-9809	6.7	16
553	Synergistic dosing effect of TiC/FeCr nanocatalysts on the hydrogenation/dehydrogenation kinetics of nanocrystalline MgH <sub>2</sub> powders. <b>2016</b> , 104, 158-170		39
552	Kinetic mechanisms of hydriding and dehydriding reactions in La <sub>0.8</sub> Mg <sub>0.2</sub> Ni alloys investigated by the modified Chou model. <i>International Journal of Hydrogen Energy</i> , <b>2016</b> , 41, 9183-9190	6.7	15
551	Impact of Nanostructuring on the Phase Behavior of Insertion Materials: The Hydrogenation Kinetics of a Magnesium Thin Film. <b>2016</b> , 120, 10185-10191		20
550	Catalytic effect of TiF <sub>4</sub> in improving hydrogen storage properties of MgH <sub>2</sub> . <i>International Journal of Hydrogen Energy</i> , <b>2016</b> , 41, 14178-14183	6.7	45
549	Investigation of the capacity degradation mechanism of La <sub>0.8</sub> Mg <sub>0.2</sub> Ta <sub>0.1</sub> Ni AB <sub>3</sub> -type alloy. <i>International Journal of Hydrogen Energy</i> , <b>2016</b> , 41, 21261-21267	6.7	7
548	Study the Effect of NiF <sub>2</sub> Additive on the Hydrogen Sorption Properties of 4MgH <sub>2</sub> +Li <sub>3</sub> AlH <sub>6</sub> Destabilized System. <i>Materials Today: Proceedings</i> , <b>2016</b> , 3, S96-S103	1.4	3
547	Enhanced hydrogen storage properties of LiBH <sub>4</sub> generated using a porous Li <sub>3</sub> BO <sub>3</sub> catalyst. <b>2016</b> , 689, 187-191		19
546	Non-isothermal synergetic catalytic effect of TiF <sub>3</sub> and Nb <sub>2</sub> O <sub>5</sub> on dehydrogenation high-energy ball milled MgH <sub>2</sub> . <b>2016</b> , 183, 65-75		17
545	Electrochemical hydriding and thermal dehydriding properties of nanostructured hydrogen storage MgNi <sub>26</sub> alloy. <b>2016</b> , 26, 2136-2143		5
544	A sustainable integrated in situ transesterification of microalgae for biodiesel production and associated co-product-a review. <i>Renewable and Sustainable Energy Reviews</i> , <b>2016</b> , 65, 1179-1198	16.2	88
543	Crystal structure and hydrogen storage behaviors of Mg/MoS <sub>2</sub> composites from ball milling. <b>2016</b> , 31, 773-778		3
542	In situ preparation of nanocrystalline Ni@C and its effect on hydrogen storage properties of MgH <sub>2</sub> . <i>International Journal of Hydrogen Energy</i> , <b>2016</b> , 41, 18121-18129	6.7	33
541	Remarkably enhanced dehydrogenation properties and mechanisms of MgH <sub>2</sub> by sequential-doping of nickel and graphene. <i>International Journal of Hydrogen Energy</i> , <b>2016</b> , 41, 17433-17441	6.7	18

- 540 Hydrogen Storage Characteristics of Nanocrystalline and Amorphous Nd-Mg-Ni-Based NdMg<sub>12</sub>-Type Alloys Synthesized via Mechanical Milling. **2016**, 47, 6404-6412 2
- 539 Comparative hydrogen uptake study on titanium/MWCNTs composite prepared by two different methods. *International Journal of Hydrogen Energy*, **2016**, 41, 18114-18120 6.7 21
- 538 Electrochemical performances of Mg<sub>45</sub>M<sub>5</sub>Co<sub>50</sub> (M=Pd, Zr) ternary hydrogen storage electrodes. **2016**, 26, 1388-1395 4
- 537 Metallic glassy Zr<sub>70</sub>Ni<sub>20</sub>Pd<sub>10</sub> powders for improving the hydrogenation/dehydrogenation behavior of MgH<sub>2</sub>. **2016**, 6, 26936 42
- 536 Enhanced hydrogen storage properties of MgH co-catalyzed with KNiF and CNTs. **2016**, 45, 19380-19388 47
- 535 Entwicklung eines skalierbaren Brenners zum Betrieb mit reinem Wasserstoff. **2016**, 88, 1508-1512 2
- 534 The kinetics of lightweight solid-state hydrogen storage materials: A review. *International Journal of Hydrogen Energy*, **2016**, 41, 13131-13151 6.7 72
- 533 Structure, hydrogen storage kinetics and thermodynamics of Mg-base Sm<sub>5</sub>Mg<sub>41</sub> alloy. *International Journal of Hydrogen Energy*, **2016**, 41, 5994-6003 6.7 58
- 532 Understanding the dehydrogenation process of MgH<sub>2</sub> from the recombination of hydrogen atoms. *International Journal of Hydrogen Energy*, **2016**, 41, 5716-5724 6.7 9
- 531 Improving magnesium based systems for efficient hydrogen storage tanks. *International Journal of Hydrogen Energy*, **2016**, 41, 14455-14460 6.7 9
- 530 Surface valence transformation during thermal activation and hydrogenation thermodynamics of Mg<sub>80</sub>Ni<sub>20</sub> melt-spun ribbons. **2016**, 371, 35-43 13
- 529 A first-principles study on interaction of Mg/Ni interface and its hydrogen absorption characteristics. **2016**, 649, 133-137 4
- 528 Point-defect kinetics in  $\delta$  and  $\delta$ MgH<sub>2</sub>. *International Journal of Hydrogen Energy*, **2016**, 41, 5688-5692 6.7 9
- 527 Site preference and diffusion of hydrogen during hydrogenation of Mg: A first-principles study. *International Journal of Hydrogen Energy*, **2016**, 41, 3508-3516 6.7 12
- 526 Structural and electrochemical hydrogen storage properties of MgTiN<sub>x</sub> (x = 0.1, 0.5, 1, 2) alloys prepared by ball milling. *International Journal of Hydrogen Energy*, **2016**, 41, 11761-11766 6.7 21
- 525 Evolution of the phase structure and hydrogen storage thermodynamics and kinetics of Mg<sub>88</sub>Y<sub>12</sub> binary alloy. *International Journal of Hydrogen Energy*, **2016**, 41, 2689-2699 6.7 61
- 524 The electrochemical hydrogen storage properties of Mg<sub>67</sub>Pd<sub>x</sub>Co<sub>33</sub> (x=1, 3, 5, 7) electrodes with BCC phase. **2016**, 662, 396-403 6
- 523 Performance Study of a Thermally Double Coupled Multi-Tubular Reactor by Considering the Effect of Flow Type Patterns. **2016**, 14, 63-78 1

522	Superior catalytic activity derived from a two-dimensional Ti <sub>3</sub> C <sub>2</sub> precursor towards the hydrogen storage reaction of magnesium hydride. <b>2016</b> , 52, 705-8		160
521	New nanostructured phases with reversible hydrogen storage capability in immiscible magnesium-zirconium system produced by high-pressure torsion. <b>2016</b> , 108, 293-303		54
520	Improvement of Hydrogen Vacancy Diffusion Kinetics in MgH <sub>2</sub> by Niobium- and Zirconium-Doping for Hydrogen Storage Applications. <b>2016</b> , 120, 4806-4812		34
519	Hydrogenation of Mg nanofilms catalyzed by size-selected Pd nanoparticles: Observation of localized MgH <sub>2</sub> nanodomains. <b>2016</b> , 337, 14-25		11
518	Solid-state reactions and hydrogen storage in magnesium mixed with various elements by high-pressure torsion: experiments and first-principles calculations. <b>2016</b> , 6, 11665-11674		15
517	Nickel-decorated graphene nanoplates for enhanced H <sub>2</sub> sorption properties of magnesium hydride at moderate temperatures. <i>Journal of Materials Chemistry A</i> , <b>2016</b> , 4, 2560-2570	13	77
516	Phase equilibria of Ce-Mg-Ni ternary system at 673 K and hydrogen storage properties of selected alloy. <i>International Journal of Hydrogen Energy</i> , <b>2016</b> , 41, 1725-1735	6.7	22
515	Improving the hydrogenation properties of MgH <sub>2</sub> at room temperature by doping with nano-size ZrO <sub>2</sub> catalyst. <b>2016</b> , 655, 21-27		54
514	Hydrogenation thermodynamics of melt-spun magnesium rich Mg-Ni nanocrystalline alloys with the addition of multiwalled carbon nanotubes and TiF <sub>3</sub> . <b>2016</b> , 306, 437-447		50
513	Hydrogen storage thermodynamics and kinetics of LaMg <sub>11</sub> Ni + x wt.% Ni (x = 100, 200) alloys synthesized by mechanical milling. <b>2016</b> , 107, 348-355		3
512	Kinetic enhancement of the sorption properties of MgH <sub>2</sub> with the additive titanium isopropoxide. <i>International Journal of Hydrogen Energy</i> , <b>2017</b> , 42, 5227-5234	6.7	15
511	Influence of micro-amount O <sub>2</sub> or N <sub>2</sub> on the hydrogenation/dehydrogenation kinetics of hydrogen-storage material MgH <sub>2</sub> . <i>International Journal of Hydrogen Energy</i> , <b>2017</b> , 42, 8057-8062	6.7	11
510	Dimensional effects of nanostructured Mg/MgH <sub>2</sub> for hydrogen storage applications: A review. <i>Renewable and Sustainable Energy Reviews</i> , <b>2017</b> , 72, 523-534	16.2	177
509	Hydrogen storage properties of a Mg-La-Fe-H nano-composite prepared through reactive ball milling. <b>2017</b> , 701, 208-214		31
508	Changes in microstructure, phases, and hydrogen storage characteristics of metal hydro-borate and nickel-added magnesium hydride with hydrogen absorption and release reactions. <i>International Journal of Hydrogen Energy</i> , <b>2017</b> , 42, 1018-1026	6.7	18
507	Effects of microstructure on the hydrogen storage properties of the melt-spun Mg-5Ni-3La (at.%) alloys. <b>2017</b> , 702, 126-131		19
506	Impact of initial catalyst form on the 3D structure and performance of ball-milled Ni-catalyzed MgH <sub>2</sub> for hydrogen storage. <i>International Journal of Hydrogen Energy</i> , <b>2017</b> , 42, 5177-5187	6.7	14
505	Dehydrogenation-hydrogenation characteristics of nanocrystalline Mg <sub>2</sub> Ni powders compacted by high-pressure torsion. <b>2017</b> , 702, 84-91		29



- 504 Structures and Electrochemical Hydrogen Storage Properties of the As-Spun RE-Mg-Ni-Co-Al-Based AB<sub>2</sub>-Type Alloys Applied to Ni-MH Battery. **2017**, 48, 2472-2482 2
- 503 Ambient temperature hydrogen storage in porous materials with exposed metal sites. *International Journal of Hydrogen Energy*, **2017**, 42, 6801-6809 6.7 13
- 502 The hydrogen storage properties of Mg-Li-Al composite system catalyzed by K<sub>2</sub>ZrF<sub>6</sub>. **2017**, 104, 214-220 15
- 501 Highly ameliorated gaseous and electrochemical hydrogen storage dynamics of nanocrystalline and amorphous LaMg<sub>12</sub>-type alloys prepared by mechanical milling. **2017**, 24, 50-58 6
- 500 Hydrogen storage thermodynamic and kinetic characteristics of PrMg<sub>12</sub>-type alloys synthesized by mechanical milling. **2017**, 24, 198-205 6
- 499 Structural and Optical Properties Correlation of Nickel Doped Magnesium-Titanium Alloys with Sorption Kinetics Reaction for Hydrogen Storage Application. **2017**, 70, 581-587
- 498 Effect of BiVO<sub>4</sub> additive on the hydrogen storage properties of MgH<sub>2</sub>. **2017**, 89, 197-203 22
- 497 Role of milling time and Ni content on dehydrogenation behavior of MgH<sub>2</sub>/Ni composite. **2017**, 27, 569-577 23
- 496 Hydrogen storage thermodynamics and kinetics of RE-Mg-Ni-based alloys prepared by mechanical milling. *International Journal of Hydrogen Energy*, **2017**, 42, 18473-18483 6.7 12
- 495 Enhancement of the hydrogen storage properties of Mg/C nanocomposites prepared by reactive milling with molybdenum. **2017**, 32, 299-304 1
- 494 Structures and electrochemical hydrogen storage properties of melt-spun RE-Mg-Ni-Co-Al alloys. *International Journal of Hydrogen Energy*, **2017**, 42, 14227-14245 6.7 12
- 493 Hydrogen Desorption Below 150 °C in MgH<sub>2</sub>-TiH<sub>2</sub> Composite Nanoparticles: Equilibrium and Kinetic Properties. **2017**, 121, 11166-11177 52
- 492 Controllable fabrication of Ni-based catalysts and their enhancement on desorption properties of MgH<sub>2</sub>. **2017**, 715, 329-336 26
- 491 Stress/strain effects on thermodynamic properties of magnesium hydride: A brief review. *International Journal of Hydrogen Energy*, **2017**, 42, 16603-16610 6.7 17
- 490 Effect of Ni content on the structure and hydrogenation property of mechanically alloyed TiMgNi<sub>x</sub> ternary alloys. *International Journal of Hydrogen Energy*, **2017**, 42, 23751-23758 6.7 5
- 489 Hydrogen storage properties of core-shell structured Mg@TM (TM = Co, V) composites. *International Journal of Hydrogen Energy*, **2017**, 42, 15246-15255 6.7 32
- 488 First-principles study on hydrogen storage in Al-, Ca-, Mn-doped MgNi clusters. **2017**, 31, 1730002
- 487 Hydrogen Storage Technologies for Future Energy Systems. **2017**, 8, 445-471 141



