Zhenguo Huang

List of Publications by Year
in descending order

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107 papers	4,750 citations	101543 36 h-index	106344 65 g-index
114 all docs	114 docs citations	114 times ranked	5872 citing authors

#	Article	IF	Citations
1	Progress in the application of surface engineering methods in immobilizing TiO₂ and ZnO coatings for environmental photocatalysis. Catalysis Reviews - Science and Engineering, 2023, 65, 822-873.	12.9	16
2	Boron leaching: Creating vacancy-rich Ni for enhanced hydrogen evolution. Nano Research, 2022, 15, 1868-1873.	10.4	18
3	Controllable synthesis of 2D TiH2 nanoflakes with superior catalytic activity for low-temperature hydrogen cycling of NaAlH4. Chemical Engineering Journal, 2022, 427, 131546.	12.7	16
4	Single-pot solvothermal strategy toward support-free nanostructured LiBH4 featuring 12Âwt% reversible hydrogen storage at 400ÂÂ°C. Chemical Engineering Journal, 2022, 428, 132566.	12.7	20
5	Catalytic Oxidative Dehydrogenation of Light Alkanes over Oxygen Functionalized Hexagonal Boron Nitride. ChemistrySelect, 2022, 7, .	1.5	1
6	Effective synthesis of magnesium borohydride via B-O to B-H bond conversion. Chemical Engineering Journal, 2022, 432, 134322.	12.7	16
7	2D boron nanosheet architectonics: opening new territories by smart functionalization. Journal of Materials Chemistry A, 2022, 10, 2736-2750.	10.3	12
8	1,6;2,3-Bis-BN Cyclohexane: Synthesis, Structure, and Hydrogen Release. Journal of the American Chemical Society, 2022, 144, 8434-8438.	13.7	5
9	Boron nitride for enhanced oxidative dehydrogenation of ethylbenzene. Journal of Energy Chemistry, 2021, 57, 477-484.	12.9	23
10	Realizing 6.7 wt% reversible storage of hydrogen at ambient temperature with non-confined ultrafine magnesium hydrides. Energy and Environmental Science, 2021, 14, 2302-2313.	30.8	186
11	The effect of various cations/anions for MgH2 hydrolysis reaction. Journal of Materials Science and Technology, 2021, 73, 186-192.	10.7	26
12	Amorphous Dualâ€Layer Coating: Enabling High Liâ€Ion Conductivity of Nonâ€Sintered Garnetâ€Type Solid Electrolyte. Advanced Functional Materials, 2021, 31, 2009692.	14.9	42
13	An Amineâ€“Borane System Featuring Roomâ€Temperature Dehydrogenation and Regeneration. Angewandte Chemie - International Edition, 2021, 60, 11725-11729.	13.8	11
14	An Amineâ€“Borane System Featuring Roomâ€Temperature Dehydrogenation and Regeneration. Angewandte Chemie, 2021, 133, 11831-11835.	2.0	3
15	Solid State Electrolytes: Amorphous Dualâ€Layer Coating: Enabling High Liâ€Ion Conductivity of Nonâ€Sintered Garnetâ€Type Solid Electrolyte (Adv. Funct. Mater. 15/2021). Advanced Functional Materials, 2021, 31, 2170100.	14.9	4
16	Nano-synergy enables highly reversible storage of 9.2Âwt% hydrogen at mild conditions with lithium borohydride. Nano Energy, 2021, 83, 105839.	16.0	46
17	Breaking the Passivation: Sodium Borohydride Synthesis by Reacting Hydrated Borax with Aluminum. Chemistry - A European Journal, 2021, 27, 9087-9093.	3.3	6
18	Recent Development of Lithium Borohydrideâ€Based Materials for Hydrogen Storage. Advanced Energy and Sustainability Research, 2021, 2, 2100073.	5.8	31

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19	Recent Progress on Two-Dimensional Carbon Materials for Emerging Post-Lithium (Na+, K+, Zn2+) Hybrid Supercapacitors. Polymers, 2021, 13, 2137.	4.5	19
20	Few-Layered Boron Nitride Nanosheets for Strengthening Polyurethane Hydrogels. ACS Applied Nano Materials, 2021, 4, 7988-7994.	5.0	10
