Andreas ZÃ¼ttel

List of Publications by Year
in descending order

157 papers	19,931 citations	41344 49 h-index	10158 140 g-index
171 all docs	171 docs citations	171 times ranked	14328 citing authors

#	Article	IF	Citations
1	Hydrogen-storage materials for mobile applications. Nature, 2001, 414, 353-358.	27.8	7,383
2	Complex Hydrides for Hydrogen Storage. Chemical Reviews, 2007, 107, 4111-4132.	47.7	1,963
3	Materials for hydrogen storage. Materials Today, 2003, 6, 24-33.	14.2	1,530
4	Hydrogen storage methods. Die Naturwissenschaften, 2004, 91, 157-172.	1.6	803
5	Application of hydrides in hydrogen storage and compression: Achievements, outlook and perspectives. International Journal of Hydrogen Energy, 2019, 44, 7780-7808.	7.1	486
6	Correlation between thermodynamical stabilities of metal borohydrides and cation electronegativites: First-principles calculations and experiments. Physical Review B, 2006, 74, .	3.2	465
7	Hydrogen: the future energy carrier. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2010, 368, 3329-3342.	3.4	447
8	Recent Progress in Metal Borohydrides for Hydrogen Storage. Energies, 2011, 4, 185-214.	3.1	412
9	Stability and Reversibility of LiBH₄. Journal of Physical Chemistry B, 2008, 112, 906-910.	2.6	324
10	Boosting CO Production in Electrocatalytic CO₂ Reduction on Highly Porous Zn Catalysts. ACS Catalysis, 2019, 9, 3783-3791.	11.2	247
11	Experimental studies on intermediate compound of LiBH4. Applied Physics Letters, 2006, 89, 021920.	3.3	220
12	Selective and Stable Electroreduction of CO₂ to CO at the Copper/Indium Interface. ACS Catalysis, 2018, 8, 6571-6581.	11.2	175
13	Stability and Decomposition of NaBH₄. Journal of Physical Chemistry C, 2010, 114, 7173-7177.	3.1	174
14	The influence of cobalt on the electrochemical cycling stability of LaNi5-based hydride forming alloys. Journal of Alloys and Compounds, 1996, 241, 160-166.	5.5	169
15	Thermodynamical stability of calcium borohydrideCa(BH4)2. Physical Review B, 2006, 74, .	3.2	169
16	Single-layer graphene membranes by crack-free transfer for gas mixture separation. Nature Communications, 2018, 9, 2632.	12.8	160
17	Mechanically milled Mg composites for hydrogen storage the transition to a steady state composition. Journal of Alloys and Compounds, 1996, 240, 206-213.	5.5	135
18	3D hierarchical porous indium catalyst for highly efficient electroreduction of CO₂. Journal of Materials Chemistry A, 2019, 7, 4505-4515.	10.3	134

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19	Sorption enhanced CO2 methanation. Physical Chemistry Chemical Physics, 2013, 15, 9620.	2.8	130
20	Efficient Base-Metal NiMn/TiO₂ Catalyst for CO₂ Methanation. ACS Catalysis, 2019, 9, 7823-7839.	11.2	124
21	Electrochemical reconstruction of ZnO for selective reduction of CO2 to CO. Applied Catalysis B: Environmental, 2020, 273, 119060.	20.2	115
22	Concurrent Photocatalytic Hydrogen Generation and Dye Degradation Using MILâ€125â€NH₂ under Visible Light Irradiation. Advanced Functional Materials, 2018, 28, 1806368.	14.9	110
23	Hydrogen density in nanostructured carbon, metals and complex materials. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2004, 108, 9-18.	3.5	108
24	Mechanically milled Mg composites for hydrogen storage: the relationship between morphology and kinetics. Journal of Alloys and Compounds, 1998, 269, 259-270.	5.5	95
25	Nanostructured materials for solid-state hydrogen storage: A review of the achievement of COST Action MP1103. International Journal of Hydrogen Energy, 2016, 41, 14404-14428.	7.1	94
