Citation Report

List of articles citing

Ti-doped alkali metal aluminium hydrides as potential novel reversible hydrogen storage materials

DOI: 10.1016/s0925-8388(96)03049-6
Journal of Alloys and Compounds, 1997, 253-254, 1-9.

#	Paper	IF	Citations
1466	Orthogonal Experiment Study on the Hydrogen Desorption Properties of NaAlH4 and LiAlH4. **1994**, 115-116, 1-38		11
1465	Hydrogen-absorbing alloys. **1999**, 4, 267-272		68
1464	Synthesis of Na3AlH6 and Na2LiAlH6 by mechanical alloying. *Journal of Alloys and Compounds*, **1999**, 283, 304-306	5.7	101
1463	Hydrogenation properties of complex alkali metal hydrides fabricated by mechano-chemical synthesis. *Journal of Alloys and Compounds*, **1999**, 290, 71-78	5.7	135
1462	A panoramic overview of hydrogen storage alloys from a gas reaction point of view. *Journal of Alloys and Compounds*, **1999**, 293-295, 877-888	5.7	596
1461	Neutron Scattering Spectroscopy. **2000**, 1-27		
1460	Trigonal SrAl2H2: the first Zintl phase hydride. *Journal of Alloys and Compounds*, **2000**, 306, 127-132	5.7	68
1459	Lithium□beryllium hydrides: the lightest reversible metal hydrides. *Journal of Alloys and Compounds*, **2000**, 307, 157-166	5.7	58
1458	Solid state phase transformations in LiAlH4 during high-energy ball-milling. *Journal of Alloys and Compounds*, **2000**, 313, 69-74	5.7	137
1457	In-situ X-ray diffraction study of the decomposition of NaAlH4. *Journal of Alloys and Compounds*, **2000**, 297, 270-281	5.7	223
1456	Metal-doped sodium aluminium hydrides as potential new hydrogen storage materials. *Journal of Alloys and Compounds*, **2000**, 302, 36-58	5.7	608
1455	Investigation of the perovskite related structures of NaMgH3, NaMgF3 and Na3AlH6. *Journal of Alloys and Compounds*, **2000**, 299, 101-106	5.7	147
1454	Sodium alanates for reversible hydrogen storage. *Journal of Alloys and Compounds*, **2000**, 298, 125-134	5.7	219
1453	Reversible Hydrogen Storage via Titanium-Catalyzed LiAlH4 and Li3AlH6. **2001**, 105, 11214-11220		265
1452	Phase relations and hydrogenation behavior of Sr1□CaxAl2 (0□1). *Journal of Alloys and Compounds*, **2001**, 322, 257-264	5.7	13
1451	Titanium catalyzed solid-state transformations in LiAlH4 during high-energy ball-milling. *Journal of Alloys and Compounds*, **2001**, 329, 108-114	5.7	189
1450	Hydrogen□Metal Systems: Applications of Gas□Solid Reactions. **2001**, 3895-3905		

1449	Hydrogen-storage materials for mobile applications. **2001**, 414, 353-8		6468
1448	Synthesis and crystal structure of Sr(2)AlH(7): a new structural type of alkaline earth aluminum hydride. **2002**, 41, 6547-9		49
1447	Dynamic in situ X-ray diffraction of catalyzed alanates. *Journal of Alloys and Compounds*, **2002**, 330-332, 691-695	5.7	79
1446	Engineering considerations in the use of catalyzed sodium alanates for hydrogen storage. *Journal of Alloys and Compounds*, **2002**, 330-332, 696-701	5.7	123
1445	Effect of mechanical grinding under Ar and H2 atmospheres on structural and hydriding properties in LaNi5. *Journal of Alloys and Compounds*, **2002**, 330-332, 747-751	5.7	23
1444	Microstructural characterization of catalyzed NaAlH4. *Journal of Alloys and Compounds*, **2002**, 330-332, 702-707	5.7	94
1443	Catalyzed alanates for hydrogen storage. *Journal of Alloys and Compounds*, **2002**, 330-332, 683-690	5.7	204
1442	Enhancing low pressure hydrogen storage in sodium alanates. *Journal of Alloys and Compounds*, **2002**, 337, 254-263	5.7	63
1441	X-ray diffraction studies of titanium and zirconium doped NaAlH4: elucidation of doping induced structural changes and their relationship to enhanced hydrogen storage properties. *Journal of Alloys and Compounds*, **2002**, 337, L8-L11	5.7	166
1440	Hydrogen sorption by single-walled carbon nanotubes prepared by a torch arc method. *Journal of Alloys and Compounds*, **2002**, 339, 275-282	5.7	40
1439	Effect of Ti-catalyst content on the reversible hydrogen storage properties of the sodium alanates. *Journal of Alloys and Compounds*, **2002**, 339, 299-308	5.7	329
1438	Synthesis and structures of magnesium alanate and two solvent adducts. *Journal of Alloys and Compounds*, **2002**, 345, 286-296	5.7	110
1437	Accurate structure of LiAlD4 studied by combined powder neutron and X-ray diffraction. *Journal of Alloys and Compounds*, **2002**, 346, 184-189	5.7	117
1436	Catalyzed Complex Metal Hydrides. *MRS Bulletin*, **2002**, 27, 712-716	3.2	123
1435	Hydrogen storage properties in nano-structured magnesium- and carbon-related materials. *Physica B: Condensed Matter*, **2003**, 328, 77-80	2.8	55
1434	LiBH4 a new hydrogen storage material. **2003**, 118, 1-7		815
1433	Implementing a hydrogen economy. **2003**, 6, 18-23		147
1432	Materials for hydrogen storage. **2003**, 6, 24-33		1149

1431	H2 Storage in Li3N. Temperature-Programmed Hydrogenation and Dehydrogenation. **2003**, 42, 5135-5139		92
1430	Rehydrogenation of Dehydrogenated NaAlH4 at Low Temperature and Pressure. **2003**, 107, 10176-10179		41
1429	Investigation of hydrogen discharging and recharging processes of Ti-doped NaAlH4 by X-ray diffraction analysis (XRD) and solid-state NMR spectroscopy. *Journal of Alloys and Compounds*, **2003**, 350, 246-255	5.7	144
1428	Phase changes and hydrogen release during decomposition of sodium alanates. *Journal of Alloys and Compounds*, **2003**, 350, 136-144	5.7	44
1427	The decomposition of LiAlD4 studied by in-situ X-ray and neutron diffraction. *Journal of Alloys and Compounds*, **2003**, 351, 222-227	5.7	80
1426	Magnesium alanate□ material for reversible hydrogen storage?. *Journal of Alloys and Compounds*, **2003**, 356-357, 418-422	5.7	112
1425	Hydrogen storage properties of LiBH4. *Journal of Alloys and Compounds*, **2003**, 356-357, 515-520	5.7	543
1424	Reversible hydrogen decomposition of KAlH4. *Journal of Alloys and Compounds*, **2003**, 353, 310-314	5.7	124
1423	The structure of Li3AlD6. *Journal of Alloys and Compounds*, **2003**, 354, 143-147	5.7	63
1422	Neutron diffraction structure determination of NaAlD4. *Journal of Alloys and Compounds*, **2003**, 358, 142-145	5.7	121
1421	Hydrogen desorption kinetics in transition metal modified NaAlH4. *Journal of Alloys and Compounds*, **2003**, 356-357, 400-404	5.7	167
1420	The effects of titanium precursors on hydriding properties of alanates. *Journal of Alloys and Compounds*, **2003**, 356-357, 423-428	5.7	89
1419	Hydrogen interaction with mechanically alloyed magnesium□alt composite materials. *Journal of Alloys and Compounds*, **2003**, 359, 320-325	5.7	41
1418	Hydrogen reactivity of Li-containing hydrogen storage materials. *Journal of Alloys and Compounds*, **2003**, 356-357, 358-362	5.7	20
1417	Kinetic Study and Determination of the Enthalpies of Activation of the Dehydrogenation of Titanium- and Zirconium-Doped NaAlH4 and Na3AlH6. **2003**, 107, 7671-7674		86
1416	Pressure-induced phase of NaAlH4: A potential candidate for hydrogen storage?. **2003**, 82, 2257-2259		107
1415	Small Ti clusters for catalysis of hydrogen exchange in NaAlH4. **2003**, 14, 778-785		166
1414	Compound Formation in Ti-Doped Sodium Aluminum Hydrides. **2003**, 801, 126		2

1413	Synthesis and Thermal Characteristics of Complex Metal Hydride: NaAlH4. **2003**, 801, 138	4
1412	Huge-pressure-induced volume collapse in LiAlH4 and its implications to hydrogen storage. **2003**, 68,	85
1411	Reversible phase transition in LiAlH4 under high-pressure conditions. **2004**, 70,	35
1410	Structure and hydrogen dynamics of pure and Ti-doped sodium alanate. **2004**, 70,	138
1409	X-ray absorption study of Ti-activated sodium aluminum hydride. **2004**, 85, 500-502	180
1408	Hydrogen adsorption and desorption by potassium-doped superactivated carbon. **2004**, 84, 4113-4115	28
1407	Electronic structure of the complex hydride NaAlH4. **2004**, 69,	71
1406	First-principles study of NaAlH4 and Na3AlH6 complex hydrides. **2004**, 70,	78
1405	Hydrogen exchange kinetics in NaAlH4 catalyzed in different decomposition states. **2004**, 95, 7748-7753	56
1404	Dehydrogenation kinetics and long term cycling behavior of Titanium doped NaAlH4. **2004**, 837, 69	
1403	Electronic Structure and Hydrogen Desorption in NaAlH4. **2004**, 837, 31	1
1402	Characterization of the Local Titanium Environment in Doped Sodium Aluminum Hydride using X-ray Absorption Spectroscopy. **2004**, 837, 25	2
1401	Structure and stability of complex metal hydrides - theoretical approach. **2004**, 837, 13	
1400	Structure and stability of possible new alanates. **2004**, 67, 607-613	39
1399	New Metal□□H System Composed of Mg(NH2)2and LiH for Hydrogen Storage. **2004**, 108, 8763-8765	292
1398	Crystal structure and thermodynamic stability of the lithium alanates LiAlH4 and Li3AlH6. **2004**, 69,	100
1397	Structural stability of complex hydrides: LiBH4 revisited. **2004**, 93, 145501	144
1396	Catalytic effect of 3d transition metals on hydrogen storage properties in mechanically milled graphite. **2004**, 65, 535-539	44

1395	Desorption of LiAlH4 with Ti- and V-based additives. **2004**, 108, 54-59	96
1394	Destabilization and enhanced dehydriding reaction of LiNH2: an electronic structure viewpoint. **2004**, 79, 1765-1767	106
1393	Nanocrystalline aluminium hydrides for hydrogen storage. **2004**, 108, 42-47	71
1392	Li□N based hydrogen storage materials. **2004**, 108, 48-50	79
1391	Material properties of MBH4 (M=Li,Na,andK). **2004**, 108, 51-53	141
1390	Hydrogen density in nanostructured carbon, metals and complex materials. **2004**, 108, 9-18	95
1389	Synthesis and dehydriding studies of Mg□N□H systems. **2004**, 138, 309-312	115
1388	Raman scattering of complex sodium aluminum hydride for hydrogen storage. **2004**, 388, 430-435	18
1387	Combined TEM-EDX and XAFS studies of Ti-doped sodium alanate. **2004**, 6, 4369-4374	141
1386	Highly Effective Li2O/Li3N with Ultrafast Kinetics for H2 Storage. **2004**, 43, 2464-2467	64
1385	Comparative Kinetic Study of Olivine Li[sub x]MPO[sub 4] (M=Fe, Mn). **2004**, 151, A1352	345
1384	Effect of the Heat Pretreatment of Li3N on Its H2Storage Performance. **2004**, 43, 4174-4177	30
1383	Design of Potential Hydrogen-Storage Materials Using First-Principle Density-Functional Calculations. **2004**, 4, 471-477	50
1382	Mechanism of Novel Reaction from LiNH2 and LiH to Li2NH and H2 as a Promising Hydrogen Storage System. **2004**, 108, 7887-7892	274
1381	Chemical State and Local Structure around Titanium Atoms in NaAlH4 Doped with TiCl3 Using X-ray Absorption Spectroscopy. **2004**, 108, 16372-16376	101
1380	First-principles study on lithium borohydride LiBH4. **2004**, 69,	247
1379	Structure and Energetics of LiBH4 and Its Surfaces: A First-Principles Study□ **2004**, 108, 8682-8690	63
1378	Light metal hydrides and complex hydrides for hydrogen storage. **2004**, 2249-58	509

1377	Thermal decomposition of the non-interstitial hydrides for the storage and production of hydrogen. **2004**, 104, 1283-316		1335
1376	Structural stability and electronic structure for Li3AlH6. **2004**, 69,		36
1375	Destabilization of Li-based complex hydrides. *Journal of Alloys and Compounds*, **2004**, 370, 271-275	5.7	192
1374	A new ternary magnesium□titanium hydride Mg7TiHx with hydrogen desorption properties better than both binary magnesium and titanium hydrides. *Journal of Alloys and Compounds*, **2004**, 372, 213-217	5.7	122
1373	Thermochemistry and crystal structures of lithium, sodium and potassium alanates as determined by ab initio simulations. *Journal of Alloys and Compounds*, **2004**, 372, 92-96	5.7	37
1372	Recording of hydrogen evolution□ way for controlling the doping process of sodium alanate by ball milling. *Journal of Alloys and Compounds*, **2004**, 370, 104-109	5.7	53
1371	Rehydrogenation and cycling studies of dehydrogenated NaAlH4. *Journal of Alloys and Compounds*, **2004**, 373, 265-269	5.7	52
1370	Adsorption of Ti on LiAlH4 surfaces studied by band structure calculations. *Journal of Alloys and Compounds*, **2004**, 373, 28-32	5.7	10
1369	A novel magnesium□vanadium hydride synthesized by a gigapascal-high-pressure technique. *Journal of Alloys and Compounds*, **2004**, 375, 253-258	5.7	69
1368	Electronic structure and Rietveld refinement parameters of Ti-doped sodium alanates. *Journal of Alloys and Compounds*, **2004**, 375, 1-10	5.7	79
1367	Synchrotron X-ray and neutron diffraction studies of NaAlH4 containing Ti additives. *Journal of Alloys and Compounds*, **2004**, 376, 215-221	5.7	148
1366	Long term cycling behavior of titanium doped NaAlH4 prepared through solvent mediated milling of NaH and Al with titanium dopant precursors. *Journal of Alloys and Compounds*, **2004**, 377, 283-289	5.7	76
1365	Method for preparing Ti-doped NaAlH4 using Ti powder: observation of an unusual reversible dehydrogenation behavior. *Journal of Alloys and Compounds*, **2004**, 379, 99-102	5.7	61
1364	(LiNH2□MgH2): a viable hydrogen storage system. *Journal of Alloys and Compounds*, **2004**, 381, 284-287	5.7	443
1363	A reversible hydrogen storage mechanism for sodium alanate: the role of alanes and the catalytic effect of the dopant. *Journal of Alloys and Compounds*, **2004**, 379, 135-142	5.7	52
1362	First principles investigations of complex hydrides AMH4 and A3MH6 (A=Li, Na, K, M=B, Al, Ga) as hydrogen storage systems. *Journal of Alloys and Compounds*, **2004**, 364, 6-12	5.7	83
1361	Lithium nitride for reversible hydrogen storage. *Journal of Alloys and Compounds*, **2004**, 365, 271-276	5.7	276
1360	Hydrogen Absorption and Desorption by Magnesium-Based Nano-Composite Materials. **2004**, 837, 95		2

1359	Hydrogen Reactivity of Alkaline Hydrogen Storage Materials with RE-Oxides. **2004**, 68, 223-227	1
1358	Thermal and Volumetric Studies of Complex Chemical Hydrides: Li-modified/Ti-doped Mg2FeH6, Sonicated LiNH2/LiH and Zn- mixed NaBH4. **2005**, 885, 1	1
1357	??????????. **2005**, 55, 629-632	1
1356	Composite Materials based on Light Elements for Hydrogen Storage. **2005**, 46, 1-14	71
1355	Flexibility in metal-organic framework materials: Impact on sorption properties. **2005**, 178, 2491-2510	484
1354	Dehydrogenation kinetics of as-received and ball-milled . **2005**, 178, 3672-3678	93
1353	Progress and problems in hydrogen storage methods. **2005**, 9, 395-408	361
1352	An overview of advanced materials for hydrogen storage. **2005**, 162-163, 169-177	141
1351	Synthesis of Mg(AlH4)2 in bilayer Mg/Al thin films under plasma immersion hydrogen ion implantation and thermal desorption processes. **2005**, 485, 135-140	7
1350	Effect of metal type and loading on hydrogen storage on NaAlH4. **2005**, 6, 348-351	3
1349	Metal ammine complexes for hydrogen storage. **2005**, 15, 4106	148
1348	Carbon nanotubes for clean energy applications. **2005**, 38, R231-R252	84
1347	Development of Hydrogen Absorbing Alloy with High Dissociation Pressure. **2005**, 884, 1	1
1346	Reversible storage of hydrogen in destabilized LiBH4. **2005**, 109, 3719-22	835
1345	Hydrogen storage in novel organometallic buckyballs. **2005**, 94, 155504	568
1344	Crystal structure of Ca(AlH4)2 predicted from density-functional band-structure calculations. **2005**, 71,	56
1343	First-principles study on lithium amide for hydrogen storage. **2005**, 71,	79
1342	Improved hydrogen storage of TiF3-doped NaAlH4. **2005**, 6, 2488-91	62

1341	Strategies for hydrogen storage in metal--organic frameworks. **2005**, 44, 4670-9	2144
1340	Strategien f□ die Wasserstoffspeicherung in metall-organischen Kompositger□ten. **2005**, 117, 4748-4758	253
1339	Nanotechnological Aspects in Materials for Hydrogen Storage. **2005**, 7, 443-455	216
1338	Nanoscale Energy Storage Materials Produced by Hydrogen-Driven Metallurgical Reactions. **2005**, 7, 597-601	7
1337	Reversible hydrogen-storage functions for mixtures of Li3N and Mg3N2. **2005**, 80, 1-3	94
1336	Electron-microscopy studies of NaAlH4 with TiF3 additive: hydrogen-cycling effects. **2005**, 80, 709-715	49
1335	Destabilization of LiBH4 by mixing with LiNH2. **2005**, 80, 1409-1412	152
1334	On the Reversibility of Hydrogen Storage in Novel Complex Hydrides. **2005**, 11, 811-816	31
1333	Some New Molecular Hydrides Stabilized and Characterized with the Aid of the Matrix-Isolation Technique. **2005**, 631, 1551-1564	16
1332	Fuel Cells: Microsystems. **2005**, 1-13	0
1331	Metal-Complex Hydrides for Hydrogen-Storage Application. **2005**, 475-479, 2437-2440	
1330	Characterization of titanium dopants in sodium alanate by electron paramagnetic resonance spectroscopy. **2005**, 20, 3265-3269	15
1329	Apparatus for high temperatures and intermediate pressures, for in situ nuclear magnetic resonance of hydrogen storage systems. **2005**, 76, 073906	6
1328	Structural transitions in NaBH4 under pressure. **2005**, 87, 261916	61
1327	KH+Ti co-doped NaAlH4 for high-capacity hydrogen storage. **2005**, 98, 074905	22
1326	Structures and thermodynamics of the mixed alkali alanates. **2005**, 71,	70
1325	Ab initio study of the vibrational properties of Mg(AlH4)2. **2005**, 71,	13
1324	Decomposition reactions for NaAlH4, Na3AlH6, and NaH: First-principles study. **2005**, 71,	93

1323	Density functional calculations of Ti-enhanced NaAlH4. **2005**, 71,	103
1322	Pressure-induced structural phase transition in NaBH4. **2005**, 72,	36
1321	Vacancy-mediated hydrogen desorption in NaAlH4. **2005**, 72,	74
1320	Ab initio study of Mg(AlH4)2. **2005**, 72,	46
1319	Pressure-induced phase transitions of the LiAlD4 system. **2005**, 72,	19
1318	Density-functional band-structure calculations of magnesium alanate Mg(AlH4)2. **2005**, 72,	23
1317	Direct formation of Na3AlH6 by mechanical milling NaH/Al with TiF3. **2005**, 87, 071911	17
1316	Hydrogen Storage in Li3N: Deactivation Caused by a High Dehydrogenation Temperature. **2005**, 44, 4304-4309	27
1315	A Density Functional Theory Study of the Catalytic role of Ti atoms in Reversible Hydrogen Storage in the Complex Metal Hydride, NaAlH4. **2005**, 884, 1	
1314	Transmission Electron Microscopy Studies of 5-cycled Na Alanate with Ti Based Additive. **2005**, 884, 1	
1313	High Throughput Screening of Complex Hydrides for Hydrogen Storage. **2005**, 885, 1	
1312	First-principles study of Ti-doped sodium alanate surfaces. **2005**, 86, 103109	58
1311	Role of titanium in hydrogen desorption in crystalline sodium alanate. **2005**, 86, 251913	67
1310	Missing pieces of the puzzle or about some unresolved issues in solid state chemistry of alkali metal aluminohydrides. **2005**, 7, 1310-4	66
1309	Analytical electron microscopy studies of lithium aluminum hydrides with Ti- and V-based additives. **2005**, 109, 4350-6	18
1308	Revised Crystal Structure Model of Li2NH by Neutron Powder Diffraction. **2005**, 74, 483-487	87
1307	Dynamic Measurement of Hydrogen Storage/Release Properties of Mg Doped with Pd Nanoparticles Using a Tapered-Element Oscillating Microbalance under Flow Conditions. **2005**, 19, 2107-2109	5
1306	High Reversible Hydrogen Capacity of LiNH2/Li3N Mixtures. **2005**, 44, 1510-1513	31

1305	Hydrogen desorption mechanism in a Li-N-H system by means of the isotopic exchange technique. **2005**, 109, 14855-8		66
1304	Point defect dynamics and evolution of chemical reactions in alanates by anelastic spectroscopy. **2005**, 109, 1168-73		59
1303	First-principles study of Ti-catalyzed hydrogen chemisorption on an Al surface: a critical first step for reversible hydrogen storage in NaAlH4. **2005**, 109, 6952-7		123
1302	Hydrogen desorption exceeding ten weight percent from the new quaternary hydride Li3BN2H8. **2005**, 109, 6-8		289
1301	Orbital-free density functional theory applied to NaAlH4. **2005**, 109, 16554-62		11
1300	Exploration of the nature of active Ti species in metallic Ti-doped NaAlH4. **2005**, 109, 20131-6		79
1299	Mechanism of hydrogenation reaction in the Li-Mg-N-H system. **2005**, 109, 10744-8		71
1298	Modeling alkali alanates for hydrogen storage by density-functional band-structure calculations. **2005**, 20, 3199-3213		39
1297	Determination of the crystal structure of Mg(AlH4)2 by combined X-ray and neutron diffraction. *Journal of Alloys and Compounds*, **2005**, 387, 47-51	5.7	68
1296	Structural stability of alkali boron tetrahydrides ABH4 (A = Li, Na, K, Rb, Cs) from first principle calculation. *Journal of Alloys and Compounds*, **2005**, 387, 97-104	5.7	117
1295	Thermal properties characterization of sodium alanates. *Journal of Alloys and Compounds*, **2005**, 389, 299-305	5.7	45
1294	Synergistic effects of co-dopants on the dehydrogenation kinetics of sodium aluminum hydride. *Journal of Alloys and Compounds*, **2005**, 391, 245-255	5.7	43
1293	Synthesis and crystal structure of Na2LiAlD6. *Journal of Alloys and Compounds*, **2005**, 392, 27-30	5.7	54
1292	Effect of Ti catalyst with different chemical form on LiNH hydrogen storage properties. *Journal of Alloys and Compounds*, **2005**, 404-406, 439-442	5.7	90
1291	Desorption behaviours from metalNH systems synthesized by ball milling. *Journal of Alloys and Compounds*, **2005**, 404-406, 443-447	5.7	61
1290	The crystal structure of KAlD4. *Journal of Alloys and Compounds*, **2005**, 394, 35-38	5.7	47
1289	XRD and NMR investigation of Ti-compound formation in solution-doping of sodium aluminum hydrides: solubility of Ti in NaAlH4 crystals grown in THF. *Journal of Alloys and Compounds*, **2005**, 394, 265-270	5.7	56
1288	IR characterizations of lithium imide and amide. *Journal of Alloys and Compounds*, **2005**, 395, 236-239	5.7	141

1287	Catalyzed Na2LiAlH6 for hydrogen storage. *Journal of Alloys and Compounds*, **2005**, 404-406, 771-774	5.7	18
1286	Effect of graphite as a co-dopant on the dehydrogenation and hydrogenation kinetics of Ti-doped sodium aluminum hydride. *Journal of Alloys and Compounds*, **2005**, 395, 252-262	5.7	50
1285	Electron microscopy studies of lithium aluminium hydrides. *Journal of Alloys and Compounds*, **2005**, 395, 307-312	5.7	20
1284	Effects of catalysts on the dehydriding of alanates monitored by proton NMR. *Journal of Alloys and Compounds*, **2005**, 404-406, 738-742	5.7	24
1283	Electronic structure of ternary hydrides based on light elements. *Journal of Alloys and Compounds*, **2005**, 404-406, 176-180	5.7	19
1282	Kinetic studies of the decomposition of NaAlH4 doped with a Ti-based catalyst. *Journal of Alloys and Compounds*, **2005**, 404-406, 339-342	5.7	40
1281	Chemical state of Ti in sodium alanate doped with TiCl3 using X-ray photoelectron spectroscopy. *Journal of Alloys and Compounds*, **2005**, 404-406, 766-770	5.7	37
1280	Motion of point defects and monitoring of chemical reactions in sodium aluminium hydride. *Journal of Alloys and Compounds*, **2005**, 404-406, 748-751	5.7	18
1279	The use of complex metal hydrides as hydrogen storage materials: Synthesis and XRD-studies of Ca(AlH4)2 and Mg(AlH4)2. *Journal of Alloys and Compounds*, **2005**, 404-406, 762-765	5.7	17
1278	Nanocrystalline alanates□hase transformations, and catalysts. *Journal of Alloys and Compounds*, **2005**, 404-406, 732-737	5.7	29
1277	Pressure□omposition isotherms and thermodynamic properties of TiF3-enhanced Na2LiAlH6. *Journal of Alloys and Compounds*, **2005**, 397, 135-139	5.7	42
1276	Crystal structure and stability of LiAlD4 with TiF3 additive. *Journal of Alloys and Compounds*, **2005**, 397, 291-295	5.7	41
1275	Decomposition kinetics of lithium amide for hydrogen storage materials. *Journal of Alloys and Compounds*, **2005**, 400, 76-82	5.7	80
1274	Isothermal decomposition of LiAlD4 with and without additives. *Journal of Alloys and Compounds*, **2005**, 404-406, 743-747	5.7	30
1273	Evidence for the existence of □Na3AlH6: Monitoring the phase transformation from □Na3AlH6 by in situ methods. *Journal of Alloys and Compounds*, **2005**, 398, 228-234	5.7	13
1272	100□200 C polymer fuel cells for use with NaAlH4. *Journal of Alloys and Compounds*, **2005**, 404-406, 653-656	5.7	48
1271	New catalytic complexes for metal hydride systems. *Journal of Alloys and Compounds*, **2005**, 404-406, 706-711	5.7	20
1270	Theoretical modeling of hydrogen storage materials: Prediction of structure, chemical bond character, and high-pressure behavior. *Journal of Alloys and Compounds*, **2005**, 404-406, 377-383	5.7	17