21	Carbon- and oxygen-doped hexagonal boron nitride for degradation of organic pollutants. Surface Innovations, 2021, 9, 222-230.	2.3	6
22	Titanium Hydride Nanoplates Enable 5â€‰wt% of Reversible Hydrogen Storage by Sodium Alanate below 80Â°C. Research, 2021, 2021, 9819176.	5.7	8
23	Boron: Its Role in Energyâ€Related Processes and Applications. Angewandte Chemie - International Edition, 2020, 59, 8800-8816.	13.8	186
24	Bor in energiebezogenen Prozessen und Anwendungen. Angewandte Chemie, 2020, 132, 8882-8900.	2.0	45
25	Exploration of the Dehydrogenation Pathways of Ammonia Diborane and Diammoniate of Diborane by Molecular Dynamics Simulations Using Reactive Force Fields. Journal of Physical Chemistry A, 2020, 124, 1698-1704.	2.5	19
26	Editorial: Metal Hydride-Based Energy Storage and Conversion Materials. Frontiers in Chemistry, 2020, 8, 675.	3.6	2
27	Efficient Synthesis of Sodium Borohydride: Balancing Reducing Agents with Intrinsic Hydrogen Source in Hydrated Borax. ACS Sustainable Chemistry and Engineering, 2020, 8, 13449-13458.	6.7	17
28	Closing the Loop for Hydrogen Storage: Facile Regeneration of NaBH₄ from its Hydrolytic Product. Angewandte Chemie, 2020, 132, 8701-8707.	2.0	39
29	Functionalised hexagonal boron nitride for energy conversion and storage. Journal of Materials Chemistry A, 2020, 8, 14384-14399.	10.3	96
30	Hollow-shell structured porous CoSe₂ microspheres encapsulated by MXene nanosheets for advanced lithium storage. Sustainable Energy and Fuels, 2020, 4, 2352-2362.	4.9	39
31	Closing the Loop for Hydrogen Storage: Facile Regeneration of NaBH₄ from its Hydrolytic Product. Angewandte Chemie - International Edition, 2020, 59, 8623-8629.	13.8	205
32	11B NMR Chemical Shift Predictions via Density Functional Theory and Gauge-Including Atomic Orbital Approach: Applications to Structural Elucidations of Boron-Containing Molecules. ACS Omega, 2019, 4, 12385-12392.	3.5	20
33	Artificial 2D Flux Pinning Centers in MgB2 Induced by Graphitic-Carbon Nitride Coated on Boron for Superconductor Applications. ACS Applied Nano Materials, 2019, 2, 5399-5408.	5.0	6
34	In situ formation and superior lithium storage properties of tentacle-like ZnO@NC@CNTs composites. Nanoscale Advances, 2019, 1, 1200-1206.	4.6	16
35	Fluorescent Carbonâ€•and Oxygenâ€Doped Hexagonal Boron Nitride Powders as Printing Ink for Anticounterfeit Applications. Advanced Optical Materials, 2019, 7, 1901380.	7.3	26
36	Hexagonal Boron Nitride Nanosheets Grown via Chemical Vapor Deposition for Silver Protection. ACS Applied Nano Materials, 2019, 2, 2830-2835.	5.0	26

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37	SnSb alloy nanoparticles embedded in N-doped porous carbon nanofibers as a high-capacity anode material for lithium-ion batteries. Journal of Alloys and Compounds, 2019, 777, 775-783.	5.5	35
38	Periodically Arranged Arrays of Dendritic Pt Nanospheres Using Cageâ€Type Mesoporous Silica as a Hard Template. Chemistry - an Asian Journal, 2018, 13, 106-110.	3.3	5
39	Directional Droplet Propulsion on Gradient Boron Nitride Nanosheet Grid Surface Lubricated with a Vapor Film below the Leidenfrost Temperature. ACS Nano, 2018, 12, 11995-12003.	14.6	13
40	In Situ Synthesis and Unprecedented Electrochemical Performance of Double Carbon Coated Cross-Linked Co₃O₄. ACS Applied Materials & Interfaces, 2018, 10, 42372-42379.	8.0	22
41	Revealing the chemistry of an anode-passivating electrolyte salt for high rate and stable sodium metal batteries. Journal of Materials Chemistry A, 2018, 6, 12012-12017.	10.3	58