26	Crossover of liquid products from electrochemical CO2 reduction through gas diffusion electrode and anion exchange membrane. Journal of Catalysis, 2020, 385, 140-145.	6.2	94
27	Effects of Ti on the cycle life of amorphous MgNi-based alloy prepared by ball milling. Journal of Alloys and Compounds, 2000, 306, 219-226.	5.5	89
28	Theoretical calculation of the energy of formation of LiBH4. Chemical Physics Letters, 2005, 405, 73-78.	2.6	85
29	Universal approach toward high-efficiency two-dimensional perovskite solar cells via a vertical-rotation process. Energy and Environmental Science, 2020, 13, 3093-3101.	30.8	82
30	Complex and liquid hydrides for energy storage. Applied Physics A: Materials Science and Processing, 2016, 122, 1.	2.3	81
31	CO2 hydrogenation reaction over pristine Fe, Co, Ni, Cu and Al2O3 supported Ru: Comparison and determination of the activation energies. Journal of Catalysis, 2018, 366, 139-149.	6.2	80
32	Rotational motion of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mtext>BH</mml:mtext></mml:mrow><mml:mn>4</mml:mn></mml:msub></mml:mrow></mml:math> in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>M</mml:mi><mml:msub><mml:mrow><mml:mtext>BH</mml:mtext></mml:mrow><mml:mn>4</mml:mn></mml:msub></mml:mrow></mml:math>. Physical Review B, 2010, 81, .	3.2	77
33	Pressure and temperature dependence of the decomposition pathway of LiBH4. Physical Chemistry Chemical Physics, 2012, 14, 6514.	2.8	77
34	Lowâ€Temperature Synthesis of LiBH₄ by Gasâ€“Solid Reaction. Chemistry - A European Journal, 2009, 15, 5531-5534.	3.3	76
35	Photocatalytic Hydrogen Generation from a Visible-Light-Responsive Metalâ€“Organic Framework System: Stability versus Activity of Molybdenum Sulfide Cocatalysts. ACS Applied Materials & Interfaces, 2018, 10, 30035-30039.	8.0	71
36	Enhanced Electrocatalytic CO₂ Reduction to C₂₊ Products by Adjusting the Local Reaction Environment with Polymer Binders. Advanced Energy Materials, 2022, 12, .	19.5	71

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37	Decoration of graphene with nickel nanoparticles: study of the interaction with hydrogen. Journal of Materials Chemistry A, 2014, 2, 1039-1046.	10.3	67
38	Effects of pretreatment on the activation behavior of Zr(V0.25Ni0.75)2 metal hydride electrodes in alkaline solution. Journal of Alloys and Compounds, 1994, 209, 99-105.	5.5	64
39	A multifaceted approach to hydrogen storage. Physical Chemistry Chemical Physics, 2011, 13, 16955.	2.8	64
40	Hydrogen in Nanostructured, Carbon-Related, and Metallic Materials. MRS Bulletin, 2002, 27, 705-711.	3.5	58
41	Surface changes on AlH3 during the hydrogen desorption. Applied Physics Letters, 2010, 96, .	3.3	58
42	Reversible hydrogen storage in Mg(BH4)2/carbon nanocomposites. Journal of Materials Chemistry A, 2013, 1, 11177.	10.3	57
43	Renewable energy storage via CO2 and H2 conversion to methane and methanol: Assessment for small scale applications. Renewable and Sustainable Energy Reviews, 2019, 107, 497-506.	16.4	56
44	In Situ Control of the Adsorption Species in CO₂ Hydrogenation: Determination of Intermediates and Byproducts. Journal of Physical Chemistry C, 2018, 122, 20888-20893.	3.1	55
45	Self-supported copper-based gas diffusion electrodes for CO₂ electrochemical reduction. Journal of Materials Chemistry A, 2019, 7, 26285-26292.	10.3	55
