Ankur Jain

List of Publications by Citations

89 papers	2,348 citations	21 h-index	47 g-index
93 ext. papers	2,732 ext. citations	5 avg, IF	5.25 L-index

#	Paper	IF	Citations
89	Hydrogen storage in Mg: A most promising material. *International Journal of Hydrogen Energy*, **2010**, 35, 5133-5144	6.7	784
88	Novel hydrogen storage materials: A review of lightweight complex hydrides. *Journal of Alloys and Compounds*, **2010**, 503, 303-339	5.7	352
87	Development of vanadium based hydrogen storage material: A review. *Renewable and Sustainable Energy Reviews*, **2017**, 72, 791-800	16.2	99
86	Improving hydrogen sorption kinetics of MgH2 by mechanical milling with TiF3. *Journal of Alloys and Compounds*, **2007**, 432, L1-L4	5.7	56
85	Surface modification of MgH 2 by ZrCl 4 to tailor the reversible hydrogen storage performance. *International Journal of Hydrogen Energy*, **2017**, 42, 6152-6159	6.7	46
84	Catalytic effect of TiF4 in improving hydrogen storage properties of MgH2. *International Journal of Hydrogen Energy*, **2016**, 41, 14178-14183	6.7	45
83	How does TiF4 affect the decomposition of MgH2 and its complex variants? An XPS investigation. *Journal of Materials Chemistry A*, **2017**, 5, 15543-15551	13	43
82	Catalytic effect of ZrCrNi alloy on hydriding properties of MgH2. *International Journal of Hydrogen Energy*, **2009**, 34, 9157-9162	6.7	40
81	Enhancement of hydrogen desorption kinetics in magnesium hydride by doping with lithium metatitanate. *Journal of Alloys and Compounds*, **2017**, 711, 400-405	5.7	38
80	Phase and morphology evolution study of ball milled MgTo hydrogen storage alloys. *International Journal of Hydrogen Energy*, **2013**, 38, 7070-7076	6.7	35
79	Effect of Cu catalyst on the hydrogenation and thermodynamic properties of Mg2Ni. *International Journal of Hydrogen Energy*, **2012**, 37, 3755-3760	6.7	35
78	Impurity Gas Analysis of the Decomposition of Complex Hydrides. *Journal of Physical Chemistry C*, **2011**, 115, 17220-17226	3.8	34
77	The enhanced de/re-hydrogenation performance of MgH2 with TiH2 additive. *International Journal of Energy Research*, **2018**, 42, 1139-1147	4.5	32
76	Study on the thermal decomposition of NaBH 4 catalyzed by ZrCl 4. *International Journal of Hydrogen Energy*, **2017**, 42, 22432-22437	6.7	30
75	Destabilization of LiH by Li Insertion into Ge. *Journal of Physical Chemistry C*, **2013**, 117, 5650-5657	3.8	26
74	Mobility and dynamics in the complex hydrides LiAlH4 and LiBH4. *Faraday Discussions*, **2011**, 151, 213-30; discussion 285-95	3.6	25
73	Hydrogen storage properties of Mg2Ni affected by Cr catalyst. *International Journal of Hydrogen Energy*, **2012**, 37, 16013-16017	6.7	24