42	Hydroxyl-Functional Groups on Graphene Trigger the Targeted Delivery of Antitumor Drugs. Journal of Biomedical Nanotechnology, 2018, 14, 1420-1429.	1.1	6
43	A new sodium iron phosphate as a stable high-rate cathode material for sodium ion batteries. Nano Research, 2018, 11, 6197-6205.	10.4	24
44	A nitrogen-doped three-dimensional carbon framework for high performance sodium ion batteries. RSC Advances, 2017, 7, 1588-1592.	3.6	20
45	Highly active Fe₃BO₆ as an anode material for sodium-ion batteries. Chemical Communications, 2017, 53, 4698-4701.	4.1	30
46	Few-atomic-layered hexagonal boron nitride: CVD growth, characterization, and applications. Materials Today, 2017, 20, 611-628.	14.2	96
47	High energy density supercapacitors composed of nickel cobalt oxide nanosheets on nanoporous carbon nanoarchitectures. Journal of Materials Chemistry A, 2017, 5, 11834-11839.	10.3	97
48	Synthesis of mesostructured manganese phosphonate and its promising energy storage application. Journal of Materials Chemistry A, 2017, 5, 23259-23266.	10.3	24
49	Atomically Thin Hexagonal Boron Nitride Nanofilm for Cu Protection: The Importance of Film Perfection. Advanced Materials, 2017, 29, 1603937.	21.0	63
50	Carbon- and crack-free growth of hexagonal boron nitride nanosheets and their uncommon stacking order. Nanoscale, 2016, 8, 15926-15933.	5.6	20
51	Ammonium Aminodiboranate: A Longâ€Sought Isomer of Diammoniate of Diborane and Ammonia Borane Dimer. Chemistry - A European Journal, 2016, 22, 7727-7729.	3.3	15
52	Structural, Magnetic, and Optical Properties of A3V4(PO4)6 (A = Mg, Mn, Fe, Co, Ni). Inorganic Chemistry, 2016, 55, 5772-5779.	4.0	5
53	A High-Performance Rechargeable Mg²⁺/Li⁺ Hybrid Battery Using One-Dimensional Mesoporous TiO₂(B) Nanoflakes as the Cathode. ACS Applied Materials & Interfaces, 2016, 8, 7111-7117.	8.0	81
54	An improved synthesis of unsolvated NaB 3 H 8 and its application in preparing Na 2 B 12 H 12. International Journal of Hydrogen Energy, 2016, 41, 15471-15476.	7.1	19

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55	Graphene-wrapped reversible reaction for advanced hydrogen storage. Nano Energy, 2016, 26, 488-495.	16.0	86
56	Boron-Doped Anatase TiO₂ as a High-Performance Anode Material for Sodium-Ion Batteries. ACS Applied Materials & Interfaces, 2016, 8, 16009-16015.	8.0	145
57	Boric Acid Assisted Reduction of Graphene Oxide: A Promising Material for Sodium-Ion Batteries. ACS Applied Materials & Interfaces, 2016, 8, 18860-18866.	8.0	96
58	Superior sodium-ion storage performance of Co₃O₄@nitrogen-doped carbon: derived from a metalâ€“organic framework. Journal of Materials Chemistry A, 2016, 4, 5428-5435.	10.3	159
59	Regeneration of alkaline metal amidoboranes with high purity. International Journal of Hydrogen Energy, 2016, 41, 407-412.	7.1	13
60	Controllable synthesis of few-layered and hierarchically porous boron nitride nanosheets. Chemical Communications, 2016, 52, 3911-3914.	4.1	39
61	Hydrogen Storage Materials for Mobile and Stationary Applications: Current State of the Art. ChemSusChem, 2015, 8, 2789-2825.	6.8	302
62	Edgeâ€Hydroxylated Boron Nitride Nanosheets as an Effective Additive to Improve the Thermal Response of Hydrogels. Advanced Materials, 2015, 27, 7196-7203.	21.0	227
63	Hydrogels: Edgeâ€Hydroxylated Boron Nitride Nanosheets as an Effective Additive to Improve the Thermal Response of Hydrogels (Adv. Mater. 44/2015). Advanced Materials, 2015, 27, 7247-7247.	21.0	8