46	Electrochemical and surface properties of Zr(VxNi1-x)2 alloys as hydrogen-absorbing electrodes in alkaline electrolyte. Journal of Alloys and Compounds, 1994, 203, 235-241.	5.5	54
47	Threeâ€dimensional pore structure and ion conductivity of porous ceramic diaphragms. AICHE Journal, 2013, 59, 1446-1457.	3.6	52
48	Hydrogen Dynamics in Nanoconfined Lithiumborohydride. Journal of Physical Chemistry C, 2013, 117, 3789-3798.	3.1	51
49	Composite membranes for alkaline electrolysis based on polysulfone and mineral fillers. Journal of Power Sources, 2015, 291, 163-172.	7.8	50
50	The Origin of the Catalytic Activity of a Metal Hydride in CO₂ Reduction. Angewandte Chemie - International Edition, 2016, 55, 6028-6032.	13.8	50
51	Catalytic effect of titanium nitride nanopowder on hydrogen desorption properties of NaAlH4 and its stability in NaAlH4. Journal of Power Sources, 2009, 192, 582-587.	7.8	49
52	Electrochemical characterisation of air electrodes based on La0.6Sr0.4CoO3 and carbon nanotubes. Journal of Power Sources, 2008, 183, 590-594.	7.8	48
53	Reversible hydrogen absorption in sodium intercalated fullerenes. International Journal of Hydrogen Energy, 2012, 37, 14307-14314.	7.1	47
54	Mg composites for hydrogen storage The dependence of hydriding properties on composition. Journal of Alloys and Compounds, 1997, 261, 276-280.	5.5	45

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55	First-Principles Determination of the Ground-State Structure of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>LiBH</mml:mi><mml:mn>4</mml:mn></mml:msub></mml:math>. Physical Review Letters, 2010, 104, 215501.	7.8	45
56	Stability of the LiBH4/CeH2 Composite System Determined by Dynamic pcT Measurements. Journal of Physical Chemistry C, 2010, 114, 16801-16805.	3.1	44
57	Solvent-free synthesis and stability of MgB₁₂H₁₂. Journal of Materials Chemistry A, 2014, 2, 7244-7249.	10.3	41
58	Surface and bulk properties of the TiyZr1âˆ'y(VxNi1âˆ'x)2 alloy system as active electrode material in alkaline electrolyte. Journal of Alloys and Compounds, 1995, 231, 645-649.	5.5	39
59	First-principles determination of the ground-state structure of Mg(BH4)2. Chemical Physics Letters, 2009, 480, 203-209.	2.6	38
60	Incarceration of Iodine in a Pyreneâ€Based Metalâ€“Organic Framework. Chemistry - A European Journal, 2019, 25, 501-506.	3.3	38
61	Monocarborane cluster as a stable fluorine-free calcium battery electrolyte. Scientific Reports, 2021, 11, 7563.	3.3	38
62	Composition of Hydrofullerene Mixtures Produced by C60 Reaction with Hydrogen Gas Revealed by High-Resolution Mass Spectrometry. Journal of Physical Chemistry B, 2005, 109, 12742-12747.	2.6	37
63	Hydrogen storage and distribution systems. Mitigation and Adaptation Strategies for Global Change, 2007, 12, 343-365.	2.1	37
64	CO2 hydrogenation on a metal hydride surface. Physical Chemistry Chemical Physics, 2012, 14, 5518.	2.8	37
65	Hydrogen storage properties of various carbon supported NaBH4 prepared via metathesis. International Journal of Hydrogen Energy, 2018, 43, 7108-7116.	7.1	37
66	Nitrogen-doped carbon black supported Ptâ€“M (MÂ=ÂPd, Fe, Ni) alloy catalysts for oxygen reduction reaction in proton exchange membrane fuel cell. Materials Today Energy, 2019, 13, 374-381.	4.7	37
67	Effect of the surface oxidation of LiBH4 on the hydrogen desorption mechanism. Physical Chemistry Chemical Physics, 2010, 12, 10950.	2.8	36
68	Study of borohydride ionic liquids as hydrogen storage materials. Journal of Energy Chemistry, 2019, 33, 17-21.	12.9	36