486	Dissociation of H <sub>2</sub> on Mg-coated B <sub>12</sub> C <sub>6</sub> N <sub>6</sub> . <b>2017</b> , 26, 068801		0
485	Effect of initial powder type on the hydrogen storage properties of high-pressure torsion consolidated Mg. <i>International Journal of Hydrogen Energy</i> , <b>2017</b> , 42, 22438-22448	6.7	21
484	Bias polarization study of steam electrolysis by composite oxygen electrode Ba <sub>0.5</sub> Sr <sub>0.5</sub> Co <sub>0.8</sub> Fe <sub>0.2</sub> O <sub>3-<math>\delta</math></sub> /BaCe <sub>0.4</sub> Zr <sub>0.4</sub> Y <sub>0.2</sub> O <sub>3-<math>\delta</math></sub> . <b>2017</b> , 424, 82-86		2
483	Functionalised hybrid Poly(ether ether ketone) containing MnO <sub>2</sub> : Investigation of operative conditions for hydrogen sorption. <i>International Journal of Hydrogen Energy</i> , <b>2017</b> , 42, 10089-10098	6.7	5
482	Enhanced hydriding kinetics of Mg-10 at% Al composite by forming Al <sub>12</sub> Mg <sub>17</sub> during hydriding combustion synthesis. <b>2017</b> , 712, 44-49		21
481	Structure, morphology and hydrogen storage kinetics of nanocomposite MgH <sub>2</sub> /10 wt% ZrNi <sub>5</sub> powders. <b>2017</b> , 3, 60-71		27
480	Improved dehydrogenation performance of NaAlH <sub>4</sub> using NiFe <sub>2</sub> O <sub>4</sub> nanoparticles. <b>2017</b> , 709, 850-856		19
479	Elaboration and electrochemical characterization of Mg <sub>95</sub> Ni hydrogen storage alloy electrodes for Ni/MH batteries. <i>International Journal of Hydrogen Energy</i> , <b>2017</b> , 42, 8098-8108	6.7	14
478	Single-use paper-based hydrogen fuel cells for point-of-care diagnostic applications. <b>2017</b> , 342, 442-451		40
477	Hydriding kinetics of MgTiH <sub>2</sub> fine dispersions obtained by mechanosynthesis. <b>2017</b> , 307, 145-152		4
476	Air-stable MgH <sub>2</sub> /CeO <sub>2</sub> composite with facilitated de/hydrogenation kinetics synthesized by high energy ball milling. <b>2017</b> , 133, 94-101		20
475	Implementation of hydrogen plasma activation of Mg powder in two steps hydrogenation. <b>2017</b> , 128, 108-113		
474	Recent advances in hydrogen storage using catalytically and chemically modified graphene nanocomposites. <i>Journal of Materials Chemistry A</i> , <b>2017</b> , 5, 22897-22912	13	51
473	First-principles investigation of decomposition and adsorption properties of RDX on the surface of MgH <sub>2</sub> . <b>2017</b> , 496, 15-23		3
472	Hierarchically Controlled Inside-Out Doping of Mg Nanocomposites for Moderate Temperature Hydrogen Storage. <b>2017</b> , 27, 1704316		49
471	Hydrogen adsorption and dissociation on the TM-doped (TM=Ti, Nb) Mg <sub>55</sub> nanoclusters: A DFT study. <i>International Journal of Hydrogen Energy</i> , <b>2017</b> , 42, 24797-24810	6.7	20
470	Enhancement of hydrogen sorption properties of MgH <sub>2</sub> with a MgF <sub>2</sub> catalyst. <i>International Journal of Hydrogen Energy</i> , <b>2017</b> , 42, 20120-20124	6.7	27
469	Highly stable and controllable CoB/Ni-foam catalysts for hydrogen generation from alkaline NaBH <sub>4</sub> solution. <i>International Journal of Hydrogen Energy</i> , <b>2017</b> , 42, 21063-21072	6.7	21

- 468 Synthesis and electrochemical properties of binary MgTi and ternary MgTiX (X = Ni, Si) hydrogen storage alloys. *International Journal of Hydrogen Energy*, **2017**, 42, 23404-23415 6.7 10
- 467 Effect of activated carbon from polyolefin wax on the hydrogen sorption properties of magnesium. *International Journal of Hydrogen Energy*, **2017**, 42, 26872-26876 6.7 5
- 466 Dehydrogenation steps and factors controlling desorption kinetics of a Mg-Ce hydrogen storage alloy. *International Journal of Hydrogen Energy*, **2017**, 42, 21121-21130 6.7 17
- 465 The cycling stability of the in situ formed Mg-based nanocomposite catalyzed by YH<sub>2</sub>. *Journal of Materials Chemistry A*, **2017**, 5, 17532-17543 13 58
- 464 Electrochemical hydriding of nanocrystalline Mg-Ni-X (X = Co, Mn, Nd) alloys prepared by mechanical alloying and spark plasma sintering. **2017**, 726, 787-795 7
- 463 Isothermal activation, thermodynamic and hysteresis of MgH<sub>2</sub> hydrides catalytically modified by high-energy ball milling with MWCNTs and TiF<sub>3</sub>. *International Journal of Hydrogen Energy*, **2017**, 42, 22953-22962 6.7 22
- 462 Synergetic Effects toward Catalysis and Confinement of Magnesium Hydride on Modified Graphene: A First-Principles Study. **2017**, 121, 18401-18411 7
- 461 Effect of the hierarchical Co@C nanoflowers on the hydrogen storage properties of MgH<sub>2</sub>. *International Journal of Hydrogen Energy*, **2017**, 42, 28464-28472 6.7 32
- 460 Improved dehydrogenation kinetics of MgH<sub>2</sub> due to NiMnAl. **2017**, 4, 116520 5
- 459 Catalytic effect of nickel phthalocyanine on hydrogen storage properties of magnesium hydride: Experimental and first-principles studies. *International Journal of Hydrogen Energy*, **2017**, 42, 28485-28497 6.7 10
- 458 Green facile thermal decomposition synthesis, characterization and electrochemical hydrogen storage characteristics of ZnAl<sub>2</sub>O<sub>4</sub> nanostructure. *International Journal of Hydrogen Energy*, **2017**, 42, 17167-17177 6.7 34
- 457 High temperature metal hydrides for energy systems Part A: Numerical model validation and calibration. *International Journal of Hydrogen Energy*, **2017**, 42, 16195-16202 6.7 10
- 456 Improving dehydrogenation properties of Mg/Nb composite films via tuning Nb distributions. **2017**, 36, 574-580 9
- 455 FEM simulation supported evaluation of a hydrogen grain boundary diffusion coefficient in MgH<sub>2</sub>. *International Journal of Hydrogen Energy*, **2017**, 42, 22530-22537 6.7 9
- 454 Catalytic effect of SrFe<sub>12</sub>O<sub>19</sub> on the hydrogen storage properties of LiAlH<sub>4</sub>. *International Journal of Hydrogen Energy*, **2017**, 42, 19126-19134 6.7 18
- 453 Synthesis and hydrogen storage properties of core-shell structured binary Mg@Ti and ternary Mg@Ti@Ni composites. *International Journal of Hydrogen Energy*, **2017**, 42, 2239-2247 6.7 37
- 452 Dissociation and diffusion of hydrogen on defect-free and vacancy defective Mg (0001) surfaces: A density functional theory study. **2017**, 394, 371-377 22
- 451 Enhanced hydrogen diffusion in magnesium based hydride induced by strain and doping from first principle study. **2017**, 694, 687-693 14

450	Novel MAX-phase Ti <sub>3</sub> AlC <sub>2</sub> catalyst for improving the reversible hydrogen storage properties of MgH <sub>2</sub> . <i>International Journal of Hydrogen Energy</i> , <b>2017</b> , 42, 4244-4251	6.7	30
449	Synthesis and Characterization of Carbon-Stabilized Magnesium Nanoparticles. <b>2017</b> , 28, 881-889		1
448	Common ion effect in the hydrolysis reaction of Mg Ca alloy hydride-salt composites. <i>International Journal of Hydrogen Energy</i> , <b>2017</b> , 42, 1429-1435	6.7	15
447	Application of dielectric barrier discharge plasma-assisted milling in energy storage materials [A review. <b>2017</b> , 691, 422-435		248
446	In-situ synchrotron X-ray diffraction investigation on hydrogen-induced decomposition of long period stacking ordered structure in MgNi <sub>2</sub> system. <b>2017</b> , 127, 102-107		49
445	A new synthesis route of ammonia production through hydrolysis of metal [Nitrides. <i>International Journal of Hydrogen Energy</i> , <b>2017</b> , 42, 24897-24903	6.7	19
444	High temperature metal hydrides for energy systems Part B: Comparison between high and low temperature metal hydride reservoirs. <i>International Journal of Hydrogen Energy</i> , <b>2017</b> , 42, 16203-16213	6.7	10
443	Metal Hydrides: Electronic Band Structure. <b>2017</b> ,		
442	Graphene-based materials and their potential applications. <b>2017</b> , 267-287		1
441	Nanosized Magnesium Electrochemically Deposited on a Carbon Nanotubes Suspension: Synthesis and Hydrogen Storage. <b>2017</b> , 5,		5
440	Atomic cluster structures, phase stability and physicochemical properties of binary Mg-X (X= Ag, Al, Ba, Ca, Gd, Sn, Y and Zn) alloys from ab-initio calculations. <b>2018</b> , 95, 119-129		26
439	Design and synthesis of a magnesium alloy for room temperature hydrogen storage. <b>2018</b> , 149, 88-96		101
438	Structural and surface modification of carbon nanotubes for enhanced hydrogen storage density. <b>2018</b> , 14, 57-65		41
437	Mg <sub>65</sub> Ni <sub>20</sub> Y <sub>15</sub> Ag <sub>X</sub> (X = 1, 2, 3, 5) alloys prepared via atmosphere controlled induction system. <b>2018</b> , 96, 810-815		2
436	Production and electrochemical characterization of Mg Ni alloys by molten salt electrolysis for NiMH batteries. <i>International Journal of Hydrogen Energy</i> , <b>2018</b> , 43, 6266-6274	6.7	5
435	DFT Insights into the Interactive Effect of Ni + N Cosubstitution on Enhanced Dehydrogenation Properties of Mg(BH <sub>4</sub> )(NH <sub>2</sub> )-like Complex Hydride for Hydrogen Energy Storage. <b>2018</b> , 122, 5956-5966		6
434	Enhanced hydrogen storage performance in Pd <sub>3</sub> Co decorated nitrogen/boron doped graphene composites. <i>International Journal of Hydrogen Energy</i> , <b>2018</b> , 43, 8018-8025	6.7	16
433	LiBH <sub>4</sub> as solid electrolyte for Li-ion batteries with Bi <sub>2</sub> Te <sub>3</sub> nanostructured anode. <i>International Journal of Hydrogen Energy</i> , <b>2018</b> , 43, 21709-21714	6.7	13

