Marek PolaÅ„ski

List of Publications by Year
in descending order

74 papers	2,639 citations	185998 28 h-index	189595 50 g-index
75 all docs	75 docs citations	75 times ranked	2442 citing authors

#	Article	IF	Citations
1	The microstructure, mechanical properties and corrosion resistance of 316L stainless steel fabricated using laser engineered net shaping. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 677, 1-10.	2.6	356
2	Structure and hydrogen storage properties of a high entropy ZrTiVCrFeNi alloy synthesized using Laser Engineered Net Shaping (LENS). International Journal of Hydrogen Energy, 2013, 38, 12180-12189.	3.8	188
3	Microstructure and hydrogen storage properties of a TiZrNbMoV high entropy alloy synthesized using Laser Engineered Net Shaping (LENS). International Journal of Hydrogen Energy, 2014, 39, 9904-9910.	3.8	188
4	Microstructural characterisation of high-entropy alloy AlCoCrFeNi fabricated by laser engineered net shaping. Journal of Alloys and Compounds, 2015, 648, 751-758.	2.8	149
5	Improved Hydrogen Storage Kinetics of Nanoconfined NaAlH₄ Catalyzed with TiCl₃ Nanoparticles. ACS Nano, 2011, 5, 4056-4064.	7.3	110
6	Comparative studies of the influence of different nano-sized metal oxides on the hydrogen sorption properties of magnesium hydride. Journal of Alloys and Compounds, 2009, 486, 697-701.	2.8	104
7	The effect of milling conditions on microstructure and hydrogen absorption/desorption properties of magnesium hydride (MgH2) without and with Cr2O3 nanoparticles. International Journal of Hydrogen Energy, 2008, 33, 1859-1867.	3.8	86
8	Synthesis and decomposition mechanisms of Mg2FeH6 studied by in-situ synchrotron X-ray diffraction and high-pressure DSC. International Journal of Hydrogen Energy, 2010, 35, 3578-3582.	3.8	81
9	Microstructures and hydrogen storage properties ofÂLa Ni Fe V Mn alloys. International Journal of Hydrogen Energy, 2017, 42, 27154-27164.	3.8	65
10	A Review of Recent Advances on the Effects of Microstructural Refinement and Nano-Catalytic Additives on the Hydrogen Storage Properties of Metal and Complex Hydrides. Energies, 2011, 4, 1-25.	1.6	61
11	Magnesium-Based Materials for Hydrogen Storageâ€"A Scope Review. Materials, 2020, 13, 3993.	1.3	59
12	Dynamic synthesis of ternary Mg2FeH6. International Journal of Hydrogen Energy, 2010, 35, 1257-1266.	3.8	54
13	Why the ball to powder ratio (BPR) is insufficient for describing the mechanical ball milling process. International Journal of Hydrogen Energy, 2014, 39, 9883-9887.	3.8	54
14	Nanoconfined NaAlH₄: Determination of Distinct Prolific Effects from Pore Size, Crystallite Size, and Surface Interactions. Journal of Physical Chemistry C, 2012, 116, 21046-21051.	1.5	52
15	Microstructure and texture evolution of copper processed by differential speed rolling with various speed asymmetry coefficient. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2013, 564, 289-297.	2.6	49
16	Nanoconfined NaAlH₄: prolific effects from increased surface area and pore volume. Nanoscale, 2014, 6, 599-607.	2.8	47
17	Mg2NiH4 synthesis and decomposition reactions. International Journal of Hydrogen Energy, 2013, 38, 4003-4010.	3.8	44
18	The effects of ball milling and molar ratio of LiH on the hydrogen storage properties of nanocrystalline lithium amide and lithium hydride (LiNH2+LiH) system. Journal of Alloys and Compounds, 2010, 491, 658-667.	2.8	39