64	New synthetic procedure for NaNH2(BH3)2 and evaluation of its hydrogen storage properties. Science China Chemistry, 2015, 58, 169-173.	8.2	8
65	Structural and magnetic properties of RTiNO2 (R=Ce, Pr, Nd) perovskite nitride oxides. Journal of Solid State Chemistry, 2015, 226, 279-285.	2.9	16
66	Synthesis of Large and Few Atomic Layers of Hexagonal Boron Nitride on Melted Copper. Scientific Reports, 2015, 5, 7743.	3.3	63
67	A novel rechargeable battery with a magnesium anode, a titanium dioxide cathode, and a magnesium borohydride/tetraglyme electrolyte. Chemical Communications, 2015, 51, 2641-2644.	4.1	113
68	Porous Ni nanofibers with enhanced catalytic effect on the hydrogen storage performance of MgH₂. Journal of Materials Chemistry A, 2015, 3, 15843-15848.	10.3	121
69	Capacity enhancement of aqueous borohydride fuels for hydrogen storage in liquids. Journal of Alloys and Compounds, 2015, 645, S196-S199.	5.5	16
70	Electronic Structure and Photocatalytic Water Oxidation Activity of RTiNO₂ (R = Ce, Pr, and Nd) Perovskite Nitride Oxides. Chemistry of Materials, 2015, 27, 2414-2420.	6.7	17
71	Sodium-difluoro(oxalato)borate (NaDFOB): a new electrolyte salt for Na-ion batteries. Chemical Communications, 2015, 51, 9809-9812.	4.1	61
72	Guanidinium octahydrotriborate: an ionic liquid with high hydrogen storage capacity. Journal of Materials Chemistry A, 2015, 3, 11411-11416.	10.3	25

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73	Niobium doped anatase TiO₂ as an effective anode material for sodium-ion batteries. Journal of Materials Chemistry A, 2015, 3, 22969-22974.	10.3	77
74	Facile synthesis of nanocage Co3O4 for advanced lithium-ion batteries. Journal of Power Sources, 2015, 298, 203-208.	7.8	100
75	A new approach to synthesize MoO₂@C for high-rate lithium ion batteries. Journal of Materials Chemistry A, 2015, 3, 21314-21320.	10.3	72
76	Iodine Monochloride Facilitated Deglycosylation, Anomerization, and Isomerization of 3-Substituted Thymidine Analogues. Nucleosides, Nucleotides and Nucleic Acids, 2014, 33, 786-799.	1.1	3
77	Desolvation and Dehydrogenation of Solvated Magnesium Salts of Dodecahydrododecaborate: Relationship between Structure and Thermal Decomposition. Chemistry - A European Journal, 2014, 20, 7325-7333.	3.3	13
78	Study of Anion Order/Disorder in RTaN₂O (R = La, Ce, Pr) Perovskite Nitride Oxides. Crystal Growth and Design, 2014, 14, 117-125.	3.0	42
79	Synthesis, structural analysis, and thermal decomposition studies of [(NH3)2BH2]B3H8. RSC Advances, 2013, 3, 7460.	3.6	16
80	Thermolysis and solid state NMR studies of NaB₃H₈, NH₃B₃H₇, and NH₄B₃H₈. Dalton Transactions, 2013, 42, 701-708.	3.3	30
81	Structure determination of an amorphous compound AlB4H11. Chemical Science, 2012, 3, 3183.	7.4	13
82	Boronâ€“nitrogenâ€“hydrogen (BNH) compounds: recent developments in hydrogen storage, applications in hydrogenation and catalysis, and new syntheses. Energy and Environmental Science, 2012, 5, 9257.	30.8	233
83	Anti and gauche conformers of an inorganic butane analogue, NH3BH2NH2BH3. Chemical Communications, 2012, 48, 7943.	4.1	26
84	The structural characterization of (NH4)2B10H10 and thermal decomposition studies of (NH4)2B10H10 and (NH4)2B12H12. International Journal of Hydrogen Energy, 2012, 37, 4267-4273.	7.1	12
85	Comprehensive NMR Study of Magnesium Borohydride. Journal of Physical Chemistry C, 2011, 115, 3172-3177.	3.1	39
