Pei Sun

List of Publications by Year
in descending order

42 papers	1,712 citations	331670 21 h-index	361022 35 g-index
47 all docs	47 docs citations	47 times ranked	1051 citing authors

#	Article	IF	Citations
1	A Novel Method for Densification of Titanium Using Hydrogenation-Induced Expansion under Constrained Conditions. Scripta Materialia, 2022, 210, 114432.	5.2	5
2	In situ formation of nanocrystalline MgH2 through room temperature hydrogenation. Materials and Design, 2022, 218, 110729.	7.0	14
3	A high throughput dynamic method for characterizing thermodynamic properties of catalyzed magnesium hydrides by thermogravimetric analysis. Physical Chemistry Chemical Physics, 2021, 23, 15374-15383.	2.8	5
4	A study on the synthesis of coarse TiO2 powder with controlled particle sizes and morphology via hydrolysis. Powder Technology, 2021, 393, 650-658.	4.2	8
5	Analysis of the Elevated Temperature Plastic Flow Response of Ti-6Al-4V Produced via the Hydrogen Sintering and Phase Transformation (HSPT) Process. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2020, 51, 3956-3966.	2.2	1
6	Deoxygenation of Ti metal. , 2020, , 181-223.		3
7	Selected processes for Ti production â€“ a cursory review. , 2020, , 351-362.		2
8	Energy consumption of the Kroll and HAMR processes for titanium production. , 2020, , 389-410.		4
9	Effect of air exposure on hydrogen storage properties of catalyzed magnesium hydride. Journal of Power Sources, 2020, 454, 227936.	7.8	36
10	Effects of Process Gas Pressure and Type on Oxygen Content in Sintered Titanium Produced using Jet-Milled Titanium Hydride Powders. Jom, 2020, 72, 1286-1291.	1.9	1
11	Hydrogen assisted magnesiothermic reduction (HAMR) of TiO2 to produce titanium metal powder. , 2020, , 165-179.		2
12	Deoxygenation of Ti metal: A review of processes in literature. International Journal of Refractory Metals and Hard Materials, 2020, 91, 105270.	3.8	17
13	Manipulation of microstructure and mechanical properties during dehydrogenation of hydrogen-sintered Tiâ€“6Alâ€“4V. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 764, 138244.	5.6	9
14	Amorphous TiCu-Based Additives for Improving Hydrogen Storage Properties of Magnesium Hydride. ACS Applied Materials & Interfaces, 2019, 11, 38868-38879.	8.0	54
15	Potentially More Ecofriendly Chemical Pathway for Production of High-Purity TiO₂ from Titanium Slag. ACS Sustainable Chemistry and Engineering, 2019, 7, 4821-4830.	6.7	23
16	Capturing low-pressure hydrogen using V Ti Cr catalyzed magnesium hydride. Journal of Power Sources, 2019, 413, 139-147.	7.8	21
17	An investigation of the reduction of TiO2 by Mg in H2 atmosphere. Chemical Engineering Science, 2019, 195, 484-493.	3.8	12
18	Novel Method for Making Biomedical Segregation-Free Ti-30Ta Alloy Spherical Powder for Additive Manufacturing. Jom, 2018, 70, 364-369.	1.9	10

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19	Powder metallurgy of titanium â€“ past, present, and future. International Materials Reviews, 2018, 63, 407-459.	19.3	339
20	Mitigation of the Surface Oxidation of Titanium by Hydrogen. Journal of Physical Chemistry C, 2018, 122, 20691-20700.	3.1	15
21	Mechanisms of Hydrogen-Assisted Magnesiothermic Reduction of TiO2. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2018, 49, 2998-3006.	2.1	14
22	Hydrogen enhanced thermodynamic properties and kinetics of calciothermic deoxygenation of titanium-oxygen solid solutions. International Journal of Hydrogen Energy, 2018, 43, 11939-11951.	7.1	30
23	The effect of molten salt on oxygenÂremoval from titanium and its alloys using calcium. Journal of Materials Science, 2017, 52, 4120-4128.	3.7	47
24	Kinetically enhanced metallothermic redox of TiO2 by Mg in molten salt. Chemical Engineering Journal, 2017, 327, 169-182.	12.7	22
25	Hydrogen-enabled microstructure and fatigue strength engineering of titanium alloys. Scientific Reports, 2017, 7, 41444.	3.3	48
26	Review of the Methods for Production of Spherical Ti and Ti Alloy Powder. Jom, 2017, 69, 1853-1860.	1.9	169
27	Microstructure and Mechanical Properties of Ti-6Al-4V Fabricated by Selective Laser Melting of Powder Produced by Granulation-Sintering-Deoxygenation Method. Jom, 2017, 69, 2731-2737.	1.9	9
28	A Perspective on Thermochemical and Electrochemical Processes for Titanium Metal Production. Jom, 2017, 69, 1861-1868.	1.9	27
29	Hydrogen assisted magnesiothermic reduction of TiO2. Chemical Engineering Journal, 2017, 308, 299-310.	12.7	84
30	Hydrogen Assisted Magnesiothermic Reduction (HAMR) of Commercial TiO₂ to Produce Titanium Powder with Controlled Morphology and Particle Size. Materials Transactions, 2017, 58, 355-360.	1.2	42
31	Thermodynamic Destabilization of Ti-O Solid Solution by H₂ and Deoxygenation of Ti Using Mg. Journal of the American Chemical Society, 2016, 138, 6916-6919.	13.7	65
32	A novel method for production of spherical Ti-6Al-4V powder for additive manufacturing. Powder Technology, 2016, 301, 331-335.	4.2	99
33	New Powder Metallurgical Approach to Achieve High Fatigue Strength in Ti-6Al-4V Alloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2016, 47, 2335-2345.	2.2	37
34	A novel chemical pathway for energy efficient production of Ti metal from upgraded titanium slag. Chemical Engineering Journal, 2016, 286, 517-527.	12.7	77
35	Hydrogen sintering of titanium and its alloys. , 2015, , 163-182.		11
36	Phase Transformations and Formation of Ultra-Fine Microstructure During Hydrogen Sintering and Phase Transformation (HSPT) Processing of Ti-6Al-4V. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2015, 46, 5546-5560.	2.2	34

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37	A powder metallurgy method for manufacturing Ti-6Al-4V with wrought-like microstructures and mechanical properties via hydrogen sintering and phase transformation (HSPT). Scripta Materialia, 2015, 107, 103-106.	5.2	82
38	An experimental survey of additives for improving dehydrogenation properties of magnesium hydride. Journal of Power Sources, 2015, 278, 38-42.	7.8	42
39	An experimental study of the (Tiâ€“6Alâ€“4V)â€“xH phase diagram using in situ synchrotron XRD and TGA/DSC techniques. Acta Materialia, 2015, 84, 29-41.	7.9	78
40	A Comparison of Hydrogen Sintering and Phase Transformation (<scp>HSPT</scp>) Processing with Vacuum Sintering of <scp>CP</scp>â€<scp>T</scp>i. Advanced Engineering Materials, 2013, 15, 1007-1013.	3.5	15
41	Hydrogen Sintering of Titanium to Produce High Density Fine Grain Titanium Alloys. Advanced Engineering Materials, 2012, 14, 383-387.	3.5	58
42	Pathways to Optimize Performance/Cost Ratio of Powder Metallurgy Titanium â€“ A Perspective. Key Engineering Materials, 0, 520, 15-23.	0.4	35