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19	Combinatorial synthesis of alloy libraries with a progressive composition gradient using laser engineered net shaping (LENS): Hydrogen storage alloys. International Journal of Hydrogen Energy, 2013, 38, 12159-12171.	3.8	37
20	Hierarchical, nanoporous graphenic carbon materials through an instant, self-sustaining magnesiothermic reduction. Carbon, 2016, 96, 937-946.	5.4	37
21	Fe-Al thin walls manufactured by Laser Engineered Net Shaping. Journal of Alloys and Compounds, 2017, 696, 1105-1112.	2.8	37
22	Microstructure and properties of LENS (laser engineered net shaping) manufactured Ni-Ti shape memory alloy. Journal of Alloys and Compounds, 2018, 750, 863-870.	2.8	36
23	The effect of chromium (III) oxide (Cr2O3) nanopowder on the microstructure and cyclic hydrogen storage behavior of magnesium hydride (MgH2). Journal of Alloys and Compounds, 2011, 509, 2386-2391.	2.8	35
24	Synthesis and decomposition mechanisms of ternary Mg2CoH5 studied using in situ synchrotron X-ray diffraction. International Journal of Hydrogen Energy, 2011, 36, 10760-10770.	3.8	34
25	A simple method of synthesis and surface purification of titanium carbide powder. International Journal of Refractory Metals and Hard Materials, 2013, 38, 87-91.	1.7	32
26	Heterogeneous iron-containing carbon gels as catalysts for oxygen electroreduction: Multifunctional role of sulfur in the formation of efficient systems. Carbon, 2017, 116, 655-669.	5.4	31
27	The influence of laser engineered net shaping (LENSâ„¢) technological parameters on the laser deposition efficiency and properties of H13 (AISI) steel. Journal of Alloys and Compounds, 2020, 823, 153840.	2.8	31
28	Magnesium- and intermetallic alloys-based hydrides for energy storage: modelling, synthesis and properties. Progress in Energy, 2022, 4, 032007.	4.6	29
29	Metallic and complex hydride-based electrochemical storage of energy. Progress in Energy, 2022, 4, 032001.	4.6	26
30	New perspectives of functional metal borohydrides. Journal of Alloys and Compounds, 2022, 896, 163014.	2.8	25
31	Direct Synthesis of Fe-Al Alloys from Elemental Powders Using Laser Engineered Net Shaping. Materials, 2020, 13, 531.	1.3	23
32	Hydrogen storage in complex hydrides: past activities and new trends. Progress in Energy, 2022, 4, 032009.	4.6	23
33	Mg2FeH6 synthesized from plain steel and magnesium hydride. Journal of Alloys and Compounds, 2019, 776, 1029-1040.	2.8	22
34	The influence of the milling time on the yield of Mg2FeH6 from a two-step synthesis conducted in a custom-made reactor. International Journal of Hydrogen Energy, 2013, 38, 2785-2789.	3.8	21
35	Synthesis of Fe-Al-Ti Based Intermetallics with the Use of Laser Engineered Net Shaping (LENS). Materials, 2015, 8, 2311-2331.	1.3	20
36	The influence of different additives on the solid-state reaction of magnesium hydride (MgH2) with Si. International Journal of Hydrogen Energy, 2009, 34, 7692-7699.	3.8	19

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37	Rapid hydrogenation at 30ÂÂ°C of magnesium (Mg) and iron (Fe) nanocomposite obtained through a decomposition of Mg2FeH6 precursor. International Journal of Hydrogen Energy, 2011, 36, 1059-1065.	3.8	19
38	Mechano-chemical synthesis of manganese borohydride (Mn(BH4)2) and inverse cubic spinel (Li2MnCl4) in the (nLiBH4Â+ÂMnCl2) (nÂ=Â1, 2, 3, 5, 9 and 23) mixtures and their dehydrogenation behavior. International Journal of Hydrogen Energy, 2012, 37, 16056-16069.	3.8	19
39	Copolycondensation of heterocyclic aldehydes: A general approach to sulfur and nitrogen dually-doped carbon gels. Microporous and Mesoporous Materials, 2016, 225, 198-209.	2.2	19
40	The composites of magnesium hydride and iron-titanium intermetallic. International Journal of Hydrogen Energy, 2011, 36, 1177-1183.	3.8	18
41	A comparative study on the hydrogen absorption of thin films at room temperature deposited on non-porous glass substrate and nano-porous anodic aluminum oxide (AAO) template. International Journal of Hydrogen Energy, 2011, 36, 11777-11784.	3.8	17
42	Mg2FeH6 Synthesis Efficiency Map. Crystals, 2018, 8, 94.	1.0	17
43	Mg2(Fe, Cr, Ni)HX complex hydride synthesis from austenitic stainless steel and magnesium hydride. International Journal of Hydrogen Energy, 2020, 45, 19440-19454.	3.8	16
44	Just shake or stir. About the simplest solution for the activation and hydrogenation of an FeTi hydrogen storage alloy. International Journal of Hydrogen Energy, 2022, 47, 5361-5371.	3.8	15
45	Synthesis of amorphous manganese borohydride in the (NaBH 4 â€“MnCl 2) system, its hydrogen generation properties and crystalline transformation during solvent extraction. Journal of Energy Chemistry, 2017, 26, 24-34.	7.1	14
46	Hydrogen sorption behavior of mechanically synthesized Mgâ€“Ag alloys. International Journal of Hydrogen Energy, 2021, 46, 33152-33163.	3.8	13
47	The Influence of Cerium on the Hydrogen Storage Properties of La1-xCexNi5 Alloys. Energies, 2020, 13, 1437.	1.6	11
48	Nano-Engineering Approach to Destabilization of Magnesium Hydride (MgH₂) by Solid-State Reaction with Si. Journal of Nanoscience and Nanotechnology, 2009, 9, 3441-3448.	0.9	10
49	Sulfurized metal borohydrides. Dalton Transactions, 2016, 45, 639-645.	1.6	10
50	The influence of refractory metals on the hydrogen storage characteristics of FeTi-based alloys prepared by suspended dropletÂalloying. International Journal of Hydrogen Energy, 2020, 45, 21635-21645.	3.8	10
51	Scandium functionalized carbon aerogel: Synthesis of nanoparticles and structure of a new ScOCl and properties of NaAlH4 as a function of pore size. Journal of Solid State Chemistry, 2015, 231, 190-197.	1.4	9
52	Origin of microporosity in chalcogen-doped carbon materials: The case of selenium-doped carbogels. Microporous and Mesoporous Materials, 2018, 272, 260-264.	2.2	9
53	Oxidative and adsorptive removal of chlorophenols over Fe-, N- and S-multi-doped carbon xerogels. Journal of Environmental Chemical Engineering, 2021, 9, 105568.	3.3	9
54	The effect of milling energy input and molar ratio on the dehydrogenation and thermal conductivity of the (LiNH2Â+ÂnMgH2) (nÂ=Â0.5, 0.7, 0.9, 1.0, 1.5 andÂ2.0) nanocomposites. International Journal of Hydrogen Energy, 2014, 39, 10585-10599.	3.8	8