1269	Investigations on hydrogen storage behavior of CNT doped NaAlH4. *Journal of Alloys and Compounds*, **2005**, 403, 312-317	5.7	58
1268	Lattice dynamics of NaAlH4 from high-temperature single-crystal Raman scattering and ab initio calculations: Evidence of highly stable AlH4□anions. **2005**, 71,		68
1267	Dehydrogenation of a combined LiAlH4/LiNH2 system. **2005**, 109, 20830-4		67
1266	Effects of SWNT and metallic catalyst on hydrogen absorption/desorption performance of MgH2. **2005**, 109, 22217-21		82
1265	One-step direct synthesis of a Ti-doped sodium alanate hydrogen storage material. **2005**, 4732-4		82
1264	Mobile Wasserstoffspeicher mit Hydriden der leichten Elemente. **2006**, 54, 24-28		11
1263	Remarks on catalytic reduction of CO2, H+ and H2 by monovalent Ni. **2006**, 8, 1340-5		11
1262	Hydrogen release from mixtures of lithium borohydride and lithium amide: a phase diagram study. **2006**, 110, 4186-92		159
1261	Equilibrium structure and Ti-catalyzed H2 desorption in NaAlH4 nanoparticles from density functional theory. **2006**, 8, 4853-61		80
1260	Mechanistic investigations on the heterogeneous solid-state reaction of magnesium amides and lithium hydrides. **2006**, 110, 14221-5		103
1259	A precursor state for formation of TiAl3 complex in reversible hydrogen desorption/adsorption from Ti-doped NaAlH4. **2006**, 1822-4		37
1258	High-pressure study of NaAlH4 by Raman spectroscopy up to 17 GPa. **2006**, 26, 165-173		13
1257	HYDROGEN IN METALS: Microstructural Aspects. **2006**, 36, 555-608		415
1256	A first-principles analysis of hydrogen interaction in Ti-doped NaAlH4 surfaces: structure and energetics. **2006**, 110, 25863-8		45
1255	Hydrogen absorption and desorption by the Li-Al-N-H system. **2006**, 110, 9632-6		57
1254	Understanding the role of Ti in reversible hydrogen storage as sodium alanate: a combined experimental and density functional theoretical approach. **2006**, 128, 11404-15		122
1253	Synthesis and crystal structure of Li4BH4(NH2)3. **2006**, 2439-41		126
1252	Polyanionic hydrides from polar intermetallics AeE2 (Ae = Ca, Sr, Ba; E = Al, Ga, In). **2006**, 128, 817-24		33

1251	Improved hydrogen release from LiB0.33N0.67H2.67 with noble metal additions. **2006**, 110, 7967-74		68
1250	Ultrafast Reaction between Li3N and LiNH2To Prepare the Effective Hydrogen Storage Material Li2NH. **2006**, 45, 4993-4998		28
1249	Fast H-vacancy dynamics during alanate decomposition by anelastic spectroscopy. proposition of a model for Ti-enhanced hydrogen transport. **2006**, 110, 9105-11		47
1248	Hydrogen storage properties of Li-Mg-N-H systems with different ratios of LiH/Mg(NH2)2. **2006**, 110, 12964-8		76
1247	Identification of destabilized metal hydrides for hydrogen storage using first principles calculations. **2006**, 110, 8769-76		249
1246	A dehydrogenation mechanism of metal hydrides based on interactions between Hdelta+ and H-. **2006**, 45, 8749-54		44
1245	The crystal structure and surface energy of NaAlH4: a comparison of DFT methodologies. **2006**, 110, 622-30		38
1244	Evolution of the local structure around Ti atoms in NaAlH4 doped with TiCl3 or Ti13.6THF by ball milling using X-ray absorption and X-ray photoelectron spectroscopy. **2006**, 110, 1192-200		62
1243	First crystal structure studies of CaAlH5. **2006**, 45, 3849-51		41
1242	Hydrogen Storage of Li2NH Prepared by Reacting Li with NH3. **2006**, 45, 182-186		16
1241	Fermi resonances of borohydrides in a crystalline environment of alkali metals. **2006**, 110, 9927-33		34
1240	A new Li-Al-N-H system for reversible hydrogen storage. **2006**, 110, 14236-9		50
1239	Crystal structure, Raman spectroscopy, and ab initio calculations of a new bialkali alanate K2LiAlH6. **2006**, 110, 25686-91		36
1238	Synchrotron X-ray studies of Ti-doped NaAlH4. **2006**, 110, 3051-4		23
1237	Thermal destabilization of binary and complex metal hydrides by chemical reaction: A thermodynamic analysis. **2006**, 30, 65-69		70
1236	Thermodynamical stability of calcium borohydride Ca(BH4)2. **2006**, 74,		153
1235	Understanding the effect of titanium species on the decomposition of alanates in homogeneous solution. *Journal of Alloys and Compounds*, **2006**, 413, 218-221	5.7	11
1234	SEM and TEM characterization of sodium alanate doped with TiCl3 or small Ti clusters (Ti13□6THF). *Journal of Alloys and Compounds*, **2006**, 414, 190-203	5.7	37

1233	Application of mechanical milling to synthesize a novel quarterly hydride. *Journal of Alloys and Compounds*, **2006**, 413, 273-280	5.7	9
1232	Sonochemical doping of Ti-catalyzed sodium aluminum hydride. *Journal of Alloys and Compounds*, **2006**, 419, 162-171	5.7	9
1231	Thermodynamic and structural characterization of the Mg□i□H hydrogen storage system. *Journal of Alloys and Compounds*, **2006**, 407, 274-281	5.7	155
1230	Reaction products between TiCl3 catalyst and Li3AlH6 during mechanical mixing. *Journal of Alloys and Compounds*, **2006**, 419, 176-179	5.7	13
1229	The crystal structure and stability of K2NaAlH6. *Journal of Alloys and Compounds*, **2006**, 415, 284-287	5.7	38
1228	Characterization of Al□i phases in cycled TiF3-enhanced Na2LiAlH6. *Journal of Alloys and Compounds*, **2006**, 416, 274-278	5.7	18
1227	Ab-initio calculations of titanium solubility in NaAlH4 and Na3AlH6. *Journal of Alloys and Compounds*, **2006**, 416, 245-249	5.7	19
1226	Development of metal hydride with high dissociation pressure. *Journal of Alloys and Compounds*, **2006**, 419, 256-261	5.7	81
1225	Isothermal decomposition of LiAlD4. *Journal of Alloys and Compounds*, **2006**, 416, 72-79	5.7	16
1224	Mechanochemical synthesis of ultrafine TiAl3 powder and its catalytic effect on dehydrogenation of Li3AlH6. *Journal of Alloys and Compounds*, **2006**, 417, 69-71	5.7	9
1223	Effect of Ti-doping on the dehydrogenation kinetic parameters of lithium aluminum hydride. *Journal of Alloys and Compounds*, **2006**, 419, 40-44	5.7	59
1222	Hydrogen adsorption and desorption by carbon materials. *Journal of Alloys and Compounds*, **2006**, 421, 204-208	5.7	67
1221	Thermodynamic calculation of LiH<->Li3AlH6<->LiAlH4 reactions. *Journal of Alloys and Compounds*, **2006**, 420, 286-290	5.7	58
1220	A general initial decomposition reaction for complex metal hydrides. *Journal of Alloys and Compounds*, **2006**, 421, 54-56	5.7	3
1219	Dependence of H-storage performance on preparation conditions in TiF3 doped NaAlH4. *Journal of Alloys and Compounds*, **2006**, 421, 217-222	5.7	16
1218	Mechanochemical synthesis and thermal decomposition of zinc borohydride. *Journal of Alloys and Compounds*, **2006**, 422, 273-275	5.7	103
1217	Mechanochemical synthesis and thermal decomposition of Mg(AlH4)2. *Journal of Alloys and Compounds*, **2006**, 422, 283-287	5.7	61
1216	Magnesium-based nano-composite materials for hydrogen storage. *Journal of Alloys and Compounds*, **2006**, 424, 294-298	5.7	73

1215	Thermodynamic assessment of the NaH<->Na3AlH6<->NaAlH4 hydride system. *Journal of Alloys and Compounds*, **2006**, 424, 370-375	5.7	30
1214	Hydrogen-Based Technologies for Mobile Applications. **2006**, 225-272		1
1213	Electron microscopy study of Ti-doped sodium aluminum hydride prepared by mechanical milling NaH/Al with Ti powder. **2006**, 100, 034914		17
1212	Syntheses and Hydrogen Desorption Properties of Metal-Borohydrides M(BH4)n (M=Mg, Sc, Zr, Ti, and Zn; n=2–4) as Advanced Hydrogen Storage Materials. **2006**, 47, 1898-1901		82
1211	Relation between Melting and Dehydrogenation Temperatures of LiAlH4. **2006**, 47, 405-408		3
1210	Neutron scattering and hydrogenous materials. **2006**, 9, 34-41		16
1209	The role of heteroatoms in carbon nanotubes for hydrogen storage. **2006**, 44, 2816-2821		99
1208	Improving hydrogen storage/release properties of magnesium with nano-sized metal catalysts as measured by tapered element oscillating microbalance. **2006**, 300, 130-138		30
1207	The H/D isotope effect in the stability of lithium alanate. **2006**, 423, 102-105		21
1206	A density functional theory study of Ti-doped NaAlH4 clusters. **2006**, 426, 180-186		25
1205	Monitoring of chemical reactions and point defect dynamics in sodium alanates. **2006**, 442, 75-78		15
1204	Tin and tin/titanium as catalyst components for reversible hydrogen storage of sodium aluminium hydride. **2006**, 85, 2141-2147		15
1203	Dehydriding reactions of mixed complex hydrides. **2006**, 155, 447-455		76
1202	Hydrogen generation from lithium borohydride solution over nano-sized platinum dispersed on LiCoO2. **2006**, 155, 325-328		60
1201	Reaction of hydrogen with sodium oxide: A reversible hydrogenation/dehydrogenation system. **2006**, 155, 167-171		18
1200	Hydrogen storage in metal–hydrogen systems and their derivatives. **2006**, 154, 456-460		77
1199	Modeling of hydrogen storage materials by density-functional calculations. **2006**, 159, 88-99		30
1198	The roots and the future of mechanical spectroscopy. **2006**, 442, 5-20		17

1197	Hydrogen storage: The major technological barrier to the development of hydrogen fuel cell cars. **2006**, 80, 1084-1089		276
1196	Effect of Ti and metal vacancies on the electronic structure, stability, and dehydrogenation of Na3AlH6: Supercell band-structure formalism and gradient-corrected density-functional theory. **2006**, 73,		33
1195	Correlation between thermodynamical stabilities of metal borohydrides and cation electronegativites: First-principles calculations and experiments. **2006**, 74,		423
1194	Metal Hydrides: Properties and Applications of Alanates. **2006**, 1-5		2
1193	Recent development on hydrogen storage materials composed of light elements. *Physica B: Condensed Matter*, **2006**, 383, 45-48	2.8	16
1192	Phonons at the zone center for □NaAlH4. **2006**, 67, 2536-2541		2
1191	Recent development on hydrogen storage properties in metal□H systems. **2006**, 159, 126-131		34
1190	Hydrogen storage of metal nitrides by a mechanochemical reaction. **2006**, 159, 81-87		51
1189	Metal hydrides for vehicular applications: The state of the art. **2006**, 58, 26-32		69
1188	Clathrate hydrogen hydrate--a promising material for hydrogen storage. **2006**, 45, 2011-3		102
1187	Hydrogen-isotope scrambling on doped sodium alanate. **2006**, 45, 3663-5		66
1186	Tailoring Hydrogen Storage Materials Towards Application. **2006**, 8, 377-385		181
1185	Wasserstoff-Clathrat-Hydrat □ein zukunftstr□chtiger Wasserstoff-Speicher. **2006**, 118, 2063-2065		5
1184	Hydrogen-Isotope Scrambling on Doped Sodium Alanate. **2006**, 118, 3745-3747		11
1183	Theoretical Design of Catalysts for the Heterolytic Splitting of H2. **2006**, 16, 2061-2076		18
1182	Advanced Hydrogen-Storage Materials Based on Sc-, Ce-, and Pr-Doped NaAlH4. **2006**, 18, 1198-1201		206
1181	Hydrogen bonding in the LaNi3BH3 hydride. **2006**, 125, 144708		7
1180	Crystal Structure Analysis in the Dehydrogenation Process of Mg(NH2)2-LiH System. **2006**, 971, 1		5

1179	Lattice dynamics and thermodynamic properties of NaAlH4: Density-functional calculations using a linear response theory. **2006**, 73,	17
1178	Structural phase stability and bonding behavior of BAlH5(B=Mg,Ba) from first-principles calculations. **2006**, 73,	22
1177	Role of charge in destabilizing AlH4 and BH4 complex anions for hydrogen storage applications: Ab initio density functional calculations. **2006**, 74,	45
1176	Dehydriding reaction of metal hydrides and alkali borohydrides enhanced by microwave irradiation. **2006**, 88, 112104	57
1175	High hydrogen content complex hydrides: A density-functional study. **2006**, 89, 071906	58
1174	Role of Ti in the reversible dehydrogenation of Ti-doped sodium alanate. **2006**, 89, 201904	15
1173	Experimental studies on intermediate compound of LiBH4. **2006**, 89, 021920	209
1172	Stability of Ti in NaAlH4. **2006**, 88, 161917	32
1171	Crystal and electronic structures of LiNH2. **2006**, 88, 041914	55
1170	Nanostructured Materials for Gas Reactive Applications. **2007**, 365-437	3
1169	The Potential of Binary Lithium Magnesium Nitride - LiMgN for Hydrogen Storage Application. **2007** , 1042, 1	
1168	Storage and Transportation Opportunities of Hydrogen. **2007**, 2, 287-295	6
1167	Hydrogen-related catalytic effects of Ti and other light transition metals on NaAlH(4) surfaces. **2007**, 19, 176007	8
1166	First-principles investigations of the pressure-induced structural transitions in Mg(AlH(4))(2). **2007**, 19, 176205	7
1165	Electrohydrogenation of MgH2-thin films. **2007**, 90, 071912	23
1164	Dehydrogenation from 3d-transition-metal-doped NaAlH4: Prediction of catalysts. **2007**, 90, 141904	23
1163	Crystal and electronic structures of the complex hydride Li4BN3H10. **2007**, 102, 033507	13
1162	Pressure-induced structural phase transition in NaAlH4. **2007**, 75,	20

1161	Reaction energetics and crystal structure of Li4BN3H10 from first principles. **2007**, 75,		67
1160	Rate limiting steps of the phase transformations in Ti-doped NaAlH4 investigated by isotope exchange. **2007**, 75,		51
1159	Short-range order of low-coverage TiAl(111): Implications for hydrogen storage in complex metal hydrides. **2007**, 90, 151917		15
1158	A New Concept of Hydrogen Storage Using Lithium Hydride and Ammonia. **2007**, 1042, 1		0
1157	Catalytic Effect of Ti5Si3 on Dehydrogenation of NaAlH4. **2007**, 124-126, 951-954		
1156	In Situ High-Resolution Observation for Decomposition of NaAlH4. **2007**, 561-565, 1621-1624		
1155	Metal Hydrides for Hydrogen Storage. **2007**, 1041, 1		1
1154	Hydrogen self-dynamics in orthorhombic alkaline earth hydrides through incoherent inelastic neutron scattering. *Journal of Alloys and Compounds*, **2007**, 427, 18-24	5.7	26
1153	Synthesis of NaAlH4-based hydrogen storage material using milling under low pressure hydrogen atmosphere. *Journal of Alloys and Compounds*, **2007**, 430, 350-355	5.7	39
1152	A process for synthesizing the LiMgNH hydrogen storage system from Mg and LiNH2. *Journal of Alloys and Compounds*, **2007**, 432, 289-292	5.7	10
1151	Investigations on hydrogen desorption from the mixture of Mg(NH2)2 and CaH2. *Journal of Alloys and Compounds*, **2007**, 432, 298-302	5.7	26
1150	Improved hydrogen release from LiB0.33N0.67H2.67 with metal additives: Ni, Fe, and Zn. *Journal of Alloys and Compounds*, **2007**, 433, 282-291	5.7	56
1149	Structural studies of Li3N using neutron powder diffraction. *Journal of Alloys and Compounds*, **2007**, 436, 256-260	5.7	40
1148	Investigations on the desorption kinetics of Mm-doped NaAlH4. *Journal of Alloys and Compounds*, **2007**, 439, 243-248	5.7	37
1147	Direct formation of LiAlH4 by a mechanochemical reaction. *Journal of Alloys and Compounds*, **2007**, 441, 189-191	5.7	24
1146	How carbon affects hydrogen desorption in NaAlH4 and Ti-doped NaAlH4. *Journal of Alloys and Compounds*, **2007**, 437, 360-366	5.7	43
1145	Unexpected kinetic effect of MgB2 in reactive hydride composites containing complex borohydrides. *Journal of Alloys and Compounds*, **2007**, 440, L18-L21	5.7	268
1144	Dehydriding and rehydriding properties of Mg(NH2)2LiH systems. *Journal of Alloys and Compounds* , **2007**, 446-447, 328-331	5.7	17

1143	On the local structure of Ti during in situ desorption of Ti(OBu)4 and TiCl3 doped NaAlH4. *Journal of Alloys and Compounds*, **2007**, 446-447, 232-236	5.7	8
1142	A new series of high hydrogen content hydrogen-storage materials: A theoretical prediction. *Journal of Alloys and Compounds*, **2007**, 446-447, 44-47	5.7	16
1141	Hydrogen storage properties of Na-Li-Mg-Al-H complex hydrides. *Journal of Alloys and Compounds*, **2007**, 446-447, 228-231	5.7	28
1140	Hydrogen-related defects in sodium alanate. *Journal of Alloys and Compounds*, **2007**, 446-447, 459-461	5.7	10
1139	Design, fabrication and testing of NaAlH4 based hydrogen storage systems. *Journal of Alloys and Compounds*, **2007**, 446-447, 707-712	5.7	42
1138	A first-principles study of Sc-doped NaAlH4 for reversible hydrogen storage. *Journal of Alloys and Compounds*, **2007**, 446-447, 267-270	5.7	17
1137	First principles study of the destabilization of Li amide-imide reaction for hydrogen storage. *Journal of Alloys and Compounds*, **2007**, 446-447, 319-322	5.7	20
1136	Dynamics of defects in alanates. *Journal of Alloys and Compounds*, **2007**, 446-447, 260-263	5.7	17
1135	Raman scattering and lattice stability of NaAlH4 and Na3AlH6. *Journal of Alloys and Compounds*, **2007**, 446-447, 242-247	5.7	21
1134	Thermodynamic destabilization and reaction kinetics in light metal hydride systems. *Journal of Alloys and Compounds*, **2007**, 446-447, 409-414	5.7	123
1133	Ultrasmall-angle X-ray scattering (USAXS) studies of morphological trends in high energy milled NaAlH4 powders. *Journal of Alloys and Compounds*, **2007**, 446-447, 248-254	5.7	8
1132	Thermodynamical stabilities of metal-borohydrides. *Journal of Alloys and Compounds*, **2007**, 446-447, 296-300	5.7	103
1131	Hydrogen storage properties of 2LiNH2+LiBH4+MgH2. *Journal of Alloys and Compounds*, **2007**, 446-447, 345-349	5.7	36
1130	High throughput screening of the ternary Li-N-H-Mg-H2-Li-B-H4 phase diagram. *Journal of Alloys and Compounds*, **2007**, 446-447, 355-359	5.7	36
1129	Point defect dynamics in sodium aluminum hydrides: A combined quasielastic neutron scattering and density functional theory study. *Journal of Alloys and Compounds*, **2007**, 446-447, 469-473	5.7	33
1128	Development of a high-pressure microbalance for hydrogen storage materials. *Journal of Alloys and Compounds*, **2007**, 446-447, 703-706	5.7	2
1127	Ti EELS standards for identification of catalytic species in NaAlH4 hydrogen storage materials. *Journal of Alloys and Compounds*, **2007**, 446-447, 255-259	5.7	15
1126	Stability analysis of doped materials for reversible hydrogen storage in destabilized metal hydrides. **2007**, 76,		25

1125	Synthesis and properties of magnesium tetrahydroborate, Mg(BH4)2. **2007**, 17, 3496		287
1124	First-principles calculations of structural, electronic, and thermodynamic properties of Na2BeH4. **2007**, 76,		6
1123	First principle calculations of alkali hydride electronic structures. **2007**, 19, 406211		19
1122	Structural transition of Li2BeH4 under high pressure: A first-principles study. **2007**, 75,		9
1121	Hydrogen storage in calcium alanate: First-principles thermodynamics and crystal structures. **2007**, 75,		88
1120	Vacancy mediated desorption of hydrogen from a sodium alanate surface: An ab initio spin-polarized study. **2007**, 90, 143119		12
1119	Functional anion concept: effect of fluorine anion on hydrogen storage of sodium alanate. **2007**, 9, 1499-502		74
1118	NaAlH4 Clusters with Two Titanium Atoms Added. *Journal of Physical Chemistry C*, **2007**, 111, 8206-8213	3.8	20
1117	Boron Compounds as Hydrogen Storage Materials. **2007**, 29, 1415-1423		17
1116	Role of Lithium Vacancies in Accelerating the Dehydrogenation Kinetics on a LiBH4(010) Surface: An Ab Initio Study. *Journal of Physical Chemistry C*, **2007**, 111, 12124-12128	3.8	10
1115	Direct and Reversible Synthesis of AlH3□riethylenediamine from Al and H2. *Journal of Physical Chemistry C*, **2007**, 111, 19148-19152	3.8	64
1114	Role of charged defects and impurities in kinetics of hydrogen storage materials: A first-principles study. **2007**, 76,		85
1113	Hydrogen energy in Indian context and R&D efforts at Banaras Hindu University. **2007**, 64, 761-776		5
1112	Unprecedented flexibility of the >Ti=Si2007, 9, 2706-12		1
1111	First-Principle Studies of the Formation and Diffusion of Hydrogen Vacancies in Magnesium Hydride. *Journal of Physical Chemistry C*, **2007**, 111, 8360-8365	3.8	56
1110	Potential of Binary Lithium Magnesium Nitride for Hydrogen Storage Applications. *Journal of Physical Chemistry C*, **2007**, 111, 12129-12134	3.8	54
1109	Synthesis of Metal Complex Hydrides for Hydrogen Storage. *Journal of Physical Chemistry C*, **2007**, 111, 14917-14924	3.8	33
1108	Hydrogen storage: the remaining scientific and technological challenges. **2007**, 9, 2643-53		380

1107	Steam-Reforming Product (H2/CO2 Mixture) Used as a Hydrogen Source for Hydrogen Storage in Li3N. **2007**, 46, 5940-5942		7
1106	Kinetic Improvement in the Mg(NH2)2□LiH Storage System by Product Seeding. *Journal of Physical Chemistry C*, **2007**, 111, 6568-6573	3.8	56
1105	Potential and Reaction Mechanism of Li□Mg□Al□H System for Reversible Hydrogen Storage. *Journal of Physical Chemistry C*, **2007**, 111, 16686-16692	3.8	23
1104	Hydrogen dynamics in Na3AlH6: a combined density functional theory and quasielastic neutron scattering study. **2007**, 111, 3886-92		35
1103	Hydrogen and Hydrogen-Storage Materials. **2007**, 417-437		
1102	In situ synchrotron diffraction studies of phase transitions and thermal decomposition of Mg(BH4)2 and Ca(BH4)2. **2007**, 17, 4939		135
1101	Electronic structure and optical properties of lightweight metal hydrides. **2007**, 75,		109
1100	Metal Amides: New Hydrogen Storage Systems. **2007**, 1-3		
1099	Nanotechnological Aspects in Materials for Hydrogen Storage. **2007**,		
1098	Structure and bonding in cyclic isomers of BAl2Hnm (n=3-6, m=-2 to +1): preference for planar tetracoordination, pyramidal tricoordination, and divalency. *Chemistry - A European Journal*, **2007**, 13, 2622-31	4.8	13
1097	Reversible Hydrogen Storage by a Li□Al□H Complex. **2007**, 17, 1137-1142		94
1096	Hydrogenography: An Optical Combinatorial Method To Find New Light-Weight Hydrogen-Storage Materials. **2007**, 19, 2813-2817		161
1095	Selected nanotechnologies for renewable energy applications. **2007**, 31, 619-636		136
1094	The catalytic role of an isolated-Ti atom in the hydrogenation of Ti-doped Al(001) surface: An ab initio density functional theory calculation. **2007**, 450, 80-85		29
1093	Mechanochemical transformations in Li(Na)AlH4□Li(Na)NH2 systems. **2007**, 55, 3121-3130		35
1092	Superior hydrogen storage kinetics of MgH2 nanoparticles doped with TiF3. **2007**, 55, 4585-4591		113
1091	The TiCl3 catalyst in NaAlH4 for hydrogen storage induces grain refinement and impacts on hydrogen vacancy formation. **2007**, 55, 5549-5557		71
1090	Understanding the effect of TiO2, VCl3, and HfCl4 on hydrogen desorption/absorption of NaAlH4. **2007**, 163, 997-1002		31