86	Synthesis, Structural Characterization, and Thermal Decomposition Study of Mg(H₂O)₆B₁₀H₁₀Â·4H₂O. Journal of Physical Chemistry C, 2011, 115, 11793-11802.	3.1	10
87	Ammonium Octahydrotriborate (NH4B3H8): New Synthesis, Structure, and Hydrolytic Hydrogen Release. Inorganic Chemistry, 2011, 50, 3738-3742.	4.0	67
88	High-capacity hydrogen release through hydrolysis of NaB3H8. International Journal of Hydrogen Energy, 2011, 36, 7038-7042.	7.1	33
89	Li2B12H12Â·7NH3: a new ammine complex for ammonia storage or indirect hydrogen storage. Journal of Materials Chemistry, 2010, 20, 2743.	6.7	38
90	Intermolecular dihydrogen- and hydrogen-bonding interactions in diammoniumcloso-decahydrodecaborate sesquihydrate. Acta Crystallographica Section C: Crystal Structure Communications, 2010, 66, m1-m3.	0.4	13

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91	Redetermination of di-Î¼-hydrido-hexahydridotetrakis(tetrahydrofuran)dialuminium(III)magnesium(II). Acta Crystallographica Section E: Structure Reports Online, 2010, 66, m575-m575.	0.2	2
92	A Simple and Efficient Way to Synthesize Unsolvated Sodium Octahydrotriborate. Inorganic Chemistry, 2010, 49, 8185-8187.	4.0	41
93	Thermal Decomposition Behavior of Hydrated Magnesium Dodecahydrododecaborates. Journal of Physical Chemistry Letters, 2010, 1, 201-204.	4.6	23
94	Effects of carbon black, graphite and carbon nanotube additives on hydrogen storage properties of magnesium. Journal of Alloys and Compounds, 2007, 427, 94-100.	5.5	107
95	Noticeable improvement in the desorption temperature from graphite in rehydrogenated MgH2/graphite composite. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2007, 447, 180-185.	5.6	36
96	Improvement in hydrogen cycling properties of magnesium through added graphite. Materials Letters, 2007, 61, 3163-3166.	2.6	18
97	DSC study of the effect of milling conditions on the hydrogen storage properties of boron. Journal of Materials Science, 2007, 42, 3985-3989.	3.7	3
98	Effects of milling conditions on hydrogen storage properties of graphite. Journal of Materials Science, 2007, 42, 5437-5441.	3.7	7
99	Preparation of spherical clusters of metal oxide nanorods and their hydrogen storage behavior. Materials Letters, 2006, 60, 3891-3894.	2.6	14
100	Effects of iron oxide (Fe2O3, Fe3O4) on hydrogen storage properties of Mg-based composites. Journal of Alloys and Compounds, 2006, 422, 299-304.	5.5	70
101	Thermal stability and hydrogen storage property of Mg1.9Cu0.1Nix (x=1.8, 1.9, 2.0 and 2.1) alloys. Journal of Alloys and Compounds, 2006, 426, 335-340.	5.5	4
102	Electrochemical Hydrogen Storage in Single-Walled Carbon Nanotube Paper. Journal of Nanoscience and Nanotechnology, 2006, 6, 713-718.	0.9	11
103	Enhanced electrochemical properties of nonstoichiometric amorphous Mg2Ni1.3 electrodes. Journal of Applied Electrochemistry, 2006, 36, 11-16.	2.9	2
104	Electrochemical hydrogen storage properties of nonstoichiometric amorphous MgNi1+xMgNi1+xâ€“carbon composites (x=0.05x=0.05â€“0.3). International Journal of Hydrogen Energy, 2006, 31, 2032-2039.	7.1	30
105	Precipitation synthesis and sintering of yttria nanopowders. Materials Letters, 2004, 58, 2137-2142.	2.6	103
106	Rational design of robust and universal aqueous binders to enable highly stable cyclability of highâ€capacity conversion and alloyâ€type anodes. Energy and Environmental Materials, 0, , .	12.8	2
107	Application of machine learning algorithms in predicting the photocatalytic degradation of perfluorooctanoic acid. Catalysis Reviews - Science and Engineering, 0, , 1-26.	12.9	17