69	AB2 and AB5 metal hydride electrodes: a phenomenological model for the cycle life. Journal of Alloys and Compounds, 1993, 200, 157-163.	5.5	35
70	A novel method for the synthesis of solvent-free Mg(B₃H₈)₂. Dalton Transactions, 2016, 45, 3687-3690.	3.3	35
71	Synergistic Cu/CeO2 carbon nanofiber catalysts for efficient CO2 electroreduction. Electrochemistry Communications, 2020, 114, 106716.	4.7	34
72	Synthesis of C59Hxand C58HxFullerenes Stabilized by Hydrogen. Journal of Physical Chemistry B, 2005, 109, 5403-5405.	2.6	32

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73	Unraveling and optimizing the metal-metal oxide synergistic effect in a highly active Co (CoO)1â€“ catalyst for CO2 hydrogenation. Journal of Energy Chemistry, 2021, 53, 241-250.	12.9	32
74	Effects of electrode compacting additives on the cycle life and high-rate dischargeability of Zr(V0.25Ni0.75)2 metal hydride electrodes in alkaline solution. Journal of Alloys and Compounds, 1994, 206, 31-38.	5.5	31
75	Model based determination of the optimal reactor concept for Sabatier reaction in small-scale applications over Ru/Al2O3. Chemical Engineering Journal, 2019, 375, 121954.	12.7	31
76	Solventâ€•and Catalystâ€Free Carbon Dioxide Capture and Reduction to Formate with Borohydride Ionic Liquid. ChemSusChem, 2020, 13, 2025-2031.	6.8	31
77	Tandem effect of Ag@C@Cu catalysts enhances ethanol selectivity for electrochemical CO2 reduction in flow reactors. Cell Reports Physical Science, 2022, 3, 100949.	5.6	31
78	Surface and bulk reactions in borohydrides and amides. Energy and Environmental Science, 2012, 5, 6823.	30.8	30
79	Storage of Renewable Energy by Reduction of CO2 with Hydrogen. Chimia, 2015, 69, 264.	0.6	29
80	Hydrogen storage and electrochemical properties of LaNi5-xCux hydride-forming alloys. Journal of Alloys and Compounds, 2019, 775, 175-180.	5.5	29
81	Direct CO₂ Capture and Reduction to Highâ€End Chemicals with Tetraalkylammonium Borohydrides. Angewandte Chemie - International Edition, 2021, 60, 9580-9589.	13.8	28
82	A model-based comparison of Ru and Ni catalysts for the Sabatier reaction. Sustainable Energy and Fuels, 2020, 4, 1396-1408.	4.9	26
83	Support-Dependent Cuâ€“In Bimetallic Catalysts for Tailoring the Activity of Reverse Water Gas Shift Reaction. ACS Sustainable Chemistry and Engineering, 2022, 10, 1524-1535.	6.7	26
84	Titanium and native defects in LiBH₄and NaAlH₄. Journal of Physics Condensed Matter, 2008, 20, 465210.	1.8	25
85	Parametric sensitivity in the Sabatier reaction over Ru/Al₂O₃ â€“ theoretical determination of the minimal requirements for reactor activation. Reaction Chemistry and Engineering, 2019, 4, 100-111.	3.7	25
86	Engineering long-term stability into perovskite solar cells via application of a multi-functional TFSI-based ionic liquid. Cell Reports Physical Science, 2021, 2, 100475.	5.6	25
87	Properties of Zr(V0.25Ni0.75)2 metal hydride as active electrode material. Journal of Alloys and Compounds, 1996, 239, 175-182.	5.5	23
88	On the possibility of metal hydride formation. Journal of Alloys and Compounds, 1998, 274, 239-247.	5.5	23
89	Interface reactions and stability of a hydride composite (NaBH4 + MgH2). Physical Chemistry Chemical Physics, 2012, 14, 8360.	2.8	23
90	Description of the capacity degradation mechanism in LaNi5-based alloy electrodes. Journal of Alloys and Compounds, 2015, 621, 225-231.	5.5	23