1089	Kinetics of Ru-catalyzed sodium borohydride hydrolysis. **2007**, 164, 772-781		142
1088	Investigation of the processes for reversible hydrogen storage in the LiNMgNNH system. **2007**, 164, 496-502		49
1087	Synthesis of ultrafine titanium aluminide powders and their catalytic enhancement in dehydrogenation kinetics of NaAlH4. **2007**, 56, 125-128		14
1086	Advantage of TiF3 over TiCl3 as a dopant precursor to improve the thermodynamic property of Na3AlH6. **2007**, 56, 361-364		26
1085	Thermodynamic functions and pressure-temperature phase diagram of lithium alanates by ab initio calculations. **2007**, 76,		27
1084	First-principles investigation of metal-hydride phase stability: The Ti-H system. **2007**, 76,		56
1083	Using first principles calculations to identify new destabilized metal hydride reactions for reversible hydrogen storage. **2007**, 9, 1438-52		161
1082	Phase Boundaries and Reversibility of LiBH4/MgH2 Hydrogen Storage Material. *Journal of Physical Chemistry C*, **2007**, 111, 12881-12885	3.8	161
1081	Destabilizing LiBH4 with a Metal (M = Mg, Al, Ti, V, Cr, or Sc) or Metal Hydride (MH2 = MgH2, TiH2, or CaH2). *Journal of Physical Chemistry C*, **2007**, 111, 19134-19140	3.8	227
1080	Thermodynamic guidelines for the prediction of hydrogen storage reactions and their application to destabilized hydride mixtures. **2007**, 76,		114
1079	Hydrogen storage and distribution systems. **2007**, 12, 343-365		26
1078	Catalytic effect of Ti5Si3 on thermal decomposition of Li3AlH6. **2007**, 42, 6302-6305		3
1077	Orbital landscapes for reductive 2e- activation of dihydrogen molecule. **2007**, 13, 757-67		2
1076	An overview of materials for the hydrogen economy. **2007**, 59, 50-55		79
1075	Fuel cell vehicles: Status 2007. **2007**, 165, 833-843		270
1074	A hybrid method for hydrogen storage and generation from water. **2007**, 172, 853-858		12
1073	Hydrogen production from the photocatalytic hydrolysis of sodium borohydride in the presence of In2Sn2and SbTiO2s. **2008**, 14, 655-660		16
1072	Hydrogen storage properties of the MgTiH system prepared by high-energyhigh-pressure reactive milling. **2008**, 180, 491-497		74

1071	Effects of reduction conditions on the cycling performance of hydrogen storage by iron oxides: Storage stage. **2008**, 63, 4974-4980		10
1070	Hydrogen electrode reaction of lithium and sodium aluminum hydrides. *International Journal of Hydrogen Energy*, **2008**, 33, 3178-3181	6.7	13
1069	Hydrogen desorption properties of LiBNH system synthesized by mechanical milling. *International Journal of Hydrogen Energy*, **2008**, 33, 3128-3131	6.7	16
1068	Magnesium borohydride: A new hydrogen storage material. *Renewable Energy*, **2008**, 33, 193-196	8.1	75
1067	Catalytic effect and reaction mechanism of Ti doped in NaAlH4: A review. **2008**, 53, 1784-1788		3
1066	Hydrogen evolution performance of magnesium alanate prepared by a mechanochemical metathesis reaction method. **2008**, 25, 268-272		7
1065	Recent progress in hydrogen storage. **2008**, 11, 36-43		422
1064	Lithium nitrides as sustainable energy materials. **2008**, 8, 229-39		41
1063	Theoretical study of the CsMgH3, Cs2MgH4 and Cs4Mg3H10 complex hydrides from first-principles. **2008**, 245, 2749-2755		2
1062	Pt@MOF-177: synthesis, room-temperature hydrogen storage and oxidation catalysis. *Chemistry - A European Journal*, **2008**, 14, 8204-12	4.8	252
1061	Density functional investigations of electronic structure and dehydrogenation reactions of Al- and Si-substituted magnesium hydride. **2008**, 9, 928-34		27
1060	Strategies for the improvement of the hydrogen storage properties of metal hydride materials. **2008**, 9, 2157-62		42
1059	A self-catalyzing hydrogen-storage material. **2008**, 47, 882-7		116
1058	A Self-Catalyzing Hydrogen-Storage Material. **2008**, 120, 896-901		12
1057	The study of controlling pore size on electrospun carbon nanofibers for hydrogen adsorption. **2008**, 318, 42-9		128
1056	On the reversibility of hydrogen storage in Ti- and Nb-catalyzed Ca(BH4)2. **2008**, 181, 140-143		90
1055	An ab initio study of possible pathways in the thermal decomposition of NaAlH4. **2008**, 181, 3037-3043		9
1054	Materials challenges for hydrogen storage. **2008**, 28, 1467-1473		36

1053	Effect of pressure and temperature on structural stability of potential hydrogen storage compound Li3AlH6. **2008**, 460, 442-446		7
1052	Dehydriding and rehydriding processes of well-crystallized Mg(BH4)2 accompanying with formation of intermediate compounds. **2008**, 56, 1342-1347		185
1051	Structural properties of the nanoscopic Al85Ti15 solid solution observed in the hydrogen-cycled NaAlH4+0.1TiCl3 system. **2008**, 56, 4691-4701		29
1050	Kinetic- and thermodynamic-based improvements of lithium borohydride incorporated into activated carbon. **2008**, 56, 6257-6263		124
1049	The effect of doping rare-earth chloride dopant on the dehydrogenation properties of NaAlH4 and its catalytic mechanism. *International Journal of Hydrogen Energy*, **2008**, 33, 2260-2267	6.7	40
1048	Improvement in desorption kinetics of NaAlH4 catalyzed with TiO2 nanopowder. *International Journal of Hydrogen Energy*, **2008**, 33, 3748-3753	6.7	59
1047	Hydrogen spillover in the context of hydrogen storage using solid-state materials. **2008**, 1, 338		116
1046	Hydrogen vacancies facilitate hydrogen transport kinetics in sodium hydride nanocrystallites. **2008**, 78,		22
1045	Kinetics and Thermodynamics. *Green Energy and Technology*, **2008**, 471-500	0.6	0
1044	Further investigation of the effect of framework catenation on hydrogen uptake in metal-organic frameworks. **2008**, 130, 15896-902		141
1043	Titanium and native defects in LiBH(4) and NaAlH(4). **2008**, 20, 465210		24
1042	Enhanced Hydrogen Storage Performance of LiBH4–SiO2–TiF3 Composite. *Journal of Physical Chemistry C*, **2008**, 112, 4005-4010	3.8	59
1041	Stability and reversibility of LiBH4. **2008**, 112, 906-10		287
1040	Aluminohydrides: Structures, NMR, solid-state reactions. **2008**, 53, 2048-2081		14
1039	Effects of Ti and Fe Additives on Hydrogen Release from Lithium Alanate. **2008**, 37, 400-403		20
1038	Thermal and mechanically activated decomposition of LiAlH4. **2008**, 43, 1263-1275		69
1037	X-ray Photoelectron Spectroscopy. *Green Energy and Technology*, **2008**, 575-601	0.6	1
1036	Hydrogen adsorption in microporous organic framework polymer. **2008**, 4342-4		42

1035	Crystal Chemistry of Perovskite-Type Hydride NaMgH3: Implications for Hydrogen Storage. **2008**, 20, 2335-2342		46
1034	High-throughput synthesis and screening of hydrogen-storage alloys. **2008**, 10, 37-43		18
1033	Hydrogen-rich boron-containing materials for hydrogen storage. **2008**, 5400-13		154
1032	Development of Innovative Hydrogen and Micro Energy Solutions at the Austrian Research Centers. **2008**,		0
1031	Theoretical study on (Al2O3)n (n = 1-10 and 30) fullerenes and H2 adsorption properties. **2008**, 47, 2274-9		35
1030	Lithium nitrides, imides and amides as lightweight, reversible hydrogen stores. **2008**, 18, 2321		71
1029	Membrane and MEA Development in Polymer Electrolyte Fuel Cells. **2008**, 1-28		
1028	Reversible hydrogen storage properties of NaAlH4 catalyzed with scandium. *Journal of Alloys and Compounds*, **2008**, 450, 293-300	5.7	44
1027	First-principles investigations of the MMgH3 (M=Li, Na, K, Rb, Cs) series. *Journal of Alloys and Compounds*, **2008**, 450, 327-337	5.7	45
1026	The structure of LiMg(AlD4)3. *Journal of Alloys and Compounds*, **2008**, 455, 249-254	5.7	32
1025	LiAlD4 with VCl3 additives: Influence of ball-milling energies. *Journal of Alloys and Compounds*, **2008**, 458, 467-473	5.7	5
1024	Hydrogen storage properties of Mg[BH4]2. *Journal of Alloys and Compounds*, **2008**, 459, 583-588	5.7	110
1023	The crystal structure of LiMgAlD6 from combined neutron and synchrotron X-ray powder diffraction. *Journal of Alloys and Compounds*, **2008**, 460, 64-68	5.7	16
1022	Hydrogen release of catalyzed lithium aluminum hydride by a mechanochemical reaction. *Journal of Alloys and Compounds*, **2008**, 462, 275-278	5.7	44
1021	Investigation of reaction between LiNH2 and H2. *Journal of Alloys and Compounds*, **2008**, 463, 462-465	5.7	21
1020	Reversible hydrogen storage in the lithium borohydride–calcium hydride coupled system. *Journal of Alloys and Compounds*, **2008**, 464, L1-L4	5.7	73
1019	The influence of amorphous Al2O3 coating on hydrogen uptake of materials. *Journal of Alloys and Compounds*, **2008**, 464, L13-L16	5.7	12
1018	Improved hydrogen sorption of sodium alanate by optimized processing. *Journal of Alloys and Compounds*, **2008**, 465, 310-316	5.7	26

1017	Investigation of the thermodynamics governing metal hydride synthesis in the molten state process. *Journal of Alloys and Compounds*, **2008**, 465, 41-46	5.7	3
1016	Report from the third workshop on future directions of solid-state chemistry: The status of solid-state chemistry and its impact in the physical sciences. **2008**, 36, 1-133		51
1015	Large-Scale Screening of Metal Hydride Mixtures for High-Capacity Hydrogen Storage from First-Principles Calculations. *Journal of Physical Chemistry C*, **2008**, 112, 5258-5262	3.8	95
1014	Thermodynamic modeling of the Na□Al□Ti□H system and Ti dissolution in sodium alanates. **2008**, 32, 624-636		13
1013	Materials for hydrogen storage: current research trends and perspectives. **2008**, 668-81		563
1012	Technology Options for Onboard Hydrogen Storage. **2008**, 14, 85-99		
1011	Prototype electrostatic ground state approach to predicting crystal structures of ionic compounds: Application to hydrogen storage materials. **2008**, 77,		57
1010	Hydrogen storage in liquid organic heterocycles. **2008**, 1, 134		288
1009	Hydrogen-deuterium exchange experiments to probe the decomposition reaction of sodium alanate. **2008**, 10, 4045-55		65
1008	Cobalt-catalyzed hydrogen desorption from the LiNH2-LiBH4 system. **2008**, 2395-9		54
1007	Thermal decomposition of Mg(BH4)2 under He flow and H2 pressure. **2008**, 18, 2611		99
1006	Investigations on the Formation and Decomposition Behaviors of BaAlH5 and Ba2AlH7. *Journal of Physical Chemistry C*, **2008**, 112, 17423-17426	3.8	5
1005	Adjustment of the Stability of Complex Hydrides by Anion Substitution. *Journal of Physical Chemistry C*, **2008**, 112, 5658-5661	3.8	77
1004	Hydrogen Storage Properties in (LiNH2)2□iBH4□MgH2)X Mixtures (X = 0.0□1.0). *Journal of Physical Chemistry C*, **2008**, 112, 4384-4390	3.8	39
1003	Influence of Surface Reactions on Complex Hydride Reversibility. *Journal of Physical Chemistry C*, **2008**, 112, 18270-18279	3.8	4
1002	Comparison of the Calculated and Experimental Scenarios for Solid-State Reactions Involving Ca(AlH4)2. *Journal of Physical Chemistry C*, **2008**, 112, 131-138	3.8	14
1001	Nature of hydrogen interaction and saturation on small titanium clusters. **2008**, 112, 2846-54		26
1000	Thermodynamic Properties of Trialkali (Li, Na, K) Hexa-alanates: A Combined DFT and Experimental Study. *Journal of Physical Chemistry C*, **2008**, 112, 18598-18607	3.8	15

999	Investigation of the Nature of a TiAl Cluster Formed upon Cycling under Hydrogen in Na Alanate Doped with a Ti-Based Precursor. *Journal of Physical Chemistry C*, **2008**, 112, 12545-12549	3.8	35
998	Density Functional Theory Study of the TiH2 Interaction with a NaAlH4 Cluster. *Journal of Physical Chemistry C*, **2008**, 112, 15759-15764	3.8	20
997	Hydrogen Storage Properties of Space-Confined NaAlH4 Nanoparticles in Ordered Mesoporous Silica. **2008**, 20, 3954-3958		155
996	Reactivity of LiBH4: In Situ Synchrotron Radiation Powder X-ray Diffraction Study. *Journal of Physical Chemistry C*, **2008**, 112, 1299-1303	3.8	122
995	Thermodynamic analysis of hydrogen sorption reactions in LiMgNH systems. **2008**, 92, 021907		22
994	Ti-Decorated Doped Silicon Fullerene: A Possible Hydrogen-Storage Material. *Journal of Physical Chemistry C*, **2008**, 112, 19963-19968	3.8	49
993	Hydrogen Storage in LiNH2/Li3N Material for H2/CO2 Mixture Gas as Hydrogen Source. **2008**, 47, 48-50		15
992	Reversible Catalytic Reactions and the Stability of Ti Surface Defects in NaAlH4. **2008**, 20, 7539-7544		6
991	Structures of aluminium-based light weight hydrides. **2008**, 223, 636-648		55
990	Conclusion: technological challenges in hydrogen storage. **2008**, 565-570		
989	Structure and dynamics of TiAlH compounds in Ti-doped NaAlH4. **2008**, 34, 201-210		10
988	Properties of Hydrogen. **2008**, 71-147		3
987	Vacancy-mediated dehydrogenation of sodium alanate. **2008**, 105, 3673-7		94
986	Hydrogen Storage. **2008**, 165-263		16
985	History of Hydrogen. **2008**, 7-21		1
984	Gamma-point lattice free energy estimates from O1 force calculations. **2008**, 128, 184708		1
983	Ca(AlH4)2, CaAlH5, and CaH2+6LiBH4: Calculated dehydrogenation enthalpy, including zero point energy, and the structure of the phonon spectra. **2008**, 128, 234505		8
982	Nanomaterials for Hydrogen Storage Applications: A Review. **2008**, 2008, 1-9		121

981	Hydrogen storage technologies. **2008**, 3-17		7
980	Neutron scattering studies for analysing solid-state hydrogen storage. **2008**, 135-173		1
979	Solid-state hydrogen storage system design. **2008**, 82-103		0
978	Nanogravimetric Evaluation of Hydrogen Uptake in Thin Film Materials by A Quartz Crystal Microbalance. **2008**, 1098, 1		
977	First-principles study of a double-cation alkali metal borohydride LiK(BH4)2. **2008**, 20, 445210		12
976	Hydrogen Storage Properties of a Combined Li3AlH6-LiBH4 System. **2008**, 1098, 1		
975	Destabilized LiBH4–NaAlH4 Mixtures Doped with Titanium Based Catalysts. *Journal of Physical Chemistry C*, **2008**, 112, 18244-18248	3.8	28
974	Intermetallics for hydrogen storage. **2008**, 315-356		1
973	Charge and Discharge Properties of Hydrogen in the Alloy Hydride System with Open Cell Al Foam. **2008**, 569, 301-304		
972	Hydrogen bonding in sodium alanate: a muon spin rotation study. **2008**, 100, 026401		36
971	Effect of adsorbed hydrogen on the stability of titanium atoms on aluminum surfaces. **2008**, 77,		13
970	Crystal structure prediction of LiBeH3 using ab initio total-energy calculations and evolutionary simulations. **2008**, 129, 234105		16
969	Superior hydrogen desorption kinetics of Mg(NH2)2 hollow nanospheres mixed with MgH2 nanoparticles. **2008**, 92, 231910		17
968	Dynamical properties and temperature induced molecular disordering of LiBH4 and LiBD4. **2008**, 78,		66
967	Synthesis and Hydrogen Storage Properties of a Single-Phase Magnesium Borohydride Mg(BH4)2. **2008**, 49, 2224-2228		34
966	Effect of Ball-Milling on the Properties of Mg2Cu Hydrogen Storage Alloy. **2008**, 49, 2698-2701		5
965	Structural, energetic, and electronic properties of hydrogenated titanium clusters. **2008**, 128, 194714		19
964	Transmission electron microscopy characterization of NaAlH4. **2008**, 126, 012015		2

963	Ti-induced destabilization of NaBH4 from first-principles theory. **2008**, 20, 122202		5
962	Material Design of Hydrides for Energy-Related Applications. **2008**, 18, 180-185		
961	Electronic Structure and Formation Enthalpy of Hydroaluminates and Hydroborates. **2008**, 1-6		1
960	First-principles study of the formation and migration of native defects in NaAlH4. **2009**, 80,		50
959	Geometric and electronic structures of hydrogenated transition metal (Sc, Ti, Zr) clusters. **2009**, 79,		23
958	The kinetic enhancement of hydrogen cycling in NaAlH(4) by melt infusion into nanoporous carbon aerogel. **2009**, 20, 204018		72
957	Diffusion of hydrogen vacancy in Na3AlH6. **2009**, 95, 111910		10
956	Dynamics and thermodynamics of a novel phase of NaAlH4. **2009**, 103, 185901		19
955	An infrared imaging method for high-throughput combinatorial investigation of hydrogenation-dehydrogenation and new phase formation of thin films. **2009**, 80, 073707		13
954	Ab initio molecular dynamics study of the hydrogen diffusion in sodium and lithium hydrides. **2009**, 106, 016104		8
953	Direct synthesis of nanocrystalline NaAlH4 complex hydride for hydrogen storage. **2009**, 94, 041907		31
952	Hydrogen. *Green Energy and Technology*, **2009**, 105-161	0.6	1
951	An x-ray photoemission electron microscopy study of the formation of Ti-Al phases in 4 mol% TiCl3 catalyzed NaAlH4 during high energy ball milling. **2009**, 20, 204014		11
950	Ab initio study on the electronic structure and vibration modes of alkali and alkaline-earth amides and alanates. **2009**, 21, 185501		7
949	Size effects on the hydrogen storage properties of nanoscaffolded Li3BN2H8. **2009**, 20, 204002		33
948	High-pressure polymorphs of Li(2)BeH(4) predicted by first-principles calculations. **2009**, 21, 385405		3
947	Hydrogen desorption from NaAlH4catalyzed by ball-milling with carbon nanofibers. **2009**, 182, 012050		4
946	Nanostructures of LiBH4: a density-functional study. **2009**, 20, 275704		20

945	Elastic properties of NaXH(4) (X = B, Al). **2009**, 21, 275401		9
944	Hydrogen storage in complex metal hydrides. **2009**, 74, 183-196		43
943	Predicting New Materials for Hydrogen Storage Application. *Materials*, **2009**, 2, 2296-2318	3.5	7
942	First-Principles Study on Hydrogen Atom Hopping in NaAlH4. **2009**, 1216, 1		
941	Chemische und physikalische L□sungen f□ die Speicherung von Wasserstoff. **2009**, 121, 6732-6757		164
940	Effect of doped transition metal on reversible hydrogen release/uptake from NaAlH4. *Chemistry - A European Journal*, **2009**, 15, 1685-95	4.8	31
939	Hydrogen storage mediated by Pd and Pt nanoparticles. **2009**, 10, 2566-76		165
938	Chemical and physical solutions for hydrogen storage. **2009**, 48, 6608-30		1065
937	Proton NMR studies of the NaAlH4 structure. **2009**, 200, 280-4		
936	A review: Hydrogen generation from borohydride hydrolysis reaction. **2009**, 187, 527-534		405
935	Thermal Conductivity and Phase Diagrams of Some Potential Hydrogen Storage Materials Under Pressure. **2009**, 30, 1118-1129		17
934	Reversible hydrogen storage behaviors and microstructure of TiC-doped sodium aluminum hydride. **2009**, 44, 4700-4704		17
933	Solid-state hydrogen storage: Storage capacity, thermodynamics, and kinetics. **2009**, 61, 45-51		10
932	Observations of nanoscopic, face centered cubic Ti and TiH x. **2009**, 94, 787-793		11
931	Effect of LaCl3 and Ti on Hydrogen Storage Properties of NaAlH4 and LiAlH4. **2009**, 38, 1328-1332		2
930	Neutron scattering and hydrogen storage. **2009**, 12, 54-61		44
929	Effect of Additives on the Reversibility of Lithium Alanate (LiAlH4). **2009**, 38, 766-769		9
928	Novel materials for solid-state hydrogen storage: Anelastic spectroscopy studies. **2009**, 521-522, 134-138		4

927	Atomic and electronic structure of hydrogen-related centers in hydrogen storage materials. *Physica B: Condensed Matter*, **2009**, 404, 793-797	2.8	4
926	A search for new Mg- and K-containing alanates for hydrogen storage. *International Journal of Hydrogen Energy*, **2009**, 34, 4582-4586	6.7	15
925	Complex hydrides as solid storage materials: First safety tests. *International Journal of Hydrogen Energy*, **2009**, 34, 5981-5985	6.7	22
924	Low temperature milling of the LiNH2 + LiH hydrogen storage system. *International Journal of Hydrogen Energy*, **2009**, 34, 4331-4339	6.7	26
923	Ultrasonic irradiation as a tool to modify the H-desorption from hydrides: MgH(2) suspended in decane. **2009**, 16, 810-6		16
922	Hydrogenography of PdHx thin films: Influence of H-induced stress relaxation processes. **2009**, 57, 1209-1219		49
921	Formation of Na3AlH6 from a NaH/Al mixture and Ti-containing catalyst. **2009**, 57, 1959-1965		8
920	Superior catalytic effect of TiF3 over TiCl3 in improving the hydrogen sorption kinetics of MgH2: Catalytic role of fluorine anion. **2009**, 57, 2250-2258		125
919	Mechanochemical synthesis and XPS analysis of sodium alanate with different additives. **2009**, 57, 5563-5570		32
918	Challenges in hydrogen storage. **2009**, 176, 155-166		38
917	Catalyzed hydrogen spillover for hydrogen storage. **2009**, 131, 4224-6		70
916	Development of Combined Optical Cell and Sieverts-type Apparatus for in-situ Measurement of Hydrogen Storage Materials. **2009**, 1216, 1		
915	Carbon nanomaterials as catalysts for hydrogen uptake and release in NaAlH4. **2009**, 9, 1501-5		180
914	Improvement of the LiAlH4□NaBH4 System for Reversible Hydrogen Storage. *Journal of Physical Chemistry C*, **2009**, 113, 10813-10818	3.8	41
913	First-principles prediction of thermodynamically reversible hydrogen storage reactions in the Li-Mg-Ca-B-H system. **2009**, 131, 230-7		242
912	Hydriding and Dehydriding Kinetics of Sodium Alanate at Constant Pressure Thermodynamic Driving Forces. *Journal of Physical Chemistry C*, **2009**, 113, 14512-14517	3.8	25
911	Excess Electrons in LiAlH4 Clusters: Implication for Hydrogen Storage. *Journal of Physical Chemistry C*, **2009**, 113, 1104-1108	3.8	7
910	Formation of hydrides in (Ti(1-x)Zr(x))Co(2.00) (0 2009, 48, 11655-9		3

909	Hydrogen De/Resorption Properties of the LiBH4□MgH2□Al System. *Journal of Physical Chemistry C* , **2009**, 113, 21964-21969	3.8	47
908	The Dehydrogenation Reactions and Kinetics of 2LiBH4□Al Composite. *Journal of Physical Chemistry C*, **2009**, 113, 18424-18430	3.8	44
907	(MnH9)2□salts with high hydrogen contents and unusual bonding: Density functional calculations. **2009**, 80,		3
906	Nanosized Co- and Ni-Catalyzed Ammonia Borane for Hydrogen Storage. **2009**, 21, 2315-2318		151
905	X-ray Diffraction and NMR Studies of Na3□LinAlH6 (n = 0, 1, 2) Alanates Synthesized by High-Pressure Reactive Ball Milling. *Journal of Physical Chemistry C*, **2009**, 113, 21242-21252	3.8	20
904	Formation of an intermediate compound with a B12H12 cluster: experimental and theoretical studies on magnesium borohydride Mg(BH4)2. **2009**, 20, 204013		99
903	First principles investigation of H addition and abstraction reactions on doped aluminum clusters. **2009**, 113, 5832-7		33
902	Hydrogen Interaction in Ti-Doped LiBH4 for Hydrogen Storage: A Density Functional Analysis. **2009**, 5, 3079-87		18
901	Identification of the Dehydrogenated Product of Ca(BH4)2. *Journal of Physical Chemistry C*, **2009**, 113, 5865-5871	3.8	78
900	Effect of Milling Parameters on the Dehydrogenation Properties of the Mg□TiH System. *Journal of Physical Chemistry C*, **2009**, 113, 19344-19350	3.8	41
899	A Theoretical Study of H2 Reacting on Ti/Al(100) Surfaces. *Journal of Physical Chemistry C*, **2009**, 113, 11027-11034	3.8	17
898	Formation Reactions and the Thermodynamics and Kinetics of Dehydrogenation Reaction of Mixed Alanate Na2LiAlH6. *Journal of Physical Chemistry C*, **2009**, 113, 7978-7984	3.8	41
897	Polyelectrolyte multilayered nanofilms as a novel approach for the protection of hydrogen storage materials. **2009**, 1, 996-1001		18
896	Wide-Line Solid-State NMR Characterizations of Sodium Alanates. *Journal of Physical Chemistry C*, **2009**, 113, 15467-15472	3.8	21
895	On the Reversibility of Hydrogen-Storage Reactions in Ca(BH4)2: Characterization via Experiment and Theory. *Journal of Physical Chemistry C*, **2009**, 113, 20088-20096	3.8	56
894	Hydrogenation Reaction Pathway in Li2Mg(NH)2. *Journal of Physical Chemistry C*, **2009**, 113, 15772-15777	3.8	27
893	Manganese Borohydride As a Hydrogen-Storage Candidate: First-Principles Crystal Structure and Thermodynamic Properties. *Journal of Physical Chemistry C*, **2009**, 113, 13416-13424	3.8	16
892	Thermodynamic Profiles of Ti-Doped Sodium Alanates. *Journal of Physical Chemistry C*, **2009**, 113, 15051-15057	3.8	72