432	Microstructure and absorption/desorption kinetics evolutions of Mg Ni Ce alloys during hydrogenation and dehydrogenation cycles. <i>International Journal of Hydrogen Energy</i> , <b>2018</b> , 43, 8404-8414	6.7	14
431	Reversible hydrogenation of the Zintl phases BaGe and BaSn studied by in situ diffraction. <b>2018</b> , 233, 399-409		6
430	Hydrogen storage properties of Y-Mg-Cu-H nanocomposite obtained by hydrogen-induced decomposition of YMg <sub>4</sub> Cu intermetallic. <b>2018</b> , 751, 176-182		18
429	Methanol Production in Thermally Coupled, Fluidized-Bed, Bubble-Column and Membrane Reactors. <b>2018</b> , 539-571		
428	On the hydrogen desorption entropy change of modified MgH <sub>2</sub> . <b>2018</b> , 737, 427-432		8
427	Improved hydrogen absorption and desorption kinetics of magnesium-based alloy via addition of yttrium. <b>2018</b> , 378, 636-645		49
426	Hydrogen generation by hydrolysis of Mg-Mg <sub>2</sub> Si composite and enhanced kinetics performance from introducing of MgCl <sub>2</sub> and Si. <i>International Journal of Hydrogen Energy</i> , <b>2018</b> , 43, 2903-2912	6.7	74
425	An Investigation on Hydrogen Storage Kinetics of the Nanocrystalline and Amorphous LaMg <sub>12</sub> -type Alloys Synthesized by Mechanical Milling. <b>2018</b> , 33, 278-287		1
424	An outstanding effect of graphite in nano-MgH <sub>2</sub> /TiH <sub>2</sub> on hydrogen storage performance. <i>Journal of Materials Chemistry A</i> , <b>2018</b> , 6, 10740-10754	13	58
423	Nanolayer-like-shaped MgFeO synthesised a simple hydrothermal method and its catalytic effect on the hydrogen storage properties of MgH <sub>2</sub> . <b>2018</b> , 8, 15667-15674		41
422	Investigation on structure and hydrogen storage performance of as-milled and cast Mg 90 Al 10 alloys. <i>International Journal of Hydrogen Energy</i> , <b>2018</b> , 43, 6642-6653	6.7	14
421	Development of a kinetic model of hydrogen absorption and desorption in magnesium and analysis of the rate-determining step. <b>2018</b> , 699, 132-138		11
420	Progress and Trends in Magnesium-Based Materials for Energy-Storage Research: A Review. <b>2018</b> , 6, 445-458		104
419	Microstructure and enhanced gaseous hydrogen storage behavior of CoS <sub>2</sub> -catalyzed Sm <sub>5</sub> Mg <sub>41</sub> alloy. <b>2018</b> , 116, 878-891		26
418	The enhanced de/re-hydrogenation performance of MgH <sub>2</sub> with TiH <sub>2</sub> additive. <b>2018</b> , 42, 1139-1147		32
417	Recent progress in magnesium hydride modified through catalysis and nanoconfinement. <i>International Journal of Hydrogen Energy</i> , <b>2018</b> , 43, 1545-1565	6.7	76
416	Structural, elastic and optoelectronic properties of the hydrogen based perovskite compounds: Ab-initio study. <b>2018</b> , 56, 1-9		7
415	First-principles studies of K <sub>1-x</sub> M <sub>x</sub> MgH <sub>3</sub> (M = Li, Na, Rb, or Cs) perovskite hydrides for hydrogen storage. <i>International Journal of Hydrogen Energy</i> , <b>2018</b> , 43, 2232-2236	6.7	16

- 414 Structural characterization and hydrogen sorption properties of the Mg<sub>50</sub>Ni<sub>45</sub>Cr<sub>5</sub> alloy. **2018**, 56, 449-467 1
- 413 Catalytic Tuning of Sorption Kinetics of Lightweight Hydrides: A Review of the Materials and Mechanism. **2018**, 8, 651 21
- 412 Performance and fuel cell applications of reacted ball-milled MgH/5.3 wt% TiH nanocomposite powders.. **2018**, 8, 38175-38185 13
- 411 Metallic Glassy V<sub>45</sub>Zr<sub>20</sub>Ni<sub>20</sub>Cu<sub>10</sub>Al<sub>3</sub>Pd<sub>2</sub> Alloy Powders for Superior Hydrogenation/Dehydrogenation Kinetics of MgH<sub>2</sub>. *Materials Today: Proceedings*, **2018**, 5, 13718-13725 <sup>1,4</sup> 5
- 410 1. Introduction: hydrogen storage as solution for a changing energy landscape. **2018**, 1-34
- 409 . **2018**, 3
- 408 Effects of Native Vacancies on Nb-Doped MgH<sub>2</sub> Using Density Functional Theory Calculations. **2018**, 122, 27955-27962 3
- 407 The effect of hydrogen on the electronic, mechanical and phonon properties of LaMgNi<sub>4</sub> and its hydrides for hydrogen storage applications. *International Journal of Hydrogen Energy*, **2018**, 43, 23397-23408 <sup>6,7</sup> 25
- 406 The Mg-Rich Phase NdNiMg: Structural and Magnetic Properties. **2018**, 57, 14152-14158 8
- 405 Bulk nanocomposite MgH<sub>2</sub>/10 wt% (8 Nb<sub>2</sub>O<sub>5</sub>/2 Ni) solid-hydrogen storage system for fuel cell applications. *International Journal of Hydrogen Energy*, **2018**, 43, 23382-23396 <sup>6,7</sup> 18
- 404 Temperature-Dependent Lattice Vibration of Magnesium Hydride. **2018**, 122, 27963-27972 2
- 403 A novel complex oxide TiVO<sub>3.5</sub> as a highly active catalytic precursor for improving the hydrogen storage properties of MgH<sub>2</sub>. *International Journal of Hydrogen Energy*, **2018**, 43, 23327-23335 <sup>6,7</sup> 43
- 402 Stress effects on the kinetics of hydride formation and growth in metals. **2018**, 15,
- 401 Dehydrogenation properties of the LiNH<sub>2</sub>BH<sub>3</sub>/MgH<sub>2</sub> and LiNH<sub>2</sub>BH<sub>3</sub>/LiBH<sub>4</sub> bi-component hydride systems for hydrogen storage applications. **2018**, 7, 1 4
- 400 Microstructure and hydrogen storage properties of Mg-based Mg<sub>85</sub>Zn<sub>5</sub>Ni<sub>10</sub> alloy powders. **2018**, 25, 1172-1178 2
- 399 Enhanced hydrogen storage properties and mechanisms of magnesium hydride modified by transition metal dissolved magnesium oxides. *International Journal of Hydrogen Energy*, **2018**, 43, 21864-21873 <sup>6,7</sup> <sup>21</sup> 21
- 398 Electrochemical deposited Mg-PPy multilayered film to store hydrogen. *International Journal of Hydrogen Energy*, **2018**, 43, 22385-22390 <sup>6,7</sup> 3
- 397 Metal oxides for hydrogen storage. **2018**, 251-274 7

396	Effects of Li on hydrogen absorption properties of Mg <sub>17</sub> Al <sub>12</sub> (110) surface: A density functional theory study. <i>International Journal of Hydrogen Energy</i> , <b>2018</b> , 43, 18330-18338	6.7	6
395	A comparative study on the microstructure and cycling stability of the amorphous and nanocrystallization Mg <sub>60</sub> Ni <sub>20</sub> La <sub>10</sub> alloys. <i>International Journal of Hydrogen Energy</i> , <b>2018</b> , 43, 19141-19151	6.7	6
394	Discovering a new MgH metastable phase.. <b>2018</b> , 8, 32003-32008		18
393	Microstructure and Electrochemical Performance of CeMg <sub>12</sub> /Ni/TiF <sub>3</sub> Composites for Hydrogen Storage. <b>2018</b> , 27, 4507-4513		2
392	Nanoporous magnesium. <b>2018</b> , 11, 6428-6435		33
391	Electrosorption of Hydrogen in Pd-Based Metallic Glass Nanofilms. <b>2018</b> , 1, 2630-2646		19
390	Optimization of TiH <sub>2</sub> content for fast and efficient hydrogen cycling of MgH <sub>2</sub> -TiH <sub>2</sub> nanocomposites. <i>International Journal of Hydrogen Energy</i> , <b>2018</b> , 43, 16774-16781	6.7	29
389	Characterization of hydrogen storage behavior of the as-synthesized p-type NiO/n-type CeO <sub>2</sub> nanocomposites by carbohydrates as a capping agent: The influence of morphology. <i>International Journal of Hydrogen Energy</i> , <b>2018</b> , 43, 14557-14568	6.7	6
388	Hydrogen storage in MgH <sub>2</sub> LaNi <sub>5</sub> composites prepared by cold rolling under inert atmosphere. <i>International Journal of Hydrogen Energy</i> , <b>2018</b> , 43, 13348-13355	6.7	16
387	Enhanced hydrogen storage properties of K <sub>2</sub> TiF <sub>6</sub> doped Mg-Na-Al composite system. <b>2018</b> , 217, 350-356		5
386	Modification based on internal refinement and external decoration: A powerful strategy for superior thermodynamics and hysteresis of Mg-Ni hydrogen energy storage alloys. <b>2018</b> , 766, 112-122		21
385	Role of NiMn <sub>9</sub> Al <sub>4</sub> Co <sub>14</sub> Fe <sub>3.6</sub> alloy on dehydrogenation kinetics of MgH <sub>2</sub> . <b>2018</b> , 6, 318-325		19
384	Nitrogen-Based Hydrogen Storage Systems: A Detailed Overview. <b>2018</b> , 39-88		
383	Beneficial Effects of Graphene on Hydrogen Uptake and Release from Light Hydrogen Storage Materials. <b>2018</b> , 229-262		
382	Enhanced hydrogen storage properties of MgH <sub>2</sub> catalyzed with carbon-supported nanocrystalline TiO <sub>2</sub> . <b>2018</b> , 398, 183-192		113
381	Remarkable Synergistic Catalysis of Ni-Doped Ultrafine TiO on Hydrogen Sorption Kinetics of MgH. <b>2018</b> , 10, 24975-24980		49
380	Acceleration of the corrosion reaction of magnesium by Fenton reagents. <b>2018</b> , 71, 1852-1862		1
379	Destabilizing the dehydriding thermodynamics of MgH <sub>2</sub> by reversible intermetallics formation in Mg <sub>2</sub> Ag <sub>2</sub> Zn ternary alloys. <b>2018</b> , 396, 796-802		28

378	The Effects of Nanostructure on the Hydrogen Sorption Properties of Magnesium-Based Metallic Compounds: A Review. <b>2018</b> , 8, 106		25
377	Vanadium oxide nanoparticles supported on cubic carbon nanoboxes as highly active catalyst precursors for hydrogen storage in MgH <sub>2</sub> . <i>Journal of Materials Chemistry A</i> , <b>2018</b> , 6, 16177-16185	13	71
376	Microstructure and Hydrogen Absorption/Desorption Behavior of Mg <sub>23</sub> -xLa x Ni <sub>10</sub> Alloy. <b>2018</b> , 33, 476-484		
375	Enhanced hydrogen storage kinetics in Mg@FLG composite synthesized by plasma assisted milling. <i>International Journal of Hydrogen Energy</i> , <b>2018</b> , 43, 17346-17352	6.7	13
374	New interatomic potential for simulation of pure magnesium and magnesium hydrides. <b>2018</b> , 154, 295-302		7
373	Bulk nanocrystalline gamma magnesium hydride with low dehydrogenation temperature stabilized by plastic straining via high-pressure torsion. <b>2018</b> , 157, 54-57		19
372	Study of an industrially oriented Mg content control technology during annealing process for the LaMg(NiAl) <sub>3.5</sub> hydrogen storage alloy. <i>International Journal of Hydrogen Energy</i> , <b>2018</b> , 43, 17318-17327	6.7	4
371	Impact of the addition of poly-dihydrogen ruthenium precursor complexes on the hydrogen storage properties of the Mg/MgH <sub>2</sub> system. <b>2018</b> , 2, 2335-2344		10
370	An investigation of gaseous hydrogen storage characterizations of Mg-Y-Ni-Cu alloys synthesized by melt spinning.. <b>2018</b> , 8, 28969-28977		4
369	A novel solid-solution MXene (Ti <sub>0.5</sub> V <sub>0.5</sub> ) <sub>3</sub> C <sub>2</sub> with high catalytic activity for hydrogen storage in MgH <sub>2</sub> . <b>2018</b> , 1, 114-120		32
368	Hydrogen storage thermodynamic and dynamic properties of as-milled Ce Mg Ni-based CeMg <sub>12</sub> -type alloys. <i>International Journal of Hydrogen Energy</i> , <b>2019</b> , 44, 19275-19284	6.7	1
367	Investigation of the microstructure and the thermodynamic and kinetic properties of ball-milled CeMg <sub>12</sub> -type composite materials as hydrogen storage materials. <b>2019</b> , 156, 109824		4
366	MgH/CuO Hydrogen Storage Composite with Defect-Rich Surfaces for Carbon Dioxide Hydrogenation. <b>2019</b> , 11, 31009-31017		23
365	Thermodynamic investigation on the MgBd intermetallic phases. <b>2019</b> , 139, 105890		6
364	Technologies for the Storage of Hydrogen Part 1: Hydrogen Storage in the Narrower Sense. <b>2019</b> , 6, 72		6
363	Excellent catalytic activity of a two-dimensional Nb <sub>4</sub> C <sub>3</sub> T <sub>x</sub> (MXene) on hydrogen storage of MgH <sub>2</sub> . <b>2019</b> , 493, 431-440		19
362	Improved hydrogen storage dynamics of as-milled Mg <sub>22</sub> (LaY) <sub>2</sub> Ni <sub>10</sub> alloy catalyzed by MoS <sub>2</sub> . <b>2019</b> , 484, 1198-1207		1
361	Converting H <sup>+</sup> from coordinated water into H <sub>2</sub> enables super facile synthesis of LiBH <sub>4</sub> . <b>2019</b> , 21, 4380-4387		96