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91	Identifying Reaction Species by Evolutionary Fitting and Kinetic Analysis: An Example of CO₂ Hydrogenation in DRIFTS. Journal of Physical Chemistry C, 2019, 123, 8785-8792.	3.1	23
92	Crystal Structural Investigations for Understanding the Hydrogen Storage Properties of YMgNi₄-Based Alloys. ACS Omega, 2020, 5, 31192-31198.	3.5	22
93	Influence of Composition on Performance in Metallic Ironâ€“Nickelâ€“Cobalt Ternary Anodes for Alkaline Water Electrolysis. ACS Catalysis, 2020, 10, 12139-12147.	11.2	20
94	The Role of Ti in Alanates and Borohydrides: Catalysis and Metathesis. Journal of Physical Chemistry C, 2014, 118, 77-84.	3.1	19
95	Avoiding chromium transport from stainless steel interconnects into contact layers and oxygen electrodes in intermediate temperature solid oxide electrolysis stacks. Journal of Power Sources, 2014, 270, 587-593.	7.8	19
96	Hydrogen Desorption Kinetics in Metal Intercalated Fullerides. Journal of Physical Chemistry C, 2015, 119, 1714-1719.	3.1	18
97	First-principles study of the paths of the decomposition reaction of LiBH₄. Molecular Physics, 2010, 108, 1263-1276.	1.7	17
98	Thermal properties of Y(BH4)3 synthesized via two different methods. International Journal of Hydrogen Energy, 2013, 38, 9263-9270.	7.1	17
99	CO2 Hydrogenation over Unsupported Fe-Co Nanoalloy Catalysts. Nanomaterials, 2020, 10, 1360.	4.1	17
100	First principles study ofÎ±-boron: can the B12cage host hetero-atoms?. Molecular Physics, 2009, 107, 1831-1842.	1.7	16
101	Effect of Boron Doping On Graphene Oxide for Ammonia Adsorption. ChemNanoMat, 2017, 3, 794-797.	2.8	16
102	Small-scale demonstration of the conversion of renewable energy to synthetic hydrocarbons. Sustainable Energy and Fuels, 2017, 1, 1748-1758.	4.9	16
103	The role of malachite nanorods for the electrochemical reduction of CO2 to C2 hydrocarbons. Electrochimica Acta, 2019, 297, 55-60.	5.2	16
104	Influence of the alloy morphology on the kinetics of AB5-type metal hydride electrodes. Journal of Alloys and Compounds, 1999, 285, 292-297.	5.5	15
105	Hydrogen Dynamics in Lightweight Tetrahydroborates. Zeitschrift Fur Physikalische Chemie, 2010, 224, 263-278.	2.8	15
106	Insight into the decomposition pathway of the complex hydride Al3Li4(BH4)13. International Journal of Hydrogen Energy, 2013, 38, 2790-2795.	7.1	15
107	The Origin of the Catalytic Activity of a Metal Hydride in CO₂ Reduction. Angewandte Chemie, 2016, 128, 6132-6136.	2.0	15
108	Modelling the CO2 hydrogenation reaction over Co, Ni and Ru/Al2O3. Journal of Catalysis, 2019, 375, 193-201.	6.2	15

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109	Near ambient-pressure X-ray photoelectron spectroscopy study of CO2 activation and hydrogenation on indium/copper surface. Journal of Catalysis, 2021, 395, 315-324.	6.2	15
110	Surface Oxygenate Species on TiC Reinforce Cobalt-Catalyzed Fischerâ€“Tropsch Synthesis. ACS Catalysis, 2021, 11, 8087-8096.	11.2	15
111	Experimental performance investigation of a 2 kW methanation reactor. Sustainable Energy and Fuels, 2018, 2, 1101-1110.	4.9	14
112	Imaging Catalysis: Operando Investigation of the CO2 Hydrogenation Reaction Dynamics by Means of Infrared Thermography. ACS Catalysis, 2020, 10, 1721-1730.	11.2	14
113	The catalyzed hydrogen sorption mechanism in alkali alanates. Physical Chemistry Chemical Physics, 2015, 17, 20932-20940.	2.8	13
114	High Influence of Potassium Bromide on Thermal Decomposition of Ammonia Borane^{â€}. Journal of Physical Chemistry C, 2016, 120, 25276-25288.	3.1	13