891	Catalytic Mechanism of New TiC-Doped Sodium Alanate for Hydrogen Storage. *Journal of Physical Chemistry C*, **2009**, 113, 20745-20751	3.8	40
890	Calcium Amidoborane Ammoniate: Synthesis, Structure, and Hydrogen Storage Properties. **2009**, 21, 4899-4904		80
889	Improving Hydrogen Sorption Kinetics of the Mg(NH2)2–LiH System by the Tuning Particle Size of the Amide. *Journal of Physical Chemistry C*, **2009**, 113, 14523-14527	3.8	30
888	Dehydrogenation properties of LaCl3 catalyzed NaAlH4 complex hydrides. *Journal of Alloys and Compounds*, **2009**, 467, 413-416	5.7	13
887	Microwave irradiation effects on reversible hydrogen desorption in sodium aluminum hydrides (NaAlH4). *Journal of Alloys and Compounds*, **2009**, 470, 250-255	5.7	13
886	Comparative study of dehydrogenation of sodium aluminum hydride wet-doped with ScCl3, TiCl3, VCl3, and MnCl2. *Journal of Alloys and Compounds*, **2009**, 471, L16-L22	5.7	23
885	Cycling properties of Sc- and Ce-doped NaAlH4 hydrogen storage materials prepared by the one-step direct synthesis method. *Journal of Alloys and Compounds*, **2009**, 471, 383-386	5.7	67
884	Ti cations in sodium alanate. *Journal of Alloys and Compounds*, **2009**, 471, L29-L31	5.7	8
883	Catalytic hydrogenations of tolane and stilbene with Ti- and Ce-doped complex metal hydrides. *Journal of Alloys and Compounds*, **2009**, 474, 57-60	5.7	7
882	Improving MgH2 formation kinetics and its effect on NaBH4 synthesis. *Journal of Alloys and Compounds*, **2009**, 474, 321-325	5.7	11
881	Synthesis of nanocomposite hydrides for solid-state hydrogen storage by controlled mechanical milling techniques. *Journal of Alloys and Compounds*, **2009**, 483, 252-255	5.7	27
880	Investigation of (Mg, Al, Li, H)-based hydride and alanate mixtures produced by reactive ball milling. *Journal of Alloys and Compounds*, **2009**, 476, 425-428	5.7	8
879	Metastability and crystal structure of the bialkali complex metal borohydride NaK(BH4)2. *Journal of Alloys and Compounds*, **2009**, 476, 446-450	5.7	38
878	Studies of mixed hydrides based on Mg and Ca by reactive ball milling. *Journal of Alloys and Compounds*, **2009**, 476, 639-643	5.7	11
877	Reversible hydrogen storage in NaF–Al composites. *Journal of Alloys and Compounds*, **2009**, 477, 76-80	5.7	39
876	Structural and hydriding/dehydriding properties of Mg–La–Ni-based composites. *Journal of Alloys and Compounds*, **2009**, 477, 440-444	5.7	14
875	Structural determination of NaAl2Ga2 intermetallic compound having the ThCr2Si2 type structure. *Journal of Alloys and Compounds*, **2009**, 477, 149-151	5.7	3
874	Direct synthesis of BaAlH5 and Ba2AlH7 from BaH2 and Al system and their hydriding/dehydriding characteristics. *Journal of Alloys and Compounds*, **2009**, 477, 744-748	5.7	3

873	Enhanced hydrogen storage performance of LiBH4–Ni composite. *Journal of Alloys and Compounds*, **2009**, 479, 545-548	5.7	57
872	First-principles investigation of sodium and lithium alloyed alanates. *Journal of Alloys and Compounds*, **2009**, 479, 678-683	5.7	9
871	Diffusion controlled hydrogen desorption reaction for the LiBH4/2LiNH2 system. *Journal of Alloys and Compounds*, **2009**, 481, 473-479	5.7	20
870	Study on hydrogen storage properties of LiAlH4. *Journal of Alloys and Compounds*, **2009**, 481, 761-763	5.7	26
869	Synchrotron XRD and XANES studies of cerium-doped NaAlH4: Elucidation of doping induced structure changes and electronic state. *Journal of Alloys and Compounds*, **2009**, 481, 60-64	5.7	16
868	Catalytic effect of Ni nanoparticles on the desorption kinetics of MgH2 nanoparticles. *Journal of Alloys and Compounds*, **2009**, 482, 388-392	5.7	57
867	First-principles investigations of F and Cl impurities in NaAlH4. *Journal of Alloys and Compounds*, **2009**, 484, 347-351	5.7	5
866	Effect of Si substitution for Al on the structural and hydrogenation properties of the Zintl phase alloy SrAl2. *Journal of Alloys and Compounds*, **2009**, 485, 439-443	5.7	5
865	Reversible hydrogen storage in titanium-catalyzed LiAlH4–LiBH4 system. *Journal of Alloys and Compounds*, **2009**, 487, 434-438	5.7	49
864	Syntheses, crystal structures, and thermal analyses of solvent-free Ca(AlD4)2 and CaAlD5. *Journal of Alloys and Compounds*, **2009**, 487, 472-478	5.7	24
863	Aluminium hydride: a reversible material for hydrogen storage. **2009**, 3717-9		94
862	Characterization of hydrogen storage materials by means of pressure concentration isotherms based on the mass flow method. **2009**, 80, 083901		18
861	The synthesis and hydrogen storage properties of a MgH(2) incorporated carbon aerogel scaffold. **2009**, 20, 204027		117
860	Hydrogen multicenter bonds and reversible hydrogen storage. **2009**, 130, 114301		23
859	Facile cycling of Ti-doped LiAlH4 for high performance hydrogen storage. **2009**, 131, 5032-3		87
858	Design and Construction of Metal–Organic Frameworks for Hydrogen Storage and Selective Gas Adsorption. **2009**, 353-373		2
857	Crystal Chemistry and Dehydrogenation/Rehydrogenation Properties of Perovskite Hydrides RbMgH3 and RbCaH3. *Journal of Physical Chemistry C*, **2009**, 113, 15091-15098	3.8	15
856	Impact of Stoichiometry on the Hydrogen Storage Properties of LiNH2–LiBH4–MgH2 Ternary Composites. *Journal of Physical Chemistry C*, **2009**, 113, 2004-2013	3.8	17

855	First-principles determination of crystal structures, phase stability, and reaction thermodynamics in the Li-Mg-Al-H hydrogen storage system. **2009**, 79,		46
854	Nanoscale Materials For Hydrogen and Energy Storage. **2009**, 270-297		1
853	First-principles computational discovery of materials for hydrogen storage. **2009**, 180, 012076		10
852	Hydrogen storage materials: present scenarios and future directions. **2009**, 105, 21		80
851	How intimate contact with nanoporous carbon benefits the reversible hydrogen desorption from NaH and NaAlH4. **2009**, 6261-3		52
850	Active species of CeAl(4) in the CeCl(3)-doped sodium aluminium hydride and its enhancement on reversible hydrogen storage performance. **2009**, 6857-9		47
849	Ambient temperature hydrogen desorption from LiAlH4–LiNH2 mediated by HMPA. **2009**, 19, 8426		16
848	Improved hydrogen storage property of Li–Mg–B–H system by milling with titanium trifluoride. **2009**, 2, 120-123		52
847	The identification of a hitherto unknown intermediate phase CaB2Hx from decomposition of Ca(BH4)2. **2009**, 19, 2754		51
846	New approaches to hydrogen storage. **2009**, 38, 73-82		690
845	Hydrogen Absorption/Desorption Mechanism in Potassium Alanate (KAlH4) and Enhancement by TiCl3 Doping. *Journal of Physical Chemistry C*, **2009**, 113, 6845-6851	3.8	44
844	Dissociative adsorption of hydrogen molecule on aluminum clusters: effect of charge and doping. **2009**, 113, 2565-71		56
843	FUELS—HYDROGEN STORAGE	Complex Hydrides. **2009**, 473-483		1
842	Lightweight sodium alanate thin films grown by reactive sputtering. **2009**, 95, 121904		10
841	Experimental and Theoretical Investigation Into Hydrogen Storage via Spillover in IRMOF-8. *Journal of Physical Chemistry C*, **2009**, 113, 3222-3231	3.8	62
840	Direct Dry Syntheses and Thermal Analyses of a Series of Aluminum Complex Hydrides. **2009**, 50, 182-186		17
839	Molecular hydrogen carrier with activated nanohydride and ammonia. **2009**, 24, 2185-2190		37
838	Influence of the dopant during the one step mechano-chemical synthesis of sodium alanate. **2009**, 144, 012022		1

837	Microscopic indicator for thermodynamic stability of hydrogen storage materials provided by muon-spin spectroscopy. **2010**, 225, 012051		1
836	High-Resolution TEM Observations of the Decomposition of NaAlH4. **2010**, 51, 1016-1019		6
835	High capacity hydrogen storage materials: attributes for automotive applications and techniques for materials discovery. **2010**, 39, 656-75		867
834	Hydrogen storage properties of Ca(BH4)2-LiNH2 system. **2010**, 5, 1594-9		31
833	Crystal Structures and Thermodynamic Investigations of LiK(BH4)2, KBH4, and NaBH4 from First-Principles Calculations. *Journal of Physical Chemistry C*, **2010**, 114, 678-686	3.8	54
832	Room-temperature synthesis of nickel borides via decomposition of NaBH(4) promoted by nickel bromide. **2010**, 49, 8756-62		17
831	Significantly improved dehydrogenation of LiBH4 destabilized by TiF3. **2010**, 3, 465-470		89
830	LiBH4/SBA-15 Nanocomposites Prepared by Melt Infiltration under Hydrogen Pressure: Synthesis and Hydrogen Sorption Properties. *Journal of Physical Chemistry C*, **2010**, 114, 6163-6168	3.8	128
829	Titanium-doped nickel clusters TiNi(n) (n = 1-12): geometry, electronic, magnetic, and hydrogen adsorption properties. **2010**, 114, 5049-57		50
828	Studies on metal oxide nanoparticles catalyzed sodium aluminum hydride. **2010**, 35, 5037-5042		44
827	High-pressure techniques for discovering and re-hydrogenation of metal hydride materials. **2010**, 71, 1154-1158		10
826	Investigations on the solid state interaction between LiAlH4 and NaNH2. **2010**, 183, 2040-2044		15
825	A reality check on using NaAlH4 as a hydrogen storage material. **2010**, 14, 1813-1819		10
824	Thermodynamic effects in nanoscale NaAlH4. **2010**, 11, 789-92		79
823	Liquid-phase chemical hydrogen storage: catalytic hydrogen generation under ambient conditions. **2010**, 3, 541-9		345
822	Nanosizing and nanoconfinement: new strategies towards meeting hydrogen storage goals. **2010**, 3, 1332-48		283
821	Hydrogen storage in metal-organic frameworks. **2010**, 22, E117-30		305
820	Advanced materials for energy storage. **2010**, 22, E28-62		3687

819	Nanoparticles and 3D Supported Nanomaterials. **2010**, 279-340		1
818	Complex Hydrides. **2010**, 117-157		3
817	Tailoring Reaction Enthalpies of Hydrides. **2010**, 187-214		9
816	Aluminum Hydride (Alane). **2010**, 249-277		2
815	Amminelithium amidoborane Li(NH3)NH2BH3: a new coordination compound with favorable dehydrogenation characteristics. *Chemistry - A European Journal*, **2010**, 16, 3763-9	4.8	58
814	Hydrogen desorption energies of Aluminum hydride (AlnH3n) clusters. *Physica B: Condensed Matter* , **2010**, 405, 3075-3081	2.8	12
813	Chemical vapor synthesis and characterization of aluminum nanopowder. **2010**, 195, 1463-1471		10
812	Dehydrogenation associated with Ti catalyst in sodium alanate. **2010**, 71, 1073-1076		8
811	Reversible hydrogenation/dehydrogenation performances of the Na2LiAlH6Mg(NH2)2 system. *International Journal of Hydrogen Energy*, **2010**, 35, 8343-8349	6.7	11
810	Hydrogen desorption mechanism of a LiNH hydrogen storage system. **2010**, 962, 68-71		5
809	Spectroscopy and bonding in ternary metal hydride complexesPotential hydrogen storage media. **2010**, 254, 215-234		77
808	Low-Temperature Synthesis of Superconducting NanocrystallineMgB2. **2010**, 2010, 1-5		5
807	Hydrogen Storage in Ti-Zr Based Systems. **2010**, 1279, 1		
806	Development of a nuclear magnetic resonance system for in situ analysis of hydrogen storage materials under high pressures and temperatures. **2010**, 81, 104101		1
805	Structural investigation and thermodynamical properties of alkali calcium trihydrides. **2010**, 132, 114504		9
804	Density functional study of Li4NH and Li1.5NH1.5 as intermediary compounds during hydrogenation of Li3N. **2010**, 81,		15
803	Microscopic indicator for thermodynamic stability of hydrogen storage materials provided by positive muon-spin rotation. **2010**, 81,		13
802	Hydrogen: A future energy vector for sustainable development. **2010**, 224, 539-558		46

801	First-principles study of hydrogen vacancies in sodium alanate with Ti substitution. **2010**, 22, 205503		4
800	Hydrogen dissociation on small aluminum clusters. **2010**, 133, 184304		41
799	Regeneration of aluminium hydride using dimethylethylamine. **2010**, 3, 1099		36
798	Reversibility and Improved Hydrogen Release of Magnesium Borohydride. *Journal of Physical Chemistry C*, **2010**, 114, 5224-5232	3.8	129
797	Hydrogen in magnesium: new perspectives toward functional stores. **2010**, 3, 526		306
796	Nickel macrocycles with complex hydrides□ew avenues for hydrogen storage research. **2010**, 3, 1973		17
795	Catalytic effects of TiF3 on hydrogen spillover on Pt/carbon for hydrogen storage. **2010**, 26, 15394-8		29
794	Dehydrogenation Promotion of LiBH4□NH3 Through Heating in Ammonia or Mixing with Metal Hydrides. *Journal of Physical Chemistry C*, **2010**, 114, 12823-12827	3.8	21
793	Reversible Hydrogen Storage in Destabilized LiAlH4□MgH2□iBH4 Ternary-Hydride System Doped with TiF3. *Journal of Physical Chemistry C*, **2010**, 114, 11643-11649	3.8	45
792	Role of Schottky Defects in Hydrogen and Metal Diffusion in NaH, MgH2, and NaMgH3. **2010**, 1, 2968-2973		21
791	Comprehensive Study of Melt Infiltration for the Synthesis of NaAlH4/C Nanocomposites. **2010**, 22, 2233-2238		71
790	Discovery of A New Al Species in Hydrogen Reactions of NaAlH4. **2010**, 1, 2412-2416		44
789	In-Situ Deposition of Alkali and Alkaline Earth Hydride Thin Films To Investigate the Formation of Reactive Hydride Composites. *Journal of Physical Chemistry C*, **2010**, 114, 13895-13901	3.8	9
788	Kinetics of Hydrogen Desorption in NaAlH4 and Ti-Containing NaAlH4. *Journal of Physical Chemistry C*, **2010**, 114, 8026-8031	3.8	37
787	Reaction Intermediates during the Dehydrogenation of Metal Borohydrides: A Cluster Perspective. *Journal of Physical Chemistry C*, **2010**, 114, 16849-16854	3.8	27
786	Reversible Vacancy Formation and Recovery during Dehydrogenation□ydrogenation Cycling of Ti-Doped NaAlH4. *Journal of Physical Chemistry C*, **2010**, 114, 6869-6873	3.8	20
785	Calcium Borohydride for Hydrogen Storage: A Computational Study of Ca(BH4)2 Crystal Structures and the CaB2Hx Intermediate. *Journal of Physical Chemistry C*, **2010**, 114, 9503-9509	3.8	25
784	Platinum Nanoparticle Functionalized CNTs as Nanoscaffolds and Catalysts To Enhance the Dehydrogenation of Ammonia-Borane. *Journal of Physical Chemistry C*, **2010**, 114, 21885-21890	3.8	46

783	Hydrogenation of nanocrystalline Mg at room temperature in the presence of TiH(2). **2010**, 132, 6616-7		110
782	Ab initio thermodynamic and elastic properties of AGaH4 hydrides (A=Li, Na, K, Rb, and Cs). **2010**, 82,		11
781	A first principles study of the thermal stability of A(m)(MH(4))(n) light complex hydrides. **2010**, 22, 175502		4
780	Hydrogen Dynamics in Lightweight Tetrahydroborates. **2010**, 224, 263-278		15
779	Investigation on reversible hydrogen storage properties of Li3AlH6/2LiNH2 composite. *Journal of Alloys and Compounds*, **2010**, 494, 58-61	5.7	11
778	Crystal structure and charge density analysis of Ca(BH4)2. *Journal of Alloys and Compounds*, **2010**, 491, 57-62	5.7	25
777	Hydrogen storage properties of the Zintl phase alloy SrAl2 doped with TiF3. *Journal of Alloys and Compounds*, **2010**, 492, 277-281	5.7	5
776	Influence of titanium and vanadium on the hydrogen transport through amorphous alumina films. *Journal of Alloys and Compounds*, **2010**, 494, 239-244	5.7	1
775	Reversible hydrogen storage in Ti□r-codoped NaAlH4 under realistic operation conditions. *Journal of Alloys and Compounds*, **2010**, 496, L38-L40	5.7	18
774	Effect of TiH2 and Mg2Ni additives on the hydrogen storage properties of magnesium hydride. *Journal of Alloys and Compounds*, **2010**, 499, 35-38	5.7	28
773	Powder diffraction methods for studies of borohydride-based energy storage materials. **2010**, 225, 557-569		66
772	Breaking the passivation--the road to a solvent free borohydride synthesis. **2010**, 12, 10919-22		43
771	Synthesis of nanostructured Mg2FeH6 hydride and hydrogen sorption properties of complex. **2010**, 20, 2281-2288		11
770	Hydride storage. **2010**,		1
769	Clusters. **2010**, 37-70		3
768	Raman Spectroscopy Measurements of the Pressure□Temperature Behavior of LiAlH4. *Journal of Physical Chemistry C*, **2010**, 114, 11991-11997	3.8	8
767	Mechanisms for the enhanced hydrogen desorption performance of the TiF4-catalyzed Na2LiAlH6 used for hydrogen storage. **2010**, 3, 645		52
766	Towards understanding a mechanism for reversible hydrogen storage: theoretical study of transition metal catalysed dehydrogenation of sodium alanate. **2010**, 12, 4012-23		20

765	Hydrogen tracer diffusion in LiBH4 measured by spatially resolved Raman spectroscopy. **2010**, 12, 5061-6		22
764	Role of Li2B12H12 for the Formation and Decomposition of LiBH4. **2010**, 22, 3265-3268		135
763	Influence of dopants Ti and Ni on bonding interactions and dehydrogenation properties of lithium alanate. **2010**, 12, 10942-9		8
762	Pressure-dependent deuterium reaction pathways in the Li-N-D system. **2010**, 12, 2089-97		26
761	Phase transition induced improvement in H2 desorption kinetics: the case of the high-temperature form of Y(BH4)3. **2011**, 13, 8847-51		28
760	A novel catalyst precursor K2TiF6 with remarkable synergetic effects of K, Ti and F together on reversible hydrogen storage of NaAlH4. **2011**, 47, 1740-2		67
759	The role of Ni in increasing the reversibility of the hydrogen release from nanoconfined LiBH4. **2011**, 151, 47-58; discussion 95-115		59
758	The impact of carbon materials on the hydrogen storage properties of light metal hydrides. **2011**, 21, 2417-2427		141
757	Towards a structure-performance relationship for hydrogen storage in Ti-doped NaAlH4 nanoparticles. **2011**, 47, 2143-5		9
756	Theoretical study of the vibrational properties of NaAlH4 with AlH3 vacancies. **2011**, 151, 243-51; discussion 285-95		2
755	Energetics and structure of single Ti defects and their influence on the decomposition of NaAlH(4). **2011**, 13, 552-62		9
754	The effect of complex halides and binary halides on hydrogen release for the 2LiBH4:1MgH2 system. **2011**, 151, 133-41; discussion 199-212		9
753	Modification of the hydrogen storage properties of Li3N by confinement into mesoporous carbons. **2011**, 4, 3625		21
752	Thin film metal hydrides for hydrogen storage applications. **2011**, 21, 4021-4026		37
751	Synthesis Mechanism of Alkali Borohydrides by Heterolytic Diborane Splitting. *Journal of Physical Chemistry C*, **2011**, 115, 2489-2496	3.8	10
750	Comprehensive NMR Study of Magnesium Borohydride. *Journal of Physical Chemistry C*, **2011**, 115, 3172-3177		30
749	Phonon, IR, and Raman spectra, NMR parameters, and elastic constant calculations for AlH3 polymorphs. **2011**, 115, 10708-19		15
748	In situ Raman cell for high pressure and temperature studies of metal and complex hydrides. **2011**, 83, 3199-204		6

747	Enhanced Hydriding□Dehydriding Performance of CeAl2-Doped NaAlH4 and the Evolvement of Ce-Containing Species in the Cycling. *Journal of Physical Chemistry C*, **2011**, 115, 2537-2543	3.8	36
746	Site Substitution of Ti in NaAlH4 and Na3AlH6. *Journal of Physical Chemistry C*, **2011**, 115, 21454-21464	3.8	19
745	Metals (Ni, Fe)-Incorporated Titanate Nanotubes Induced Destabilization of LiBH4. *Journal of Physical Chemistry C*, **2011**, 115, 9780-9786	3.8	30
744	Vacancy Diffusion in NaAlH4 and Na3AlH6. *Journal of Physical Chemistry C*, **2011**, 115, 21465-21472	3.8	27
743	Vibrational properties of CaAlH5 and □AlH3 with different AlH6 networks studied by inelastic neutron scattering. **2011**, 50, 8007-11		7
742	Thermodynamics, Kinetics, and Modeling Investigation on the Dehydrogenation of CeAl4-Doped NaAlH4 Hydrogen Storage Material. *Journal of Physical Chemistry C*, **2011**, 115, 22680-22687	3.8	20
741	Reaction Mechanisms in the Li3AlH6/LiBH4 and Al/LiBH4 Systems for Reversible Hydrogen Storage. Part 1: H Capacity and Role of Al. *Journal of Physical Chemistry C*, **2011**, 115, 6040-6047	3.8	19
740	27Al, 23Na, and 45Sc Solid-State NMR Studies of ScCl3-Doped NaAlH4. *Journal of Physical Chemistry C*, **2011**, 115, 13100-13106	3.8	13
739	First-Principles Calculated Phase Diagram for Nanoclusters in the Na□Al□H System: A Single-Step Decomposition Pathway for NaAlH4. *Journal of Physical Chemistry C*, **2011**, 115, 2636-2643	3.8	33
738	Oxidation Products of NaAlH4 Studied by Solid-State NMR and X-ray Diffraction. *Journal of Physical Chemistry C*, **2011**, 115, 7002-7011	3.8	12
737	Effect of Ce4+ and Ce3+ on the Hydrogen Release of NaAlH4. **2011**, 40, 2083-2087		1
736	Structure and Thermodynamic Properties of the NaMgH3 Perovskite: A Comprehensive Study. **2011**, 23, 2317-2326		48
735	Computational Nanostructure Design for Hydrogen Storage. *Green Energy and Technology*, **2011**, 761-799	0.6	
734	Development of amidoboranes for hydrogen storage. **2011**, 47, 5116-29		129
733	Potential Storage Materials. *Green Energy and Technology*, **2011**, 19-59	0.6	4
732	Formation of Al2H7- anions--indirect evidence of volatile AlH3 on sodium alanate using solid-state NMR spectroscopy. **2011**, 13, 17234-41		12
731	Nanoconfinement effects in energy storage materials. **2011**, 13, 21186-95		101
730	Effect of Titanium Doping of Al(111) Surfaces on Alane Formation, Mobility, and Desorption. *Journal of Physical Chemistry C*, **2011**, 115, 16701-16710	3.8	12

729	Improved hydrogen storage kinetics of nanoconfined NaAlH□catalyzed with TiCl□hanoparticles. **2011**, 5, 4056-64		99
728	Magnesium imide: synthesis and structure determination of an unconventional alkaline earth imide from decomposition of magnesium amide. **2011**, 50, 1116-22		17
727	Hydrogen Adsorption and Storage. **2011**, 157-245		3
726	Hydrogen Sorption Improvement of LiAlH4 Catalyzed by Nb2O5 and Cr2O3 Nanoparticles. *Journal of Physical Chemistry C*, **2011**, 115, 13088-13099	3.8	52
725	Hydrogen storage and ionic mobility in amide-halide systems. **2011**, 151, 271-84; discussion 285-95		37
724	Ti-doped LiAlH4 for hydrogen storage: synthesis, catalyst loading and cycling performance. **2011**, 133, 15593-7		72
723	Solid-state hydrogen storage for mobile applications: Quo Vadis?. **2011**, 4, 2495		91
722	Recent Progress in Metal Borohydrides for Hydrogen Storage. *Energies*, **2011**, 4, 185-214	3.1	380
721	Effective hydrogen storage: a strategic chemistry challenge. **2011**, 151, 399-414		91
720	Two new cluster ions, Ga[GaH3]4(5-) with a neopentane structure in Rb8Ga5H15 and [GaH2]n(n-) with a polyethylene structure in Rb(n)(GaH2)n, represent a new class of compounds with direct Ga-Ga bonds mimicking common hydrocarbons. **2011**, 133, 14574-7		26
719	Releasing 17.8 wt% H2 from lithium borohydride ammoniate. **2011**, 4, 3593		68
718	Materials-based hydrogen storage: Attributes for near-term, early market PEM fuel cells. **2011**, 15, 29-38		84
717	Correlation between composition and hydrogen storage behaviors of the Li2NH-MgNH combination system. **2011**, 40, 8179-86		17
716	Improved reversible dehydrogenation of 2LiBH4+MgH2 system by introducing Ni nanoparticles. **2011**, 26, 1143-1150		16
715	Large-scale screening of metal hydrides for hydrogen storage from first-principles calculations based on equilibrium reaction thermodynamics. **2011**, 13, 7218-29		29
714	A multifaceted approach to hydrogen storage. **2011**, 13, 16955-72		58
713	A multidisciplinary combinatorial approach for tuning promising hydrogen storage materials towards automotive applications. **2011**, 151, 369-84; discussion 385-97		9
712	Nanoconfined hydrides for energy storage. **2011**, 3, 2086-98		240