360	Superior catalytic effects of FeCo nanosheets on MgH for hydrogen storage. <b>2019</b> , 48, 12699-12706		19
359	Investigation of microstructure and electrochemical hydrogen storage thermodynamic and kinetic properties of ball-milled CeMg <sub>12</sub> -type composite materials. <b>2019</b> , 182, 108034		3
358	Microstructure and improved hydrogen storage properties of Mg <sub>85</sub> Zn <sub>5</sub> Ni <sub>10</sub> alloy catalyzed by Cr <sub>2</sub> O <sub>3</sub> nanoparticles. <b>2019</b> , 134, 295-306		5
357	High-pressure phases induce H-vacancy diffusion kinetics in TM-doped MgH <sub>2</sub> : Ab initio study for hydrogen storage improvement. <i>International Journal of Hydrogen Energy</i> , <b>2019</b> , 44, 21948-21954	6.7	17
356	Mg-based Nanocomposites for hydrogen storage containing La <sub>23</sub> Nd <sub>8.5</sub> Ti <sub>1.1</sub> Ni <sub>33.9</sub> Co <sub>32.9</sub> Al <sub>0.65</sub> alloys as additives. <i>Materials Today: Proceedings</i> , <b>2019</b> , 18, 901-911	1.4	
355	ENERGY STORAGE DEVELOPMENT USING HYDROGEN AND ITS POTENTIAL APPLICATION IN COLOMBIA. <b>2019</b> , 9, 254-268		3
354	Improved hydrogen storage properties of Mg/MgH <sub>2</sub> thanks to the addition of nickel hydride complex precursors. <i>International Journal of Hydrogen Energy</i> , <b>2019</b> , 44, 28848-28862	6.7	17
353	Effect of Ti-additives on hydrogenation/dehydrogenation properties of MgH <sub>2</sub> . <b>2019</b> ,		0
352	Synergetic effect of reactive ball milling and cold pressing on enhancing the hydrogen storage behavior of nanocomposite MgH <sub>2</sub> /10 wt% TiMn <sub>2</sub> binary system. <i>International Journal of Hydrogen Energy</i> , <b>2019</b> , 44, 26428-26443	6.7	12
351	In situ observation of hydride nucleation and selective growth in magnesium thin-films with environmental transmission electron microscopy. <i>International Journal of Hydrogen Energy</i> , <b>2019</b> , 44, 32112-32123	6.7	6
350	Superior Hydrogen Absorption/Desorption Cycle Durability of Ball-Milled 82MgH <sub>2</sub> -3PrH <sub>2</sub> -15Al Composite. <b>2019</b> , 4, 11759-11765		1
349	Microstructure, hydrogen storage thermodynamics and kinetics of La <sub>5</sub> Mg <sub>95</sub> Ni (x=5, 10, 15) alloys. <b>2019</b> , 29, 1057-1066		5
348	Effect of catalysts on microstructure, hydrogen storage thermodynamics, and kinetics performance of La <sub>5</sub> Mg <sub>85</sub> Ni <sub>10</sub> alloy. <i>International Journal of Hydrogen Energy</i> , <b>2019</b> , 44, 24839-24848	6.7	1
347	Environmentally friendly nanocrystalline magnesium hydride decorated with metallic glassy-zirconium palladium nanopowders for fuel cell applications.. <b>2019</b> , 9, 27987-27995		6
346	Effect of nano-structured Ta <sub>2</sub> C on hydrogen absorption/Desorption kinetics of MgH <sub>2</sub> system. <i>International Journal of Hydrogen Energy</i> , <b>2019</b> , 44, 24792-24799	6.7	0
345	Hydrogenation of Pd/Mg films: A quantitative assessment of transport coefficients. <i>International Journal of Hydrogen Energy</i> , <b>2019</b> , 44, 27862-27875	6.7	5
344	Experimental and Modeling Study of the Fabrication of Mg Nano-Sculpted Films by Magnetron Sputtering Combined with Glancing Angle Deposition. <b>2019</b> , 9, 361		6
343	Recent advances on the thermal destabilization of Mg-based hydrogen storage materials.. <b>2018</b> , 9, 408-428		58

342	Hydrogen adsorption, dissociation, and diffusion on high-index Mg(101 $\bar{1}$ 3) and their comparisons with Mg(0001): A systematic first-principles study. <i>International Journal of Hydrogen Energy</i> , <b>2019</b> , 44, 4897-4906	6.7	8
341	Magnesium based materials for hydrogen based energy storage: Past, present and future. <i>International Journal of Hydrogen Energy</i> , <b>2019</b> , 44, 7809-7859	6.7	264
340	Geometrical effect in Mg-based metastable nano alloys with BCC structure for hydrogen storage. <i>International Journal of Hydrogen Energy</i> , <b>2019</b> , 44, 29291-29296	6.7	7
339	Technologien zur Speicherung von Wasserstoff. Teil 1: Wasserstoffspeicherung im engeren Sinn. <b>2019</b> , 91, 383-392		4
338	Structure and hydrogen storage properties of AB <sub>3</sub> -type Re <sub>2</sub> Mg(Ni <sub>0.7</sub> $\bar{1}$ xCo <sub>0.2</sub> Mn <sub>0.1</sub> Al <sub>x</sub> ) <sub>9</sub> (x = 0-0.04) alloys. <b>2019</b> , 8, 1		2
337	Improved hydrogen storage kinetics and thermodynamics of RE-Mg-based alloy by co-doping Ce $\bar{1}$ . <i>International Journal of Hydrogen Energy</i> , <b>2019</b> , 44, 16765-16776	6.7	33
336	Efficient hydrogen storage with the combination of metal Mg and porous nanostructured material. <i>International Journal of Hydrogen Energy</i> , <b>2019</b> , 44, 16824-16832	6.7	7
335	Phase and Morphology Control of Magnesium Nanoparticles via Lithium Doping. <b>2019</b> , 19, 3626-3632		4
334	Significant Thermodynamic Destabilization and Superior Hydrogen Storage Properties of Nanocrystalline Mg-20 wt % Ti $\bar{1}$ Cr $\bar{1}$ x (x = 0.4, 0.6, 0.8; Ti/Cr = 2:3) Composites Synthesized by Reactive Ball Milling. <b>2019</b> , 123, 15963-15976		3
333	How to Design Hydrogen Storage Materials? Fundamentals, Synthesis, and Storage Tanks. <b>2019</b> , 3, 1900043		48
332	Theoretical discovery of high capacity hydrogen storage metal tetrahydrides. <i>International Journal of Hydrogen Energy</i> , <b>2019</b> , 44, 18153-18158	6.7	64
331	Nanocrystalline Mg <sub>80</sub> Y <sub>4</sub> Ni <sub>8</sub> Cu <sub>8</sub> alloy with sub-10 nm microstructure and excellent hydrogen storage cycling stability prepared by nanocrystallization. <b>2019</b> , 111, 106475		2
330	Purity of MgH <sub>2</sub> Improved by the Process of Pre-milling Assisted Hydriding of Mg Powder under a Hydrogen Pressure of 0.5 MPa. <b>2019</b> , 93, 665-673		2
329	Band Gap Narrowing of Zinc Orthogermanate by Dimensional and Defect Modification. <b>2019</b> , 123, 14573-14581		5
328	Nitrogen-stimulated superior catalytic activity of niobium oxide for fast full hydrogenation of magnesium at ambient temperature. <b>2019</b> , 23, 79-87		33
327	Kinetic improvement of H <sub>2</sub> absorption and desorption properties in Mg/MgH <sub>2</sub> by using niobium ethoxide as additive. <i>International Journal of Hydrogen Energy</i> , <b>2019</b> , 44, 11961-11969	6.7	8
326	The effect of oxygen coverages on hydrogenation of Mg (0001) surface. <b>2019</b> , 487, 510-518		4
325	Hydrogen storage systems for fuel cells: Comparison between high and low-temperature metal hydrides. <i>International Journal of Hydrogen Energy</i> , <b>2019</b> , 44, 15118-15134	6.7	22

324	Mechanically-Induced Catalyzation of MgH <sub>2</sub> Powders with Zr <sub>2</sub> Ni-Ball Milling Media. <b>2019</b> , 9, 382		7
323	Thermodynamics analysis of hydrogen storage based on compressed gaseous hydrogen, liquid hydrogen and cryo-compressed hydrogen. <i>International Journal of Hydrogen Energy</i> , <b>2019</b> , 44, 16833-16840	6.7	46
322	Nanoflakes MgNiO <sub>2</sub> synthesised via a simple hydrothermal method and its catalytic roles on the hydrogen sorption performance of MgH <sub>2</sub> . <b>2019</b> , 796, 279-286		57
321	Enhanced hydrolysis performance and the air-stability of Mg-Ca hydride-chloride composites. <b>2019</b> , 792, 869-877		6
320	Hydrogen energy, economy and storage: Review and recommendation. <i>International Journal of Hydrogen Energy</i> , <b>2019</b> , 44, 15072-15086	6.7	796
319	Transition metal substitution on Mg(101̄B) and Mg(0001) surfaces for improved hydrogenation and dehydrogenation: A systematic first-principles study. <b>2019</b> , 479, 626-633		2
318	Hydrogen storage performances of RCaMgNi <sub>9</sub> (R = Nd, Gd and Er) compounds. <b>2019</b> , 794, 45-52		5
317	Synergistic Effect of New ZrNi <sub>5</sub> /Nb <sub>2</sub> O <sub>5</sub> Catalytic Agent on Storage Behavior of Nanocrystalline MgH <sub>2</sub> Powders. <b>2019</b> , 9, 306		6
316	Effect of LaNi <sub>3</sub> Amorphous Alloy Nanopowders on the Performance and Hydrogen Storage Properties of MgH <sub>2</sub> . <b>2019</b> , 12, 1005		12
315	Mechanosynthesis and Reversible Hydrogen Storage of Mg <sub>2</sub> Ni and Mg <sub>2</sub> Cu Alloys. <b>2019</b> , 60, 441-449		5
314	Improved hydrogen storage performances of Mg-Y-Ni-Cu alloys by melt spinning. <b>2019</b> , 138, 263-271		15
313	Effects of Ni Content and Ball Milling Time on the Hydrogen Storage Thermodynamics and Kinetics Performances of LaMgNi Ternary Alloys. <b>2019</b> , 32, 961-971		1
312	Effects of two-dimension MXene Ti <sub>3</sub> C <sub>2</sub> on hydrogen storage performances of MgH <sub>2</sub> -LiAlH <sub>4</sub> composite. <b>2019</b> , 522, 178-187		23
311	Reversible Metal-Hydride Transformation in Mg-Ti-H Nanoparticles at Remarkably Low Temperatures. <b>2019</b> , 20, 1325-1333		6
310	Microstructural evolution and hydrogen storage properties of a Ni-modified Mg <sub>15</sub> Al alloy. <i>International Journal of Hydrogen Energy</i> , <b>2019</b> , 44, 10788-10799	6.7	4
309	Controllable Hydrolysis Performance of MgLi Alloys and Their Hydrides. <b>2019</b> , 20, 1316-1324		17
308	Investigation of room temperature hydrogen storage in biomass derived activated carbon. <b>2019</b> , 789, 800-804		27
307	Hydrogenation and crystallization of amorphous phase: A new mechanism for the electrochemical capacity and its decay in milled Mg Ni alloys. <b>2019</b> , 305, 145-154		9

306	Desorption properties of LiAlH <sub>4</sub> doped with LaFeO <sub>3</sub> catalyst. <i>International Journal of Hydrogen Energy</i> , <b>2019</b> , 44, 11953-11960	6.7	18
305	Enhancing hydrogen storage properties of the Mg/MgH <sub>2</sub> system by the addition of bis(tricyclohexylphosphine)nickel(II) dichloride. <i>International Journal of Hydrogen Energy</i> , <b>2019</b> , 44, 11939-11952	6.7	11
304	Enhanced hydrogenation and hydrolysis properties of core-shell structured Mg-MO <sub>x</sub> (M = Al, Ti and Fe) nanocomposites prepared by arc plasma method. <b>2019</b> , 371, 233-243		22
303	Recent developments in the fabrication, characterization and implementation of MgH <sub>2</sub> -based solid-hydrogen materials in the Kuwait Institute for Scientific Research.. <b>2019</b> , 9, 9907-9930		23
302	Stability investigation of the $\delta$ -MgH <sub>2</sub> phase synthesized by high-energy ball milling. <i>International Journal of Hydrogen Energy</i> , <b>2019</b> , 44, 29179-29188	6.7	12
301	Structure and hydrogen storage characteristics of as-spun Mg-Y-Ni-Cu alloys. <b>2019</b> , 35, 1727-1734		8
300	Low temperature de/hydrogenation in the partially crystallized Mg <sub>60</sub> Ce <sub>10</sub> Ni <sub>20</sub> Cu <sub>10</sub> metallic glasses induced by milling with process control agents. <b>2019</b> , 792, 835-843		10
299	MgTiO <sub>3</sub> H <sub>x</sub> and CaTiO <sub>3</sub> H <sub>x</sub> perovskite compounds for hydrogen storage applications. <i>International Journal of Hydrogen Energy</i> , <b>2019</b> , 44, 11930-11938	6.7	10
298	The dual capacity of the NiSn alloy/MWCNT nanocomposite for sodium and hydrogen ions storage using porous Cu foam as a current collector. <i>International Journal of Hydrogen Energy</i> , <b>2019</b> , 44, 6674-6686	6.7	3
297	A striking catalytic effect of facile synthesized ZrMn <sub>2</sub> nanoparticles on the de/rehydrogenation properties of MgH <sub>2</sub> . <i>Journal of Materials Chemistry A</i> , <b>2019</b> , 7, 5626-5634	13	66
296	Microstructure characteristics, hydrogen storage kinetic and thermodynamic properties of Mg <sub>80</sub> Ni <sub>20</sub> Y <sub>x</sub> (x = 0-4) alloys. <i>International Journal of Hydrogen Energy</i> , <b>2019</b> , 44, 7371-7380	6.7	10
295	An ab initio study of spectroscopic and thermodynamic characteristics of MgH <sub>2</sub> and TiC systems. <i>International Journal of Hydrogen Energy</i> , <b>2019</b> , 44, 6756-6762	6.7	3
294	Characterization of microstructure, hydrogen storage kinetics and thermodynamics of a melt-spun Mg <sub>86</sub> Y <sub>10</sub> Ni <sub>4</sub> alloy. <i>International Journal of Hydrogen Energy</i> , <b>2019</b> , 44, 6728-6737	6.7	17
293	Comprehensive investigation on hydrogen and fuel cell technology in the aviation and aerospace sectors. <i>Renewable and Sustainable Energy Reviews</i> , <b>2019</b> , 106, 31-40	16.2	123
292	Catalytic effect of Ti <sub>2</sub> C MXene on the dehydrogenation of MgH <sub>2</sub> . <i>International Journal of Hydrogen Energy</i> , <b>2019</b> , 44, 6787-6794	6.7	23
291	Facile Hydrogen Release on the Composites of Lithium Hydride with Carbonaceous and Polymer Materials. <b>2019</b> , 62, 87-96		1
290	Amorphous/nanocrystalline alloys: fabrication, properties, and applications. <b>2019</b> , 4, 100027		39
289	Capturing low-pressure hydrogen using V-Ti-Cr catalyzed magnesium hydride. <b>2019</b> , 413, 139-147		12