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55	Insight into Phase Stability in the Mg-Pd System: The Ab Initio Calculations. Journal of Phase Equilibria and Diffusion, 2020, 41, 681-686.	0.5	8
56	Hydrogenation Ability of Mg-Li Alloys. Energies, 2020, 13, 2080.	1.6	8
57	Structural and calorimetric studies of magnesium-rich Mg-Pd alloys. Journal of Alloys and Compounds, 2021, 858, 158085.	2.8	8
58	The Influence of Layer Thickness on the Microstructure and Mechanical Properties of M300 Maraging Steel Additively Manufactured by LENSÂ® Technology. Materials, 2022, 15, 603.	1.3	7
59	Mechano-chemical activation of the (3LiBH₄ + TiF₃) system, its dehydrogenation behavior and the effects of ultrafine filamentary Ni and graphene additives. RSC Advances, 2016, 6, 93245-93258.	1.7	6
60	Nano-engineering of magnesium hydride for hydrogen storage. Microelectronic Engineering, 2009, 86, 889-891.	1.1	5
61	Improved hydrogen storage kinetics of nanoconfined LiBH₄-MgH₂ reactive hydride composites catalyzed with nickel Nanoparticles. Materials Research Society Symposia Proceedings, 2012, 1441, 1.	0.1	5
62	Graphitic encapsulation of MgO and Fe3C nanoparticles in the reaction of iron pentacarbonyl with magnesium. Materials Characterization, 2013, 81, 97-104.	1.9	5
63	Pressurised-cell test stand with oscillating heating for investigation heat transfer phenomena in metal hydride beds. International Journal of Hydrogen Energy, 2016, 41, 16974-16983.	3.8	5
64	The effects of filamentary Ni, graphene and lithium amide (LiNH2) additives on the dehydrogenation behavior of mechano-chemically synthesized crystalline manganese borohydride (Mn(BH4)2) and its solvent filtration/extraction. Materials Research Bulletin, 2018, 100, 394-406.	2.7	5
65	Magnesium-based complex hydride mixtures synthesized from stainless steel and magnesium hydride with subambient temperature hydrogen absorption capability. Journal of Alloys and Compounds, 2022, 901, 163489.	2.8	5
66	Hydrogen Sorption Behavior of Cast Ag-Mg Alloys. Materials, 2022, 15, 270.	1.3	5
67	Thermodynamic properties of Mg-Pd liquid alloys. Journal of Molecular Liquids, 2020, 317, 114024.	2.3	4
68	Hydriding properties of Mgâ€“Alâ€“Zn quasicrystal powder produced by mechanical alloying. Zeitschrift Fur Kristallographie - Crystalline Materials, 2009, 224, 105-108.	0.4	3
69	Thermodynamic properties of liquid Mg Pt alloys determined by the calorimetric method. Journal of Molecular Liquids, 2020, 317, 113976.	2.3	3
70	Insight into Phase Stability in the Mg-Pt System. The Ab Initio Calculations. Journal of Phase Equilibria and Diffusion, 2021, 42, 102-106.	0.5	3
71	Calorimetric Studies of Magnesium-Rich Mg-Pd Alloys. Materials, 2021, 14, 680.	1.3	3
72	The Effects of Additives on the Dehydrogenation of Amorphous Manganese Borohydride and Its Crystalline Form after Solvent Filtration/Extraction. Energies, 2017, 10, 1741.	1.6	2

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73	Theoretical studies of the thermodynamic and mechanical properties of Mgâ€“Pt system. An insight into phase equilibria. Journal of Materials Research, 2022, 37, 1904-1915.	1.2	2
74	Damping Properties of Sandwich Truss Core Structures by Strain Energy Method. IOP Conference Series: Materials Science and Engineering, 2015, 96, 012022.	0.3	0