711	TEM characterization of pure and transition metal enhanced NaAlH4. *Journal of Alloys and Compounds*, **2011**, 509, 281-289	5.7	29
710	Kinetics of 9-ethylcarbazole hydrogenation over Raney-Ni catalyst for hydrogen storage. *Journal of Alloys and Compounds*, **2011**, 509, 152-156	5.7	54
709	Destabilization of LiBH4 by (Ce, La)(Cl, F)3 for hydrogen storage. *Journal of Alloys and Compounds*, **2011**, 509, 751-757	5.7	55
708	Synthesis of calcium alanate and its dehydriding performance enhanced by FeF3 doping. *Journal of Alloys and Compounds*, **2011**, 509, 590-595	5.7	9
707	Direct preparation of LiBH4 from pre-treated LiH+B mixture at high pressure. *Journal of Alloys and Compounds*, **2011**, 509, 3481-3485	5.7	9
706	The reversible synthesis of bis(quinuclidine) alane. *Journal of Alloys and Compounds*, **2011**, 509, S654-S657	5.7	19
705	Catalytic effect of fullerene and formation of nanocomposites with complex hydrides: NaAlH4 and LiAlH4. *Journal of Alloys and Compounds*, **2011**, 509, S562-S566	5.7	18
704	Direct synthesis of sodium alanate with novel catalytic TiB2. *Journal of Alloys and Compounds*, **2011**, 509, S747-S749	5.7	6
703	Investigation on the nature of active species in the CeCl3-doped sodium alanate system. *Journal of Alloys and Compounds*, **2011**, 509, S750-S753	5.7	18
702	Synthesis and dehydrogenation of CeAl4-doped calcium alanate. *Journal of Alloys and Compounds*, **2011**, 509, S743-S746	5.7	10
701	Thermal decomposition performance of Ca(BH4)2/LiNH2 mixtures. *Journal of Alloys and Compounds* , **2011**, 509, S724-S727	5.7	11
700	Aluminum hydride as a hydrogen and energy storage material: Past, present and future. *Journal of Alloys and Compounds*, **2011**, 509, S517-S528	5.7	155
699	Conversion materials for hydrogen storage and electrochemical applications□concepts and similarities. *Journal of Alloys and Compounds*, **2011**, 509, S529-S534	5.7	29
698	Microstructure and desorption properties study of catalyzed NaAlH4. *Journal of Alloys and Compounds*, **2011**, 509, 5873-5876	5.7	6
697	Li□Mg□NH-based combination systems for hydrogen storage. *Journal of Alloys and Compounds*, **2011**, 509, 7844-7853	5.7	67
696	Comparison of hydrogen cycling kinetics in NaAlH4□arbon aerogel composites synthesized by melt infusion or ball milling. *Journal of Alloys and Compounds*, **2011**, 509, 8958-8964	5.7	19
695	Native Defect Concentrations in NaAlH4 and Na3AlH6. *Journal of Physical Chemistry C*, **2011**, 115, 21443-21453	3.8	27
694	Influence of TiC catalyst on absorption/desorption behaviors and microstructures of sodium aluminum hydride. **2011**, 21, 1297-1302		6

693	NaAlH4 doped with Ti or Sc: Bulk and surface investigation from first principles. **2011**, 83,		10
692	Hydride-Assisted Hydrogenation of Ti-Doped NaH/Al: A Density Functional Theory Study. *Journal of Physical Chemistry C*, **2011**, 115, 2522-2528	3.8	10
691	Promotional Effect of Aluminum on MgH2+LiBH4 Hydrogen Storage Materials. **2011**, 52, 641-646		10
690	Combined x-ray photoelectron spectroscopy and scanning electron microscopy studies of the LiBH4□MgH2 reactive hydride composite with and without a Ti-based additive. **2011**, 109, 014913		21
689	Hydrogen Storage Properties of the Mg(NH3)6Cl2-LiH Combined System. **2011**, 52, 627-634		5
688	Arenas of expectations for hydrogen technologies. **2011**, 78, 152-162		68
687	Enhanced volumetric hydrogen density in sodium alanate by compaction. **2011**, 196, 9254-9259		27
686	Hydrogen absorption/desorption properties of Li□Al□H composite. **2011**, 126, 989-992		3
685	AlH3-mediated mechanism in hydriding/dehydriding of NaAlH4. *International Journal of Hydrogen Energy*, **2011**, 36, 9767-9771	6.7	6
684	Kinetics of hydrolysis of sodium borohydride for hydrogen production in fuel cell applications: A review. *International Journal of Hydrogen Energy*, **2011**, 36, 9772-9790	6.7	170
683	The reactions in LiBH4□NaNH2 hydrogen storage system. *International Journal of Hydrogen Energy*, **2011**, 36, 9733-9742	6.7	31
682	Hydriding-dehydriding kinetics and the microstructure of La- and Sm-doped NaAlH4 prepared via direct synthesis method. *International Journal of Hydrogen Energy*, **2011**, 36, 10861-10869	6.7	27
681	Adjustment of the decomposition path for Na2LiAlH6 by TiF3 addition. *International Journal of Hydrogen Energy*, **2011**, 36, 12279-12285	6.7	7
680	Effect of several metal chlorides on the thermal decomposition behaviour of □Mg(BH4)2. *International Journal of Hydrogen Energy*, **2011**, 36, 12313-12318	6.7	50
679	First-principles study of the H2 splitting processes on pure and transition-metal-doped Al (111) surfaces. *International Journal of Hydrogen Energy*, **2011**, 36, 12742-12752	6.7	9
678	Improved hydrogen sorption performance of NbF5-catalysed NaAlH4. *International Journal of Hydrogen Energy*, **2011**, 36, 14503-14511	6.7	32
677	Destabilization of LiBH4 by MH2 (M□=□Ce, La) for hydrogen storage: Nanostructural effects on the hydrogen sorption kinetics. *International Journal of Hydrogen Energy*, **2011**, 36, 15231-15238	6.7	37
676	Direct synthesis of nanocrystalline titanium dioxide/carbon composite and its catalytic effect on NaAlH4 for hydrogen storage. *International Journal of Hydrogen Energy*, **2011**, 36, 15652-15657	6.7	14

675	Dehydrogenation of pure and Ti-doped Na3AlH6 surfaces from first principles calculations. *International Journal of Hydrogen Energy*, **2011**, 36, 15632-15641	6.7	8
674	Using first-principles metadynamics simulation to predict new phases and probe the phase transition of NaAlH4. **2011**, 23, 345401		2
673	Materials for Hydrogen Storage: Past, Present, and Future. **2011**, 2, 206-211		676
672	Dihydrogen bonding vs metal-□nteraction in complexes between H2 and metal hydride. **2011**, 115, 201-10		26
671	Statistical theory of phase transformations in the lithium-nitrogen-hydrogen system. **2011**, 112, 549-566		2
670	Decomposition of Lithium Amide and Lithium Imide with and without Anion Promoter. **2011**, 50, 8058-8064		12
669	Direct synthesis and hydrogen storage behaviors of nanocrystalline Na2LiAlH6. **2011**, 46, 3314-3318		7
668	Hydrogen release from sodium borohydrides at low temperature by the addition of zinc fluoride. *International Journal of Hydrogen Energy*, **2011**, 36, 8203-8208	6.7	15
667	Nanoscopic Al1⊠Cex phases in the NaH + Al + 0.02CeCl3 system. *International Journal of Hydrogen Energy*, **2011**, 36, 8403-8411	6.7	19
666	Co-effects of Tm 2 O 3 and porous silica on reversible hydrogen storage in NaAlH 4. *International Journal of Hydrogen Energy*, **2011**, 36, 9091-9097	6.7	11
665	Comparative catalytic effects of NiCl2, TiC and TiN on hydrogen storage properties of LiAlH4. *Rare Metals*, **2011**, 30, 27-34	5.5	10
664	Improved hydrogen desorption properties of Co-doped Li2BNH6. **2011**, 56, 2481-2485		7
663	Progress in improving thermodynamics and kinetics of new hydrogen storage materials. **2011**, 6, 151-161		4
662	Tailoring properties of borohydrides for hydrogen storage: A review. **2011**, 208, 1754-1773		218
661	Quantitative evaluation of catalytic effect of metal chlorides on the decomposition reaction of NaAlH4. **2011**, 111, 950-960		6
660	Hydrogen storage properties of the CeH2 doped Li-Mg-N-H/NaAlH4 system. **2011**, 29, 599-603		6
659	Hydrogen Storage Technologies □A Tutorial with Perspectives from the US National Program. **2011**, 1-15		3
658	A Study of the Thermodynamic Destabilization of Sodium Aluminum Hydride (NaAlH4) with Titanium Nitride (TiN) using X-ray Diffraction and Residual Gas Analysis. **2011**, 99-106		

657	Ultrasmall Angle X-Ray Scattering (USAXS) Studies of Morphological Changes in NaAlH4. **2011**, 51-59		2
656	Infrared imaging tool for screening catalyst effect on hydrogen storing thin film libraries. **2011**, 159, 144-149		3
655	De-/re-hydrogenation features of NaAlH4 confined exclusively in nanopores. **2011**, 59, 1829-1838		75
654	Structural transitions of NaAlH4 under high pressure by first-principles calculations. *Physica B: Condensed Matter*, **2011**, 406, 1612-1614	2.8	4
653	Hydrogen desorption behavior of vanadium borohydride synthesized by modified mechano-chemical process. *International Journal of Hydrogen Energy*, **2011**, 36, 4993-4999	6.7	8
652	Dehydrogenation reactions of 2NaBH4 + MgH2 system. *International Journal of Hydrogen Energy*, **2011**, 36, 7891-7896	6.7	35
651	Thermal desorption of hydrogen from magnesium hydride (MgH2): An in situ microscopy study by environmental SEM and TEM. *International Journal of Hydrogen Energy*, **2011**, 36, 6014-6021	6.7	31
650	Enhanced hydrogen storage properties of LiBH4–MgH2 composite by the catalytic effect of MoCl3. *International Journal of Hydrogen Energy*, **2011**, 36, 7128-7135	6.7	27
649	Decomposition of lithium magnesium aluminum hydride. *International Journal of Hydrogen Energy*, **2011**, 36, 7602-7611	6.7	11
648	Hydrogen release from sodium alanate observed by time-resolved neutron backscattering. **2011**, 23, 254214		3
647	Six-dimensional quasiclassical and quantum dynamics of H2 dissociation on the c(2 □2)-Ti/Al(100) surface. **2011**, 134, 114708		13
646	First-principles prediction of high-capacity, thermodynamically reversible hydrogen storage reactions based on (NH4)2B12H12. **2011**, 83,		12
645	Perspective on the Storage of Hydrogen: Past and Future. **2011**, 169-201		16
644	Catalytic effect of near-surface alloying on hydrogen interaction on the aluminum surface. **2011**, 83,		17
643	Optical response of the sodium alanate system: GW0-BSE calculations and thin film measurements. **2011**, 83,		19
642	Prediction of a Ca(BH4)(NH2) quaternary hydrogen storage compound from first-principles calculations. **2011**, 84,		15
641	Theoretical study of C60 as catalyst for dehydrogenation in LiBH4. **2011**, 22, 335401		21
640	Orthogonal Experiment Study on the Hydrogen Desorption Properties of NaAlH4 and LiAlH4. **2011**, 413, 491-498		

639	Electronic structures and thermodynamic stabilities of aluminum-based deuterides from first principles calculations. **2011**, 20, 017102		2
638	References. **2012**, 435-482		
637	Hydrogen desorption behaviour of a ball-milled graphite LiBH4 composite. **2012**, 1386, 1		1
636	Raman Scattering Study of Hydrogen Storage Material LiNH2. **2012**, 81, 094603		7
635	Effects of Ce-Based Dopants on the Hydrogen Storage Material of NaAlH4. **2012**, 1441, 11		
634	Metastable Metal Hydrides for Hydrogen Storage. **2012**, 2012, 1-18		27
633	Moderate Temperature Dense Phase Hydrogen Storage Materials within the US Department of Energy (DOE) H2 Storage Program: Trends toward Future Development. **2012**, 2, 413-445		10
632	Electronic Principles of Hydrogen Incorporation and Dynamics in Metal Hydrides. **2012**, 2, 1261-1282		3
631	Liquid-phase chemical hydrogen storage materials. **2012**, 5, 9698		620
630	Crystal Structure of a Lightweight Borohydride from Submicrometer Crystallites by Precession Electron Diffraction. **2012**, 24, 3401-3405		17
629	Structure and diffusion in liquid complex hydrides via ab initio molecular dynamics. **2012**, 86,		6
628	Additive Effects of LiBH4 and ZrCoH3 on the Hydrogen Sorption of the Li-Mg-N-H Hydrogen Storage System. *Journal of Physical Chemistry C*, **2012**, 116, 20246-20253	3.8	25
627	Surface and bulk reactions in borohydrides and amides. **2012**, 5, 6823		30
626	Significantly Improved Dehydrogenation of LiAlH4 Destabilized by MnFe2O4 Nanoparticles. *Journal of Physical Chemistry C*, **2012**, 116, 11939-11945	3.8	70
625	Site-dependent activity of atomic Ti catalysts in Al-based hydrogen storage materials. **2012**, 134, 10381-4		16
624	Double layers of H2 adsorption on an AlN sheet induced by electric field. **2012**, 14, 1		1
623	The synthesis of nanoscopic Ti based alloys and their effects on the MgH2 system compared with the MgH2+0.01Nb2O5 benchmark. *International Journal of Hydrogen Energy*, **2012**, 37, 4227-4237	6.7	64
622	Pressure-induced structural transitions of LiNH2: A first-principle study. *Journal of Alloys and Compounds*, **2012**, 544, 129-133	5.7	7

621	Hydrogen De-/Absorption Improvement of NaBH4 Catalyzed by Titanium-Based Additives. *Journal of Physical Chemistry C*, **2012**, 116, 1596-1604	3.8	68
620	Materials design and modification on amide-based composites for hydrogen storage. **2012**, 22, 550-560		35
619	Dynamics of H2 dissociation on the 1/2 ML c(2 2)-Ti/Al(100) surface. **2012**, 14, 3234-47		12
618	Hydrogenation properties of KSi and NaSi Zintl phases. **2012**, 14, 13319-24		18
617	Enhanced hydriding dehydriding performance of 2LiBH4 MgH2 composite by the catalytic effects of transition metal chlorides. **2012**, 22, 20764		51
616	Enhanced hydrogen storage properties of NaAlH4 co-catalysed with niobium fluoride and single-walled carbon nanotubes. **2012**, 2, 1569-1576		20
615	Investigation of LiAlH4-THF formation by direct hydrogenation of catalyzed Al and LiH. **2012**, 14, 6569-76		11
614	Effects of Titanium-Containing Additives on the Dehydrogenation Properties of LiAlH4: A Computational and Experimental Study. *Journal of Physical Chemistry C*, **2012**, 116, 22327-22335	3.8	15
613	Structure and hydrogen storage properties of the first rare-earth metal borohydride ammoniate: Y(BH4)3 4NH3. **2012**, 22, 1061-1068		52
612	TiN catalyst for the reversible hydrogen storage performance of sodium alanate system. **2012**, 22, 13782		25
611	Thermodynamics and kinetics of NaAlH4 nanocluster decomposition. **2012**, 14, 8160-9		34
610	Improvement of the hydrogen storage kinetics of NaAlH4 with Ti-loaded high-ordered mesoporous carbons (Ti-OMCs) by melt infiltration. **2012**, 22, 17183		22
609	Superior Catalytic Effects of Nb2O5, TiO2, and Cr2O3 Nanoparticles in Improving the Hydrogen Sorption Properties of NaAlH4. *Journal of Physical Chemistry C*, **2012**, 116, 11924-11938	3.8	43
608	Alane complexes of chromium, tungsten, and manganese. **2012**, 134, 2551-4		41
607	Crystalline TiB2: an efficient catalyst for synthesis and hydrogen desorption/absorption performances of NaAlH4 system. **2012**, 22, 3127		37
606	First Principles Study of Hydrogen Desorption from the NaAlH4 Surface Doped by Ti Clusters. *Journal of Physical Chemistry C*, **2012**, 116, 4311-4315	3.8	8
605	Hydrogen Storage Properties of 3Mg(NH2)2 2Li3AlH6. *Journal of Physical Chemistry C*, **2012**, 116, 1485-1492	3.8	5
604	Hydrogen Interaction with the Al Surface Promoted by Subsurface Alloying with Transition Metals. *Journal of Physical Chemistry C*, **2012**, 116, 18663-18668	3.8	18

603	New Aspects on the Decomposition of Sodium Alanate Revealed by Small-Angle X-ray Scattering. *Journal of Physical Chemistry C*, **2012**, 116, 3875-3881	3.8	2
602	Hydrogen Absorption Kinetics of the Transition-Metal-Chloride-Enhanced NaAlH4 System. *Journal of Physical Chemistry C*, **2012**, 116, 14205-14217	3.8	24
601	Solid-state thermolysis of ammonia borane and related materials for high-capacity hydrogen storage. **2012**, 41, 4296-302		64
600	Hydrogen release from Li alanates originates in molecular lattice instability emerging at ~100 K. **2012**, 100, 193901		7
599	Intermediate species and kinetics of lithium imide decomposition. *International Journal of Hydrogen Energy*, **2012**, 37, 10467-10472	6.7	9
598	Hydrogenation of LiH/Al catalyzed with TiN, TiMn2 and LaNi5. *International Journal of Hydrogen Energy*, **2012**, 37, 10210-10214	6.7	3
597	Improvement of the hydrogen storage kinetics of NaAlH4 with nanocrystalline titanium dioxide loaded carbon spheres (Ti-CSs) by melt infiltration. *International Journal of Hydrogen Energy*, **2012**, 37, 10222-10228	6.7	13
596	Ti-doped LiAlH4 for hydrogen storage: Rehydrogenation process, reaction conditions and microstructure evolution during cycling. *International Journal of Hydrogen Energy*, **2012**, 37, 10215-10221	6.7	22
595	Multi-hydride systems with enhanced hydrogen storage properties derived from Mg(BH4)2 and LiAlH4. *International Journal of Hydrogen Energy*, **2012**, 37, 10733-10742	6.7	42
594	The location of Ti containing phases after the completion of the NaAlH4 + xTiCl3 milling process. *Journal of Alloys and Compounds*, **2012**, 513, 597-605	5.7	17
593	Synthesis, crystal structure and thermal decomposition of LiCa(AlH4)3. *Journal of Alloys and Compounds*, **2012**, 520, 202-206	5.7	11
592	On the effect of thermal treatment and hydrogen vibrational dynamics in sodium alanates: An inelastic neutron scattering study. *Journal of Alloys and Compounds*, **2012**, 523, 108-113	5.7	8
591	Synergistic effects of bimetallic catalysis on the cycling behavior of NaAlH4 Co-Doped with Zr and Fe. *Journal of Alloys and Compounds*, **2012**, 539, 242-248	5.7	12
590	Polymorphic composition of alane after cryomilling with fluorides. *Journal of Alloys and Compounds*, **2012**, 540, 241-247	5.7	4
589	Non-covalent interactions in ammonium cation□cetylene clusters. **2012**, 992, 70-77		7
588	Li-Na ternary amidoborane for hydrogen storage: experimental and first-principles study. **2012**, 41, 4754-64		16
587	Hydrogen Storage. **2012**, 157-177		1
586	Magnesium Borohydride: From Hydrogen Storage to Magnesium Battery. **2012**, 124, 9918-9921		35

585	Magnesium borohydride: from hydrogen storage to magnesium battery. **2012**, 51, 9780-3		315
584	Mechanochemical synthesis of complex hydrides. **2012**, 57, 1631-1652		8
583	Reversible hydrogen storage by NaAlH4 confined within a titanium-functionalized MOF-74(Mg) nanoreactor. **2012**, 6, 9807-17		125
582	Smart Nanomaterials for Space and Energy Applications. **2012**, 213-249		
581	Hydrogen Storage Materials. **2012**, 607-637		7
580	Nanostructured Metal Particles for Catalysts and Energy-Related Materials. **2012**, 123-201		2
579	Synthesis and characterisation of a mesoporous carbon/calcium borohydride nanocomposite for hydrogen storage. *International Journal of Hydrogen Energy*, **2012**, 37, 16631-16635	6.7	13
578	Preparation of a new Ti catalyst for improved performance of NaAlH4. *International Journal of Hydrogen Energy*, **2012**, 37, 11650-11655	6.7	6
577	Enhanced dehydrogenation properties of LiBH4 compositing with hydrogenated magnesium-rare earth compounds. *International Journal of Hydrogen Energy*, **2012**, 37, 13446-13451	6.7	10
576	Cycling and engineering properties of highly compacted sodium alanate pellets. *International Journal of Hydrogen Energy*, **2012**, 37, 15187-15195	6.7	12
575	Hydrogen storage properties and mechanisms of the Mg(BH4)2–NaAlH4 system. *International Journal of Hydrogen Energy*, **2012**, 37, 17137-17145	6.7	32
574	Synthesis and hydrogen storage thermodynamics and kinetics of Mg(AlH4)2 submicron rods. *International Journal of Hydrogen Energy*, **2012**, 37, 18148-18154	6.7	31
573	Enhanced dehydrogenation of nanoscale MgH2 confined by ordered mesoporous silica. **2012**, 136, 146-150		23
572	Quasiclassical trajectory calculations of hydrogen absorption in the (NaAlH4)2Ti system on a model analytical potential energy surface. **2012**, 14, 3915-21		2
571	Hydrogen Storage Properties of New Hydrogen-Rich BH3NH3-Metal Hydride (TiH2, ZrH2, MgH2, and/or CaH2) Composite Systems. *Journal of Physical Chemistry C*, **2012**, 116, 8349-8358	3.8	29
570	Simultaneous control of ionic and electronic conductivity in materials: thallium bromide case study. **2012**, 108, 246604		11
569	Excellent Catalytic Effects of Graphene Nanofibers on Hydrogen Release of Sodium alanate. *Journal of Physical Chemistry C*, **2012**, 116, 10861-10866	3.8	28
568	Borohydride hydrazinates: high hydrogen content materials for hydrogen storage. **2012**, 5, 5686-5689		59

567	Ruthenium(0) nanoparticles supported on multiwalled carbon nanotube as highly active catalyst for hydrogen generation from ammonia-borane. **2012**, 4, 6302-10		158
566	Hydrogen storage in 2NaBH4+MgH2 mixtures: Destabilization by additives and nanoconfinement. *Journal of Alloys and Compounds*, **2012**, 536, S236-S240	5.7	17
565	The first steps of the Li-B-H cluster formation. **2012**, 112, 1507-1513		
564	Organometallic-complex-grafted adamantane as novel hydrogen-storage material: A first principles computation. **2012**, 249, 1431-1437		2
563	Novel structural motifs in low energy phases of LiAlH4. **2012**, 108, 205505		42
562	Catalytic Influence of Various Cerium Precursors on the Hydrogen Sorption Properties of NaAlH4. **2012**, 2, 560-568		34
561	Proposed mechanisms for the catalytic activity of Ti in NaAlH4. **2012**, 112, 2164-78		90
560	Three-Dimensional CFD-Population Balance Simulation of a Chemical Vapor Synthesis Reactor for Aluminum Nanopowder: Nucleation, Surface Growth, and Coagulation. **2012**, 43, 413-423		4
559	Carbon nanostructures as catalyst for improving the hydrogen storage behavior of sodium aluminum hydride. *International Journal of Hydrogen Energy*, **2012**, 37, 2750-2755	6.7	22
558	Optimization of hydrogen storage tubular tanks based on light weight hydrides. *International Journal of Hydrogen Energy*, **2012**, 37, 2825-2834	6.7	37
557	Investigation on synthesis, structure and catalytic modification of Ca(AlH4)2 complex hydride. *International Journal of Hydrogen Energy*, **2012**, 37, 936-941	6.7	11
556	Transition metal-decorated activated carbon catalysts for dehydrogenation of NaAlH4. *International Journal of Hydrogen Energy*, **2012**, 37, 2737-2741	6.7	16
555	Effect of MgCl2 additives on the H-desorption properties of LiNH system. *International Journal of Hydrogen Energy*, **2012**, 37, 903-907	6.7	20
554	New compounds in the potassium-aluminium-hydrogen system observed during release and uptake of hydrogen. *International Journal of Hydrogen Energy*, **2012**, 37, 345-356	6.7	21
553	Significantly improved dehydrogenation of LiAlH4 destabilized by K2TiF6. *International Journal of Hydrogen Energy*, **2012**, 37, 3261-3267	6.7	48
552	Numerical modeling and performance evaluation of multi-tubular sodium alanate hydride finned reactor. *International Journal of Hydrogen Energy*, **2012**, 37, 1551-1567	6.7	29
551	Enhanced hydrogen uptake/release in 2LiH MgB2 composite with titanium additives. *International Journal of Hydrogen Energy*, **2012**, 37, 1604-1612	6.7	20
550	Alanate Borohydride material systems for hydrogen storage applications. *International Journal of Hydrogen Energy*, **2012**, 37, 2388-2396	6.7	14