288	H <sub>2</sub> adsorption on Cu(I)-ZSM-5: Exploration of Cu(I)-exchange in solution. <i>International Journal of Hydrogen Energy</i> , <b>2019</b> , 44, 18866-18874	6.7	4
287	Novel one-step synthesis of nickel encapsulated carbon nanotubes as efficient electrocatalyst for hydrogen evolution reaction. <i>International Journal of Hydrogen Energy</i> , <b>2019</b> , 44, 2685-2693	6.7	30
286	Facile hydrothermal synthesis of 3D flower-like La-MoS <sub>2</sub> nanostructure for photocatalytic hydrogen energy production. <b>2019</b> , 43, 491-499		26
285	Structure and electrochemical performances of as-milled LaMg <sub>12</sub> -type alloy/Ni composites. <b>2019</b> , 26, 59-68		1
284	Enhanced dry methane reforming over Ru decorated mesoporous silica and its kinetic study. <b>2019</b> , 29, 240-253		27
283	Introduction: hydrogen storage as solution for a changing energy landscape. <b>2019</b> , 4,		2
282	Hydrogen storage thermodynamics and dynamics of LaMg <sub>12</sub> -based LaMg <sub>12</sub> -type alloys synthesized by mechanical milling. <b>2019</b> , 38, 1144-1152		6
281	Phase Transformations in MgH <sub>2</sub> /TiH <sub>2</sub> Hydrogen Storage System by High-Pressure Torsion Process. <b>2020</b> , 22, 1900027		19
280	The hydrogen storage properties of Mg-intermetallic-hydrides by ab initio calculations and kinetic Monte Carlo simulations. <i>International Journal of Hydrogen Energy</i> , <b>2020</b> , 45, 11158-11166	6.7	5
279	The destabilization of LiBH <sub>4</sub> through the addition of Bi <sub>2</sub> Se <sub>3</sub> nanosheets. <i>International Journal of Hydrogen Energy</i> , <b>2020</b> , 45, 23947-23953	6.7	7
278	Microstructural details of hydrogen diffusion and storage in Ti/VCr alloys activated through surface and bulk severe plastic deformation. <i>International Journal of Hydrogen Energy</i> , <b>2020</b> , 45, 5326-5336	6.7	13
277	Microstructural and morphological investigations on Mg-Nb <sub>2</sub> O <sub>5</sub> -CNT nanocomposites processed by high-pressure torsion for hydrogen storage applications. <i>International Journal of Hydrogen Energy</i> , <b>2020</b> , 45, 7917-7928	6.7	14
276	Materials, technological status, and fundamentals of PEM fuel cells: A review. <b>2020</b> , 32, 178-203		300
275	Properties of BaYO <sub>3</sub> perovskite and hydrogen storage properties of BaYO <sub>3</sub> H <sub>x</sub> . <i>International Journal of Hydrogen Energy</i> , <b>2020</b> , 45, 10507-10515	6.7	7
274	Improving the hydrogenation properties of AZ31-Mg alloys with different carbonaceous additives by high energy ball milling (HEBM) and equal channel angular pressing (ECAP). <i>International Journal of Hydrogen Energy</i> , <b>2020</b> , 45, 22291-22301	6.7	5
273	Effect of atomic iron on hydriding reaction of magnesium: Atomic-substitution and atomic-adsorption cases from a density functional theory study. <b>2020</b> , 504, 144489		12
272	Enhanced hydrogen storage performance of Mg-Cu-Ni system catalyzed by CeO <sub>2</sub> additive. <b>2020</b> , 38, 983-993		5
271	Study of the synthesis of PMMA-Mg nanocomposite for hydrogen storage application. <i>International Journal of Hydrogen Energy</i> , <b>2020</b> , 45, 4743-4753	6.7	8

270	Hydrogen storage thermodynamics and dynamics of Mg <sub>90</sub> Ni <sub>10</sub> based alloys synthesized by melt spinning. <b>2020</b> , 138, 109252		9
269	From the perspectives of DFT calculations, thermodynamic modeling, and kinetic Monte Carlo simulations: the interaction between hydrogen and ScC monolayers. <b>2020</b> , 22, 4387-4401		2
268	Hybrid activation mechanism of thermal annealing for hydrogen storage of magnesium based on experimental evidence and theoretical validation. <b>2020</b> , 504, 144491		10
267	TbMgNi <sub>4-x</sub> Cox(H,D) <sub>2</sub> System. I: Synthesis, Hydrogenation Properties, and Crystal and Electronic Structures. <b>2020</b> , 124, 196-204		5
266	A landscape of hydride compounds for off-board refilling of transport vehicles. <i>International Journal of Hydrogen Energy</i> , <b>2020</b> , 45, 2954-2966	6.7	4
265	Nano-inducement of Ni for low-temperature dominant dehydrogenation of Mg <sub>90</sub> Al alloy prepared by HCS+MM. <b>2020</b> , 819, 153020		7
264	LaFeO <sub>3</sub> synthesised by solid-state method for enhanced sorption properties of MgH <sub>2</sub> . <b>2020</b> , 16, 102844		44
263	A high-performance ternary ferrite-spinel material for hydrogen storage via chemical looping redox cycles. <i>International Journal of Hydrogen Energy</i> , <b>2020</b> , 45, 2034-2043	6.7	4
262	Enhanced kinetics of MgH <sub>2</sub> via in situ formed catalysts derived from MgCCo <sub>1.5</sub> Ni <sub>1.5</sub> . <b>2020</b> , 822, 153621		10
261	Magnesium-Based Materials for Hydrogen Storage-A Scope Review. <b>2020</b> , 13,		21
260	Metal (boro-) hydrides for high energy density storage and relevant emerging technologies. <i>International Journal of Hydrogen Energy</i> , <b>2020</b> , 45, 33687-33730	6.7	28
259	Molecular dynamics study on magnesium hydride nanoclusters with machine-learning interatomic potential. <b>2020</b> , 102,		2
258	Thermochemical transformation and reversible performance of Mg(NH <sub>2</sub> ) <sub>2</sub> NaMgH <sub>3</sub> system. <i>International Journal of Hydrogen Energy</i> , <b>2020</b> , 45, 23069-23075	6.7	4
257	Formation and hydrogen storage behavior of nanostructured Mg <sub>2</sub> FeH <sub>6</sub> in a compressed 2MgH <sub>2</sub> /Fe composite. <i>International Journal of Hydrogen Energy</i> , <b>2020</b> , 45, 21676-21686	6.7	3
256	Iron based catalyst for the improvement of the sorption properties of KSiH <sub>3</sub> . <i>International Journal of Hydrogen Energy</i> , <b>2020</b> , 45, 33681-33686	6.7	4
255	From gangue to the fuel-cells application. <b>2020</b> , 10, 20022		6
254	Study of the synthesis of C:H coating by PECVD for protecting Mg-based nano-objects. <b>2020</b> , 17, 2000083		
253	An effective method to screen carbon (boron, nitrogen) based two-dimensional hydrogen storage materials. <i>International Journal of Hydrogen Energy</i> , <b>2020</b> , 45, 25054-25064	6.7	9



252	Differences in the heterogeneous nature of hydriding/dehydriding kinetics of MgH <sub>2</sub> -TiH <sub>2</sub> nanocomposites. <i>International Journal of Hydrogen Energy</i> , <b>2020</b> , 45, 27421-27433	6.7	17
251	Adsorption of H <sub>2</sub> molecules on B/N-doped defected graphene sheets—DFT study. <b>2020</b> , 31, 2413-2434		2
250	Development of a Novel Method for the Fabrication of Nanostructured Zr(x)Ni(y) Catalyst to Enhance the Desorption Properties of MgH <sub>2</sub> . <b>2020</b> , 10, 849		4
249	Recent Advances in the Development of Nano-Sculpted Films by Magnetron Sputtering for Energy-Related Applications. <b>2020</b> , 10,		5
248	Mg-Ni-La based small hydrogen storage tank: kinetics, reversibility and reaction mechanisms.. <b>2020</b> , 10, 33171-33177		
247	Effect of carbon nanoscaffolds on hydrogen storage performance of magnesium hydride. <b>2020</b> , 37, 1306-1316		7
246	Hydrogen Direct Adsorptive Separation: Development Status and Trends. <b>2020</b> , 34, 15126-15140		2
245	Realizing Hydrogen De/Absorption Under Low Temperature for MgH <sub>2</sub> by Doping Mn-Based Catalysts. <b>2020</b> , 10,		11
244	Enhancing the Hydrogen Storage Properties of A <sub>x</sub> B <sub>y</sub> Intermetallic Compounds by Partial Substitution: A Short Review. <b>2020</b> , 1, 38-63		12
243	Improving hydrogen storage performance of Mg-based alloy through microstructure optimization. <b>2020</b> , 480, 228823		6
242	Behavior of Compacted Magnesium-Based Powders for Energy-Storage Applications. <b>2020</b> , 8, 54		0
241	Microstructure Evolution Mechanism and Mechanical Properties of Mg-RE Alloy at a Critical Transition Temperature of Material Performance. <b>2020</b> , 29, 7198-7206		2
240	In-situ transmission electron microscopy investigation of the influence of hydrogen on the oxidation mechanisms of fine grained magnesium. <b>2020</b> , 248, 122928		0
239	Insight into the energy conversion and structural evolution of magnesium hydride during high-energy ball milling for its controllable synthesis. <b>2020</b> , 836, 155312		4
238	The roles of native defects and transition metal additives in the dehydrogenation mechanism of Mg(AlH <sub>4</sub> ) <sub>2</sub> . <i>International Journal of Hydrogen Energy</i> , <b>2020</b> , 45, 17625-17636	6.7	1
237	Solid-state hydrogen storage nanomaterials for fuel cell applications. <b>2020</b> , 229-261		1
236	Trends and future challenges in hydrogen production and storage research. <b>2020</b> , 27, 31092-31104		27
235	Solid-State Conversion of Magnesium Waste to Advanced Hydrogen-Storage Nanopowder Particles. <b>2020</b> , 10,		3