72	Synthesis, characterization and hydrogenation of ZrFe2-xNixZrFe2-xNix (x=0.2,0.4,0.6,0.8)(x=0.2,0.4,0.6,0.8) alloys. *International Journal of Hydrogen Energy*, **2007**, 32, 3965-3971	6.7	24
71	Effect of ZrCrCo alloy on hydrogen storage properties of Mg. *Journal of Alloys and Compounds*, **2015**, 645, S518-S523	5.7	23
70	Study of cyclic performance of V-Ti-Cr alloys employed for hydrogen compressor. *International Journal of Hydrogen Energy*, **2018**, 43, 2881-2889	6.7	23
69	Thermodynamics and structural aspects of hydrogen absorption in Zr1-xCrxFe2 alloys. *International Journal of Hydrogen Energy*, **2007**, 32, 2445-2449	6.7	23
68	Catalytic Tuning of Sorption Kinetics of Lightweight Hydrides: A Review of the Materials and Mechanism. *Catalysts*, **2018**, 8, 651	4	21
67	Improved hydrogen release from magnesium borohydride by ZrCl4 additive. *International Journal of Hydrogen Energy*, **2017**, 42, 22342-22347	6.7	20
66	Development of Mg Li B based advanced material for onboard hydrogen storage solution. *International Journal of Hydrogen Energy*, **2017**, 42, 3963-3970	6.7	19
65	A new synthesis route of ammonia production through hydrolysis of metal Nitrides. *International Journal of Hydrogen Energy*, **2017**, 42, 24897-24903	6.7	19
64	Characterization and hydrogenation of CeNi5Crx (x=0, 1, 2) alloys. *Journal of Alloys and Compounds*, **2007**, 430, 165-169	5.7	18
63	Destabilization of lithium hydride by the substitution of group 14 elements: A review. *International Journal of Hydrogen Energy*, **2016**, 41, 5969-5978	6.7	18
62	Structural and Mssbauer spectroscopic study of cubic phase ZrFe2Mnx hydrogen storage alloy. *Journal of Alloys and Compounds*, **2008**, 454, 31-37	5.7	17
61	Crystal structure, hydrogen absorption and thermodynamics of Zr1CoxFe2 alloys. *Journal of Alloys and Compounds*, **2007**, 438, 106-109	5.7	17
60	Catalytic effect of bis (cyclopentadienyl) nickel II on the improvement of the hydrogenation-dehydrogenation of Mg-MgH2 system. *International Journal of Hydrogen Energy*, **2017**, 42, 17178-17183	6.7	16
59	Effect of Magnesium Fluoride on Hydrogenation Properties of Magnesium Hydride. *Energies*, **2015**, 8, 12546-12556	3.1	16
58	Flower-like BiS nanostructures as highly efficient anodes for all-solid-state lithium-ion batteries.. *RSC Advances*, **2019**, 9, 29549-29555	3.7	15
57	Correlation between the milling time and hydrogen-storage properties of nanostructured ZrFeNi ternary alloy. *Journal of Alloys and Compounds*, **2009**, 480, 325-328	5.7	14
56	LiBH4 as solid electrolyte for Li-ion batteries with Bi2Te3 nanostructured anode. *International Journal of Hydrogen Energy*, **2018**, 43, 21709-21714	6.7	13
55	Catalytic modification in dehydrogenation properties of KSiH3. *Physical Chemistry Chemical Physics*, **2014**, 16, 26163-7	3.6	13

54	Hydrogenation behaviour of Ce-based AB5 intermetallic compounds. *Journal of Alloys and Compounds*, **2007**, 440, 84-88	5.7	13
53	Highly efficient & stable Bi & Sb anodes using lithium borohydride as solid electrolyte in Li-ion batteries.. *RSC Advances*, **2019**, 9, 13077-13081	3.7	12
52	Correlation between electrochemical behavior and hydrogen storage properties of LiSn system. *Journal of Alloys and Compounds*, **2013**, 580, S211-S215	5.7	12
51	Effect of La-content on the hydrogenation properties of the Ce1LaxNi3Cr2 (x=0.2, 0.4, 0.6, 0.8, 1) alloys. *International Journal of Hydrogen Energy*, **2012**, 37, 3683-3688	6.7	12
50	The effects of Ni and Mg2Ni interlayer on hydrogenation properties of Pd sandwiched Mg films. *Journal of Alloys and Compounds*, **2011**, 509, 2105-2110	5.7	12
49	Significance of Hydrogen as Economic and Environmentally Friendly Fuel. *Energies*, **2021**, 14, 7389	3.1	12
48	Highly stable nanostructured Bi2Se3 anode material for all solid-state lithium-ion batteries. *Journal of Alloys and Compounds*, **2020**, 838, 155403	5.7	12
47	Two-Peak Mystery of LiNH2NaH Dehydrogenation Is Solved? A Study of the Analogous Sodium Amide/Lithium Hydride System. *Journal of Physical Chemistry C*, **2016**, 120, 27903-27909	3.8	11
46	Nanostructured Bi2Te3 as anode material as well as a destabilizing agent for LiBH4. *International Journal of Hydrogen Energy*, **2020**, 45, 16992-16999	6.7	11
45	Correlation between the milling time and hydrogen storage properties of ZrCrFe ternary alloy. *International Journal of Hydrogen Energy*, **2010**, 35, 9910-9915	6.7	10
44	Ion beam induced mixing at Co/Si interface. *Vacuum*, **2008**, 83, 397-400	3.7	10
43	Comparative study on hydrogenation properties of Pd capped Mg and Mg/Al films. *International Journal of Hydrogen Energy*, **2012**, 37, 3779-3785	6.7	9
42	Kinetic Enhancement in the Sorption Properties by Forming Mg wt % ZrCrCu Composites. *Journal of Physical Chemistry C*, **2013**, 117, 11953-11959	3.8	8
41	Tailoring the absorptiondesorption properties of KSiH3 compound using nano-metals (Ni, Co, Nb) as catalyst. *Journal of Alloys and Compounds*, **2015**, 645, S144-S147	5.7	7
40	The destabilization of LiBH4 through the addition of Bi2Se3 nanosheets. *International Journal of Hydrogen Energy*, **2020**, 45, 23947-23953	6.7	7
39	Thermodynamics and kinetics of hydrogen absorptiondesorption of vanadium synthesized by aluminothermy. *Journal of Thermal Analysis and Calorimetry*, **2017**, 130, 721-726	4.1	6
38	Ammonia suppression during decomposition of sodium amide by the addition of metal hydride. *International Journal of Hydrogen Energy*, **2017**, 42, 22388-22394	6.7	6
37	Hydriding behavior of Mg-50wt% ZrCrFe composite Prepared by high energy ball milling. *International Journal of Hydrogen Energy*, **2012**, 37, 3665-3670	6.7	6