115	Thermal stability of size-selected copper nanoparticles: Effect of size, support and CO2 hydrogenation atmosphere. Applied Surface Science, 2020, 510, 145439.	6.1	13
116	Electrospun nanofibers for electrochemical reduction of CO2: A mini review. Electrochemistry Communications, 2021, 124, 106968.	4.7	13
117	Membrane electrode assembly fabricated with the combination of Pt/C and hollow shell structured-Pt-SiO 2 @ZrO 2 sphere for self-humidifying proton exchange membrane fuel cell. Journal of Power Sources, 2017, 367, 8-16.	7.8	12
118	On the possibility of metal hydride formation. Journal of Alloys and Compounds, 1998, 274, 234-238.	5.5	11
119	Hydrogen absorption and hydride electrode behaviour of the Laves phase ZrV1.5â^'xCrxNi1.5. Journal of Alloys and Compounds, 1999, 291, 289-294.	5.5	11
120	Characteristics and properties of nano-LiCoO2 synthesized by pre-organized single source precursors: Li-ion diffusivity, electrochemistry and biological assessment. Journal of Nanobiotechnology, 2017, 15, 58.	9.1	11
121	Methanol production from CO₂via an integrated, formamide-assisted approach. Sustainable Energy and Fuels, 2020, 4, 1773-1779.	4.9	11
122	Bulk and surface properties of crystalline and amorphous Zr36(V0.33Ni0.66)64 alloy as active electrode material. Journal of Alloys and Compounds, 1998, 266, 321-326.	5.5	10
123	Cobalt-free over-stoichiometric Laves phase alloys for Niâ€“MH batteries. Journal of Alloys and Compounds, 2003, 350, 319-323.	5.5	10
124	Hydrogen dynamics in the low temperature phase of LiBH4 probed by quasielastic neutron scattering. Chemical Physics, 2013, 427, 18-21.	1.9	10
125	Effect of composition and particle morphology on the electrochemical properties of LaNi5-based alloy electrodes. Journal of Alloys and Compounds, 2014, 607, 32-38.	5.5	10
126	Destabilizing sodium borohydride with an ionic liquid. Materials Today Energy, 2018, 9, 391-396.	4.7	10

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127	Influence of electrode thickness on charge-discharge behaviour of AB5-type metal hydride electrodes. Journal of Alloys and Compounds, 1995, 221, 207-211.	5.5	9
128	Revealing the Surface Chemistry for CO₂ Hydrogenation on Cu/CeO_{2â€“x} Using Near-Ambient-Pressure X-ray Photoelectron Spectroscopy. ACS Applied Energy Materials, 2021, 4, 12326-12335.	5.1	9
129	Halide exchange in the passivation of perovskite solar cells with functionalized ionic liquids. Cell Reports Physical Science, 2022, 3, 100848.	5.6	9
130	Hydrogen Interaction with Carbon Nanostructures. Journal of Metastable and Nanocrystalline Materials, 2001, 11, 95-0.	0.1	8
131	Ti cations in sodium alanate. Journal of Alloys and Compounds, 2009, 471, L29-L31.	5.5	8
132	Reactivity enhancement of oxide skins in reversible Ti-doped NaAlH4. AIP Advances, 2014, 4, 127130.	1.3	8
133	Storing Renewable Energy in the Hydrogen Cycle. Chimia, 2015, 69, 741-745.	0.6	8
134	Fast real time and quantitative gas analysis method for the investigation of the CO2 reduction reaction mechanism. Review of Scientific Instruments, 2018, 89, 114102.	1.3	8
135	Accurate measurement of pressure-composition isotherms and determination of thermodynamic and kinetic parameters of metal hydrides. International Journal of Hydrogen Energy, 2019, 44, 13583-13591.	7.1	8
136	Selective Borohydride Oxidation Reaction on Nickel Catalyst with Anion and Cation Exchange Ionomer for Highâ€Performance Direct Borohydride Fuel Cells. Advanced Energy Materials, 2022, 12, .	19.5	8