234	Insight DFT studies about the optoelectronic properties of Fe and Ga doped Mg-based hydrides: Efficient materials for optical devices. <b>2020</b> , 24, e00483		1
233	Metal carbonates-induced solution-free dehydrogenation of alkaline earth metal hydrides at room temperature. <b>2020</b> , 289, 121485		1
232	In situ measurement technologies on solid-state hydrogen storage materials: a review. <b>2020</b> , 17, 100463		22
231	Investigation on Adsorption and Decomposition Properties of CL-20/FOX-7 Molecules on MgH(110) Surface by First-Principles. <b>2020</b> , 25,		2
230	Mechanically induced-catalyzation for improving the behavior of MgH <sub>2</sub> . <b>2020</b> , 263-291		
229	Li-triggered superior catalytic activity of V in Li <sub>3</sub> VO <sub>4</sub> : enabling fast and full hydrogenation of Mg at lower temperatures. <i>Journal of Materials Chemistry A</i> , <b>2020</b> , 8, 14935-14943	13	7
228	Direct Microstructural Evidence on the Catalyzing Mechanism for De/hydrogenation of Mg by Multi-valence NbOx. <b>2020</b> , 124, 6571-6579		3
227	Magnesium-based hydrogen storage compounds: A review. <b>2020</b> , 832, 154865		84
226	Growth kinetics of MgH <sub>2</sub> nanocrystallites prepared by ball milling. <b>2020</b> , 50, 178-183		22
225	Excellent catalysis of Mn <sub>3</sub> O <sub>4</sub> nanoparticles on the hydrogen storage properties of MgH <sub>2</sub> : an experimental and theoretical study. <b>2020</b> , 2, 1666-1675		18
224	Enhanced Hydrogen Storage Properties of MgH Using a Ni and TiO Co-Doped Reduced Graphene Oxide Nanocomposite as a Catalyst. <b>2020</b> , 8, 207		5
223	Towards Non-Mechanical Hybrid Hydrogen Compression for Decentralized Hydrogen Facilities. <b>2020</b> , 13, 3145		21
222	Enhancing Hydrogen Storage Properties of MgH by Transition Metals and Carbon Materials: A Brief Review. <b>2020</b> , 8, 552		23
221	Hydrogenation of acetylene and propyne over hydrogen storage ErNi <sub>5</sub> -Al alloys and the role of absorbed hydrogen. <i>International Journal of Hydrogen Energy</i> , <b>2020</b> , 45, 19226-19236	6.7	3
220	Investigation of dehydrogenation performance and air stability of MgH <sub>2</sub> /BMMMA nanostructured composite prepared by direct high-energy ball-milling. <b>2020</b> , 9, 1		4
219	Adsorption and decomposition properties of HMX on MgH <sub>2</sub> (1 1 0) surface: A first Principles study. <b>2020</b> , 538, 110875		1
218	Improve hydrogen sorption kinetics of MgH <sub>2</sub> by doping carbon-encapsulated iron-nickel nanoparticles. <b>2020</b> , 843, 156035		14
217	Modeling and numerical simulation of a 5 kg LaNi <sub>5</sub> -based hydrogen storage reactor with internal conical fins. <i>International Journal of Hydrogen Energy</i> , <b>2020</b> , 45, 8794-8809	6.7	30

216	Effect of air exposure on hydrogen storage properties of catalyzed magnesium hydride. <b>2020</b> , 454, 227936	14
215	Polyol Process Coupled to Cold Plasma as a New and Efficient Nanohydride Processing Method: Nano-NiH as a Case Study. <b>2020</b> , 10,	0
214	Enhancement of dehydrogenation properties in LiAlH <sub>4</sub> catalysed by BaFe <sub>12</sub> O <sub>19</sub> . <b>2020</b> , 835, 155183	10
213	Thermodynamic and microstructural basis for the fast hydrogenation kinetics in Mg/Mg <sub>2</sub> Ni-carbon hybrids. <i>International Journal of Hydrogen Energy</i> , <b>2020</b> , 45, 11632-11640	6.7 6
212	Hydrogen storage property of as-milled La <sub>7</sub> RE <sub>3</sub> Mg <sub>80</sub> Ni <sub>10</sub> (RE = Sm, Ce) alloys. <i>International Journal of Hydrogen Energy</i> , <b>2020</b> , 45, 28163-28174	6.7 3
211	Fabrication of ball-milled MgO/Mg(OH) <sub>2</sub> -hydromagnesite composites and evaluation as an air-stable hydrogen storage material. <i>International Journal of Hydrogen Energy</i> , <b>2020</b> , 45, 12949-12960	6.7 6
210	Effect of CeH-CeO Composites on the Desorption Properties of MgNiH. <b>2020</b> , 8, 293	3
209	Remarkably improved hydrogen storage properties of carbon layers covered nanocrystalline Mg with certain air stability. <i>International Journal of Hydrogen Energy</i> , <b>2020</b> , 45, 28134-28143	6.7 8
208	Hydrogen activation on aluminium-doped magnesium hydride surface for methanation of carbon dioxide. <b>2020</b> , 515, 146038	6
207	Hydrogen storage in magnesium decorated boron clusters (Mg <sub>2</sub> B <sub>n</sub> , n = 4–14): A density functional theory study. <i>International Journal of Hydrogen Energy</i> , <b>2020</b> , 45, 12961-12971	6.7 15
206	Catalytic effect on hydrogen de/absorption properties of MgH - x'wt% MM (x = 0, 10, 20, 30) nanomaterials. <b>2021</b> , 28, 3866-3871	1
205	Enhancing (de)hydrogenation kinetics properties of the Mg/MgH <sub>2</sub> system by adding ANi <sub>5</sub> (A = Ce, Nd, Pr, Sm, and Y) alloys via ball milling. <b>2021</b> , 39, 1010-1016	8
204	Synthesis process and catalytic activity of Nb <sub>2</sub> O <sub>5</sub> hollow spheres for reversible hydrogen storage of MgH <sub>2</sub> . <b>2021</b> , 45, 3129-3141	10
203	Highly active multivalent multielement catalysts derived from hierarchical porous TiNb <sub>2</sub> O <sub>7</sub> nanospheres for the reversible hydrogen storage of MgH <sub>2</sub> . <b>2021</b> , 14, 148-156	24
202	Experimental evaluation of the role of oxygen on the growth of MgOx nano-sculpted thin films synthesized by reactive magnetron sputtering combined with glancing angle deposition. <b>2021</b> , 718, 138480	1
201	Hydrogen absorption and desorption properties of Mg/MgH <sub>2</sub> with nanometric dispersion of small amounts of Nb(V) ethoxide. <i>International Journal of Hydrogen Energy</i> , <b>2021</b> , 46, 4126-4136	6.7 5
200	ΔMgH <sub>2</sub> induced by high pressure for low temperature dehydrogenation. <i>International Journal of Hydrogen Energy</i> , <b>2021</b> , 46, 5441-5448	6.7 4
199	Hydrogen storage properties and mechanisms of as-cast, homogenized and ECAP processed Mg <sub>98.5</sub> Y <sub>1</sub> Zn <sub>0.5</sub> alloys containing LPSO phase. <b>2021</b> , 217, 119315	6

198	First-principles investigations of the structural, optoelectronic, magnetic and thermodynamic properties of hydride perovskites $\text{XCuH}_3$ (X = Co, Ni, Zn) for hydrogen storage applications. <b>2021</b> , 228, 166187		3
197	The potential of hydrogen hydrate as a future hydrogen storage medium. <b>2021</b> , 24, 101907		11
196	Improving the dynamics of a Nd-Mg-Ni-based alloy by combining Ni element and mechanical milling.. <b>2021</b> , 11, 3603-3612		0
195	Revealing the role of defects in graphene oxide in the evolution of magnesium nanocrystals and the resulting effects on hydrogen storage. <i>Journal of Materials Chemistry A</i> , <b>2021</b> , 9, 9875-9881	13	5
194	Current Research Trends and Perspectives on Solid-State Nanomaterials in Hydrogen Storage. <b>2021</b> , 2021, 3750689		9
193	Solid-state hydrides for hydrogen storage. <b>2021</b> , 249-264		1
192	Promoted plasma generation for laser-driven flyer by MgAl hydride films. <b>2021</b> , 184, 109949		1
191	Synthesis of Highly Activated Magnesium by Niobium and Tantalum Gel Oxide Catalyst. <b>2021</b> , 62, 284-289		1
190	Hydrogen storage properties of MgNb@C nanocomposite: Effects of Nb nanocatalyst and carbon nanoconfinement. <i>International Journal of Hydrogen Energy</i> , <b>2021</b> , 46, 9443-9451	6.7	10
189	Hydrogen storage behavior of Mg-based alloy catalyzed by carbon-cobalt composites. <b>2021</b> , 9, 1977-1977		4
188	Synergetic effect of multiple phases on hydrogen desorption kinetics and cycle durability in ball milled $\text{MgH}_2/\text{BrF}_3/\text{Al}$ composite. <b>2021</b> , 31, 152-158		2
187	DFT based first principles study of novel combinations of perovskite-type hydrides $\text{XGaH}_3$ (X = Rb, Cs, Fr) for hydrogen storage applications. <b>2021</b> , 11, 025032		2
186	Review on Hydrogen Storage Performance of $\text{MgH}_2$ : Development and Trends. <b>2021</b> , 6, 1589-1606		11
185	A Review of High Density Solid Hydrogen Storage Materials by Pyrolysis for Promising Mobile Applications. <b>2021</b> , 60, 2737-2771		12
184	Obtaining particles with the structure $\text{Mg@C}$ and $(\text{Mg@C})@\text{Pd}$ , their properties and stability in the hydrogenation/dehydrogenation processes. <i>International Journal of Hydrogen Energy</i> , <b>2021</b> , 47, 7299-7299	6.7	0
183	Substitution of nickel in $\text{Mg}_2\text{Ni}$ and its hydride with elements from groups XIII and XIV: An ab initio study. <i>International Journal of Hydrogen Energy</i> , <b>2021</b> , 46, 15691-15701	6.7	0
182	Hydrogen desorption from alloys $\text{MgCu}(\text{XCl})$ : Cu catalysis in detail. <i>International Journal of Hydrogen Energy</i> , <b>2021</b> , 46, 14494-14507	6.7	0
181	Hydrogen Desorption Properties of $\text{MgH}_2 + 10 \text{ wt\% SiO}_2 + 5 \text{ wt\% Ni}$ Prepared by Planetary Ball Milling. <b>2021</b> , 16, 280-285		11

180	Optimal design of a metal hydride hydrogen storage bed using a helical coil heat exchanger along with a central return tube during the absorption process. <i>International Journal of Hydrogen Energy</i> , <b>2021</b> , 46, 14478-14493	6.7	12
179	Location-dependent effect of nickel on hydrogen dissociation and diffusion on Mg (0001) surface: Insights into hydrogen storage material design. <b>2021</b> ,		7
178	Exploring fundamental properties of Mg <sub>0.915</sub> Al <sub>0.085</sub> H <sub>2</sub> (A' = Ti, Fe) for potential hydrogen storage application: First-principles study. <b>2021</b> , 45, 14971-14984		0
177	Boron from net charge acceptor to donor and its effect on hydrogen uptake by novel Mg-B-electrochemically synthesized reduced graphene oxide. <b>2021</b> , 11, 10995		2
176	Enhanced hydrogen storage properties of Mg by the synergistic effect of grain refinement and NiTiO <sub>3</sub> nanoparticles. <b>2021</b> ,		4
175	Superior dehydrogenation performance of Mg-based alloy under electropulsing. <b>2021</b> , 197, 113788		3
174	Characterization of microstructure, hydrogen storage kinetics and thermodynamics of ball-milled Mg <sub>90</sub> Y <sub>1.5</sub> Ce <sub>1.5</sub> Ni <sub>7</sub> alloy. <i>International Journal of Hydrogen Energy</i> , <b>2021</b> , 46, 17802-17813	6.7	3
173	Roles of Ti-Based Catalysts on Magnesium Hydride and Its Hydrogen Storage Properties. <b>2021</b> , 9, 36		8
172	Catalytic effect comparison of TiO <sub>2</sub> and La <sub>2</sub> O <sub>3</sub> on hydrogen storage thermodynamics and kinetics of the as-milled La-Sm-Mg-Ni-based alloy. <b>2021</b> , 9, 2063-2063		0
171	Multilayer Mg/NbO thin film nanostructures. <b>2021</b> , 330, 114251		
170	Two-dimensional vanadium carbide for simultaneously tailoring the hydrogen sorption thermodynamics and kinetics of magnesium hydride. <b>2021</b> ,		1
169	Hydrogen Production via Hydrolysis and Alcoholysis of Light Metal-Based Materials: A Review. <b>2021</b> , 13, 134		11
168	Experimental and theoretical studies of hydrogen generation by binary metal (oxide)-graphene oxide composite materials. <i>International Journal of Hydrogen Energy</i> , <b>2021</b> , 46, 19802-19813	6.7	4
167	Dynamical stabilization and H-vacancy diffusion kinetics of lightweight complex hydrides: Ab initio study for hydrogen storage improvement. <i>International Journal of Hydrogen Energy</i> , <b>2021</b> , 46, 22591-22598	6.7	4
166	The investigation of hydrogen sublattice in Mg <sub>2</sub> NiH <sub>x</sub> (x = 0.3) hydride by first-principle calculations. <b>2021</b> , 27, 102174		0
165	Magnesium containing High Entropy Alloys.		0
164	Enhancement of hydrogen storage properties of Li <sub>12</sub> +xMg <sub>3</sub> -xSi <sub>4</sub> -ySn <sub>y</sub> (x=y=0.48) phase by modification with Li <sub>x</sub> ZnO/La <sub>2</sub> O <sub>3</sub> -CNT composites. <i>International Journal of Hydrogen Energy</i> , <b>2021</b> , 46, 22864-22876	6.7	2
163	Vacancy-Mediated Hydrogen Spillover Improving Hydrogen Storage Properties and Air Stability of Metal Hydrides. <b>2021</b> , 17, e2100852		4