549	Desorption kinetics of lithium amide/magnesium hydride systems at constant pressure thermodynamic driving forces. *International Journal of Hydrogen Energy*, **2012**, 37, 3298-3304	6.7	30
548	Influence of transition metal dopants and temperature on the dehydrogenation and rehydrogenation kinetics of NaAlH4. *International Journal of Hydrogen Energy*, **2012**, 37, 4194-4200	6.7	7
547	Economic potential of complex hydrides compared to conventional hydrogen storage systems. *International Journal of Hydrogen Energy*, **2012**, 37, 4204-4214	6.7	32
546	Achievement in hydrogen storage on adsorbents with high surface-to-bulk ratio Prospects for Si-containing matrices. *International Journal of Hydrogen Energy*, **2012**, 37, 5032-5049	6.7	23
545	Li-N-H system Reversible accumulator and store of hydrogen. *International Journal of Hydrogen Energy*, **2012**, 37, 7565-7578	6.7	8
544	Mg2FeH6iBH4 and Mg2FeH6iNH2 composite materials for hydrogen storage. *International Journal of Hydrogen Energy*, **2012**, 37, 6694-6699	6.7	15
543	Experimental study of powder bed behavior of sodium alanate in a lab-scale H2 storage tank with flow-through mode. *International Journal of Hydrogen Energy*, **2012**, 37, 7645-7653	6.7	11
542	Catalytic effect of Gd2O3 and Nd2O3 on hydrogen desorption behavior of NaAlH4. *International Journal of Hydrogen Energy*, **2012**, 37, 8402-8407	6.7	12
541	Structural, thermodynamic, electronic, and optical properties of NaH from first-principles calculations. **2012**, 133, 346-355		5
540	Improved dehydrogenation performances of TiB2-doped sodium alanate. **2012**, 134, 1197-1202		15
539	Effect of group IV elements on the thermodynamic property of NaH + Al. *Renewable Energy*, **2012**, 43, 172-178	8.1	1
538	Structural, electronic, optical and thermodynamic properties of NaxRb1H and NaxK1H alloys. **2012**, 73, 1-7		4
537	Theoretical study of hydrogen adsorption in oxygen functionalized carbon slit pores. **2012**, 154, 38-44		29
536	Theoretical study of elementary reactions of dissociative addition of an H2 molecule to doped aluminide clusters MAl12 (M = Cr, Mo, and W). **2012**, 57, 528-537		10
535	Effects of Different Ti-compounds on the Reversibility of NaAlH4. **2013**, 37, 713-719		11
534	Crystal structures and thermodynamic investigations of NaSc(BH4)4 from first-principles calculations. **2013**, 113, 119-124		6
533	Novel approach for thermal diffusivity measurements in inert atmosphere using the flash method. **2013**, 114, 629-634		8
532	Konversionsmaterialien fi die Energiespeicherung. **2013**, 47, 230-238		4

531	Thermal decomposition behaviors of magnesium borohydride doped with metal fluoride additives. **2013**, 560, 82-88		23
530	Hydrogen storage: beyond conventional methods. **2013**, 49, 8735-51		355
529	Hydrogen Storage Materials. **2013**, 99-136		5
528	Hydrogen Storage Materials. **2013**, 377-405		4
527	Al-H bond coordination: expanded ring carbene adducts of AlH3 as neutral bi- and tri-functional donor ligands. **2013**, 49, 5547-9		34
526	Hydrogen Storage Properties of Complex Metal Hydride-Carbon Materials. **2013**, 56, 1937-1943		4
525	Binary and Complex Main-Group Hydrides for Hydrogen Storage. **2013**, 1251-1275		
524	Effect of defects and dopants in graphene on hydrogen interaction in graphene-supported NaAlH4. *International Journal of Hydrogen Energy*, **2013**, 38, 3670-3680	6.7	19
523	Probing the unusual anion mobility of LiBH4 confined in highly ordered nanoporous carbon frameworks via solid state NMR and quasielastic neutron scattering. **2013**, 1, 9935		37
522	RETRACTED: Crystal structures of XnB12H12 (X = Li, K, Ca) and hydrogen storage property of Na(Li, K, Ca)BH system from first principles calculation. **2013**, 559, 61-66		1
521	Controlled degradation of highly compacted sodium alanate pellets. *International Journal of Hydrogen Energy*, **2013**, 38, 3019-3023	6.7	5
520	Transmission electron microscopic observations of the decomposition process of lithium alanate. *International Journal of Hydrogen Energy*, **2013**, 38, 3689-3694	6.7	8
519	Synergistic hydrogen desorption of HCS MgH2+LiAlH4 composite. **2013**, 55, 933-938		20
518	Influence of lanthanon hydride catalysts on hydrogen storage properties of sodium alanates. **2013**, 31, 502-506		6
517	Sodium alanate system for efficient hydrogen storage. *International Journal of Hydrogen Energy*, **2013**, 38, 8798-8812	6.7	39
516	Formation of sub-valent carbenoid ligands by metal-mediated dehydrogenation chemistry: coordination and activation of H2Ga{(NDippCMe)2CH}. **2013**, 4, 4245		35
515	Catalytic Properties of Near-Surface Alloy of Transition Metal in Aluminum: A Density Functional Theory Study of Structural and Electronic Properties. *Journal of Physical Chemistry C*, **2013**, 117, 25077-25089	3.8	13
514	Exploring High-Pressure Lithium Beryllium Hydrides: A New Chemical Perspective. *Journal of Physical Chemistry C*, **2013**, 117, 13879-13886	3.8	22

513	Graphyne and Graphdiyne: Versatile Catalysts for Dehydrogenation of Light Metal Complex Hydrides. *Journal of Physical Chemistry C*, **2013**, 117, 21643-21650	3.8	34
512	Significantly improved hydrogen storage properties of NaAlH4 catalyzed by Ce-based nanoparticles. **2013**, 1, 9752		28
511	Theoretical modeling of elementary reactions of dissociative addition of an H2 molecule to aluminum clusters MAl12 doped with early 3d and 4d transition metal atoms. **2013**, 58, 1479-1488		11
510	Tailoring the hydrogen storage properties of Li4BN3H10 by confinement into highly ordered nanoporous carbon. **2013**, 1, 3926		13
509	Carbon nanomaterial-assisted morphological tuning for thermodynamic and kinetic destabilization in sodium alanates. **2013**, 1, 5238		22
508	Methods to stabilize and destabilize ammonium borohydride. **2013**, 42, 680-7		18
507	New directions for hydrogen storage: sulphur destabilised sodium aluminium hydride. **2013**, 1, 12775		17
506	Separation and characterization of the active species in Ti-doped NaAlH4. **2013**, 49, 2046-8		14
505	Improved hydrogen storage performance of Ca(BH4)2: a synergetic effect of porous morphology and in situ formed TiO2. **2013**, 6, 847		34
504	Mechanically alloyed nanocomposites. **2013**, 58, 383-502		519
503	Study on Influence of Processes on the Dehydrogenation Performance of NaAlH4. **2013**, 42, 2228-2231		1
502	Remarkable decrease in dehydrogenation temperature of LiBNH hydrogen storage system with CoO additive. *International Journal of Hydrogen Energy*, **2013**, 38, 13318-13327	6.7	17
501	Effect of CeO2 and Y2O3 as Catalysts on Hydrogen Desorption Properties of NaAlH4. **2013**, 42, 1321-1324		1
500	In situ synchrotron X-ray diffraction study on the improved dehydrogenation performance of NaAlH4–Mg(AlH4)2 mixture. *Journal of Alloys and Compounds*, **2013**, 577, 6-10	5.7	4
499	TiF4-doped Mg(AlH4)2 with significantly improved dehydrogenation properties. *International Journal of Hydrogen Energy*, **2013**, 38, 13343-13351	6.7	14
498	Synthesis, characterization, and reversible hydrogen sorption study of sodium-doped fullerene. **2013**, 24, 455601		19
497	Effects of graphitic carbon nitride on the dehydrogenation of ammonia borane. **2013**, 34, 1303-1311		2
496	NaAlH4 confined in ordered mesoporous carbon. *International Journal of Hydrogen Energy*, **2013**, 38, 8829-8837	6.7	15

495	Surface step enhanced H2 splitting on Ti-doped Al(1 1 1) surface. **2013**, 565, 86-91		2
494	Insight into the decomposition pathway of the complex hydride Al3Li4(BH4)13. *International Journal of Hydrogen Energy*, **2013**, 38, 2790-2795	6.7	14
493	Complexes between dihydrogen and amine, phosphine, and arsine derivatives. Hydrogen bond versus pnictogen interaction. **2013**, 117, 3243-51		44
492	Synthesis of ammine dual-metal (V, Mg) borohydrides with enhanced dehydrogenation properties. *International Journal of Hydrogen Energy*, **2013**, 38, 5322-5329	6.7	10
491	In situ high pressure NMR study of the direct synthesis of NaAlH4. **2013**, 15, 6179-81		9
490	Catalyzed Rehydrogenation of NaAlH4: Ti and Friends Are Active on NaH Surfaces; Pt and Friends Are Not. *Journal of Physical Chemistry C*, **2013**, 117, 8150-8155	3.8	5
489	Recent process and development of metal aminoborane. **2013**, 8, 1076-89		28
488	Metal□organic frameworks as platforms for clean energy. **2013**, 6, 1656		768
487	Catalytic effects of nitrogen-doped graphene and carbon nanotube additives on hydrogen storage properties of sodium alanate. **2013**, 1, 3355		25
486	Improving hydrogen storage properties of MgH2 by addition of alkali hydroxides. *International Journal of Hydrogen Energy*, **2013**, 38, 10932-10938	6.7	16
485	Size effect on hydrogen storage properties of NaAlH4 confined in uniform porous carbons. **2013**, 2, 995-1003		34
484	Aluminium clusters for molecular hydrogen storage and the corresponding alanes as fuel alternatives: A structural and energetic analysis. *International Journal of Hydrogen Energy*, **2013**, 38, 5758-5767	6.7	15
483	Enhanced hydrogen storage properties of TiN□LiAlH4 composite. *International Journal of Hydrogen Energy*, **2013**, 38, 3695-3701	6.7	28
482	Improved reversible hydrogen storage of LiAlH4 by nano-sized TiH2. *International Journal of Hydrogen Energy*, **2013**, 38, 2770-2777	6.7	34
481	Role of particle size, grain size, microstrain and lattice distortion in improved dehydrogenation properties of the ball-milled Mg(AlH4)2. *International Journal of Hydrogen Energy*, **2013**, 38, 1460-1468	6.7	27
480	Reversible hydrogen storage properties of NaAlH4 enhanced with TiN catalyst. *Journal of Alloys and Compounds*, **2013**, 566, 137-141	5.7	33
479	Recent advances in the theory of hydrogen storage in complex metal hydrides. *MRS Bulletin*, **2013**, 38, 462-472	3.2	11
478	Mechanochemical synthesis of hydrogen storage materials. **2013**, 58, 30-75		294

477	A first-principles study of hydrogen interaction and saturation on ScAl3. *Journal of Alloys and Compounds*, **2013**, 552, 457-462	5.7	7
476	Compaction pressure influence on material properties and sorption behaviour of LiBH4□MgH2 composite. *International Journal of Hydrogen Energy*, **2013**, 38, 8357-8366	6.7	31
475	Nanoconfined light metal hydrides for reversible hydrogen storage. *MRS Bulletin*, **2013**, 38, 488-494	3.2	94
474	Amides and borohydrides for high-capacity solid-state hydrogen storage□aterials design and kinetic improvements. *MRS Bulletin*, **2013**, 38, 480-487	3.2	42
473	Recent developments in aluminum-based hydrides for hydrogen storage. *MRS Bulletin*, **2013**, 38, 473-479	3.2	32
472	Composite materials for hazard mitigation of reactive metal hydrides. *International Journal of Hydrogen Energy*, **2013**, 38, 290-304	6.7	
471	Effect of Transition Metal Dopants on Initial Mass Transport in the Dehydrogenation of NaAlH4: Density Functional Theory Study. *Journal of Physical Chemistry C*, **2013**, 117, 3-14	3.8	18
470	NiFe2O4 Nanoparticles Catalytic Effects of Improving LiAlH4 Dehydrogenation Properties. *Journal of Physical Chemistry C*, **2013**, 117, 25917-25925	3.8	39
469	Heating Rate-Dependent Dehydrogenation in the Thermal Decomposition Process of Mg(BH4)2□6NH3. *Journal of Physical Chemistry C*, **2013**, 117, 16326-16335	3.8	25
468	Chemical State, Distribution, and Role of Ti- and Nb-Based Additives on the Ca(BH4)2 System. *Journal of Physical Chemistry C*, **2013**, 117, 4394-4403	3.8	23
467	Templated Synthesis and Chemical Behavior of Nickel Nanoparticles within High Aspect Ratio Silica Capsules. *Journal of Physical Chemistry C*, **2013**, 117, 25826-25836	3.8	16
466	Status and Development in Hydrogen Transport and Storage for Energy Applications. *Energy Technology*, **2013**, 1, 501-511	3.5	40
465	Structural study and dehydrogenation mechanisms of a novel mixed metal amidoborane: Sodium magnesium amidoborane. **2013**, 590, 27-34		7
464	Mobile Species in NaAlH4. *Journal of Physical Chemistry C*, **2013**, 117, 8105-8113	3.8	17
463	Reversible Hydrogenation Studies of NaBH4 Milled with Ni-Containing Additives. *Journal of Physical Chemistry C*, **2013**, 117, 6060-6065	3.8	46
462	Progress in Hydrogen Storage in Complex Hydrides. **2013**, 293-332		7
461	Solid-Solid heterogeneous catalysis: the role of potassium in promoting the dehydrogenation of the Mg(NH(2))(2)/2 LiH composite. **2013**, 6, 2181-9		23
460	Crystalline Al1 □x Ti x phases in the hydrogen cycled NaAlH4 + 0.02TiCl3 system. **2013**, 93, 1080-1094		6

459	Novel hydrogen storage systems and materials. **2013**, 37, 683-685		17
458	Synthesis, characterization and hydrogen sorption studies of mixed sodium-potassium alanate. **2013**, 48, 520-531		5
457	Low-energy polymeric phases of alanates. **2013**, 110, 135502		33
456	Material Demands for Storage Technologies in a Hydrogen Economy. **2013**, 2013, 1-16		15
455	Kinetics and the thermal decomposition of Sodium Alanate in the presence of MmNi4.5Al0.5nanoparticles. **2014**, 1, 015501		4
454	Reactivity enhancement of oxide skins in reversible Ti-doped NaAlH4. **2014**, 4, 127130		5
453	Effect of La3+ on Dehydrogenation Capacity of the LiAlH4–NH4Cl System. **2014**, 43, 2075-2078		1
452	Decomposition Behavior of Eutectic LiBH4–Mg(BH4)2 and Its Confinement Effects in Ordered Nanoporous Carbon. *Journal of Physical Chemistry C*, **2014**, 118, 27265-27271	3.8	19
451	Adsorbents Based on Electrospun Nanofibers. **2014**, 473-495		2
450	Hydrogen atom trapping in a self-organized one-dimensional dimer. **2014**, 2, 096104		
449	Synergetic effects of NaAlH4-TiF3 co-additive on dehydriding reaction of Mg(AlH4)2. **2014**, 23, 726-731		9
448	Chemical Storage Based on Metal Hydrides and Hydrocarbons. **2014**, 91-119		
447	Catalytic modification in dehydrogenation properties of KSiH3. **2014**, 16, 26163-7		13
446	Encyclopedia of Applied Electrochemistry. **2014**, 1049-1066		1
445	Electronic and dehydrogenation properties of TiB2 cluster-doped NaAlH4 (101) surface: A first-principle approach. *International Journal of Hydrogen Energy*, **2014**, 39, 14178-14183	6.7	8
444	Promoted Mo incorporated Co–Ru–B catalyst for fast hydrolysis of NaBH 4 in alkaline solutions. *International Journal of Hydrogen Energy*, **2014**, 39, 16202-16211	6.7	34
443	Influence of titanium and nickel dopants on the dehydrogenation properties of Mg(AlH4)2: Electronic structure mechanisms. *International Journal of Hydrogen Energy*, **2014**, 39, 9276-9287	6.7	8
442	Experimental investigation of a liquid cooled high temperature proton exchange membrane (HT-PEM) fuel cell coupled to a sodium alanate tank. *International Journal of Hydrogen Energy*, **2014**, 39, 5931-5941	6.7	23

441	Fundamental studies of H2 interaction with MAl3 clusters [M=Li, Sc, Ti, Zr]. *Journal of Alloys and Compounds*, **2014**, 588, 144-152	5.7	5
440	Advanced reactor concept for complex hydrides: Hydrogen absorption from room temperature. *International Journal of Hydrogen Energy*, **2014**, 39, 7030-7041	6.7	15
439	Improved de/hydrogenation properties and favorable reaction mechanism of CeH2 + KH co-doped sodium aluminum hydride. *International Journal of Hydrogen Energy*, **2014**, 39, 6577-6587	6.7	11
438	Superior dehydrogenation performance of nanoscale lithium borohydride modified with fluorographite. *International Journal of Hydrogen Energy*, **2014**, 39, 896-904	6.7	17
437	Advanced materials for solid state hydrogen storage: Thermal engineering issues **2014**, 72, 176-189		42
436	Promotional effects of oxygen-containing additives on ammonia borane dehydrogenation for polymer electrolyte membrane fuel cell applications. *International Journal of Hydrogen Energy*, **2014**, 39, 21786-21795	6.7	7
435	Promoting Effect of Carbon Surfaces on H2 Dissociation on Aln Clusters by First Principles Calculations. *Journal of Physical Chemistry C*, **2014**, 118, 513-522	3.8	3
434	Significantly improved kinetics, reversibility and cycling stability for hydrogen storage in NaAlH4 with the Ti-incorporated metal organic framework MIL-125(Ti). **2014**, 2, 1847-1854		22
433	An ammonia-stabilized mixed-cation borohydride: synthesis, structure and thermal decomposition behavior. **2014**, 16, 135-43		28
432	Structural transitions of ternary imide Li2Mg(NH)2 for hydrogen storage. **2014**, 105, 083909		8
431	Fast hydrogen release under moderate conditions from NaBH4 destabilized by fluorographite. **2014**, 4, 2550-2556		19
430	The influence of protecting polyelectrolyte layers on the temperature behavior of NaBD4. **2014**, 4, 2628-2633		1
429	NbN nanoparticles as additive for the high dehydrogenation properties of LiAlH4. **2014**, 43, 1806-13		20
428	Theory of mass transport in sodium alanate. **2014**, 2, 4438-4448		10
427	Towards easy reversible dehydrogenation of LiBH4 by catalyzing hierarchic nanostructured CoB. **2014**, 10, 235-244		40
426	Halide substitution in Ca(BH4)2. **2014**, 4, 4736-4742		19
425	Beneficial effects of stoichiometry and nanostructure for a LiBH4MgH2 hydrogen storage system. **2014**, 2, 66-72		15
424	Coordination and activation of Al-H and Ga-H bonds. *Chemistry - A European Journal*, **2014**, 20, 17624-34	4.8	41

423	Enhanced hydrogen storage properties of LiAlH4 catalyzed by CoFe2O4 nanoparticles. **2014**, 4, 18989-18997		27
422	A metal-oxide catalyst enhanced the desorption properties in complex metal hydrides. **2014**, 2, 4361-4365		30
421	Interaction mechanism of hydrogen storage materials with layer-by-layer applied protective polyelectrolyte coatings. *International Journal of Hydrogen Energy*, **2014**, 39, 14834-14842	6.7	1
420	Effect of gas back pressure on hydrogen storage properties and crystal structures of Li 2 Mg(NH) 2. *International Journal of Hydrogen Energy*, **2014**, 39, 17754-17764	6.7	12
419	H2O-Functionalized Zeolitic Zn(2-methylimidazole)2 Framework (ZIF-8) for H2 Storage. *Journal of Physical Chemistry C*, **2014**, 118, 21866-21872	3.8	42
418	Ultrafast Bulk Diffusion of AlHx in High-Entropy Dehydrogenation Intermediates of NaAlH4. *Journal of Physical Chemistry C*, **2014**, 118, 18356-18361	3.8	3
417	Improved Interaction of Hydrogen on Transition-Metal-Doped Al(100) Stepped Surface. *Journal of Physical Chemistry C*, **2014**, 118, 7442-7450	3.8	7
416	Hydrogen storage in hydride-forming materials. **2014**, 368-409		4
415	One hundred years of the Max-Planck-Institut f□ Kohlenforschung. **2014**, 53, 8562-86		5
414	100 Jahre Max-Planck-Institut f□ Kohlenforschung. **2014**, 126, 8702-8727		1
413	Aluminium alloy based hydrogen storage tank operated with sodium aluminium hexahydride Na3AlH6. *International Journal of Hydrogen Energy*, **2014**, 39, 17118-17128	6.7	24
412	Neutron diffraction studies of a four-coordinated hydride in near square-planar geometry. **2014**, 53, 11140-5		51
411	Dehydrogenation Properties of LiAlH4 Doped with Rare Earth Oxides. **2014**, 43, 799-802		5
410	Effective thermodynamic alteration to Mg(NH2)2□iH system: achieving near ambient-temperature hydrogen storage. **2014**, 2, 15816-15822		35
409	The Role of Ti in Alanates and Borohydrides: Catalysis and Metathesis. *Journal of Physical Chemistry C*, **2014**, 118, 77-84	3.8	14
408	Cooperatively enhanced catalytic properties of Ti@Al(100) near-surface alloy for aluminum hydrogenation. *International Journal of Hydrogen Energy*, **2014**, 39, 11963-11975	6.7	1
407	In Situ Embedding of Mg2NiH4 and YH3 Nanoparticles into Bimetallic Hydride NaMgH3 to Inhibit Phase Segregation for Enhanced Hydrogen Storage. *Journal of Physical Chemistry C*, **2014**, 118, 23635-23644	3.8	28
406	Screening analysis of metal hydride based thermal energy storage systems for concentrating solar power plants. **2014**, 38, 821-833		79

405	Regeneration of sodium alanate studied by powder in situ neutron and synchrotron X-ray diffraction. **2014**, 2, 16594-16600		14
404	Nanoconfined NaAlH4: prolific effects from increased surface area and pore volume. **2014**, 6, 599-607		39
403	Accelerating the Understanding and Development of Hydrogen Storage Materials: A Review of the Five-Year Efforts of the Three DOE Hydrogen Storage Materials Centers of Excellence. **2014**, 1, 81-117		3
402	Superior dehydrogenation/hydrogenation kinetics and long-term cycling performance of K and Rb cocatalyzed Mg(NH(2))(2)-2LiH system. **2014**, 6, 17024-33		30
401	NaAlH4 dehydrogenation properties enhanced by MnFe2O4 nanoparticles. **2014**, 248, 388-395		20
400	Complex hydrides for hydrogen storage new perspectives. **2014**, 17, 122-128		328
399	Local atomic structural investigations of precursory phenomenon of the hydrogen release from LiAlD4. *Journal of Alloys and Compounds*, **2014**, 586, 244-247	5.7	6
398	Effect of F on the Hydrogen Release Properties of NaAlH4 and LiAlH4. **2014**, 43, 61-63		5
397	Enhancement of the H2 desorption properties of LiAlH4 doping with NiCo2O4 nanorods. *International Journal of Hydrogen Energy*, **2014**, 39, 4414-4420	6.7	19
396	NaAlH4 production from waste aluminum by reactive ball milling. *International Journal of Hydrogen Energy*, **2014**, 39, 9877-9882	6.7	5
395	Additive Effects of TiCl3 on Dehydrogenation Reaction of LiAlH4. **2014**, 55, 1138-1140		5
394	Crystal structures of aluminum-based hydrides. **2015**, 4, 192-217		9
393	Materials for Hydrogen Storage. **2015**, 1-19		1
392	Thermodynamic stability of transition metals on the Mg-terminated MgB2 (0001) surface and their effects on hydrogen dissociation and diffusion. **2015**, 91,		6
391	High-pressure polymorphism as a step towards high density structures of LiAlH4. **2015**, 107, 041906		3
390	Alloy Design Based on Molecular Orbital Method. **2015**, 54, 207-217		
389	Phase space investigation of the lithium amide halides. *Journal of Alloys and Compounds*, **2015**, 645, S343-S346	3.7	2
388	Zintl-phase Sr3LiAs2H: crystal structure and chemical bonding analysis by the electron localizability approach. *Chemistry - A European Journal*, **2015**, 21, 14471-7	4.8	7

387	A composite of complex and chemical hydrides yields the first Al-based amidoborane with improved hydrogen storage properties. *Chemistry - A European Journal*, **2015**, 21, 14562-70	4.8	25
386	Hydrogen Storage Materials for Mobile and Stationary Applications: Current State of the Art. **2015**, 8, 2789-825		236
385	Ultrafine Nanocrystalline CeO2@C-Containing NaAlH4 with Fast Kinetics and Good Reversibility for Hydrogen Storage. **2015**, 8, 4180-8		19
384	Crystal Structure Relation between Tetragonal and Orthorhombic CsAlD4: DFT and Time-of-Flight Neutron Powder Diffraction Studies. **2015**, 2015, 5545-5550		6
383	An Aluminum Hydride That Functions like a Transition-Metal Catalyst. **2015**, 127, 10363-10367		38
382	An Aluminum Hydride That Functions like a Transition-Metal Catalyst. **2015**, 54, 10225-9		157
381	The improved Hydrogen Storage Performances of the Multi-Component Composite: 2Mg(NH2)2□LiH□iBH4. *Energies*, **2015**, 8, 6898-6909	3.1	17
380	Combined X-ray and Raman Studies on the Effect of Cobalt Additives on the Decomposition of Magnesium Borohydride. *Energies*, **2015**, 8, 9173-9190	3.1	22
379	Development of Hydrogen Storage Tank Systems Based on Complex Metal Hydrides. *Materials*, **2015**, 8, 5891-5921	3.5	40
378	Metal-Organic Frameworks as Platforms for Hydrogen Generation from Chemical Hydrides. **2015**, 421-467		
377	Coordination and Activation of EH Bonds (E=B, Al, Ga) at Transition Metal Centers. **2015**, 1-38		16
376	Hydrogen storage: Materials, methods and perspectives. **2015**, 50, 457-469		416
375	Synthesis and Engineering Materials Properties of Fluid-Phase Chemical Hydrogen Storage Materials for Automotive Applications. **2015**, 29, 6695-6703		5
374	Structural and kinetic investigation of the hydride composite Ca(BH4)2 + MgH2 system doped with NbF5 for solid-state hydrogen storage. **2015**, 17, 27328-42		21
373	Enhanced catalytic effects of Co@C additive on dehydrogenation properties of LiAlH4. *Journal of Alloys and Compounds*, **2015**, 645, S468-S471	5.7	9
372	Potassium, rubidium and cesium hydrides as dehydrogenation catalysts for the lithium amide/magnesium hydride system. *International Journal of Hydrogen Energy*, **2015**, 40, 2266-2273	6.7	32
371	Synthesis and characterization of two new amide chloride compounds: Potential H2 storage materials. *International Journal of Hydrogen Energy*, **2015**, 40, 3001-3005	6.7	9
370	Kinetics Enhancement, Reaction Pathway Change, and Mechanism Clarification in LiBH4with Ti-Catalyzed Nanocrystalline MgH2Composite. *Journal of Physical Chemistry C*, **2015**, 150123144814008	3.8	16