137	ZrV1.5Ni1.5 as electrode material in nickel-metal hydride batteries An in situ scanning tunnelling microscopy investigation. Journal of Alloys and Compounds, 1997, 260, 265-270.	5.5	7
138	Hydriding properties of the Zr(Cr0.5Ni0.5)Î± (1.75â‰Î±â‰3.5) alloy system. Journal of Alloys and Compounds, 1998, 274, 294-298.	5.5	7
139	Surface properties of V40(TiCr)51Fe8Mn alloy during hydrogenation/dehydrogenation cycles. Journal of Alloys and Compounds, 2013, 580, S156-S158.	5.5	7
140	Electrochemical properties of Zr (VxNi1Ã¢Â^Â’x)3 as electrode material in nickel-metal hydridebatteries. International Journal of Hydrogen Energy, 1999, 24, 229-233.	7.1	6
141	Postâ€Synthesis Amine Borane Functionalization of a Metalâ€Organic Framework and Its Unusual Chemical Hydrogen Release Phenomenon. Chemistry - A European Journal, 2017, 23, 8823-8828.	3.3	6
142	Dualâ€Functional Photocatalysis: Concurrent Photocatalytic Hydrogen Generation and Dye Degradation Using MILâ€125â€NH₂ under Visible Light Irradiation (Adv. Funct. Mater. 52/2018). Advanced Functional Materials, 2018, 28, 1870373.	14.9	6
143	Complex hydrides for CO2 reduction. MRS Bulletin, 2022, 47, 424-431.	3.5	6
144	In situ STM investigation of metal hydride electrodes in alkaline electrolyte during electrochemical cycles. Journal of Alloys and Compounds, 1997, 261, 273-275.	5.5	5

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145	Nanostructured graphite-hydrogen systems prepared by mechanical milling method. Molecular Crystals and Liquid Crystals, 2002, 386, 173-178.	0.9	5
146	New Ni 0.5 Ti 2 (PO 4) 3 @C NASICONâ€type Electrode Material with High Rate Capability Performance for Lithiumâ€Ion Batteries: Synthesis and Electrochemical Properties. ChemSusChem, 2019, 12, 4846-4853.	6.8	5
147	Synthesis of grid compliant substitute natural gas from a representative biogas mixture in a hybrid Ni/Ru catalysed reactor. Chemical Engineering Science: X, 2020, 8, 100078.	1.5	4
148	Supercritical Nitrogen Processing for the Purification of Reactive Porous Materials. Journal of Visualized Experiments, 2015, , e52817.	0.3	3
149	Surface Reactions are Crucial for Energy Storage. Chimia, 2015, 69, 269.	0.6	3
150	Effects of Ball Milling and TiF3 Addition on the Dehydrogenation Temperature of Ca(BH4)2 Polymorphs. Energies, 2020, 13, 4828.	3.1	3
151	Phase analysis and atom distribution in the Zr(V0.5Ni0.5)3Dx (x=0,4.6) alloy system with Laves-type AB2 structure. Journal of Alloys and Compounds, 2002, 333, 99-102.	5.5	2
152	Direct CO 2 Capture and Reduction to Highâ€End Chemicals with Tetraalkylammonium Borohydrides. Angewandte Chemie, 2021, 133, 9666-9675.	2.0	2
153	Hydrogen Storage by Reduction of COâ„ to Synthetic Hydrocarbons. Chimia, 2021, 75, 156.	0.6	1
154	Time and Frequency Resolved Hydrogen Dynamics in deuterated LiBH₄. Materials Research Society Symposia Proceedings, 2009, 1216, 1.	0.1	0
155	Evidence for Hydrogen Transport in Deuterated LiBH₄ from Raman-Scattering Measurements and First-Principles Calculations. Advances in Science and Technology, 2010, 72, 150-157.	0.2	0
156	A combined diffuse reflectance infrared Fourier transform spectroscopyâ€“mass spectroscopyâ€“gas chromatography for the operando study of the heterogeneously catalyzed CO2 hydrogenation over transition metal-based catalysts. Review of Scientific Instruments, 2020, 91, 074102.	1.3	0
157	EXPERIMENTAL TECHNIQUES TO MEASURE OF THE EQUILIBRIUM PLATEAU PRESSURES OF METAL HYDRIDES. , 2009, , .		0