162	Catalytic effects of TiO <sub>2</sub> on hydrogen storage thermodynamics and kinetics of the as-milled Mg-based alloy. <b>2021</b> , 176, 111118		5
161	Electro-deoxidation Process for Producing FeTi from Low-Grade Ilmenite: Tailoring Precursor Composition for Hydrogen Storage. <b>2021</b> , 7, 1178-1189		1
160	Study of the Hydrogen Storage Properties and Catalytic Mechanism of a MgH-NaAlH System Incorporating FeCl. <b>2021</b> , 6, 18948-18956		1
159	Trimesic acid-Ni based metal organic framework derivative as an effective destabilizer to improve hydrogen storage properties of MgH <sub>2</sub> . <i>International Journal of Hydrogen Energy</i> , <b>2021</b> , 46, 28134-28143	6.7	2
158	Improvement of substituting La with Ce on hydrogen storage thermodynamics and kinetics of Mg-based alloys. <i>International Journal of Hydrogen Energy</i> , <b>2021</b> , 46, 28719-28733	6.7	5
157	Mg-based materials for hydrogen storage. <b>2021</b> , 9, 1837-1837		18
156	Influence of CeO <sub>2</sub> nanoparticles on microstructure and hydrogen storage performance of Mg-Ni-Zn alloy. <b>2021</b> , 178, 111248		3
155	The effect of Na addition on the first hydrogen absorption kinetics of cast hypoeutectic Mg <sub>92</sub> La alloys. <i>International Journal of Hydrogen Energy</i> , <b>2021</b> , 46, 27096-27106	6.7	3
154	Enhancement in hydrogenation dehydrogenation kinetics of KSiH <sub>3</sub> by the addition of Ti-based catalysts. <b>2021</b> , 11, 100086		0
153	Achieving a novel solvent-free regeneration of LiBH <sub>4</sub> combining hydrogen storage and production in a closed material cycle. <b>2021</b> ,		0
152	Progress of graphene and loaded transition metals on Mg-based hydrogen storage alloys. <i>International Journal of Hydrogen Energy</i> , <b>2021</b> , 46, 33468-33485	6.7	3
151	The Catalytic Role of D-block Elements and Their Compounds for Improving Sorption Kinetics of Hydride Materials: A Review. <b>2021</b> , 2, 333-364		0
150	Influence of carbon catalysts on the improvement of hydrogen storage properties in a body-centered cubic solid solution alloy. <b>2021</b> , 182, 422-434		0
149	Assessing the microstructure and in vitro degradation behavior of Mg-xGd screw implants using µCT. <b>2021</b> , 9, 2207-2207		6
148	Numerical simulation of heat supply and hydrogen desorption by hydrogen flow to porous MgH <sub>2</sub> sheet. <b>2021</b> , 421, 129648		2
147	Hydrogen storage technologies for stationary and mobile applications: Review, analysis and perspectives. <i>Renewable and Sustainable Energy Reviews</i> , <b>2021</b> , 149, 111311	16.2	50
146	Achieving superior hydrogen storage properties of MgH <sub>2</sub> by the effect of TiFe and carbon nanotubes. <b>2021</b> , 422, 130101		36
145	Achieving fast hydrogenation by hydrogen-induced phase separation in Mg-based amorphous alloys. <b>2021</b> , 887, 161476		3

144	Thermally stable La-Ni-B amorphous additives for enhancing hydrogen storage performance of MgH <sub>2</sub> . <b>2021</b> , 888, 161520	5
143	Materials for Hydrogen Mobile Storage Applications. 632, 052087	1
142	Synergetic effect of C and Ni on hydrogen release from MgNi-electrochemically synthesized reduced graphene oxide based hydride. <b>2021</b> , 5, 4414-4424	2
141	Remarkable isosteric heat of hydrogen adsorption on Cu(I)-exchanged SSZ-39. <i>International Journal of Hydrogen Energy</i> , <b>2020</b> , 45, 34972-34982	6.7 7
140	Modeling the control of the desorption rate of hydrogen released from the adsorption storage bed to supply a fuel cell. <i>International Journal of Hydrogen Energy</i> , <b>2020</b> , 45, 17605-17612	6.7 3
139	Numerical modeling and performance comparison of high-temperature metal hydride reactor equipped with bakery system for solar thermal energy storage. <i>International Journal of Hydrogen Energy</i> , <b>2020</b> , 45, 31612-31631	6.7 7
138	Catalytic effect of Ni@rGO on the hydrogen storage properties of MgH <sub>2</sub> . <b>2020</b> , 8, 461-471	46
137	Hydrolysis and regeneration of sodium borohydride (NaBH <sub>4</sub> ) via combination of hydrogen production and storage. <b>2017</b> , 359, 400-407	129
136	Enhanced hydrogen generation by hydrolysis of Mg doped with flower-like MoS <sub>2</sub> for fuel cell applications. <b>2017</b> , 365, 273-281	53
135	Mechanism of the growth pattern formation and three-dimensional morphological transition of hcp magnesium alloy dendrite. <b>2018</b> , 2,	19
134	Preparation of MgH <sub>2</sub> by Gas-Solid Synthesis and Thermodynamics Analysis. <b>2015</b> , 03, 53-59	3
133	The influence of Ti layer on the hydrogen desorption properties of Mg in multi-layer. <b>2014</b> , 396-400	1
132	Hydrogen storage kinetics of nanocrystalline and amorphous NdMg <sub>12</sub> -type alloy/Ni composites synthesized by mechanical milling. <b>2016</b> , 107, 605-614	3
131	Microstructure and Electrochemical Hydrogen Storage Characteristics of CeMg <sub>12</sub> +100wt%Ni+Ywt%TiF <sub>3</sub> (Y=0, 3, 5) Alloys Prepared by Ball Milling. <b>2013</b> , 28, 217-223	3
130	First-Principles Investigation of Energetics and Electronic Structures of Ni and Sc Co-Doped MgH <sub>2</sub> . <b>2016</b> , 07, 34-42	8
129	The Structures and Properties of Y-Substituted Mg <sub>2</sub> Ni Alloys and Their Hydrides: A First-Principles Study. <b>2016</b> , 07, 67-74	4
128	Hydrogen production, storage and delivery in regards to automotive applications A brief review. <b>2021</b> ,	0
127	Explosion characteristics and suppression of hybrid Mg/H <sub>2</sub> mixtures. <i>International Journal of Hydrogen Energy</i> , <b>2021</b> , 46, 38934-38943	6.7 5

- 126 Effect of Carbonized 2-Methylnaphthalene on the Hydrogen Storage Performance of MgH<sub>2</sub>. **2021**, 4, 11505-11513 o
- 125 Ab-initio study of the structural, optoelectronic, magnetic, hydrogen storage properties and mechanical behavior of novel combinations of hydride perovskites LiXH<sub>3</sub> (X = Cr, Fe, Co, & Zn) for hydrogen storage applications. **2021**, 20, 2284 o
- 124 Photocatalytic water splitting ability of Fe/MgO-rGO nanocomposites towards hydrogen evolution. *International Journal of Hydrogen Energy*, **2021**, 46, 38232-38246 6.7 7
- 123 First Principles Study of Electronic Structure and Magnetic Properties of TMH (TM = Cr, Mn, Fe, Co). **2013**, 2013, 1-10 1
- 122 Isothermal Hydrogenation Kinetics Study of Magnesium Hydride with TiH<sub>2</sub> Additive. **2014**, 27-30
- 121 Isothermal Hydrogenation Kinetics Study of Magnesium Hydride with TiH<sub>2</sub> Additive. 27-30
- 120 Group 1-Group 2 Bimetallic Alkyls and Hydrides. **2016**, 41-61
- 119 Effects of Different Mg/Ti Ratios on the Electrochemical Hydrogen Storage Properties of Mg<sub>x</sub>Ti<sub>1-x</sub>Pd Films. **2016**, 97-105
- 118 Introduction. **2016**, 1-40
- 117 An Electrochemical Investigation of Mg<sub>2</sub>Ni Hydrogen Storage Alloys by Mechanical Alloying. **2017**, 375-380
- 116 (La, Mg)<sub>2</sub>Ni<sub>7</sub>-based hydrogen storage alloys. **2017**, 261-277
- 115 Introduction to Mg-based metal hydrides. **2018**, 20-20
- 114 Characterization of TiO<sub>2</sub> Nanoparticle Morphology and its Influence on the Hydrogen Sorption Kinetics of MgH<sub>2</sub>. **2019**, 22,
- 113 Pathogenesis of Migraine and Magnesium Deficiency. **2019**, 09, 1374-1380
- 112 Producción de Hidrógeno mediante digestión anaerobia de residuos de planta de jitomate. 1-12
- 111 New ternary MgCo<sub>2</sub>Ga<sub>5</sub> and MgNi<sub>2</sub>Ga<sub>5</sub> gallides. **2020**, 235, 513-521 o
- 110 Determination of thermophysical and thermodynamic properties, of Ag-Mg alloys. **2021**, 29, 102946 o
- 109 Cluster nanoportals for the hydrogenation of underlying nanofilms. **2020**, 87-118



108 Hydrogen. **2022**, 419-444

107 Fast and stable hydrogen storage in the porous composite of MgH<sub>2</sub> with Nb<sub>2</sub>O<sub>5</sub> catalyst and carbon nanotube. **2022**, 893, 162206

5

106 Hydrogen. **2020**, 168-194

105 Significance of Hydrogen as Economic and Environmentally Friendly Fuel. **2021**, 14, 7389

12

104 Room temperature conversion of Mg to MgH<sub>2</sub> assisted by low fractions of additives. *International Journal of Hydrogen Energy*, **2021**,

6.7 2

103 The comprehensive review for development of heat exchanger configuration design in metal hydride bed. *International Journal of Hydrogen Energy*, **2021**, 47, 2461-2461

6.7 2

102 Stability, Electronic Structure and Thermodynamic Properties of Nanostructured MgH<sub>2</sub> Thin Films. **2021**, 14, 7737

2

101 Hydrogen storage properties of Pr-Mg-Ni- based alloys prepared by vacuum induction melting. **2022**, 197, 110865

1

100 Enhanced hydrogen desorption properties of MgH<sub>2</sub> by highly dispersed Ni: The role of in-situ hydrogenolysis of nickelocene in ball milling process. **2022**, 900, 163547

2

99 MgH<sub>2</sub>-based hydrogen storage tank: Kinetics, reversibility, and MWCNTs content. **2022**, 163, 110578

1

98 Multilayer crystal-amorphous Pd-based nanosheets on Si/SiO<sub>2</sub> with interface-controlled ion transport for efficient hydrogen storage. *International Journal of Hydrogen Energy*, **2022**, 47, 6777-6788

6.7 0

97 Nonisothermal crystallization behavior of micron-sized Mg<sub>85</sub>Ni<sub>5</sub>Y<sub>10</sub> amorphous wires. **2022**, 581, 121412

0

96 Ultra-fine TiO<sub>2</sub> nanoparticles supported on three-dimensionally ordered macroporous structure for improving the hydrogen storage performance of MgH<sub>2</sub>. **2022**, 585, 152561

3

95 Effect of Microstructural Refinement and Na Addition on Hydrogenation Kinetics of Cast Mg<sub>90</sub>Al<sub>10</sub> Alloy During the First Hydrogen Absorption Process. **2022**, 69-76

94 Electronic structure regulation toward the improvement of the hydrogenation properties of TiZrHfMoNb high-entropy alloy. **2022**, 905, 164150

0

93 Magnesium Alloys for Hydrogen Storage Processed by ECAP Followed by Low Temperature Rolling. **2022**, 25,

0

92 Enhancement of Effective Thermal Conductivity of Rgo/Mg Nanocomposite Packed Beds.

91 Transition-metal-based pentalene complexes as hydrogen storage materials— theoretical view.

0

90	Synergistic Effects of V and Ni Catalysts on Hydrogen Sorption Kinetics of Mg-Based Hydrogen Storage Materials: A Computational Study. <b>2022</b> , 126, 5483-5492		0
89	A Unique Nanoflake-Shape Bimetallic Ti-Nb Oxide of Superior Catalytic Effect for Hydrogen Storage of MgH <sub>2</sub> . <b>2022</b> , e2107013		4
88	Investigation on the gaseous hydrogen storage properties of as-cast Mg <sub>95</sub> -Al <sub>5</sub> Y (x = 0.8) alloys. <i>International Journal of Hydrogen Energy</i> , <b>2022</b> , 47, 12653-12664	6.7	0
87	Phase Change Cooling of a Metal Hydride Reactor for Rapid Hydrogen Absorption. <b>2022</b> , 15, 2490		0
86	Hydrogen-induced change of oxidation combustion characteristics of Al <sub>2</sub> Mg alloy. <i>International Journal of Hydrogen Energy</i> , <b>2022</b> , 47, 11686-11693	6.7	
85	Hydrogen sorption behaviour of Mg-5wt.%La alloys after the initial hydrogen absorption process. <i>International Journal of Hydrogen Energy</i> , <b>2022</b> ,	6.7	1
84	Recent Advances on Mg <sub>90</sub> Al <sub>10</sub> Systems for Solid-State Hydrogen Storage: A Review. <b>2022</b> , 10,		2
83	Free volume formation and the high strength of pure Mg after room temperature core-sheath ECAP passes. <b>2022</b> , 18, 147-158		0
82	Significantly improved hydrogen storage properties of Mg <sub>90</sub> Al <sub>10</sub> catalyzed by TiF <sub>3</sub> . <b>2022</b> , 908, 164581		0
81	Stability and electronic structure of magnesium hydride and magnesium deuteride under high pressure. <b>2021</b> , 2145, 012026		0
80	Two-dimensional GeC <sub>3</sub> : a reversible, high-capacity hydrogen molecule storage material predicted by first-principles calculations.. <b>2022</b> , 101984		2
79	Transition towards carbon-neutral districts based on storage techniques and spatiotemporal energy sharing with electrification and hydrogenation. <i>Renewable and Sustainable Energy Reviews</i> , <b>2022</b> , 162, 112444	16.2	4
78	Absorption based solid state hydrogen storage system: A review. <b>2022</b> , 52, 102204		1
77	Enhancement of effective thermal conductivity of rGO/Mg nanocomposite packed beds. <b>2022</b> , 192, 122891		1
76	Few-layer MXene Ti <sub>3</sub> C <sub>2</sub> T <sub>x</sub> supported Ni@C nanoflakes as catalyst for hydrogen desorption of MgH <sub>2</sub> . <i>Journal of Materials Chemistry A</i> ,	13	2
75	Hydrogen production in Mexico: State of the art, future perspectives, challenges, and opportunities. <i>International Journal of Hydrogen Energy</i> , <b>2022</b> ,	6.7	0
74	Heteroatom-Doped Graphenes as Actively Interacting 2D Encapsulation Media for Mg-Based Hydrogen Storage.. <b>2022</b> ,		1
73	Material Life Cycle Assessment on Mg <sub>2</sub> NiH <sub>x</sub> -CaF <sub>2</sub> Composites. <b>2022</b> , 33, 148-157		