369	Design, sorption behaviour and energy management in a sodium alanate-based lightweight hydrogen storage tank. *International Journal of Hydrogen Energy*, **2015**, 40, 2984-2988	6.7	27
368	Simulation studies and safety analysis of high pressure milling vials for the direct synthesis of high capacity metal hydrides. *International Journal of Hydrogen Energy*, **2015**, 40, 5006-5012	6.7	5
367	Cyclic Dehydrogenation(Re)Hydrogenation with Hydrogen-Storage Materials: An Overview. *Energy Technology*, **2015**, 3, 100-117	3.5	22
366	Remarkably improved hydrogen storage properties of nanocrystalline TiO2-modified NaAlH4 and evolution of Ti-containing species during dehydrogenation/hydrogenation. **2015**, 8, 533-545		40
365	Energy Expression of the Chemical Bond Between Atoms in Hydrides and Oxides and Its Application to Materials Design. **2015**, 183-213		1
364	Lithium metatitanate enhanced solid–solid reaction in a lithium–nitrogen–hydrogen system. **2015**, 5, 18375-18378		6
363	Effects of Ni and Co-decorated MWCNTs addition on the dehydrogenation behavior and stability of LiAlH4. *International Journal of Hydrogen Energy*, **2015**, 40, 14064-14071	6.7	15
362	Computational study of catalytic effect of C3N4 on H2 release from complex hydrides. *International Journal of Hydrogen Energy*, **2015**, 40, 8897-8902	6.7	11
361	A generic physical model for a thermally integrated high-temperature PEM fuel cell and sodium alanate tank system. *International Journal of Hydrogen Energy*, **2015**, 40, 14551-14561	6.7	9
360	Fluorescence X-ray Absorption Study of ScCl3-Doped Sodium Alanate. *Journal of Physical Chemistry C*, **2015**, 119, 15810-15815	3.8	2
359	Mechanistic understanding of CoO-catalyzed hydrogen desorption from a LiBH4–NH3-3LiH system. **2015**, 44, 14514-22		7
358	The catalyzed hydrogen sorption mechanism in alkali alanates. **2015**, 17, 20932-40		11
357	Colorimetric detection of Al(III) in vermicelli samples based on ionic liquid group coated gold nanoparticles. **2015**, 5, 62260-62264		18
356	Environmental and health impact assessment of Liquid Organic Hydrogen Carrier (LOHC) systems – challenges and preliminary results. **2015**, 8, 1035-1045		134
355	Catalytic effect of Ti and Ni on dehydrogenation of AlH3: A first principles investigation. **2015**, 347, 139-146		5
354	Using autofrettage technology to decrease stresses in a girth welded joint of a high pressure hydrogen tank. *International Journal of Hydrogen Energy*, **2015**, 40, 8110-8121	6.7	6
353	The effect of NH3 content on hydrogen release from LiBH4–NH3 system. *International Journal of Hydrogen Energy*, **2015**, 40, 4573-4578	6.7	6
352	Hydrogen absorption and lithium ion conductivity in Li6NBr3. *Journal of Alloys and Compounds*, **2015**, 645, S174-S177	5.7	3

351	One step high pressure mechanochemical synthesis of reversible alanates NaAlH4 and KAlH4. *International Journal of Hydrogen Energy*, **2015**, 40, 4916-4924	6.7	10
350	Hydrogen desorption kinetics of CeCl3-doped sodium aluminum hydride compacts measured by parallel in situ FTIR-ATR-spectroscopy and gravimetry. *International Journal of Hydrogen Energy*, **2015**, 40, 4175-4183	6.7	5
349	Hydrogen Storage Materials. **2015**, 205-239		4
348	Pure hydrogen-generating doped sodium hydrazinidoborane. *International Journal of Hydrogen Energy*, **2015**, 40, 7475-7482	6.7	10
347	Design of an efficient, high purity hydrogen generation apparatus and method for a sustainable, closed clean energy cycle. *International Journal of Hydrogen Energy*, **2015**, 40, 9885-9906	6.7	11
346	Remarkable enhancement in dehydrogenation properties of Mg(BH4)2 modified by the synergetic effect of fluorographite and LiBH4. *International Journal of Hydrogen Energy*, **2015**, 40, 14163-14172	6.7	19
345	CNT addition to the LiBH4 MgH2 composite: the effect of milling sequence on the hydrogen cycling properties. **2015**, 5, 90014-90021		7
344	Role of aluminum chloride on the reversible hydrogen storage properties of the Li NH system. *International Journal of Hydrogen Energy*, **2015**, 40, 13506-13517	6.7	18
343	Kinetics study of sodium alanate with catalyst TiO2. **2015**, 52, 504-507		6
342	Synthesis of a Nanosized Carbon-Supported Ni Composite and Its Remarkable Catalysis for Hydrogen Desorption from the LiBH4 LiNH2 System. *Journal of Physical Chemistry C*, **2015**, 119, 24760-24768	4.8	15
341	Effect of LiCl presence on the hydrogen storage performance of the Mg(NH2)2 LiH composite. **2015**, 5, 68542-68550		15
340	Hydrogen cycling in Mg(BH4)2 with cobalt-based additives. **2015**, 3, 6592-6602		38
339	Crystal feature and electronic structure of novel mixed alanate LiCa(AlH4)3: a density functional theory investigation. **2015**, 5, 16439-16445		5
338	New insights into the effects of NaCl and LiCl on the hydrogen storage behaviours of a 6LiBH4 Mg(AlH4)2 composite. **2015**, 5, 12144-12151		9
337	Enhancing ionic conductivity in lithium amide for improved energy storage materials. **2015**, 6, 015005		3
336	Ammonia borane destabilized by aluminium hydride: A mutual enhancement for hydrogen release. *International Journal of Hydrogen Energy*, **2015**, 40, 1047-1053	6.7	12
335	Ni -doped NaAlH4 hydrogen storage materials prepared by a facile two-step synthesis method. *Rare Metals*, **2015**, 34, 679-682	5.5	10
334	Enhancement of hydrogen storage capacity and hydrostability of metal organic frameworks (MOFs) with surface-loaded platinum nanoparticles and carbon black. **2015**, 202, 8-15		41

333	Solid state storage of hydrogen and its isotopes: An engineering overview. **2015**, 41, 872-883	47
332	Metal Hydrides: Properties and Applications of Alanates. **2016**,	
331	Fuel Cells: Microsystems. **2016**,	
330	Energetic evaluation of hydrogen storage in metal hydrides. **2016**, 40, 1820-1831	28
329	Hydrogen Storage by Reversible Metal Hydride Formation. **2016**, 763-790	5
328	Alloy Design Based on Molecular Orbital Method. **2016**, 57, 213-226	26
327	Study on Hydrogen Storage Materials. **2016**, 85, 091012	8
326	A theoretical study of high-pressure-induced phases of LiAlH4 using calculated NQCC parameters. **2016**, 90, 2571-2575	1
325	First-principles calculated decomposition pathways for LiBH4 nanoclusters. **2016**, 6, 26056	11
324	Mass production of LiAl alloys by the step-controlled casting process. **2016**, 99, 102-106	1
323	Neutron Powder Diffraction. **2016**, 31-89	1
322	Solid Hydrogen Storage Materials: Non-interstitial Hydrides. *Green Energy and Technology*, **2016**, 207-239	0.6
321	Improvement of hydrogen storage property of three-component Mg(NH)-LiNH-LiH composites by additives. **2016**, 45, 15374-15381	21
320	Dehydrogenation characteristics of LiAlH4 improved by in-situ formed catalysts. **2016**, 25, 868-873	20
319	Dehydrogenation kinetics and reversibility of LiAlH4□LiBH4 doped with Ti-based additives and MWCNT. **2016**, 98, 149-155	21
318	Promoted hydrogen release from alkali metal borohydrides in ionic liquids. **2016**, 3, 1137-1145	12
317	Destabilization of lithium hydride and the thermodynamic assessment of the Li□AlH system for solar thermal energy storage. **2016**, 6, 94927-94933	15
316	Hydrides. **2016**, 1-39	1

315	Investigation of the Effects of Mechanochemical Treatment on NaAlH4Based Anode Materials for Li-Ion Batteries. **2016**, 163, A2628-A2635		10
314	First principles study of AlH3 vacancy mediated mechanism in dehydriding of NaAlH4. *International Journal of Hydrogen Energy*, **2016**, 41, 16966-16973	6.7	1
313	Hydrogen Storage. **2016**, 567-638		
312	Effective participation of Li4(NH2)3BH4 in the dehydrogenation pathway of the Mg(NH2)2-2LiH composite. **2016**, 18, 17997-8005		15
311	Tailoring Thermodynamics and Kinetics for Hydrogen Storage in Complex Hydrides towards Applications. **2016**, 16, 189-204		49
310	Thermodynamic analysis of dehydrogenation path of MgAlLiNa alloys. **2016**, 54, 54-66		1
309	Optimization and comprehensive characterization of metal hydride based hydrogen storage systems using in-situ Neutron Radiography. **2016**, 328, 567-577		5
308	Towards easily tunable hydrogen storage via a hydrogen-induced glass-to-glass transition in Mg-based metallic glasses. **2016**, 120, 68-74		46
307	Improved electrolysis of liquid ammonia for hydrogen generation via ammonium salt electrolyte and Pt/Rh/Ir electrocatalysts. *International Journal of Hydrogen Energy*, **2016**, 41, 14507-14518	6.7	22
306	A review on kinetic models and corresponding analysis methods for hydrogen storage materials. *International Journal of Hydrogen Energy*, **2016**, 41, 18072-18087	6.7	155
305	Organic derivatives of Mg(BH4)2 as precursors towards MgB2 and novel inorganic mixed-cation borohydrides. **2016**, 45, 14370-7		15
304	Anisotropic storage medium development in a full-scale, sodium alanate-based, hydrogen storage system. *International Journal of Hydrogen Energy*, **2016**, 41, 13557-13574	6.7	4
303	Remarkably improved hydrogen storage properties of NaAlH4 doped with 2D titanium carbide. **2016**, 327, 519-525		57
302	Towards Direct Synthesis of Alane: A Predicted Defect-Mediated Pathway Confirmed Experimentally. **2016**, 9, 2358-64		5
301	Metal Hydrides. **2016**, 149-161		
300	Irreproducibility in hydrogen storage material research. **2016**, 9, 3368-3380		68
299	From M(BH) (M = La, Ce) Borohydride Frameworks to Controllable Synthesis of Porous Hydrides and Ion Conductors. **2016**, 55, 9748-9756		26
298	Asymmetric Reaction Paths and Hydrogen Sorption Mechanism in Mechanochemically Synthesized Potassium Alanate (KAlH4). *Journal of Physical Chemistry C*, **2016**, 120, 21299-21308	3.8	6

297	Enhanced hydrogen desorption properties of LiAlH by doping lithium metatitanate. **2016**, 18, 27623-27629		9
296	Complex metal borohydrides: multifunctional materials for energy storage and conversion. **2016**, 28, 353001		27
295	Hydrogen Generation and Storage in Porous Silicon. **2016**, 273-295		1
294	Hydrogen carriers. **2016**, 1,		394
293	Catalyzed KSiH3 as a reversible hydrogen storage material. **2016**, 4, 19045-19052		12
292	Preparation and Catalytic Activity of a Novel Nanocrystalline ZrO @C Composite for Hydrogen Storage in NaAlH. **2016**, 11, 3541-3549		14
291	Understanding the hydrogen storage behavior of promising Al□MgN□a compositions using thermodynamic modeling. **2016**, 5, 1		2
290	Design and operation of an aluminium alloy tank using doped Na3AlH6 in kg scale for hydrogen storage. **2016**, 324, 589-597		12
289	Aluminium complexes of B- and N-based hydrides: Synthesis, structures and hydrogen storage properties. *International Journal of Hydrogen Energy*, **2016**, 41, 15489-15504	6.7	24
288	Catalytic decomposition of carbon-based liquid-phase chemical hydrogen storage materials for hydrogen generation under mild conditions. **2016**, 6, 269-277		5
287	Chloride catalytic effect on hydrogen desorption in NaAlH4. *International Journal of Hydrogen Energy*, **2016**, 41, 8271-8276	6.7	10
286	Cyclic stability and structure of nanoconfined Ti-doped NaAlH 4. *International Journal of Hydrogen Energy*, **2016**, 41, 4159-4167	6.7	12
285	Dynamics of Pyramidal SiH3□Ions in ASiH3 (A = K and Rb) Investigated with Quasielastic Neutron Scattering. *Journal of Physical Chemistry C*, **2016**, 120, 6369-6376	3.8	15
284	Electronic structure, optical and thermodynamic properties of ternary hydrides MBeH3 (M = Li, Na, and K). **2016**, 94, 865-876		3
283	Combustion Mechanism of a Novel Energetic Fuel Candidate Based on Amine Metal Borohydrides. **2016**,		2
282	Li4(NH2)3Cl amide-chloride: a new synthesis route, and hydrogen storage kinetic and thermodynamic properties. **2016**, 6, 15622-15629		4
281	Catalytic effect of Nb2O5 on dehydrogenation kinetics of NaAlH4. *International Journal of Hydrogen Energy*, **2016**, 41, 8264-8270	6.7	9
280	DFT calculations for the electronic structure of alpha phase of CsMgH3 as advanced hydrogen storage materials. *International Journal of Hydrogen Energy*, **2016**, 41, 2762-2770	6.7	6

279	Hydrogen storage properties and mechanisms of a Mg(BH4)2□2NH3□NaAlH4 combination system. *International Journal of Hydrogen Energy*, **2016**, 41, 2788-2796	6.7	11
278	Origin of distinct hydrogen absorption behavior of Zr2Pd and ZrPd2. *International Journal of Hydrogen Energy*, **2016**, 41, 1736-1743	6.7	3
277	Complex hydrides as room-temperature solid electrolytes for rechargeable batteries. **2016**, 122, 1		41
276	Recent progress in magnesium borohydride Mg(BH4)2: Fundamentals and applications for energy storage. *International Journal of Hydrogen Energy*, **2016**, 41, 14387-14403	6.7	85
275	Sodium-based hydrides for thermal energy applications. **2016**, 122, 1		30
274	First-principles study of transition metal (Ti, Nb)-doped NaAlH4. *International Journal of Hydrogen Energy*, **2016**, 41, 3517-3526	6.7	6
273	Effect of Na3FeF6 catalyst on the hydrogen storage properties of MgH2. **2016**, 45, 7085-93		55
272	Complex and liquid hydrides for energy storage. **2016**, 122, 1		64
271	Materials Engineering and Scale-up of Fluid Phase Chemical Hydrogen Storage for Automotive Applications. **2016**, 30, 560-569		2
270	Achieving ambient temperature hydrogen storage in ultrafine nanocrystalline TiO2@C-doped NaAlH4. **2016**, 4, 1087-1095		39
269	Tuning kinetics and thermodynamics of hydrogen storage in light metal element based systems□A review of recent progress. *Journal of Alloys and Compounds*, **2016**, 658, 280-300	5.7	186
268	Conceptual density functional theory (DFT) approach to all-metal aromaticity and hydrogen storage. **2016**, 243-280		
267	Evolution of the active species and catalytic mechanism of Ti doped NaAlH 4 for hydrogen storage. *International Journal of Hydrogen Energy*, **2017**, 42, 6088-6095	6.7	24
266	Hydrogen and deuterium interaction of NaAlH x D 4□ (0□x□4) and its kinetics isotope effect. *International Journal of Hydrogen Energy*, **2017**, 42, 6160-6165	6.7	1
265	Near Ambient Condition Hydrogen Storage in a Synergized Tricomponent Hydride System. **2017**, 7, 1602456		25
264	Synthesis of Nanoflower-Shaped MXene Derivative with Unexpected Catalytic Activity for Dehydrogenation of Sodium Alanates. **2017**, 9, 7611-7618		49
263	Metal borohydrides and derivatives - synthesis, structure and properties. **2017**, 46, 1565-1634		249
262	Significantly enhanced hydrogen desorption properties of Mg(AlH4)2 nanoparticles synthesized using solvent free strategy. **2017**, 27, 112-120		12

261	Nanostructured and Complex Hydrides for Hydrogen Storage. **2017**, 415-432		5
260	NaNH2□NaBH4 hydrogen storage composite materials synthesized via liquid phase ball-milling: Influence of Co□NiB catalyst on the dehydrogenation performances. *International Journal of Hydrogen Energy*, **2017**, 42, 14725-14733	6.7	15
259	Theoretical study of hydrogen storage in a truncated tetrahedron hydrocarbon. **2017**, 123, 1		3
258	How does TiF4 affect the decomposition of MgH2 and its complex variants? □An XPS investigation. **2017**, 5, 15543-15551		43
257	Hydrogen Storage Technologies for Future Energy Systems. **2017**, 8, 445-471		141
256	A first-principle approach to study the thermodynamical behavior of MgH2+nH (n=0, 4, 8). **2017**,		
255	A NaAlH 4 -Ca(BH 4) 2 composite system for hydrogen storage. *Journal of Alloys and Compounds*, **2017**, 720, 497-501	5.7	10
254	Remarkably improved dehydrogenation of ZrCl4 doped NaAlH4 for hydrogen storage application. *International Journal of Hydrogen Energy*, **2017**, 42, 15299-15307	6.7	9
253	Enhanced hydrogen generation by solid-state thermal decomposition of NaNH2□NaBH4 composite promoted with Mg□CoB catalyst. **2017**, 32, 1203-1209		6
252	Reversible hydrogen storage in yttrium aluminum hydride. **2017**, 5, 6042-6046		27
251	Improved dehydrogenation performance of NaAlH 4 using NiFe 2 O 4 nanoparticles. *Journal of Alloys and Compounds*, **2017**, 709, 850-856	5.7	19
250	Direct synthesis and dehydrogenation properties of NaAlH4 catalyzed with ball-milled TiB. *Rare Metals*, **2017**, 36, 517-522	5.5	5
249	The enhanced de/re-hydrogenation performance of 4MgH 2 -NaAlH 4 composite by doping with TiH 2. *Journal of Alloys and Compounds*, **2017**, 698, 1002-1008	5.7	23
248	The renaissance of hydrides as energy materials. **2017**, 2,		240
247	Simulation and design of catalytic membrane reactor for hydrogen production via methylcyclohexane dehydrogenation. *International Journal of Hydrogen Energy*, **2017**, 42, 26296-26307	6.7	24
246	Pitfalls in the characterisation of the hydrogen sorption properties of materials. *International Journal of Hydrogen Energy*, **2017**, 42, 29320-29343	6.7	28
245	Preparations and de/re-hydrogenation properties of LixNa3-xAlH6 (x=0.9□1.3) non-stoichiometric compounds. *Journal of Alloys and Compounds*, **2017**, 729, 648-654	5.7	1
244	Solid Aluminum Borohydrides for Prospective Hydrogen Storage. **2017**, 10, 4725-4734		17

243	Recent advance in MXenes: A promising 2D material for catalysis, sensor and chemical adsorption. **2017**, 352, 306-327		315
242	Hydrogen Chemisorption on Singly Vanadium-Doped Aluminum Clusters. *Chemistry - A European Journal*, **2017**, 23, 15638-15643	4.8	20
241	The enhanced de/re-hydrogenation performances of LiNa2AlH6 combined with two-dimension lamellar Ti3C2. *International Journal of Hydrogen Energy*, **2017**, 42, 25285-25293	6.7	9
240	Insight to the Thermal Decomposition and Hydrogen Desorption Behaviors of NaNH-NaBH Hydrogen Storage Composite. **2017**, 9, 31977-31984		14
239	Light metal borohydrides/amides combined hydrogen storage systems: composition, structure and properties. **2017**, 5, 25112-25130		34
238	Synthesis of nanoscale CeAl4 and its high catalytic efficiency for hydrogen storage of sodium alanate. *Rare Metals*, **2017**, 36, 77-85	5.5	11
237	A DFT study on the hydrogen desorption from the lithium borohydride and aluminohydride upon the addition of nanostructured carbon catalyzing agent. *International Journal of Hydrogen Energy*, **2017**, 42, 3019-3026	6.7	4
236	Kinetic alteration of the 6Mg(NH)-9LiH-LiBH system by co-adding YCl and LiN. **2017**, 19, 32105-32115		8
235	Scalable, Self-Contained Sodium Metal Production Plant for a Hydrogen Fuel Clean Energy Cycle. **2017**,		
234	Complex Metal Hydrides for Hydrogen, Thermal and Electrochemical Energy Storage. *Energies*, **2017**, 10, 1645	3.1	104
233	Metal Hydrides: Electronic Band Structure. **2017**,		
232	Unique Hydrogen Desorption Properties of LiAlH4/h-BN Composites. **2017**, 5, 71		2
231	Tetrahydroborates: Development and Potential as Hydrogen Storage Medium. **2017**, 5, 74		41
230	Functional Materials for Gas Storage. Part II: Hydrogen and Methane. **2017**, 281-311		
229	Investigation of Catalytic Effects and Compositional Variations in Desorption Characteristics of LiNH2-nanoMgH2. **2017**, 7, 701		0
228	Metal Hydrides. **2017**, 477-520		2
227	Role of Metal Electronegativity in the Dehydrogenation Thermodynamics and Kinetics of Composite Metal Borohydride-LiNH Hydrogen Storage Materials. **2018**, 10, 9514-9521		16
226	DFT Insights into the Interactive Effect of Ni + N Cosubstitution on Enhanced Dehydrogenation Properties of Mg(BH4)(NH2)-like Complex Hydride for Hydrogen Energy Storage. *Journal of Physical Chemistry C*, **2018**, 122, 5956-5966	3.8	6

225	Facile Synthesis and Superior Catalytic Activity of Nano-TiN@N-C for Hydrogen Storage in NaAlH. **2018**, 10, 15767-15777		29
224	Hydrogen production, storage, transportation and key challenges with applications: A review. **2018**, 165, 602-627		477
223	A study on the hydrogen storage properties and reaction mechanism of Na3AlH6LiBH4 composite system. *International Journal of Hydrogen Energy*, **2018**, 43, 8365-8374	6.7	14
222	Anomalous H2 Desorption Rate of NaAlH4 Confined in Nitrogen-Doped Nanoporous Carbon Frameworks. **2018**, 30, 2930-2938		30
221	Thermal properties and cycling performance of Ca(BH4)2/MgH2 composite for energy storage. **2018**, 700, 44-49		9
220	Review on Ammonia Absorption Materials: Metal Hydrides, Halides, and Borohydrides. **2018**, 1, 232-242		38
219	Metallized siligraphene nanosheets (SiC7) as high capacity hydrogen storage materials. **2018**, 11, 3802-3813		37
218	Synergistic effects played by CMK-3 and NbF5 co-additives on de/re-hydrogenation performances of NaAlH4. *International Journal of Hydrogen Energy*, **2018**, 43, 9705-9712	6.7	5
217	Mechanochemical synthesis and effect of various additives on the hydrogen absorption□desorption behavior of Na3AlH6. **2018**, 53, 13742-13750		1
216	Superior Reversible Hydrogen Storage Properties and Mechanism of LiBH4□MgH2□Al Doped with NbF5 Additive. *Journal of Physical Chemistry C*, **2018**, 122, 7613-7620	3.8	12
215	On the higher-order T ? (e + t) Jahn-Teller coupling effects in the photodetachment spectrum of the alanate anion (AlH). **2018**, 20, 9401-9410		10
214	Tailoring magnesium based materials for hydrogen storage through synthesis: Current state of the art. **2018**, 10, 168-198		174
213	A review on design strategies for metal hydrides with enhanced reaction thermodynamics for hydrogen storage applications. **2018**, 42, 1455-1468		40
212	Synthesis and characterisation of a porous Al scaffold sintered from NaAlH4. **2018**, 53, 1076-1087		5
211	Development of Catalyst-Enhanced Sodium Alanate as an Advanced Hydrogen-Storage Material for Mobile Applications. *Energy Technology*, **2018**, 6, 487-500	3.5	44
210	Doped phosphorene for hydrogen capture: A DFT study. **2018**, 433, 249-255		38
209	Two-dimensional MXene/A-TiO2 composite with unprecedented catalytic activation for sodium alanate. **2018**, 318, 167-174		22
208	Ab-initio study of electronic and elastic properties of Mg(BH4)(NH2) complex hydride. *International Journal of Hydrogen Energy*, **2018**, 43, 1587-1595	6.7	3

207	Stable structures of exohedrally decorated C60-fullerenes. **2018**, 129, 847-853		23
206	Synthesis and thermal decomposition of potassium tetraamidoboranealuminate, K[Al(NH2BH3)4]. *International Journal of Hydrogen Energy*, **2018**, 43, 311-321	6.7	11
205	In situ formation of Al3Ti, MgF2 and Al and their superior synergetic effects on reversible hydrogen storage of MgH2. **2018**, 318, 107-112		20
204	Catalytic Tuning of Sorption Kinetics of Lightweight Hydrides: A Review of the Materials and Mechanism. **2018**, 8, 651		21
203	Enhanced dehydrogenation kinetic properties and hydrogen storage reversibility of LiBH4 confined in activated charcoal. **2018**, 28, 1618-1625		8
202	Tuning the Reactivity of Small Metal Clusters by Heteroatom Doping. **2018**, 51, 3174-3182		41
201	Nanostructured Metal Hydrides for Hydrogen Storage. **2018**, 118, 10775-10839		256
200	Solid State Hydrogen Storage in Alanates and Alanate-Based Compounds: A Review. **2018**, 8, 567		36
199	Super Atomic Clusters: Design Rules and Potential for Building Blocks of Materials. **2018**, 118, 5755-5870		265
198	Light-Activated Hydrogen Storage in Mg, LiH and NaAlH. **2018**, 83, 904-908		6
197	Catalytic effect of ScCl3 on the dehydrogenation properties of LiAlH4. *Journal of Alloys and Compounds*, **2018**, 762, 73-79	5.7	18
196	Hydrogen. **2018**, 5-105		6
195	2.3 Boron. **2018**, 72-87		
194	A hydride composite featuring mutual destabilisation and reversible boron exchange: Ca(BH4)2Mg2NiH4. **2018**, 6, 17929-17946		5
193	Hydrogen storage performances and reaction mechanism of non-stoichiometric compound Li1.3Na1.7AlH6 doped with Ti3C2. **2018**, 513, 135-140		6
192	Crystal Structural Determination of SrAlD5 with Corner-Sharing AlD6 Octahedron Chains by X-ray and Neutron Diffraction. **2018**, 8, 89		3
191	Destabilizing sodium borohydride with an ionic liquid. **2018**, 9, 391-396		8
190	Theoretical study of hydrogen storage in a truncated triangular pyramid molecule consisting of pyridine and benzene rings bridged by vinylene groups. **2018**, 124, 1		1