36	Synthesis of nano-crystalline Zr-M (M=Ni, Co, Fe, Cu) bilayer films and their thermodynamics of hydrogen uptake by resistance measurement. *International Journal of Hydrogen Energy*, **2010**, 35, 9893-9900	6.7	6
35	Hydrogen absorption effects in ZrFe2−xNix compounds by means of 57Fe Mössbauer spectroscopy. *Journal of Magnetism and Magnetic Materials*, **2007**, 318, 44-48	2.8	6
34	Surface morphology and the phase formation at Cr/Si system. *Applied Surface Science*, **2007**, 253, 4721-4726	6.7	6
33	Electrochemical reaction mechanism for Bi2Te3-based anode material in highly durable all solid-state lithium-ion batteries. *Journal of Materials Science: Materials in Electronics*, **2020**, 31, 16429-16436	2.1	6
32	Enhanced performance of MgH2 composite electrode using glass-ceramic electrolytes for all-solid-state Li-ion batteries. *Journal of Alloys and Compounds*, **2021**, 863, 158729	5.7	6
31	Structural and H2 sorption properties of MgH2−10 wt%ZrCrM (M = Cu, Ni) nano-composites. *Journal of Nanoparticle Research*, **2011**, 13, 5719-5726	2.3	5
30	Structural and thermodynamical investigations of La0.23Ni0.34Co0.33Nd0.08Ti0.01Al0.01 hydrogen storage alloy. *International Journal of Hydrogen Energy*, **2008**, 33, 356-359	6.7	5
29	Hydrogen uptake characteristics of mischmetal based alloy. *Journal of Power Sources*, **2006**, 159, 132-134	3.9	5
28	Structural and electrical properties of swift heavy ion beam irradiated Co/Si interface. *Bulletin of Materials Science*, **2006**, 29, 187-191	1.7	5
27	Implementation of Bismuth Chalcogenides as an Efficient Anode: A Journey from Conventional Liquid Electrolyte to an All-Solid-State Li-Ion Battery. *Molecules*, **2020**, 25,	4.8	5
26	Hydrogen Sorption and Cyclic Compressor Performance of V40Ti21.5Cr33.5M5 (M= Nb, Zr, Fe) Alloys. *Nihon Enerugi Gakkaishi/Journal of the Japan Institute of Energy*, **2019**, 98, 157-164	0.5	4
25	Structural and Hydrogen Storage Properties Of Mg-x Wt% ZrCrMn Composites. *Advanced Materials Letters*, **2014**, 5, 692-698	2.4	4
24	Iron based catalyst for the improvement of the sorption properties of KSiH3. *International Journal of Hydrogen Energy*, **2020**, 45, 33681-33686	6.7	4
23	High capacity MgH2 composite electrodes for all-solid-state Li-ion battery operating at ambient temperature. *International Journal of Hydrogen Energy*, **2021**, 46, 1030-1037	6.7	4
22	Structural, electrical and thermodynamical aspects of hydrogenated La-Ni-Si alloy. *Bulletin of Materials Science*, **2006**, 29, 67-72	1.7	3
21	Eutectic melting in x(2LiBH4-MgH2) hydrogen storage system by the addition of KH. *International Journal of Hydrogen Energy*, **2020**, 45, 17000-17005	6.7	3
20	Critical Temperature and Pressure Conditions of Degradation during Thermochemical Hydrogen Compression: A Case Study of V-Based Hydrogen Storage Alloy. *Energies*, **2020**, 13, 2324	3.1	3
19	Destabilization of LiBH4 by the infusion of Bi2X3 (X = S, Se, Te): an in situ TEM investigation. *Journal of Materials Chemistry A*, **2020**, 8, 25706-25715	13	3