72	Probing the structural evolution, electronic and vibrational properties of magnesium clusters doped with sodium atom*.		0
71	ZnC3-2D a new material for hydrogen reversible storage predicted by first-principles calculations. <b>2022</b> , 103657		0
70	Milling induced surface modification of V-based catalyst to improve sorption kinetics of KSiH3: An XPS investigation. <i>International Journal of Hydrogen Energy</i> , <b>2022</b> ,	6.7	0
69	A Glimpse on the plethora of applications of prodigious material MXene. <b>2022</b> , e00439		0
68	Microstructure and electrochemical performance of Zn-doped of Mg <sub>2</sub> Ni <sub>1-x</sub> Zn <sub>x</sub> hydrogen storage alloys. <i>International Journal of Hydrogen Energy</i> , <b>2022</b> ,	6.7	0
67	In situ formation of nanocrystalline MgH <sub>2</sub> through room temperature hydrogenation. <b>2022</b> , 218, 110729		1
66	Paper-based microfluidic fuel cells and their applications: A prospective review. <b>2022</b> , 264, 115732		2
65	Hydrogen Storage Behavior and Performance of Multiple Cold-Rolled MgH <sub>2</sub> /Nb <sub>2</sub> O <sub>5</sub> Nanocomposite Powders. <b>2022</b> , 10, 1017		
64	High quality Mg(0001) films grown on Si(111)3B-B surface at room temperature. <b>2022</b> , 754, 139317		
63	Materials for hydrogen storage at room temperature [An overview. <i>Materials Today: Proceedings</i> , <b>2022</b> ,	1.4	0
62	Solar thermal-activated photocatalysis for hydrogen production and aqueous triethanolamine polymerization. <i>Journal of Materials Chemistry A</i> ,	13	0
61	Impact of Polymers on Magnesium-Based Hydrogen Storage Systems. <i>Polymers</i> , <b>2022</b> , 14, 2608	4.5	0
60	Challenges toward achieving a successful hydrogen economy in the US: Potential end-use and infrastructure analysis to the year 2100. <b>2022</b> , 100012		1
59	Improved hydrogen storage characteristics of magnesium hydride using dual auto catalysts (MgF <sub>2</sub> +CsH). <i>International Journal of Hydrogen Energy</i> , <b>2022</b> ,	6.7	0
58	Microstructure characteristics, hydrogen storage thermodynamic and kinetic properties of Mg <sub>2</sub> Ni <sub>1-x</sub> based hydrogen storage alloys. <i>International Journal of Hydrogen Energy</i> , <b>2022</b> ,	6.7	1
57	Hydrogen storage characteristics, kinetics and thermodynamics of Gd-Mg-Ni-based alloys. <i>International Journal of Hydrogen Energy</i> , <b>2022</b> ,	6.7	1
56	Hydrogen energy production, storage methods, and applications for power generation. 3, 113-122		
55	Hydrogen storage methods: Review and current status. <i>Renewable and Sustainable Energy Reviews</i> , <b>2022</b> , 167, 112743	16.2	11

54	Regulation of Kinetic Properties of Chemical Hydrogen Absorption and Desorption by Cubic K <sub>2</sub> MoO <sub>4</sub> on Magnesium Hydride. <b>2022</b> , 12, 2468	0
53	Design optimization of a magnesium-based metal hydride hydrogen energy storage system. <b>2022</b> , 12,	0
52	Electrochemical hydrogen storage, mechanical and thermal behaviors of novel Mg-based alloy. <b>2022</b> , 11, 1-9	
51	The effects of crystalline defects on hydrogen absorption kinetics of catalyzed MgH <sub>2</sub> at ambient conditions. <b>2022</b> , 927, 167090	1
50	Remarkable kinetics of novel Ni@CeO <sub>2</sub> /MgH <sub>2</sub> hydrogen storage composite. <b>2022</b> ,	1
49	Experimental hydrogen sorption study on a LaNi <sub>5</sub> -based 5 kg reactor with novel conical fins and water tubes and its numerical scale-up through a modular approach. <b>2022</b> ,	0
48	Recent Advances and Reliable Assessment of Solid-State Materials for Hydrogen Storage: A Step Forward toward a Sustainable H <sub>2</sub> Economy. 2200276	0
47	A Unique NiOOH@FeOOH Heteroarchitecture for Enhanced Oxygen Evolution in Saline Water. 2108619	6
46	Revealing the effect of 2D carbides with different metal sites for improving hydrogen storage in MgH <sub>2</sub> . 10,	0
45	Fundamentals and recent advances in polymer composites with hydride-forming metals for hydrogen storage applications. <b>2022</b> , 47, 34139-34164	1
44	XPS Investigation on Improving Hydrogen Sorption Kinetics of the KSiH <sub>3</sub> System by Using Zr-Based Catalysts. <b>2022</b> , 15, 7454	1
43	Improving hydrogen storage thermodynamics and kinetics of Ce-Mg-Ni-based alloy by mechanical milling with TiF <sub>3</sub> . <b>2022</b> ,	0
42	Magnesium Sublimation for Growing Thin Films and Conformal Coatings on 1D Nanostructures. <b>2022</b> , 2, 186-193	0
41	Insights of hydrogen adsorption and dissociation on Ni doped Mg <sub>4</sub> clusters: A DFT study. <b>2022</b> , 1217, 113907	0
40	Hydrogen in magnesium alanate Mg(AlH <sub>4</sub> ) <sub>2</sub> , aluminum and magnesium hydrides. <b>2022</b> ,	0
39	A Fancy Hydrangea Shape Bimetallic Ni-Mo Oxide of Remarkable Catalytic Effect for Hydrogen Storage of MgH <sub>2</sub> . <b>2022</b> ,	0
38	Improved hydrogen storage performance of Sm-Mg composites by adding nano-graphite. <b>2022</b> , 168144	0
37	Remarkable low-temperature hydrogen cycling kinetics of Mg enabled by VH nanoparticles. <b>2023</b> , 144, 168-177	3

- 36 Boosting the hydrogen storage performance of MgH<sub>2</sub> by Vanadium based complex oxides. **2023**, 174, 111187 0
- 35 Effects of highly dispersed Ni nanoparticles on the hydrogen storage performance of MgH<sub>2</sub>. **2023**, 30, 54-62 0
- 34 Gas Hydrates as High-Efficiency Storage System: Perspectives and Potentialities. **2022**, 15, 8728 1
- 33 Density functional theory study of reversible hydrogen storage in monolayer beryllium hydride by decoration with boron and lithium. **2022**, 0
- 32 Impact of severe plastic deformation on kinetics and thermodynamics of hydrogen storage in magnesium and its alloys. **2022**, 1
- 31 The rare earth doped Mg<sub>2</sub>Ni (010) surface enhances hydrogen storage. **2022**, 156243 0
- 30 Bibliometric Analysis of Global Trends around Hydrogen Production Based on the Scopus Database in the Period 2011-2021. **2023**, 16, 87 1
- 29 Experimental Study on the Relationship Between Unit Cell Parameters and Dehydrogenation Temperature of MgH<sub>2</sub>. 0
- 28 Dual-cation K<sub>2</sub>TaF<sub>7</sub> catalyst improves high-capacity hydrogen storage behavior of MgH<sub>2</sub>. **2022**, 0
- 27 Peculiarities of the absorption and desorption of hydrogen by opal matrices. **2023**, 0
- 26 Highly Efficient Hydrogen Storage of Sc Decorated Biphenylene Monolayer near Ambient-temperature: An Ab-initio Simulations. 0
- 25 Superfunctional Materials by Ultra-Severe Plastic Deformation. **2023**, 16, 587 0
- 24 Interfacial engineering of nickel/vanadium based two-dimensional layered double hydroxide for solid-state hydrogen storage in MgH<sub>2</sub>. **2022**, 0
- 23 Microstructural characteristics and hydrogen storage properties of the Mg<sub>91</sub>Ni<sub>8</sub>Si<sub>2</sub> nanocomposite prepared by a solution-based method. **2023**, 0
- 22 Role of electron localisation in H adsorption and hydride formation in the Mg basal plane under aqueous corrosion: a first-principles study. 0
- 21 Enhancing hydrogen storage properties of MgH<sub>2</sub> using FeCoNiCrMn high entropy alloy catalysts. **2023**, 149, 88-98 1
- 20 Recent advances of magnesium hydride as an energy storage material. **2023**, 149, 99-111 0
- 19 Recent advances in metal/covalent organic frameworks based materials: Their synthesis, structure design and potential applications for hydrogen production. **2023**, 483, 215066 1

- 18 In situ analysis of phase constituents evolution upon hydrogen cycling of cold-forged Mg-Ni powders. **2023**, 947, 169543 ○
- 17 Hydrogen storage performance and phase transformations in as-cast and extruded Mg-Ni-Gd-Y-Zn-Cu alloys. **2023**, 151, 162-177 ○
- 16 Effect of Y content on the hydrogen storage properties of ball-milled Mg<sub>2.4</sub>-Y Ni (x = 0.05, 0.1, 0.15, 0.2) alloys. **2023**, 178, 111320 ○
- 15 Enhancement of hydrogen storage properties from amorphous Mg<sub>85</sub>Ni<sub>5</sub>Y<sub>10</sub> alloy. **2023**, 605, 122167 ○
- 14 Influence of niobium/tantalum doping on the hydrogen behavior of ZrCo(110) surface. **2023**, ○
- 13 Structural, electronic, mechanical and dynamical stability properties of LiAH<sub>3</sub> (A = Sc, Ti & V) perovskite-type hydrides: A first principle study. **2023**, 568, 111851 ○
- 12 Hydrogen storage property improvement of La<sub>0.7</sub>Mg<sub>0.3</sub>Ni alloy by ball milling with TiF<sub>3</sub>. **2023**, ○
- 11 Recent advancements in hydrogen storage - Comparative review on methods, operating conditions and challenges. **2023**, ○
- 10 Computational design of a new palladium alloy with efficient hydrogen storage capacity and hydrogenation-dehydrogenation kinetics. **2023**, ○
- 9 On the Catalytic Mechanism of 3d and 4d Transition-Metal-Based Materials on the Hydrogen Sorption Properties of Mg/MgH<sub>2</sub>. **2023**, 13, 519 ○
- 8 Hydrogen Hydrate Promoters for Gas Storage: A Review. **2023**, 16, 2667 ○
- 7 Research Regarding Molybdenum Flakes: Improvement on the Hydrogen Storage Efficiency of MgH<sub>2</sub>. **2023**, 13, 631 ○
- 6 First principle study on transition metal ammine borohydrides with amphoteric hydrogen for hydrogen storage applications. **2023**, ○
- 5 Combined effect of multiple atomic interactions and structural catalysis on the dehydrogenation from MgH<sub>2</sub> in Mg(H<sub>2</sub>)-Ni-rGO system. ○
- 4 Structures and hydrogen storage properties of AeVH<sub>3</sub> (Ae = Be, Mg, Ca, Sr) perovskite hydrides by DFT calculations. **2023**, ○
- 3 High catalytic activity derived from TiNbAlC MAX towards improving the hydrogen storage properties of MgH<sub>2</sub>. **2023**, 955, 170297 ○
- 2 High-performance La<sub>0.7</sub>Mg<sub>0.3</sub>Ni-based alloys prepared with low cost raw materials. **2023**, ○
- 1 Hydrogen storage thermodynamics and kinetics of the as-cast and milled Ce-Mg-Ni-based alloy. **2023**, 35, 106217 ○