189	Effect of additives, ball milling and isotopic exchange in porous magnesium borohydride.. **2018**, 8, 27645-27653		12
188	New Phase of Ca(BH4)2 at Near Ambient Conditions. *Journal of Physical Chemistry C*, **2018**, 122, 14272-14276		3
187	Reactivity of magnesium borohydride Metal hydride composites, Mg(BH4)2-MHx, M = Li, Na, Mg, Ca. *Journal of Alloys and Compounds*, **2019**, 770, 1155-1163	5.7	11
186	Technologies for the Storage of Hydrogen Part 1: Hydrogen Storage in the Narrower Sense. **2019**, 6, 72		6
185	Experimental Investigation of Isobaric specific heat capacity (Cp) of 9-ethylcarbazole in liquid and solid state. **2019**, 24,		
184	From the can to the tank: NaAlH4 from recycled aluminum. *International Journal of Hydrogen Energy* , **2019**, 44, 20183-20190	6.7	3
183	On the preparation and NMR spectroscopic characterization of potassium aluminium tetrahydride KAlH. **2019**, 21, 12576-12584		1
182	First-Principles Computational Screening of Perovskite Hydrides for Hydrogen Release. **2019**, 21, 736-742		2
181	Complex Hydrides for Energy Storage, Conversion, and Utilization. **2019**, 31, e1902757		58
180	An ab initio study of reversible dihydrogen adsorption in metal decorated graphyne. **2019**, 126, 174301		13
179	Tailoring the Kinetic Behavior of Hydride Forming Materials for Hydrogen Storage. **2019**,		1
178	Alanates, a Comprehensive Review. *Materials*, **2019**, 12,	3.5	14
177	Lightweight hydrides nanocomposites for hydrogen storage: Challenges, progress and prospects. **2019**, 62, 1597-1625		22
176	Technologien zur Speicherung von Wasserstoff. Teil 1: Wasserstoffspeicherung im engeren Sinn. **2019**, 91, 383-392		4
175	A database approach for materials selection for hydrogen storage in aerospace technology. **2019**, 30, 287-296		4
174	Hydrogen Chemisorption on Doubly Vanadium Doped Aluminum Clusters. **2019**, 233, 799-812		6
173	How to Design Hydrogen Storage Materials? Fundamentals, Synthesis, and Storage Tanks. **2019**, 3, 1900043		48
172	Hydrogen storage materials for hydrogen and energy carriers. *International Journal of Hydrogen Energy*, **2019**, 44, 18179-18192	6.7	100

171	Reversible Hydrogen Uptake/Release over a Sodium Phenoxide□Cyclohexanolate Pair. **2019**, 131, 3134-3139		2
170	Amphoteric behavior of hydrogen (H+1 and H□1) in complex hydrides from van der Waals interaction-including ab initio calculations. **2019**, 7, 6228-6240		4
169	Computational study of H binding to MH (M = Ti, V, or Cr). **2019**, 48, 4921-4930		2
168	Triggering highly stable catalytic activity of metallic titanium for hydrogen storage in NaAlH4 by preparing ultrafine nanoparticles. **2019**, 7, 4651-4659		24
167	In-Situ/Operando X-ray Characterization of Metal Hydrides. **2019**, 20, 1261-1271		4
166	Study of borohydride ionic liquids as hydrogen storage materials. **2019**, 33, 17-21		26
165	Future perspectives of thermal energy storage with metal hydrides. *International Journal of Hydrogen Energy*, **2019**, 44, 7738-7745	6.7	75
164	A first-principles study of Nb-doped NaAlH4 (001) surface. **2019**, 290, 7-11		3
163	Catalytic Hydroboration of Organic Nitriles Promoted by Aluminum Complex. **2019**, 361, 850-857		41
162	Reversible Hydrogen Uptake/Release over a Sodium Phenoxide-Cyclohexanolate Pair. **2019**, 58, 3102-3107		17
161	Complex hydrides for energy storage. *International Journal of Hydrogen Energy*, **2019**, 44, 7860-7874	6.7	82
160	Mechanochemical synthesis of Ce3Al11 powder and its catalytic effect on the hydrogen sorption properties of NaAlH4. *Journal of Alloys and Compounds*, **2019**, 784, 313-318	5.7	8
159	Identifying the Role of Dynamic Surface Hydroxides in the Dehydrogenation of Ti-Doped NaAlH. **2019**, 11, 4930-4941		12
158	Elucidating the Role of Temperature and Pressure to the Thermodynamic Stability of Charged Defects in Complex Metal-Hydrides: A Case Study of NaAlH4. *Journal of Physical Chemistry C*, **2019**, 123, 62-69	3.8	7
157	Introduction: hydrogen storage as solution for a changing energy landscape. **2019**, 4,		2
156	Internal combustion engine efficiency enhancer by using hydrogen. **2020**, 41, 237-240		20
155	Dehydrogenation characteristics of ZrC-doped LiAlH4 with different mixing conditions. *Rare Metals*, **2020**, 39, 383-391	5.5	8
154	Aluminon functionalized silver nanoparticles for the colorimetric detection of aqueous Al(III). **2020**, 239, 122318		2

153	Crystal structure evolution of complex metal aluminum hydrides upon hydrogen release. **2020**, 42, 133-143		13
152	Formation of Mn hydrides from bis(trimethylsilylmethyl) Mn(II): A DFT study. **2020**, 178, 114355		
151	Metallo-N-Heterocycles - A new family of hydrogen storage material. **2020**, 26, 198-202		11
150	Remarkable hydrogen absorption/desorption behaviors and mechanism of sodium alanates in-situ doped with Ti-based 2D MXene. **2020**, 242, 122529		15
149	A landscape of hydride compounds for off-board refilling of transport vehicles. *International Journal of Hydrogen Energy*, **2020**, 45, 2954-2966	6.7	4
148	Materials for hydrogen-based energy storage past, recent progress and future outlook. *Journal of Alloys and Compounds*, **2020**, 827, 153548	5.7	264
147	N-Doped Graphene-Rich Aerogels Decorated with Nickel and Cobalt Nanoparticles: Effect on Hydrogen Storage Properties of Nanoconfined LiBH4. *Journal of Physical Chemistry C*, **2020**, 124, 115-125	3.8	14
146	Exploration of the Dehydrogenation Pathways of Ammonia Diborane and Diammoniate of Diborane by Molecular Dynamics Simulations Using Reactive Force Fields. **2020**, 124, 1698-1704		14
145	Electrolyte-Assisted Hydrogen Cycling in Lithium and Sodium Alanates at Low Pressures and Temperatures. *Energies*, **2020**, 13, 5868	3.1	
144	Sustainable Option for Hydrogen Production: Mechanistic Study of the Interaction between Cobalt Pincer Complexes and Ammonia Borane. **2020**, 10, 723		0
143	Computationally Predicted High-Throughput Free-Energy Phase Diagrams for the Discovery of Solid-State Hydrogen Storage Reactions. **2020**, 12, 48553-48564		3
142	The direct and reversible hydrogenation of activated aluminium supported by piperidine. **2020**, 49, 17689-17698		3
141	Structural Studies of Hydrogen Storage Materials with Neutron Diffraction: A Review. **2020**, 89, 051001		4
140	Techno-Economic Assessment of Destabilized Li Hydride Systems for High Temperature Thermal Energy Storage. **2020**, 8, 30		1
139	High-pressure cell for in situ neutron studies of hydrogen storage materials. **2020**, 21, 125-135		0
138	In situ measurement technologies on solid-state hydrogen storage materials: a review. **2020**, 17, 100463		22
137	Amorphous-Carbon-Supported Ultrasmall TiB Nanoparticles With High Catalytic Activity for Reversible Hydrogen Storage in NaAlH. **2020**, 8, 419		6
136	Hydrogen storage in light-metal based systems: A review. *Journal of Alloys and Compounds*, **2020**, 829, 154597	5.7	61

135	Electron microscope investigation on hydrogen storage materials: A review. *International Journal of Hydrogen Energy*, **2020**, 45, 12048-12070	6.7	23
134	Structure and Dynamics of Borohydrides Studied by Neutron Scattering Techniques: A Review. **2020**, 89, 051011		10
133	Reversible Hydrogen Storage Using Nanocomposites. **2020**, 10, 4618		7
132	A Review of the MSCA ITN ECOSTORE Novel Complex Metal Hydrides for Efficient and Compact Storage of Renewable Energy as Hydrogen and Electricity. **2020**, 8, 17		26
131	Two-dimensional C@TiO2/Ti3C2 composite with superior catalytic performance for NaAlH4. *International Journal of Hydrogen Energy*, **2020**, 45, 21666-21675	6.7	17
130	Facile synthesis of NiCo2O4-anchored reduced graphene oxide nanocomposites as efficient additives for improving the dehydrogenation behavior of lithium alanate. **2020**, 7, 1257-1272		11
129	Sodium anilinide-cyclohexylamide pair: synthesis, characterization, and hydrogen storage properties. **2020**, 56, 1944-1947		4
128	Few-atom cluster model systems for a hydrogen economy. **2020**, 5, 1754132		6
127	Chemical energy storage. **2021**, 249-292		3
126	Perspectives and challenges of hydrogen storage in solid-state hydrides. **2021**, 29, 1-12		18
125	Improved hydrogen storage performances of LiAlH4 + Mg(BH4)2 composite with TiF3 addition. **2021**, 45, 2882-2898		12
124	Effect of K2NbF7 on the hydrogen release behaviour of NaAlH4. *Journal of Alloys and Compounds*, **2021**, 851, 156686	5.7	10
123	Modification of NaAlH4 properties using catalysts for solid-state hydrogen storage: A review. *International Journal of Hydrogen Energy*, **2021**, 46, 766-782	6.7	22
122	Gaseous complex hydrides NaMH and NaMH (M = B, Al) as hydrogen storage materials: a quantum chemical study. **2020**, 27, 2		2
121	Highly active and stable CeO2 supported nickel-complex catalyst in hydrogen generation. *International Journal of Hydrogen Energy*, **2021**, 46, 499-507	6.7	4
120	First-Principles Calculation on Electronic Band Structure and Phonon Structure for NaBH4 and NaBH6 at High Pressures. **2021**, 10, 1-8		
119	Solid-state hydrogen storage as a future renewable energy technology. **2021**, 263-287		
118	Neutron scattering studies of materials for hydrogen storage. **2021**,		3

117	Enhanced dehydrogenation performance of NaAlH4 by the addition of spherical SrTiO3. **2021**, 45, 8648-8658		5
116	Bimetallic and trimetallic nanomaterials for hydrogen storage applications. **2021**, 17-36		
115	On-Board and Off-Board Technologies for Hydrogen Storage. **2021**, 139-165		
114	Preparation methods of hydrogen storage materials and nanomaterials. **2021**, 1-16		
113	Recent advances in catalyst-enhanced LiAlH4 for solid-state hydrogen storage: A review. *International Journal of Hydrogen Energy*, **2021**, 46, 9123-9141	6.7	14
112	A Review of High Density Solid Hydrogen Storage Materials by Pyrolysis for Promising Mobile Applications. **2021**, 60, 2737-2771		12
111	Hydrogen Vibration in Hydrogen Storage Materials Investigated by Inelastic Neutron Scattering. **2021**, 64, 614-621		2
110	Synergistic Effect of CeF3 Nanoparticles Supported on Ti3C2 MXene for Catalyzing Hydrogen Storage of NaAlH4. **2021**, 4, 2820-2827		6
109	Coupling of nanoconfinement with metallic catalysis in supported NaAlH4 for low-temperature hydrogen storage. **2021**, 491, 229611		5
108	Mechanochemical modification of LiAlH4 with Fe2O3 - A combined DFT and experimental study. *International Journal of Hydrogen Energy*, **2021**, 46, 13070-13081	6.7	4
107	Enhanced hydrogen storage of alanates: Recent progress and future perspectives. **2021**, 31, 165-179		11
106	Computational exploration of magnesium-decorated carbon nitride (g-C3N4) monolayer as advanced energy storage materials. *International Journal of Hydrogen Energy*, **2021**, 46, 21739-21747	6.7	11
105	AlH3 as a hydrogen storage material: recent advances, prospects and challenges. *Rare Metals*, **2021**, 40, 3337-3356	5.5	13
104	Mechanochemical synthesis and dehydrogenation properties of Yb(AlH4)3. *International Journal of Hydrogen Energy*, **2021**, 46, 26437-26444	6.7	1
103	Developing Ideal Metalorganic Hydrides for Hydrogen Storage: From Theoretical Prediction to Rational Fabrication. **2021**, 3, 1417-1425		4
102	Computational Study of the Effect of Doping with Ti on NaAlH4 Nanocluster Dehydrogenation. **2021**, 95, 1646-1654		
101	Improving Reproducibility in Hydrogen Storage Material Research. **2021**, 22, 2141-2157		2
100	Hydrogen Economy and Role of Hythane as a Bridging Solution: A Perspective Review.		7

99	Generating Mechanism of Catalytic Effect for Hydrogen Absorption/Desorption Reactions in NaAlH4TiCl3. **2021**, 11, 8349		1
98	Computational evaluation of Mg-decorated g-CN as clean energy gas storage media. *International Journal of Hydrogen Energy*, **2021**, 46, 35130-35136	6.7	3
97	Hydrogen Clathrates: Next Generation Hydrogen Storage Materials. **2021**, 41, 69-107		16
96	Energy storage onboard zero-emission two-wheelers: Challenges and technical solutions. *Sustainable Energy Technologies and Assessments*, **2021**, 47, 101435	4.7	7
95	Improved kinetic model of hydrogen absorption and desorption in titanium with subsurface transport. **2021**, 173, 112833		0
94	Controllable synthesis of 2D TiH2 nanoflakes with superior catalytic activity for low-temperature hydrogen cycling of NaAlH4. **2022**, 427, 131546		3
93	New Light on the Chemistry of the Group 13 Metals. 1-74		2
92	Integration of Hydrogen Energy Technologies in Autonomous Power Systems. **2008**, 23-81		4
91	Inelastic and Quasi-Elastic Neutron Scattering. **2016**, 245-276		1
90	Hydrogen Storage. *Green Energy and Technology*, **2008**, 81-128	0.6	5
89	Hydrogen Storage Technologies. **2017**, 117-142		3
88	Materials for hydrogen storage. **2005**, 517-530		1
87	Hydrides for Hydrogen Storage. **2001**, 531-556		9
86	Introduction to hydrogen storage. **2016**, 3-25		8
85	Interfacial Effect between Aluminum-Based Complex Hydrides and Nickel-Containing Porous Carbon Sheets. **2020**, 3, 9685-9695		1
84	f-Element hydrides: structure and magnetism. **2009**, 100, 1182-1186		10
83	Enhanced hydrogen storage kinetics and air stability of nanoconfined NaAlH in graphene oxide framework.. **2021**, 11, 32533-32540		1
82	Reversible chemical hydrogen storage in borohydrides via thermolysis and hydrolysis: Recent advances, challenges, and perspectives. *International Journal of Hydrogen Energy*, **2021**,	6.7	1

81 Hydriding Properties of Magnesium-Salt Mechanical Alloys. **2004**, 489-502

80 References. **2005**, 405-440

79 Nanocrystalline light metal hydrides for hydrogen storage. **2006**, 266-302

78 Reversible Hydrides for On-Board Hydrogen Storage. **2007**, 191-208

77 Hydrogen storage material as an energy media. **2008**, 20, 68-71

76 Influence of Zr catalyst on reversible hydrogen storage characteristics of NaAlH4 and Na3AlH6. **2010**, 59, 4178 2

75 First-principles study on the catalytic role of Ti in the hydrogenation of Al(110) surfaces. **2010**, 59, 8015 1

74 Hydrogen Sorption Properties of Ti-Oxide/Chloride Catalyzed Na2LiAlH6. 13-20

73 Aluminum Hydride. **2011**, 263-273

72 Trend in Research and Development of Lithium Complex Hydrides for Hydrogen Storage. **2012**, 22, 159-167

71 Production of Atomic Photochemical Hydrogen and Photoinjection of Hydrogen in Solids. **2013**, 241-282

70 Overview on Hydrogen Absorbing Materials. **2014**, 312-342

69 Neutron Diffraction Studies of the Ti3Al/D System. **1998**, 337-342

68 The catalytic effect of transition matel doped Al (111) surfaces for hydrogen splitting. **2015**, 64, 038801 1

67 Chapter 6 In situ Powder Diffraction for the Study of Hydrogen Storage Materials: A General Introduction. **2016**, 161-190

66 Introduction to complex metal hydrides. **2018**, 251-251

65 Synthesis and crystal structure of alkali alanates. **2018**, 252-260

64 Synthesis and crystal structure of mixed alkali alanates. **2018**, 261-264

63	Thermal Energy Storage Systems Based on Metal Hydride Materials. **2019**, 283-315		
62	Novel materials and technologies for hydrogen storage. **2020**, 337-365		
61	Nanostructured advanced materials for hydrogen storage. **2020**, 97-163		1
60	Low-Valent Titanium Species Stabilized with Aluminum/Boron Hydride Fragments. *Chemistry - A European Journal*, **2021**,	4.8	0
59	Metal Hydroborates: From Hydrogen Stores to Solid Electrolyte. *Journal of Alloys and Compounds*, **2021**, 895, 162659	5.7	3
58	Status on Existing Technologies. *Green Energy and Technology*, **2008**, 523-523	0.6	
57	SEM/(S)TEM. *Green Energy and Technology*, **2008**, 549-573	0.6	
56	Parallel FTIR-ATR spectroscopy and gravimetry for the in situ hydrogen desorption measurement of NaAlH powder compacts. *Applied Optics*, **2020**, 59, 9510-9519	0.2	1
55	Neutron Vibrational Spectroscopy. 1-27		
54	Efficient removal of aluminium(III) from aqueous solutions via ion-flotation technique using aluminon as a chelating agent and oleic acid as a surfactant. *International Journal of Environmental Analytical Chemistry*, 1-18	1.8	1
53	Surface Properties of the Hydrogen-Titanium System. *Journal of Physical Chemistry C*, **2021**, 125, 25339-25349	3.8	2
52	Solid-State Hydrogen Storage for a Decarbonized Society. *Hydrogen*, **2021**, 2, 428-443	1.8	5
51	Short-Lived Interfaces in Energy Materials. *Frontiers in Energy Research*, **2022**, 9,	3.8	0
50	Light-weight solid-state hydrogen storage materials characterized by neutron scattering. *Journal of Alloys and Compounds*, **2022**, 899, 163254	5.7	2
49	Ionic conductivity in complex metal hydride-based nanocomposite materials: The impact of nanostructuring and nanocomposite formation. *Journal of Alloys and Compounds*, **2022**, 901, 163474	5.7	2
48	Cluster-based Materials for Energy Harvesting and Storage. **2021**, 277-316		
47	An Overview of the Recent Advances of Additive-Improved Mg(BH4)2 for Solid-State Hydrogen Storage Material. *Energies*, **2022**, 15, 862	3.1	1
46	Computational Evaluation of Li-doped g-C2N Monolayer as Advanced Hydrogen Storage Media. *International Journal of Hydrogen Energy*, **2022**, 47, 3625-3632	6.7	1

45	Titanium Hydride Nanoplates Enable 5 wt% of Reversible Hydrogen Storage by Sodium Alanate below 80°C.. *Research*, **2021**, 2021, 9819176	7.8	1
44	Metal Oxide Nanostructured Materials for Photocatalytic Hydrogen Generation. *Nanotechnology in the Life Sciences*, **2022**, 665-708	1.1	
43	An efficient single atom catalysts Os/P3C sheet for ammonia borane dehydrogenation. *Chinese Chemical Letters*, **2022**,	8.1	1
42	Complex Metal Borohydrides: From Laboratory Oddities to Prime Candidates in Energy Storage Applications.. *Materials*, **2022**, 15,	3.5	0
41	Recent advances in metastable alloys for hydrogen storage: a review. *Rare Metals*, 1	5.5	7
40	LiAlH4–ZrCl4 mixtures for hydrogen release at near room temperature. *International Journal of Hydrogen Energy*, **2022**,	6.7	3
39	N-doped carbon coated Ti3C2 MXene as a high-efficiency catalyst for improving hydrogen storage kinetics and stability of NaAlH4. *Renewable Energy*, **2022**, 188, 778-787	8.1	4
38	Boron Hydrogen Compounds: Hydrogen Storage and Battery Applications.. *Molecules*, **2021**, 26,	4.8	3
37	Resistivity Testing of Palladium Dilution Limits in CoPd Alloys for Hydrogen Storage.. *Materials*, **2021**, 15,	3.5	
36	Opportunities for Catalytic Reactions and Materials in Buildings. *Encyclopedia*, **2022**, 2, 36-55		
35	The elastic, mechanical, and thermodynamic properties of NaXH (X = B, Al) intended for the storage of hydrogen: An ab-initio study. *Physica B: Condensed Matter*, **2022**, 413851	2.8	0
34	A Conceptual DFT Approach Toward Analyzing Hydrogen Storage Potential. **2022**, 533-553		0
33	Absorption based solid state hydrogen storage system: A review. *Sustainable Energy Technologies and Assessments*, **2022**, 52, 102204	4.7	1
32	Sustainable NaAlH4 production from recycled automotive Al alloy. *Green Chemistry*,	10	1
31	Complex hydrides for CO2 reduction. *MRS Bulletin*, 1	3.2	1
30	Catalytical enhancement on hydrogen production from LiAlH4 by Fe–e2O3 addition. *International Journal of Hydrogen Energy*, **2022**, 47, 16964-16977	6.7	1
29	Hydrogen Storage: Liquid and Chemical. **2012**, 144-165		0
28	Averaged and Local Structure Analysis of Hydrogen Storage Materials by High Intensity Neutron Total Diffractometer, NOVA. *Nihon Kessho Gakkaishi*, **2022**, 64, 174-177	0	

27	The Power of Multifunctional Metal Hydrides: A Key Enabler Beyond Hydrogen Storage. *Journal of Alloys and Compounds*, **2022**, 165936	5.7	0
26	Catalysis in Solid Hydrogen Storage: Recent Advances, Challenges and Perspectives. *Energy Technology*,	3.5	2
25	Computational Evaluation of Al-Decorated g-CN Nanostructures as High-Performance Hydrogen-Storage Media. **2022**, 12, 2580		1
24	Nanomaterials for on-board solid-state hydrogen storage applications. **2022**,		1
23	A comprehensive review on hydrogen production and utilization in North America: Prospects and challenges. **2022**, 269, 115927		4
22	Modeling and simulation of hydrogenation process of NaAlH4. **2022**, 4, 100491		0
21	Effects of metal-based additives on dehydrogenation process of 2NaBH4 + MgH2 system. **2022**,		1
20	Constructal design of weight optimized metal hydride storage device embedded with ribbed honeycomb. **2022**, 119368		0
19	Effects of surface morphology changes on FTIR-ATR spectroscopy with compacted Sodium Alanate (NaAlH4) during cycling. **2022**,		0
18	LiAlH4 Nanoparticles Encapsulated within Metallic Titanium Shells for Enhanced Hydrogen Storage.		1
17	Tribochemically driven dehydrogenation of undoped sodium alanate under room temperature. **2022**, 25, 494-508		0
16	Novel Nanomaterials for Hydrogen Production and Storage: Evaluating the Futurity of Graphene/Graphene Composites in Hydrogen Energy. **2022**, 15, 9085		0
15	First-principle prediction of one-dimensional silicon allotropes: Promising new candidate for chemical and electrochemical hydrogen storage. **2022**,		0
14	Impact of severe plastic deformation on kinetics and thermodynamics of hydrogen storage in magnesium and its alloys. **2022**,		1
13	Thermocatalytic Ammonia Decomposition Status and Current Research Demands for a Carbon-Free Hydrogen Fuel Technology.		0
12	Nanointerface Engineering of Metal Hydrides for Advanced Hydrogen Storage.		0
11	Analysis of hydrogen storage mechanism in bilayer double-vacancy defective graphene modified using transition metals: Insights from Ti-BDVG(Ti)-Ti. **2023**,		0
10	Current trends and applications of ionic liquids in electrochemical devices. **2023**, 63-88		0

9	Li- and Mg-based borohydrides for hydrogen storage and ionic conductor. **2023**, 153, 181-204	0
8	Enhanced reversible hydrogen storage performance of Mg-decorated g-C2N: First principles calculations. **2023**, 220, 112046	0
7	Effect of (Ti0.35V0.65)0.86Fe0.14Hy on synthesis and hydrogen storage properties of NaAlH4. **2023**,	0
6	Challenges associated with hydrogen storage systems due to the hydrogen embrittlement of high strength steels. **2023**,	0
5	Hydrogen-assisted one-pot synthesis of ultrasmall TiC nanoparticles enhancing hydrogen cycling of sodium alanate. **2023**, 462, 142199	0
4	Electronic structure and stability of a pure sodium alanate clusters Na12Al12H48, and the interstitial space-doped with Ti, C and H atoms, as a promising hydrogen storage system: Density functional theory. **2023**,	0
3	Hydrogen absorption and desorption in the V□AlH system. **2023**, 52, 4880-4890	0
2	First principle study on transition metal ammine borohydrides with amphoteric hydrogen for hydrogen storage applications. **2023**,	0
1	Hydrogen and helium trapping in hcp beryllium. **2023**, 6,	0