18	Lithiation mechanism of antimony chalcogenides (Sb2X3; X = S, Se, Te) electrodes for high-capacity all-solid-state Li-ion battery. *International Journal of Energy Research*, **2021**, 45, 11135-11145	4.5	3
17	Growth and structural characterization of BiSbTe3-ySey single crystals. *Materials Today: Proceedings*, **2020**, 31, 622-624	1.4	2
16	Effect of isovalent substitution on the structural and electrical properties of BixSb2-xTe3 topological insulator single crystals. *Materials Today: Proceedings*, **2020**, 31, 616-621	1.4	2
15	Carbon nanotube-sulfur nanocomposite electrodes for high energy foldable lithium sulfur battery. *Materials Today: Proceedings*, **2021**, 42, 1638-1641	1.4	2
14	Eutectic Phenomenon of LiNH2–KH Composite in MH-NH3 Hydrogen Storage System. *Molecules*, **2019**, 24,	4.8	1
13	Hydrogen Sorption Characteristics of ZrCrAl Ternary Alloy as a Function of Milling Time. *Macromolecular Symposia*, **2017**, 376, 1700047	0.8	1
12	Structural and Morphological Modifications Induced by Fe Ion Implantation in Sb2Te3 Thin Films. *Macromolecular Symposia*, **2021**, 399, 2100079	0.8	1
11	All-Solid-State Li-Ion Batteries Using a Combination of Sb2S3/Li2S-P2S5/Acetylene Black as the Electrode Composite and LiBH4 as the Electrolyte. *ACS Applied Energy Materials*, **2021**, 4, 6269-6276	6.1	1
10	Electrochemical Performance of Graphene-Modulated Sulfur Composite Cathodes Using LiBH4 Electrolyte for All-Solid-State Li-S Battery. *Energies*, **2021**, 14, 7362	3.1	0
9	Hydrogen storage behavior of TiFe alloy activated by different methods. *Materials Letters: X*, **2021**, 9, 100061	0.5	0
8	Enhancement in hydrogenation dehydrogenation kinetics of KSiH3 by the addition of Ti-based catalysts. *Materials Letters: X*, **2021**, 11, 100086	0.5	0
7	The Catalytic Role of D-block Elements and Their Compounds for Improving Sorption Kinetics of Hydride Materials: A Review. *Reactions*, **2021**, 2, 333-364	1.5	0
6	Nitrogen-Based Hydrogen Storage Systems: A Detailed Overview **2018**, 39-88		
5	Electrical and optical properties of hydrogenated RNi5/Co (R=Ce, La) bi-layer systems. *International Journal of Hydrogen Energy*, **2007**, 32, 1916-1921	6.7	
4	Conversion reaction of TiFe hydride as anode material for all-solid-state Lithium-ion batteries. *Materials Letters: X*, **2021**, 10, 100067	0.5	
3	Effect of multiwall carbon nanotubes on photo catalytic activity of CdS nanocrystals. *Materials Today: Proceedings*, **2021**, 38, 1218-1221	1.4	
2	Chalcogenides as Anode Material for All-Solid-State Li-Ion Batteries. *ACS Symposium Series*,57-86	0.4	
1	Application of Metal Hydrides for All-Solid-State Li-Ion Batteries. *ACS Symposium Series*,87-112	0.4	